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# TECHNICAL REPORT

Maximize the production  
of goods and services  
of Mediterranean forest  
ecosystems in the context  
of global changes

April 2016



**Improving Mediterranean woodland  
areas governance through participative  
approaches implementation**

**Düzlerçami Forest - Turkey**

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*The methods and analyses used as well as the results and conclusions expressed in this report are those of the author and do not necessarily reflect the views of the experts involved in this project.*

# Table of contents

Author .....	2
National Team .....	2
Technical support and review .....	2
Coordination and project management .....	2
Citation .....	2
<b>Table of contents .....</b>	<b>3</b>
<b>Figures &amp; tables .....</b>	<b>5</b>
<b>List of Acronyms .....</b>	<b>11</b>
<b>Executive summary .....</b>	<b>14</b>
<b>Context .....</b>	<b>15</b>
Study context .....	15
Pilot site description .....	16
Pilot site management targets and project issues .....	17
Management and planning tools in place on the pilot site, and stakeholders involved .....	18
<b>Participative approach for improved governance .....</b>	<b>24</b>
Participative approach in the pilot site .....	24
Objective of the participative approach in the pilot site .....	24
Governance structure .....	24
Identifying involved stakeholders .....	25
Phases of the participative approach .....	25
Diagnosis, definition of development strategic choices and resources management .....	31
Workshops/meetings organization, mobilization methods and stakeholders consultations .....	31
Identified resources and strategic choices .....	32
Participative planning and actions plans .....	38
Added value of the participatory initiatives .....	43
<b>Presentation of synergies .....</b>	<b>46</b>
Synergies with the project's other component .....	46
Synergies with other projects .....	46
<b>Participative approach critical analysis .....</b>	<b>47</b>
Study inputs and limitations .....	47
This study's limitations/weaknesses .....	47
Difficulties encountered and recommendations/solutions found .....	48
<b>Valorization and replication of the participatory approach .....</b>	<b>50</b>
<b>Conclusion .....</b>	<b>51</b>
<b>Bibliography .....</b>	<b>53</b>
<b>Annexes .....</b>	<b>56</b>
Annex 1: Tables .....	57
Annex 2: Figures .....	107
Annex 3: Survey forms .....	144
Survey Form 1: "Questionnaire Forms of R'WOT Technique" Designed to Carry Out the Present Situation Analysis and to Determine the Most Suitable Forest Resources Management Strategies in Düzlerçami Pilot Site, for Filling by Steering Committee, Scientific Committee, and Stakeholders' Committee/Forum .....	144
Survey Form 2: Pair wise Comparison Forms for Determining the Importance of Stakeholders and Sub-stakeholders by the Members of Steering Committee .....	148



Survey Form 3: Pair wise Comparison Forms for Determining the Importance of Decision Criteria by the Members of Steering Committee, Stakeholders' Categories (Local Administration, Local Users Living in the Site, Professional Interests, Economic Interests, and Users of the Catchment Area Coming from Outside), and Scientific Committee.....	153
Survey Form 4: Pair wise Comparison Forms for Determining the Importance of Forest Values According to Each Decision Criterion by the Members of Scientific Committee.....	159
Survey Form 5: Questionnaire Form for Measuring the Stakeholders' Committee/Forum Members' Current Opinions and Involvement in Forest Resources Management in Düzlerçamı pilot site for Pre-Assessments of Participation Process.....	179
Survey Form 6: Questionnaire Form for Measuring the Impacts and Results of Participation Process, and the Stakeholders' Committee/Forum Members' Satisfaction Levels Regarding Involvement in FFEM Initiative in Düzlerçamı pilot site for Post-Assessments of Participation Process.....	180
Survey Form 7: Questionnaire Form for Determining the Sociodemographic Characteristics of the Stakeholders' Committee/Forum Members in Düzlerçamı Pilot Site.....	181
Survey Form 8: Questionnaire Form for Determining the Comments of the Stakeholders' Committee/Forum Members in Düzlerçamı Pilot Site.....	182

## Figures & tables

Figure 1 : Maps indicating location of the Düzlerçamı pilot site (not scaled).....	16
Figure 2 : Forest management targets in Düzlerçamı pilot site (Source: Forest Management Plan of Düzlerçamı)....	18
Figure 3 : Organizational Structure of Antalya Regional Directorate of Forestry.....	20
Figure 4: Organization of the government structure of the participatory approach in Düzlerçamı pilot site .....	25
Figure 5 : Four Phases of the Participatory Approach Methodology Proposed in FFEM Project in Düzlerçamı Pilot Site.....	29
Figure 6: Workshops/meetings organizations of FFEM Project.....	31
Figure 7: Maps indicating land cover and distributions of forest trees for the Düzlerçamı pilot site .....	107
Figure 8: Organizational Structure of Ministry of Forestry and Water Affairs.....	108
Figure 9: Organizational Structure of General Directorate of Forestry .....	109
Figure 10: Rural Organization of General Directorate of Forestry.....	110
Figure 11: The National Inter-Components Meeting or Workshop at 27-28 May 2014, and Düzlerçamı Pilot Site Field Trip with the Participation of the Representatives of the Different Units of the Forestry Organization and FFEM Project Team in Turkey.....	111
Figure 12: General Meeting or Workshop of the FFEM Project with the Participation of Different Stakeholders from Villages and Towns in Düzlerçamı Pilot Site at 25 December 2014.....	111
Figure 13: AHP Decision Hierarchy and Decision Making Model for Phase 3 “ <i>Determining the Priorities of the Forest Values</i> ” of the Participatory Approach Methodology Used in FFEM Project in Düzlerçamı Pilot Site.....	113
Figure 14: The Importance Values and Ranking Orders of the Stakeholders in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique.....	113
Figure 15: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “ <i>Local Administration</i> ” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique.....	114
Figure 16: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “ <i>Local Users Living in the Site</i> ” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique.....	114
Figure 17: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “ <i>Professional Interests</i> ” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique.....	115
Figure 18: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “ <i>Economic Interests</i> ” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique.....	115
Figure 19: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “ <i>Users of the Catchment Area Coming from Outside</i> ” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique .....	116
Figure 20: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of AHP Technique.....	116
Figure 21: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders’ Categories “ <i>Local Administration</i> ” According to Pair wise Comparison of AHP Technique.....	117
Figure 22: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders’ Categories “ <i>Local Users Living in the Site</i> ” According to Pair wise Comparison of AHP Technique .....	117
Figure 23: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders’ Categories “ <i>Professional Interests</i> ” According to Pair wise Comparison of AHP Technique.....	118
Figure 24: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders’ Categories “ <i>Economic Interests</i> ” According to Pair wise Comparison of AHP Technique.....	118
Figure 25: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders’ Categories “ <i>Users of the Catchment Area Coming from Outside</i> ” According to Pair wise Comparison of AHP Technique.....	119
Figure 26: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Scientific Committee According to Pair wise Comparison of AHP Technique.....	119

Figure 27: The Mean Importance Values and Ranking Orders of Decision Alternatives with Respect to Each Criterion according to Pair wise Comparison of AHP Technique, Determined by Sector Experts.....	120
Figure 28: Importance Values and Ranking Orders of the Forest Values in Düzlerçamı Pilot Site, Obtained with the Aid of the AHP Technique.....	121
Figure 29: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, the Weights of all the Stakeholders are Assumed to be Equal, i.e. ( $1/5 = 0,200$ ).....	121
Figure 30: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Stakeholders is assumed to Be 1,000, the Weights of the others are assumed to be 0,000.....	122
Figure 31: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Stakeholders is assumed to Be 1,000, the Weights of the others are assumed to be equal, i.e. ( $1/4 = 0,250$ ).....	122
Figure 32: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Local Administration on the Importance Values and Ranking Orders of Decision Alternatives.....	123
Figure 33: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Local Users Living in the Site on the Importance Values and Ranking Orders of Decision Alternatives.....	123
Figure 34: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Professional Interests on the Importance Values and Ranking Orders of Decision Alternatives.....	124
Figure 35: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Economic Interests on the Importance Values and Ranking Orders of Decision Alternatives.....	124
Figure 36: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Users of the Catchment Area Coming from Outside on the Importance Values and Ranking Orders of Decision Alternatives.....	125
Figure 37: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, the Weights of Decision Criteria are Assumed to be Equal, i.e. ( $1/11 = 0,091$ ).....	125
Figure 38: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Decision Criteria is assumed to be 1,000, the Weights of the others are assumed to be 0,000.....	126
Figure 39: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Decision Criteria are assumed to be 0,000, the Weights of the others are assumed to be equal, i.e. ( $1/10 = 0,100$ ).....	126
Figure 40: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion " <i>Monetary and Financial Contribution to the System of Ministry of Environment and Forest</i> " on the Importance Values and Ranking Orders of Decision Alternatives.....	127
Figure 41: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion " <i>Contribution to Food Security</i> " on the Importance Values and Ranking Orders of Decision Alternatives.....	127
Figure 42: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion " <i>Support to Production of Natural Food</i> " on the Importance Values and Ranking Orders of Decision Alternatives.....	128
Figure 43: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion " <i>Support to Forest Protection</i> " on the Importance Values and Ranking Orders of Decision Alternatives.....	128
Figure 44: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion " <i>Support to Rural Development</i> " on the Importance Values and Ranking Orders of Decision Alternatives.....	129
Figure 45: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion " <i>Support to Employment</i> " on the Importance Values and Ranking Orders of Decision Alternatives.....	129
Figure 46: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion " <i>Support to Exchange Savings</i> " on the Importance Values and Ranking Orders of Decision Alternatives.....	130
Figure 47: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion " <i>Support to the Other Sectors</i> " on the Importance Values and Ranking Orders of Decision Alternatives.....	130
Figure 48: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion " <i>Prominence Due to International Contractual</i> " on the Importance Values and Ranking Orders of Decision Alternatives.....	131
Figure 49: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion " <i>Contribution to Comprehending of Importance of Forest Resources</i> " on the Importance Values and Ranking Orders of Decision Alternatives.....	131
Figure 50: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion " <i>Strengthening to Professional Honour</i> " on the Importance Values and Ranking Orders of Decision Alternatives.....	132
Figure 51: Percentage of Representatives of the Stakeholders' Committee/Forum Participated in the Survey of Fourth Phase of the Participatory Approach by Education Characteristics.....	132

Figure 52: Percentage of Representatives of the Stakeholders' Committee/Forum Participated in the Survey of Fourth Phase of the Participatory Approach by Age Characteristics.....	133
Figure 53: Percentage of Representatives of the Stakeholders' Committee/Forum Participated in the Survey of Fourth Phase of the Participatory Approach by Residence Village Characteristics.....	133
Figure 54: The Mean Scores for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site.....	134
Figure 55: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of Village Administration at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	135
Figure 56: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of Local People at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	135
Figure 57: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of Beekeepers at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	136
Figure 58: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of NWFP Pickers at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	136
Figure 59: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of Hunters at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	137
Figure 60: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of Cutting Workers at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	137
Figure 61: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of Shepherds at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	138
Figure 62: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for All Representatives at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	138
Figure 63: The Mean Scores for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site.....	139
Figure 64: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of Village Administration at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	140
Figure 65: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of Local People at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	140
Figure 66: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of Beekeepers at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	141
Figure 67: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of NWFP Pickers at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	141
Figure 68: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of Hunters at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	142
Figure 69: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of Cutting Workers at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	142
Figure 70: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of Shepherds at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	143
Figure 71: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for All Representatives at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%).....	143
Table 1: Main Stakeholders Involved at Düzlerçamı Pilot Site.....	22
Table 2 : Stakeholders Involved in the Participation Process, and their Objectives, Interests, Roles and Arrangements in the Governance Structure.....	26
Table 3: SWOT Analysis of the Forest Resources Management in Düzlerçamı Pilot Site and the Priorities of the SWOT Factors and Groups for Representatives of "Steering Committee" .....	33
Table 4: SWOT Analysis of the Forest Resources Management in Düzlerçamı Pilot Site and the Priorities of the SWOT Factors and Groups for Representatives of "Stakeholders' Committee/Forum" .....	34
Table 5: SWOT Analysis of the Forest Resources Management in Düzlerçamı Pilot Site and the Priorities of the SWOT Factors and Groups for Representatives of "Scientific Committee" .....	35
Table 6: SWOT Analysis of the Forest Resources Management in Düzlerçamı Pilot Site and the Overall Relative Priorities of the SWOT Factors and Groups for "All Participants" .....	36
Table 7: SWOT Analysis of the Forest Resources Management in Düzlerçamı Pilot Site and the Overall Relative Priorities of the SWOT Factors and Groups for "All Participants" .....	37

Table 8: Importance Values and Ranking Orders of the Forest Values in Düzlerçamı Pilot Site, Obtained with the Aid of the AHP Technique.....	42
Table 9: Results and Hypothesis tested in the Fourth and Final Phase “Assessing the Impacts and Results of participation Process, and Determining the Stakeholders’ Satisfaction Levels with the Participation Level” of the Participatory Approach.....	45
Table 10: Definition of Some Important Key Words .....	56
Table 11: Populations and Areas of Düzlerçamı Settlement Units in the Düzlerçamı Pilot Site.....	58
Table 12: Management Challenges of Düzlerçamı Pilot Site (Yılmaz, 2013d).....	58
Table 13: Competent Authorities by Sectors in Düzlerçamı Pilot Site (Yılmaz, 2013d).....	60
Table 14: Main Threats that Affect the Sustainable Management of Natural Resources in Düzlerçamı Pilot Site (Yılmaz, 2013d).....	62
Table 15: Existing or Potential Conflicts among the Different Stakeholders in Düzlerçamı Pilot Site (Yılmaz, 2013d) .....	66
Table 16: Existing or Potential Synergies among the Different Stakeholders in Düzlerçamı Pilot Site (Yılmaz, 2013d) .....	67
Table 17: Regulatory Instruments Relevant to the Management and Use of the Natural Resources in Düzlerçamı Pilot Site (Yılmaz, 2013d).....	68
Table 18: Planning Activities on the Natural Resources Use and Management.....	71
Table 19: The Example on “ <i>Annual Coordination Meeting for Forest Fire Preventing Activities</i> ” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site (Yılmaz, 2013d).....	71
Table 20: The Example on “ <i>Annual Training and Awareness Meeting Related Forest Fire Preventing for Forest Villagers</i> ” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site (Yılmaz, 2013d).....	71
Table 21: The Example on “ <i>Participation of Local Villagers to Fire Fighting Activities</i> ” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site (Yılmaz, 2013d).....	72
Table 22: The Example on “ <i>Training and Awareness Programs for Hunters</i> ” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site (Yılmaz, 2013d).....	72
Table 23: The Example on “ <i>Research Project: Inventory and Classification of Information Intended for Functional Planning Based Forest Ecosystem in Düzlerçamı Forest Ranger District</i> ” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site (Yılmaz, 2013d).....	73
Table 24: The Example on “ <i>Research Project: Determination of Efficiency at the Level of Agriculture Development Cooperatives in Forest Villages: The Study Case in Antalya</i> ” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site (Yılmaz, 2013d).....	73
Table 25: The example on “ <i>Research Project: Wild Goat (Capra aegagrus Erleben 1777) Population in Antalya-Düzlerçamı Wildlife Progress Area and Evaluation of Its Habitat</i> ” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site (Yılmaz, 2013d).....	74
Table 26: The example on “ <i>Research Project: Fallow Deer (Dama dama L. 1758) Producing and Settlement Techniques</i> ” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site (Yılmaz, 2013d) .....	74
Table 27: Components of the Governance Structure Implemented in Düzlerçamı Pilot Site, and Composition, Mission/Role, Decision-Making Power, Meeting Frequency of Each Component of the Governance Structure.....	75
Table 28: Implemented Phases and Steps of the Participatory Approach and the Stakeholders Involved in Each Phase.....	77
Table 29: Rules and Procedures Subjected to Participation in This Study.....	78
Table 30: National Inter-Components Meeting or Workshop, Düzlerçamı Pilot Site Field Trip of the FFEM Project .....	78
Table 31: The Information Meetings and Coffeehouse Meetings with the Participation of Different Stakeholders from Villages and Towns in Düzlerçamı Pilot Site .....	79
Table 32: General Meeting or Workshop of the FFEM Project with the Participation of Different Stakeholders from Villages and Towns in Düzlerçamı Pilot Site.....	80
Table 33: The Information Meeting and Questionnaire-Survey Filling Studies with the Participation of the Representatives of the Other Public Institutes and Other Some Stakeholders.....	81
Table 34: List of Identified Factors under Each SWOT Category in Düzlerçamı Pilot Site.....	82
Table 35: Values or Status of the Most Priority SWOT Factors as Sustainable Development Indicators Based on the “ <i>Positive Scenarios</i> ” in Düzlerçamı Pilot Site.....	83
Table 36: Values or Status of the Most Priority SWOT Factors as Sustainable Development Indicators Based on the “ <i>Negative Scenarios</i> ” in Düzlerçamı Pilot Site.....	83



Table 37: Action Plans Developed Thanks to FFEM Project – Component 3 and the Propositions of Participative Governance Models in Düzlerçami Pilot Site.....	84
Table 38: The Importance Values and Ranking Orders of the Stakeholders in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique.....	86
Table 39: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “ <i>Local Administration</i> ” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique.....	86
Table 40: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “ <i>Local Users Living in the Site</i> ” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique.....	86
Table 41: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “ <i>Professional Interests</i> ” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique.....	86
Table 42: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “ <i>Economic Interests</i> ” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique.....	87
Table 43: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “ <i>Users of the Catchment Area Coming from Outside</i> ” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique.....	87
Table 44: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Steering Committee According to Pairwise Comparison of AHP Technique.....	87
Table 45: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories “ <i>Local Administration</i> ” According to Pair wise Comparison of AHP Technique.....	88
Table 46: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories “ <i>Local Users Living in the Site</i> ” According to Pair wise Comparison of AHP Technique.....	88
Table 47: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories “ <i>Professional Interests</i> ” According to Pair wise Comparison of AHP Technique.....	89
Table 48: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories “ <i>Economic Interests</i> ” According to Pair wise Comparison of AHP Technique.....	89
Table 49: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories.....	89
Table 50: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Scientific Committee According to Pair wise Comparison of AHP Technique.....	90
Table 51: The Mean Importance Values and Ranking Orders of Decision Alternatives with Respect to Each Criterion according to Pair wise Comparison of AHP Technique, Determined by Sector Experts.....	91
Table 52: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, the Weights of all the Stakeholders are Assumed to be Equal, i.e. ( $1/5 = 0,200$ ).....	92
Table 53: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Stakeholders is assumed to Be 1,000, the Weights of the others are assumed to be 0,000.....	92
Table 54: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Stakeholders is assumed to be 0,000, the Weights of the others are assumed to be equal, i.e. ( $1/4 = 0,250$ ).....	93
Table 55: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, the Weights of Decision Criteria are Assumed to be Equal, i.e. ( $1/11 = 0,091$ ).....	93
Table 56: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Decision Criteria is assumed to be 1,000, the Weights of the others are assumed to be 0,000.....	94
Table 57: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Decision Criteria are assumed to be 0,000, the Weights of the others are assumed to be equal, i.e. ( $1/10 = 0,100$ ).....	94
Table 58: Statistical Techniques Used in the Fourth and Final Phase “Assessing the Impacts and Results of participation Process, and Determining the Stakeholders' Satisfaction Levels with the Participation Level” of the Participatory Approach.....	95
Table 59: Sociodemographic Characteristics of Representatives of the Stakeholders' Committee/Forum Living in Düzlerçami Pilot Site, Who Participated in the Survey of Fourth Phase of the Participatory Approach.....	96

Table 60: Cronbach Alpha Reliability Coefficients of the Scales of Pre-Assessments and Post-Assessments of Participation Process.....	96
Table 61: The Scores for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site.....	97
Table 62: The Results of One-Way Analysis of Variance (ANOVA) for the Differences in Pre-Assessments of Participation Process for the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site.....	99
Table 63: The Results of ANOVA of the Pre-Assessments of Participation Process by Several Demographic Characteristics of the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site.....	100
Table 64: Multiple Linear Regression Results for the Prediction of the Pre-Assessments of Participation Process of the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site by Their Sociodemographic Characteristics.....	101
Table 65: Scores for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site.....	101
Table 66: The Results of ANOVA for the Differences in Post-Assessments of Participation Process for the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site.....	102
Table 67: The Results of ANOVA of the Post-Assessments of Participation Process by Several Demographic Characteristics of the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site.....	104
Table 68: Multiple Linear Regression Results for the Prediction of the Post-Assessments of Participation Process of the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site by Their Sociodemographic Characteristics.....	104
Table 69: Matrix of Correlation Coefficients for the Relationship between the Pre-Assessments of Participation Process and the Post-Assessments of Participation Process within FFEM Initiative of Stakeholders' Committee/Forum Members in Düzlerçamı Pilot Site.....	105
Table 70: Correlation Analysis Results for the Relationship between Education and the Pre-Assessments of Participation Process and the Post-Assessments of Participation Process within FFEM Initiative of Stakeholders' Committee/Forum Members in Düzlerçamı Pilot Site.....	105
Table 71: Correlation Analysis Results for the Relationship between Age and the Pre-Assessments of Participation Process and the Post-Assessments of Participation Process within FFEM Initiative of Stakeholders' Committee/Forum Members in Düzlerçamı Pilot Site.....	106
Table 72: Correlation Analysis Results for the Relationship between Residence Village and the Pre-Assessments of Participation Process and the Post-Assessments of Participation Process within FFEM Initiative of Stakeholders' Committee/Forum Members in Düzlerçamı Pilot Site.....	106

# List of Acronyms

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AHP	Analytic Hierarchy Process
ANOVA	One Way Analysis of Variance
ÇEKÜL	Protection and Promotion of the Environment and Cultural Heritage (Turkish acronym)
ÇEM	Ministry of Forestry and Water Affairs, General Directorate of Combating Desertification and Erosion of Turkey (Turkish acronym)
C3	Component 3 “ <i>Improving Modes of Governance for Mediterranean Forest Ecosystems by Applying the Participative Governance Approaches</i> ” of the FFEM Project
DGEIAPİ	Ministry of Environment and Urbanization, Directorate General of Environmental Impact Assessment, Permitting and Inspection
FAO	Food and Agriculture Organization of the United Nations
FDD	Ministry of Forestry and Water Affairs, General Directorate of Forestry (OGM), Regional Directorate of Forestry (OBM), Forest Districts Directorate
FFEM	French Global Environment Facility Funds=Fonds Français pour l'Environnement Mondial=FGEF
FFEM Project	The project “ <i>Optimizing the production of goods and services by Mediterranean forest ecosystems in a context of global changes</i> ”
GDEA	Ministry of Energy and Natural Resources, General Directorate of Energy Affairs
GDEM	Ministry of Environment and Urbanization, General Directorate of Environmental Management
GDF	Ministry of Forestry and Water Affairs, General Directorate of Forestry (OGM)
GDFC	Ministry of Food, Agriculture, and Livestock, General Directorate of Food and Control
GDH	Ministry of Transport, Maritime Affairs and Communications, General Directorate of Highways
GDHS	Ministry of Health, General Directorate of Health Services
GDIO	Ministry of Culture and Tourism, General Directorate of Investment and Operations
GDLRC	Ministry of Environment and Urbanization, General Directorate of Land Registry and Cadastre (TKGM)
GDNCNP	Ministry of Forestry and Water Affairs, General Directorate of Nature Conservation and National Parks
GDNP	Ministry of Finance, General Directorate of National Property
GDPNA	Ministry of Environment and Urbanization, General Directorate of Protection of Natural Assets
GDSHW	Ministry of Forestry and Water Affairs, General Directorate of State Hydraulic Works (DSİ)
GDTSMS	Ministry of Forestry and Water Affairs, Turkish State Meteorological Service (MGM)
GDWM	Ministry of Forestry and Water Affairs, General Directorate of Water Management
NGO's	Non-Governmental Organizations

MCDM	Multiple Criteria Decision Making
MoCT	Ministry of Culture and Tourism
MoD	Ministry of Development
MoENR	Ministry of Energy and Natural Resources
MoEU	Ministry of Environment and Urbanization
MoF	Ministry of Finance
MoFAL	Ministry of Food, Agriculture, and Livestock
MoH	Ministry of Health
MoI	Ministry of Interior
MoJ	Ministry of Justice
MoND	Ministry of National Defence
MoNE	Ministry of National Education
MoFWA	Ministry of Forestry and Water Affairs
MoSIT	Ministry of Science, Industry and Technology
MoTMAC	Ministry of Transport, Maritime Affairs and Communications
MoYS	Ministry of Youth and Sports
MTA	Ministry of Energy and Natural Resources, Mineral Research & Exploration General Directorate (Turkish acronym)
NPRD	Ministry of Forestry and Water Affairs, National Park Regional Directorate
NWFP(s)	Non-Wood Forest Product(s)
ORMAN-İŞ	Turkish Forest Workers Union (Syndicate) (Turkish acronym)
OR-KOOP	Central Union of Turkish Forestry Cooperatives (Turkish acronym)
PLAN BLEU	Association for Environment and Development in the Mediterranean
RDF	Ministry of Forestry and Water Affairs, General Directorate of Forestry (OGM), Regional Directorate of Forestry (OBM)
RTUK	Prime Ministry Radio and Television Higher Council (Turkish acronym)
R'WOT	SWOT analysis + Ranking method + Linear Combination method
SAFRI	South-West Anatolia Forest Research Institute Directorate
SilvaMED	Silva Mediterranea Committee
SPO	State Planning Organisation (DPT)
SPSS®	Statistical Package for Social Sciences
SUEN	Ministry of Forestry and Water Affairs, Turkish Water Institute (Turkish acronym)
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TMMOB	Union of Chambers of Turkish Engineers and Architects (Turkish acronym)
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forestry Forum
TAGEM	Ministry of Food, Agriculture and Livestock, General Directorate of Agricultural Research and Policy (Turkish acronym)

TARIM-İŞ	(Confederation of Turkish Trade Unions, Workers Syndicate of Forest, Soil-Water, Agriculture and Agriculture Industry (Turkish acronym)
TARIM ORKAM-SEN	Confederation of Civil Servants Trade Unions, (KESK), Agriculture Forestry Public Servants Union (Syndicate) (Turkish acronym)
TÜRÇEK	Turkish Environmental and Woodlands Protection Society (Turkish acronym)
TEMA	Turkish Foundation for Combating Soil Erosion, for Reforestation and the Protection of Natural Habitats (Turkish acronym)
TMMOB	Union of Chambers of Turkish Engineers and Architects (Turkish acronym)
TOÇ BİR-SEN	Confederation of Public Servants Trade Unions, Agriculture-Forest Staff Union (Turkish acronym)
TOD	Foresters' Association of Turkey (Turkish acronym)
TODEG	Ecotourism Group of Foresters' Association of Turkey (Turkish acronym)
TSI	Ministry of Science, Industry and Technology, Turkish Standards Institute (TSE)
TTKD	Turkish Association for the Conservation of Nature (Turkish acronym)
TUBITAK	Ministry of Science, Industry and Technology, The Scientific and Technological Research Council of Turkey (Turkish acronym)
TurkStat	Ministry of Development, Turkish Statistical Institute (DİE)
TÜRK TARIM-ORMAN SEN	Turkish Public Officials Trade Unions of Agriculture, Forest and Food Service Department (Turkish acronym)



# Executive summary

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The project called “Optimizing the production of goods and services by Mediterranean forest ecosystems in a context of global changes (FFEM Project)” was launched by the FAO (Food and Agriculture Organization of the United Nations), coordinated by FAO and PlanBleu. It was implemented from 2013 to 2015 and aimed to manage and/or restore Mediterranean woodlands with a sustainable supply of goods and services from forest ecosystems perspective in the following five partner countries: Turkey, Morocco, Tunisia, Algeria and Lebanon. To achieve this aim, the FFEM (French Global Environment Facility) project has been structured around five components. This report explains the activities and results of the 3<sup>rd</sup> Component “Improving modes of governance for Mediterranean forest ecosystems by applying participative governance approaches” in Düzlerçamı pilot site in Turkey.

There were five stakeholders’ categories that are involved in the participation process in Düzlerçamı pilot site: Local Administration (Antalya RDF, Antalya NPRD, and Local Governments), Local Users Living in the Site (Local People, Beekeepers, NWFP Pickers, Shepherds, and Hunters), Professional Interests (SAFRI, University, Other Public Institutes, NGOs, and TMMOB), Economic Interests (Cutting Workers, Private Sector, and Tourism Agencies), and Users of the Catchment Area Coming from Outside (Picnickers and Ecotourists).

Questionnaire-Survey Filling Studies, Düzlerçamı pilot site field trips, National Inter-Components and Information Meeting, Information Meetings, Coffeehouse Meetings, Participatory Workshop Activities, Coffeehouse Meetings, Informal Interviews, Direct Observation, etc. were organised for the dialog and coordination, shared the experiences, exchange of information among all participants, emphasizing interaction and exchange of information among them, discussed the possible integrated activities among different components of the FFEM Project etc. in Düzlerçamı pilot site.

There were three phases of the participatory approach methodology used in FFEM Project in Düzlerçamı pilot site: 1- Present Situation Analysis and Strategy Formulation, 2- Determining the Priorities of the Forest Values, and 3- Assessing the Impacts and Results of Participation Process, and Determining the Stakeholders’ Satisfaction Levels with the Participation Level.

At the end of first phase, it was yielded the analytical priorities for the factors included in SWOT analysis and made them commensurable with each other. At the end of second phase, according to results, Wood Production Value as a production value was rated less important of the all values, while Environmental Value was considered the most important forest value for the participants. At the final phase, statements that the participants ranked the most agreed statement and the least agreed one were determined for pre-assessments of participation process within FFEM initiative.

It was believed that C3 of FFEM Project had generated some information on participatory approach and methodology of forest resources management in Turkey and other Mediterranean regions. Future research is needed to address the limitation of the current Düzlerçamı pilot study.

**Keywords:** FFEM Project, Component 3, Participatory Approach, Mediterranean, Düzlerçamı, Antalya, Turkey.

# Context

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## STUDY CONTEXT

Stakeholder analysis is an approach and a procedure for understanding a system by identifying its key actors or stakeholders in the system, and assessing their respective interests in that system (Grimble and Chan, 1995). The knowledge of stakeholders' behaviour, intentions, interrelations, interests, and the influence on the resources is important for the decision making process (Brugha and Varvasovszky, 2000). Thus, stakeholder analysis can help to bridge the gap between stakeholders' expectations and policy's objectives (Chevalier and Buckles, 1999). The identification and documentation of the factors and the scientific findings for the stakeholders' analysis provides better basis to the policymakers in order to formulate a sound forest policy (Krott, 2005). Stakeholders' analysis has been found to be especially useful for the study of issues pertaining to the natural resource management, equity and development. The objective of this study is to evaluate the stakeholders' perceptions towards the development of a sustainable forest resources policy. The R'WOT framework was used to analyse their perceptions.

Strategy evaluation for forest resources management is problematic because there are several possible strategies and it requires a Multi Criteria Decision Making (MCDM) analysis to choose the best ones. Government agencies are poorly equipped in terms of appropriate strategies choices which fit their particular context. This paper proposes a MCDM-based SWOT analysis for the evaluation of alternative forest resources management strategies for Düzlerçamı pilot site.

The main contribution of this phase is to add a comparative analysis to the SWOT analysis of forest resources management and to determine the priorities of the SWOT groups, their factors, and forest resources management strategies. When the forest resources management literature was reviewed, we understood that a numerical tool for the evaluation of the criteria and the strategies was needed. This phase of the study provides an analytical tool for the people who are responsible for determining forest resources management strategies by means of Düzlerçamı case study. The R'WOT tool used in this phase includes three well-known techniques, "SWOT Analysis", "Ranking Technique" and "Linear Combination Technique". These techniques have been used for various sectors with different aims in Turkey before.

The demand for sound scientific information and public participation in nature conservation and forest policy has rapidly expanded in national level as well as international policy arenas (Mills and Solberg, 1998; Daniels and Walker, 2001). In 1992, the United Nations (UN Conference on Environment and Development—Agenda 21) formally recognized the access to natural resources' information and public participation as priorities. These principles were stressed in 1998 (United Nations Economic Council for Europe, Aarhus Convention), 2002 (United Nations World Summit on Sustainable Development), and 2003 (Ministerial Conference on the Protection of Forests in Europe).

The objectives of public participation were to communicate knowledge about decisions and hear public opinions before the final decision making of those agencies. Examples of consensus building and conflict management through collaborative problem solving, negotiation, conciliation and mediation, and joint decision making are rare, but are increasingly recognized as potential forest policy tools for forest resources management in Turkey.

In this study, it was intended to develop and test "tools" (ranging from overall approaches to specific techniques) to enhance the planning, design and prospective management of forest resources in Düzlerçamı pilot site, applicable to the diversity of Mediterranean contexts and inclusive of all stakeholders.

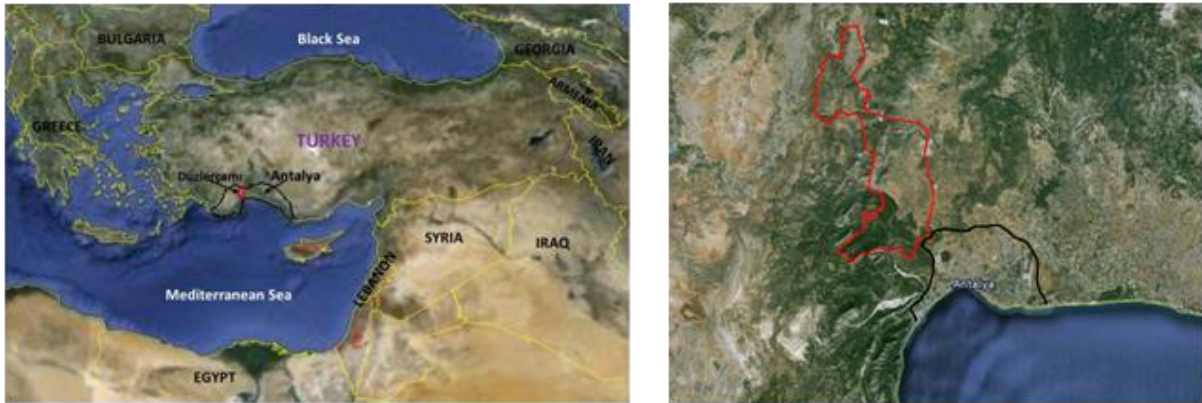
Participation in natural resources decision making is increasingly becoming regarded as a democratic right, which is increasingly being used by the boosted environmental interest and pressure groups.

The main objective of sustainable forest management is to meet the needs and aspirations of the current generation without damaging the future ones. Preventing local people from over-utilizing forests has been proven unsuccessful in top-down type governmental forest policies due to the difficulties of monitoring and enforcement (Arnold, 1991). Thus, forest management policies have shifted toward people-oriented management and provision of a continuous flow of multiple benefits. In this regard, forest management authorities have placed the highest priority on participatory forest programs, which encourage local communities to voluntarily get involved in the management of forest resources to protect, manage, and develop forests in a sustainable way.

## PILOT SITE DESCRIPTION

The exact location of Düzlerçamı pilot site, chosen as the pilot site for FFEM Project in Turkey, is in the boundaries of Antalya City and Antalya Forest District. Distance from Antalya City is 10 km. It is located in Southwest part of Turkey and in the boundaries of Antalya city (Figure 1).

Figure 1 : Maps indicating location of the Düzlerçamı pilot site (not scaled)



Climate is arid and moist. Rainfall is moist, semi-humid and semi-arid. Main rock (limestone) and soil type is typical for other areas in the Mediterranean region. Total land area is approximately 29,000 ha. Surface area of woodland on the site is approximately 19,000 ha (65%). Site has also a typical structure of Mediterranean landscape and vegetation type. It has different types of forests such as coniferous, broadleaves and mixed forests. *Pinus brutia* and shrubs are widely distributed in the site. Generally, productive forests are located in the south part of the area, and degraded ones in the north part. Productive forest area is around 6,810 ha or approximately 35% of total forest area in the pilot site. The site is under high fire risk because of the fire-sensitive ecosystem. For example, *Pinus brutia* forest ecosystem, which is common on the site, is quite sensitive during the summer period together with the human activities (Figure 7).

Moreover, there are 15 settlement units (villages or county town). On the site, population is estimated at 28,000 inhabitants. However, population-both living in and out the site-should be taken into account while analysing Component 3 issues (Table 11). Socio-economic activities in the site include agriculture, livestock farming, jobs generated by forest services, harvesting of non-timber forest products (acorns, pine nuts, aromatic and medicinal plants, honey, etc.), beekeeping, fuelwood gathering, sheepherding, free trade and recreational activities (tourism and hunting), etc.

There are 430 plant taxa belonging to 288 species and 76 families. 33 of them are endemic plants (8% endemism rate approximately). In the site, there are 24 endangered plant species according to IUCN while 2 plants (*Cyclamen coum* and *Alkanna pinardii*) are endangered according to Bern Convention.

15 mammals species, 19 reptiles species and 53 birds species are present in the site. There is a "Fallow Deer (*Dama dama*) Conservation Area and Production Station" in the area. Fallow Deer population is a unique natural population in the world. Also, there are "Düzlerçamı Wildlife Progress Area" and "Güver Canyon Nature Park" in the site. Some mammals (*Capra aegagrus*, *Lynx lynx*), reptiles (*Testudo graeca*, *Coluber* spp.) and birds (*Accipter nisus*, *Buteo buteo*) and other important wildlife species are present.

According to Expert opinions and related literature, there are main management challenges are faced to ensure the sustainable management of natural resources and ecosystem services in Düzlerçamı pilot site (Table 12) (Yılmaz, 2013d). In Düzlerçamı pilot site, there are many competent authorities that have the control over the natural resources sectors such as natural resources conservation, forestry, agriculture, livestock farming, fishing, tourism, urban and rural spatial planning, water management, hunting and wildlife management and outdoor recreation (Table 13) (Yılmaz, 2013d). In addition, there are some main threats that affect the sustainable management of natural resources in Düzlerçamı pilot site (Table 14) (Yılmaz, 2013d). Besides, some existing or potential conflicts are present among the different stakeholders in Düzlerçamı pilot site (Table 15) (Yılmaz, 2013d). Also, there are synergies among the different stakeholders on sustainable management of natural resources in Düzlerçamı pilot site (Table 16) (Yılmaz, 2013d).

Also, in examining instruments relevant to the management and use of natural resources, there are many regulatory instruments which govern the management and use of the natural resources on the site (Table 17). These instruments include numerous laws relative to forest activities, grazing, mining, hunting, etc. national strategy-action plans, regional development plans, national programmes, and management plans provide a framework for silviculture, grazing, the protection of biodiversity, the fight against desertification, socio-economic development in villages, fire prevention, the

development of non-timber forest products, etc. Appropriate measures to meet the global responsibilities should be taken into account towards taking care of the national conditions and interests. For this purpose, global responsibilities, international treaties and processes which Turkey is the party should be taken into consideration (Yılmaz, 2013d).

There were some reasons that motivated the choice of Düzlerçamı pilot site in view of the challenges and objectives of the Component 3 (C3) of the FFEM project:

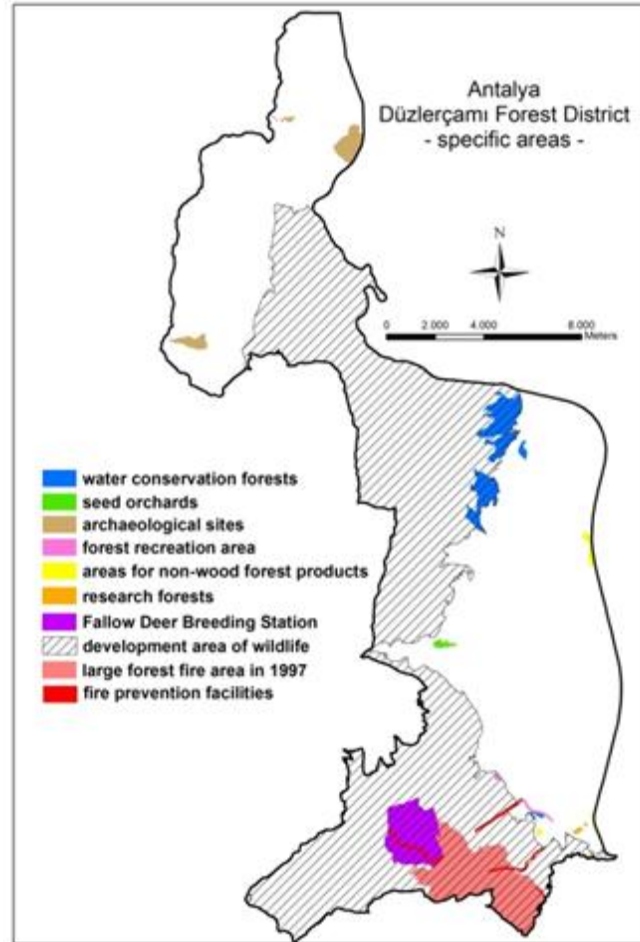
- Düzlerçamı pilot site has an eminent urgency of prevention or protection for one or more environmental, cultural or biological resource that is endangered or threatened.
- The Düzlerçamı region had typical characteristics of Mediterranean biological, physical, ecological, social, economic, cultural, managerial, and political structures. Selection of Düzlerçamı pilot site covered a wide range of these Mediterranean ecosystems' characteristics.
- Düzlerçamı pilot site was chosen as the study site because its characteristics covered a wide range of Mediterranean ecosystems, e.g. climate, rainfall, soil types, landscape and vegetation types, forest types, flora, fauna, etc.
- There is a significant human activities interfering with the natural cycles of the resources and interacting with their management practices in Düzlerçamı pilot site.
- Different interest and beneficiary groups in Düzlerçamı pilot site had multiple demands and expectations (product, service, function) from the forests in this region. Among these interest and beneficiary groups; state forest organization, local people (forest villagers), private sector, forest products and services consumers/users, non-governmental organizations (NGOs), research and training institutions, urban populations, local authorities, forestry firms etc. could be mentioned. So, Düzlerçamı pilot site was compliance with specific criteria for the implementation of participatory approaches
- Consistency and synergies were sought between the FFEM Project components, while attempting to combine as many components as possible on a single site, in particular C3 regarding participatory since its governance was cross-disciplinary and should be associated with other components. Düzlerçamı pilot site had the possibility of synergies with activities planned in other components of the FFEM Project on the same site.
- The conducted experiments in the Düzlerçamı pilot site were to act as demonstrators and to be transferable to other contexts in the Mediterranean sub-regions in Turkey and other countries.
- Düzlerçamı region has multiple-valued forest resources, different and conflicted interest groups and different competent authorities in the area. Consequently, pilot site selection was in line with Turkey's forestry priorities.
- There was a history of dialogue, collaboration, and participatory initiatives in Düzlerçamı pilot site and a platform of stakeholders on whom to rely on to implement the participatory approach. Actually, participatory governance approaches might have been tested in the area facilitating the start-up of the approach (existing analyses of the area and motivated stakeholders).
- The Managers of Antalya Regional Directorate of Forestry (OBM or RDF) and Village Administration are local facilitators or coordinators and could help ensure the dialog and coordination between project owners and concerned stakeholders during the participatory process (facilitating participation, running the workshops, ensuring coordination between project owners and local stakeholders).
- Düzlerçamı pilot site was a good example for the other Mediterranean parts of Turkey where forest managers required to be informed as policy makers.
- Düzlerçamı pilot site had natural, ecological and cultural importance and contain many resources with international significance, i.e. biodiversity potential, fallow deer conservation area and production station, wildlife progress area, nature park, special habitats for endemic and endangered species, etc.

## Pilot site management targets and project issues

Forest management targets in Düzlerçamı pilot site include water conservation, seed orchards, archaeological sites, forest recreation, non-wood forest product production, research aims, Fallow Deer breeding, wildlife development, and fire production (Figure 2).



Figure 2 : Forest management targets in Düzlerçamı pilot site (Source: Forest Management Plan of Düzlerçamı)



## Management and planning tools in place on the pilot site, and stakeholders involved

### Forests organization and governance within the country

Among the organizations which have direct or indirect relations with forestry in Turkey, the following can be mentioned ; state forest organization (MoFWA), forest villagers organizations (forest village cooperatives and higher unions), universities and research institutions (forestry faculties, other universities, Turkish Scientific and Technical Research Institution - TÜBİTAK), private sector organizations (forest products industry organizations, forest products domestic and foreign trade companies, ecotourism and game tourism firms, private nurseries, forestry planning and implementation services firms), NGOs, and forestry institutions, hunters associations, local authorities and other state organizations (different Ministries and General Directories, such as MoCT, MoFAL, GDLRC, GDSHW, TurkStat, SPO, TSI, GDNP, etc.).

State forest organization which was established under the MoFWA is among the oldest state organizations in the country with the units which have experienced staff in different forestry subjects and cover the entire country. Central organization of the Ministry of Environment and Forestry consists of three main service units and four affiliated institutions (Figure 8).

GDF, which makes the decisions at national level, is responsible for protecting forestry and its resources against danger of all sorts while developing them in a nature-friendly approach and managing forestry and its resources within the integrity of ecosystem and in a manner that will avail the society of multi-purpose sustainable outcomes. It was shown the GDF's central organization (Figure 9) and the provincial organization (Figure 10).



Antalya RDF is responsible for managing forest resources in Düzlerçamı pilot site. RDF's duties are to develop forests; to protect against improper and illegal interventions, natural disasters, fires and various harmful insects and to ensure the needed control; to manage and operate forests according to technical and economic requirements, to ensure their continuance, to undertake and to have done the work and procedures for the production, transportation and storage of forest products, to market these products, to develop and improve forests and to undertake afforestation, etc. As shown in the organizational structure of Antalya RDF (Figure 3), there are fifteen Branch Directorates, thirteen Forest District Directorates, and one Forestry Sapling Directorate linked to Antalya FRD.

The sixth National Park Regional Directorate (NPRD) – Antalya Branch Directorate which is under the MoFWA is responsible for nature protection and wildlife issues in Düzlerçamı pilot site. The objectives of the BBM are to protect and develop wildlife and hunting resources as well as in-forest water resources, rivers, lakes, ponds, wetlands, and vulnerable areas in order to carry out and commission work and procedures regarding all studies, inventories, planning, designing, implementation and monitoring the regulation of land hunting, management and control of hunting resources and to establish and commission the accomplishment of facilities regarding these services

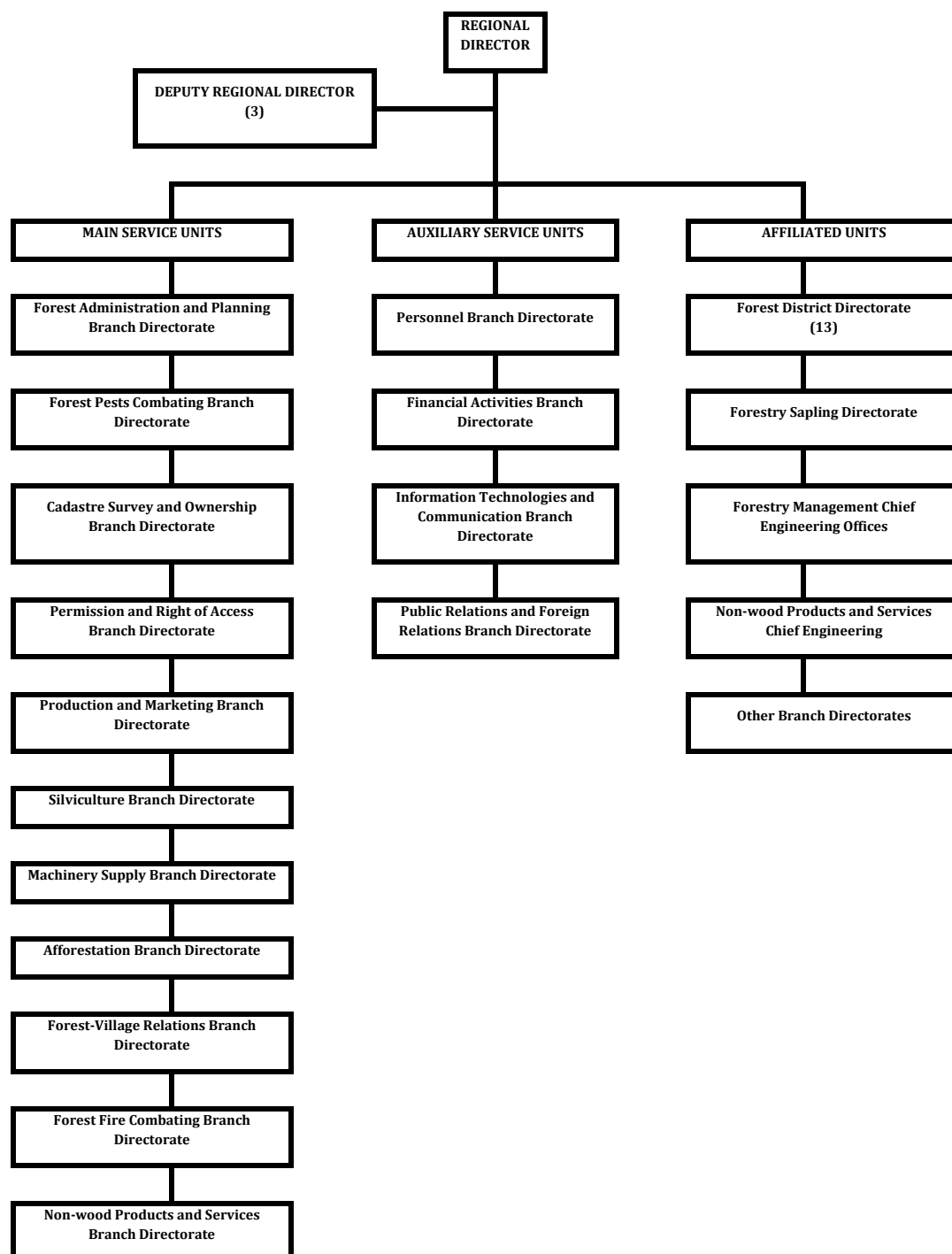
Besides, another forest organization in Düzlerçamı pilot site which is South-west Anatolia Forest Research Institute (SAFRI) linked directly to GDF.

### The tools accompanying the natural resources use and management

Planning activities related to the natural resources' use and management in Turkey has a long history which had started with the various and multi-levelled plans and projects. The subjects have been prepared and implemented by different units of forestry organization. Some planning/projects activities in forestry and natural resources management are showed in Table 18.

The studies (dealing with forestry policies, preparation and implementation of tools accompanying the natural resources use and management, evaluation of the implementations and improvements) had mainly been carried out by the state forest organization. However, the participation and contributions of other community parties were lacking. In order to fill in this deficiency, great efforts have presently been spent to get the representatives of different institutions and stakeholders to participate in the studies related to preparing and implementing different natural resources management recent documents. For example:

Figure 3 : Organizational Structure of Antalya Regional Directorate of Forestry.



- The representatives of different institutions and stakeholders have been participating, including forest organizations and forestry faculties to some studies on preparing “Forestry Special Task Commissions’ Reports” which is executed by SPO every five years in order to lighten the preparation of forestry section of the development plans.
- “National Forestry Programme (2004-2023)” was prepared with the participation of the representatives from the forestry organization and other related institutions, administrations and stakeholders (forest villagers NGO’s, other ministries, related state organizations, universities, private sector agencies etc.) in order to receive the views, comments and suggestions with some contributions from sector experts.

- In the preparation process of the “*Strategic Plans of GDF*”, all participation channels have been kept open, consistent with participation principals. Surveys-including questions on subjects which will direct the view of the General Directorate to the future\_-have been distributed according to the personnel organization, external target group, nongovernmental organizations (and other public organizations), and current goods and services provided by the General Directorate. The surveys have been filled by internal personnel, external target groups, nongovernmental organizations and other public organizations. In order to analyse the GDF' situation, workshop was held to involve people from nongovernmental organizations, forestry faculties, forest-village cooperatives, other public organizations, Ministry, headquarter and provincial units of GDF.
- “*Forestry Research Master Plan*”, which ensures the policy, strategy, priority and principles for forestry research studies, mentions that efforts should be made to strengthen and improve dialog among researchers, implementation units and other stakeholders, based on dissemination and utilization of research results to the implementers.
- In “*Forestry Faculties*”, efforts have been spent to strengthen the dialog and cooperation among forest faculties, other education institutions, forest organization and other stakeholders,
- “*Training, public relations and awareness activities*” of the MoFWA, have been executed by: the chairmanships' department at the Ministry, GDF central units, and the units at branch directorate level in the provincial of the Ministry and GDF. Current studies are generally focused on service and information training while creating general awareness in the community. Strengthening by training and the extension and awareness activities for main stakeholders (forest villagers, politics and local authorities, etc.) beyond schools and hunters are among the important needs.

Despite these efforts, participation of stakeholder groups remain insufficient, and far from the expected level. Identification of appropriate participatory methodologies should ensure the appropriate participation of local forest villagers and other stakeholder groups of forest resources management (in decisions, authority, responsibilities and sacrifices). Moreover, the necessary participatory approach's legislation and development studies should be carried out. On the other hand, Functional forest resources management plans should be prepared, covering all forestry activities involving local people and other stakeholder groups while applying all the approved implementations.

### The state of the governance organization in the pilot site

The stakeholders can take the form of a person, a group, an organization, a member or a system which have an interest in Düzlerçamı pilot site whether by protecting, developing, using or managing natural resources. The main stakeholders and their interests in the pilot site are shown in the Table 2. These stakeholders are as follows:

- MoFWA, GDF, Antalya RDF,
- MoFWA, GDNCNP, Sixth National Park Regional Directorate (NPRD) – Antalya Branch Directorate,
- Local Governments (Governorship, District Governorate, Municipality, Village Administration),
- Research Institutes / Universities,
- Other Ministries and General Directorates (MoFWA ÇEM, GDTSMS, GDSHW, GDLRC, MoSIT, TUBITAK, MoFAL, MoCT, Ministry of Interior, RTUK, TurkStat, MoTMAC, MoEU, MoENR, SPO, MoF, Mini MoNE, MoH, MoJ, MoYS, Military Forces),
- Beekeepers,
- Cutting Workers,
- NWFP Pickers,
- Shepherds,
- Hunters,
- Local People,
- Picnickers,
- Ecotourists,
- Private Sector,
- Tourism agency,
- The Turkish Environmental and Woodlands Protection Society (TÜRÇEK),
- The Foresters' Association of Turkey (TOD),
- The Turkish Association for the Conservation of Nature (TTKD),
- The Protection and Promotion of the Environment and Cultural Heritage (ÇEKÜL),
- The Turkish Foundation for Combating Soil Erosion, for Reforestation and the Protection of Natural Habitats (TEMA),
- The Central Union of Turkish Forestry Cooperatives (OR-KOOP) and its local cooperatives,

- The Union of Chambers of Turkish Engineers and Architects (TMMOB) Chamber of Forestry Engineers, Chamber of Agricultural Engineers, Chamber of Landscape Architects, Chamber of Environmental Engineers, Chamber of Architects,
- Workers and Civil Servants Unions [TOÇ BİR-SEN (Confederation of Public Servants Trade Unions, Agriculture-Forest Staff Union), TÜRK TARIM-ORMAN SEN (Turkish Public Officials Trade Unions of Agriculture, Forest and Food Service Department), TARIM ORKAM-SEN (Confederation of Civil Servants Trade Unions - KESK, Agriculture Forestry Public Servants Syndicate), ORMAN-İŞ, TARIM-İŞ (Confederation of Turkish Trade Unions, Workers Syndicate of Forest, Soil-Water, Agriculture and Agriculture Industry) etc.].

**Table 1: Main Stakeholders Involved at Düzlerçamı Pilot Site**

ID	STAKEHOLDER NAME	STAKEHOLDER TYPE	ROLES AND INTERESTS OF STAKEHOLDER	GOODS AND SERVICES RELATED TO STAKEHOLDER USES & INTERESTS
1	MoFWA, GDF, Antalya RDF	Governmental Actor	Owner, Manager, Policy Maker	Industrial wood, Fuel wood, Food, Fodder and forage, Hunting and game products, Biodiversity conservation, Forest conservation, Fire prevention and/or suppression, Water purification/water quality, Carbon sequestration, Health protection, Recreation, Spiritual and cultural services, Aesthetic services, Historical and educational services, Environment conservation, Environmental education, Ecotourism, Afforestation, Rural development, Soil erosion combating, Harvesting, NWFPs, Employment, etc.
2	MoFWA, GDNCNP, Sixth National Park Regional Directorate (NPRD) – Antalya Branch Directorate	Governmental Actor	Owner, Manager, Policy Maker	Hunting and game products, Biodiversity conservation, Forest conservation, Recreation, Tourism, Aesthetic services, Historical and educational services, Environment conservation, Environmental education, Ecotourism, Forestry publications, Forestry science and technology, Social activities, Employment, etc.
3	Local Governments (Governorship, District Governorate, Municipality, Village Administration)	Governmental Actor	Manager, Policy Maker	Rural development, Development of local knowledge, Afforestation, Employment, etc.
4	Research Institutes / Universities	Research Centres and Universities	Researcher	All types of interest
5	Other Ministries and General Directorates (MoFWA ÇEM, GDTSMS, GDSHW, GDLRC, MoSIT, TUBITAK, MoFAL, MoCT, Ministry of Interior, RTUK, TurkStat, MoTMAC, MoEU, MoENR, SPO, MoF, Mini MoNE, MoH, MoJ, MoYS, Military Forces)	Governmental Actor	Manager, Policy Maker	Different types of interest
6	Beekeepers	User of the Natural Resources	User	Food, Health protection, Ecological Agriculture, etc.
7	Cutting Workers	User of the Natural Resources	User	Industrial wood, Fuel wood, Rural development, Harvesting, Employment, etc.
8	NWFP Pickers	User of the Natural Resources	User	Food, Pharmaceuticals and medicinal, Ecological Agriculture, Rural development, NWFPs, Employment, Forest product marketing, etc.
9	Shepherds	User of the Natural Resources	User	Food, Fodder and forage, etc.
10	Hunters	User of the Natural Resources	User	Food, Hunting and game products, Recreation, Tourism, Rural development, Employment, etc.
11	Local People	User of the Natural Resources	User, Volunteer	Industrial wood, Fuel wood, Mushroom, Food, Fodder and forage, Biodiversity conservation, Forest conservation, Fire prevention and/or suppression, Water purification/water quality, Carbon sequestration, Soil protection, Health protection, Environment conservation, Ecological agriculture, People's participation, Afforestation, Development of local knowledge, Rural development, Social activities, Water resource management, Soil erosion combating, Sustainable land use, Harvesting, Employment, etc.
12	Picnickers	User of the Natural Resources	User	Industrial wood, Fuel wood, Mushroom, Food, Fodder and forage, Biodiversity conservation, Forest conservation, Fire prevention and/or suppression, Water purification/water quality, Carbon sequestration, Soil protection, Health protection, Environment conservation, Ecological agriculture, People's participation, Afforestation, Development of local knowledge, Rural development, Social activities, Water resource management, Soil erosion combating, Sustainable land use, Harvesting, Employment, etc.
13	Ecotourists	User of the Natural Resources	User	Biodiversity conservation, Forest conservation, Health protection, Recreation, Tourism, Spiritual and cultural services, Aesthetic services, Historical & educational services, Environment conservation, Environmental education, Ecotourism, Development of local knowledge, Rural development, Social activities, etc.

14	Private Sector	User of the Natural Resources	User	Industrial wood, Fuel wood, Hunting and game products, Pharmaceuticals and medicinal, Recreation, Tourism, Ecotourism, Ecological Agriculture, Afforestation, Rural development, Harvesting, Forest product marketing, Forest product export and import, etc.
15	Tourism agency	User of the Natural Resources	User	Hunting and game products, Recreation, Tourism, Ecotourism, Rural development, Social activities, etc.
16	The Turkish Environmental and Woodlands Protection Society (TÜRÇEK)	Non-governmental Organization (NGO) and Association	Volunteer	Biodiversity conservation, Health protection, Environment conservation, Environmental education, Ecotourism, Ecological Agriculture, People's participation, etc.
17	The Foresters' Association of Turkey (TOD)	NGO and Association	Volunteer	Environmental education, Ecotourism, Forestry publications, Forestry science and technology, etc.
18	The Turkish Association for the Conservation of Nature (TTKD)	NGO and Association	Volunteer	Environmental education, Afforestation, Research and development, Development of local knowledge, Rural development, Social activities, etc.
19	The Protection and Promotion of the Environment and Cultural Heritage (ÇEKÜL)	NGO and Foundation	Volunteer	Biodiversity conservation, Spiritual and cultural services, Historical & educational services, Environment conservation, Environmental education, Afforestation, Rural development, etc.
20	The Turkish Foundation for Combating Soil Erosion, for Reforestation and the Protection of Natural Habitats (TEMA)	NGO and Foundation	Volunteer	Biodiversity conservation, Environment conservation, Environmental education, Water resource management, Soil erosion combating, Sustainable land use, etc.
21	The Central Union of Turkish Forestry Cooperatives (OR-KOOP) and its local cooperatives	NGO and Cooperative	Volunteer	Industrial wood, Fuel wood, Forest conservation, Afforestation, Forestry publications, Harvesting, NWFPs, Employment, Forestry credits, Forest product marketing, Forest product export and import, Forestry consultancy, etc.
22	The Union of Chambers of Turkish Engineers and Architects (TMMOB) Chamber of Forestry Engineers, Chamber of Agricultural Engineers, Chamber of Landscape Architects, Chamber of Environmental Engineers, Chamber of Architects	NGO and Professional Organization	Volunteer	Forest conservation, Environment conservation, Spiritual and cultural services, Aesthetic services, Historical & educational services, Environmental education, Forestry publications, Forestry science and technology, Rural development, Social activities, Forestry consultancy, Training and meeting, etc.
23	Workers and Civil Servants Unions [TOÇ BİR-SEN (Confederation of Public Servants Trade Unions, Agriculture-Forest Staff Union), TÜRK TARIM-ORMAN SEN (Turkish Public Officials Trade Unions of Agriculture, Forest and Food Service Department), TARIM ORKAM-SEN (Confederation of Civil Servants Trade Unions - KESK, Agriculture Forestry Public Servants Syndicate), ORMAN-İŞ, TARIM-İŞ (Confederation of Turkish Trade Unions, Workers Syndicate of Forest, Soil-Water, Agriculture and Agriculture Industry) etc.]	NGO and Union	Volunteer	People's participation, Social activities, Employment, Training and meeting, etc.

Source: Yilmaz, 2013d



# Participative approach for improved governance

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## PARTICIPATIVE APPROACH IN THE PILOT SITE

### Objective of the participative approach in the pilot site

The overall management and development objectives set for the site and aiming for a sustainable management of natural resources in a context of climate change and anthropogenic pressure are the following:

- Adapt forest management and forest ecosystems to climate change and mitigate climate change;
- Improve the prevention of risk and damage from forest fires;
- Reduce anthropogenic pressure on ecosystems;
- Improve the provision of ecosystem goods and services for inhabitants (all users – locals, visitors and catchment's users);
- Alleviate poverty and foster rural development.

The specific objectives of the participatory approach in the pilot site are:

- To collect and gain insight about the preferences, opinions and expectations of stakeholders, in so the governmental organizations will take them into consideration during the decision making processes concerning the sustainable management of natural resources, particularly in the determination of the priorities of the forest values.
- Facilitate the exchange of knowledge and experience on priorities of forest values among stakeholders and promote common and joint learning about the problems and their solutions (communication and awareness-raising).

There are more general (long term) objectives, such as:

- Facilitate the resolution of disputes, increase the involvement of local actors in site management, and increase their trust in governmental organizations, administrators and decision makers.
- Improve\_ through collaborative means- the decisions, plans and policies relating to natural resources management.

Descriptions, starting date, ending date, weaknesses and strengths, and the other detailed information of these examples of the current and past participation mechanisms/tools/initiatives at Düzlerçamı pilot site that allowed stakeholders' participation in decision-making and implementation processes are shown from Table 19 to Table 26. A variety of participatory initiatives (before this study in the pilot site) have been undertaken in Düzlerçamı pilot site, with varying degrees of participation on the part of the actors, and ranging from mere consultation (low level of participation) to active involvement (high level of participation) in decision-making and in the implementation of actions. Some of these initiatives include: annual coordination meetings for forest fire preventing activities, annual training and awareness meeting related to forest fire preventing targeting the villagers, participation of local villagers in forest fire fighting activities, training and awareness programs for hunters and finally some research projects such as: *"Inventory and Classification of Information Intended for Functional Planning Based Forest Ecosystem in Düzlerçamı Forest Ranger District"*, *"Determination of Efficiency at the Level of Agriculture Development Cooperatives in Forest Villages: The Study Case in Antalya"*, *"Wild Goat (Capra aegagrus Erxleben 1777) Population in Antalya-Düzlerçamı Wildlife Progress Area and Evaluation of Its Habitat"* and *"Fallow Deer (Dama dama L. 1758) Producing and Settlement Techniques"* carried out by SAFRI.

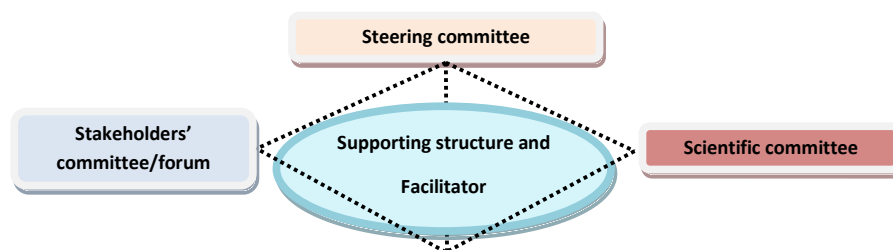
## Governance structure

### The governance structure implemented by this study

There are five components of the government structure of the participatory approach in Düzlerçamı pilot site (Figure 4):

1. Steering committee,
2. Supporting structure,
3. Facilitator,
4. Scientific committee,
5. Stakeholders' committee/forum.

Figure 4: Organization of the government structure of the participatory approach in Düzlerçamı pilot site



Source: Yilmaz, 2013d

Table 27 shows the description of components of the governance structure implemented and how they function (composition, mission/role, decision-making power, meeting frequency, etc.).

### The differences with respect to the structure expected in the methodology

There is no change in the description of components of the governance structure to implement in the pilot site in the methodological document. So, components of the governance structure to implement were not modified along the participation process.

### Identifying involved stakeholders

Table 3 shows the stakeholders that were involved in the participation process, and their objectives/interests, roles, organizational forms, mobilization and participation approaches in the governance structure. There are five stakeholders' categories that are involved in the participation process in Düzlerçamı pilot site: Local Administration, Local Users Living in the Site, Professional Interests, Economic Interests, and Users of the Catchment Area Coming from Outside. "Local Administration" consists of Antalya RDF, Antalya NPRD, and Local Governments (Governorship, Provincial Local Administration, District Governorate, Municipality, and Village Administration). "Local Users Living in the Site" comprises Local People, Beekeepers, NWFP Pickers, Shepherd, and Hunters. "Professional Interests" contains SAFRI, University, Other Public Institutes, NGOs, and TMMOB. "Economic Interests" includes Cutting Workers, Private Sector (Forest Products Industry), and Tourism Agencies. "Users of the Catchment Area Coming from Outside" consists of Picnickers and Ecotourists (Table 3).

### Phases of the participative approach

#### The implemented phases of participative approach and the stakeholders involved in each phase

Implemented phases and steps of the participatory approach and the stakeholders involved in each phase are shown in Table 28 according to which there were four phases of the participatory approach methodology used in FFEM Project in Düzlerçamı pilot site (Figure 5):

1. Building up the governance structure,
2. Present situation analysis and strategy formulation,
3. Determining the priorities of the forest values,
4. Assessing the impacts and results of participation process, and determining the stakeholders' satisfaction levels according to their participation.

In the first phase, we identified the members of the Steering committee, Stakeholders' committee/forum, Support structure, Facilitator and Scientific committee. A list has also been prepared to build up the governance structure and to set the rules of participation and decision in each component of governance structure. In this context, some rules and procedures subjected to participate in this study are shown in Table 29.

The objectives of Phase 2 "Present Situation Analysis and Strategy Formulation" of the participatory approach were as follows:

1. To assess the effects of environmental, social and economic factors related to forest resources management by using the participatory approach in the pilot site,
2. To analyse internal (strengths and weaknesses) and external (opportunities and threats) environments in order to attain a systematic approach and support for decision situation in pilot site, and to provide a good basis for successful strategy formulation,

3. To use the SWOT analysis more effectively by using a hybrid method called “R’WOT Method<sup>1</sup>” that produces the quantitative values for the SWOT groups and SWOT factors.

There is no comprehensive methodology to determine and prioritize forestry strategies for developing forestry in potential available areas. Therefore, the significance of this phase was to examine the determining and prioritizing strategies for developing forestry in the Düzlerçamı pilot site. Thus, possible suggestions on how to develop forestry in Düzlerçamı region would be made. This phase adopted a participatory approach and all interested parties (i.e. Steering Committee, Supporting Structure, Facilitator, Scientific Committee, and Stakeholders' Committee/Forum in government structure of the participatory approach) related to forestry sector in Düzlerçamı pilot site were involved. The study was based on all interested parties interviews and questionnaires structured according to the *R’WOT Technique*'s principles.

**Table 2 : Stakeholders Involved in the Participation Process, and their Objectives, Interests, Roles and Arrangements in the Governance Structure**

Stakeholders' categories	Participation objectives/ interest	Stakeholders' role in the participatory approach	Organizational form	Components of the governance structure in which they are involved	Mobilization and participation approaches
<b>Local administration</b>					
Antalya RDF	Industrial wood, Fuel wood, Food, Fodder and forage, Hunting and game products, Biodiversity conservation, Forest conservation, Fire prevention and/or suppression, Water purification/water quality, Carbon sequestration, Health protection, Recreation, Spiritual and cultural services, Aesthetic services, Historical & educational services, Environment conservation, Environmental education, Ecotourism, Afforestation, Rural development, Soil erosion combating, Harvesting, NWFPs, Employment etc.	To determine priorities and rankings of SWOT groups and SWOT factors in phase 1 of the foreseen participatory approach	State institution and organization	Steering committee	Information meeting, questionnaires and surveys, general meeting
Sixth NPRD – Antalya Branch Directorate	Hunting and game products, Biodiversity conservation, Forest conservation, Recreation, Tourism, Aesthetic services, Historical & educational services, Environment conservation, Environmental education, Ecotourism, Forestry publications, Forestry science and technology, Social activities, Employment etc.	To express their opinion on the importance of decision criteria in phase 2 of the foreseen participatory approach	State institution and organization	Steering committee	Information meeting, questionnaires and surveys, general meeting
Local Governments (Governorship, District Governorate, Municipality, Village Administration)	<p><u>Governorship:</u> Has two functions: on the one hand is the representative of the central administration and thus verifies compliance with laws and regulations. On the other hand, it acts in accordance with the decisions adopted by the Provincial General Assembly. Its interests include rural development, forestry, recreation, tourism, land management, development of local knowledge, afforestation, employment, ecological agriculture, people's participation, social activities etc.</p> <p><u>District Governorate:</u> Plays an important role as authority in determining and meeting the local and common needs as well as in representing the state and the government in his own districts. Having these capacities, they are responsible for the coordination and cooperation between the central government and the other local governments. Its interests include rural development, forestry, recreation, tourism, land management, development of local knowledge, afforestation, employment, ecological agriculture, people's participation, social activities etc.</p> <p><u>Municipality:</u> Its responsibilities include monitoring, controlling and supervising the whole of the administration in the Municipal Districts. Its interests include water, health protection, housing, culture, rural development, fire prevention and/or suppression, forestation, recreation, spiritual and cultural services etc.</p> <p><u>Village Administration:</u> industrial wood, fuel wood, food, fodder and forage, hunting and game products, health protection, water purification/water quality, forest conservation, rural development, grazing, fire prevention and/or suppression, environment conservation, soil erosion combating, harvesting, NWFPs etc.</p>	<p>To fill the surveys or questionnaires to measure the impact and results of participation process, and to assess their satisfaction levels with participation process in pre-assessment and post-assessment of phase 3 of the foreseen participatory approach</p>	State institutions and organizations	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, coffeehouse meetings, workshop

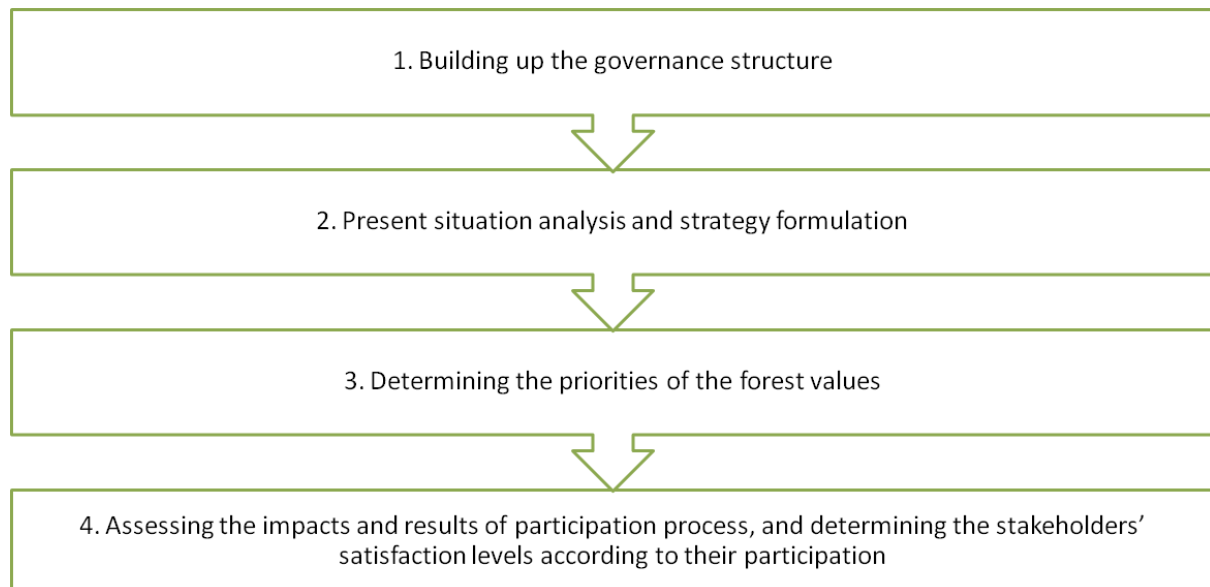
<sup>1</sup> (SWOT analysis + Ranking method + Linear Combination method)

Local Users Living in the site					
Local People	Industrial wood, Fuel wood, Mushroom, Food, Fodder and forage, Biodiversity conservation, Forest conservation, Fire prevention and/or suppression, Water purification/water quality, Carbon sequestration, Soil protection, Health protection, Environment conservation, Ecological agriculture, People's participation, Afforestation, Development of local knowledge, Rural development, Social activities, Water resource management, Soil erosion combating, Sustainable land use, Harvesting, Employment etc.	The same that Local Governments	No organization	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, coffeehouse meetings, workshop
Beekeepers	Food, Health protection, Ecological Agriculture etc.	The same that Local Governments	Association	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, coffeehouse meetings, workshop
NWFP Pickers	Food, Pharmaceuticals-medicinal, Ecological Agriculture, Rural development, NWFPs, Employment, Forest product marketing etc.	The same that Local Governments	Not organized	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, coffeehouse meetings, workshop
Shepherds	Food, Fodder and forage etc.	The same that Local Governments	Not organized	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, coffeehouse meetings, workshop
Hunters	Food, Hunting and game products, Recreation, Tourism, Rural development, Employment etc.	The same that Local Governments	Associations	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, coffeehouse meetings, workshop
Professional interests					
South-west Anatolia Forest Research Institute (SAFRI)	All types of interest	<p>To carry out SWOT analysis in phase 1 of the foreseen participatory approach</p> <p>To determine priorities and rankings of SWOT groups and SWOT factors in phase 1 the foreseen participatory approach</p> <p>To express their opinion on the importance of forest values according to the decision criteria in phase 2 the foreseen participatory approach</p>	State institution and organization	Scientific committee	Expert interviews, questionnaires, general meeting
University	All types of interest	The same that Research Institute	State institution and organization	Scientific committee	Expert interviews, questionnaires, general meeting

Other Public Institutes	Different types of interest	The same that Local Governments	State institutions and organizations	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, general meeting
NGOs	Biodiversity conservation, Health protection, Environment conservation, Environmental education, Ecotourism, Ecological Agriculture, People's participation, Ecotourism, Forestry publications, Forestry science and technology, Afforestation, Research and development, Development of local knowledge, Rural development, Social activities, Spiritual and cultural services, Historical & educational services, Water resource management, Soil erosion combating, Sustainable land use, Industrial wood, Fuel wood, Forest conservation, Harvesting, NWFPs, Employment, Forestry credits, Forest product marketing, Forest product export and import, Forestry consultancy, Training and meeting etc.	The same that Local Governments	Associations, Foundations, Cooperatives	Steering committee	Information meeting, questionnaires and surveys, general meeting
TMMOB	Forest conservation, Environment conservation, Spiritual and cultural services, Aesthetic services, Historical & educational services, Environmental education, Forestry publications, Forestry science and technology, Rural development, Social activities, Forestry consultancy, Training and meeting etc.	The same that Local Governments	Chambers	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, general meeting
<b>Economic interests</b>					
Cutting Workers	Industrial wood, Fuel wood, Rural development, Harvesting, Employment etc.	The same that Local Governments	Association, Syndicates	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, coffeehouse meetings, workshop
Private Sector	Industrial wood, Fuel wood, Hunting and game products, Pharmaceuticals-medicinal, Recreation, Tourism, Ecotourism, Ecological Agriculture, Afforestation, Rural development, Harvesting, Forest product marketing, Forest product export and import etc.	The same that Local Governments	Chambers (industry, trade)	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, general meeting
Tourism Agencies	Hunting and game products, Recreation, Tourism, Ecotourism, Rural development, Social activities etc.	The same that Local Governments	Unions	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, general meeting
<b>Users of the Catchment Area Coming from Outside</b>					
Picnickers	Forest conservation, Health protection, Recreation, Tourism, Aesthetic services, Environment conservation, Ecotourism, Rural development, Social activities etc.	The same that Local Governments	Not organized	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, general meeting
Ecotourists	Biodiversity conservation, Forest conservation, Health protection, Recreation, Tourism, Spiritual and cultural services, Aesthetic services, Historical & educational services, Environment conservation, Environmental education, Ecotourism, Development of local knowledge, Rural development, Social activities etc.	The same that Local Governments	Not organized	Stakeholders' committee/forum	Information meeting, questionnaires and surveys, general meeting



Figure 5 : Four Phases of the Participatory Approach Methodology Proposed in FFEM Project in Düzlerçami Pilot Site



The first step of Phase 2 “*Present Situation Analysis and Strategy Formulation*” was the application of “*SWOT Analysis*”. SWOT groups refer to four characteristics (i.e. strengths, weaknesses, opportunities and threats) and SWOT factors refer to the individual factors underlying the four SWOT groups. Firstly, the relevant SWOT factors of the external and internal environments were identified and included in SWOT analysis. The list of SWOT factors within every SWOT group were determined by Steering Committee, Supporting Structure, Facilitator and Scientific Committee during one general meeting. Also, SWOT analysis was carried out by all participants in pilot site according to the participatory approach.

Second step of Phase 2 was related to “*Comparisons between SWOT Factors within Every SWOT Group*”. During the comparisons, the main question was: **what are the priority values and rankings of the SWOT factors?** These priorities reflected all participants’ perception of the relative importance of the SWOT factors. Priorities and rankings of SWOT groups and SWOT factors were determined by means of “*Ranking Method*” with the help of all the participants in pilot site while following the participatory approach.

Third step of Phase 2 was related to “*Comparisons between four SWOT groups*”, where four SWOT groups were compared by all participants, and their relative priorities were calculated by means of “*Ranking Method*”.

Fourth and final step of Phase 2 was related to “*Determining the global priorities of SWOT groups and factors*”. For this aim, the “*Linear Combination method*” was used.

Objectives of Phase 3 “*Determining the Priorities of the Forest Values*” of the participatory approach were as follows;

1. To determine the decision criteria and forest values importance weights according to stakeholders' preference,
2. To identify the priorities of forest values of the stakeholders by using “*Analytic Hierarchy Process (AHP) Method*”,
3. To compare and analyse the differences and similarities among priorities of forest values of each stakeholder group.

First step of Phase 3 “*Determining the Priorities of the Forest Values*” was related to “*Determining of Decision Elements*”. It was identified decision criteria, and alternative forest values.

Second step of Phase 3 was related to “*Determining the Importance of Stakeholders and Sub-stakeholders*”. The AHP decision model (hierarchical model) of this decision problem contained five levels. The most general objective was considered as determining priority of the values of forest resources. The 2<sup>nd</sup> level of AHP decision hierarchy consisted of the stakeholders. Five stakeholder namely Local Administration, Local Users Living in the Site, Professional Interests, Economic Interests, and Users of the Catchment Area Coming from Outside were considered. The stakeholders at Level 3 of AHP decision model were subdivided into more detailed stakeholders. For example, Local Users Living in the Site were decomposed into Local People, Beekeepers, NWFP Pickers, Shepherds, and Hunters. The members of Steering Committee-which was one of the components of the government structure of the participatory approach in Düzlerçami pilot site-were contacted to express their opinion on the importance of stakeholders and sub-stakeholders.

**Third step of Phase 3** was related to *"Determining the Importance of Selected Decision Criteria"*. Level 4 of AHP hierarchical model will consist in decision criteria i.e. Monetary and Financial Contribution to the System of MoFWA, Contribution to Food Security, Support to Production of Natural Food, Support to Forest Protection, Support to Rural Development, Support to Employment, Support to Exchange Savings, Support to the Other Sectors, Prominence Due to International Contractual, Contribution to Comprehending of Importance of Forest Resources and Strengthening to Professional Honour. Representatives of Steering Committee, Stakeholders' Categories (Local Administration, Local Users Living in the Site, Professional Interests, Economic Interests, and Users of the Catchment Area Coming from Outside), and Scientific Committee were contacted to express their opinion on the importance of selected decision criteria.

**Fourth step of Phase 3** was related to *"Determining the Importance of Forest Values According to the Decision Criteria"*. Level 5 of AHP hierarchical model consisted in alternative forest values, i.e. Environmental Values, Wood Production Value, NWFPs Production Value, Forage Production Value, Tourism Value, Water Quality and Quantity Value and Recreation Value. Experts from SAFRI and University were contacted to express their opinion on the importance of forest values according to the decision criteria.

**Fifth and final step of Phase 3** *"Determining the Priorities of the Forest Values"* was related to *"Determining the Priority Value of Each Forest Value"*. Priority value of each forest value was calculated by means of the *"AHP Method"* and *"matrix calculations"*. The important problem in forest management plan is how to determine priority ranking and selection of forest functions. In this phase of using participatory method, an answer to this problem has been given by participatory approach.

**Objectives of fourth and final phase** *"Assessing the Impacts and Results of Participation Process, and Determining the Stakeholders' Satisfaction Levels with the Participation Level"* of the participatory approach were as follows:

1. To assess the impacts and results of participation process,
2. To examine participants' perceptions of this process
3. To investigate differences among the stakeholders' satisfaction levels due to their participation level.

**First step of Phase 4** *"Assessing the Impacts and Results of Participation Process, and Determining the Stakeholders' Satisfaction Levels with the Participation Level"* was related to the *"Pre-assessments of Participation Process"* that was carried out before the participation process beginning and during one general meeting and workshop. Surveys or questionnaires were designed to measure the impacts and results of participation process, and stakeholders' satisfaction levels for pre-assessments of participation process. In this step, current opinions of the stakeholders were assessed regarding their satisfaction levels linked to the management system and their current involvement in management. Responses of pre-assessments of participation process were based on the seven-point Likert scale. This survey scale's reliability was measured by *"Cronbach's alpha coefficient"* for reliability measures. Moreover, the other opinions of the stakeholders were collected as qualitative data by submitting the blank page of the survey.

**The second step of Phase 4** was related to *"Post-assessments of Participation Process within FFEM Initiative"* which was carried out once, after the participation process initiated during the final general meeting or workshop. Surveys or questionnaires were designed to measure the impacts and results of participation process, and stakeholders' satisfaction levels for post-assessments of participation process within FFEM initiative. In this step, we assessed opinions of the stakeholders regarding their satisfaction levels after the involvement in FFEM initiative. Responses of post-assessments of participation process within FFEM initiative were based on seven-point Likert scale. Its reliability was measured by *"Cronbach's alpha coefficient"*. Furthermore, additional opinions of the stakeholders were collected as qualitative data by submitting the blank page of the survey.

**Third and final step of Phase 4** *"Assessing the Impacts and Results of Participation Process, and Determining the Stakeholders' Satisfaction Levels with the Participation Level"* was related to the *"Final Assessment of Participation Process"*. Gaps between pre-assessments and post-assessments of participation process within FFEM initiative were identified. The impacts and results of participation process, and the stakeholders' satisfaction levels with the participation level were observed. Some statistics techniques were used to determine possible differences between the scores for two time periods, i.e. pre-assessments and post-assessments.

### **The differences with respect to the phases expected in the methodology**

There is no change in the phases of the participatory governance approach's methodology in the pilot site.

## DIAGNOSIS, DEFINITION OF DEVELOPMENT STRATEGIC CHOICES AND RESOURCES MANAGEMENT

### Workshops/meetings organization, mobilization methods and stakeholders consultations

First of all, the efforts spent to get the participation and contribution of all stakeholders during the implementation of FFEM Project in Düzlerçami pilot site had great contribution and support. This final report of FFEM Project was prepared with the participation of representatives from the Forestry Organization and other public institutes and other stakeholders (forest villagers, NGOs, other ministries, universities, private sector agencies etc.) from the beginning until the final steps (between 2013-2015 years) (Figure 6).

The participatory National Inter-Components and Information Meeting and the Düzlerçami pilot site field trip were organized in Antalya at 27-28 May 2014 at provincial level with the participation of the representatives of the different units of the Forestry Organization and FFEM Project team in Turkey (Table 30 and Figure 11). In this meeting, the dialog and the coordination with forestry organization in Düzlerçami pilot site were initiated by sharing experiences and information among all participants, and discussing the possible integrated activities among different components of the FFEM Project. Moreover, questionnaires (forms containing a set of questions) were conducted, and submitted to all participants to gain mathematical and statistical information concerning the Phases 2, 3 and 4 and their steps of the participatory approach for C3 of the FFEM Project. For this aim, face-to-face and/or virtual meetings were carried out with representatives of the forestry organization. Both face-to-face meetings and expert interviews took place between the Supporting Structure (Focal Point of FFEM Project), Facilitator (National Expert of the C3 of FFEM Project), and Scientific Committee (Experts from SAFRI and University).

Figure 6: Workshops/meetings organizations of FFEM Project



As seen in Table 31, Information and Coffeehouse Meetings, took place in public and social places where people (villagers) would meet for conversation, rest, entertainment and having good-time while drinking tea, coffee, etc., in the villages or towns, with the participation of different stakeholders (i.e. villagers) in villages and towns of Düzlerçami pilot site on 23-24 December 2014. These meetings were realised for introducing the FFEM Project and its Components to stakeholders and for emphasizing interaction and exchange of information among them. Then, we determined stakeholders' views and suggestions related to the evaluation and improvement of current forest resources management in our pilot site. We asked them the following question: "*Are you satisfied with forestry department's policy and natural resources management?*" and then we noted their expectations regarding forest resources in order to determine-through brainstorming-their point of views and proposals concerning the forest resources management's problems and solutions.

Then, the Participatory Workshop Activity was organized in Antalya at a local level with the participation of different stakeholders from villages and towns in Düzlerçami pilot site at 25 December 2014 (Table 32 and Figure 12). The objectives of this workshop were to: determine the priorities and rankings of SWOT groups and factors in phase I of the

participatory approach of FFEM Project, received stakeholders' opinions on the importance of decision criteria in phase 2 of the participatory approach, fill out the surveys or questionnaires to measure the impact and results of participation process, and assess their satisfaction levels with the participation process during the pre-assessments and post-assessments of phase 3 of the foreseen participatory approach. Data from this organized participatory workshop were used for related phases of participatory approach methodology of FFEM Project's calculations in Düzlerçamı pilot site.

Women in Düzlerçamı pilot site as in Turkey are directly involved in forestry activities as participants and beneficiaries. The opinions from both men and women on forest resources management in the pilot site were extracted from the information provided by: the Questionnaire-Survey Filling Studies, Düzlerçamı pilot site field trips, National Inter-Components and Information Meeting, Information Meetings, Coffeehouse Meetings, Participatory Workshop Activities, Coffeehouse Meetings, Informal Interviews, Direct Observation, etc. In spite of these efforts which offered to women the opportunities to share and discuss their opinions, their participation during the different phases of the participatory approach ensured did not meet a big success. It can be determined that it had been nearly impossible for FFEM project team to interact with women, given that all members of the project team were male. It was not able to take the initiative to request the appointment of a female team member because of the time constraint. The General Meetings or Workshops (held in a hotel in Antalya) and Coffeehouse Meetings (held in coffee houses in the villages or towns) were not appropriate places for women to be. Furthermore, women in Düzlerçamı pilot site are, as typical in rural Turkey, primarily engaged in unpaid household work, including household chores such as cooking, cleaning, and childcare, grazing and milking animals, preparation of animal products, taking care of orchards, collecting wood, etc. Given their unpaid labour burden, it is plausible that time constraints would be more binding for women than they are for men in terms of attending the meetings. This is not to imply that women necessarily spend more labour time, but that it might have been harder for women to bargain away their daily responsibilities to attend project activities than for men.

Finally, Information Meetings and Questionnaire-Survey Filling Studies with the face-to-face working method were realised with the participation of the representatives of the other public institutes and some other stakeholders at their offices from 23 February to 13 March 2015 (Table 33). These activities were implemented for introducing them the FFEM Project and its Components, for revealing the priorities and rankings of SWOT groups and factors in phase 1 of the participatory approach of FFEM Project by analysing internal and external environments in Düzlerçamı pilot site, and for providing strategy formulation of forest resources management, by determining priority values and rankings of the SWOT factors and groups, as well as providing quantitative examination of internal and external environments in pilot site and take their attitudes and opinions regarding the importance of decision criteria in phase 2.

## Identified resources and strategic choices

### Strengths and weaknesses, sustainable development opportunities and threats the territory faces

The second phase "Present Situation Analysis and Strategy Formulation" of the participatory approach methodology used in FFEM Project in Düzlerçamı pilot site aims at understanding critical areas of sustainable development, and the forest resources management's challenges and opportunities in Düzlerçamı pilot site (Table 34). The results of the study are summarized for Steering Committee, Stakeholders' Committee/Forum, Scientific Committee and the all of participants in Table 4, Table 5, Table 6 and Table 7 respectively. The group "priority scores" demonstrate the relative importance of each group within SWOT groups. The overall priority scores (obtained by adjusting factor priority scores by multiplying with SWOT group priority score) illustrate the relative importance of each factor across all SWOT categories. The combined overall priority values of strengths and opportunities categories can be interpreted as a positive perception, whereas for weaknesses and threats categories, it reflects negative perception.

The overall priorities (Table 8 and Figure 14) under the "strengths" category across "all participants" (priority 0, 0298) indicated the acceptance of the factor "having a better and easier highway and transportation system and to be close to downtown Antalya" as a main factor. Under the "weaknesses" category, the "all participants" (priority 0,0288) perceived the factor "organisational problems such as lacking of well skilled, well qualified middle and lower level personnel to be used in forestry practices in local Forestry Organization and overloaded works of forest chiefs and engineers" Under the "opportunities" category, the "all participants" (priority 0,0314) gave the highest priority values to the factor "increasing education, information and consciousness level of the public about the importance and sustainable management of forest resources at local, national and global level". Analysis of maximum overall priority values across all participants (priority 0, 0340) for all SWOT categories revealed that maximum number of high scores were for the "threats" category. This implies that a majority of stakeholders perceived overwhelming external issues related to "natural resources disruption as a result of global warming, forest fires, uncontrolled grazing, illegal hunting, overexploitation etc." as hindrances in developing sustainable forest resources management in Düzlerçamı pilot site.

So at the end of this phase, we yielded the analytical priorities for the factors included in SWOT analysis and made them commensurable with each other.

**Table 3: SWOT Analysis of the Forest Resources Management in Düzlerçami Pilot Site and the Priorities of the SWOT Factors and Groups for Representatives of “Steering Committee”**

SWOT Groups	Group Priority Scores	SWOT Factors	Overall Priority Scores
Strengths	0,2561	<b><u>Forestry Organization having infrastructure, facilities, machinery and equipment, budget, communication and expert personnel contributes social, economic, culture and environmental conditions of the regional development.</u></b>	<b>0,0336</b>
		Suitability of the pilot site to produce quite a lot and various forest resources based goods and services due to the region's having rich natural resources and ecologic characteristics.	0,0304
		Suitability for the development of forest industry with respect to woody raw materials production in the pilot site, having relatively rich productive forests.	0,0247
		Having rich and well quality fresh water and underground water resources and water production.	0,0296
		Having in-forest pastures and grazing lands, which is important to sustaining wildlife and animal grazing.	0,0261
		Having satisfactory level of wildlife population of both game animals and birds in the habitats, which are suiAppendix Appendix Table for hunting and hunting tourism.	0,0277
		Having pristine natural resources, rich historical and cultural assets suiAppendix Appendix Table for recreation, ecotourism and outdoor sports (trekking, trailing, rafting, etc.).	0,0291
		Having a better and easier highway and transportation system and to be close to downtown Antalya.	0,0298
		Having a strong local support to social, economic, cultural, environmental and managerial approach and developments in the pilot site.	0,0250
Weaknesses	0,2524	Organisational problems such as lacking of well skilled, well qualified middle and lower level personnel to be used in forestry practices in local Forestry Organization and overloaded works of forest chiefs and engineers.	0,0270
		Not having reliable, correct, updated and accessible inventory data for non-wood forestry goods and services and forestry functions other than wood materials.	0,0278
		Lack of legal provisions, measuring monetary values of forest resources, public relations and advertisements, infrastructures, capital availability, financial deficiencies, marketing and coordination in forest resources management.	0,0291
		Lacking of advertisement, experience, infrastructures related to cultural and inheritance tourism, outdoor sports and recreation; not having a well-structured, planned and participatory management organisation.	0,0282
		Lack of direct participation of interest groups in forest resources management, dominance of top down decision making culture and in this context lack of communication and cooperation in between Forestry Organisation and interest groups.	0,0302
		Limited quantity of incomes from selling wood materials and lack of employment opportunities and thus resulting rural poverty and high unemployment rate.	0,0266
		Lack of diversity in local economy.	0,0265
		<b><u>Lack of enterprising culture, vision and long run objectives and investments regarding natural resources in rural areas.</u></b>	<b>0,0308</b>
		Migration of young population to urban areas and ageing of actual population.	0,0260
Opportunities	0,2612	Increasing education, information and consciousness level of the public about the importance and sustainable management of forest resources at local, national and global level.	0,0304
		Improvements in Forestry Organization with respect to multipurpose, multidisciplinary and multidimensional forest resources planning.	0,0276
		The availability of new and contemporary planning methods to be possible used forest resources management (participatory planning, natural resources planning and integrated watershed management, etc.).	0,0275
		Increasing importance and priorities of forest functions other than wood production and the increment and diversity in demand and expectations to those forest resources functions, and thus creating new markets as a result of increasing demand.	0,0304
		Rural development as a result of forest resources management including wood productions and non-wood forest functions and thus making contributions to local economy, job creation and extra income sources.	0,0313
		Voluntarily and passionately participation and contribution of public institutions, civil society organisation, local administrations and sectorial experts.	0,0273
		Possibility of providing internal and inter institutional integration in forest resources management.	0,0254
		<b><u>Accessing research institutions and universities in the region, which conduct researches on forest resources management and planning.</u></b>	<b>0,0348</b>
		The opportunities and possibilities provided by rich community diversity, which made out of local population and the people travelled to the pilot site.	0,0265
Threats	0,2304	Decreasing revenue due to diminishing the quantity of wood production sold as a result of market fluctuation of supply and demand and market price and increment in harvesting costs.	0,0240
		<b><u>Natural resources disruption as a result of global warming, forest fires, insect-fungus and virus attacks and damages, drought, unplanned summer meadows grazing, uncontrolled grazing, illegal hunting, overexploitation, illegal poaching and logging, forestland encroachment.</u></b>	<b>0,0317</b>
		Political, economic and social pressures, influences and channelling.	0,0316
		Restricted local, national and international alternatives and sustainable financial resources intended for natural resources management.	0,0232
		Overlapping power and authorities inside the institutions and inter-institutions.	0,0235
		Possible conflicts among Forestry Organization, the public, NGOs, private sector, and local administration (village administration, municipality, etc.).	0,0247
		Unsatisfactory education, welfare and employment rate of forest villagers.	0,0241
		Not developing the possibility of employment and income sources to keep staying rural population and improve their welfare in their hometowns.	0,0244
		Not having the awareness of the public, NGOs, private sector, and local administration on different forest values, except for timber products.	0,0232

The Most Important SWOT Group and the Most Important SWOT Factors in Each SWOT Group are in Bold Face, and underlined.



Table 4: SWOT Analysis of the Forest Resources Management in Düzlerçamı Pilot Site and the Priorities of the SWOT Factors and Groups for Representatives of “Stakeholders’ Committee/Forum”

SWOT Groups	Group Priority Scores	SWOT Factors	Overall Priority Scores
Strengths	0,2561	<b><u>Forestry Organization having infrastructure, facilities, machinery and equipment, budget, communication and expert personnel contributes social, economic, culture and environmental conditions of the regional development.</u></b>	<b>0,0336</b>
		Suitability of the pilot site to produce quite a lot and various forest resources based goods and services due to the region's having rich natural resources and ecologic characteristics.	0,0304
		Suitability for the development of forest industry with respect to woody raw materials production in the pilot site, having relatively rich productive forests.	0,0247
		Having rich and well quality fresh water and underground water resources and water production.	0,0296
		Having in-forest pastures and grazing lands, which is important to sustaining wildlife and animal grazing.	0,0261
		Having satisfactory level of wildlife population of both game animals and birds in the habitats, which are suiAppendix Appendix Table for hunting and hunting tourism.	0,0277
		Having pristine natural resources, rich historical and cultural assets suiAppendix Appendix Table for recreation, ecotourism and outdoor sports (trekking, trailing, rafting, etc.).	0,0291
		Having a better and easier highway and transportation system and to be close to downtown Antalya.	0,0298
		Having a strong local support to social, economic, cultural, environmental and managerial approach and developments in the pilot site.	0,0250
Weaknesses	0,2524	Organisational problems such as lacking of well skilled, well qualified middle and lower level personnel to be used in forestry practices in local Forestry Organization and overloaded works of forest chiefs and engineers.	0,0270
		Not having reliable, correct, updated and accessible inventory data for non-wood forestry goods and services and forestry functions other than wood materials.	0,0278
		Lack of legal provisions, measuring monetary values of forest resources, public relations and advertisements, infrastructures, capital availability, financial deficiencies, marketing and coordination in forest resources management.	0,0291
		Lacking of advertisement, experience, infrastructures related to cultural and inheritance tourism, outdoor sports and recreation; not having a well-structured, planned and participatory management organisation.	0,0282
		Lack of direct participation of interest groups in forest resources management, dominance of top down decision making culture and in this context lack of communication and cooperation in between Forestry Organisation and interest groups.	0,0302
		Limited quantity of incomes from selling wood materials and lack of employment opportunities and thus resulting rural poverty and high unemployment rate.	0,0266
		Lack of diversity in local economy.	0,0265
		<b><u>Lack of enterprising culture, vision and long run objectives and investments regarding natural resources in rural areas.</u></b>	<b>0,0308</b>
		Migration of young population to urban areas and ageing of actual population.	0,0260
Opportunities	0,2612	Increasing education, information and consciousness level of the public about the importance and sustainable management of forest resources at local, national and global level.	0,0304
		Improvements in Forestry Organization with respect to multipurpose, multidisciplinary and multidimensional forest resources planning.	0,0276
		The availability of new and contemporary planning methods to be possible used forest resources management (participatory planning, natural resources planning and integrated watershed management, etc.).	0,0275
		Increasing importance and priorities of forest functions other than wood production and the increment and diversity in demand and expectations to those forest resources functions, and thus creating new markets as a result of increasing demand.	0,0304
		Rural development as a result of forest resources management including wood productions and non-wood forest functions and thus making contributions to local economy, job creation and extra income sources.	0,0313
		Voluntarily and passionately participation and contribution of public institutions, civil society organisation, local administrations and sectorial experts.	0,0273
		Possibility of providing internal and inter institutional integration in forest resources management.	0,0254
		<b><u>Accessing research institutions and universities in the region, which conduct researches on forest resources management and planning.</u></b>	<b>0,0348</b>
		The opportunities and possibilities provided by rich community diversity, which made out of local population and the people travelled to the pilot site.	0,0265
Threats	0,2304	Decreasing revenue due to diminishing the quantity of wood production sold as a result of market fluctuation of supply and demand and market price and increment in harvesting costs.	0,0240
		<b><u>Natural resources disruption as a result of global warming, forest fires, insect-fungus and virus attacks and damages, drought, unplanned summer meadows grazing, uncontrolled grazing, illegal hunting, overexploitation, illegal poaching and logging, forestland encroachment.</u></b>	<b>0,0317</b>
		Political, economic and social pressures, influences and channelling.	0,0316
		Restricted local, national and international alternatives and sustainable financial resources intended for natural resources management.	0,0232
		Overlapping power and authorities inside the institutions and inter-institutions.	0,0235
		Possible conflicts among Forestry Organization, the public, NGOs, private sector, and local administration (village administration, municipality, etc.).	0,0247
		Unsatisfactory education, welfare and employment rate of forest villagers.	0,0241
		Not developing the possibility of employment and income sources to keep staying rural population and improve their welfare in their hometowns.	0,0244
		Not having the awareness of the public, NGOs, private sector, and local administration on different forest values, except for timber products.	0,0232

The Most Important SWOT Group and the Most Important SWOT Factors in Each SWOT Group are in Bold Face, and underlined.

Table 5: SWOT Analysis of the Forest Resources Management in Düzlerçami Pilot Site and the Priorities of the SWOT Factors and Groups for Representatives of “Scientific Committee”

SWOT Groups	Group Priority Scores	SWOT Factors	Overall Priority Scores
Strengths	0,2161	<b><u>Forestry Organization having infrastructure, facilities, machinery and equipment, budget, communication and expert personnel contributes social, economic, culture and environmental conditions of the regional development.</u></b>	<b>0,0281</b>
		Suitability of the pilot site to produce quite a lot and various forest resources based goods and services due to the region's having rich natural resources and ecologic characteristics.	0,0279
		Suitability for the development of forest industry with respect to woody raw materials production in the pilot site, having relatively rich productive forests.	0,0171
		Having rich and well quality fresh water and underground water resources and water production.	0,0275
		Having in-forest pastures and grazing lands, which is important to sustaining wildlife and animal grazing.	0,0214
		Having satisfactory level of wildlife population of both game animals and birds in the habitats, which are suiAppendix Appendix Table for hunting and hunting tourism.	0,0199
		Having pristine natural resources, rich historical and cultural assets suiAppendix Appendix Table for recreation, ecotourism and outdoor sports (trekking, trailing, rafting, etc.).	0,0260
		Having a better and easier highway and transportation system and to be close to downtown Antalya.	0,0234
		Having a strong local support to social, economic, cultural, environmental and managerial approach and developments in the pilot site.	0,0248
Weaknesses	0,2887	<b><u>Organisational problems such as lacking of well skilled, well qualified middle and lower level personnel to be used in forestry practices in local Forestry Organization and overloaded works of forest chiefs and engineers.</u></b>	<b>0,0408</b>
		Not having reliable, correct, updated and accessible inventory data for non-wood forestry goods and services and forestry functions other than wood materials.	0,0372
		Lack of legal provisions, measuring monetary values of forest resources, public relations and advertisements, infrastructures, capital availability, financial deficiencies, marketing and coordination in forest resources management.	0,0361
		Lacking of advertisement, experience, infrastructures related to cultural and inheritance tourism, outdoor sports and recreation; not having a well-structured, planned and participatory management organisation.	0,0328
		Lack of direct participation of interest groups in forest resources management, dominance of top down decision making culture and in this context lack of communication and cooperation in between Forestry Organisation and interest groups.	0,0274
		Limited quantity of incomes from selling wood materials and lack of employment opportunities and thus resulting rural poverty and high unemployment rate.	0,0338
		Lack of diversity in local economy.	0,0275
		Lack of enterprising culture, vision and long run objectives and investments regarding natural resources in rural areas.	0,0282
		Migration of young population to urban areas and ageing of actual population.	0,0248
Opportunities	0,2208	Increasing education, information and consciousness level of the public about the importance and sustainable management of forest resources at local, national and global level.	0,0248
		Improvements in Forestry Organization with respect to multipurpose, multidisciplinary and multidimensional forest resources planning.	0,0292
		<b><u>The availability of new and contemporary planning methods to be possible used forest resources management (participatory planning, natural resources planning and integrated watershed management, etc.).</u></b>	<b>0,0301</b>
		Increasing importance and priorities of forest functions other than wood production and the increment and diversity in demand and expectations to those forest resources functions, and thus creating new markets as a result of increasing demand.	0,0260
		Rural development as a result of forest resources management including wood productions and non-wood forest functions and thus making contributions to local economy, job creation and extra income sources.	0,0255
		Voluntarily and passionately participation and contribution of public institutions, civil society organisation, local administrations and sectorial experts.	0,0218
		Possibility of providing internal and inter institutional integration in forest resources management.	0,0224
		Accessing research institutions and universities in the region, which conduct researches on forest resources management and planning.	0,0243
		The opportunities and possibilities provided by rich community diversity, which made out of local population and the people travelled to the pilot site.	0,0167
Threats	0,2744	Decreasing revenue due to diminishing the quantity of wood production sold as a result of market fluctuation of supply and demand and market price and increment in harvesting costs.	0,0219
		<b><u>Natural resources disruption as a result of global warming, forest fires, insect-fungus and virus attacks and damages, drought, unplanned summer meadows grazing, uncontrolled grazing, illegal hunting, overexploitation, illegal poaching and logging, forestland encroachment.</u></b>	<b>0,0382</b>
		Political, economic and social pressures, influences and channelling.	0,0343
		Restricted local, national and international alternatives and sustainable financial resources intended for natural resources management.	0,0330
		Overlapping power and authorities inside the institutions and inter-institutions.	0,0263
		Possible conflicts among Forestry Organization, the public, NGOs, private sector, and local administration (village administration, municipality, etc.).	0,0294
		Unsatisfactory education, welfare and employment rate of forest villagers.	0,0328
		Not developing the possibility of employment and income sources to keep staying rural population and improve their welfare in their hometowns.	0,0316
		Not having the awareness of the public, NGOs, private sector, and local administration on different forest values, except for timber products.	0,0268

The Most Important SWOT Group and the Most Important SWOT Factors in Each SWOT Group are in Bold Face, and underlined.

Table 6: SWOT Analysis of the Forest Resources Management in Düzlerçamı Pilot Site and the Overall Relative Priorities of the SWOT Factors and Groups for “All Participants”

SWOT Groups	Group Priority Scores	SWOT Factors	Overall Priority Scores
Strengths	0,2477	Forestry Organization having infrastructure, facilities, machinery and equipment, budget, communication and expert personnel contributes social, economic, culture and environmental conditions of the regional development.	0,0293
		Suitability of the pilot site to produce quite a lot and various forest resources based goods and services due to the region's having rich natural resources and ecologic characteristics.	0,0289
		Suitability for the development of forest industry with respect to woody raw materials production in the pilot site, having relatively rich productive forests.	0,0245
		Having rich and well quality fresh water and underground water resources and water production.	0,0290
		Having in-forest pastures and grazing lands, which is important to sustaining wildlife and animal grazing.	0,0242
		Having satisfactory level of wildlife population of both game animals and birds in the habitats, which are suiAppendix Appendix Table for hunting and hunting tourism.	0,0279
		Having pristine natural resources, rich historical and cultural assets suiAppendix Appendix Table for recreation, ecotourism and outdoor sports (trekking, trailing, rafting, etc.).	0,0277
		<b><u>Having a better and easier highway and transportation system and to be close to downtown Antalya.</u></b>	<b>0,0298</b>
		Having a strong local support to social, economic, cultural, environmental and managerial approach and developments in the pilot site.	0,0264
		<b><u>Organisational problems such as lacking of well skilled, well qualified middle and lower level personnel to be used in forestry practices in local Forestry Organization and overloaded works of forest chiefs and engineers.</u></b>	<b>0,0288</b>
Weaknesses	0,2384	Not having reliable, correct, updated and accessible inventory data for non-wood forestry goods and services and forestry functions other than wood materials.	0,0255
		Lack of legal provisions, measuring monetary values of forest resources, public relations and advertisements, infrastructures, capital availability, financial deficiencies, marketing and coordination in forest resources management.	0,0253
		Lacking of advertisement, experience, infrastructures related to cultural and inheritance tourism, outdoor sports and recreation; not having a well-structured, planned and participatory management organisation.	0,0264
		Lack of direct participation of interest groups in forest resources management, dominance of top down decision making culture and in this context lack of communication and cooperation in between Forestry Organisation and interest groups.	0,0249
		Limited quantity of incomes from selling wood materials and lack of employment opportunities and thus resulting rural poverty and high unemployment rate.	0,0287
		Lack of diversity in local economy.	0,0258
		Lack of enterprising culture, vision and long run objectives and investments regarding natural resources in rural areas.	0,0274
		Migration of young population to urban areas and ageing of actual population.	0,0257
		<b><u>Increasing education, information and consciousness level of the public about the importance and sustainable management of forest resources at local, national and global level.</u></b>	<b>0,0314</b>
		Improvements in Forestry Organization with respect to multipurpose, multidisciplinary and multidimensional forest resources planning.	0,0301
Opportunities	0,2555	The availability of new and contemporary planning methods to be possible used forest resources management (participatory planning, natural resources planning and integrated watershed management, etc.).	0,0264
		Increasing importance and priorities of forest functions other than wood production and the increment and diversity in demand and expectations to those forest resources functions, and thus creating new markets as a result of increasing demand.	0,0296
		Rural development as a result of forest resources management including wood productions and non-wood forest functions and thus making contributions to local economy, job creation and extra income sources.	0,0311
		Voluntarily and passionately participation and contribution of public institutions, civil society organisation, local administrations and sectorial experts.	0,0267
		Possibility of providing internal and inter institutional integration in forest resources management.	0,0267
		Accessing research institutions and universities in the region, which conduct researches on forest resources management and planning.	0,0286
		The opportunities and possibilities provided by rich community diversity, which made out of local population and the people travelled to the pilot site.	0,0251
		Decreasing revenue due to diminishing the quantity of wood production sold as a result of market fluctuation of supply and demand and market price and increment in harvesting costs.	0,0252
Threats	0,2584	<b><u>Natural resources disruption as a result of global warming, forest fires, insect-fungus and virus attacks and damages, drought, unplanned summer meadows grazing, uncontrolled grazing, illegal hunting, overexploitation, illegal poaching and logging, forestland encroachment.</u></b>	<b>0,0340</b>
		Political, economic and social pressures, influences and channelling.	0,0294
		Restricted local, national and international alternatives and sustainable financial resources intended for natural resources management.	0,0270
		Overlapping power and authorities inside the institutions and inter-institutions.	0,0256
		Possible conflicts among Forestry Organization, the public, NGOs, private sector, and local administration (village administration, municipality, etc.).	0,0278
		Unsatisfactory education, welfare and employment rate of forest villagers.	0,0305
		Not developing the possibility of employment and income sources to keep staying rural population and improve their welfare in their hometowns.	0,0314
		Not having the awareness of the public, NGOs, private sector, and local administration on different forest values, except for timber products.	0,0274

The Most Important SWOT Group and the Most Important SWOT Factors in Each SWOT Group are in Bold Face, and underlined.

Table 7: SWOT Analysis of the Forest Resources Management in Düzlerçami Pilot Site and the Overall Relative Priorities of the SWOT Factors and Groups for “All Participants”

SWOT Factors	Overall Priority Scores	Priority Rankings
Natural resources disruption as a result of global warming, forest fires, insect-fungus and virus attacks and damages, drought, unplanned summer meadows grazing, uncontrolled grazing, illegal hunting, overexploitation, illegal poaching and logging ...	0,0340	1
Increasing education, information and consciousness level of the public about the importance and sustainable management of forest resources at local, national and global level.	0,0314	2
Not developing the possibility of employment and income sources to keep staying rural population and improve their welfare in their hometowns.	0,0314	3
Rural development as a result of forest resources management including wood productions and non-wood forest functions and thus making contributions to local economy, job creation and extra income sources.	0,0311	4
Unsatisfactory education, welfare and employment rate of forest villagers.	0,0305	5
Improvements in Forestry Organization with respect to multipurpose, multidisciplinary and multidimensional forest resources planning.	0,0301	6
Having a better and easier highway and transportation system and to be close to downtown Antalya.	0,0298	7
Increasing importance and priorities of forest functions other than wood production and the increment and diversity in demand and expectations to those forest resources functions, and thus creating new markets as a result of increasing demand.	0,0296	8
Political, economic and social pressures, influences and channelling.	0,0294	9
Forestry Organization having infrastructure, facilities, machinery and equipment, budget, communication and expert personnel contributes social, economic, culture and environmental conditions of the regional development.	0,0293	10
Having rich and well quality fresh water and underground water resources and water production.	0,0290	11
Suitability of the pilot site to produce quite a lot and various forest resources based goods and services due to the region's having rich natural resources and ecologic characteristics.	0,0289	12
Organisational problems such as lacking of well skilled, well qualified middle and lower level personnel to be used in forestry practices in local Forestry Organization and overloaded works of forest chiefs and engineers.	0,0288	13
Limited quantity of incomes from selling wood materials and lack of employment opportunities and thus resulting rural poverty and high unemployment rate.	0,0287	14
Accessing research institutions and universities in the region, which conduct researches on forest resources management and planning.	0,0286	15
Having satisfactory level of wildlife population of both game animals and birds in the habitats, which are suiAppendix Appendix Table for hunting and hunting tourism.	0,0279	16
Possible conflicts among Forestry Organization, the public, NGOs, private sector, and local administration (village administration, municipality, etc.).	0,0278	17
Having pristine natural resources, rich historical and cultural assets suiAppendix Appendix Table for recreation, ecotourism and outdoor sports (trekking, trailing, rafting, etc.).	0,0277	18
Lack of enterprising culture, vision and long run objectives and investments regarding natural resources in rural areas.	0,0274	19
Not having the awareness of the public, NGOs, private sector, and local administration on different forest values, except for timber products.	0,0274	20
Restricted local, national and international alternatives and sustainable financial resources intended for natural resources management.	0,0270	21
Voluntarily and passionately participation and contribution of public institutions, civil society organisation, local administrations and sectorial experts.	0,0267	22
Possibility of providing internal and inter institutional integration in forest resources management.	0,0267	23
Having a strong local support to social, economic, cultural, environmental and managerial approach and developments in the pilot site.	0,0264	24
Lacking of advertisement, experience, infrastructures related to cultural and inheritance tourism, outdoor sports and recreation; not having a well-structured, planned and participatory management organisation.	0,0264	25
The availability of new and contemporary planning methods to be possible used forest resources management (participatory planning, natural resources planning and integrated watershed management, etc.).	0,0264	26
Lack of diversity in local economy.	0,0258	27
Migration of young population to urban areas and ageing of actual population.	0,0257	28
Overlapping power and authorities inside the institutions and inter-institutions.	0,0256	29
Not having reliable, correct, updated and accessible inventory data for non-wood forestry goods and services and forestry functions other than wood materials.	0,0255	30
Lack of legal provisions, measuring monetary values of forest resources, public relations and advertisements, infrastructures, capital availability, financial deficiencies, marketing and coordination in forest resources management.	0,0253	31
Decreasing revenue due to diminishing the quantity of wood production sold as a result of market fluctuation of supply and demand and market price and increment in harvesting costs.	0,0252	32
The opportunities and possibilities provided by rich community diversity, which made out of local population and the people travelled to the pilot site.	0,0251	33
Lack of direct participation of interest groups in forest resources management, dominance of top down decision making culture and in this context lack of communication and cooperation in between Forestry Organisation and interest groups.	0,0249	34
Suitability for the development of forest industry with respect to woody raw materials production in the pilot site, having relatively rich productive forests.	0,0245	35
Having in-forest pastures and grazing lands, which is important to sustaining wildlife and animal grazing.	0,0242	36

## Sustainability indicators future development using scenarios

For describing sustainability indicators of future development using scenarios, the overall management goal statement was expressed: increase total benefit through rural development in Düzlerçami pilot site. Then, the SWOT factors determined with participative approach by all stakeholders in the second phase “*Present Situation Analysis and Strategy Formulation*” of the participatory approach methodology used in FFEM Project in Düzlerçami pilot site were taken as “*sustainability indicators*”.

To clarify the meaning of the SWOT factors, the following definitions were used: Strengths are the internal strengths that support the achievement of the desired future condition (i.e., goal). Weaknesses are the internal weaknesses that undermine the achievement of the goal. Opportunities describe the external factors that are conducive to the achievement of the goal, while Threats describe the external factors that are not conducive to the achievement of the goal. Indicators are essentially measures of the goal, which could be described or assessed in terms of their present and future conditions. These indicators can be monitored to get a better sense of how close the goal is from being achieved.

As these initial factors were examined more closely, especially when strategies and action plans were developed, they were modified, revised, or redefined.

Before pursuing the scenarios analysis for both positive and negative ones, it was decided to examine the ten top priority SWOT factors, especially those factors that were perceived to be significant and those considered critical to the forest resources management in Düzlerçamı pilot site by all the stakeholders.

These scenarios consisted of three periods (i.e. Short Term/2015-2020, Medium Term/2015-2030, and Long Term/2015-2040), excluding Present Situation, and a series of activities whose overall impacts could be encapsulated in terms of the condition or status of the SWOT factor itself.

For example, for positive scenarios, one of the used “Opportunity” factors was “increasing education, information and consciousness level of the public about the importance and sustainable management of forest resources at local, national and global level”. This factor was assumed to be on “average” condition, since it has a value “5”. Likewise, the current conditions of the other selected SWOT factors were specified. The period 1–3 conditions were assumed to represent the projected value or status of the selected SWOT factor upon the implementation of the scenarios. For example, the scenario calls for improvement of education, information and consciousness level of the public in the next three periods; from its current “average” condition of 5, improving successively to 7, 8 and 9 for periods (or years) 1, 2 and 3 respectively. These examples of explanations are also the similar situations for negative scenarios.

To be able to simulate the potential impacts of SWOT factors, some surrogate measures must be used to reflect and represent their conditions. In general, a simple and highly transparent quantification approach was used. The surrogate values used were scaled between 1 (Poor) and 10 (Excellent).

The impacts of the scenarios can be monitored through the projected values of the “Total Benefit”. It is expected that as the Strengths and Opportunities improve, and at the same time the negative impacts of the Weaknesses and Threats diminish, the Total Benefit can be expected to increase. Values or status of used SWOT factors based on the scenarios were presented in Table 35 for positive scenarios and Table 36 for negative scenarios, respectively.

## **PARTICIPATIVE PLANNING AND ACTIONS PLANS**

Practical actions that were identified in the framework of various activities, such as Questionnaire-Survey Filling Studies, Düzlerçamı pilot site field trips, National Inter-Components and Information Meeting, Information Meetings, Coffeehouse Meetings, Participatory Workshop Activities, Informal Interviews, Direct Observation which were achieved during the preparation of FFEM Project – C3 in Düzlerçamı pilot site were given in Table 37. These information are given below the actions; (i) definition of the action, (ii) priority of the action (1,2,3), (iii) action type, (iv) responsible institution, organization and stakeholders that will carry out the action, (v) first degree responsible units (General Directorate or its unit) at high level, to follow and coordinate the action, and (vi) implementation term of the action (Short Term / 2015-2020 or Long Term / 2015-2030).

The coordination task of the implementation, monitoring and evaluation studies of the action plan at local level in the MoFWA will be implemented by the Antalya RDF and Sixth NPRD – Antalya Branch Directorate.

But, to realistically determine the means of implementation (such as costs, resources, agenda, etc.) for each action, at first, it was thought that responsible General Directorate or its unit at local level should primarily achieve the necessary initiations and studies for the preparation and implementation of the detailed short term action plans (research action plan, reforestation action plan, functional planning action plan, NWFPs development action plan, etc.) covering the details (finance, institutional development needs and possibilities, responsibility and authority distribution, collaboration principles, etc.) of the actions related to them.

On the other hand, action plans developed for Düzlerçamı pilot site are not static; therefore, they should periodically be revised and developed in the light of its nature, developing conditions, the results gained from the implementations, information and experiences.

The number of available alternative values of forest resources is increasing over the years as a result of the progress in scientific research. Different interest and beneficiary groups in the communities have multiple demands and expectations (product, service, function) from the forests in Düzlerçamı pilot site. Among these interests and beneficiary groups, the following can be mentioned: state forest organization, local people (forest villagers), private sector, forest products and services consumers/users, NGOs, research and training institutions, urban populations, local authorities, politics, global communities, international cooperation agencies, forestry firms, etc.. In addition, it is important to estimate and take into consideration the expectations of future generations and to see them among the most important stakeholders. Beyond these, sustainability needs of the natural balance and forest ecosystems should be taken into account and evaluated among the expectations.



Crucial changes could occur by type, number, quality, priority and intensity of the demands and expectations from the forests from time to time, depending on the demographic, economic, social cultural and ecological developments and changes in the community. The quantity and intensity of demands and expectations with regard to social and cultural services and conservative/environmental functions of forest seem to increase crucially in recent years, while demand for forests products, mainly for timber, have had crucial importance in the past periods. This trend is expected to last increasingly in the coming years, taking into consideration that vast number of country population that will be living in urban areas for coming periods (Source: Expert opinions).

Competition among the demands and expectations, conflicts among the interests and beneficiary groups could occur frequently, since it is impossible to meet all demands and expectations of the community from the limited forest resources. Competition and conflicts between the rights and benefits at local and national levels seem to gain importance.

Under these conditions, it is an important necessity to gain correct information and to update it periodically regarding different demands and expectations of people from the forests in order to conserve forest resources and to manage them sustainably. In the framework of sustainable forest management, meeting these demands and expectations should be balanced according to basic criteria of utilization for people. So, forest resources managers face a situation to determine the priorities of forest values by satisfying various stakeholders' preferences, needs, demands and expectations. In other words, determination of priorities of forest values has to be seen as an important task in the decision making process of forest resources management.

An examination regarding present situation and changing trends of demands and expectations from the forests for different stakeholders of the community in the Düzlerçamı pilot site is given at third phase of the participatory approach methodology used in FFEM Project below.

Priority determination of the values of forest resources is a complex process. Such decision making problem is not limited only in priority determination of the values of forest resources, but also several factors need to be considered. The factors which influence the decision-making process include direct participation of decision makers, various stakeholders and sector experts to decision making process, multi-decision criteria, alternative forest values, and evaluation and prioritization of forest values.

Without assessing the knowledge and opinions of the stakeholders, it is not possible to manage forest resources and to develop its areas. A natural resources management that does not address and recognize stakeholders' preferences, needs, demands and expectations, results not only in disputes and conflicts but also into resource degradation extinction. Hence, for an effective natural resources management, it is imperative that the stakeholders' preferences, needs, demands and expectations for a given resource are directly and explicitly included in natural resource management decisions. Forest resources managers have to recognize that their job cannot simply be a biological and technical process, but should reflect diverse stakeholders' preferences, demands, needs and expectations.

Traditionally, public participation into decision making has been sharing information on decisions that are already made. Thus, these decisions have contributed to publics' suspicion towards decision makers. However, the direct public participation is two-way communication that is supported by stakeholders and the public. In this approach, stakeholders and the public concerns, needs and values are directly incorporated into decision making so better decisions can be made. On the other hand, the AHP is a commonly used mathematical technique for solving any multi-criteria decision making problem. Because of its simplicity, flexibility, effectiveness, ease of use and interpretation, and ability to consider both quantitative and qualitative criteria, this technique is one of the most popular multi-criteria decision making methodologies available today. The AHP is applicable to different concerned groups' participation in land and forest management strategy selection problem in which the optimum decision alternative is selected. There are a lot of literatures on AHP applications of the participatory approach in natural resources management (For example, Yılmaz, 1999; Kangas, 1992; Kangas, 1994; Schomoldt et al., 1995; Kangas et al., 1996; Kuusipalo et al., 1997; Yılmaz, 1999; Yılmaz, 2004a; Yılmaz, 2004b; Yılmaz, 2004c; Yılmaz et al., 2004; Yılmaz, 2005; Geray et al., 2007; Yılmaz et al., 2010; etc.).

Phase 3 "*Determining the Priorities of the Forest Values*" of the participatory approach methodology used in FFEM Project in Düzlerçamı pilot site presented a case study that was applied the AHP for taking Steering Committee (Decision Makers), Scientific Committee (Sector Experts), and Stakeholders' Committee/Forum (Stakeholders and Sub-stakeholders) preferences into account in determining priority ranking and selection of forest function in forest management plan and strategy for Düzlerçamı pilot site. Data of this phase was collected during the participatory workshop activity at 25 December 2014.

***Phase 3 – Step 1: Determining of decision elements (i.e. Decision makers, the stakeholders and sub-stakeholders, sector experts, decision criteria and alternative forest values)***

We identified the decision elements (Steering Committee, Scientific Committee, and Stakeholders' Committee/Forum, decision criteria, and alternative forest values) in the first step of Phase 3 in the participatory approach methodology used in Düzlerçamı pilot site. So, the AHP decision hierarchy and decision making model was defined as follows (see also Figure 15):

1. **Common Goal (Level 1):** to determine the priorities of the values of forest resources in the Düzlerçamı pilot site
2. **The Stakeholders (Level 2) and Sub-Stakeholders (Level 3):**
  - Stakeholder 1: Local Administration
    - Sub-Stakeholder 1: Antalya RDF
    - Sub-Stakeholder 2: Sixth NPRD – Antalya Branch Directorate
    - Sub-Stakeholder 3: Local Governments (Governorship, District Governorate, Municipality, Village Administration)
  - Stakeholder 2: Local Users Living in the Site
    - Sub-Stakeholder 4: Local People (Villagers)
    - Sub-Stakeholder 5: Beekeepers
    - Sub-Stakeholder 6: NWFP Pickers
    - Sub-Stakeholder 7: Shepherds
    - Sub-Stakeholder 8: Hunters
  - Stakeholder 3: Professional Interests
    - Sub-Stakeholder 9: SAFRI
    - Sub-Stakeholder 10: University
    - Sub-Stakeholder 11: Other Public Institutes
    - Sub-Stakeholder 12: NGOs
    - Sub-Stakeholder 13: TMMOB (Union of Chambers of Turkish Engineers and Architects)
  - Stakeholder 4: Economic Interests
    - Sub-Stakeholder 14: Cutting Workers
    - Sub-Stakeholder 15: Private Sector (Forest Products Industrialists)
    - Sub-Stakeholder 16: Tourism Agencies
  - Stakeholder 2: Users of the Catchment Area Coming from Outside
    - Sub-Stakeholder 17: Picnickers
    - Sub-Stakeholder 18: Ecotourists
3. **Decision Criteria (Level 4):**
  - Decision Criteria 1: Monetary and Financial Contribution to the System of MoFWA
  - Decision Criteria 2: Contribution to Food Security
  - Decision Criteria 3: Support to Production of Natural Food
  - Decision Criteria 4: Support to Forest Protection
  - Decision Criteria 5: Support to Rural Development
  - Decision Criteria 6: Support to Employment
  - Decision Criteria 7: Support to Exchange Savings
  - Decision Criteria 8: Support to the Other Sectors
  - Decision Criteria 9: Prominence Due to International Contractual
  - Decision Criteria 10: Contribution to Comprehending of Importance of Forest Resources
  - Decision Criteria 11: Strengthening to Professional Honour
4. **Decision Alternatives (Level 5):**
  - Alternative 1: Environmental Values
  - Alternative 2: Wood Production Value
  - Alternative 3: NWFPs Production Value
  - Alternative 4: Forage Production Value
  - Alternative 5: Tourism Value
  - Alternative 6: Water Quality and Quantity Value
  - Alternative 7: Recreation Value

The question involved in the pair wise comparisons for determining the relative importance is: **which one of the two compared decision elements is more important in decision making, and how much important?** In the AHP, reciprocal matrix of pair wise comparisons is constructed on the basis of comparisons made by using a verbal scale with nine measures which can be converted into a proper numerical scale (Saaty, 1980), or by employing a ratio scale directly with the help of a graphical interface where bar lengths express the relative importance of two compared elements. In this study, the graphical method was used. So, the resulting questionnaires based on all these decision elements are included from Survey Form 1 to Survey Form 4.

### *Phase 3 - Step 2: Determining the importance of stakeholders and sub-stakeholders*

In the second step of Phase 3 of the participatory approach methodology, the relative importance of Stakeholders and Sub-Stakeholders was determined by the members of Steering Committee. Priority ratings and rankings of Stakeholders at Level 2 of the AHP decision hierarchy were determined by Steering Committee as shown in Table 38 and Figure 16. The comparisons were made directly on a ratio scale by using a graphical interface where bar lengths express the relative importance of the two compared stakeholders. The priority values (or weights) were as follows: Local Administration (priority 0,387); Local Users Living in the Site (priority 0,285); Professional Interests (priority 0,156); Economic Interests (priority 0,103); and Users of the Catchment Area Coming from Outside (priority 0,068). Priorities of Sub-Stakeholders at Level 3 were estimated. Again, representatives of the Steering Committee compared pair wise the Sub-Stakeholders. Importance values and ranking orders of each Sub-Stakeholder are shown in Table 39, Table 40, Table 41, Table 42, Table 43 and Figure 17, Figure 18, Figure 19, Figure 20, Figure 21. The graphical method was used by determining the relative importance of two compared Sub-Stakeholders. The results shows that Antalya RDF (priority 0,544) from Local Administration, Local People (priority 0,590) from Local Users Living in the Site, SAFRI (priority 0,280) from Professional Interests, Tourism Agencies (priority 0,456) from Economic Interests, and Ecotourists (priority 0,668) from Users of the Catchment Area Coming from Outside were considered as the most important, while the other Sub-Stakeholders were regarded relatively unimportant with regard to forest resources management by the Steering Committee.

### *Phase 3 - Step 3: Determining the importance of selected decision criteria*

Third step of Phase 3 was related to determining the importance of selected decision criteria at Level 4 of AHP hierarchical model. For this aim, representatives of Steering Committee, Stakeholders' Categories (Local Administration, Local Users Living in the Site, Professional Interests, Economic Interests, and Users of the Catchment Area Coming from Outside), and Scientific Committee compared pair wise the decision criteria. Priority ratings and rankings of the decision criteria for Steering Committee are shown in Table 44 and Figure 22. The graphical method was used by determining the relative importance of two compared decision criteria. Then, priorities and rankings of decision criteria were estimated with regard to Local Administration (Table 45 and Figure 23), Local Users Living in the Site (Table 46 and Figure 24), Professional Interests (Table 47 and Figure 25), Economic Interests (Table 48 and Figure 26), and Users of the Catchment Area Coming from Outside (Table 49 and Figure 27), and Scientific Committee (Table 50 and Figure 28). The importance values and ranking orders of decision criteria in the opinion of representatives of the Steering Committee indicates that MoFAL (priority 0,228), GDShw (priority 0,190), MoCT (priority 0,215), MoENR (priority 0,206), and MoNE (priority 0,230) considered decision criterion "Monetary and Financial Contribution to the System of MoFWA" as the most important criterion by a substantial factor when determining the priorities of the forest values. Decision criteria "Monetary and Financial Contribution to the System of MoFWA", "Support to Forest Protection", "Support to the Other Sectors", "Strengthening to Professional Honour" were the most important decision criteria for MoEU (priority 0,300), MTA (priority 0,231), Sixth NPRD – Antalya Branch Directorate (priority 0,167), and Antalya RDF (priority 0,157) respectively. For representatives of the Stakeholders' Categories "Local Administration", Governorship (priority 0,201) and Municipality (priority 0,218), District Governorate (priority 0,230), and Village Administration (priority 0,245) placed the highest priority on decision criteria "Support to Rural Development", "Support to Forest Protection", and "Contribution to Comprehending the Importance of Forest Resources" respectively. For representatives of the Stakeholders' Categories "Local Users Living in the Site"; "Support to Rural Development", "Support to Forest Protection", "Support to Employment", and "Strengthening to Professional Honour" were an important decision criteria to Local People (priority 0,198) and Hunters (priority 0,232), Beekeepers (priority 0,264), NWFP Pickers (priority 0,208), and Shepherds (priority 0,224) respectively. For representatives of the Stakeholders' Categories "Professional Interests", decision criteria "Contribution to Comprehending of Forest Resources" and "Support to Forest Protection" were the most important criteria by Other Public Institutes (priority 0,210), TMMOB (priority 0,171), and NGOs (priority 0,249) respectively. For representatives of the Stakeholders' Categories "Economic Interests", Private Sector-Forest Products Industrialists (priority 0,244), Water Suppliers (priority 190) and Tourism Agencies (priority 0,210), and Cutting Workers (priority 0,230) placed the highest priority on decision criteria "Support to Rural Development", and "Support to Production of Natural Food" respectively. Also, for representatives of the Stakeholders' Categories "Users of the Catchment Area Coming from Outside", both Picnickers (priority 0,220) and Ecotourists (priority 0,250) considered

decision criterion “*Support to Forest Protection*” as the most important one by a substantial factor when determining the priorities of the forest values in Düzlerçamı pilot site.

#### **Phase 3 - Step 4: Determining the importance of forest values according to the decision criteria**

In fourth step of Phase 3, the seven alternative forest values (i.e. Environmental Values, Wood Production Value, NWFPs Production Value, Forage Production Value, Tourism Value, Water Quality and Quantity Value and Recreation Value) at Level 5 of AHP hierarchical model were evaluated with regard to decision criteria in a pair wise manner by sector experts from SAFRI, University, National Expert of the C3 of FFEM Project, Thematic Expert of the C3 of FFEM Project, and Assistant Thematic Expert of the C3 of FFEM Project (Table 51 and Figure 29). So, the importance of forest values was determined according to the decision criteria was determined. According to the sector experts, Environmental Value was the best one with respect to Contribution to Food Security (priority 0,289), Support to Production of Natural Food (priority 0,244), Support to Forest Protection (priority 0,343), Support to the Other Sectors (priority 0,220), Prominence Due to International Contractual (priority 0,363), Contribution to Comprehending of Importance of Forest Resources (priority 0,329) and Strengthening to Professional Honour (priority 0,300). Wood Production Value was regarded as the best one with respect to Support to Rural Development (priority 0,229) and Support to Employment (priority 0,255). Correspondingly, Tourism Value was the best one with respect to Monetary and Financial Contribution to the System of MoFWA (priority 0,204) and Support to Exchange Savings (priority 0,282).

#### **Phase 3 - Step 5: Determining the priority value of each forest value**

At fifth and final step of Phase 3, alternative forest values were evaluated via final global priorities. Global priorities were calculated on the basis of the weighting scheme for the Stakeholders and Sub-Stakeholders, the importance of the criteria from the point of view of all participants, and relative priorities of decision alternatives with respect to the criteria, and by means of the “AHP Method” and “matrix calculations” (Table 8 and Figure 30). Finally, the priority value (i.e. ranking) of each forest value was determined. According to these results, participants considered that environmental benefits from forests were valued higher than commodity benefits. Wood Production Value as a production value was rated the least important of seven values, i.e. Wood Production Value (priority 0,113), NWFPs Production Value (priority 0,135), Forage Production Value (priority 0,117), Tourism Value (priority 0,159), Water Quality and Quantity Value (priority 0,153), and Recreation Value (priority 0,115) associated with forests. Environmental Value (priority 0,209) was considered the most important forest value for the participants when determining priority ranking and selection of forest function in forest management plan and strategy for Düzlerçamı pilot site. These results indicated that participants had highly ranked environmental values.

**Table 8: Importance Values and Ranking Orders of the Forest Values in Düzlerçamı Pilot Site, Obtained with the Aid of the AHP Technique**

Forest Values	Importance Values	Ranking Orders
Environmental Values	0,2090466	1
Wood Production Value	0,1133178	7
NWFPs Production Value	0,1350718	4
Forage Production Value	0,1166042	5
Tourism Value	0,1585742	2
Water Quality and Quantity Value	0,1532189	3
Recreation Value	0,1148042	6

#### **Sensitivity Analysis**

Several weighting alternatives were applied as sensitivity analyses in order to obtain support for decision-making. For this aim, some decision elements weights were changed. The weights importance of the stakeholders and decision criteria in the AHP technique were changed to determine the ranking order sensitivity of forest values (from Table 52 to Table 57; from Figure 31 to Figure 52). According these Tables and Figures, by changing the priority values of some stakeholders, the priority ranking of decision alternatives remained unchanged as compared to the original result of priority ranking while it was determined that the priority ranking of decision alternatives was not significantly sensitive to the priority values of some stakeholders. Also, the changes of the decision criteria weights importance can influence the ranking order of the forest values for Düzlerçamı pilot site.

By using the AHP technique, different concerned parties' preferences were clarified. So, alternative forest values were evaluated with respect to judgements made by different participants. Thanks to the AHP technique, an important problem relating to priority ranking and selection of forest values in forest management plan should be solved by having all different stakeholders' participation, and conflict management carried out in Düzlerçamı pilot site.



## ADDED VALUE OF THE PARTICIPATORY INITIATIVES

In the fourth and final phase “Assessing the Impacts and Results of participation Process, and Determining the Stakeholders’ Satisfaction Levels with the Participation Level” of the participatory approach, existing participation initiatives were assessed before that participation process began, measured stakeholders’ satisfaction levels after participation process developed during the FFEM initiative, and finally compared the pre-assessments and post-assessments of participation process within FFEM initiative. So the impacts, contributions, results, and added values of the participatory approach implemented within FFEM Initiative were identified.

In achieving the objectives of this phase, ten hypotheses were stated for analysis purposes by means of SPSS© (Statistical Package for Social Sciences):

For the attainment of the objectives of this phase, it was essential, for reasons of relevance and validity, to obtain ideas for instrument development from various sources. For the preparation of the survey instrument construction of, an extensive literature examination of the participatory approach in natural resources management was conducted to identify the most prevalent issues of the participation process assessments (Cote and Bouthillier, 2002; Germain et al., 2001; Booth and Halseth 2011; Patel et al., 2007). From the literature review, the main concerns of the participation process assessments were identified, as well as the most important impacts and results of any participation process on stakeholders. From these issues, the items in the questionnaire were developed.

Questionnaire form in this phase of this study consisted of four parts: (1) Part that measures the pre-assessments of participation process (Survey Form 5), (2) Part that measures the post-assessments of participation process within FFEM initiative (Survey Form 6), (3) Part that determine the Stakeholders’ Committee/Forum Members’ socio-demographic characteristics (Survey Form 7), and (4) Part that determine the Stakeholders’ Committee/Forum Members’ opinions (Survey Form 8).

The questionnaire was refined through a pilot study. The objectives of the pilot study were: to find out potential problems that could occur in the survey process; to learn the amount of time needed to respond to the instrument; and to observe the reactions of the stakeholders. The questionnaire was administered to four stakeholders in Düzlerçami pilot site. They were instructed to ask for clarification of terms and phrases that could be unfamiliar to them. Any request for clarification helped to detect which questionnaire items needed to be revised. All questionnaire items were retained, but many of them were revised in light of the items that presented a problem to the respondents during the pilot study. The final questionnaire consisted of 14 pre-assessment items, 14 post-assessments items and 6 socio-demographic items (from Survey Form 5 to Survey Form 7).

Questionnaire items to measure the impacts and results of participation process and stakeholders’ satisfaction levels for pre-assessments of participation process were shown in Survey Form 5.

Questionnaire items to measure the impacts and results of participation process, and stakeholders’ satisfaction levels for post-assessments of participation process within FFEM initiative were in Survey Form 6.

The questionnaire was administered to the research sample (which consisted of twenty-four members of the Stakeholders’ Committee/Forum living in Düzlerçami pilot site) during the workshop at 25 December 2014. All the distributed questionnaires for data collection were completely answered by all participants in the participatory workshop activity at 25 December 2014 workshop. So, 24 questionnaires were used for the research sample.

There were two “dependent variables” in this phase: (1) pre-assessments of participation process regarding management system and their current involvement in forest resources management of Stakeholders’ Committee/Forum in Düzlerçami pilot site; and (2) post-assessments of participation process within FFEM initiative regarding their satisfaction levels regarding the involvement in FFEM initiative. Also, there were three “independent variables” in this phase: education, age, and village of residence.

The following statistical techniques were used: “descriptive statistics (percentage, mean, and standard deviation)”, “frequencies”, “binomial variables”, “one way analysis of variance (ANOVA)”, “multiple linear regression analysis”, and “correlation analysis” (Table 58).

Firstly, demographic information was collected on all representatives of the Stakeholders’ Committee/Forum who participated in the survey of the fourth phase “Assessing the Impacts and Results of Participation Process, and Determining the Stakeholders’ Satisfaction Levels with the Participation Level” of the participatory approach. One purpose for the collection of this data was to provide an overview of the population that participated in this research phase. Data were also collected to analyse differences between stakeholders and the villages in which they live. Distribution of socio-demographic characteristics by stakeholders is shown in Table 59.

79,2 percent of participants went to an “elementary school” (Table 59 and Figure 53), most of them were between 55 and 64 years old (Table 59 and Figure 54), and most of them were from “Akkoç” village (Table 59 and Figure 55).



#### *Phase 4 – Step 1: Pre-assessments of participation process*

Pre-assessments of the participation process on the Stakeholders' Committee/Forum members' current opinions and involvement in forest resources management in Düzlerçamı pilot site were measured by a fourteen-item scale constructed by the Support Structure of the C3 of FFEM Project using a Likert-type response pattern of "strongly agree", "agree", "undecided", "disagree", and "strongly disagree". Responses were coded from one to five with five assigned as "strongly agree" (or strong positive representing the high end of the scale) and one assigned to "strongly disagree" (or strong negative at the low end of the scale) (Survey Form 5). The respondents' mean score ranged from 1,00 to 4,00. The reliability of the scale of pre-assessments of participation process was estimated using the Cronbach's alpha coefficient. The fourteen item measure exhibited an alpha value of 0,895 (Table 60).

A question was asked to all participants of the Stakeholders' Committee/Forum to know how strongly they agree or disagree with different statements on pre-assessments of participation process. The most agreed and the least agreed statements were respectively; "we have no conflict with other stakeholders" (mean=2,67; standard deviation=1,523), and "we know the plans and maps of forestry" (mean=1,42; standard deviation=0,881), (Table 61 and, from Figure 56 to Figure 64).

The items on pre-assessments of participation process, listed below, show the mean score choosing from the most "agreed" to the least "agreed" (Table 61 and Figure 56);

1. We have no conflict with other stakeholders (mean=2,67; standard deviation=1,523),
2. Forestry Organization recognizes the legitimacy of our interests and rights (mean=2,33; standard deviation=1,373),
3. Forest management plans include different forest resources and use into account (mean=2,33; standard deviation=1,465),
4. Forestry Organization gives importance to decisions about issues of increasing our quality of life (mean=2,29; standard deviation=1,398),
5. Frequency at which we meet the Forestry Organization is satisfactory (mean=2,08; standard deviation=1,248),
6. We are aware of the forestry activities conducted by other users of the territory, except for Forestry Organization (mean=1,92; standard deviation=1,176),
7. Our concerns, needs and values are directly incorporated into decision making by Forestry Organization (mean=1,92; standard deviation=1,139),
8. Forestry Organization makes always its objectives and activities known to us (mean=1,83; standard deviation=1,007),
9. Forestry Organization applies the face-to-face meetings for taking our opinions (mean=1,79; standard deviation=1,474),
10. Forestry Organization organizes the meetings for taking our opinions (mean=1,75; standard deviation=0,944),
11. Forestry Organization consults our opinions before the decision making (mean=1,54; standard deviation=1,103),
12. Forestry Organization modifies its plans and applications according to our opinions and expectations (mean=1,50; standard deviation=0,780),
13. Forestry Organization uses the surveys for taking our opinions (mean=1,50; standard deviation=0,933), and
14. We know the plans and maps of forestry (mean=1,42; standard deviation=0,881).

#### *Phase 4 – Step 2: Post-assessments of participation process within FFEM initiative*

Post-assessments of participation process within FFEM initiative on the impacts and results of participation process, and the Stakeholders' Committee/Forum members' satisfaction levels regarding involvement in FFEM initiative in Düzlerçamı pilot site were researched using a fourteen-item scale constructed by the Support Structure using a Likert-type response pattern of "strongly agree", "agree", "undecided", "disagree", and "strongly disagree". Responses were coded from one to five with five assigned as "strongly agree" (representing the high end of the scale) and one assigned to strongly disagree at the low end of the scale (Survey Form 6). The respondents' mean score ranged from 3,00 to 5,00. The reliability of the scale of post-assessments of participation process within FFEM initiative was estimated using the Cronbach's alpha coefficient. The fourteen item measure exhibited an alpha value of 0,810 (Table 60).

A question asked to all participants of Stakeholders' Committee/Forum to indicate how strongly they agree or disagree with the different statements on post-assessments of participation process within FFEM initiative. Statements which were ranked as the most and least agreed statement were "the public opinions and demands were sufficiently served by the final appeal decision" (mean=4,79; standard deviation=0,588), and "it was given the feelings that my opinions were important during participation process" (mean=4,25; standard deviation=0,847) and "I felt my opinions and demands influenced the final appeal decision" (mean=4,25; standard deviation=0,944), respectively (Table 66 and, from Figure 65 to Figure 72).

The items on post-assessments of participation process within FFEM initiative, listed below, show the mean score choosing from the most "agreed" to the least "agreed" (Table 66 and Figure 64);

1. The public opinions and demands were sufficiently served by the final appeal decision (mean=4,79; standard deviation=0,588),
2. Implementation of the final appeal decision was possible in a short time (mean=4,71; standard deviation=0,624),
3. Participation process was fair to me (mean=4,67; standard deviation=0,702),

4. The final appeal decision seemed fair to me, and it was not biased (mean=4,67; standard deviation=0,565),
5. The monetary costs of the participation process were in the Table (mean=4,50; standard deviation=0,780),
6. Participation process was efficient in terms of time, not boring nor long (mean=4,42; standard deviation=0,717),
7. The final appeal decision was technically feasible (mean=4,38; standard deviation=0,711),
8. Participation process was not biased to the Forestry Organization's viewpoint (mean=4,33; standard deviation=0,761),
9. There was an opportunity to negotiate my needs and expectations during participation process (mean=4,33; standard deviation=0,868),
10. Participation process was skilfully designed (mean=4,33; standard deviation=0,816),
11. The final appeal decision was environmentally sound (mean=4,33; standard deviation=0,761),
12. Implementation of the final appeal decision can be done in a financially sound manner (mean=4,33; standard deviation=0,761),
13. It was given the feeling that my opinions were important during the participation process (mean=4,25; standard deviation=0,847), and
14. I felt like my opinions and demands influenced the final appeal decision (mean=4, 25; standard deviation=0,944).

### Hypothesis Tested

The results and Hypothesis tested in the fourth and final phase "Assessing the Impacts and Results of participation Process, and Determining the Stakeholders' Satisfaction Levels with the Participation Level" of the participatory approach are shown from Table 62 to Table 72, and summarized in Table 9.

**Table 9: Results and Hypothesis tested in the Fourth and Final Phase "Assessing the Impacts and Results of participation Process, and Determining the Stakeholders' Satisfaction Levels with the Participation Level" of the Participatory Approach**

Hypothesis Tested	Results
<i>H<sub>01</sub>: There would not be statistically significant difference between the pre-assessments of participation process held by Representatives at the Stakeholders' Committee/Forum in Düzlerçami pilot site.</i>	Not supported by the data
<i>H<sub>02</sub>: There would not be a statistically significant difference between the pre-assessments of participation process held by Stakeholders' Committee/Forum in Düzlerçami pilot site according to their socio-demographic characteristics (education, age, and village of residence).</i>	Not supported by the data
<i>H<sub>03</sub>: There wouldn't be a statistically significant difference between the pre-assessments of participation process held by Stakeholders' Committee/Forum in Düzlerçami pilot site when the effects of sociodemographic variables (education, age, and village of residence) were controlled.</i>	Not supported by the data
<i>H<sub>04</sub>: It wouldn't be a statistically significant difference among the post-assessments of participation process within FFEM initiative held by Stakeholders' Committee/Forum in Düzlerçami pilot site.</i>	Not supported by the data
<i>H<sub>05</sub>: There would not be statistically significant difference between the post-assessments of participation process within FFEM initiative held by Stakeholders' Committee/Forum in Düzlerçami pilot site according to their socio-demographic characteristics (education, age, and village of residence).</i>	Not supported by the data
<i>H<sub>06</sub>: There would not be statistically significant difference between the post-assessments of participation process within FFEM initiative held by Stakeholders' Committee/Forum in Düzlerçami pilot site when the effects of socio-demographic variables (education, age, and village of residence) were controlled.</i>	Supported by the data
<i>H<sub>07</sub>: There would not be a significant positive bivariate relationship among the pre-assessments of participation process and the post-assessments of participation process within FFEM initiative held by Stakeholders' Committee/Forum in Düzlerçami pilot site.</i>	Not supported by the data
<i>H<sub>08</sub>: There would not be a significant positive bivariate relationship among the pre-assessments of participation process and the post-assessment of participation process within FFEM initiative held by Stakeholders' Committee/Forum in Düzlerçami pilot site, and their education characteristics.</i>	Supported by the data
<i>H<sub>09</sub>: There would not be a significant positive bivariate relationship among the pre-assessments of participation process and the post-assessments of participation process within FFEM initiative held by Stakeholders' Committee/Forum in Düzlerçami pilot site, and their age characteristics.</i>	Not supported by the data
<i>H<sub>010</sub>: There would not be a significant positive bivariate relationship among the pre-assessments of participation process and the post-assessments of participation process within FFEM initiative held by Stakeholders' Committee/Forum in Düzlerçami pilot site, and characteristics of their residence villages.</i>	Not supported by the data

The final conclusions can be summarized as follows;

- Respondents had generally statistically significantly negative attitudes of pre-assessments of participation process,
- Respondents had generally statistically significantly positive attitudes of post-assessments of participation process,
- The pre-assessments of participation process were statistically, significantly and negatively related to post-assessments of participation process within FFEM initiative.

# Presentation of synergies

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## SYNERGIES WITH THE PROJECT'S OTHER COMPONENT

First of all, in Antalya from 27 to 28 May 2014, the national inter-components meeting of the FFEM Project was held. This meeting was very useful for improving inter-components relations, dialogs and coordination, being aware of each other's work, etc.

Also, the social data on the population in the pilot site was provided to other Components of FFEM Project. When needed, the literature and data among different components of FFEM Project were shared in different phases and steps of the components' approaches and methods/tools.

There were synergies with Component 2 of FFEM Project. Phase 3 "*Determining the Priorities of the Forest Values*" of the participatory approach methodology used in FFEM Project in Düzlerçamı pilot site, in which would be determined the priorities of forest values (i.e., environmental values, wood production value, NWFPs production value, forage production value, tourism value, water quality and quantity value, and recreation value) by satisfying various stakeholders' preferences, needs, demands and expectation, would be related to Component 2 of FFEM Project, i.e. assessing the socio-economic value of goods and services provided by Mediterranean Forest Ecosystem. In the inter-components' meeting, the second phase of the foreseen participatory approach of C3 was discussed; the determined priorities of forest values by different stakeholders, would be related with Component 2 of FFEM Project. But, determining priority ranking and selection of forest function under C3/Phase 3 – will be carried out in the future. However, the way to integrate the outcomes of the socio-economic value of forest goods and services under Component 2 is still under discussion.

Component 1 and Component 2 could also use participatory approaches of C3 to develop their methodologies and implement actions. Also, if needed, the data between components of FFEM Project in different phases of the components' approaches and methods/tools could be shared. For this aim, inter-components' meetings were held during in the implementation process.

## SYNERGIES WITH OTHER PROJECTS

In Turkey, the United Nations Development Programme (UNDP) Turkey's project in collaboration with the GDF, is implementing a 5-year long (2013-2018) GEF Full Size Project, named "*Integrated Approach to Management of Forests in Turkey, with Demonstration in High Conservation Value Forests in the Mediterranean Region*". This project has a unique structure with its multi focal area objectives (i.e., Climate Change Mitigation, Sustainable Forest Management and Biodiversity) which would provide opportunities to implement activities in a holistic way for integrating forests with environmental and land use policies, rural development, wood and NWFPs and services. It was believed that C3 of FFEM Project had generated some information on participatory approach and methodology of forest resources management for UNDP Turkey's project. Establishing synergies to be carried out in the future with this project is essential for the future success of the FFEM project.

# Participative approach critical analysis

## STUDY INPUTS AND LIMITATIONS

Participatory tools used in the different phases of Düzlerçamı case study had different strengths. Face-to-Face Meetings, Information Meetings, Coffeehouse Meetings, and General Meetings or Workshops focusing on the involvement of stakeholders, the provision of information, and emphasizing interaction and exchange of information among stakeholders were relatively simple to implement. These tools did not require considerable time and money to carry out and to maintain. They were relatively fast and practical methods to inform participants about FFEM project, active approaches to communicate with participants, and useful tools to increase participation level to the FFEM project. Their two-way communication characters allow for good feedback from the stakeholders. Thus, they enabled collecting a range of different visions and opinions from participants.

Questionnaires focusing on the collection of actual information were organized as structured methods to survey the participants' opinions, needs, expectations and preferences. They were efficient (in time and money) way of interviewing with participants, and did not take more effort to conduct. A long list of questions in the questionnaires provided more details. By means of comparison questions, some complex issues became easier to understand and be replied by all participants.

In addition, Expert Interviews carried out together with skilled, well-informed interviewers that were Supporting Structure, Facilitator and Scientific Committee provided interdisciplinary review and knowledge base for decision-making. These participatory tools had been successfully implemented in this case study. So, in Düzlerçamı pilot site case where all participants had already indicated a strong interest in applying participatory approach methods, the implementation of these participatory tools to communicate between Supporting Structure and all participants in the participatory process was positively evaluated.

Düzlerçamı case study indicates that the integration of MCDM and participatory planning is a promising approach and a viable option for handling complex natural resources management situations with multiple stakeholders and conflicting criteria. The strength is that the MCDM process incorporated stakeholder values in a structured way that ensured a certain degree of transparency of the decision-making process. Furthermore, the MCDM process potentially increased the decisions quality by balancing interests against each other, thereby producing solutions of higher overall stakeholder satisfaction.

## THIS STUDY'S LIMITATIONS/WEAKNESSES

First of all, data of this study were collected from representatives of Steering Committee, Stakeholders' Categories, and Scientific Committee. Each of them expressed their different opinions. In reality, acknowledging the participatory aspect of natural resources management means having to work with people which means less control and longer lag time before starting to do study, longer routes to gathering data, longer decision-making processes and an overall increased level of uncertainty during the whole process.

In addition, the selection of stakeholder groups raised other issues. The direct involvement of citizens in natural resources management decisions raises important questions about the representativeness of the involvement. It is not clear at what point stakeholder groups should be excluded from the participatory decision making.

Although the present study attempted to be relatively comprehensive while analysing various issues related to participatory forest resources management in Düzlerçamı pilot site, many limitations of the study remain. First of all, target people of the study were confined to participations residing in Düzlerçamı pilot site and Antalya city at the time of study. The extent and scope of data collected were limited to identify items in the Düzlerçamı Methodological document of FFEM project. In addition, some participants of the stakeholder groups have been analysed in this study. Greater number of participants should have been included to ascertain their perceptions because it would have given more credibility to the overall findings.

There were also some difficulties in public participation processes in forest resource management at the Düzlerçamı pilot site. Participatory approach was found to be more demanding in time respect and resources than the conventional management and planning. Difficulties include also the type of people interested in participating (limited

representativeness); a generally low total number of participants; increased conflict between opposing stakeholder groups; and too high expectations of the participants, resulting in disappointment over compromise.

As mentioned before, despite giving importance to, women's participation to FFEM project activities and decision making process in Düzlerçamı pilot site, it was acknowledged that the result was disappointing. Perhaps it is not surprising that none of the women in Düzlerçamı pilot site came to the project meetings. This problem can be linked to the gender norms prevalent in Düzlerçamı pilot site.

"Yayla" is the Turkish name for the high alpine meadows and pasture lands located in the higher elevations where "yaylacılık" - the traditional seasonal agricultural lifestyle - takes place. The "yaylacılık" tradition is a semi-sedentary pastoralism that is fundamentally composed of agricultural and cultural activities common for the mountainous regions of Turkey from the Black Sea to the Mediterranean. It is mainly a seasonal migration of villages from their permanent settlements in the lower elevations to temporary settlements in alpine meadows at higher elevations during the summer months. The tradition of migrating has been active among the majority of the Düzlerçamı communities until very recently, and was a vital resource management method. Most local people from the villages in the Düzlerçamı pilot site moves to the "yaylas" in summer. For this reason, we couldn't work with these stakeholders that were involved in the participation process of FFEM project. Once it's cold in autumn at "yaylas", the stakeholders come back to their villages. Then, we could perform the application of the Questionnaires, General Meetings or Workshops, Coffeehouse Meetings, and Interviews.

The other limitation of this study is that Düzlerçamı participants in General Meeting or Workshop were relatively homogeneous in socioeconomic backgrounds. The sampling frame was limited to individuals who seek to participate in public involvement or request to be maintained on Forestry Organization. These characteristics limit application to other possible groups.

Also, ideally, all relevant decision elements such as decision criteria, decision alternatives (forest values) should be considered and included in the AHP decision model. However, for Düzlerçamı case study only the most important decision elements were included. It was found that by increasing the number of attributes, it made the decision problem unworkable and the decision element evaluation beyond the cognitive limits of the respondents.

The time frame for FFEM project was of a short duration. So, there were relatively short periods of observation and interviews with each stakeholder in Düzlerçamı pilot site, and we worked very hard, as needed, to compensate for this limitation.

## **DIFFICULTIES ENCOUNTERED AND RECOMMENDATIONS/SOLUTIONS FOUND**

SWOT is a convenient way of conducting a strategic assessment. However, it does not analytically determine the importance of factors or assess the fit between SWOT groups and factors. To eliminate these drawbacks, SWOT is combined with some MCDM techniques which prioritize the factors with comparisons. In previous quantified SWOT analysis applications such as A\*WOT (Kurttila et al., 2000; Pesonen et al., 2001; Kajanus et al., 2003; Yılmaz, 2006; Leskinen et al., 2006; Năstase and Kajanus, 2008; . Kajanus, 2009, etc.), S-O-S (Kangas et al., 2003), the required pairwise comparisons have sometimes been found to be difficult to implement. Especially this has applied to compare the importance of different SWOT factors. This study intended to introduce a simple, acceptable, systematic, and transparent methodology for forest resources management strategy and its effects on Düzlerçamı pilot site. In this second phase of the study, applying R\*WOT instead of the other quantified methods made it easier, faster and cheaper to perform the required inquiries. The ultimate success of a strategic process like this is, to a large extent, dependent on the accuracy of an effective situational assessment (i.e., external and internal environment).

The consistency of pairwise comparisons by experts' sector was mainly good in the fourth step "*Determining the Importance of Forest Values According to the Decision Criterid*" of Phase 3 "*Determining the Priorities of the Forest Values*" of the participatory approach methodology used in FFEM Project in Düzlerçamı pilot site. Also, in this phase, the evaluations made by different experts were quite similar, except for one expert. Although the consistency of her evaluations was good, she had exceptional priorities. The reasons why she had different opinions of the majority of the other sector experts might be the insufficient concentration on the evaluation, or misunderstanding of the comparisons, etc. It may be assumed that the opinions of the majority of the sector experts are more correct than opinions of the one expert. So, her opinions were not included into the AHP analysis. The choice of the sector experts in this step of the participatory approach methodology used has to be made with care.

In some cases of pair wise comparisons having been used in the acquisition of the preference information, the required number of comparisons has grown too big, and it has been difficult to implement for some stakeholders. In this study, there were comparably large groups of participants in the pilot site. Thus, it could be rather difficult to reach a consensus of opinions in the surveys and meetings, also in phases and steps of the participatory approach. Just as there were



differences in the opinions and insights of the Steering committee, Supporting structure, Facilitator, Scientific committee in the national inter-components meeting of the FFEM Project in Antalya. However, it was expected that the analysis results would become more reliable if the number and variety of the participants were increased. Also, in the case of Düzlerçamı pilot site, the priorities of participants with different backgrounds (e.g. different stakeholders' categories) had been determining by giving weights by the Steering committee.

So, in this study, the comparisons listed in the questionnaires caused some difficulties, and few participants in the national inter-components meeting of the FFEM Project had adopted some negative attitudes towards comparisons in the questionnaires that were part of the methodology applied in C3. In some cases, the required number of comparisons had grown, and it had been difficult to implement the comparisons, and finally the conducting the questionnaires had been somewhat laborious, tedious, and time-consuming process. But, after Thematic Expert and National Expert explained in detail how the comparisons were carried out, the participants were able to do it easier and logically prioritize the decision elements.

Although it may be hard to adopt, learn, use, understand, and interpret new methods/approaches/tools and participatory management for the natural resources managers, C3 of FFEM Project can serve as a mean to introduce new approaches and methodologies to their potential users, and especially practical forestry.

Also, it is known that forest ecosystems are one of the most sensitive areas of natural resources management in terms of general biological, socio-economic, cultural etc. Also, people's choices, needs, expect and desires are changing day by day. Thus, the future is always uncertain for the forest ecosystems. These uncertainties inevitably affect strategies and decision of forest resources management.

So, only one participatory analysis may not be sufficient for dealing with the uncertainties and risks in the assessment of future development in the pilot site. Periodic researches on governance of the participatory approach in future are needed to consider these types of the uncertainties and risks.

# Valorization and replication of the participatory approach

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First of all, different phases of this study have used various MCDM (i.e., AHP and R'WOT) frameworks to identify the differences among perceptions of different stakeholder groups (NGOs, government, industry, and academia) regarding forest resources management in Düzlerçamı pilot site. The scope of this study is local, but its findings may be applicable for other regions facing similar situations. Moreover, if required, the same methodology can be replicated in each Mediterranean country or other places to assess perceptions of local stakeholder groups. Given the strengths and limitations of the AHP and R'WOT methods, the plausible conclusion is that the AHP and R'WOT are suited for participatory natural resources management both at local or watershed scale applications and policy evaluation at national or regional (Mediterranean) level.

So, this study describes an exploratory step in this direction by demonstrating a few MCDM methods that have enormous potential to improve the participatory planning process with the example of Düzlerçamı pilot site. So, to enable natural resources managers to make practical use of the powerful tool that the combination of participatory planning and MCDM provides, more studies have to be directed toward the application of this approach in real case studies, especially in Mediterranean countries. Moreover, there is a need for studies that describe and evaluate the whole process. As the assessment in this study shows, an increased focus on the participatory aspect may improve the fulfilment of the social goals and bring out this tool's full potential.

A replication of this case study can be useful in other regions to see whether a similar or different notion of public participation and associated implementation practices could be operative there. The effects of Düzlerçamı case study then can be compared with this study, and an explanation can be made about the similarities and differences of the findings. But, prior to the expansion of the Düzlerçamı case study to any level (such as local, national, regional level), the operational stages of participation methodology need to be well known by users who will be responsible for the replication in each site. This will help users understanding clearly how the methodology and notion should be implemented in the local community. To ensure an understanding of the operational stages on the methodology and concept, there is a need for a seminar or a workshop to create a mutual atmosphere of discussion among the users. They should not only focus on "what" to do, but "how" to create a real participation of people in the natural resources management. Users have to understand clearly the meaning of participation, the concept of empowerment, and how the methodology and concept can be put into practice.

As the results derived in this study are from a small sample, caution should be taken in using these findings in a broader context. A large sample is highly desirable to capture greater heterogeneity in preferences and to make generalizations at national and/or regional level. A mail survey approach can be followed to gather information from a large sample. Alternatively, respondents can be invited to convenient locations and ask them to deliberate the factors and come to a consensus on pair wise comparison or the answers of questionnaires. But, one of the problems of this approach is that some people may dominate the deliberations and influence the choice. The results of individual responses with those from group consensus can be compared.

Finally, given the strengths and limitations of the AHP and R'WOT methods, the plausible conclusion is that the AHP and R'WOT are suited for participatory natural resources management both at local or watershed scale applications and policy evaluation at national or regional (Mediterranean) level.

## Conclusion

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Forest resource planning is a very complex problem mainly due to the multiplicity of wide-ranging criteria involved in the underlying decision-making process. Thus, every decision made affects criteria of different nature like economic issues (e.g., timber, forage, livestock, hunting, etc.), environmental issues (e.g., soil erosion, carbon sequestration, biodiversity conservation, etc.) and social issues (e.g., recreational activities, level of employment, population settlement, etc.). The complexity of most forestry problems is currently increasing because of the way in which different social groups or stakeholders perceive the relative importance of these criteria. Hence, the joint use of MCDM and participatory decision-making approaches and techniques has turned out to be of paramount importance for some forestry problems (Diaz-Balteiro and Romero, 2008). So, MCDM is a sound and well-established paradigm for addressing many problems within the broad field of forest resources management.

According to the experiences of this study, MCDM techniques can allow a more participatory posture at all levels of the modelling process. Stakeholders or decision makers are able to participate and contribute actively to modelling—from identification of model elements, formulation of relationships, and all other model components, including the actual decision-making process. This calls for a more transparent, simple, and easily accessible participatory modelling paradigm and process.

Also, from the experiences gained in Düzlerçami case study on using MCDM methods in participatory approaches, these methods are worth studying and using further in the context of natural resources management. These methods are good approaches for many situations, such as participatory decision making process, in which simple and comprehensible methods are needed. It is supposed that these kinds of methods will be frequently needed in the field of participatory natural resources management. However, no MCDM method is the best one in all participatory decision making process. The method to be used should be chosen by taking into account the participatory decision support needed on hand.

On the other hand, in the second phase of Düzlerçami case study, participatory forest resources management can be a complicated and delicate task. The complexity springs from, the facts that several stakeholders are involved and that these stakeholders very often have conflicting interests; that is, the situation has both a multiple stakeholder and a multiple criteria character. The delicate task is to make the participatory process legitimate and accepted by stakeholders because they may have very different expectations of a participatory process (Kangas et al., 2010; Webler et al., 2001). One promising approach for handling the complexity is by structuring the planning process with MCDM (Mendoza and Martins, 2006). Although MCDM is basically a decision analysis tool for single decision-maker situations, the multi-criteria character also makes MCDM potentially useful as a tool for participatory planning.

The study results would become more reliable if the number of participants with different backgrounds were increased (e.g. different sector experts, rural entrepreneurs, citizens). In addition, it would be interesting to examine the differences of the opinion results between participants.

There is a need to apply the participatory approach framework developed in Düzlerçami case study to additional case studies in order to gain more practical insights under a broad variety of conditions. Further case studies should cover different Mediterranean regions differing in their conditions; involve larger groups of stakeholders, different types of land-ownership structures, different technologies, different political levels, etc.

This case study has documented satisfaction with the public participation process in Düzlerçami pilot site. By incorporating more public involvement with different tools, forest resources managers may improve participant satisfaction levels.

By employing participatory approach with all important interest groups and stakeholders represented, a planning approach with multiple criteria-goals-objectives-alternatives-attributes-phases should be used in all planning situations in natural resources planning.

In addition, the findings from Düzlerçami case study reveal that all the participants expressed clear suggestions for participatory natural resources management to improve their work together. Increased quantity and quality of communication and dialogue were mentioned by the participants of this study: They stressed out the fact that stakeholders of natural resources management should have greater support and greater focus on their economic and developmental needs throughout interviews and open-ended survey responses. These findings show the need for strengthening local capacity in natural resources management at the pilot site.

Finally, it is essential for both all participants and other people in Turkey and Mediterranean countries to see the results or effects of the FFEM project. Especially, the acquired information should be presented in a comprehensive form to

everyone involved in the FFEM project and other people that want to see how their efforts will make a difference in decision-making and coordination of action on Düzlerçamı pilot site. The participation process taken to create the decision making model in Düzlerçamı pilot site and this type of solution versus other participatory approaches in other pilot sites of other FFEM project partner countries can be compared. Also, adaptations of participatory approaches (used at FFEM project) in the planning and implementing of forest resources management can be investigated in FFEM project partner countries. As mentioned before in this report, where women's participation problem exists, both male and female team members should've been included for solving this problem, and also employed female consultants to facilitate accessibility of women, to address the issue.

After FFEM project ended and the external financial and technical support stopped, post-pilot project situations of forest resources management in the pilot sites should be monitored and evaluated according to the selected outcome variables such as change in forest resources conditions, benefits from forest resources, demands, different stakeholders' needs, expectations and their effectiveness about forest resources management, institutional effectiveness about participatory management, successes and positive or negative effects of the FFEM project in the shorter and longer term, etc. These variables can be assessed at three points in time (i.e., before the introduction of FFEM project, during the project implementation and after the projects ended). So, to inform future programs and projects, it is essential to learn from existing pilots and experiences.

Future research is needed to address the limitations of the current Düzlerçamı study, and to extend the study to additional research needs that are suggested by the related literature. A need exists to pursue experimental approaches with larger sample sizes. Additional research is needed to more fully explore and compare methods of public participation such as types of group decision making methods, facilitator roles, etc. Research also needs to be conducted on Forestry Organization issues such as the timing of public participation, comparison across various methods of different public participation and communication, and effects and role of training for stakeholders and staff, etc. A need also exists to examine the use of technology (such as photo-questionnaires, Geographical Information Systems and internet-based technologies such as e-mail and discussion groups, video conferencing, web page postings, etc.) by Forestry Organization in public participation as related to effects on participants' perceptions.

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# Annexes

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Annex 1: Tables.....	57
Annex 2: Figures.....	107
Annex 3 : Survey forms.....	144

## ANNEX 1: TABLES

Table 10: Definition of Some Important Key Words

Key Words	Definition
Alternatives	In MCDM, this term is defined as the possible solution or options to a MCDM decision problem that the decision maker(s) has to decide within (Figueira et al., 2005).
Coffeehouse Meetings	In the participatory approach in Düzlerçamı case study, meetings in public social places where people would meet for conservation, rest, entertainment and having good-time while drinking tea, coffee etc. in the villages or towns. In the beginning of participation process, these meetings were carried out for emphasizing interaction and exchange of information among stakeholders.
Criteria	In MCDM, the criteria are referred as the attributes or factors that describe a decision problem (Figueira et al., 2005).
Decision maker	Decision maker is defined as the individual or a group who is the owner of a specific decision problem (Figueira et al., 2005; Guitouni, 1998).
Economic Interests	Stakeholders' component of the government structure of the participatory approach in Düzlerçamı pilot site, that are included Cutting Workers, Private Sector (Forest Products Industry), and Tourism Agencies.
Expert interviews	Expert interviews with Supporting Structure, Facilitator and Scientific Committee occur face to face at the step 3.3 of phase 3 of the participatory approach in Düzlerçamı case study.
Face-to-face meetings	Meetings occurred by face to face or virtually with all stakeholders in the phase 2, 3 and 4 and their steps of the participatory approach in Düzlerçamı case study.
Facilitator	Stakeholders' component of the government structure of the participatory approach in Düzlerçamı pilot site, that are composed of Focal Point of National Expert of the C3 of FFEM Project (1 person)
Stakeholder	Identification of resource person or institution for effective implementation of natural resources management.
Stakeholders' Committee/forum	Stakeholders' component of the government structure of the participatory approach in Düzlerçamı pilot site, that are composed of Representatives of Local Governments (Governorship, District Governorate, Municipality, and Village Administration) (6 persons), Representatives of Other Public Institutions (GDTSMS, GDLRC, GDHS, GDNP, and GDH) (5 persons), Representatives of Local People (7 persons), Representatives of Beekeepers (2 persons), Representatives of Cutting Workers (2 persons), Representatives of NWFP Pickers (2 persons), Representatives of Shepherds (4 persons), Representatives of Hunters (2 persons), Representatives of Picnickers (2 persons), Representatives of Ecotourists (2 persons), Representatives of Private Sectors (2 persons), Representatives of Tourism Agencies (2 persons), Representatives of NGOs (2 persons), Representatives of Union of Chambers of Turkish Engineers and Architects (TMMOB) (2 persons), and Representatives of water suppliers (2 persons).
Steering Committee	Stakeholders' component of the government structure of the participatory approach in Düzlerçamı pilot site, that are composed of Representatives of Manager of Antalya RDF (4 person), Manager of Antalya NPRD (1 person), Representative of MoFAL-GDFC (1 person), Representative of GDShw (1 person), Representative of MoCT (1 person), Representative of MoEU (1 person), Representative of MoENR (1 person), Representative of MoNE (1 person) and Representative of MTA (1 person).
Supporting Structure	Stakeholders' component of the government structure of the participatory approach in Düzlerçamı pilot site, that are composed of Focal Point of FFEM Project (1 person), Thematic Expert of the C3 of FFEM Project (1 person) and Assistant Thematic Expert of the C3 of FFEM Project (1 person).
Professional Interests	Stakeholders' component of the government structure of the participatory approach in Düzlerçamı pilot site, that are contained SAFRI, University, Other Public Institutes, NGOs, and TMMOB.
Users of the Catchment Area Coming from Outside	Stakeholders' component of the government structure of the participatory approach in Düzlerçamı pilot site that are consisted of Picnickers and Ecotourists.

Table 11: Populations and Areas of Düzlerçamı Settlement Units in the Düzlerçamı Pilot Site

Municipality	Village	Population (person)	Area (ha)
Döşemealtı	Yukarı Karaman	3117	7 360,9
Döşemealtı	Akkoç	364	5 325, 2
Döşemealtı	Bademağacı	3850	2 530
Döşemealtı	Yağca	652	2 465,9
Döşemealtı	Çiğlik	2558	2 363,3
Döşemealtı	Yeniköy	4256	1 667,8
Döşemealtı	Yeşilbayır	4173	1 639,7
Döşemealtı	Dağbeli	3912	1 467,9
Döşemealtı	Bıyıklı	206	1 418
Döşemealtı	Kömürcüler	1086	936
Konyaaltı	Aşağıkaraman	1029	713,1
Döşemealtı	Kovanlık	1221	528
Döşemealtı	Çiplaklı	1050	540,2
Korkuteli	Bayatbademler	291	133
Döşemealtı	Aşağıoba	300	76,7

Table 12: Management Challenges of Düzlerçamı Pilot Site (Yılmaz, 2013d)

MANAGEMENT CHALLENGES	STAKEHOLDERS INVOLVED	BARRIERS TO TAKE UP THE CHALLENGE
Protection of forest boundaries and areas	Local communities, Local Government	Lack of forest boundaries monitoring and protection system based on the geographic information system and remote sensing techniques
Solution of ownership conflicts	Local communities, NGOs & foundations	Not giving the necessary utilisation rights and opportunities to the local people from forest areas and resources
Prevention the expansion of intensive tourism establishments, settlement areas and constructions in the forest areas	Local communities, Tourists, Local Government	Lack of creating awareness and support gaining studies for the community and various stakeholders
Conservation of forest biodiversity	Local communities, Tourists, Local Government, NGOs & foundations	Not giving priority to the forest villagers, who live in or around the protected areas, in income generating activities and income opportunities in the protected areas
Increasing of the success and effectiveness of forest fire fighting activities	Local communities, Regional Government, Local Government, NGOs & foundations	Lack of application of the fuel reduction techniques, modern fire fighting technologies (fire decision support system, fire information system etc.), and the lack of the measures regarding decreasing cost effectiveness etc.
Arrangement of grazing in range lands in or in the vicinity of forests and in forest areas	Local communities, Local Government, NGOs & foundations	Lack of traditions and implementations of forest villagers such as controlled grazing, improvement of grazing and range lands, fodder production and barn husbandry
Prevention of illegal timber utilisation, and irregular and degraded utilisations from non-wood forest products	Local communities, Regional Government, NGOs & foundations	Lack of the determination and supplying of local needs during the activities of current forest management planning, insufficiency of institutional capacity and the interest of forest organisation
Rehabilitation of degraded forest areas	Local communities, Regional Government, NGOs & foundations	Local people have been against of the rehabilitation of degraded forest areas due to the protection of improvement areas by fences and guards where local people used to use mainly for grazing, closing these areas to stop transportation and utilisation of local people for many years, very long rotations for forest tree species which are planted and improved in these areas to reach the harvesting and utilisation age
Private reforestation activities on the forest lands, other treasury lands and private lands carried out by the local people, private sectors and other organisations	Local communities, Regional Government, Local Government, NGOs & foundations, Research centre/University	Unclear ownership rights and utilisations, difficulties in the bureaucratic procedures regarding land allocation and credit receiving, mandatory waiting for many years to utilise from forest afforestation, and lack of private afforestation subsidies and extensions
Utilisation from fish living in waters in	Local communities,	Not bringing the populations of water products and wildlife living in



forests, other water products and wildlife products like meat, post, skin etc.	National Government, Regional Government, NGOs & foundations, Research centre/University, Other Public Institutes	the forest areas to normal levels
Non-wood forest products(fodder crops, water, medicinal and aromatic plants, fruits, industrial raw materials, mushroom, ornamental plants etc.) utilisation	Local communities, National Government, Regional Government, NGOs & foundations, Research centre/University, Other Public Institutes	Insufficiency of the importance and priority given to the management of non-wood forest products in present forest resources management system, and the institutional capacity in this subject
Utilisation from social and cultural services of forests like recreation, tourism, picnic, hunting, sportive fishing, fisheries, urban forests, ecotourism, landscape, training and research etc.	Local communities, National Government, Regional Government, NGOs & foundations, Research centre/University, Other Public Institutes	Insufficiency of inventory information and institutional capacities, weakness of the solidarity and cooperation among various stakeholders
Utilisation from environmental and protective functions of forests like protection of soil resources, regulation of water resources, preventing the flood harms, carbon deposit, preventing air pollution, cleaning the air etc.	Local communities, National Government, Regional Government, Local Government, NGOs & foundations, Research centre/University, Other Public Institutes	Deficiencies in cooperation among different organisations activities and in sharing and expansion of the experiences gained
Calculation/estimation of the present and potential economic values of multiple benefits of forests like timber and non-wood forest products, social and cultural services, environmental and protective functions etc.	Local communities, Regional Government	Insufficiency of research and valuation studies, and shortage of relevant expert researchers
Improvement of forest-village relations, and contribution to the development of forest villagers	Local communities, Regional Government, Local Government, NGOs & foundations, Research centre/University, Other Public Institutes	Lack of sufficient institutional and financial opportunities, lack of participation and importance given to the improvement of forest villagers and institutional capacities, lack of dialog, coordination and integrated activities with the other units of forest organisation, and programs, other organisation and stakeholders, and difficulties in reflecting limited resources to poor forest villagers who are really dependent on forests and put pressures on forests
Research, training and awareness activities	Local communities, Regional Government, Local Government, NGOs & foundations	Lack of coordination and cooperation among Universities / Research Institutes of different sectors (forestry, agriculture, biology etc.), lack of dialog among Universities / Research Institutes, implementation units and other stakeholders, the problem of dissemination and utilisation of research results to the implementers getting benefits out of these studies, and weakness of institutional capacities of Universities / Research Institutes

Table 13: Competent Authorities by Sectors in Düzlerçamı Pilot Site (Yılmaz, 2013d)

SECTOR	COMPETENT AUTHORITY (Ministries and General Directions)
Natural resources conservation	<ul style="list-style-type: none"> <li>Ministry of Forestry and Water Affairs (MoFWA), General Directorate of Forestry (OGM or GDF)</li> <li>MoFWA, General Directorate of Nature Protection and National Parks (GDNCNP)</li> <li>MoFWA, General Directorate of Turkish State Meteorological Service (GDTSMS)</li> <li>MoFWA, General Directorate of State Hydraulic Works (GDSHW)</li> <li>Ministry of Environment and Urbanisation (MoEU), General Directorate of Land Registry and Cadastre (TKGM or GDLC)</li> <li>Ministry of Science, Industry and Technology (MoSIT), The Scientific and Technological Research Council of Turkey (TUBITAK)</li> <li>Research Institutes / Universities</li> <li>Ministry of Food, Agriculture and Livestock (MoFAL), General Directorate of Agricultural Research and Policy (TAGEM)</li> <li>Ministry of Culture and Tourism (MoCT), General Directorate of Investment and Operations (GDIO)</li> <li>MoCT, Committee of Protection of Cultural and Natural Assets</li> <li>MoEU, Directorate General of Environmental Impact Assessment, Permitting and Inspection (DGEIAPI)</li> <li>MoEU, General Directorate of Environmental Management (GDEM)</li> <li>MoEU, General Directorate of Protection of Natural Assets (GDPNA)</li> <li>MoFAL, TAGEM, National Gene Bank Institutes</li> <li>MoFWA, General Directorate of Combating Desertification and Erosion of Turkey (ÇEM)</li> <li>Ministry of Interior (MoI), General Command of Gendarmerie</li> <li>Prime Ministry Radio and Television Supreme Council Corporation (RTUK)</li> </ul>
Forestry	<ul style="list-style-type: none"> <li>MoFWA, GDF</li> <li>MoFWA, GDNCNP</li> <li>MoFWA, GDTSMS</li> <li>MoFWA, GDSHW</li> <li>Ministry of Development (MoD), Turkish Statistical Institute (DIE or TurkStat)</li> <li>MoSIT, Turkish Standards Institute (TSE or TSI)</li> <li>Ministry of Transport, Maritime Affairs and Communications (MoTMAC), General Directorate of Highways (GDH)</li> <li>MoFWA, ÇEM</li> <li>MoI, General Command of Gendarmerie</li> <li>MoCT, GDIO</li> <li>MoCT, Committee of Protection of Cultural and Natural Assets</li> <li>MoEU, DGEIAPI</li> <li>MoEU, GDEM</li> <li>Ministry of Energy and Natural Resources (MoENR), General Directorate of Energy Affairs (GDEA)</li> <li>MoSIT, TUBITAK</li> <li>Research Institutes / Universities</li> <li>RTUK</li> </ul>
Agriculture	<ul style="list-style-type: none"> <li>MoFAL, General Directorate of Food and Control (GDFC)</li> <li>MoFAL, General Directorate of Plant Production</li> <li>MoFAL, General Directorate of Livestock</li> <li>MoFAL, General Directorate of Fisheries and Aquaculture</li> <li>MoFAL, General Directorate of Agrarian Reform</li> <li>MoFAL, TAGEM</li> <li>MoFAL, Central Union of Turkish Agricultural Credit Cooperatives</li> <li>MoFAL, Turkish Grain Board</li> <li>MoFAL, General Directorate of Agricultural Enterprises</li> <li>MoFAL, Meat and Fish Authority</li> <li>MoFAL, Agriculture and Rural Development Support Institution</li> <li>MoSIT, TUBITAK</li> <li>Research Institutes / Universities</li> <li>RTUK</li> </ul>
Livestock farming	<ul style="list-style-type: none"> <li>MoFWA, GDF</li> <li>MoFAL, General Directorate of Livestock</li> <li>MoFAL, TAGEM</li> <li>MoFAL, General Directorate of Agricultural Enterprises</li> <li>MoFAL, General Directorate of Agriculture and Rural Development Support Institution</li> <li>MoFWA, GDSHW</li> <li>MoSIT, TUBITAK</li> <li>MoD, TurkStat</li> <li>MoSIT, TSI</li> <li>Research Institutes / Universities</li> <li>RTUK</li> </ul>
Fishing	<ul style="list-style-type: none"> <li>MoFWA, GDF</li> </ul>

	<ul style="list-style-type: none"> <li>• MoFWA, GDNCNP</li> <li>• MoFWA, ÇEM</li> <li>• MoCT, GDIO</li> <li>• MoFAL, General Directorate of Fisheries and Aquaculture</li> <li>• MoFAL, GDFC</li> <li>• MoFAL, TAGEM</li> <li>• MoSIT, TUBITAK</li> <li>• Research Institutes / Universities</li> <li>• RTUK</li> </ul>
Tourism	<ul style="list-style-type: none"> <li>• MoSIT, TUBITAK</li> <li>• Research Institutes / Universities</li> <li>• MoCT, GDIO</li> <li>• MoCT, General Directorate of Cultural Assets and Museums</li> <li>• MoCT, General Directorate of Promotion</li> <li>• MoFWA, GDF</li> <li>• MoFWA, GDNCNP</li> <li>• MoTMAC, GDH</li> <li>• RTUK</li> </ul>
Urban and rural spatial planning	<ul style="list-style-type: none"> <li>• MoFWA, GDF</li> <li>• MoFWA, GDNCNP</li> <li>• MoFWA, ÇEM</li> <li>• MoEU, GDLRC</li> <li>• Ministry of Finance (MoF), General Directorate of National Property (GDNP)</li> <li>• MoFAL, General Directorate of Agrarian Reform (5)</li> <li>• Ministry of National Defence (MoND), General Command of Mapping</li> <li>• MoSIT, TUBITAK</li> <li>• Research Institutes / Universities</li> </ul>
Water Management	<ul style="list-style-type: none"> <li>• MoFWA, GDF</li> <li>• MoFWA, GDSHW</li> <li>• MoD, TurkStat</li> <li>• MoSIT, TSI</li> <li>• MoENR, GDEA</li> <li>• MoENR, General Directorate of Mineral Research and Exploration (MTA)</li> <li>• MoSIT, TUBITAK</li> <li>• Research Institutes / Universities</li> <li>• State Planning Organization (DPT or SPO)</li> <li>• Turkish Atomic Energy Institution</li> <li>• Ministry of Health (MoH), Turkish Public Health Institution</li> <li>• MoH, General Directorate of Health Services (GDHS)</li> <li>• MoEU, General Directorate of Provincial Bank Inc. (ILBANK)</li> <li>• MoEU, DGEIAPİ</li> <li>• RTUK</li> </ul>
Hunting and Wildlife Management	<ul style="list-style-type: none"> <li>• MoFWA, GDNCNP</li> <li>• MoCT, GDIO</li> <li>• MoFWA, Central Hunting Commission</li> <li>• MoF, General Directorate of Revenue Policies</li> <li>• MoFWA, GDF</li> <li>• Ministry of National Education (MoNE), Head Council of Education and Morality</li> <li>• MoI, Department of Associations</li> <li>• MoH, GDHS</li> <li>• Ministry of Justice (MoJ), General Directorate of Criminal Records and Statistic</li> <li>• Ministry of Youth and Sports (MoYS), Hunting and Shooting Federation</li> <li>• MoSIT, TUBITAK</li> <li>• Research Institutes / Universities</li> <li>• MoI, General Command of Gendarmerie</li> <li>• RTUK</li> </ul>
Outdoor Recreation	<ul style="list-style-type: none"> <li>• MoFWA, GDF</li> <li>• MoFWA, GDNCNP</li> <li>• MoTMAC, GDH</li> <li>• MoCT, GDIO</li> <li>• MoCT, General Directorate of Cultural Assets and Museums</li> <li>• MoCT, General Directorate of Promotion</li> <li>• MoSIT, TUBITAK</li> <li>• Research Institutes / Universities</li> <li>• RTUK</li> </ul>

Table 14: Main Threats that Affect the Sustainable Management of Natural Resources in Düzlerçamı Pilot Site

MAIN THREATS	CONTROL MEASURES	RESPONSIBLE BODY	DEGREE OF COMPLIANCE (FROM 1 TO 3)
1. Possibility of not finalising the cadastre studies of forest areas	1.1. Implementation, finalising and registration of the cadastre studies of forest areas	Local communities, Local Government	2 – Forest cadastre teams should be strengthened in terms of personnel and other capacities
	1.2. Establishment of forest boundaries monitoring and protection system based on the geographic information system and remote sensing techniques	Local communities	1 – Lack of control means
2. Lack of awareness regarding the importance of the protection of forest areas and boundaries	2. Achievement of the studies towards community informing, awareness and support gaining, establishing political awareness and interests regarding the importance of the protection of forest areas and boundaries and important threats on these areas in collaboration and dialogue among forest department and all stakeholders	Local communities, National Government, NGOs & foundations, Others	2 – Forest villagers are not informed enough during the forest cadastre and boundary marking activities
3. Pressures of encroachment, settlement and utilisation for the purpose of getting revenues and private benefit from the forest areas	3. Achievement of creating awareness and support gaining studies for the community and various interest groups	Local communities, Local Government, NGOs & foundations	1 – Lack of control means
4. Unsustainable protected area management	4.1. Development of awareness and training programs toward creating necessary awareness, interest and support regarding the importance and the necessary of the value of the protected areas at forest department, communities living in or around the protected areas, related state organisations and community	Local communities, Tourists, Regional Government, Local Government, Antalya city people, Others	2 – Extension and training activities in the protected areas should be strengthened
	4.2. Development of appropriate participatory management models for protected areas	Local communities, Tourists, Local Government, Others	2 – Establishment and planning systems of the protected areas should be improved through the way of taking into consideration of appropriate participation of local people and other stakeholders and the local rights and needs
5. Unsustainable game and wildlife management	5.1. Establishment of wildlife protection and improvement areas to conserve the game and wildlife species, their local races and genetic diversity in the way of preventing genetic pollution	Tourists, Local Government, Others	3 – It was registered the forest areas that have wildlife values and richness as protected areas, and managed by the activities of planning, implementation and evaluation which were appropriate of its objective in the pilot site
	5.2. Establishment of the saving centres to treat, maintenance and release the nature of the wildlife species and achievement of management studies	Local communities, Tourists, Local Government, Others	2 –Strengthening the maintenance of wildlife
6. Lack of suiAppendix Table integration of biodiversity conservation into forest resources inventory, planning and evaluation studies	6.1. Development of appropriate methods related to identification, measurement and evaluation of the biodiversity based on appropriate indicators	Local communities, Tourists, Regional Government	1 – Lack of control means
	6.2. Training of planning units and teams and implementing staff of forest resources	Local communities, Tourists, Regional Government	1 – Lack of control means
	6.3. Achievement of legislation (regulation etc.) development studies	Local communities, Tourists, Regional Government	1 – Lack of control means
7. Lack of the necessary importance for conserving biodiversity (including wildlife) during silvicultural implementations, reforestation and other rehabilitation studies	7.1. Ensuring necessary attention and priority to natural rehabilitation of the forests by conserving it where possible	Local communities, Tourists, Regional Government	2 – The responsibilities of rehabilitation of forests have basically been taken over by the forest organisations. But, action plans prepared for the activities which need to be implemented are insufficient
	7.2. Using domestic species, origins and races in reforestation and other restoration activities and to beware of genetic pollution	Local communities, Tourists, Regional Government	3 – These measures are successfully executed by the forestry organisation
	7.3. Protecting the endemic and threatened species	Local communities, Tourists, Regional Government	2 – Development plans of General Directorate of Nature Protection and National Parks consider these control measures, not management plan of General Directorate of Forestry
	7.4. Also, conservation of biological diversity of the species beyond forest trees	Local communities, Tourists, Regional Government	1 – Lack of control means
	7.5. Protecting the biodiversity of open areas in forests	Local communities, Tourists, Regional Government	1 – Lack of control means

	7.6. Achievement of necessary awareness, education and institutional capacity building activities in the forest department in collaboration with the forest department, universities and NGOs	Local communities, Tourists, Regional Government	1 – Lack of control means
8. Poverty of the forest villagers who live in or around the protected areas, create pressure and threats, are affected by the limitations for these areas	8.1. Determining and expanding of the appropriate approaches and applications toward strengthening the participation of the local people who are living in or in the vicinity of the protected areas	Local communities, Local Government, NGOs & foundations	1 – Lack of control means
	8.2. Giving the necessary priorities to the local communities who face with serious income lost due to the constraints brought in the protected areas with regard to support activities for rural development by the forest department and other related organisations	Local communities, Local Government, NGOs & foundations	1 – Lack of control means
9. Biotic and abiotic damages, such as fire, illegal timber cutting, irregular / overgrazing, encroachment / settlement, insect, fungi and other disease, degraded utilisation from non-wood forest products, air pollution etc., for forests	9.1. Development and implementation of the activities and measures toward strengthening the awareness, responsibilities and participation and contributions to the activities by local people and other stakeholders regarding biotic and abiotic damages (reasons, results, necessary measures etc.) in collaboration with the forest department, NGOs and other stakeholders	Local communities, National Government, NGOs & foundations	2 – It should be strengthened the cooperation with different stakeholders
	9.2. Strengthening the institutional capacity of the forest department and the allocated sources for these activities with regard to protecting the forests against biotic and abiotic damages	Local communities	2 – It should be strengthened the institutional capacity of the forest organisation
	9.3. Strengthening and implementation of the training programs for the forest guards regarding forest protection and public relations	Local communities, Regional Government	2 – Institutional capacity and the interest of forest organisation are insufficient in this respect
10. The use of secret / illegal timber and non-wood forest products in forests	10.1. Determining the needs for timber and non-wood forest products of local people and meeting these needs by legal ways within the capacities of the forests	Local communities, Regional Government, Farmers, NGOs & foundations	2 – It should be determined the real needs for timber and non-wood forest products of the household
	10.2. Meeting the needs for timber and non-wood forest products of local people by the discounted prices	Local communities, NGOs & foundations	2 – Although timber and fuel wood needs of forest villagers are met by forest organisation with lower prices as legal rights, quantity of timber of fuel wood met by this way has been below the real needs of the households and amount of the gaps are met by illegal cutting
	10.3. Expanding the measures to diminish the wood consumption and the use of alternative energy sources in the forest villages	Local communities, National Government, Regional Government, Others	3 – As a result of the usage of alternative energy resources in forest villagers, illegal wood utilisation from the forests have been decreasing in recent years
11. Possibility of failure of improvement and rehabilitation of the existing forests	11.1. For the improvement and rehabilitation of the existing forests, achieving the activities towards strengthening the suiAppendix Table methods / models, legislation arrangements and institutional capacities within one prepared plan in collaboration with the forest department and other stakeholders	Local communities, Regional Government	3 – These measures are successfully executed by the forestry organisation and stakeholders
	11.2. Giving priority to the natural rehabilitation of degraded forest lands by protecting and diminishing the pressures	Local communities	3 – These measures are successfully executed by the forestry organisation
	11.3. In degraded forest lands where the rehabilitation is impossible by natural rehabilitation, achievement of afforestation and other rehabilitation applications, using primarily local natural tree, shrub and plant species, protecting the biological diversity, preventing genetic pollution and protecting open areas inside forests and natural flora that are important for the wildlife during the reforestation and rehabilitation studies	Local communities, Regional Government	3 – These measures are successfully executed by the forestry organisation
	11.4. Strengthening the participation and contributions of the local people, private sector, NGOs, related state organisations and other stakeholders in reforestation of the existing forests	Local communities, National Government, Regional Government, Local Government, NGOs & foundations, Research centre/University	2 – In spite of various subsidy measures, activities carried out by local people, private sector, NGOs, related state organisations and other stakeholders have been carried out insufficiently
12. Possibility of failure of expansion of forest areas	12.1. Promoting and supporting, such as land allocation, credit, technical assistance etc., of multi-purpose forest plantation activities that will be carried out by private sector, local people, local authorities and other stakeholders on suiAppendix Table treasury lands	Local communities, National Government, Regional Government, Local Government, NGOs & foundations, Research centre/University	2 – In spite of various subsidy measures, activities carried out by private sector, local people, local authorities and other stakeholders have been carried out insufficiently
	12.2. Supporting the plantations and agroforestry implementations established by the local people with poplar	Local communities, Regional Government,	2 – In spite of various subsidy measures, activities carried out by local people have



	and other fast growing tree species on suiAppendix Table private lands (credit, getting seedlings and production materials of appropriate clones and species, research-development, technical assistance and training etc.)	NGOs & foundations	been carried out insufficiently
13. Possibility of failure of utilisation from the forest products	13.1. Determination of the reliable information on the supply, demand and market situation of the wood for the present and future periods (by tree species and production types) in suiAppendix Table periods	Local communities, Regional Government, Livestock farmers, Research centre/University	1 – Lack of control means
	13.2. Achieving the essential intensive silvicultural applications to increase the quantity and especially quality of the wood production	Local communities, Regional Government, Livestock farmers	2 –Strengthening this control measure
	13.3. Minimizing the volume, quality and value lost that occur during the activities of wood harvesting, collecting and marketing	Local communities, Regional Government, Livestock farmers, NGOs & foundations	2 –Strengthening this control measure
	13.4. Reducing the wood production costs, and increasing the productivity	Local communities, Regional Government, Livestock farmers, NGOs & foundations	2 –Strengthening this control measure
	13.5. Giving priority to the wood harvesting operations to be carried out by local forest villagers	Local communities, Livestock farmers, NGOs & foundations	3 – These measures are successfully executed by the forestry organisation
	13.6. Increasing the awareness and interest of local people regarding the importance of the non-wood forest products (fodder crops, water, medicinal and aromatic plants, fruits, industrial raw materials, mushroom, ornamental plants etc.) utilisation	Local communities, Tourists, National Government, NGOs & foundations	2 – These measures are presently at insufficient levels, their improvement is among the priority needs
	13.7. Implementation and finalisation of the development study of the certification system of the forest products	Local communities, Regional Government, Local Government	1 – Lack of control means
14. Possibility of failure of utilisation from social and cultural services of forests like recreation, tourism, picnic, hunting, sportive fishing, fisheries, urban forests, ecotourism, landscape, training and research etc.	14.1. Determination of the demands and expectations of the community for the present and future periods regarding utilisation of social and cultural services of forests, and determination of potential contributions of these services to local and country economies	Local communities, Tourists, National Government, NGOs & foundations, Research centre/University	1 – Lack of control means
	14.2. Strengthening the awareness and information studies on the importance and raising values of social and cultural services of forests in local people and other stakeholders	Local communities, Tourists, National Government, NGOs & foundations, Research centre/University	3 – These measures are successfully executed by the forestry and nature conservation organisations
	14.3. Strengthening the institutional capacities of the units of the forest department working in the field of social and cultural services of the forests	Local communities, Tourists, Regional Government	2 – Institutional capacities of forest organisation regarding social and cultural services of forests are insufficient
	14.4. Development of suiAppendix Table ecotourism models that are friends with nature and give importance to the participation of the local people, supporting of the implementations with relevant measures (training, credit, technical assistance etc.), and expansion of the successful implementations	Local communities, Tourists, National Government, Local Government, NGOs & foundations, Research centre/University	2 –Strengthening this control measure
15. Possibility of failure of utilisation from environmental and protective functions of forests like protection of soil resources, regulation of water resources, preventing the flood harms, carbon deposit, preventing air pollution, cleaning the air etc.	15.1. Creation of adequate awareness, interest and support regarding the importance of the environmental and protective functions of the forests among society and stakeholders	Local communities, Tourists, National Government, Local Government, NGOs & foundations	2 – There are deficiencies in cooperation's among different state organisation and stakeholder activities
	15.2. Achievement of legal and financial arrangements to ensure financial contributions from individuals and organisations (local authorities, dam owners etc.) who get important benefits from environmental and protective functions of the forests in order to use for the activities of forest resources protection, improvement and supporting forest villagers, against all these benefits	Local communities, Tourists, National Government, Regional Government, NGOs & foundations, Research centre/University	1 – Lack of control means
16. Weakness of living conditions and poverty of forest villagers	16.1. Ensuring the forest villagers to participate in the management decisions of the natural resources and in the rights and responsibilities at forest protection, development and utilisation	Local communities, Tourists, National Government, NGOs & foundations	2 – Institutional capacities of forest villagers and their organisations is not sufficient

	16.2. Strengthening the capacities of the forest villagers and cooperatives (training, pilot studies, financial support etc.) in the field of utilisation of the forest products and services	Local communities, Tourists, National Government, NGOs & foundations	2 – Lack of participation and importance given to the improvement of forest villagers and their organisations
	16.3. Applying of the appropriate integrated rural development models for contributing to the improvement of life conditions and diminishing the poverty in forest villagers	Local communities, Tourists, National Government, Regional Government, NGOs & foundations, Research centre/University	1 – There is a need of integrated models that support the implementations with necessary institutional legal and financial arrangements
17. The effects of climate change	17. Increasing the carbon held by establishing new carbon sinks and protecting and improving the existing ones	Local communities, Tourists, National Government, Local Government, NGOs & foundations	3 – These measures are successfully executed by the forestry organisation
18. Combating the desertification	18. Realisation of precautions foreseen in the national action plan to combat desertification	Local communities, Tourists, National Government, Local Government, NGOs & foundations	2 –Strengthening this control measure

\*Used a scale from 1 to 3 where 1 indicates "the control measure is not applied", 2 "the control measure is partially applied" and 3 "the control measure is very well applied".

Source: Yılmaz, 2013d

Table 15: Existing or Potential Conflicts among the Different Stakeholders in Düzlerçamı Pilot Site

CONFLICT*	STAKEHOLDERS	PROPOSED MEASURES TO SOLVE CONFLICTS*	EFFICIENCY OF THE MEASURE (from 1 to 3)**
(E) One of the bottlenecks and deficiencies regarding forest regeneration and maintenance activities is conflicts with local people regarding the study areas	Local communities, NGOs & foundations	(P) Supporting the participation of local people and other stakeholders in forest regeneration and maintenance activities (E) Using multi-purpose trees, shrubs and plant species in suiAppendix Table degraded forest areas around the villages and giving chance to the local people to utilise from these areas	3 – Excellent result, the measure has been adopted by the local people successfully
(E) Due to the protection of afforestation and improvement areas by fences and guards where local people used to use mainly for grazing, closing these areas to stop transportation utilisations of local people for many years, local people have been against of these activities and conflicts with forest organisation might be happening	Local communities, NGOs & foundations	(E) Implementations on the protection of afforestation, regeneration and improvement areas by local village legal entities instead of fences and guards	3 – Excellent result, the measure has been adopted by the local people successfully
(P) Each village holds the ownership of certain lands as common resources for the village. The legal ownership statuses of fields, forests and especially dwellings, and concessionary agricultural structures present a chaotic circumstance in the pilot site due to lacking cadastral records. These ownerships are based on unwritten rules and historic usage patterns; grazing, farming and collecting woods. So, there is a potential of quarrel over a resource among neighbour village people	Local communities, National Government, Regional Government, NGOs & foundations	(P) Registering cadastral records of forest villages	Not applicable – the measure is not implemented yet
(E) Branches and shoots of the trees in forest areas have been used as fodder crops by local people. They either cut the branches and shoots of the trees that are too high for the livestock animals to reach or they cut branches and shoots from the protected areas that it is not allowed to graze in. Although this application is prohibited, it is a big challenge to control. Because it is usually performed in small amounts at a time	Local communities, NGOs & foundations	(P) Development and implementation of training programs	Not applicable – the measure is not implemented yet
(E) Despite the challenges of the environment and damage caused to the forest, goat husbandry is a traditional way of living, because goat can supply milk, meat and hair with minimal effort in year round. In general, goat husbandry is decreasing in the pilot site as the dominant livelihood practice due to out-migration and changing economic opportunities	Local communities, NGOs & foundations	(E) Generating alternative livelihood resources to the currently dominant goat husbandry	2 – Increasing the benefits/income opportunities from forest resources
(P) Due to the unclear boundaries of the village common lands and meadows, it is possible that the villages clash with each other over the harvesting of non-wood forest products like oregano etc. This competition can cause the villagers to harvest non-wood forest products before the plants can regenerate themselves. So, the plant can be eliminated from the environment	Local communities, NGOs & foundations	(P) Developing plans to improve and regulate non-wood forest products harvesting	Not applicable – the measure is not implemented yet
(P) Boundary and ownership conflicts between local people and forest organisation	Local communities, Local Government NGOs & foundations	(E) Cadastral and ownership activities of forest organisation	3 – Conflicts and arguments have finished where cadastral and ownership activities have been completed
(E) Uncontrolled and illegal hunting is a serious problem in the pilot site. This hunting by local people and some hunters came from the outside deplete the wildlife	Local communities, Tourists, Fishermen, NGOs & foundations	(P) Hunting management plans	Not applicable – the measure is not implemented yet
(P) Multiple governmental organisations and NGOs have jurisdiction on the pilot site with various impacts on the management of the resources. Each with a different focus, almost all of the policies produced and the projects implemented without any collaboration will inevitably contradict one another. The multi-headed governance generates excess of identity and authority	Local communities, Local Government, NGOs & foundations, NGOs & cooperatives, NGOs & professional org., NGOs & unions, Antalya city people, Other Public Institutes, Others	(P) Consensus building; a neutral third party authorised by the central government should facilitate coordination among the multiple government authorities and NGOs, and next between the local people and the government-NGOs	Not applicable – the measure is not implemented yet

\*Used the letters where the letter (E) for existing and (P) for potential measures.

\*\*1 indicates “the measure is not efficient at all”, 2 “the measure is partially efficient” and 3 “the measure is fully efficient”.

Source: Yılmaz, 2013d

Table 16: Existing or Potential Synergies among the Different Stakeholders in Düzlerçami Pilot Site

SYNERGY*	STAKEHOLDERS	PROPOSED MEASURES TO ENHANCE THE SYNERGIES*	EFFICIENCY OF THE MEASURE (from 1 to 3)**
(E) When a fire break in the forest, the forest villagers quickly rush and put out the fire as a communal effort, if the fire site is accessible, even before the governmental forest fire prevention units reach it.	Local communities, NGOs & foundations	(P) Paying the money to forest villagers participated firefighting activities	Not applicable – the measure is not implemented yet
(E) Local people are employed by the forest fire prevention units as fire-fighters. Also, they are hired to restore the forests after the fires	Local communities, NGOs & foundations	(E) This measure should be continued	3 – These employment opportunities make fire an excellent source of revenue for the local people. Also, forest department use this as an opportunity to build good relationship with local people under the forestry applications
(E) The activities of protecting forest areas against biotic and abiotic damages through village legal entities have been performing	Local communities, National Government, NGOs & foundations	(E) It is paid to village budget from forest organisation as a result of this protecting service	3 – This activity is very successful in terms of preventing the biotic and abiotic damages and cost-effectiveness
(E) Forest organisation supports the private afforestation and improvement activities in forest areas, treasury lands and private lands	Local communities, Local Government, National Government, NGOs & foundations, Research centre/University	(E) Various subsidy measures (credit, technical assistance etc.) and extension	2 – It is carried out at modest levels
(E) Forest organisation has employed local people for reforestation efforts	Local communities, NGOs & foundations	(E) This measure should be continued	3 – These employment opportunities support the local communities. Also, forest department use this as an opportunity to build good relationship with local people under the forestry applications
(E) Local people used to find seasonal employment opportunities in wood production activities (logging, transportation etc.) through forest organisation	Local communities, NGOs & foundations	(E) This measure should be continued	3 – These employment opportunities facilitate the forest organisation to study in the pilot site
(E) Industrial wood production is by legal rights to the forest villagers and their cooperatives with lowered prices (subvention prices). Fuel wood production is also given to the forest village households with discounted prices. In addition wood production is given to the forest villagers and their cooperatives to get some income as cost price	Local communities, NGOs & foundations, Company	(E) This measure should be continued	3 – These measures decrease non-recorded wood production from forests
(E) The big part of the non-wood forest products are carried out by forest villagers provided the payment of symbolic tariff prices to forest organisation	Local communities, NGOs & foundations	(P) Increasing the utilisation values of non-wood forest products by appropriate management and utilisation	2 – Contribution value to the livelihood of local people is important. Also, the importance of these utilisations in terms of food security of local people
(E) For recreation and training purposes, nature tours implementations organised by both private sector agencies and various associations	Local communities, Tourists, NGOs & foundations, Producers associations, NGOs & associations	(E) This measure should be supported and continued	3 – These activities are valuable for both local people and forest organisation
(E) Contributions of the NGOs regarding creating awareness among the community and improving the responsibilities on erosion control are crucial	Local communities, NGOs & foundations, Other Public Institutes	(E) This measure should be supported and continued	2 – Deficiencies in cooperation's among different organisations activities and in sharing and expansion of the experiences gained
(E) Local people generate incomes from hunting activities (village right, guide service revenues etc.)	Local communities, Tourists, Fishermen, NGOs & foundations	(P) Hunting management plans	2 – Hunting revenues are under the potential values
(E) Supporting income generating activities in forest villages	Local communities, NGOs & foundations, Others	(P) It is not appropriate and right to load the full responsibility of the development of forest villages to only forest organisations, therefore, other public organisations and local authorities should take responsibilities in this respect	2 – Coordination and cooperation should be ensured among different organisations

\*Used the letters where the letter (E) for existing and (P) for potential measures.

\*\*1 indicates "the measure is not efficient at all", 2 "the measure is partially efficient" and 3 "the measure is fully efficient".

Source: Yılmaz, 2013d

Table 17: Regulatory Instruments Relevant to the Management and Use of the Natural Resources in Düzlerçamı Pilot Site

NAME OF THE PLANS, POLICIES, REGULATIONS, LAWS & GUIDELINES ETC.	TERRITORIAL APPLICATION FRAMEWORK	IS PARTICIPATION CONSIDERED IN THE DOCUMENT?
Forestry law N° 6831	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Environment law N° 2872	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
National Parks law N° 2873	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Law for the Organization and Duties of the MoFWA, law N° 645	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Law of National Afforestation and Erosion Control Mobilisation, law N° 4122	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Terrestrial Hunting law N° 4915	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Law on Supporting the Development of Forest Villagers, law N° 2924	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Law Pertaining to the Adoption of Amended Decree Law for the Establishment and Duties of GDF, law N° 3234	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Law for Establishment and Duties of GDSHW, law N° 6200	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Law on Waters, law N° 831	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Law on Groundwater, law N° 167	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Law on Conservation of Cultural and Natural Assets, law N° 2863	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Pasture Law, law N° 4342	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Tourism Encouragement Law, law N° 2634	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Mining Law, law N° 3213	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Soil Protection and Land Use Law, law N° 5403	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Cadastral Law, law N° 3402	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Law on Registering Land and Renovation of Cadastral Maps, law N° 2859	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Village Law, law N° 442	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Settlement Development Law, law N° 3194	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Law on Fishery Products, law N° 1380	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Special Provincial Administrations Law, law N° 5302	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Law for Municipalities, law N° 5393	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on the Document Given for Transportation of Forest Products	C	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Marking Regulation	C	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Grazing Regulation for Grassland, Summer Pastures and Winter Shelters in Forests and inside Forests	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Issues to Be Done by the Incumbents in Preventing and Extinguishing the Forest Fire	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Responsibilities and Working Principals of Forest Guards	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Discrimination and Management of Protected Forests	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Implementation of Forest Cadastre According to Forest Law N° 6831	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Utilization Type and Principal of Owners from the Trees which are on the Places that are not Accepted as Forest	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Lands which will be Removed from Forest According to the Article 2-A of Forest Law N° 6831	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Permissions for the Land Accepted as Forests	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation for Those Who Want to Utilise from Forest Products	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Determining and Implementation of Structure Systems in Article 35 of Forest Law N° 6831	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Production of Forest Products	C	<input type="checkbox"/> No



		<input checked="" type="checkbox"/> Yes
Principals on Allocated Sales of Forest Products (Decision by Ministry Committee)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Recreation Spot Regulation	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on the Arrangement of Forest Road Net Plans	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Compensation for Those Who are Injured or Death during Extinguishing Forest Fires	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Responsibilities, Works and Rules for Rural Organization of GDF	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on the Principals for Establishing, Changing and Closing down Rural Organization Units of GDF	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation for Forest Regional Directorate and Rolling Capital	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Forest Management	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Tasks for Forest Administration and Planning Department	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Tasks and Works of Head Engineering of Forest Administration and Planning (Management, Audit and Control)	C	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Introduction on Administration, Technical Works and Audits of Forest Cadastre Commissions and Works of Which Rural Organization of GDF will Do	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Lands for Protection of Wildlife and Development of Wildlife	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Establishment, Management and Control of Hunting and Wildlife Production Places and Stations	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Supporting Development of Forest Villages	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Establishment, Management and Control of the Hunting Places	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Afforestation Regulation	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Methods and Principals Related to Development Services for Forest Villagers	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation on Issues Which are Accepted as Industry, Trade, Agriculture and Forest Issues	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Mining Activities Permission Regulation	C	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Regulation (47/A) on Determination of Cadastre Works	C	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Regulation (47/D) on Bordering, Determining and Controlling of Real Estates	C	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Regulation on Establishment and Responsibilities of Cadastre Commissions Which Examine Objections	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Regulation (47/F) on Cadastre Announcements	C	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Renovation Regulation of Map and Cadastre Sheets	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Production Regulation of Large Scaled Map and Map Information	C	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Environmental Impact Assessment Regulation	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
MoFWA, GDF, Strategic Plan (2013-2017)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Forestry Master Plan	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
National Forestry Programme (2004-2023)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Forest Management Plan	L	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Road Network Plan	L	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Silviculture Plan	L	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
National Environment Strategy and Action Plan	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
National Biodiversity Strategy and Action Plan	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Combating Desertification National Action Plan	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
West Mediterranean Development Plan (Antalya, Isparta, Burdur) (2010-2013)	R	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Forestry Research Master Plan	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Forestry Special Task Commission Report (for Five Year National Development Plan)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes

Forest Village Development Plan	L	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Protected Area Management and Development Plan	L	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Fire Fighting Action Plan	L	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
NWFP (NWFP) Plan	L	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Grazing Plan	L	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Sapling Production Plan	L	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Mobilization Action Plan for Afforestation and Erosion Control (2008-2012, in Coordination with General Directorate of Afforestation)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Converting Coppice Forests to High Forests Action Plan (2006-2015)	C	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Rehabilitation of Degraded Oak Areas Action Plan (2005-2014)	C	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Rehabilitation of Oak Forests Action Plan (2006-2015)	C	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
A Forest to Each Village Action Plan (2007-2011)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Carob Action Plan (2006-2015)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Honey Forest Action Plan (2009-2015)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Rehabilitation of Burned Forest Areas and Establishment of Fire Resistive Forests Action Plan (YARDOP) (since 2008)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Maintenance Mobilisation at the Young Stands Action Plan (2012-2016)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Stone Pine Action Plan (2006-2010)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Convention for Combating Desertification (Date: 16.05.1998, N° 23344)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
United Nations Framework Convention on Climate Change (Date: 18.12.2003, N° 25320)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Kyoto Protocol to the United Nations Framework Convention on Climate Change (Date: 05.02.2009, N° 27144)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
International Convention for the Protection of Birds (Paris Convention) (Date: 17.12.1966, N° 12480)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Convention on Biological Diversity and its Annex, the Cartagena Bio-safety Protocol (Date: 27.12.1996, N° 22860)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) (Date: 20.02.1984, N° 18318)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES Convention) (Date: 20.06.1996, N° 22672)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
European Landscape Convention (Date: 27.07.2003, N° 25181)	C	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Barcelona Convention for the Protection of the Mediterranean Sea against Pollution (Date: 16.06.1981, N° 17368)	R	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes

\*C: Country Level; R: Regional Level; L: Local Level.

Source: Yılmaz, 2013d

Table 18: Planning Activities on the Natural Resources Use and Management

Level	Name of the Plan/Content
Sector/ Country Level	Forestry Special Task Commission Report (for Five Year National Development Plans), National Forestry Programme, Forestry Master Plans, Forestry Research Master Plan, Strategic Plans of GDF, National Tree Improvement Program, etc.
Watershed Level	Main Watershed Rehabilitation Projects, Eastern Anatolia Watershed Rehabilitation Project, Micro-catchment plans (in 11 provinces), etc.
Regional Level	Regional Plans of GDF, Regional Plans of General Directorates of Afforestation and Erosion Control (in 1980s), etc.
Town/Village Level	Town Forest Villages Development Plans, etc.
Forest Sub-district Level	Forest Management Plans, etc.
Protected Area Level	Management and Long-term Development Plans for National Parks and Other Protected Areas, Seed Orchards, Seed Stands, Gene Protection Forests Management Plans, etc.
Implementation Plans/Projects	Afforestation, Erosion Control, Range Improvement Implementation Projects, Road Network Plans, Firefighting Action Plans, NWFPs Plans (Protection, Improvement, Utilization), Grazing Plans, Silviculture Plans, National Biodiversity Strategy and Action Plan, Combating Desertification National Action Plan, Honey Forest Action Plan, Rehabilitation of Burned Forest Areas and Establishment of Fire Resistant Forests Action Plan (YARDOP), Maintenance Mobilization at the Young Stands Action Plan, etc.

Table 19: The Example on “Annual Coordination Meeting for Forest Fire Preventing Activities” of the Current and Past Participation Mechanisms at Düzlerçami Pilot Site

DESCRIPTION of PARTICIPATORY MECHANISM No. 1	Annual Coordination Meeting for Forest Fire Preventing Activities	
STARTING DATE	Before fire season every year	
ENDING DATE	-	
STAKEHOLDERS	NAME	DEGREE OF INVOLVEMENT
	Local communities	Gives his opinion, Participates in decision making, Participates in execution
	Tourists	Gives his opinion, Participates in decision making, Participates in execution
	National Government	Gives his opinion, Participates in decision making, Participates in execution
	Local Government	Gives his opinion, Participates in decision making, Participates in execution
Who LEADS the initiative?	Regional Directorate of Forestry (RDF)	
Is the MECHANISM a VOLUNTARY INITIATIVE, a LEGAL OBLIGATION or OTHER?	Legal obligation	
Which are the DOCUMENTS framing this mechanism? (e.g. legal act, management plan, voluntary agreement)	Decisions of forest fire prevention activities	
Is the MECHANISM applied in the field?	Yes	
WEAKNESS of the MECHANISM	-	
STRENGTHS of the MECHANISM	Participants are making crucial contributions to forest fire prevention activities, the measures have been adopted by the participants successfully	

Source: Yilmaz, 2013d

Table 20: The Example on “Annual Training and Awareness Meeting Related Forest Fire Preventing for Forest Villagers” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site

DESCRIPTION of PARTICIPATORY MECHANISM No. 2	<i>Annual Training and Awareness Meeting Related Forest Fire Preventing for Forest Villagers</i>	
STARTING DATE	<i>Before fire season every year</i>	
ENDING DATE	-	
STAKEHOLDERS	NAME	DEGREE OF INVOLVEMENT
	<i>Local communities</i>	Gives his opinion, Participates in decision making, Participates in execution
	<i>NGOs &amp; foundations</i>	Participates in execution
Who LEADS the initiative?	<i>RDF</i>	
Is the MECHANISM a VOLUNTARY INITIATIVE, a LEGAL OBLIGATION or OTHER?	Voluntary initiative	
Which are the DOCUMENTS framing this mechanism? (e.g. legal act, management plan, voluntary agreement)	<i>Voluntary agreement</i>	
Is the MECHANIM applied in the field?	<b>Yes</b>	
WEAKNESS of the MECHANISM	-	
STRENGTHS of the MECHANISM	<i>Training and awareness activities with forest villagers on forest fire preventing are successful studies as a participatory mechanism</i>	

Source: Yılmaz, 2013d

Table 21: The Example on “Participation of Local Villagers to Fire Fighting Activities” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site

DESCRIPTION of PARTICIPATORY MECHANISM No. 3	<i>Participation of Local Villagers to Fire Fighting Activities</i>	
STARTING DATE	<b>Always</b>	
ENDING DATE	-	
STAKEHOLDERS	NAME	DEGREE OF INVOLVEMENT (mark with a cross)
	<i>Local communities</i>	Gives his opinion, Participates in decision making, Participates in execution
	<i>NGOs &amp; foundations</i>	Participates in execution
Who LEADS the initiative?	<i>RDF</i>	
Is the MECHANISM a VOLUNTARY INITIATIVE, a LEGAL OBLIGATION or OTHER?	Legal obligation	
Which are the DOCUMENTS framing this mechanism? (e.g. legal act, management plan, voluntary agreement)	<b>Legal act</b>	
Is the MECHANIM applied in the field?	<b>Yes</b>	
WEAKNESS of the MECHANISM	<i>Lack of motivation, lack of skill, participatory approach that are not attractive for some people</i>	
STRENGTHS of the MECHANISM	<b>Effective forest fire fighting activities</b>	

Source: Yılmaz, 2013d

Table 22: The Example on “Training and Awareness Programs for Hunters” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site

DESCRIPTION of PARTICIPATORY MECHANISM No. 4	Training and Awareness Programs for Hunters	
STARTING DATE	In the past years	
ENDING DATE	-	
Gives his opinion, Participates in decision making, Participates in execution	NAME	DEGREE OF INVOLVEMENT (mark with a cross)
	Tourists	Gives his opinion, Participates in decision making, Participates in execution
	Fishermen	Participates in execution
	NGOs & foundations	Participates in execution
	Local Government	Participates in execution
Who LEADS the initiative?	GDNCNP	
Is the MECHANISM a VOLUNTARY INITIATIVE, a LEGAL OBLIGATION or OTHER?	Voluntary initiative	
Which are the DOCUMENTS framing this mechanism? (e.g. legal act, management plan, voluntary agreement)	Voluntary agreement	
Is the MECHANISM applied in the field?	Yes	
WEAKNESS of the MECHANISM	-	
STRENGTHS of the MECHANISM	Common training activities with hunting associations by GDNCNP were sample studies as successful participatory activities	

Source: Yılmaz, 2013d

Table 23: The Example on “Research Project: Inventory and Classification of Information Intended for Functional Planning Based Forest Ecosystem in Düzlerçamı Forest Ranger District” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site

DESCRIPTION of PARTICIPATORY MECHANISM No. 5	Research Project: “Inventory and Classification of Information Intended for Functional Planning Based Forest Ecosystem in Düzlerçamı Forest Ranger District”	
STARTING DATE	2005	
ENDING DATE	2009	
STAKEHOLDERS)	NAME	DEGREE OF INVOLVEMENT (mark with a cross)
	Regional Government	Gives his opinion, Participates in decision making, Participates in execution
	National Government	Gives his opinion
	NGOs & foundations	Gives his opinion
Who LEADS the initiative?	Southwest Anatolia Forest Research Institute	
Is the MECHANISM a VOLUNTARY INITIATIVE, a LEGAL OBLIGATION or OTHER?	Voluntary initiative	
Which are the DOCUMENTS framing this mechanism? (e.g. legal act, management plan, voluntary agreement)	Project publication	
Is the MECHANISM applied in the field?	Partially applied	
WEAKNESS of the MECHANISM	-	
STRENGTHS of the MECHANISM	Local people in the villages detected general printing elements on actual land use map, advantageous points at land uses, land use threats in terms of forestry. Also, it was carried out SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis regarding natural resources in the pilot sites	

Source: Yılmaz, 2013d



Table 24: The Example on “Research Project: Determination of Efficiency at the Level of Agriculture Development Cooperatives in Forest Villages: The Study Case in Antalya” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site

DESCRIPTION of PARTICIPATORY MECHANISM <u>No. 6</u>	<b>Research Project: “Determination of Efficiency at the Level of Agriculture Development Cooperatives in Forest Villages: The Study Case in Antalya”</b>	
STARTING DATE	2004	
ENDING DATE	2008	
STAKEHOLDERS	NAME	DEGREE OF INVOLVEMENT (mark with a cross)
	<i>Regional Government</i>	Gives his opinion, Participates in decision making, Participates in execution
	<i>NGOs &amp; foundations</i>	Gives his opinion
	<i>Other Public Institutes</i>	Gives his opinion
Who LEADS the initiative?	<i>Southwest Anatolia Forest Research Institute</i>	
Is the MECHANISM a VOLUNTARY INITIATIVE, a LEGAL OBLIGATION or OTHER?	Voluntary initiative	
Which are the DOCUMENTS framing this mechanism? (e.g. legal act, management plan, voluntary agreement)	<i>Project publication</i>	
Is the MECHANIM applied in the field?	<i>Partially applied</i>	
WEAKNESS of the MECHANISM	-	
STRENGTHS of the MECHANISM	<i>It was investigated the effectiveness levels of forest village cooperatives in the pilot site, and it was determined if the allocated resources were effectively and productively used or not</i>	

Source: Yılmaz, 2013d

Table 25: The example on “Research Project: Wild Goat (*Capra aegagrus Erxleben 1777*) Population in Antalya-Düzlerçamı Wildlife Progress Area and Evaluation of Its Habitat” of the Current and Past Participation Mechanisms at Düzlerçamı Pilot Site

DESCRIPTION of PARTICIPATORY MECHANISM <u>No. 7</u>	<b>Research Project: “Wild Goat (<i>Capra aegagrus Erxleben 1777</i>) Population in Antalya-Düzlerçamı Wildlife Progress Area and Evaluation of Its Habitat”</b>	
STARTING DATE	2005	
ENDING DATE	2010	
STAKEHOLDERS	NAME	DEGREE OF INVOLVEMENT (mark with a cross)
	<i>Regional Government</i>	Gives his opinion, Participates in decision making, Participates in execution
	<i>NGOs &amp; foundations</i>	Gives his opinion
Who LEADS the initiative?	<i>Southwest Anatolia Forest Research Institute</i>	
Is the MECHANISM a VOLUNTARY INITIATIVE, a LEGAL OBLIGATION or OTHER?	Voluntary initiative	
Which are the DOCUMENTS framing this mechanism? (e.g. legal act, management plan, voluntary agreement)	<i>Project publication</i>	
Is the MECHANIM applied in the field?	<i>Partially applied</i>	
WEAKNESS of the MECHANISM	-	
STRENGTHS of the MECHANISM	<i>It was determined reliable information on wild goat population in Düzlerçamı Wildlife Protection Areas by making negotiations with local people</i>	

Source: Yılmaz, 2013d

Table 26: The example on “Research Project: Fallow Deer (*Dama dama* L. 1758) Producing and Settlement Techniques” of the Current and Past Participation Mechanisms at Düzlerçami Pilot Site

DESCRIPTION of PARTICIPATORY MECHANISM No. 8	<b>Research Project: “Fallow Deer (<i>Dama dama</i> L. 1758) Producing and Settlement Techniques”</b>	
STARTING DATE	<b>1999</b>	
ENDING DATE	<b>2005</b>	
STAKEHOLDERS)	NAME	DEGREE OF INVOLVEMENT (mark with a cross)
	<i>Regional Government</i>	Gives his opinion, Participates in decision making, Participates in execution
	<i>NGOs &amp; foundations</i>	Gives his opinion
Who LEADS the initiative?	<b>Southwest Anatolia Forest Research Institute</b>	
Is the MECHANISM a VOLUNTARY INITIATIVE, a LEGAL OBLIGATION or OTHER?	Voluntary initiative	
Which are the DOCUMENTS framing this mechanism? (e.g. legal act, management plan, voluntary agreement)	<b>Project publication</b>	
Is the MECHANISM applied in the field?	<b>Partially applied</b>	
WEAKNESS of the MECHANISM	-	
STRENGTHS of the MECHANISM	<b>It was determined reliable information on fallow deer population in Düzlerçami Wildlife Protection Areas by making negotiations with local people</b>	

Source: Yılmaz, 2013d

Table 27: Components of the Governance Structure Implemented in Düzlerçami Pilot Site, and Composition, Mission/Role, Decision-Making Power, Meeting Frequency of Each Component of the Governance Structure

Components of the governance structure	Composition(number and typology of the partners included)	Decision-making power	Working methods
Steering committee	Manager of Antalya RDF (4 person), Manager of Sixth NPRD – Antalya Branch Directorate (1 person), Representative of MoFAL, GDFC (1 person), Representative of MoFWA, GDShw (1 person), Representative of MoCT (1 person), Representative of MoEU (1 person), Representative of MoENR (1 person), Representative of MoNE (1 person), Representative of MTA (1 person).	Steering Committee has <i>high influence</i> in the decision making, and they are <i>highly important</i> to the success of the Component 3 (C3) of the FFEM Project. They are the basis for an effective coalition of support for the FFEM Project. In practice, Steering Committee is the sole authority to take decisions on participatory forest management.	Face-to-face meeting (Meetings with all stakeholders occurred face to face or virtually in the phase 2 and 3, and their steps of the foreseen participatory approach),  Questionnaires (forms containing a set of questions; submitted to all stakeholders to gain mathematical and statistical information in the phase 2 and 3 and their steps of the foreseen participatory approach),  Information meeting, General meeting (meeting emphasizing interaction and exchange of information among all stakeholders)
Supporting structure	Focal Point of FFEM Project (1 person), Thematic Expert of the C3 of FFEM Project (1 person).	Supporting structure has high importance to the success of the C3 of the FFEM Project, but they have low influence in decision making. They are the most important for the success of C3 of FFEM Project, but they are not necessarily the decision makers. They have little influence on participatory forest management.	Face-to-face meeting, Questionnaires, Expert interviews (Expert interviews with Supporting Structure, Facilitator and Scientific Committee occurred face to face at the step 3.3 of phase 3 of the foreseen participatory approach), General meeting
Facilitator	National Expert of the C3 of FFEM Project (1 person).	Facilitator has high importance to the success of the C3 of the FFEM Project, but he has low influence in decision making. He is the most important for the success of the C3 of FFEM Project, but he is not	Face-to-face meeting, Expert interviews, Questionnaires, General meeting

		necessarily the decision maker. He has little influence on participatory forest management.	
Scientific committee	Experts from Forestry Research Institute (2 persons), Experts from University (2 persons).	Scientific committee has low importance to the success of the C3 of FFEM Project, and they have low influence in decision making. So, this committee represents the least important and influential stakeholder.	Expert interviews, Questionnaires, General meeting
<p>Stakeholders' committee/forum</p> <p>The questionnaire interviews with stakeholders were conducted by the FFEM C3 Project Team (orally face-to-face). The interview partners for organized stakeholders would be the representatives of organizations which currently were actively worked in Düzlerçamı pilot site. These people might belong to formal groups (state institutions and organizations, associations, unions, chambers, cooperatives, foundations, etc.) playing an official role. Also, the interview partners for non-organized stakeholders represented a given category of non-organized stakeholders playing an important role. Information about opinions of non-organized stakeholder groups was obtained through means such as general meetings or workshops, questionnaires. It was received help from Antalya RDF and Antalya NPRD for selection of interview partners for non-organized stakeholders for a participatory process.</p>	<p>Representatives of Local Governments (Governorship, District Governorate, Municipality, Village Administration) (6 persons),</p> <p>Representatives of Other Public Institutions (GDTSMS, GDLRC, GDHS, GDNP, and GDH) (5 persons),</p> <p>Representatives of Local People (7 persons),</p> <p>Representatives of Beekeepers (2 persons),</p> <p>Representatives of Cutting Workers (2 persons),</p> <p>Representatives of NWFP Pickers (2 persons),</p> <p>Representatives of Shepherds (4 persons),</p> <p>Representatives of Hunters (2 persons),</p> <p>Representatives of Picnickers (2 persons),</p> <p>Representatives of Ecotourists (2 persons),</p> <p>Representatives of Private Sectors (Forest Products Industrialists) (2 persons),</p> <p>Representatives of Tourism Agencies (2 persons),</p> <p>Representatives of NGOs (2 persons),</p> <p>Representatives of TMMOB (2 persons),</p> <p>Representatives of water suppliers (2 persons).</p>	<p>Stakeholders' committee/forum can influence the outcomes of C3 of FFEM Project, but this committee/forum's priorities may not be priorities of the participatory forest management. So, Stakeholders' committee/forum has low importance and high influence in decision making.</p>	<p>Questionnaires,</p> <p>Coffeehouse Meetings (meetings in public social places where people would meet for conservation, rest, entertainment and having good-time while drinking tea, coffee etc. in the villages or towns. In the beginning of participation process, these meetings were carried out for emphasizing interaction and exchange of information among stakeholders),</p> <p>Information meeting,</p> <p>Workshops</p>

Table 28: Implemented Phases and Steps of the Participatory Approach and the Stakeholders Involved in Each Phase

Phase / Step	Title of the phase/step	Stakeholders involved
<b>Phase 1</b>	<b>Building up the governance structure</b>	
Step 1.1	Determining the participants of each component of governance structure	Support structure, Facilitator
	Preparing a document with the rules of participation and decision in each component of governance structure	Support structure, Facilitator
<b>Phase 2</b>	<b>Present situation analysis and strategy formulation</b>	
Step 2.1	SWOT analysis	Stakeholders' committee/forum, Supporting structure, Facilitator and Scientific committee (All participants)
Step 2.2	Comparisons between SWOT factors within every SWOT group	All participants
Step 2.3	Comparisons between four SWOT groups	All participants
Step 2.4	Determining the global priorities of SWOT groups and factors	Supporting structure, Facilitator
<b>Phase 3</b>	<b>Determining the priorities of the forest values</b>	
Step 3.1	Determining of decision elements (i.e. Decision makers, the stakeholders and sub-stakeholders, sector experts, decision criteria and alternative forest values)	Supporting Structure and Facilitator
Step 3.2	Determining the importance of stakeholders and sub-stakeholders	Steering Committee
Step 3.3	Determining the importance of selected decision criteria	Steering Committee, Stakeholders' Categories (Local Administration, Local Users Living in the Site, Professional Interests, Economic Interests, and Users of the Catchment Area Coming from Outside), Scientific Committee
Step 3.4	Determining the importance of forest values according to the decision criteria	Scientific Committee
Step 3.5	Determining the priority value of each forest value	Supporting Structure, Facilitator
<b>Phase 4</b>	<b>Assessing the impact and results of participation process, and determining the stakeholders' satisfaction levels with the participation level</b>	
Step 4.1	Pre-assessments of participation process	Stakeholders' committee/forum
Step 4.2	Post-assessments of participation process within FFEM initiative	Stakeholders' committee/forum
Step 4.3	Final assessments of participation process	Supporting structure, Facilitator

Table 29: Rules and Procedures Subjected to Participation in This Study

ID	Rules and Procedures
1	Participation would be related to “equity”, “liberty”, “inclusivity”, and “transparency”
2	It would be essential to reach the decisions that take into account participant’s preferences, needs, expectations, and demands
3	Facilitator (National Expert, Advisor) and Supporting Structure (Thematic Expert of the C3 of FFEM Project) would be responsible for planning, implementing, and managing in participation approach process
4	Steering Committee, Stakeholders’ Committee/Forum, and Scientific Committee that was each components of the government structure of the participatory approach should be informed of foreseen participatory approach by Supporting Structure and Facilitator
5	Steering Committee, Stakeholders’ Committee/Forum, and Scientific Committee would participate in, and provide the input, i.e. their opinions in accordance with participatory methodology in this study
6	Supporting Structure and Facilitator would designate stakeholders to be stakeholder representatives and to participate in participation process (stakeholder leaders, village managers, etc.)
7	Supporting Structure and Facilitator were responsible for involving relevant stakeholders in each stakeholder’s category to phases of the foreseen participatory approaches and methodologies
8	Supporting Structure and Facilitator were responsible for organizing the face-to-face meeting, studies of questionnaires, information meetings, general meetings or workshops, expert interviews, surveys, coffeehouse meetings etc. used for stakeholders at different phases of the foreseen participatory approaches and methodologies
9	Supporting Structure and Facilitator would communicate and engage with stakeholders both living in and coming from outside Düzlerçamı pilot site
10	Supporting Structure and Facilitator would encourage stakeholders to directly participate and follow-up to participation process
11	Steering Committee would recommend non-organized stakeholders (such as Local People, NWFP Pickers, Shepherds, Picnickers, and Ecotourists etc.) that might make meaningful contributions
12	Support Structure and Facilitator should attend all general meetings or workshops, however Steering Committee, Stakeholders’ Committee/Forum, and Scientific Committee should attend general meetings or workshops relating to them during participatory management process
13	Stakeholders’ Committee/Forum members living in Düzlerçamı pilot site should attend coffeehouse meetings
14	The members of Scientific Committee should attend expert interviews
15	All participants should attend in their related face-to-face meeting, studies of questionnaires, information meetings, surveys, etc. used at different phases of the foreseen participatory approaches and methodologies

Table 30: National Inter-Components Meeting or Workshop, Düzlerçamı Pilot Site Field Trip of the FFEM Project

Municipality	Objects of the Workshop / Meeting etc.	Date	Organizer	Participant Type / Target Group	Number of Participants	Encountered Issues and Solutions Found	Agreements Reached, Concerted Actions
Antalya	to provide the dialog and coordination, to share the experiences, to discuss the possible integrated activities with other components of the FFEM Project, and to conduct the questionnaires /surveys for related Phases of the participatory approach methodology in C3 of the FFEM Project to all the participants.	27-28 May 2014	GDF, Focal Point of FFEM Project, Thematic Experts of FFEM Project , National Experts of FFEM Project.	Representatives of GDF, Focal Point of FFEM Project, Thematic Experts of FFEM Project, Assistant Thematic Experts of FFEM Project, National Experts of FFEM Project, Managers of Antalya RDF, Manager of Sixth NPRD – Antalya Branch Directorate, and Experts from SAFRI and University.	23 persons	-	The participants stressed the importance of coordination between the various components of FFEM Project,  It was decided to share FFEM Project experiences through a final workshop and exchanges among institutions and other stakeholders, and  It must be given special attention to encouraging coordination of stakeholders involved in processes of participatory governance.



Table 31: The Information Meetings and Coffeehouse Meetings with the Participation of Different Stakeholders from Villages and Towns in Düzlerçamı Pilot Site

Municipality	Objects of the Workshop / Meeting etc.	Date	Organizer	Participant Type / Target Group	Number of Participants	Encountered Issues and Solutions Found	Agreements Reached, Concerted Actions
Villages and Towns in Düzlerçamı Pilot Site	<p>to carry out for introducing the FFEM Project and its Components to stakeholders,</p> <p>to emphasize interaction and exchange of information among them,</p> <p>to determine stakeholders' (villagers') views and suggestions related to evaluation and improvement of current forest resources management in Düzlerçamı pilot site,</p> <p>to investigate if stakeholders satisfy with forestry department's policy and natural resources management in Düzlerçamı pilot site,</p> <p>to reveal their expectations of from forest resources.</p>	24 December 2014	<p>Focal Point of FFEM Project,</p> <p>Thematic Experts of FFEM Project – C3,</p> <p>National Expert of FFEM Project – C3.</p>	<p>Local Users Living in Düzlerçamı Pilot Site:</p> <ul style="list-style-type: none"> <li>• Village Administration,</li> <li>• Local People,</li> <li>• Beekeepers,</li> <li>• Cutting Workers,</li> <li>• NWFP Pickers,</li> <li>• Shepherds,</li> <li>• Hunters,</li> <li>• Picnickers, etc.</li> </ul>	Totally about 50 persons from all villages and towns in Düzlerçamı Pilot Site	<p>Solution of ownership conflicts - <i>Giving the necessary utilisation rights and opportunities to the local people from forest areas and resources,</i></p> <p>Utilisation from recreation, tourism, hunting, ecotourism etc. – <i>Research-evaluation studies on the potential contributions of these services to local and country economies,</i></p> <p>Arrangement of grazing in range lands in or in the vicinity of forests and in forest areas - <i>Awareness and information studies for forest villagers such as controlled grazing, improvement of grazing and range lands, fodder production and barn husbandry,</i></p> <p>NWFPs utilisation – <i>Increasing of the importance and priority given to the management of NWFPs in present forest resources management system, and the institutional capacity of Forestry Organization,</i></p> <p>Improvement of forest-village relations, and contribution to the development of forest villagers - <i>Increasing of participation and importance given to the improvement of forest villagers and institutional capacities, and providing of dialog, coordination and integrated activities with the forest villagers.</i></p>	<p>Although the MoFWA is expected to take over the basic load and responsibilities for the implementation of solutions found for encountered issues, it is clear that all stakeholders and other organizations in Düzlerçamı pilot site will also take over important tasks during the implementation of many of these actions. Therefore, other interest groups beyond the MoFWA (forest villagers' organizations, local authorities, NGOs, professional organizations, etc.) are expected to contribute and actively participate in the implementation, monitoring and evaluation studies of the actions in the framework of their own considerations, approaches and opportunities.</p>

Table 32: General Meeting or Workshop of the FFEM Project with the Participation of Different Stakeholders from Villages and Towns in Düzlerçamı Pilot Site

Municipality	Objects of the Workshop / Meeting etc.	Date	Organizer	Participant Type / Target Group	Number of Participants	Encountered Issues and Solutions Found	Agreements Reached, Concerted Actions
Antalya	<p>to carry out for introducing the FFEM Project and its Components to stakeholders,</p> <p>to emphasize interaction and exchange of information among them,</p> <p>to determine the priorities and rankings of SWOT groups and SWOT factors in phase 2 of the participatory approach of FFEM Project,</p> <p>to receive stakeholders' opinions on the importance of decision criteria in phase 3 of the participatory approach,</p> <p>to fill the surveys or questionnaires to measure the impact and results of participation process, and assessed their satisfaction levels with participation process in pre-assessments and post-assessments of phase 4 of the foreseen participatory approach.</p>	25 December 2014	<p>Focal Point of FFEM Project,</p> <p>Thematic Experts of FFEM Project – C3,</p> <p>National Expert of FFEM Project – C3.</p>	<p>Local Users Living in Düzlerçamı Pilot Site:</p> <ul style="list-style-type: none"> <li>•Village Administration</li> <li>•Local People,</li> <li>•Beekeepers,</li> <li>•Cutting Workers,</li> <li>•NWFP Pickers,</li> <li>•Shepherds,</li> <li>•Hunters,</li> <li>•Picnickers, etc.</li> </ul>	24 persons	-	-

Table 33: The Information Meeting and Questionnaire-Survey Filling Studies with the Participation of the Representatives of the Other Public Institutes and Other Some Stakeholders

Municipality	Objects of the Workshop / Meeting etc.	Date	Organizer	Participant Type / Target Group	Number of Participants	Encountered Issues and Solutions Found	Agreements Reached, Concerted Actions
Antalya	<p>to introduce the FFEM Project and its Components to all the representatives of the other public institutes,</p> <p>to reveal the priorities and rankings of SWOT groups and SWOT factors in phase 2 of the participatory approach of FFEM Project by analysing internal and external environments in pilot site, and to provide strategy formulation of forest resources management, by determining priority values and rankings of the SWOT factors, and by identifying priority values and rankings of the SWOT groups, so by providing quantitative examination of internal and external environments in pilot site for all the representatives of the other public institutes,</p> <p>to determine their attitudes and opinions on the importance of Stakeholders and Sub-Stakeholders in phase 3 of the participatory approach of FFEM Project for the representatives, who were members of Steering Committee,</p> <p>to take their attitudes and opinions on the importance of decision criteria in phase 3 of the participatory approach of FFEM Project for all the representatives of the other public institutes.</p>	From 23 February to 13 March 2015	<p>Focal Point of FFEM Project,</p> <p>Thematic Experts of FFEM Project – C3,</p> <p>National Expert of FFEM Project – C3.</p>	<ul style="list-style-type: none"> <li>Representative of MoFAL, GDFC,</li> <li>Representative of MoFWA, GDShw,</li> <li>Representative of MoCT,</li> <li>Representative of MoEU,</li> <li>Representative of MoENR,</li> <li>Representative of MoNE,</li> <li>Representative of MTA,</li> <li>Representatives of Local Governments (Governorship, District Governorate, Municipality),</li> <li>Representative of GDTSMS,</li> <li>Representative of GDLRC,</li> <li>Representative of GDHS,</li> <li>Representative of GDNP,</li> <li>Representative of GDH,</li> <li>Representatives of Ecotourists,</li> <li>Representatives of Representatives of Private Sectors ((forest products industry organizations),</li> <li>Representatives of Tourism Agencies,</li> <li>Representatives of NGOs,</li> <li>Representatives of TMMOB, and</li> <li>Representatives of water suppliers.</li> </ul>	27 persons	-	<p>It is not appropriate and right to load the full responsibility of the development of forest villages to only Forestry Organization, therefore, other public organizations and institutions, NGOs and local authorities should take responsibilities in this respect. Coordination and cooperation should be ensured among different organizations it might be appropriate to give the responsibility of coordination to the Forestry Organization and NGOs in this respect,</p> <p>It should be done participatory planning and implementation of the forestry activities by the Forestry Organization, local communities and other stakeholders, integration, at the watershed-level, between different forestry activities, during planning and implementation stages.</p>

Table 34: List of Identified Factors under Each SWOT Category in Düzlerçamı Pilot Site

	Helpful in achieving objectives	Hindrance in achieving objectives
	<i>Strengths</i>	<i>Weaknesses</i>
<b>Internal Factors</b>	<p><b>S1:</b> Forestry Organization having infrastructure, facilities, machinery and equipment, budget, communication and expert personnel contributes social, economic, culture and environmental conditions of the regional development.</p> <p><b>S2:</b> Suitability of the pilot site to produce quite a lot and various forest resources based goods and services due to the region's having rich natural resources and ecologic characteristics.</p> <p><b>S3:</b> Suitability for the development of forest industry with respect to woody raw materials production in the pilot site, having relatively rich productive forests.</p> <p><b>S4:</b> Having rich and well quality fresh water and underground water resources and water production.</p> <p><b>S5:</b> Having in-forest pastures and grazing lands, which is important to sustaining wildlife and animal grazing.</p> <p><b>S6:</b> Having satisfactory level of wildlife population of both game animals and birds in the habitats, which are suitable for hunting and hunting tourism.</p> <p><b>S7:</b> Having pristine natural resources, rich historical and cultural assets suitable for recreation, ecotourism and outdoor sports (trekking, trailing, rafting, etc.).</p> <p><b>S8:</b> Having a better and easier highway and transportation system and to be close to downtown Antalya.</p> <p><b>S9:</b> Having a strong local support to social, economic, cultural, environmental and managerial approach and developments in the pilot site.</p>	<p><b>W1:</b> Organisational problems such as lacking of well skilled, well qualified middle and lower level personnel to be used in forestry practices in local Forestry Organization and overloaded works of forest chiefs and engineers.</p> <p><b>W2:</b> Not having reliable, correct, updated and accessible inventory data for non-wood forestry goods and services and forestry functions other than wood materials.</p> <p><b>W3:</b> Lack of legal provisions, measuring monetary values of forest resources, public relations and advertisements, infrastructures, capital availability, financial deficiencies, marketing and coordination in forest resources management.</p> <p><b>W4:</b> Lacking of advertisement, experience, infrastructures related to cultural and inheritance tourism, outdoor sports and recreation; not having a well-structured, planned and participatory management organisation.</p> <p><b>W5:</b> Lack of direct participation of interest groups in forest resources management, dominance of top down decision making culture and in this context lack of communication and cooperation in between Forestry Organisation and interest groups.</p> <p><b>W6:</b> Limited quantity of incomes from selling wood materials and lack of employment opportunities and thus resulting rural poverty and high unemployment rate.</p> <p><b>W7:</b> Lack of diversity in local economy.</p> <p><b>W8:</b> Lack of enterprising culture, vision and long run objectives and investments regarding natural resources in rural areas.</p> <p><b>W9:</b> Migration of young population to urban areas and ageing of actual population.</p>
<b>External Factors</b>	Helpful in achieving objectives	Hindrance in achieving objectives
	<i>Opportunities</i>	<i>Threats</i>
	<b>O1:</b> Increasing education, information and consciousness level of the public about the importance and sustainable management of forest resources at local, national and global level.	<b>T1:</b> Decreasing revenue due to diminishing the quantity of wood production sold as a result of market fluctuation of supply and demand and market price and increment in harvesting costs.
	<b>O2:</b> Improvements in Forestry Organization with respect to multipurpose, multidisciplinary and multidimensional forest resources planning.	<b>T2:</b> Natural resources disruption as a result of global warming, forest fires, insect-fungus and virus attacks and damages, drought, unplanned summer meadows grazing, uncontrolled grazing, illegal hunting, overexploitation, illegal poaching and logging, forestland encroachment.
	<b>O3:</b> The availability of new and contemporary planning methods to be possible used forest resources management (participatory planning, natural resources planning and integrated watershed management, etc.).	<b>T3:</b> Political, economic and social pressures, influences and channelling.
	<b>O4:</b> Increasing importance and priorities of forest functions other than wood production and the increment and diversity in demand and expectations to those forest resources functions, and thus creating new markets as a result of increasing demand.	<b>T4:</b> Restricted local, national and international alternatives and sustainable financial resources intended for natural resources management.
	<b>O5:</b> Rural development as a result of forest resources management including wood productions and non-wood forest functions and thus making contributions to local economy, job creation and extra income sources.	<b>T5:</b> Overlapping power and authorities inside the institutions and inter-institutions.
	<b>O6:</b> Voluntarily and passionately participation and contribution of public institutions, civil society organisation, local administrations and sectorial experts.	<b>T6:</b> Possible conflicts among Forestry Organization, the public, NGOs, private sector, and local administration (village administration, municipality, etc.).
	<b>O7:</b> Possibility of providing internal and inter institutional integration in forest resources management.	<b>T7:</b> Unsatisfactory education, welfare and employment rate of forest villagers.
	<b>O8:</b> Accessing research institutions and universities in the region, which conduct researches on forest resources management and planning.	<b>T8:</b> Not developing the possibility of employment and income sources to keep staying rural population and improve their welfare in their hometowns.
	<b>O9:</b> The opportunities and possibilities provided by rich community diversity, which made out of local population and the people travelled to the pilot site.	<b>T9:</b> Not having the awareness of the public, NGOs, private sector, and local administration on different forest values, except for timber products.

Table 35: Values or Status of the Most Priority SWOT Factors as Sustainable Development Indicators Based on the “Positive Scenarios” in Düzlerçami Pilot Site

SWOT Factors	Present	Short Term (2015-2020)	Medium Term (2015-2030)	Long Term (2015-2040)
Natural resources disruption as a result of global warming, forest fires, insect-fungus and virus attacks and damages, drought, unplanned summer meadows grazing, uncontrolled grazing, illegal hunting, overexploitation, illegal poaching and logging ...	5	4	3	2
Increasing education, information and consciousness level of the public about the importance and sustainable management of forest resources at local, national and global level.	5	7	8	9
Not developing the possibility of employment and income sources to keep staying rural population and improve their welfare in their hometowns.	5	4	4	3
Rural development as a result of forest resources management including wood productions and non-wood forest functions and thus making contributions to local economy, job creation and extra income sources.	5	6	8	9
Unsatisfactory education, welfare and employment rate of forest villagers.	5	4	3	2
Improvements in Forestry Organization with respect to multipurpose, multidisciplinary and multidimensional forest resources planning.	5	7	8	9
Having a better and easier highway and transportation system and to be close to downtown Antalya.	5	8	8	9
Increasing importance and priorities of forest functions other than wood production and the increment and diversity in demand and expectations to those forest resources functions, and thus creating new markets as a result of increasing demand.	5	7	8	9
Political, economic and social pressures, influences and channelling.	5	4	3	2
Forestry Organization having infrastructure, facilities, machinery and equipment, budget, communication and expert personnel contributes social, economic, culture and environmental conditions of the regional development.	5	7	8	9
<b>TOTAL BENEFIT</b>	<b>Moderate</b>	<b>Good</b>	<b>Better</b>	<b>The Best</b>

Table 36: Values or Status of the Most Priority SWOT Factors as Sustainable Development Indicators Based on the “Negative Scenarios” in Düzlerçami Pilot Site

SWOT Factors	Present	Short Term (2015-2020)	Medium Term (2015-2030)	Long Term (2015-2040)
Natural resources disruption as a result of global warming, forest fires, insect-fungus and virus attacks and damages, drought, unplanned summer meadows grazing, uncontrolled grazing, illegal hunting, overexploitation, illegal poaching and logging ...	5	6	8	7
Increasing education, information and consciousness level of the public about the importance and sustainable management of forest resources at local, national and global level.	5	3	2	1
Not developing the possibility of employment and income sources to keep staying rural population and improve their welfare in their hometowns.	5	6	6	7
Rural development as a result of forest resources management including wood productions and non-wood forest functions and thus making contributions to local economy, job creation and extra income sources.	5	4	2	1
Unsatisfactory education, welfare and employment rate of forest villagers.	5	6	7	8
Improvements in Forestry Organization with respect to multipurpose, multidisciplinary and multidimensional forest resources planning.	5	3	2	1
Having a better and easier highway and transportation system and to be close to downtown Antalya.	5	2	2	1
Increasing importance and priorities of forest functions other than wood production and the increment and diversity in demand and expectations to those forest resources functions, and thus creating new markets as a result of increasing demand.	5	3	2	1
Political, economic and social pressures, influences and channelling.	5	6	7	8
Forestry Organization having infrastructure, facilities, machinery and equipment, budget, communication and expert personnel contributes social, economic, culture and environmental conditions of the regional development.	5	3	2	1
<b>TOTAL BENEFIT</b>	<b>Moderate</b>	<b>Bad</b>	<b>Worse</b>	<b>The Worst</b>



**Table 37: Action Plans Developed Thanks to FFEM Project – Component 3 and the Propositions of Participative Governance Models in Düzlerçamı Pilot Site**

Definition of the Action	Priority	Action Type	Responsible Inst., Org. Stakeholders etc. to Implement the Action	Responsible unit to follow and coordinate the action at high level	Implementation Period of the Action
Achievement of the activities of giving information, extension focusing on ensuring interest and support and introduction at the levels of community and stakeholders in Düzlerçamı pilot site regarding FFEM Project – C3.	1	Extension, Awareness	MoFWA, GDF, GDNCNP, ÇEM, Antalya RDF, Sixth NPRD, Scientific Institutions (SAFRI and University), and Related Stakeholders (Local Governments, Other Public Institutions, Local People, Beekeepers, Cutting Workers, NWFP Pickers, Shepherds, Hunters, Picnickers, Ecotourists, Private Sectors, Tourism Agencies, NGOs, Unions, Water Suppliers, etc.).	MoFWA, Department of Training and Publication	Short Term / 2015-2020
Execution of FFEM Project - C3 applied towards development of appropriate participatory management models for Düzlerçamı pilot site by taking into account of participation in all phases (planning, implementation, monitoring and evaluation). Training of the staff of MoFWA (GDF, GDNCNP, and ÇEM) and other organizations based on the information and experiences gained.	1	R&D, Training	By MoFWA (GDF, GDNCNP, and ÇEM), in Collaboration with Scientific Institutions, NGOs, related Organizations, and Other Stakeholders.	MoFWA, SAFRI and University	Short Term / 2015-2020
Preparation and implementation of projects towards creating awareness among local communities and developing participation regarding natural resources protection and rehabilitation in Düzlerçamı pilot site by NGOs		Training, Awareness	By NGOs in Collaboration with Local People, MoFWA, GDF, GDNCNP, ÇEM, Antalya RDF, Sixth NPRD, Other Stakeholders.	MoFWA, Department of Training and Publication	Short Term / 2015-2020
Application of participatory approach methodology developed in FFEM Project or appropriate other methodologies by participatory studies to ensure the appropriate participation of local forest villagers and other stakeholders in forest resources management (in decisions, authority and responsibilities and sacrifices) in Düzlerçamı pilot site and carrying out the necessary legislation development studies.	1	R&D, Legislation Development	MoFWA, GDF, GDNCNP, ÇEM, Antalya RDF, Sixth NPRD, Scientific Institutions, and Related Stakeholders.	MoFWA, Department of Strategy	Short Term / 2015-2020
Development of the preparation principles and methodologies of the detailed application plan and projects in a participatory way for the forest areas and resources allocated to different functions (wood production, NWFP, water utilization, recreation, hunting, etc.) at prepared forest management plan in Düzlerçamı pilot site. Training of the staff of the planning units in these subjects.	2	Planning, Training	MoFWA, GDF, GDNCNP, ÇEM, Antalya RDF, Sixth NPRD, Scientific Institutions, and Related Stakeholders.	MoFWA, Department of Strategy	Short Term / 2015-2020
Preparation of the functional forest resources management plans covering all forestry activities in participation with Local People, and other Stakeholders in Düzlerçamı pilot site, implementation of the applications according to these plans.	1	Planning, Implementation	Common Studies of the Various Units of MoFWA, in Collaboration with Other Stakeholders.	MoFWA, Department of Strategy	Long Term / 2015-2030
Ensuring the sufficient decentralization in forest resources management. For this purpose, strengthening the capacities of provincial units regarding authority and responsibilities, and of central units regarding monitoring, evaluation, inspection, and coordination.	1	Institutional	MoFWA, in Collaboration with Scientific Institutions, NGO's, Politics and Other Stakeholders.	MoFWA, Department of Strategy	Short Term / 2015-2020
Strengthening the dialogue and participatory and integrated working capacities of the Forestry Organization with all Stakeholders in Düzlerçamı pilot site.	1	Institutional	MoFWA, in Collaboration with All Stakeholders, and Scientific Institutions.	MoFWA, Department of Strategy	Short Term / 2015-2020
Strengthening the institutional and staff capacities of the Forestry Organization regarding public relations, awareness and training.	1	Institutional	MoFWA, in Collaboration with Scientific Institutions.	MoFWA, Department of Press and Public Relations	Short Term / 2015-2020
Strengthening the institutional structure and capacities of NGOs and other Stakeholders in Düzlerçamı pilot site. Development of dialogue and collaboration among themselves and with the Forestry Organization and Stakeholders.	2	Institutional	MoFWA, NGOs, and other Stakeholders.	MoFWA, Department of Press and Public Relations	Short Term / 2015-2020

Achievement of the studies towards community informing, awareness and supports gaining regarding the importance of the protection of forests areas and boundaries and important threats on these areas in collaboration and dialogue among the Forestry Organization and Stakeholders in Düzlerçamı pilot site.	1	Training, Awareness	By MoFWA, in collaboration with Media and Other Stakeholders.	MoFWA, Department of Press and Public Relations	Long Term / 2015-2030
Achievement of creating awareness and support gaining studies for the community and various Stakeholders, to prevent the expansion of intensive tourism establishments, settlement areas and constructions in the forests in Düzlerçamı pilot site.	2	Training, Awareness	By MoFWA, in collaboration with MoFAL, MoCT, NGOs, Media, and Other Stakeholders.	MoFWA, Department of Press and Public Relations	Short Term / 2015-2020
Development of awareness and training programs towards creating necessary awareness, interest and support regarding the importance and the necessity of the value and protection of the biodiversity of the forests at the Forestry Organization, communities living in or around the protected areas in Düzlerçamı pilot site, related state organizations and community.	1	Training, Awareness	By MoFWA, in Collaboration with Scientific Institutions and NGOs.	MoFWA, GDNCNP	Long Term / 2015-2030
Updating of the management plans for the important and priority protected areas in Düzlerçamı pilot site (by participatory way).	1	Planning	By GDNCNP in Collaboration with Related Units of MoFWA, Local People, Scientific Institutions, NGOs, and Other Stakeholders.	MoFWA, GDNCNP	Short Term / 2015-2020
Identification of the forest villagers who live in or around the protected areas, create pressure and threats, are seriously affected by the limitations for these areas in Düzlerçamı pilot site, giving priority to these areas, giving priority to these villages in rural development activities implemented by MoFWA (GDF and GDNCNP), MoFAL, and NGOs.	1	Institutional	By MoFWA (GDF and GDNCNP), MoFAL, and NGOs in Collaboration with Local People, and Other Related Organizations	MoFWA (GDF and GDNCNP)	Short Term / 2015-2020
Achievement of research studies on the essential measures regarding reasons, results and prevention of the forest fires and other biotic and abiotic damages in Düzlerçamı pilot site and strengthening and implementation of awareness and training studies for the forest villagers and other parts of the community on these subjects.	1	Research, Awareness, Training	By MoFWA (GDF) in Collaboration with Scientific Institutions, the Media and Related Other Organizations and Institutions.	MoFWA, SAFRI	Long Term / 2015-2030
Achievement of the studies to ensure the supports for community awareness and fight against the encroachment and settlements for getting illegal revenues from the Düzlerçamı forests around the Antalya city centre.	1	Awareness	By GDNCNP in Collaboration with NGOs, the Media and Related Other Organizations and Institutions.	MoFWA (GDF)	Long Term / 2015-2030
Pilot demonstration applications, awareness and training studies for the forest villagers regarding the rehabilitation of forest range areas, controlled grazing and silvopastoral implementations in Düzlerçamı pilot site.	1	Pilot Projects, Demonstration, Training, Awareness	By MoFWA (GDF) in Collaboration with MoFAL, Forest Villagers, NGO's and Other Related Organizations.	MoFWA (GDF)	Short Term / 2015-2020
Development and regularly implementation of appropriate training programs for the beekeepers, cutting workers, NWFPP pickers, shepherds, hunters and other forest related people in Düzlerçamı pilot site.	1	Training	By MoFWA (GDF and GDNCNP) in Collaboration with MoNE, MoFAL, Local People, Forest Village Cooperatives, and Other Stakeholders.	MoFWA, Department of Training and Publication	Long Term / 2015-2030
Strengthening and continuing the awareness and information studies on the importance and raising values of the social and cultural services of the forests (recreation, ecotourism, landscape, hunting, sportive fishing, etc.) in Forestry Organization, forest villages, and other stakeholders in Düzlerçamı pilot site.	1	Awareness	By MoFWA (GDF and GDNCNP) and Scientific Institutions in Collaboration with Related Private Sector, Media, NGO', and Other Stakeholders.	MoFWA (GDF and GDNCNP)	Long Term / 2015-2030
Establishment of new forest recreational areas in appropriate places in Düzlerçamı pilot site and expansion of these areas. Strengthening and implementation of training, awareness and inspection studies for the users of these areas.	1	Implementation	By MoFWA (GDF and GDNCNP) in Collaboration with Other Related Organizations.	MoFWA (GDF and GDNCNP)	Long Term / 2015-2030
Development and implementation of training programs on giving importance to protect natural landscape and landscape diversity and wildlife during forestry activities (reforestation rehabilitation, etc.) and giving permissions to the establishment (especially for mines, etc.) in Düzlerçamı pilot site for the staff of various units of MoFWA (GDF and GDNCNP).	2	Training, Awareness	By MoFWA (GDF and GDNCNP) in Collaboration with MoNE and Other Stakeholders.	MoFWA, Department of Training and Publication	Short Term / 2015-2020
Achievement of the studies to develop awareness, interest, political commitment and support in the society	1	Awareness	By MoFWA in Collaboration with MoNE, Media, NGOs, and	MoFWA, Department of	Long Term / 2015-2030

regarding the importance of protective and environmental functions of the forests (protection of soil and water resources, carbon deposit, reducing the air pollution, etc.) in Düzlerçamı pilot site.			Other Stakeholders.	Training and Publication	
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**Table 38: The Importance Values and Ranking Orders of the Stakeholders in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique**

Stakeholders	Importance Values	Ranking Orders
Local Administration	0,3867878	1
Local Users Living in the Site	0,2850538	2
Professional Interests	0,1563056	3
Economic Interests	0,1034459	4
Users of the Catchment Area Coming from Outside	0,0684070	5
<b>Consistency Ratio</b>	0,0034209	

**Table 39: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “Local Administration” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique**

Sub-Stakeholders Belonging to Stakeholder “Local Administration”	Importance Values	Ranking Orders
Antalya Forestry Regional Directorate	0,5440468	1
Sixth National Park Regional Directorate – Antalya Branch Directorate	0,1418150	3
Local Governments (Governorship, District Governorate, Municipality, Village Administration)	0,3141383	2
<b>Consistency Ratio</b>	0,0128763	

**Table 40: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “Local Users Living in the Site” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique**

Sub-Stakeholders Belonging to Stakeholder “Local Users Living in the Site”	Importance Values	Ranking Orders
Local People	0,5902763	1
Beekeepers	0,0913043	4
NWFP Pickers	0,1526431	2
Shepherds	0,1014399	3
Hunters	0,0643364	5
<b>Consistency Ratio</b>	0,0111845	

**Table 41: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “Professional Interests” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique**

Sub-Stakeholders Belonging to Stakeholder “Professional Interests”	Importance Values	Ranking Orders
South-west Anatolia Forest Research Institute	0,2796077	1
University	0,2392688	3
Other Public Institutes	0,2642703	2
Non-governmental Organizations	0,1125014	4
Chambers of Turkish Engineers and Architects	0,1043518	5
<b>Consistency Ratio</b>	0,0096306	

Table 42: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “*Economic Interests*” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique

Sub-Stakeholders Belonging to Stakeholder “ <i>Economic Interests</i> ”	Importance Values	Ranking Orders
Cutting Workers	0,1227809	3
Private Sector (Forest Products Industrialists)	0,4216367	2
Tourism Agencies	0,4555824	1
<b>Consistency Ratio</b>	0,0044390	

Table 43: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “*Users of the Catchment Area Coming from Outside*” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique

Sub-Stakeholders Belonging to Stakeholder “ <i>Users of the Catchment Area Coming from Outside</i> ”	Importance Values	Ranking Orders
Picnickers	0,3323481	2
Ecotourists	0,6676519	1
<b>Consistency Ratio</b>	0,0000000	

Table 44: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of AHP Technique

Representatives of Steering Committee	DECISION CRITERIA																				Consistency Ratio		
	Financial Contribution		Food Security		Natural Food		Forest Protection		Rural Development		Support to Employment		Exchange Savings		Other Sectors		International Contractual		Importance of Forest			Professional Honour	
	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank		Import. t.	Rank
Antalya Forestry Regional Directorate	0,0137151	6	0,0783691	3	0,0470646	4	0,1544314	2	0,1544314	2	0,1544314	2	0,0470646	4	0,0137151	6	0,0257836	5	0,1544314	2	0,1565621	1	0,025284
Sixth National Park Regional Directorate – Antalya Branch Directorate	0,0761626	6	0,0583263	8	0,0682193	7	0,1039253	3	0,1039253	3	0,0882743	5	0,0483425	10	0,1666563	1	0,0582126	9	0,1242050	2	0,1037505	4	0,0515069
Ministry of Food, Agriculture and Livestock	0,0183791	9	0,0527535	6	0,0918855	4	0,1495790	2	0,2280410	1	0,1495790	2	0,0479050	8	0,0570316	5	0,0570316	5	0,0963749	3	0,0514398	7	0,0161825
General Directorate of State Hydraulic Works	0,0239815	10	0,0497963	9	0,0529078	8	0,1077929	4	0,1899608	1	0,0988294	5	0,0544357	7	0,1626021	2	0,0544357	7	0,1111715	3	0,0940863	6	0,0131317
Ministry of Culture and Tourism	0,0182308	9	0,0338652	8	0,0551927	6	0,1414260	2	0,2154786	1	0,1414260	2	0,0884478	3	0,0554340	5	0,0511695	7	0,1414260	2	0,0579035	4	0,0190168
Ministry of Environment and Urbanization	0,3001872	1	0,0406777	10	0,0453958	8	0,0777533	4	0,1257196	3	0,0738528	5	0,0601317	7	0,0708225	6	0,0423654	9	0,1324781	2	0,0306159	11	0,0508181

Ministry of Energy and Natural Resources	0,0174377	11	0,0603828	8	0,0805182	5	0,1323567	3	0,2061638	1	0,1714612	2	0,0688298	7	0,0778004	6	0,0244599	10	0,1249936	4	0,0355958	9	0,0553928
Ministry of National Education	0,0198566	11	0,0869722	5	0,0868938	6	0,1533615	3	0,2298502	1	0,1572576	2	0,0470310	8	0,0492482	7	0,0314451	9	0,1066666	4	0,0314172	10	0,0304446
Mineral Research and Exploration General Directorate	0,0188922	11	0,0617248	6	0,0600174	7	0,2312122	1	0,1781012	2	0,1423625	4	0,0686470	5	0,0408074	8	0,0269803	10	0,1434756	3	0,0277793	9	0,0269434

Table 45: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories "Local Administration" According to Pair wise Comparison of AHP Technique

Representatives of Local Administration	DECISION CRITERIA																				Consistency Ratio		
	Financial Contribution		Food Security		Natural Food		Forest Protection		Rural Development		Support to Employment		Exchange Savings		Other Sectors		International Contractual		Importance of Forest			Professional Honour	
	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank		Import. t.	Rank
Governorship	0,0179010	11	0,0562745	7	0,0877657	5	0,1869483	2	0,2014716	1	0,1635605	3	0,0564713	6	0,0372673	8	0,0268026	10	0,1307604	4	0,0347767	9	0,0271699
District Governorate	0,0151350	11	0,0551898	7	0,0865059	5	0,2303144	1	0,1606644	3	0,1666239	2	0,0625858	6	0,0293110	9	0,0288018	10	0,1273264	4	0,0375416	8	0,0405225
Municipality	0,0191052	11	0,0625843	7	0,0677545	5	0,1496453	3	0,2181080	1	0,1941903	2	0,0410690	9	0,0631641	6	0,0266979	10	0,1140516	4	0,0436298	8	0,0271680
Village Administration	0,0732990	4	0,0140289	9	0,0732990	4	0,2348122	2	0,0732990	4	0,0418054	7	0,0786922	3	0,0235424	8	0,0720905	5	0,2454850	1	0,0696464	6	0,0868876

Table 46: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories "Local Users Living in the Site" According to Pair wise Comparison of AHP Technique

Representatives of Local Users Living in the Site	DECISION CRITERIA																				Consistency Ratio		
	Financial Contribution		Food Security		Natural Food		Forest Protection		Rural Development		Support to Employment		Exchange Savings		Other Sectors		International Contractual		Importance of Forest			Professional Honour	
	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank	Import. t.	Rank		Import. t.	Rank
Local People	0,0129701	11	0,0393165	9	0,0440981	8	0,1735289	2	0,1984844	1	0,1629633	3	0,0241336	10	0,0862477	5	0,0760764	7	0,1029734	4	0,0792076	6	0,0315352
Beekeepers	0,1058941	2	0,1058941	2	0,1058941	2	0,2642901	1	0,1058941	2	0,1058941	2	0,1042268	3	0,0446394	4	0,0155890	6	0,0263955	5	0,0153888	7	0,0196964
NWFP Pickers	0,0255436	9	0,0895164	5	0,1001127	4	0,0806780	8	0,1937870	2	0,2083967	1	0,0146059	10	0,0890914	6	0,0812919	7	0,1024446	3	0,0145319	11	0,0441217
Shepherds	0,0202528	7	0,0976147	3	0,0976147	3	0,0976147	3	0,0976147	3	0,0407399	5	0,0976147	3	0,0962769	4	0,0207649	6	0,1096696	2	0,2242226	1	0,0130041
Hunters	0,0136561	9	0,0950422	4	0,0635994	5	0,0361037	8	0,2319998	1	0,0975159	3	0,0975159	3	0,0378186	7	0,0975159	3	0,0616707	6	0,1675615	2	0,0246977

Table 47: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories "Professional Interests" According to Pair wise Comparison of AHP Technique

Representatives of Professional Interests	DECISION CRITERIA																						Consistency Ratio
	Financial Contribution		Food Security		Natural Food		Forest Protection		Rural Development		Support to Employment		Exchange Savings		Other Sectors		International Contractual		Importance of Forest		Professional Honour		
	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	
Other Public Institutions	0,0180089	10	0,0428157	7	0,0662943	5	0,2029955	2	0,1662230	3	0,1354556	4	0,0411232	8	0,0283205	9	0,0283205	9	0,2101874	1	0,0602554	6	0,0206406
Non-governmental Organizations	0,0163624	9	0,0871062	4	0,0871062	4	0,2488624	1	0,1357906	3	0,0871062	4	0,0343658	7	0,0237258	8	0,0529150	5	0,1918530	2	0,0348064	6	0,0175293
Chambers of Turkish Engineers and Architects	0,0170113	10	0,0719978	5	0,1255399	3	0,1672450	2	0,1672450	2	0,1072361	4	0,0504231	7	0,0350287	9	0,0358537	8	0,1706459	1	0,0517734	6	0,0314701

Table 48: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories "Economic Interests" According to Pair wise Comparison of AHP Technique

Representatives of Economic Interests	DECISION CRITERIA																						Consistency Ratio
	Financial Contribution		Food Security		Natural Food		Forest Protection		Rural Development		Support to Employment		Exchange Savings		Other Sectors		International Contractual		Importance of Forest		Professional Honour		
	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	Import. rt.	Rank	
Cutting Workers	0,0673491	6	0,0127720	11	0,2300909	1	0,0303223	8	0,1065181	5	0,1547170	3	0,0230633	9	0,0419615	7	0,0225301	10	0,1666426	2	0,1440332	4	0,0460975
Private Sector	0,0218419	10	0,0358893	8	0,0678142	7	0,0989583	4	0,2440207	1	0,2062677	2	0,0692080	6	0,0722862	5	0,0353081	9	0,1360660	3	0,0123397	11	0,0417939
Water Suppliers	0,0242941	7	0,0833031	4	0,0833031	4	0,1895682	1	0,1895682	1	0,1479677	2	0,0490934	5	0,0833031	4	0,0403404	6	0,0961754	3	0,0130833	8	0,0252755
Tourism Agencies	0,01718790	9	0,0709472	5	0,0897892	4	0,2095017	1	0,2095017	1	0,1530890	2	0,0366459	7	0,0395289	6	0,0351325	8	0,1259066	3	0,0127694	10	0,0337893

Table 49: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories

Decision Criteria	Picnickers		Ecotourists	
	Importance Values	Ranking Orders	Importance Values	Ranking Orders
Monetary and Financial Contribution to the System of MoFWA	0,0174795	10	0,0171681	10
Contribution to Food Security	0,0796034	5	0,0844439	6
Support to Production of Natural Food	0,0833738	4	0,0844439	6
Support to Forest Protection	0,2202153	1	0,2504394	1
Support to Rural Development	0,1624936	2	0,1399358	3
Support to Employment	0,1624936	2	0,0859197	4



Support to Exchange Savings	0,0501726	7	0,0848257	5
Support to the Other Sectors	0,0512880	6	0,0409966	7
Prominence Due to International Contractual	0,0302424	8	0,0271707	9
Contribution to Comprehending of Importance of Forest Resources	0,1165896	3	0,1564091	2
Strengthening to Professional Honour	0,0260483	9	0,0282471	8
<b>Consistency Ratio</b>	0,0264782		0,0726802	

Table 50: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Scientific Committee According to Pair wise Comparison of AHP Technique

Representatives of Scientific Committee	DECISION CRITERIA																				Consistency Ratio		
	Financial Contribution		Food Security		Natural Food		Forest Protection		Rural Development		Support to Employment		Exchange Savings		Other Sectors		International Contractual		Importance of Forest			Professional Honour	
	Import.	Rank	Import.	Rank	Import.	Rank	Import.	Rank	Import.	Rank	Import.	Rank	Import.	Rank	Import.	Rank	Import.	Rank	Import.	Rank			
South-west Anatolia Forest Research Institute	0,0286370	8	0,0583757	6	0,0473912	7	0,1835951	2	0,1930445	1	0,1144893	4	0,0182547	9	0,1144893	4	0,1097647	5	0,1202727	3	0,0116856	10	0,0337185
University	0,0183248	9	0,1053746	4	0,1053746	4	0,2546796	1	0,1662195	2	0,1053746	4	0,0286005	8	0,0442355	6	0,0290520	7	0,1141638	3	0,0286005	8	0,0130957
National Expert of the C3 of FFEM Project	0,0176221	10	0,0767183	5	0,1020278	4	0,2226805	1	0,1444419	3	0,1444419	3	0,0273961	8	0,0425880	6	0,0273390	9	0,1531870	2	0,0415573	7	0,0158917
Thematic Expert of the C3 of FFEM Project	0,0164710	10	0,0799192	5	0,0848124	4	0,1988273	1	0,1297355	3	0,1297355	3	0,0360487	8	0,0547841	6	0,0524842	7	0,1926640	2	0,0245182	9	0,0450019
Assistant Thematic Expert of the C3 of FFEM Project	0,0164134	10	0,0703445	5	0,0907967	4	0,2159229	1	0,1428307	3	0,1428307	3	0,0404013	8	0,0527114	6	0,0395118	9	0,1465795	2	0,0416571	7	0,0260861

Table 51: The Mean Importance Values and Ranking Orders of Decision Alternatives with Respect to Each Criterion according to Pair wise Comparison of AHP Technique, Determined by Sector Experts

Decision Criteria	Decision Alternatives (Forest Values)														Consistency Ratio
	Environmental Values		Wood Production Value		NWFPs Production Value		Forage Production Value		Tourism Value		Water Quality and Quantity Value		Recreation Value		
	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	
Monetary and Financial Contribution to the System of MoFWA	0,1024688	6	0,1660717	3	0,0834521	7	0,1123717	5	0,2038918	1	0,2030496	2	0,1286944	4	0,0030519
Contribution to Food Security	0,2887430	1	0,0427817	7	0,1653204	4	0,1756362	3	0,0585312	5	0,2155196	2	0,0534678	6	0,0042865
Support to Production of Natural Food	0,2442880	1	0,0352363	7	0,2259468	3	0,1406229	4	0,0756574	5	0,2355387	2	0,0427099	6	0,0098655
Support to Forest Protection	0,3430832	1	0,0363804	7	0,0958319	4	0,0898243	5	0,1175358	3	0,2276146	2	0,0897299	6	0,0078769
Support to Rural Development	0,0547987	7	0,2290321	1	0,1267028	5	0,1390928	4	0,1939530	2	0,1017975	6	0,1546232	3	0,0028366
Support to Employment	0,0399909	7	0,2551076	1	0,1747864	3	0,1589762	4	0,2123909	2	0,0474918	6	0,1112562	5	0,0027343
Support to Exchange Savings	0,0535405	7	0,1719161	2	0,1160832	5	0,1204617	4	0,2818560	1	0,0867987	6	0,1693437	3	0,0026331
Support to the Other Sectors	0,2204496	1	0,0484237	7	0,1130682	5	0,0754062	6	0,2186786	2	0,1389172	4	0,1850563	3	0,0020564
Prominence Due to International Contractual	0,3634566	1	0,0409520	7	0,1060147	3	0,0793482	6	0,1039250	4	0,2166581	2	0,0896454	5	0,0050956
Contribution to Comprehending of Importance of Forest Resources	0,3290367	1	0,0514327	7	0,1167031	5	0,0918194	6	0,1478301	2	0,1453880	3	0,1177900	4	0,0032726
Strengthening to Professional Honour	0,3004550	1	0,0430096	7	0,1438661	3	0,0671780	6	0,1413353	4	0,1809693	2	0,1231867	5	0,0038840

Table 52: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, the Weights of all the Stakeholders are Assumed to be Equal, i.e. ( $1/5 = 0,200$ )

Forest Values	Importance Values	Ranking Orders
Environmental Values	0,2093251	1
Wood Production Value	0,1121471	7
NWFPs Production Value	0,1349856	4
Forage Production Value	0,1172164	5
Tourism Value	0,1586577	2
Water Quality and Quantity Value	0,1544911	3
Recreation Value	0,1143749	6

Table 53: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Stakeholders is assumed to Be 1,000, the Weights of the others are assumed to be 0,000

Forest Values	Weight of stakeholder was allocated to be 1,000 (Importance weights of all other stakeholders were set to 0,000)									
	Local Administration		Local Users Living in the Site		Professional Interests		Economic Interests		Users of the Catchment Area Coming from Outside	
	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders
Environmental Values	0,2099644	1	0,2046782	1	0,2240536	1	0,1873512	1	0,2205782	1
Wood Production Value	0,1137599	7	0,1161089	6	0,1050389	7	0,1242398	5	0,1015881	7
NWFPs Production Value	0,1355296	4	0,1345407	4	0,1321054	4	0,1424797	4	0,1302727	4
Forage Production Value	0,1160280	5	0,1159182	7	0,1157017	5	0,1223684	6	0,1160656	5
Tourism Value	0,1584543	2	0,1601337	2	0,1514935	3	0,1669675	2	0,1562395	3
Water Quality and Quantity Value	0,1515594	3	0,1518291	3	0,1603366	2	0,1466171	3	0,1621132	2
Recreation Value	0,1147044	6	0,1167912	5	0,1112703	6	0,1164813	7	0,1126271	6

Table 54: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Stakeholders is assumed to be 0,000, the Weights of the others are assumed to be equal, i.e. ( $1/4 = 0,250$ )

Forest Values	Weight of stakeholder was allocated to be 0,000 (Importance weights of all other stakeholders were set to 0,250=1/4)									
	Local Administration		Local Users Living in the Site		Professional Interests		Economic Interests		Users of the Catchment Area Coming from Outside	
	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders
Environmental Values	0,2091653	1	0,2104868	1	0,2056430	1	0,2148186	1	0,2065119	1
Wood Production Value	0,1117439	7	0,1111566	7	0,1139241	7	0,1091239	7	0,1147868	7
NWFPs Production Value	0,1348496	4	0,1350969	4	0,1357057	4	0,1331121	4	0,1361638	4
Forage Production Value	0,1175135	5	0,1175409	5	0,1175950	5	0,1159284	5	0,1175041	5
Tourism Value	0,1587085	2	0,1582887	2	0,1604487	2	0,1565803	2	0,1592623	2
Water Quality and Quantity Value	0,1552240	3	0,1551566	3	0,1530297	3	0,1564596	3	0,1525856	3
Recreation Value	0,1142925	6	0,1137708	6	0,1151510	6	0,1138483	6	0,1148118	6

Table 55: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, the Weights of Decision Criteria are Assumed to be Equal, i.e. ( $1/11 = 0,091$ )

Forest Values	Importance Values	Ranking Orders
Environmental Values	0,2129683	1
Wood Production Value	0,1019513	7
NWFPs Production Value	0,1335676	4
Forage Production Value	0,1138171	6
Tourism Value	0,1597582	3
Water Quality and Quantity Value	0,1637766	2
Recreation Value	0,1151608	5

Table 56: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Decision Criteria is assumed to be 1,000, the Weights of the others are assumed to be 0,000

Forest Values	Weight of decision criteria was allocated to be 1,000 (Importance weights of all other decision criteria were set to 0,000)									
	Local Administration		Local Users Living in the Site		Professional Interests		Economic Interests		Users of the Catchment Area Coming from Outside	
	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders
Environmental Values	0,1024688	6	0,2887430	1	0,2442880	1	0,3430832	1	0,0547987	7
Wood Production Value	0,1660717	3	0,0427817	7	0,0352363	7	0,0363804	7	0,2290321	1
NWFPs Production Value	0,0834521	7	0,1653204	4	0,2198147	3	0,1019639	4	0,1267028	5
Forage Production Value	0,1123717	5	0,1756362	3	0,1382289	4	0,0922183	5	0,1382148	4
Tourism Value	0,2038918	1	0,0585312	5	0,0776311	5	0,1155621	3	0,1980957	2
Water Quality and Quantity Value	0,2030496	2	0,2155196	2	0,2351652	2	0,2279881	2	0,1010906	6
Recreation Value	0,1286944	4	0,0534678	6	0,0449259	6	0,0875139	6	0,1553169	3

Table 57: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Decision Criteria are assumed to be 0,000, the Weights of the others are assumed to be equal, i.e. (1/10 = 0,100)

Forest Values	Weight of decision criteria was allocated to be 0,000 (Importance weights of all other decision criteria were set to 0,100=1/10)									
	Local Administration		Local Users Living in the Site		Professional Interests		Economic Interests		Users of the Catchment Area Coming from Outside	
	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders	Importance Values	Ranking Orders
Environmental Values	0,2237842	1	0,2051568	1	0,2096023	1	0,1997228	1	0,2285512	1
Wood Production Value	0,0954272	7	0,1077562	6	0,1085108	7	0,1083964	7	0,0891312	7
NWFPs Production Value	0,1384324	4	0,1302455	4	0,1247961	4	0,1365812	4	0,1341073	4
Forage Production Value	0,1138366	5	0,1075101	7	0,1112509	6	0,1158519	6	0,1112523	5
Tourism Value	0,1551693	3	0,1697054	2	0,1677954	2	0,1640023	2	0,1557489	3
Water Quality and Quantity Value	0,1596694	2	0,1584223	3	0,1564578	3	0,1571755	3	0,1698653	2
Recreation Value	0,1136809	6	0,1212036	5	0,1220578	5	0,1177990	5	0,1110187	6

Table 58: Statistical Techniques Used in the Fourth and Final Phase “Assessing the Impacts and Results of participation Process, and Determining the Stakeholders’ Satisfaction Levels with the Participation Level” of the Participatory Approach

Statistical Techniques	Description
<b>Descriptive statistics (percentage, mean, and standard deviation)</b>	They were employed to show the respondents’ general perceptions on each category of the questionnaire.
<b>Frequencies</b>	They were used to assess the frequency of responses on each item as well as the frequency on education, age, and village of residence.
<b>Binomial variables</b>	They were used to count how often a particular respond occurs in a fixed number of trials.
<b>ANOVA</b>	It was used to test the differences significance between the pre-assessments of participation process held by Stakeholders’ Committee/Forum in Düzlerçami pilot site, the differences significance between the pre-assessments of participation process held by them according to their socio-demographic characteristics (education, age, and village of residence), the differences significance between the post-assessments of participation process within FFEM initiative held by them, and the differences significance between the post-assessments of participation process within FFEM initiative held by them according to their socio-demographic characteristics (education, age, and village of residence).
<b>Multiple linear regression analysis</b>	It was used to examine the differences significance between the pre-assessments of participation process held by Stakeholders’ Committee/Forum in Düzlerçami pilot site when the effects of sociodemographic variables (education, age, and village of residence) were controlled, and the differences significance between the post-assessments of participation process within FFEM initiative held by them when the effects of sociodemographic variables (education, age, and village of residence) were controlled. In other words, statistical technique was used to show the combined effects of a set of independent variables and the separate effects of each one while controlling the others on the pre-assessments and post-assessments of participation process within FFEM initiative.
<b>Correlation analysis</b>	It was used to investigate the bivariate relationships that might exist between the dependent variables (i.e. the pre-assessments and the post-assessments of participation process within FFEM initiative). Also, this statistical technique was employed to examine the bivariate relationships among the pre-assessments of participation process and the post-assessments of participation process within FFEM initiative held by Stakeholders’ Committee/Forum in Düzlerçami pilot site, and their education, age, and residence villages’ characteristics.



Table 59: Sociodemographic Characteristics of Representatives of the Stakeholders' Committee/Forum Living in Düzlerçamı Pilot Site, Who Participated in the Survey of Fourth Phase of the Participatory Approach

Sociodemographic Characteristics	Sub-Characteristics	SOCIODEMOGRAPHIC CHARACTERISTICS															
		Village Administration		Local People		Beekeepers		NWFP Pickers		Hunters		Cutting Workers		Shepherds		Total	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Education	Elementary School	3	15,8	5	26,3	1	5,3	2	10,5	2	10,5	2	10,5	4	21,1	19	79,2
	Secondary Education	0	0,0	1	33,3	0	0,0	0	0,0	0	0,0	2	66,7	0	0,0	3	12,5
	High School	0	0,0	1	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0	1	4,2
	Undergraduate	0	0,0	0	0,0	1	100,0	0	0,0	0	0,0	0	0,0	0	0,0	1	4,2
Age	25-34	0	0,0	1	33,3	0	0,0	1	33,3	0	0,0	0	0,0	1	33,3	3	12,5
	35-44	0	0,0	1	14,3	0	0,0	0	0,0	1	14,3	3	42,9	2	28,6	7	29,2
	45-54	2	50,0	0	0,0	0	0,0	0	0,0	0	0,0	1	25,0	1	25,0	4	16,7
	55-64	1	16,7	3	50,0	1	16,7	1	16,7	0	0,0	0	0,0	0	0,0	6	25,0
Residence Village	65 and More	0	0,0	2	50,0	1	25,0	0	0,0	1	25,0	0	0,0	0	0,0	4	16,7
	Yukarı Karaman	1	11,1	1	11,1	2	22,2	0	0,0	0	0,0	4	44,4	1	11,1	9	37,5
	Akkoç	1	10,0	4	40,0	0	0,0	2	20,0	2	20,0	0	0,0	1	10,0	10	41,7
	Çiğlik	1	20,0	2	40,0	0	0,0	0	0,0	0	0,0	0	0,0	2	40,0	5	20,8

Table 60: Cronbach Alpha Reliability Coefficients of the Scales of Pre-Assessments and Post-Assessments of Participation Process

CRONBACH ALPHA RELIABILITY COEFFICIENTS OF THE SCALES	
Scales	Cronbach Alpha Reliability Coefficients
Pre-Assessments of Participation Process	0,895
Post-Assessments of Participation Process	0,810

Pre-Assessments of Participation Process = 24 cases,  
Post-Assessments of Participation Process = 24 cases.

Table 61: The Scores for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of the Stakeholders' Committee/Forum in Düzlerçami Pilot Site

Statements on Pre-Assessments of Participation Process	Stakeholders' Groups	Number	1. Strongly Disagree		2. Disagree		3. Undecided		4. Agree		5. Strongly Agree		Responds With Binom Variables		Mean Score*
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Agree	Disagree	
													Percentage	Percentage	
1 Forestry Organization makes always its objectives and activities known to us.	Village Administration	3	0	0,0	2	66,7	1	33,3	0	0,0	0	0,0	1,0	99,0	2,33
	Local People	7	5	71,4	0	0,0	0	0,0	2	28,6	0	0,0	1,5	98,5	1,86
	Beekeepers	2	1	50,0	0	0,0	1	50,0	0	0,0	0	0,0	0,5	99,5	2,00
	NWFP Pickers	2	1	50,0	1	50,0	0	0,0	0	0,0	0	0,0	0,3	99,8	1,50
	Hunters	2	1	50,0	0	0,0	1	50,0	0	0,0	0	0,0	0,5	99,5	2,00
	Cutting Workers	4	2	50,0	1	25,0	1	25,0	0	0,0	0	0,0	0,8	99,3	1,75
	Shepherds	4	2	50,0	2	50,0	0	0,0	0	0,0	0	0,0	0,5	99,5	1,50
	Total	24	12	50,0	6	25,0	4	16,7	2	8,3	0	0,0	5,0	95,0	1,83
2 We know the plans and maps of forestry.	Village Administration	3	2	66,7	0	0,0	1	33,3	0	0,0	0	0,0	0,5	99,5	1,67
	Local People	7	4	57,1	0	0,0	2	28,6	1	14,3	0	0,0	1,8	98,3	2,00
	Beekeepers	2	2	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
	NWFP Pickers	2	1	50,0	1	50,0	0	0,0	0	0,0	0	0,0	0,3	99,8	1,50
	Hunters	2	2	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
	Cutting Workers	4	4	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
	Shepherds	4	4	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
	Total	24	19	79,2	1	4,2	3	12,5	1	4,2	0	0,0	2,5	97,5	1,42
3 We are aware of the forestry activities conducted by other users of the territory, except for Forestry Organization.	Village Administration	3	3	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
	Local People	7	3	42,9	2	28,6	1	14,3	0	0,0	1	14,3	2,0	98,0	2,14
	Beekeepers	2	0	0,0	0	0,0	1	50,0	1	50,0	0	0,0	1,3	98,8	3,50
	NWFP Pickers	2	1	50,0	0	0,0	1	50,0	0	0,0	0	0,0	0,5	99,5	2,00
	Hunters	2	1	50,0	0	0,0	1	50,0	0	0,0	0	0,0	0,5	99,5	2,00
	Cutting Workers	4	1	25,0	1	25,0	2	50,0	0	0,0	0	0,0	1,3	98,8	2,25
	Shepherds	4	4	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
	Total	24	13	54,2	3	12,5	6	25,0	1	4,2	1	4,2	5,5	94,5	1,92
4 Forestry Organization recognizes the legitimacy of our interests and rights.	Village Administration	3	1	33,3	1	33,3	1	33,3	0	0,0	0	0,0	0,8	99,3	2,00
	Local People	7	5	71,4	0	0,0	0	0,0	2	28,6	0	0,0	1,5	98,5	1,86
	Beekeepers	2	0	0,0	0	0,0	1	50,0	1	50,0	0	0,0	1,3	98,8	3,50
	NWFP Pickers	2	0	0,0	0	0,0	1	50,0	1	50,0	0	0,0	1,3	98,8	3,50
	Hunters	2	1	50,0	0	0,0	1	50,0	0	0,0	0	0,0	0,5	99,5	2,00
	Cutting Workers	4	1	25,0	0	0,0	2	50,0	1	25,0	0	0,0	1,8	98,3	2,75
	Shepherds	4	3	75,0	0	0,0	0	0,0	0	0,0	1	25,0	1,0	99,0	2,00
	Total	24	11	45,8	1	4,2	6	25,0	5	20,8	1	4,2	8,0	92,0	2,33
5 Our concerns, needs and values are directly incorporated into decision making by Forestry Organization.	Village Administration	3	2	66,7	1	33,3	0	0,0	0	0,0	0	0,0	0,3	99,8	1,33
	Local People	7	4	57,1	1	14,3	1	14,3	1	14,3	0	0,0	1,5	98,5	1,86
	Beekeepers	2	1	50,0	0	0,0	0	0,0	1	50,0	0	0,0	0,8	99,3	2,50
	NWFP Pickers	2	0	0,0	0	0,0	1	50,0	1	50,0	0	0,0	1,3	98,8	3,50
	Hunters	2	1	50,0	0	0,0	1	50,0	0	0,0	0	0,0	0,5	99,5	2,00
	Cutting Workers	4	1	25,0	1	25,0	2	50,0	0	0,0	0	0,0	1,3	98,8	2,25
	Shepherds	4	4	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
	Total	24	13	54,2	3	12,5	5	20,8	3	12,5	0	0,0	5,5	94,5	1,92

6	Forestry Organization modifies its plans and applications according to our opinions and expectations.	Village Administration	3	2	66,7	1	33,3	0	0,0	0	0,0	0	0,0	0,3	99,8	1,33
		Local People	7	4	57,1	1	14,3	2	28,6	0	0,0	0	0,0	1,3	98,8	1,71
		Beekeepers	2	1	50,0	0	0,0	1	50,0	0	0,0	0	0,0	0,5	99,5	2,00
		NWFP Pickers	2	1	50,0	0	0,0	1	50,0	0	0,0	0	0,0	0,5	99,5	2,00
		Hunters	2	1	50,0	1	50,0	0	0,0	0	0,0	0	0,0	0,3	99,8	1,50
		Cutting Workers	4	3	75,0	1	25,0	0	0,0	0	0,0	0	0,0	0,3	99,8	1,25
		Shepherds	4	4	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
		Total	24	16	66,7	4	16,7	4	16,7	0	0,0	0	0,0	3,0	97,0	1,50
7	Forest management plans take different forest resources and uses into account.	Village Administration	3	0	0,0	0	0,0	2	66,7	1	33,3	0	0,0	1,8	98,3	3,33
		Local People	7	3	42,9	2	28,6	0	0,0	2	28,6	0	0,0	2,0	98,0	2,14
		Beekeepers	2	0	0,0	0	0,0	1	50,0	1	50,0	0	0,0	1,3	98,8	3,50
		NWFP Pickers	2	1	50,0	0	0,0	0	0,0	1	50,0	0	0,0	0,8	99,3	2,50
		Hunters	2	2	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
		Cutting Workers	4	3	75,0	1	25,0	0	0,0	0	0,0	0	0,0	0,3	99,8	1,25
		Shepherds	4	2	50,0	0	0,0	0	0,0	0	0,0	2	50,0	2,0	98,0	3,00
		Total	24	11	45,8	3	12,5	3	12,5	5	20,8	2	8,3	8,0	92,0	2,33
8	Forestry Organization uses the surveys for taking our opinions.	Village Administration	3	3	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
		Local People	7	4	57,1	2	28,6	1	14,3	0	0,0	0	0,0	1,0	99,0	1,57
		Beekeepers	2	1	50,0	0	0,0	0	0,0	1	50,0	0	0,0	0,8	99,3	2,50
		NWFP Pickers	2	1	50,0	1	50,0	0	0,0	0	0,0	0	0,0	0,3	99,8	1,50
		Hunters	2	1	50,0	0	0,0	0	0,0	1	50,0	0	0,0	0,8	99,3	2,50
		Cutting Workers	4	4	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
		Shepherds	4	3	75,0	1	25,0	0	0,0	0	0,0	0	0,0	0,3	99,8	1,25
		Total	24	17	70,8	4	16,7	1	4,2	2	8,3	0	0,0	3,0	97,0	1,50
9	Forestry Organization organizes the meetings for taking our opinions.	Village Administration	3	1	33,3	1	33,3	1	33,3	0	0,0	0	0,0	0,8	99,3	2,00
		Local People	7	4	57,1	1	14,3	2	28,6	0	0,0	0	0,0	1,3	98,8	1,71
		Beekeepers	2	0	0,0	0	0,0	2	100,0	0	0,0	0	0,0	1,0	99,0	3,00
		NWFP Pickers	2	1	50,0	0	0,0	1	50,0	0	0,0	0	0,0	0,5	99,5	2,00
		Hunters	2	1	50,0	0	0,0	1	50,0	0	0,0	0	0,0	0,5	99,5	2,00
		Cutting Workers	4	4	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
		Shepherds	4	3	75,0	0	0,0	1	25,0	0	0,0	0	0,0	0,5	99,5	1,50
		Total	24	14	58,3	2	8,3	8	33,3	0	0,0	0	0,0	4,5	95,5	1,75
10	Forestry Organization applies the face-to-face meetings for taking our opinions.	Village Administration	3	2	66,7	0	0,0	1	33,3	0	0,0	0	0,0	0,5	99,5	1,67
		Local People	7	5	71,4	0	0,0	0	0,0	1	14,3	1	14,3	1,8	98,3	2,00
		Beekeepers	2	1	50,0	0	0,0	0	0,0	0	0,0	1	50,0	1,0	99,0	3,00
		NWFP Pickers	2	2	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
		Hunters	2	1	50,0	0	0,0	0	0,0	0	0,0	1	50,0	1,0	99,0	3,00
		Cutting Workers	4	3	75,0	0	0,0	1	25,0	0	0,0	0	0,0	0,5	99,5	1,50
		Shepherds	4	4	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
		Total	24	18	75,0	0	0,0	2	8,3	1	4,2	3	12,5	4,8	95,3	1,79
11	Frequency at which we meet the Forestry Organization is satisfactory.	Village Administration	3	1	33,3	1	33,3	1	33,3	0	0,0	0	0,0	0,8	99,3	2,00
		Local People	7	4	57,1	2	28,6	0	0,0	1	14,3	0	0,0	1,3	98,8	1,71
		Beekeepers	2	1	50,0	0	0,0	0	0,0	1	50,0	0	0,0	0,8	99,3	2,50
		NWFP Pickers	2	2	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
		Hunters	2	0	0,0	1	50,0	0	0,0	0	0,0	1	50,0	1,3	98,8	3,50
		Cutting Workers	4	0	0,0	1	25,0	3	75,0	0	0,0	0	0,0	1,8	98,3	2,75
		Shepherds	4	3	75,0	0	0,0	0	0,0	1	25,0	0	0,0	0,8	99,3	1,75
		Total	24	11	45,8	5	20,8	4	16,7	3	12,5	1	4,2	6,5	93,5	2,08
12	We have no conflict with other stakeholders.	Village Administration	3	0	0,0	1	33,3	1	33,3	1	33,3	0	0,0	1,5	98,5	3,00
		Local People	7	3	42,9	1	14,3	1	14,3	0	0,0	2	28,6	2,8	97,3	2,57
		Beekeepers	2	0	0,0	0	0,0	1	50,0	1	50,0	0	0,0	2,8	97,3	3,50

	NWFP Pickers	2	0	0,0	2	100,0	0	0,0	0	0,0	0	0,0	0,5	99,5	2,00
	Hunters	2	1	50,0	0	0,0	1	50,0	0	0,0	0	0,0	0,5	99,5	2,00
	Cutting Workers	4	1	25,0	1	25,0	0	0,0	0	0,0	2	50,0	2,3	97,8	3,25
	Shepherds	4	2	50,0	1	25,0	0	0,0	0	0,0	1	25,0	1,3	98,8	2,25
	Total	24	7	29,2	6	25,0	4	16,7	2	8,3	5	20,8	10,0	90,0	2,67
1 3 .	Village Administration	3	1	33,3	2	66,7	0	0,0	0	0,0	0	0,0	0,5	99,5	1,67
	Local People	7	3	42,9	2	28,6	1	14,3	0	0,0	1	14,3	2,0	98,0	2,14
	Beekeepers	2	0	0,0	0	0,0	0	0,0	2	100,0	0	0,0	1,5	98,5	4,00
	NWFP Pickers	2	1	50,0	0	0,0	1	50,0	0	0,0	0	0,0	0,5	99,5	2,00
	Hunters	2	1	50,0	0	0,0	0	0,0	0	0,0	1	50,0	1,0	99,0	3,00
	Cutting Workers	4	0	0,0	3	75,0	1	25,0	0	0,0	0	0,0	1,3	98,8	2,25
	Shepherds	4	3	75,0	0	0,0	0	0,0	0	0,0	1	25,0	1,0	99,0	2,00
	Total	24	9	37,5	7	29,2	3	12,5	2	8,3	3	12,5	7,8	92,3	2,29
1 4 .	Village Administration	3	2	66,7	0	0,0	0	0,0	1	33,3	0	0,0	0,8	99,3	2,00
	Local People	7	6	85,7	0	0,0	1	14,3	0	0,0	0	0,0	0,5	99,5	1,29
	Beekeepers	2	0	0,0	0	0,0	1	50,0	1	50,0	0	0,0	1,3	98,8	3,50
	NWFP Pickers	2	1	50,0	0	0,0	0	0,0	1	50,0	0	0,0	0,8	99,3	2,50
	Hunters	2	2	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
	Cutting Workers	4	4	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
	Shepherds	4	4	100,0	0	0,0	0	0,0	0	0,0	0	0,0	0,0	100,0	1,00
	Total	24	19	79,2	0	0,0	2	8,3	3	12,5	0	0,0	3,3	96,8	1,54

1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, and 5=Strongly Disagree.

Table 62: The Results of One-Way Analysis of Variance (ANOVA) for the Differences in Pre-Assessments of Participation Process for the Representatives of the Stakeholders' Committee/Forum in Düzlerçami Pilot Site

PRE-ASSESSMENTS OF PARTICIPATION PROCESS						
Statements on Pre-Assessments of Participation Process		Groups	Number	Mean <sup>a</sup>	Standard Deviation	F value P value
1. Forestry Organization makes always its objectives and activities known to us.	Village Administration	3	2,33	0,577	0,203	0,971
	Local People	7	1,86	1,464		
	Beekeepers	2	2,00	1,414		
	NWFP Pickers	2	1,50	0,707		
	Hunters	2	2,00	1,414		
	Cutting Workers	4	1,75	0,957		
	Shepherds	4	1,50	0,577		
	Total	24	1,83	1,007		
2. We know the plans and maps of forestry.	Village Administration	3	1,67	1,155	1,004	0,454
	Local People	7	2,00	1,291		
	Beekeepers	2	1,00	0,000		
	NWFP Pickers	2	1,50	0,707		
	Hunters	2	1,00	0,000		
	Cutting Workers	4	1,00	0,000		
	Shepherds	4	1,00	0,000		
	Total	24	1,42	0,881		
3. We are aware of the forestry activities conducted by other users of the territory, except for Forestry Organization.	Village Administration	3	1,00	0,000	1,652	0,194
	Local People	7	2,14	1,464		

	Beekeepers	2	3,50	0,707		
	NWFP Pickers	2	2,00	1,414		
	Hunters	2	2,00	1,414		
	Cutting Workers	4	2,25	0,957		
	Shepherds	4	1,00	0,000		
	Total	24	1,92	1,176		
4. Forestry Organization recognizes the legitimacy of our interests and rights.	Village Administration	3	2,00	1,000	0,714	0,643
	Local People	7	1,86	1,464		
	Beekeepers	2	3,50	0,707		
	NWFP Pickers	2	3,50	0,707		
	Hunters	2	2,00	1,414		
	Cutting Workers	4	2,75	1,258		
	Shepherds	4	2,00	2,000		
	Tamamı	24	2,33	1,373		

\*1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, and 5=Strongly Disagree.

Table 63: The Results of ANOVA of the Pre-Assessments of Participation Process by Several Demographic Characteristics of the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site

PRE-ASSESSMENTS OF PARTICIPATION PROCESS BY DEMOGRAPHIC CHARACTERISTICS						
Sociodemographic Characteristics	Sub-Characteristics	Number	Mean*	Standard Deviation	F value	P value
Education	Elementary School	19	1,95	1,250	12,740	0,000**
	Secondary Education	3	1,43	0,770		
	High School	1	1,21	0,579		
	Undergraduate	1	3,50	0,941		
Age	25-34	3	1,76	1,322	5,860	0,000**
	35-44	7	1,96	1,323		
	45-54	4	1,70	0,933		
	55-64	6	2,39	1,261		
	65 and More	4	1,48	0,972		
Residence Village	Yukarı Karaman	9	1,97	1,213	13,145	0,000**
	Akkoç	10	2,19	1,386		
	Çığlık	5	1,30	0,521		

\*1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, and 5=Strongly Disagree.

\*\*Significant at 0,01 level.

Table 64: Multiple Linear Regression Results for the Prediction of the Pre-Assessments of Participation Process of the Representatives of the Stakeholders' Committee/Forum in Düzlerçami Pilot Site by Their Sociodemographic Characteristics

PRE-ASSESSMENTS OF PARTICIPATION PROCESS BY STAKEHOLDERS' COMMITTEE/FORUM REPRESENTATIVES' SOCIODEMOGRAPHIC CHARACTERISTICS				
Model	Predictor Variables	Standardized Regression Coefficient ( $\beta$ )	P value	Coefficient of determination ( $R^2$ )
I	Education	0,032	0,578	0,027
	Age	-0,013	0,818	
	Residence Village	-0,151	0,010**	
II	Education	0,001	0,988	0,050
	Age	-0,097	0,115	
	Residence Village	-0,194	0,001**	
	Group	-0,179	0,005**	

\*\*Significant at 0,01 level

Table 65: Scores for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of the Stakeholders' Committee/Forum in Düzlerçami Pilot Site

Statements on Post-Assessments of Participation Process	Stakeholders' Groups	Number	1 Strongly Disagree		2. Disagree		3. Undecided		4. Agree		5. Strongly Agree		Responds With Binom Variables		Mean Score
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Agree	Disagree	
													Percentage	Percentage	
13. The final appeal decision was technically feasible	Village Administration	3	0	0,0	0	0,0	0	0,0	2	66,7	1	33,3	97,5	2,5	4,33
	Local People	7	0	0,0	0	0,0	1	14,3	2	28,6	4	57,1	94,0	6,0	4,43
	Beekeepers	2	0	0,0	0	0,0	0	0,0	2	100,0	0	0,0	98,5	1,5	4,00
	NWFP Pickers	2	0	0,0	0	0,0	1	50,0	0	0,0	1	50,0	98,5	1,5	4,00
	Hunters	2	0	0,0	0	0,0	0	0,0	0	0,0	2	100,0	98,0	2,0	5,00
	Cutting Workers	4	0	0,0	0	0,0	1	25,0	3	75,0	0	0,0	97,3	2,8	3,75
	Shepherds	4	0	0,0	0	0,0	0	0,0	0	0,0	4	100,0	96,0	4,0	5,00
	Total	24	0	0,0	0	0,0	3	12,5	9	37,5	12	50,0	81,8	18,3	4,38
14. Implementation of the final appeal decision was possible in a short time.	Village Administration	3	0	0,0	0	0,0	0	0,0	1	33,3	2	66,7	97,3	2,8	4,67
	Local People	7	0	0,0	0	0,0	1	14,3	0	0,0	6	85,7	93,5	6,5	4,71
	Beekeepers	2	0	0,0	0	0,0	1	50,0	1	50,0	0	0,0	98,8	1,3	3,50
	NWFP Pickers	2	0	0,0	0	0,0	0	0,0	1	50,0	1	50,0	98,3	1,8	4,50
	Hunters	2	0	0,0	0	0,0	0	0,0	0	0,0	2	100,0	98,0	2,0	5,00
	Cutting Workers	4	0	0,0	0	0,0	0	0,0	0	0,0	4	100,0	96,0	4,0	5,00
	Shepherds	4	0	0,0	0	0,0	0	0,0	0	0,0	4	100,0	96,0	4,0	5,00
	Total	24	0	0,0	0	0,0	2	8,3	3	12,5	19	79,2	77,8	22,3	4,71

\*1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, and 5=Strongly Agree.



Table 66: The Results of ANOVA for the Differences in Post-Assessments of Participation Process for the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site

PRE-ASSESSMENTS OF PARTICIPATION PROCESS						
Statements on Pre-Assessments of Participation Process	Groups	Number	Mean*	Standard Deviation	F value	P value
1. Participation process was not biased to the Forestry Organization's viewpoint.	Village Administration	3	3,67	0,577	0,818	0,571
	Local People	7	4,71	0,488		
	Beekeepers	2	4,00	1,414		
	NWFP Pickers	2	4,50	0,707		
	Hunters	2	4,00	1,414		
	Cutting Workers	4	4,25	0,957		
	Shepherds	4	4,50	0,577		
	Total	24	4,33	0,761		
2. Participation process was fair to me.	Village Administration	3	4,33	1,155	0,903	0,516
	Local People	7	4,29	0,951		
	Beekeepers	2	5,00	0,000		
	NWFP Pickers	2	4,50	0,707		
	Hunters	2	5,00	0,000		
	Cutting Workers	4	5,00	0,000		
	Shepherds	4	5,00	0,000		
	Total	24	4,67	0,702		
3. There was opportunity to negotiate my needs and expectations during participation process.	Village Administration	3	5,00	0,000	1,646	0,195
	Local People	7	4,43	0,787		
	Beekeepers	2	3,50	0,707		
	NWFP Pickers	2	4,00	1,414		
	Hunters	2	4,00	1,414		
	Cutting Workers	4	3,75	0,957		
	Shepherds	4	5,00	0,000		
	Total	24	4,33	0,868		
4. It was given the feelings that my opinions were important during participation process.	Village Administration	3	4,00	1,000	2,260	0,087
	Local People	7	4,71	0,488		
	Beekeepers	2	3,50	0,707		
	NWFP Pickers	2	3,50	0,707		
	Hunters	2	4,00	1,414		
	Cutting Workers	4	3,75	0,957		
	Shepherds	4	5,00	0,000		
	Tamamı	24	4,25	0,847		
5. Participation process was skilfully designed.	Village Administration	3	4,67	0,577	1,455	0,252
	Local People	7	4,43	0,787		
	Beekeepers	2	4,50	0,707		
	NWFP Pickers	2	3,50	0,707		
	Hunters	2	4,00	1,414		
	Cutting Workers	4	3,75	0,957		
	Shepherds	4	5,00	0,000		
	Total	24	4,33	0,816		
6. The monetary costs of the participation process were suiAppendix Table.	Village Administration	3	4,67	0,577	0,663	0,680
	Local People	7	4,29	0,951		
	Beekeepers	2	4,00	1,414		
	NWFP Pickers	2	4,00	1,414		
	Hunters	2	4,50	0,707		
	Cutting Workers	4	4,75	0,500		
	Shepherds	4	5,00	0,000		
	Total	24	4,50	0,780		
7. Participation process was efficient in terms of time, not boring and long.	Village Administration	3	3,33	0,577	5,283	0,003**
	Local People	7	4,43	0,535		
	Beekeepers	2	3,50	0,707		
	NWFP Pickers	2	4,50	0,707		
	Hunters	2	5,00	0,000		

	Cutting Workers	4	4,75	0,500		
	Shepherds	4	5,00	0,000		
	Total	24	4,42	0,717		
8. The final appeal decision seemed fair to me, and it was not biased.	Village Administration	3	5,00	0,000	0,650	0,690
	Local People	7	4,43	0,787		
	Beekeepers	2	4,50	0,707		
	NWFP Pickers	2	4,50	0,707		
	Hunters	2	4,50	0,707		
	Cutting Workers	4	5,00	0,000		
	Shepherds	4	4,75	0,500		
	Tamamı	24	4,67	0,565		
9. I felt my opinions and demands influenced the final appeal decision.	Village Administration	3	4,00	1,000	1,192	0,357
	Local People	7	4,29	0,951		
	Beekeepers	2	3,00	0,000		
	NWFP Pickers	2	4,00	1,414		
	Hunters	2	4,00	1,414		
	Cutting Workers	4	5,00	0,000		
	Shepherds	4	4,50	1,000		
	Total	24	4,25	0,944		
10. The public opinions and demands were sufficiently served by the final appeal decision.	Village Administration	3	4,33	1,155	0,623	0,710
	Local People	7	4,86	0,378		
	Beekeepers	2	5,00	0,000		
	NWFP Pickers	2	5,00	0,000		
	Hunters	2	5,00	0,000		
	Cutting Workers	4	4,50	1,000		
	Shepherds	4	5,00	0,000		
	Total	24	4,79	0,588		
11. The final appeal decision was environmentally sound.	Village Administration	3	4,00	1,000	3,246	0,026*
	Local People	7	4,57	0,535		
	Beekeepers	2	4,50	0,707		
	NWFP Pickers	2	5,00	0,000		
	Hunters	2	4,50	0,707		
	Cutting Workers	4	3,25	0,500		
	Shepherds	4	4,75	0,500		
	Total	24	4,33	0,761		
12. Implementation of the final appeal decision can be done in a financially sound manner.	Village Administration	3	3,67	0,577	1,674	0,188
	Local People	7	4,57	0,787		
	Beekeepers	2	3,50	0,707		
	NWFP Pickers	2	4,00	0,000		
	Hunters	2	4,00	1,414		
	Cutting Workers	4	4,75	0,500		
	Shepherds	4	4,75	0,500		
	Tamamı	24	4,33	0,761		
13. The final appeal decision was technically feasible.	Village Administration	3	4,33	0,577	1,786	0,162
	Local People	7	4,43	0,787		
	Beekeepers	2	4,00	0,000		
	NWFP Pickers	2	4,00	1,414		
	Hunters	2	5,00	0,000		
	Cutting Workers	4	3,75	0,500		
	Shepherds	4	5,00	0,000		
	Total	24	4,38	0,711		
14. Implementation of the final appeal decision was possible in a short time.	Village Administration	3	4,67	0,577	2,148	0,101
	Local People	7	4,71	0,756		
	Beekeepers	2	3,50	0,707		
	NWFP Pickers	2	4,50	0,707		
	Hunters	2	5,00	0,000		
	Cutting Workers	4	5,00	0,000		
	Shepherds	4	5,00	0,000		
	Total	24	4,71	0,624		

1- 14.	Entire Scale Items.	Village Administration	3	4,26	0,798	6,006	.000**
		Local People	7	4,51	0,707		
		Beekeepers	2	4,00	0,816		
		NWFP Pickers	2	4,25	0,799		
		Hunters	2	4,46	0,838		
		Cutting Workers	4	4,38	0,822		
		Shepherds	4	4,88	0,384		
		Total	24	4,45	0,759		

\*1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, and 5=Strongly Disagree.

\*\*Significant at 0,01 level.

Table 67: The Results of ANOVA of the Post-Assessments of Participation Process by Several Demographic Characteristics of the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site

POST-ASSESSMENTS OF PARTICIPATION PROCESS BY DEMOGRAPHIC CHARACTERISTICS						
Sociodemographic Characteristics	Sub-Characteristics	Number	Mean*	Standard Deviation	F value	P value
Education	Elementary School	19	4,44	0,766	5,398	0,001**
	Secondary Education	3	4,62	0,661		
	High School	1	4,79	0,579		
	Undergraduate	1	3,79	0,699		
Age	25-34	3	4,67	0,687	6,649	0,000**
	35-44	7	4,51	0,736		
	45-54	4	4,41	0,757		
	55-64	6	4,13	0,818		
	65 and More	4	4,70	0,601		
Residence Village	Yukarı Karaman	9	4,37	0,816	5,002	0,007**
	Akkoç	10	4,40	0,785		
	Çiğlık	5	4,70	0,521		

\*1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, and 5=Strongly Disagree.

\*\*Significant at 0,01 level.

Table 68: Multiple Linear Regression Results for the Prediction of the Post-Assessments of Participation Process of the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site by Their Sociodemographic Characteristics

POST-ASSESSMENTS OF PARTICIPATION PROCESS BY STAKEHOLDERS' COMMITTEE/FORUM REPRESENTATIVES' SOCIODEMOGRAPHIC CHARACTERISTICS				
Model	Predictor Variables	Standardized Regression Coefficient ( $\beta$ )	P value	Coefficient of determination ( $R^2$ )
I	Education	-0,009	0,879	0,025
	Age	-0,059	0,281	
	Residence Village	0,141	0,016*	
II	Education	0,028	0,631	0,058
	Age	0,040	0,510	
	Residence Village	0,191	0,001**	
	Group	0,209	0,001**	

\*Significant at 0,05 level,

\*\*Significant at 0,01 level.

Table 69: Matrix of Correlation Coefficients for the Relationship between the Pre-Assessments of Participation Process and the Post-Assessments of Participation Process within FFEM Initiative of Stakeholders' Committee/Forum Members in Düzlerçami Pilot Site

THE RELATIONSHIP BETWEEN THE PRE-ASSESSMENTS OF PARTICIPATION PROCESS AND THE POST-ASSESSMENTS OF PARTICIPATION PROCESS WITHIN FFEM INITIATIVE			
Variables		Pre-Assessments of Participation Process	Post-Assessments of Participation Process within FFEM Initiative
Pre-Assessments of Participation Process	Pearson Correlation	1	
	P value	-	
	Number	336	
Post-Assessments of Participation Process within FFEM Initiative	Pearson Correlation	-0,591	1
	P value	0,000**	-
	Number	336	336

\*\*Correlation is significant at 0,01 level

Table 70: Correlation Analysis Results for the Relationship between Education and the Pre-Assessments of Participation Process and the Post-Assessments of Participation Process within FFEM Initiative of Stakeholders' Committee/Forum Members in Düzlerçami Pilot Site

THE RELATIONSHIP BETWEEN EDUCATION AND THE PRE-ASSESSMENTS OF PARTICIPATION PROCESS AND THE POST-ASSESSMENTS OF PARTICIPATION PROCESS WITHIN FFEM INITIATIVE				
Variables	Group	Number	Pearson Correlation (r)	P value
Pre-Assessments of Participation Process	Village Administration	3	-	-
	Local People	7	-0,311	0,002**
	Beekeepers	2	0,505	0,006**
	NWFP Pickers	2	-	-
	Hunters	2	-	-
	Cutting Workers	4	-0,287	0,032*
	Shepherds	4	-	-
	Total	24	0,085	0,122
Post-Assessments of Participation Process within FFEM Initiative	Village Administration	3	-	-
	Local People	7	0,211	0,037*
	Beekeepers	2	-0,267	0,169
	NWFP Pickers	2	-	-
	Hunters	2	-	-
	Cutting Workers	4	0,241	0,073
	Shepherds	4	-	-
	Total	24	-0,060	0,275

\*\*Correlation is significant at 0,05 level,

\*\*Correlation is significant at 0,01 level

Table 71: Correlation Analysis Results for the Relationship between Age and the Pre-Assessments of Participation Process and the Post-Assessments of Participation Process within FFEM Initiative of Stakeholders' Committee/Forum Members in Düzlerçamı Pilot Site

THE RELATIONSHIP BETWEEN AGE AND THE PRE-ASSESSMENTS OF PARTICIPATION PROCESS AND THE POST-ASSESSMENTS OF PARTICIPATION PROCESS WITHIN FFEM INITIATIVE				
Variables	Group	Number	Pearson Correlation (r)	P value
Pre-Assessments of Participation Process	Village Administration	3	0,189	0,231
	Local People	7	-0,212	0,036*
	Beekeepers	2	-0,505	0,006**
	NWFP Pickers	2	0,479	0,010**
	Hunters	2	-0,545	0,003**
	Cutting Workers	4	0,224	0,097
	Shepherds	4	-0,417	0,001**
	Total	24	0,000	0,997
Post-Assessments of Participation Process within FFEM Initiative	Village Administration	3	-0,107	0,501
	Local People	7	0,015	0,885
	Beekeepers	2	0,267	0,169
	NWFP Pickers	2	-0,319	0,099
	Hunters	2	0,651	0,000**
	Cutting Workers	4	-0,215	0,111
	Shepherds	4	0,133	0,330
	Total	24	-0,070	0,201

\*\*Correlation is significant at 0,05 level.

\*\*Correlation is significant at 0,01 level.

Table 72: Correlation Analysis Results for the Relationship between Residence Village and the Pre-Assessments of Participation Process and the Post-Assessments of Participation Process within FFEM Initiative of Stakeholders' Committee/Forum Members in Düzlerçamı Pilot Site

THE RELATIONSHIP BETWEEN RESIDENCE VILLAGE AND THE PRE-ASSESSMENTS OF PARTICIPATION PROCESS AND THE POST-ASSESSMENTS OF PARTICIPATION PROCESS WITHIN FFEM INITIATIVE				
Variables	Group	Number	Pearson Correlation (r)	P value
Pre-Assessments of Participation Process	Village Administration	3	-0,208	0,186
	Local People	7	-0,071	0,486
	Beekeepers	2	-	-
	NWFP Pickers	2	-	-
	Hunters	2	-	-
	Cutting Workers	4	-	-
	Shepherds	4	-0,200	0,139
	Total	24	-0,161	0,003**
Post-Assessments of Participation Process within FFEM Initiative	Village Administration	3	0,111	0,484
	Local People	7	-0,003	0,975
	Beekeepers	2	-	-
	NWFP Pickers	2	-	-
	Hunters	2	-	-
	Cutting Workers	4	-	-
	Shepherds	4	0,099	0,468
	Total	24	0,148	0,006**

\*\*Correlation is significant at 0,01 level.

## ANNEX 2: FIGURES

Figure 7: Maps indicating land cover and distributions of forest trees for the Düzlerçamı pilot site

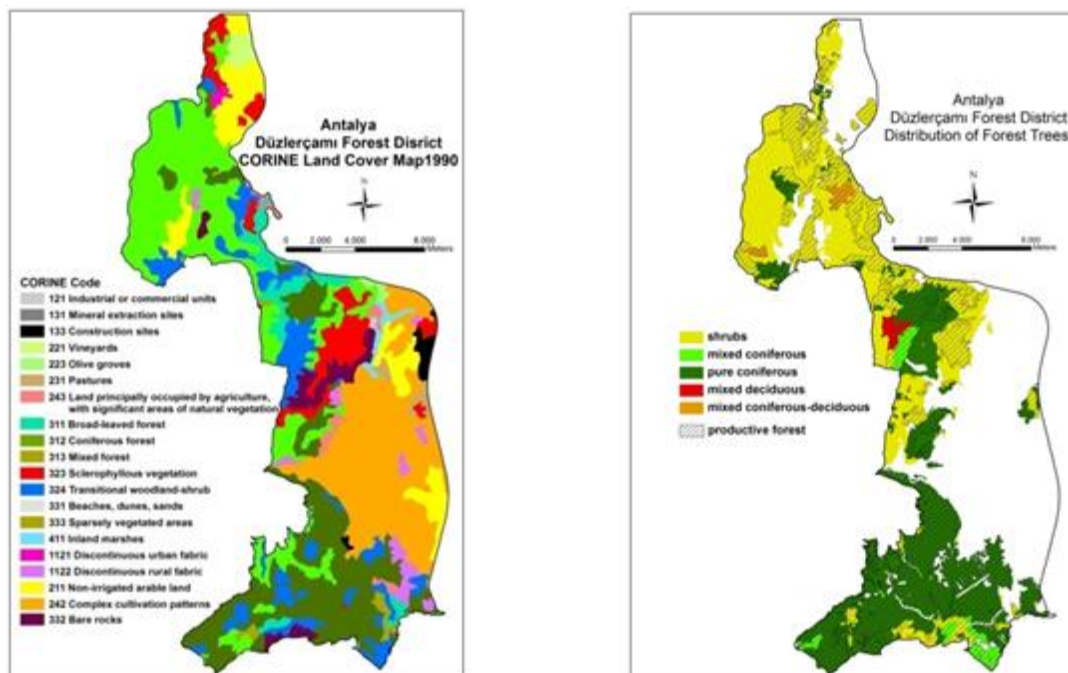




Figure 8: Organizational Structure of Ministry of Forestry and Water Affairs

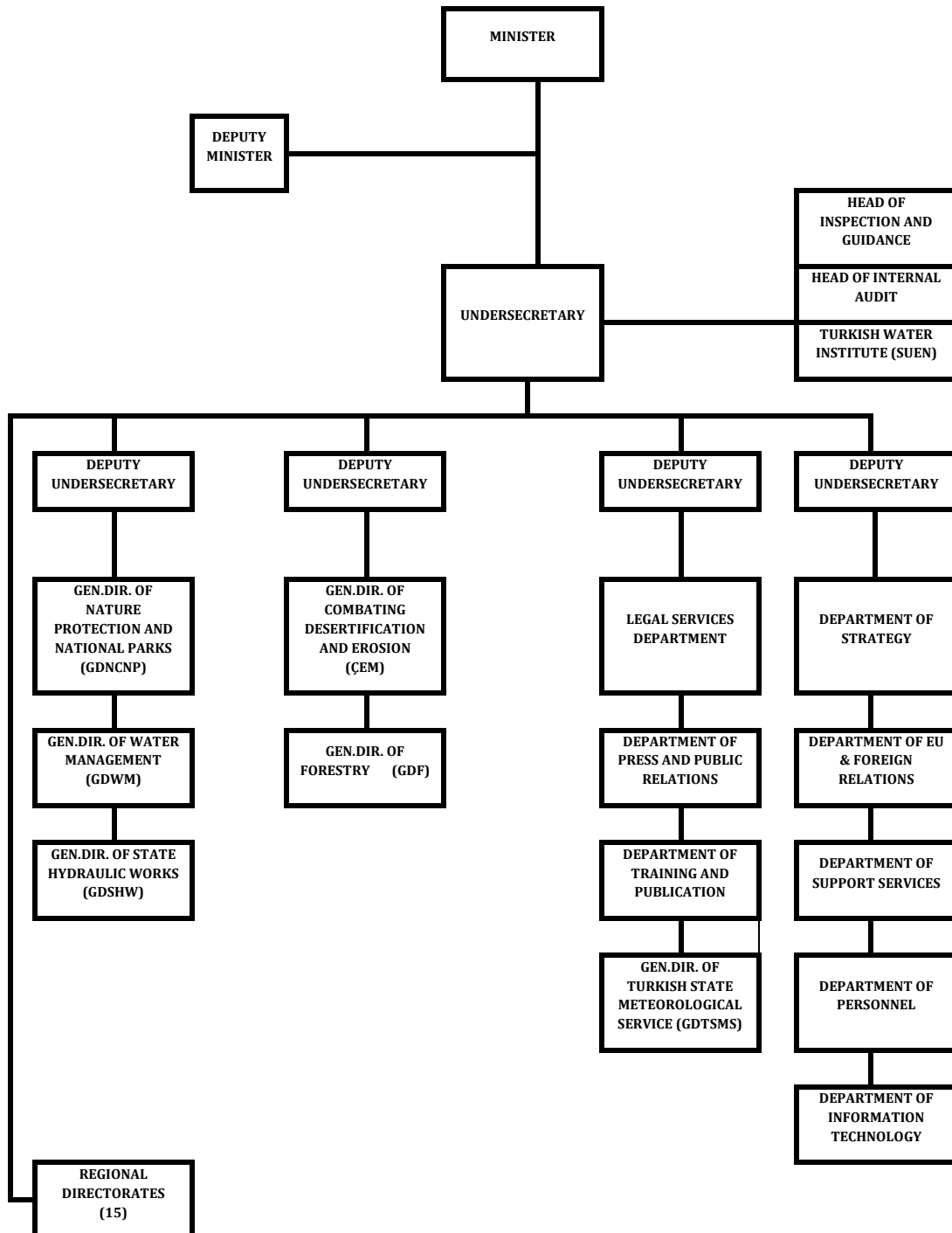


Figure 9: Organizational Structure of General Directorate of Forestry

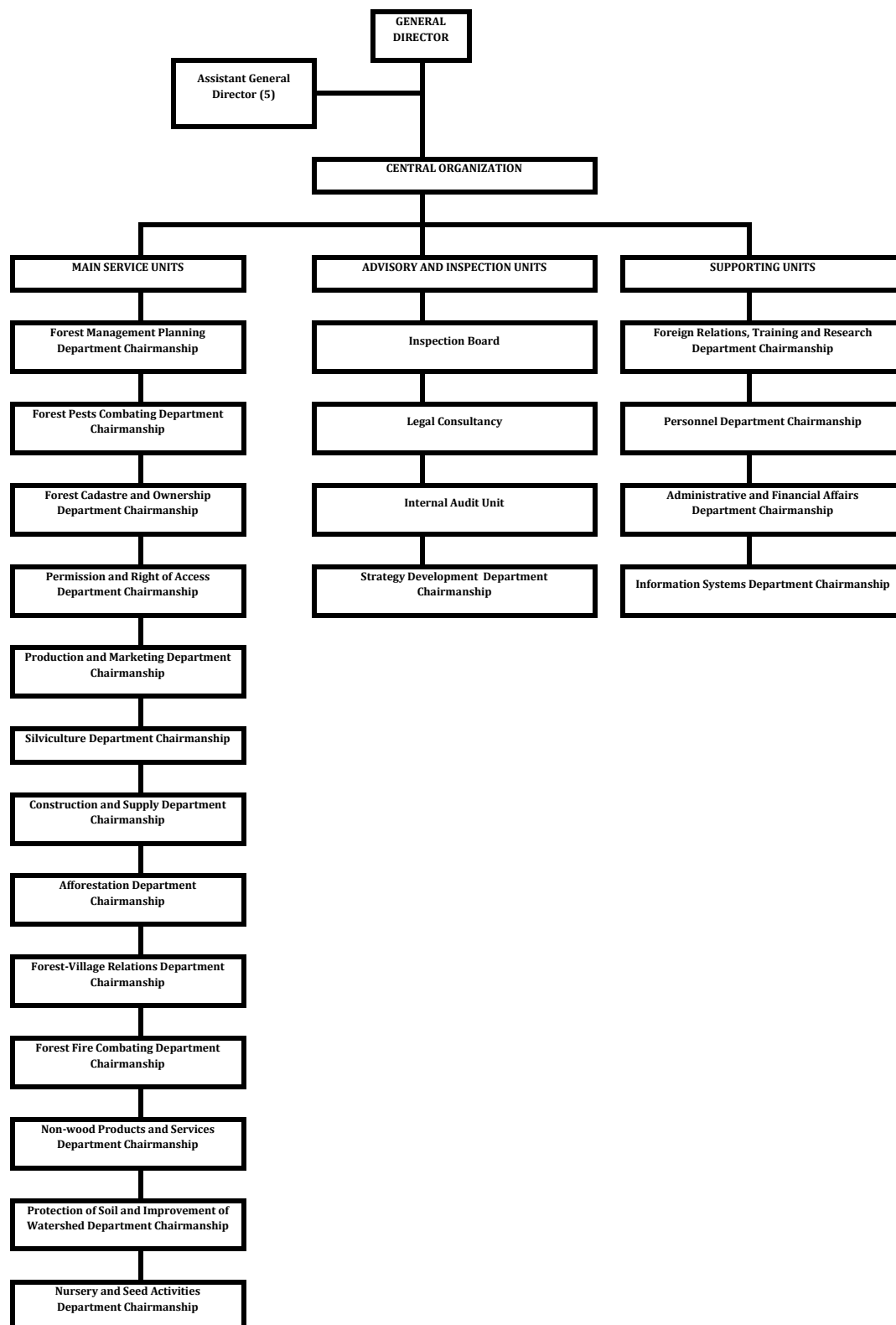


Figure 10: Rural Organization of General Directorate of Forestry

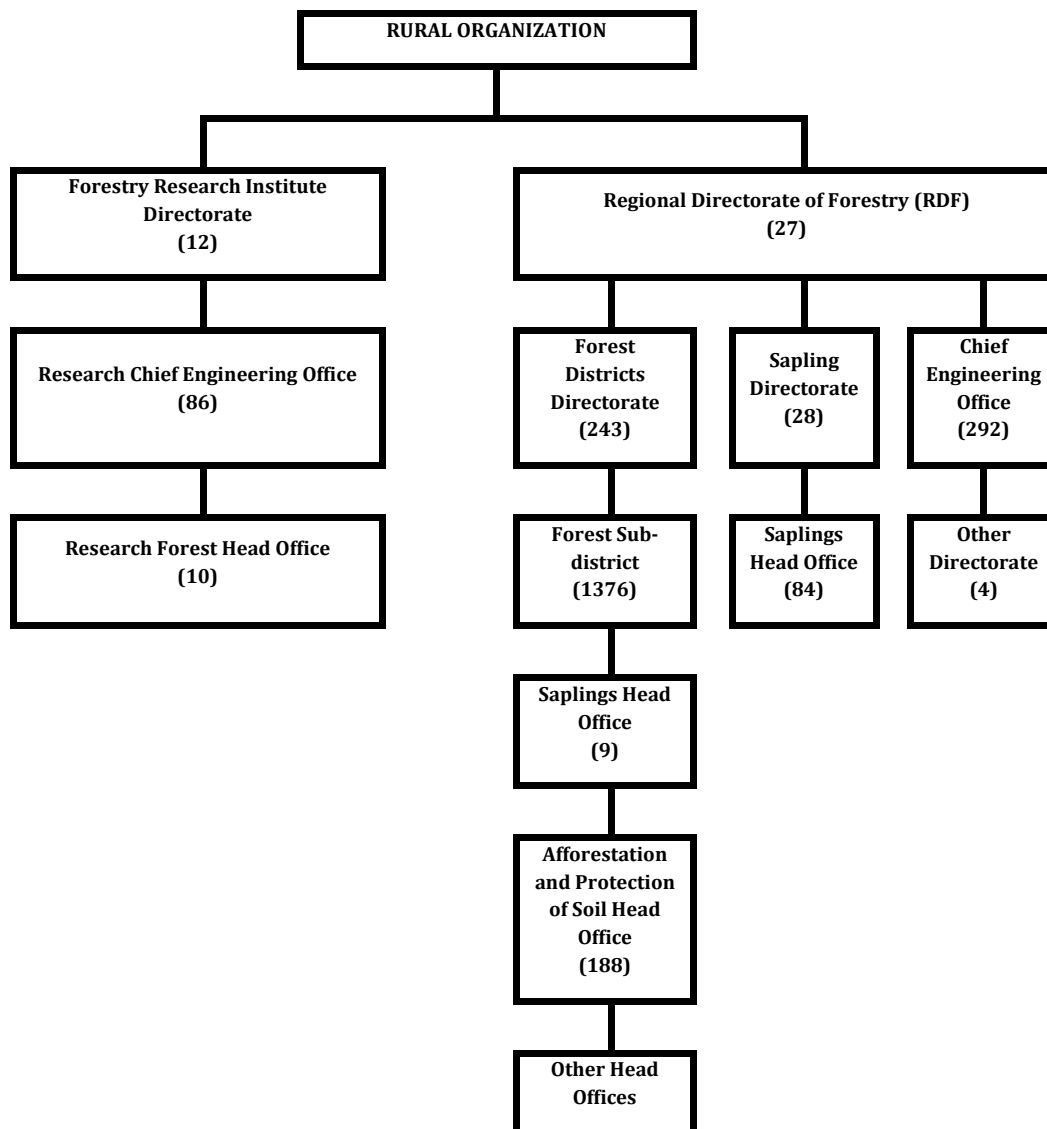


Figure 11: The National Inter-Components Meeting or Workshop at 27-28 May 2014, and Düzlerçamı Pilot Site Field Trip with the Participation of the Representatives of the Different Units of the Forestry Organization and FFEM Project Team in Turkey



Figure 12: General Meeting or Workshop of the FFEM Project with the Participation of Different Stakeholders from Villages and Towns in Düzlerçamı Pilot Site at 25 December 2014



Figure 13: Graphical Representation of SWOT Factors and Their Corresponding the Priorities as determined through R'WOT Method with "All Participants".



Factors Further Away from the Origin are Relatively More Important than Factors Closer to the Origin

Figure 14: AHP Decision Hierarchy and Decision Making Model for Phase 3 “Determining the Priorities of the Forest Values” of the Participatory Approach Methodology Used in FFEM Project in Düzlerçamı Pilot Site.

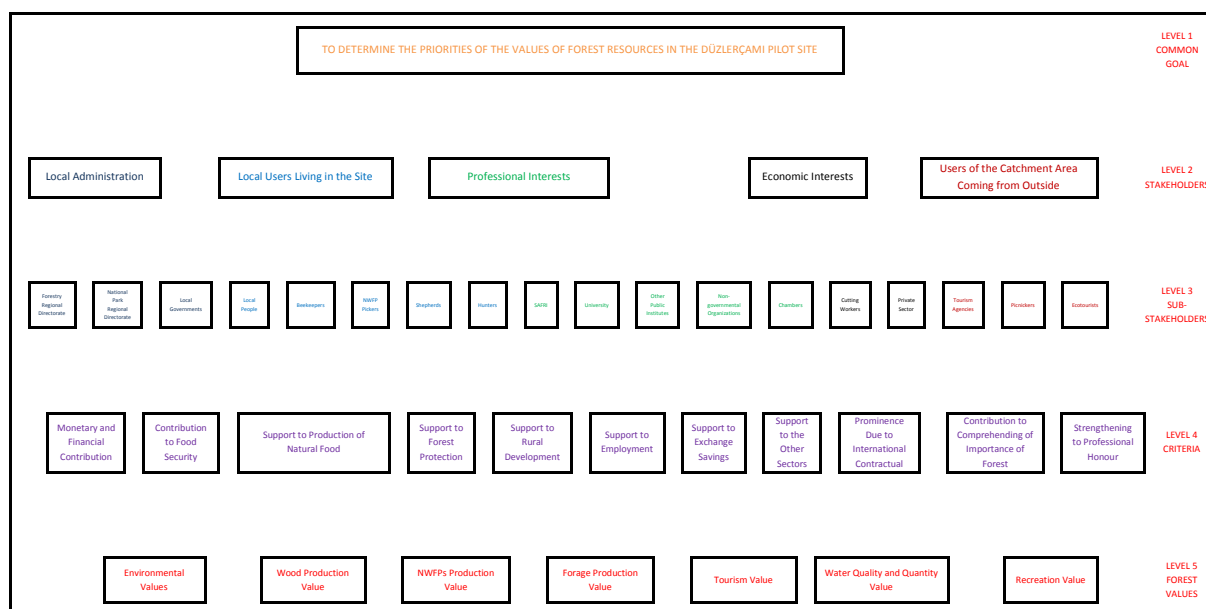


Figure 15: The Importance Values and Ranking Orders of the Stakeholders in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique

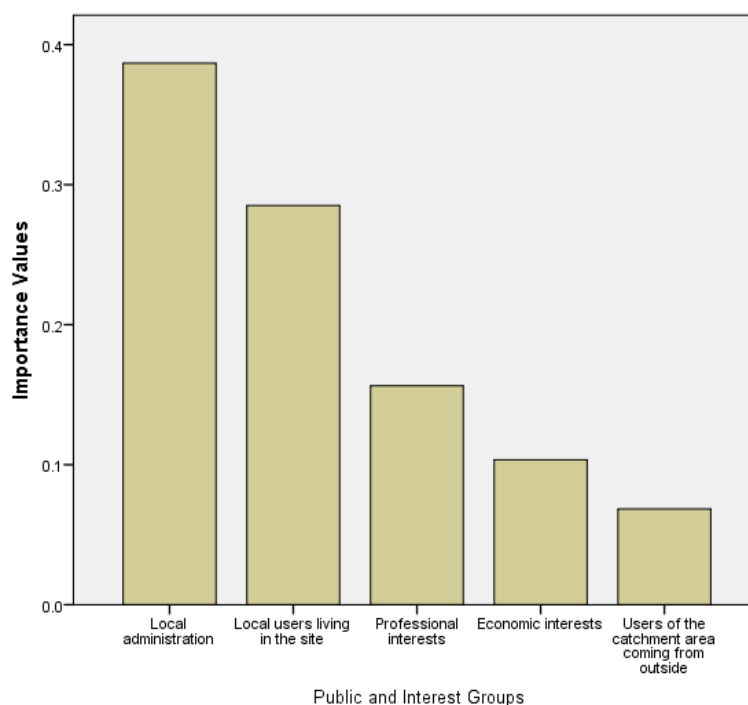




Figure 16: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “Local Administration” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique

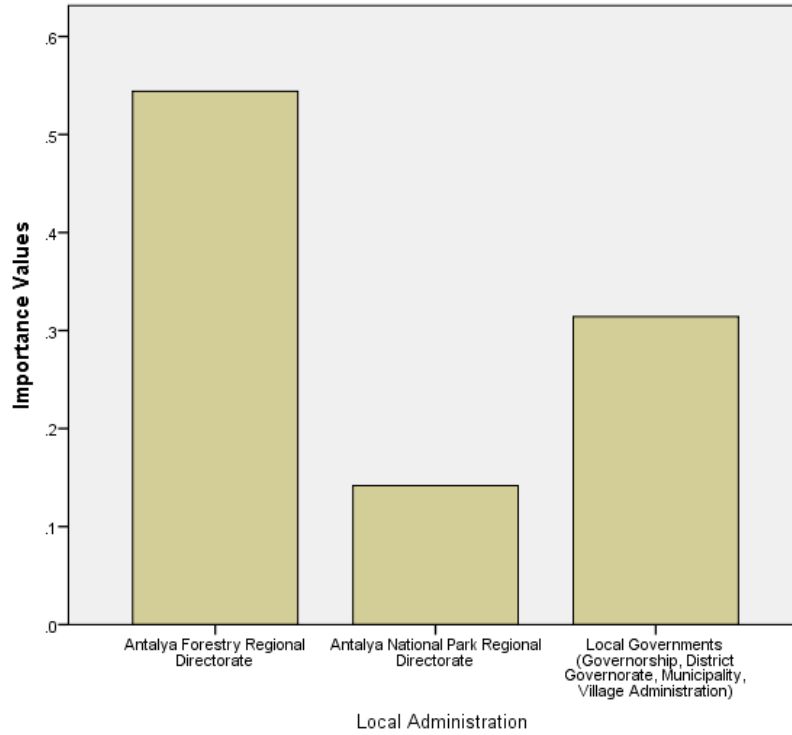


Figure 17: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “Local Users Living in the Site” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique

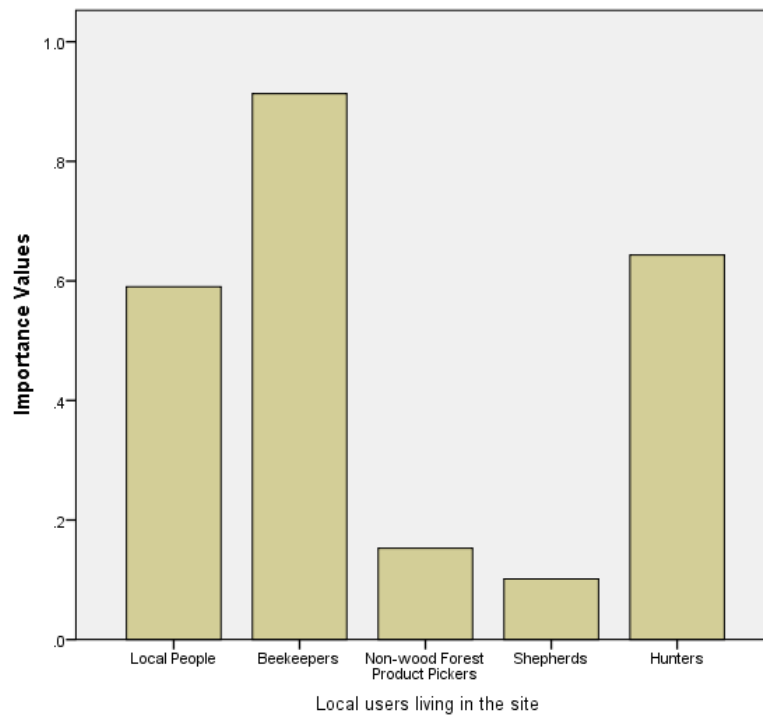


Figure 18: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “*Professional Interests*” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique

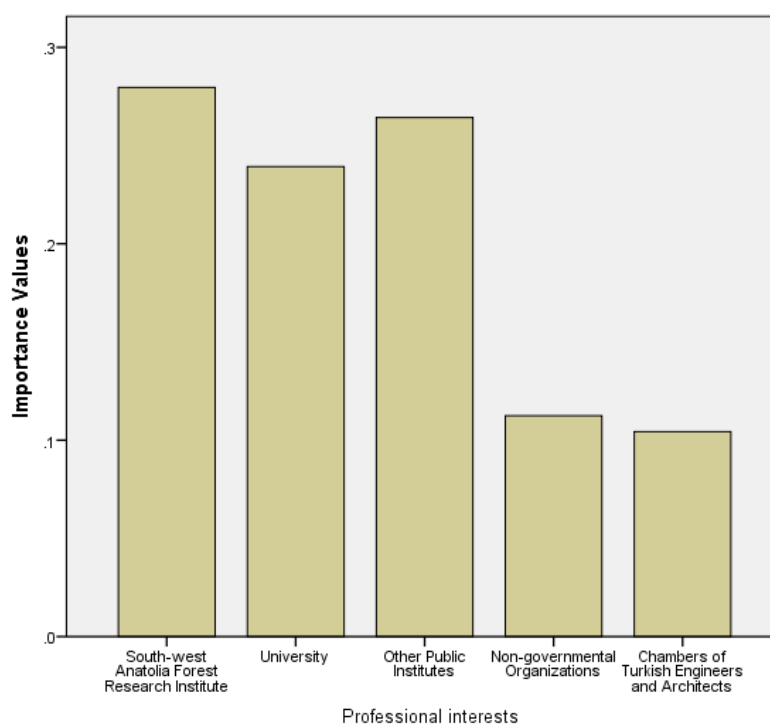


Figure 19: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “*Economic Interests*” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique

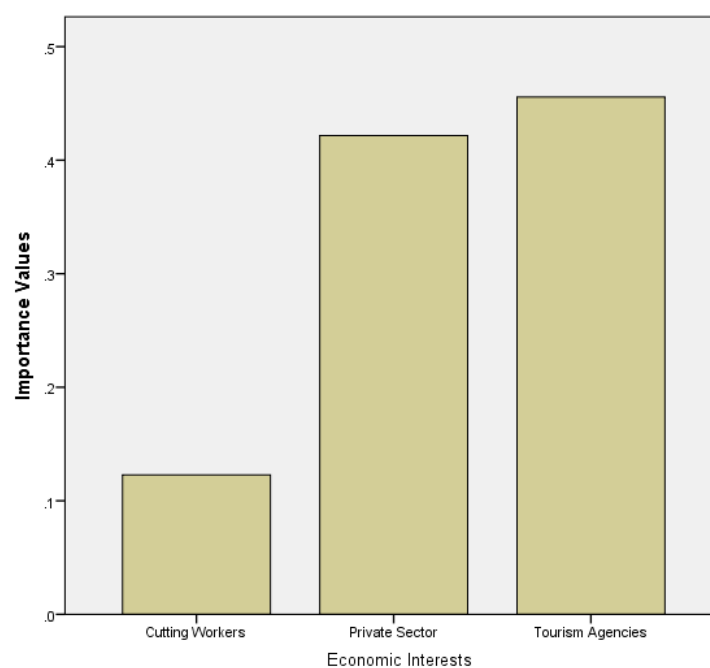


Figure 20: The Importance Values and Ranking Orders of Sub-Stakeholders Belonging to Stakeholder “Users of the Catchment Area Coming from Outside” in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of the AHP Technique

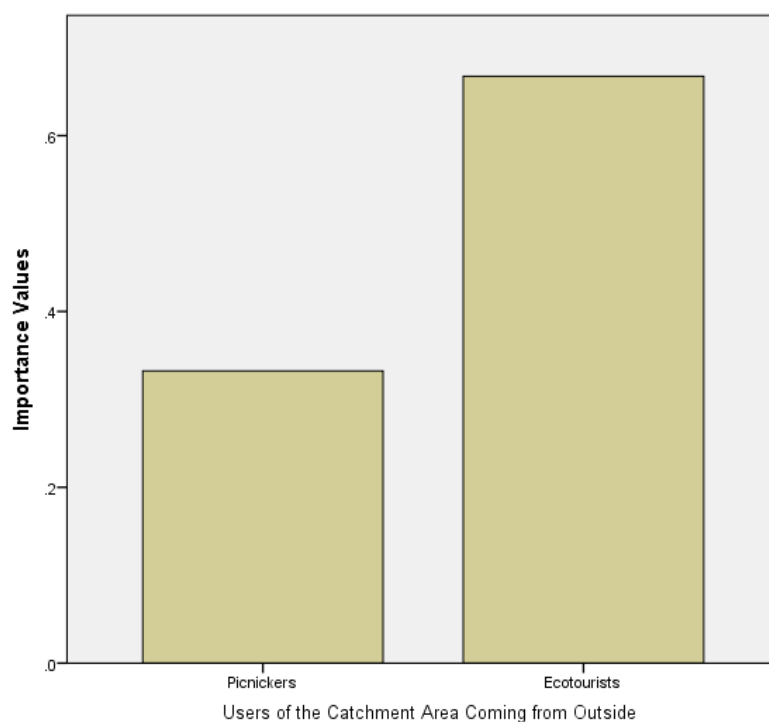


Figure 21: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Steering Committee According to Pair wise Comparison of AHP Technique

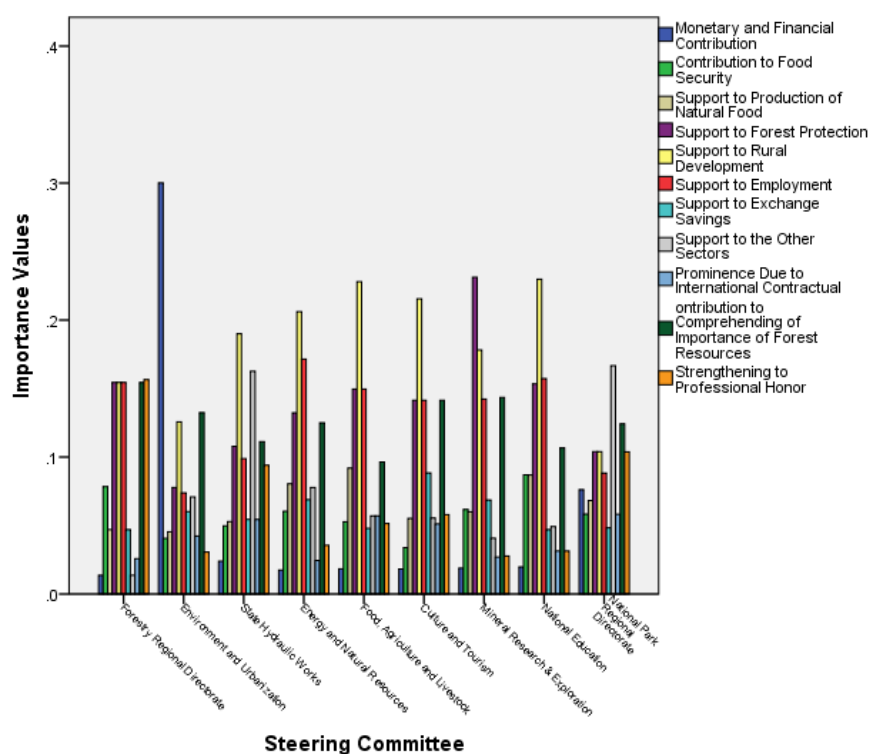


Figure 22: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories "Local Administration" According to Pair wise Comparison of AHP Technique

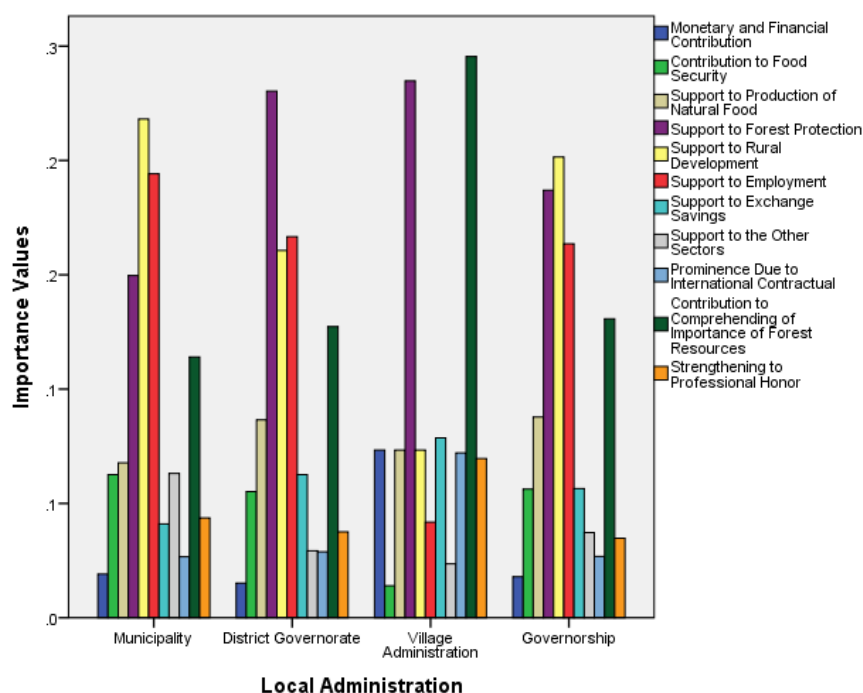


Figure 23: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories "Local Users Living in the Site" According to Pair wise Comparison of AHP Technique

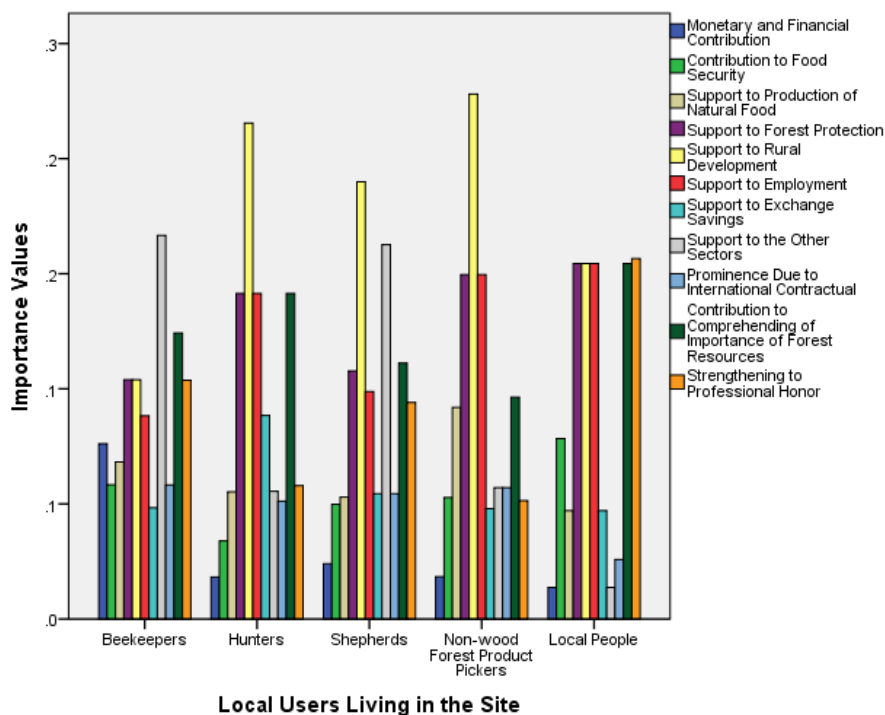


Figure 24: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories "Professional Interests" According to Pair wise Comparison of AHP Technique

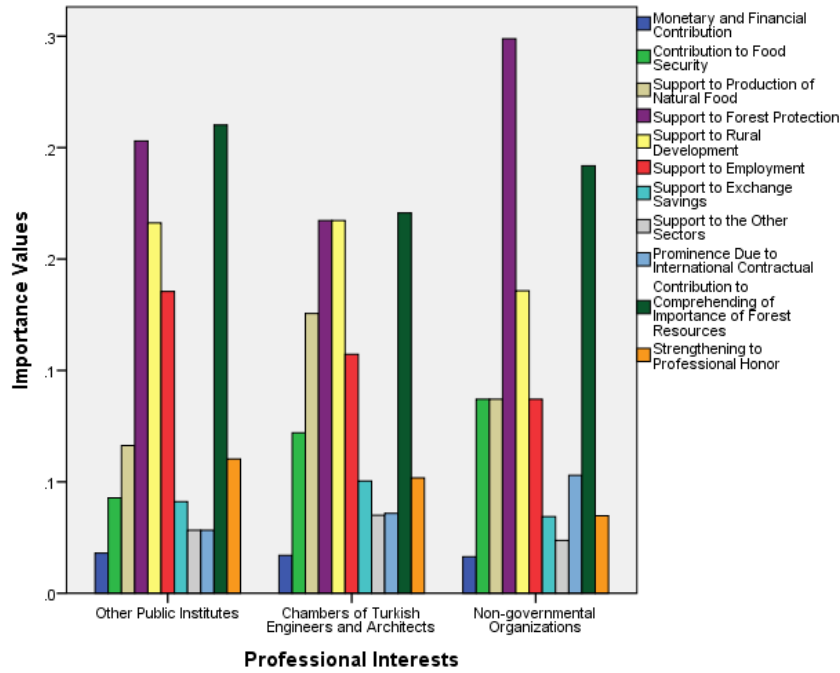


Figure 25: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories "Economic Interests" According to Pair wise Comparison of AHP Technique

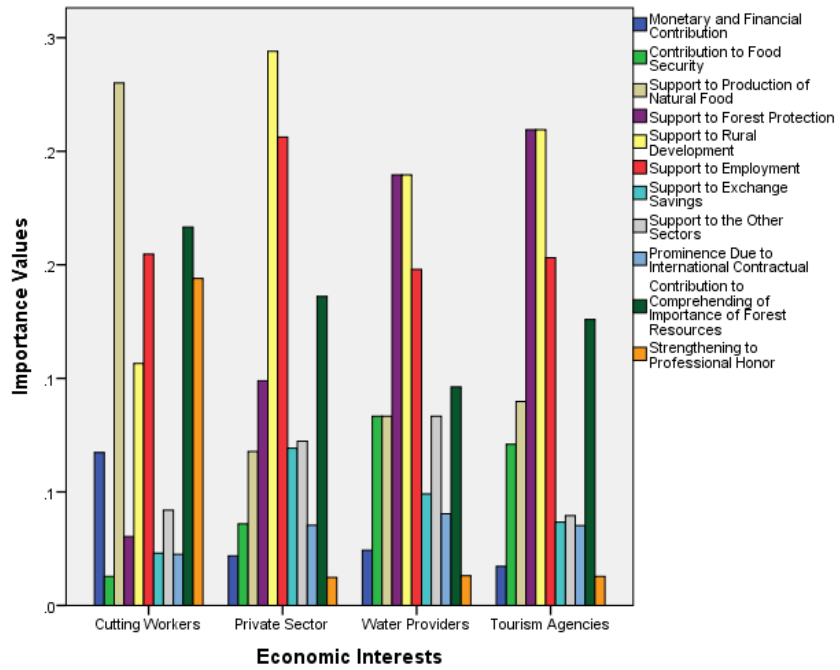


Figure 26: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Stakeholders' Categories "Users of the Catchment Area Coming from Outside" According to Pair wise Comparison of AHP Technique

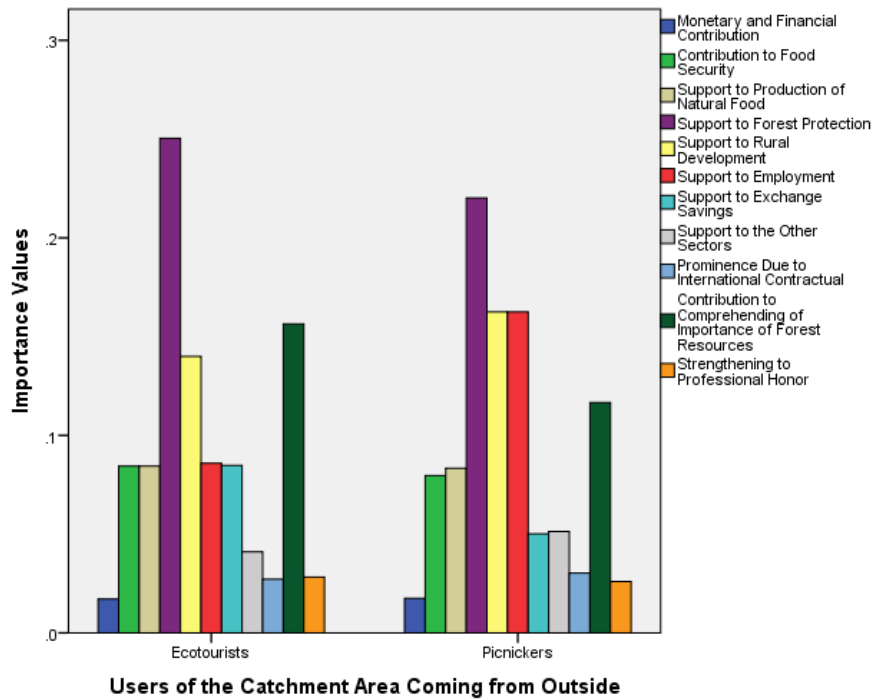


Figure 27: The Importance Values and Ranking Orders of Decision Criteria in the Opinion of Representatives of the Scientific Committee According to Pair wise Comparison of AHP Technique

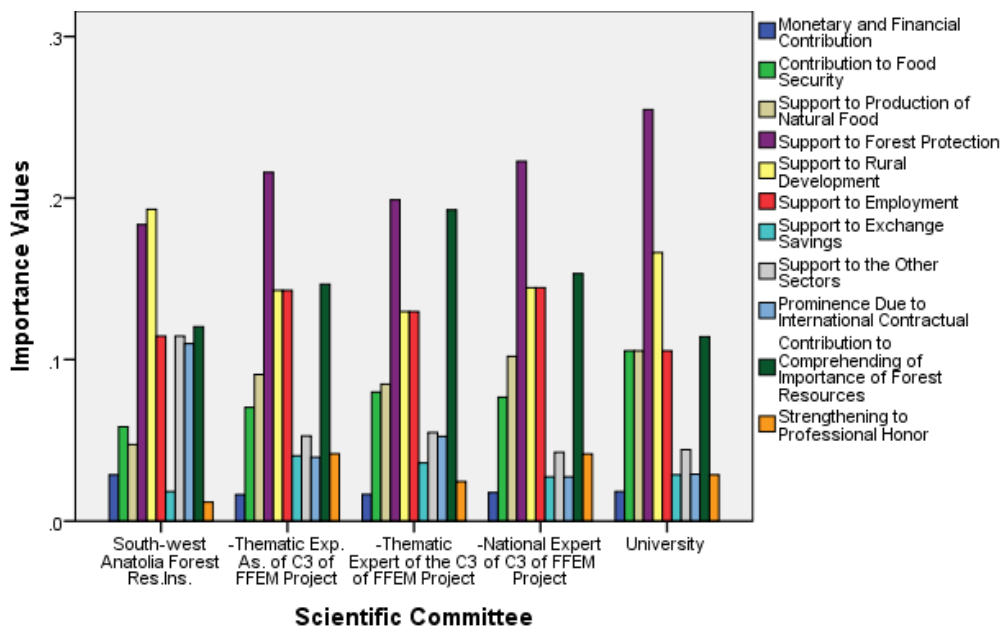




Figure 28: The Mean Importance Values and Ranking Orders of Decision Alternatives with Respect to Each Criterion according to Pair wise Comparison of AHP Technique, Determined by Sector Experts

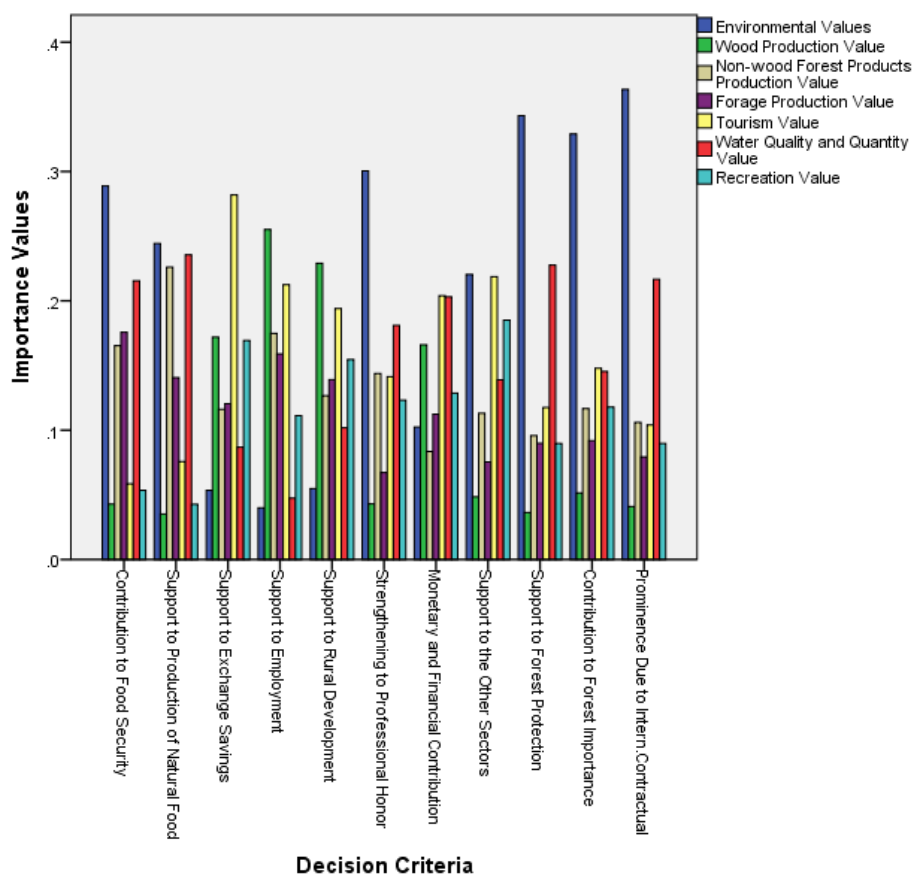


Figure 29: Importance Values and Ranking Orders of the Forest Values in Düzlerçamı Pilot Site, Obtained with the Aid of the AHP Technique

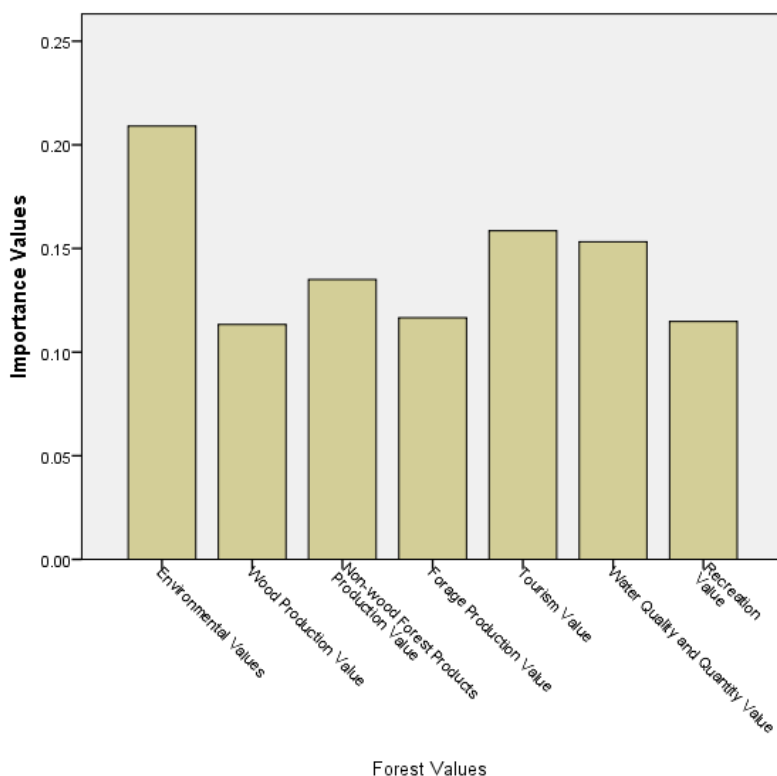


Figure 30: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, the Weights of all the Stakeholders are Assumed to be Equal, i.e. ( $1/5 = 0,200$ )

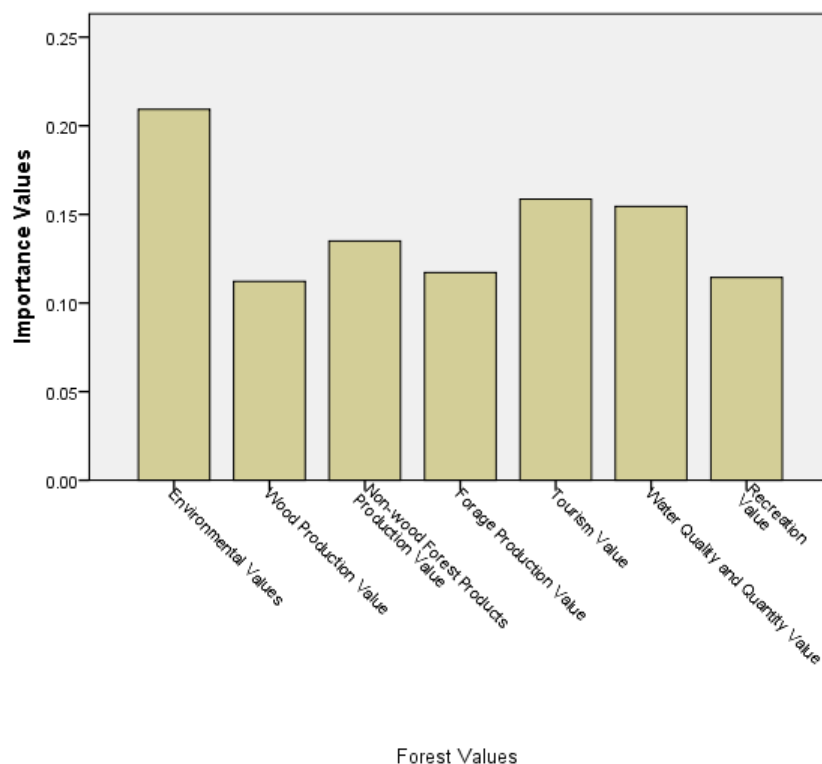


Figure 31: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Stakeholders is assumed to Be 1,000, the Weights of the others are assumed to be 0,000

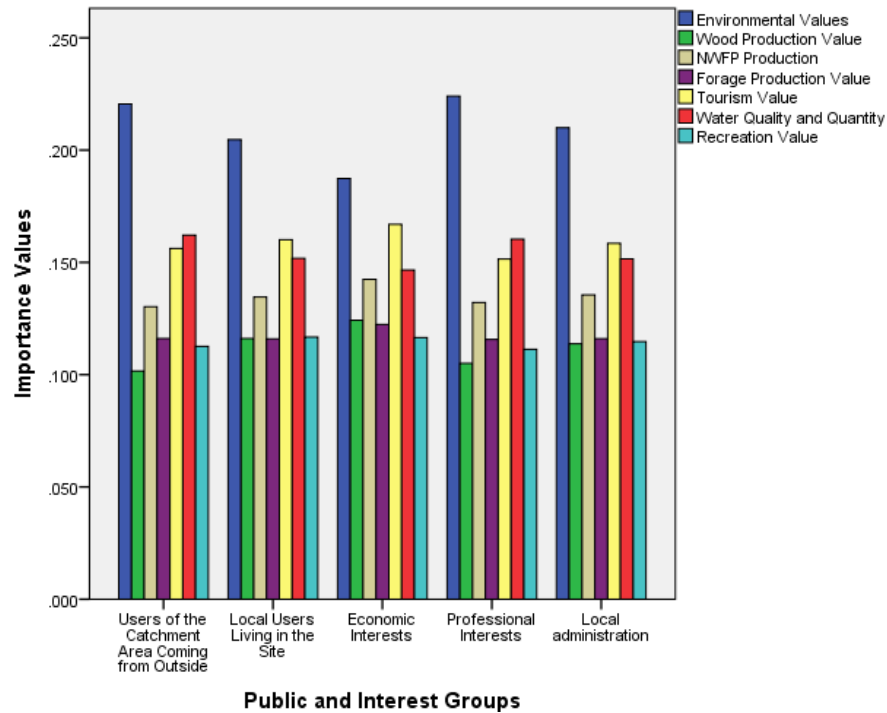


Figure 32: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Stakeholders is assumed to Be 1,000, the Weights of the others are assumed to be equal, i.e. ( $1/4 = 0,250$ )

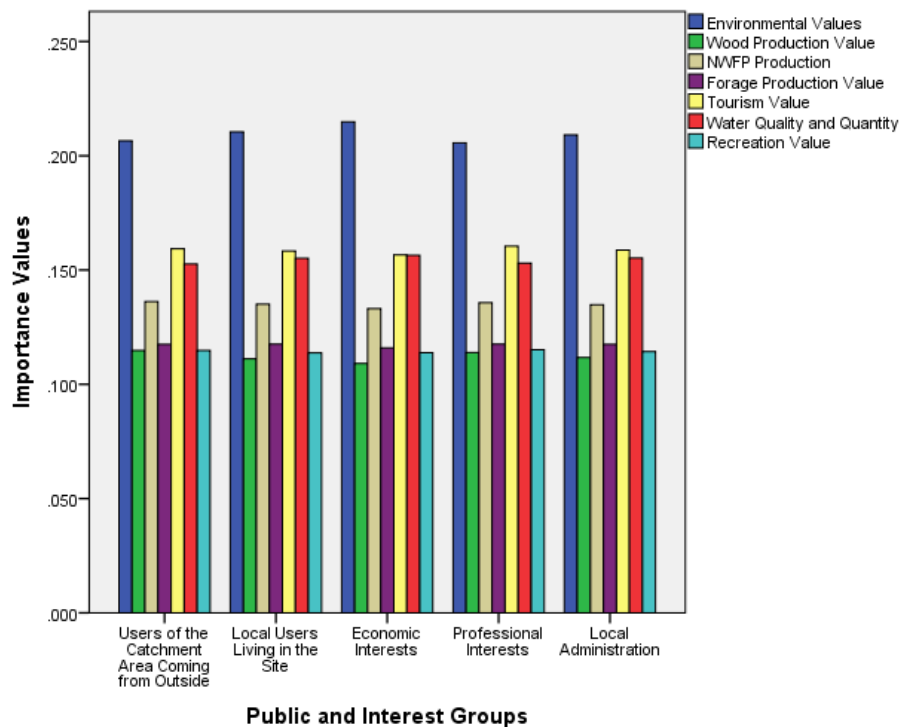


Figure 33: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Local Administration on the Importance Values and Ranking Orders of Decision Alternatives

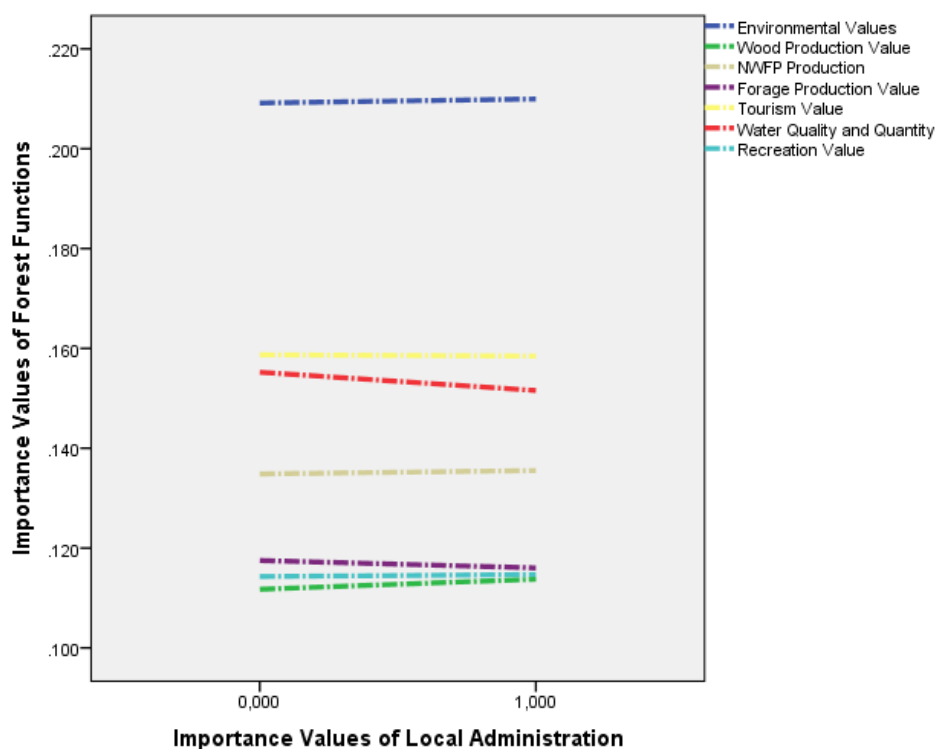


Figure 34: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Local Users Living in the Site on the Importance Values and Ranking Orders of Decision Alternatives

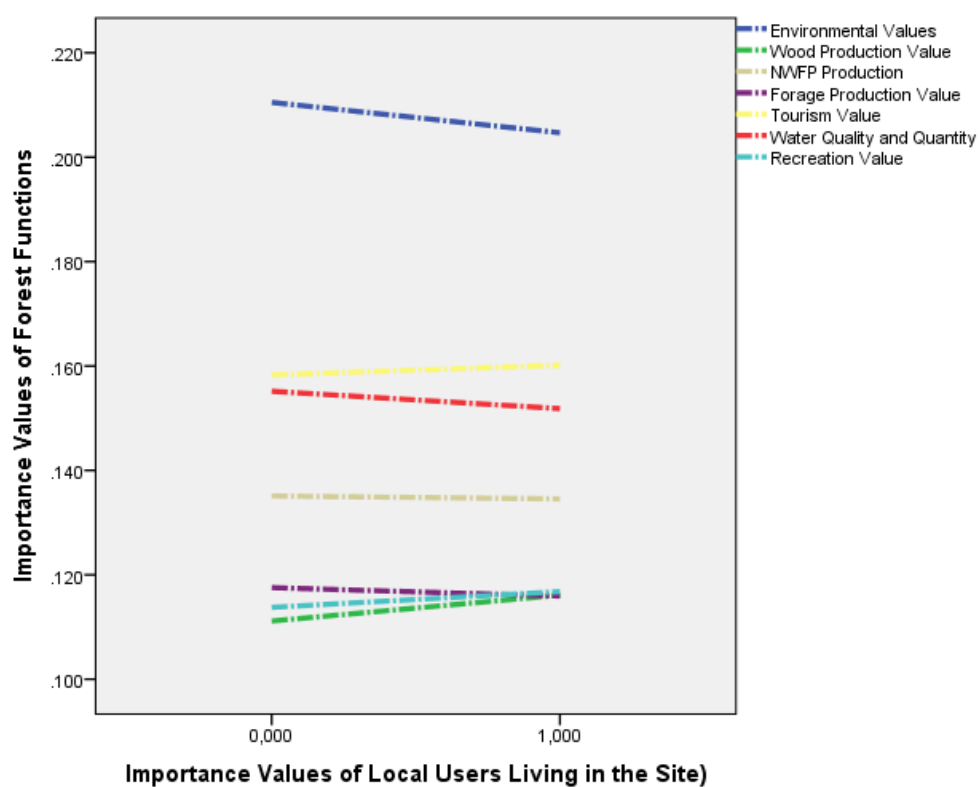


Figure 35: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Professional Interests on the Importance Values and Ranking Orders of Decision Alternatives

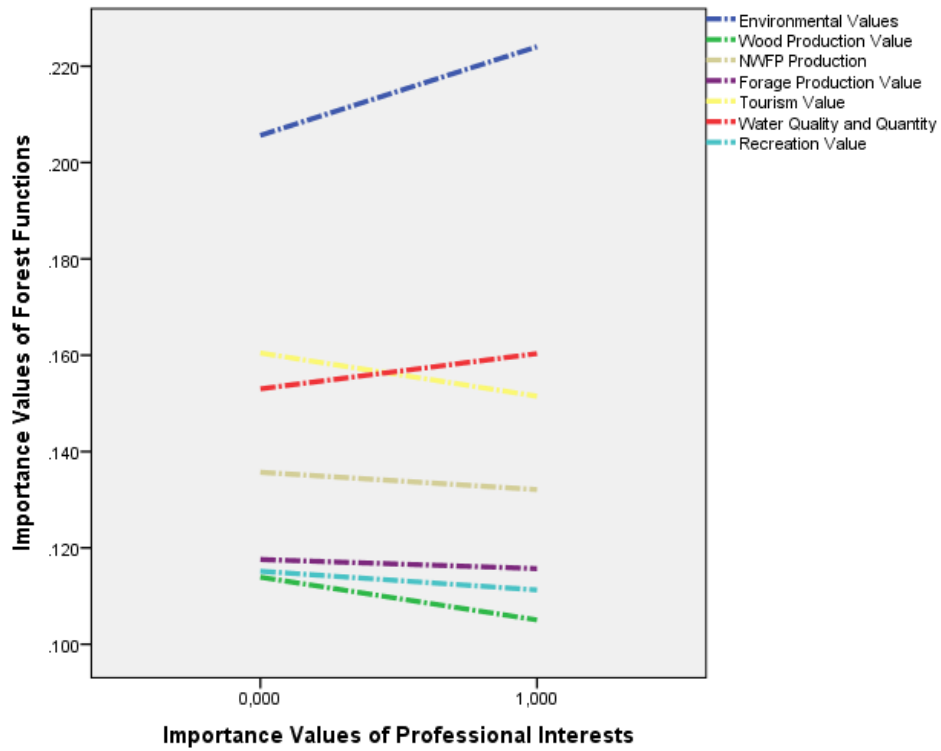


Figure 36: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Economic Interests on the Importance Values and Ranking Orders of Decision Alternatives

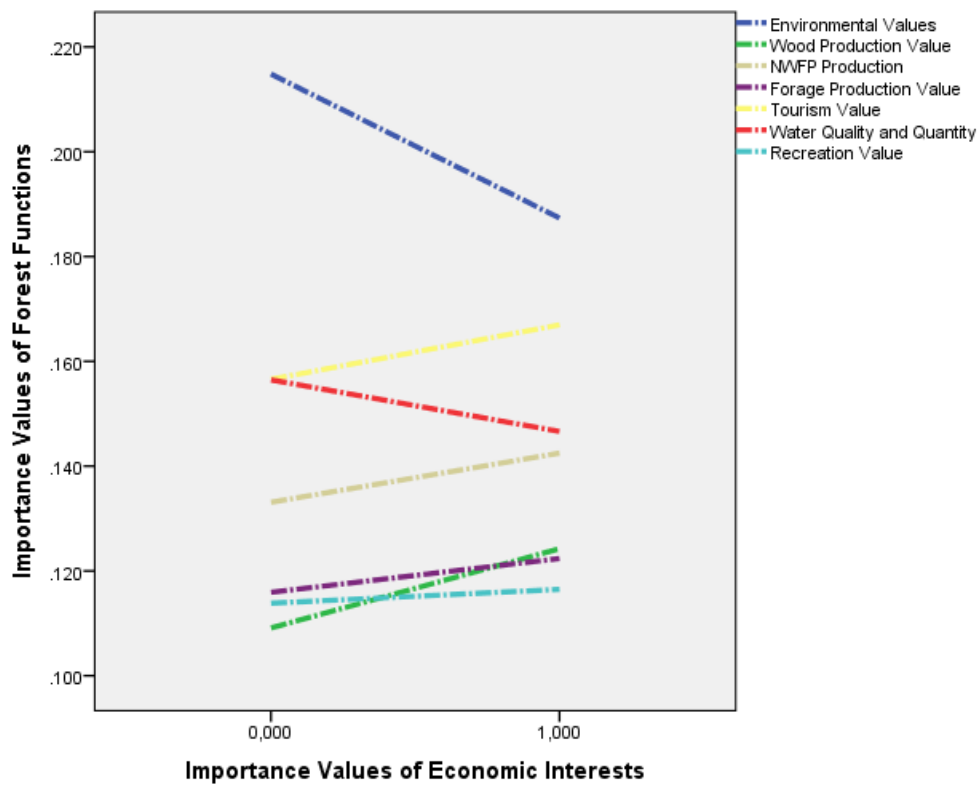


Figure 37: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Users of the Catchment Area Coming from Outside on the Importance Values and Ranking Orders of Decision Alternatives

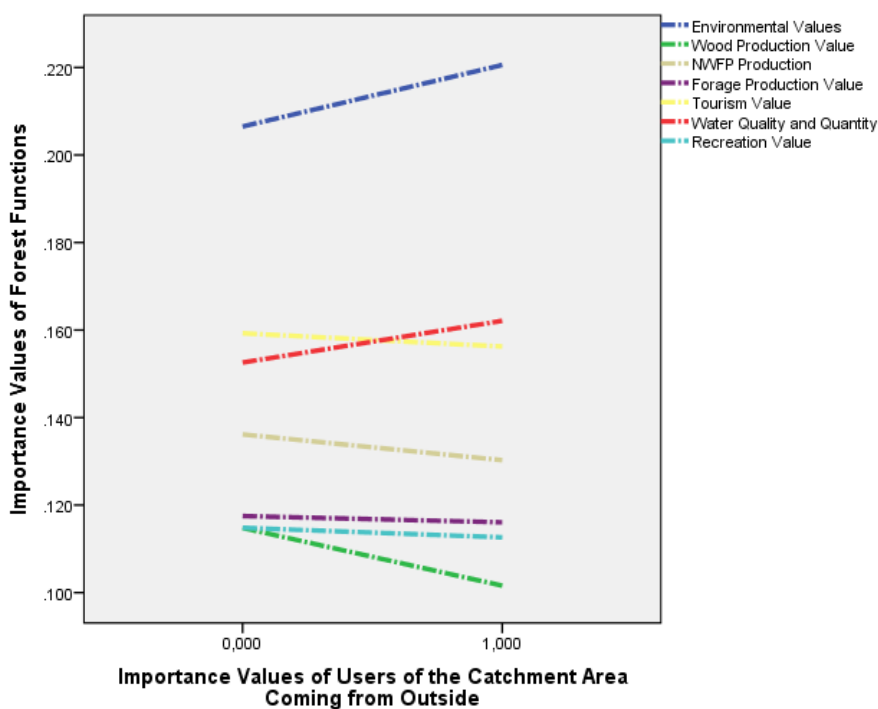


Figure 38: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, the Weights of Decision Criteria are Assumed to be Equal, i.e. ( $1/11 = 0,091$ )

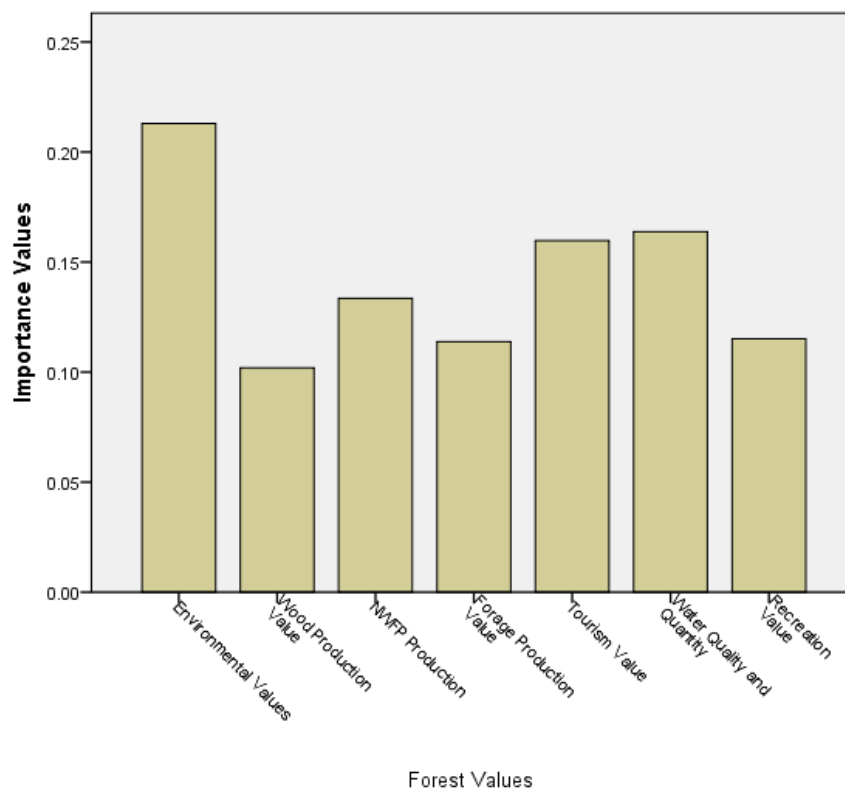




Figure 39: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Decision Criteria is assumed to be 1,000, the Weights of the others are assumed to be 0,000

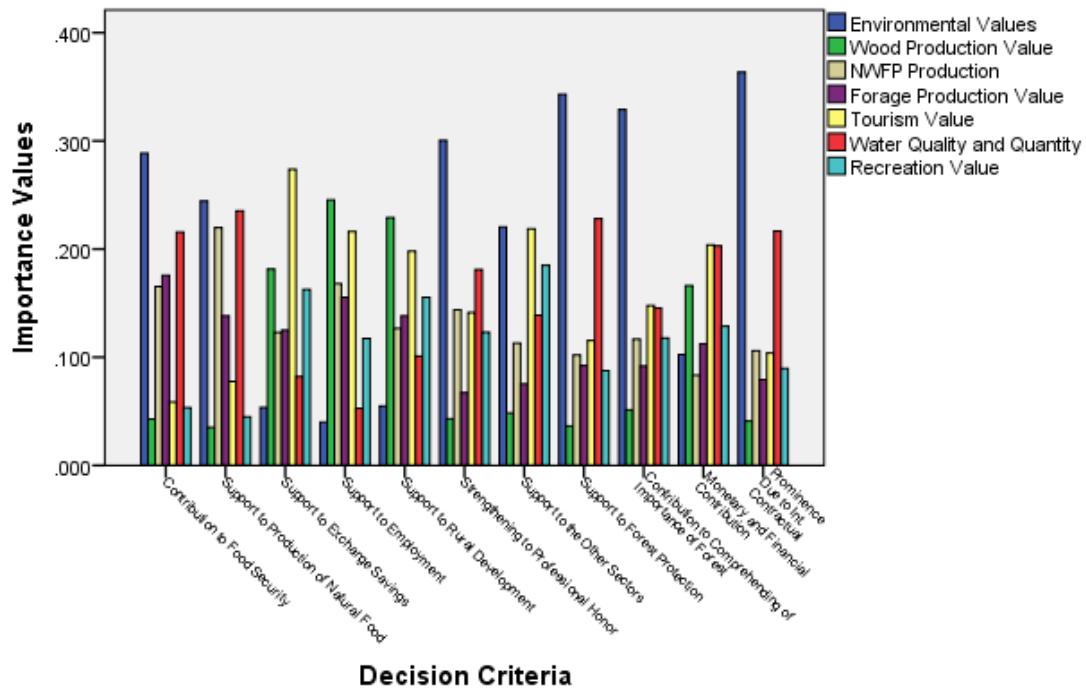


Figure 40: Sensitivity Analysis of the AHP Technique: Importance Values and Ranking Orders of Decision Alternatives, while the Weight of One of the Decision Criteria are assumed to be 0,000, the Weights of the others are assumed to be equal, i.e. ( $1/10 = 0,100$ )

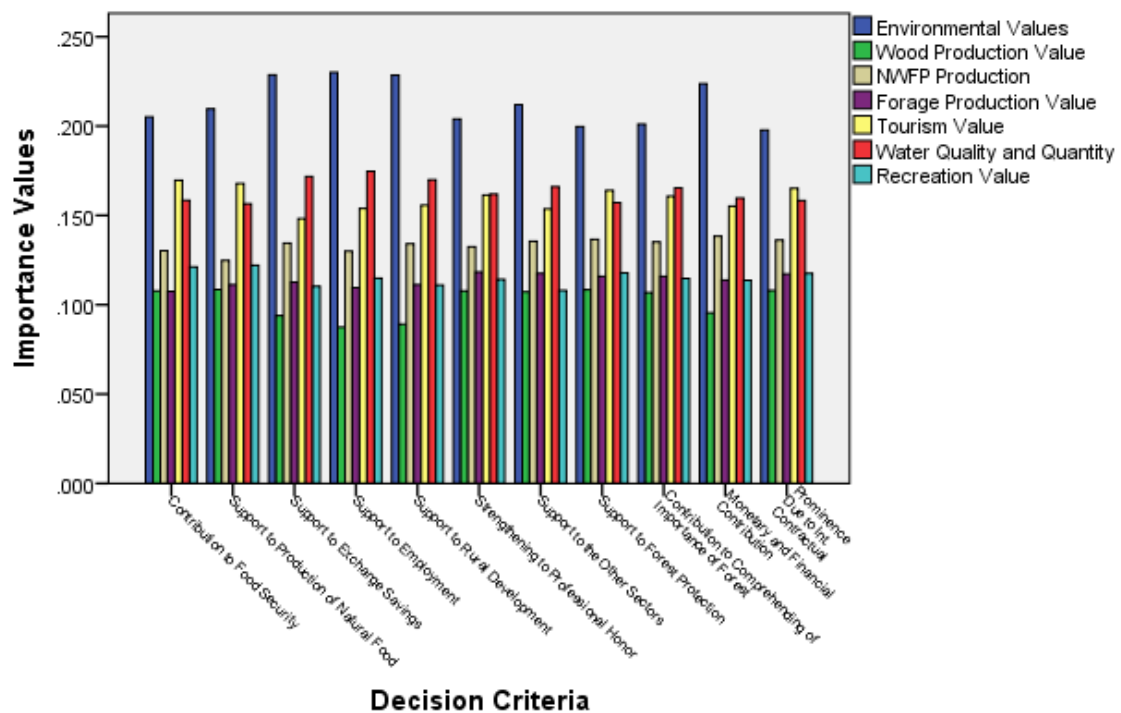


Figure 41: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion “*Monetary and Financial Contribution to the System of Ministry of Environment and Forest*” on the Importance Values and Ranking Orders of Decision Alternatives

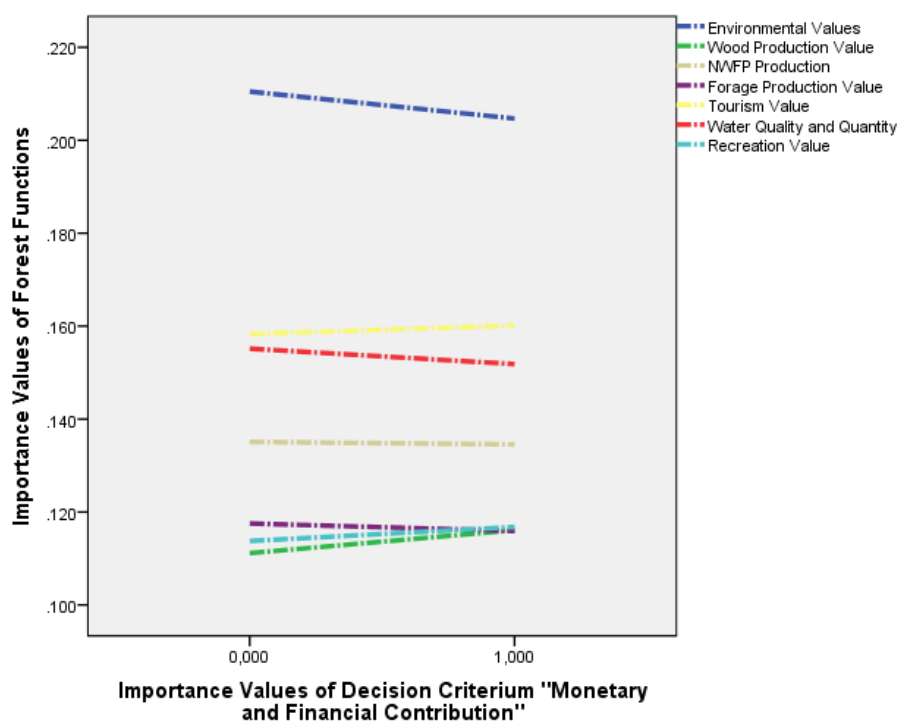


Figure 42: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion “*Contribution to Food Security*” on the Importance Values and Ranking Orders of Decision Alternatives

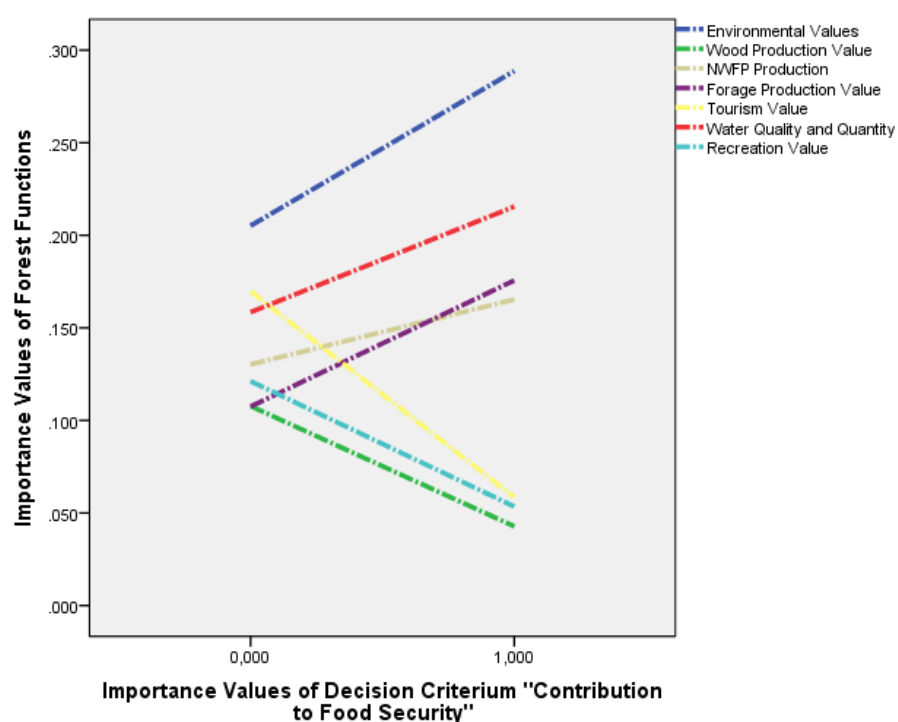


Figure 43: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion “Support to Production of Natural Food” on the Importance Values and Ranking Orders of Decision Alternatives

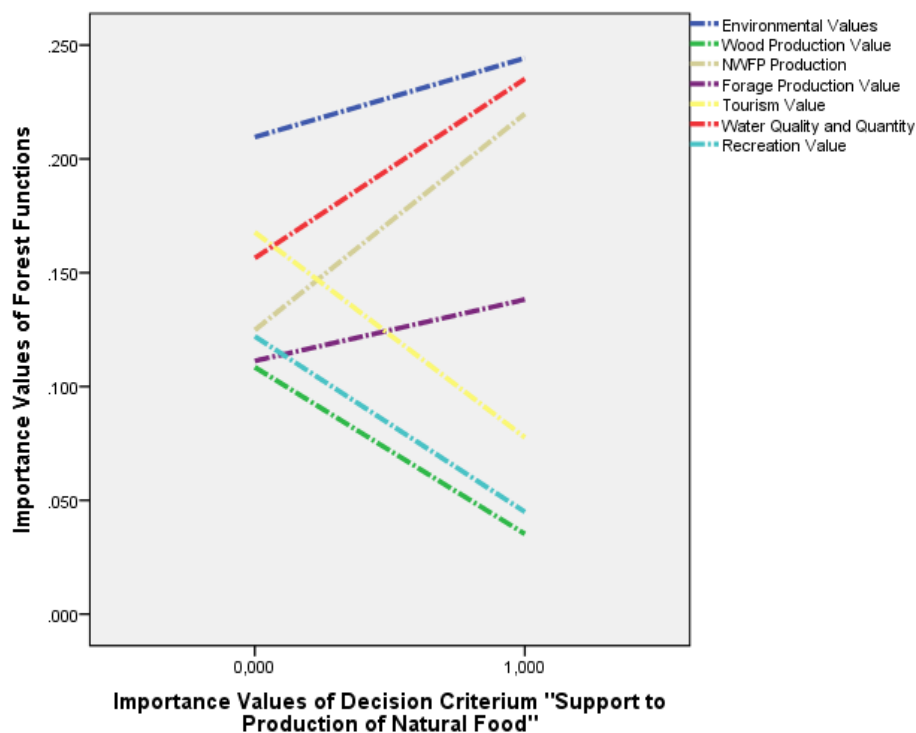


Figure 44: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion “Support to Forest Protection” on the Importance Values and Ranking Orders of Decision Alternatives

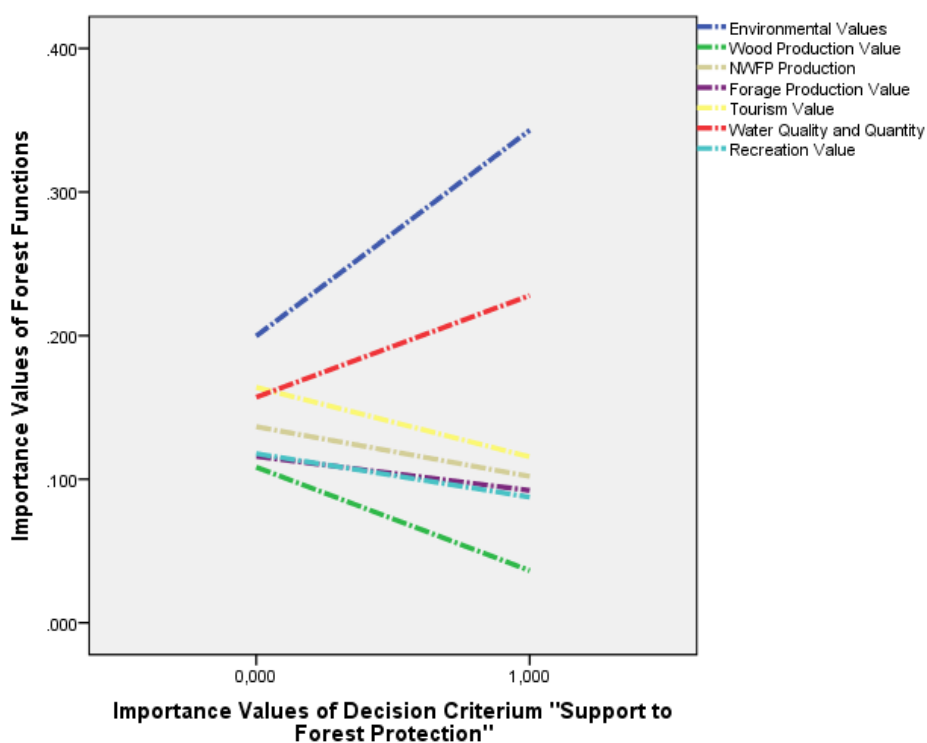


Figure 45: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion “Support to Rural Development” on the Importance Values and Ranking Orders of Decision Alternatives

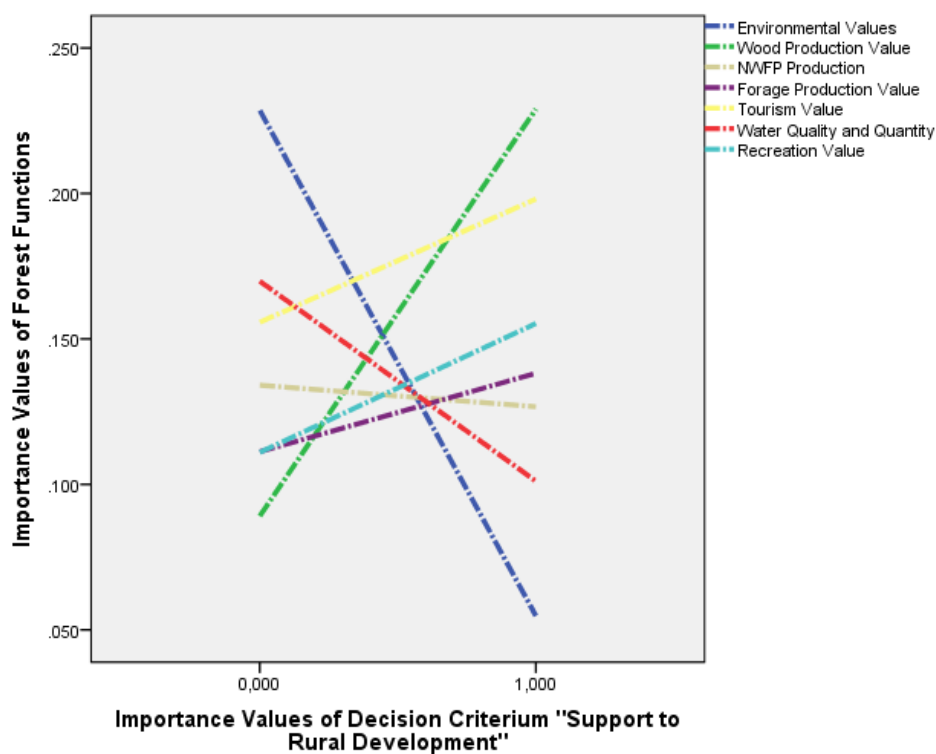


Figure 46: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion “Support to Employment” on the Importance Values and Ranking Orders of Decision Alternatives

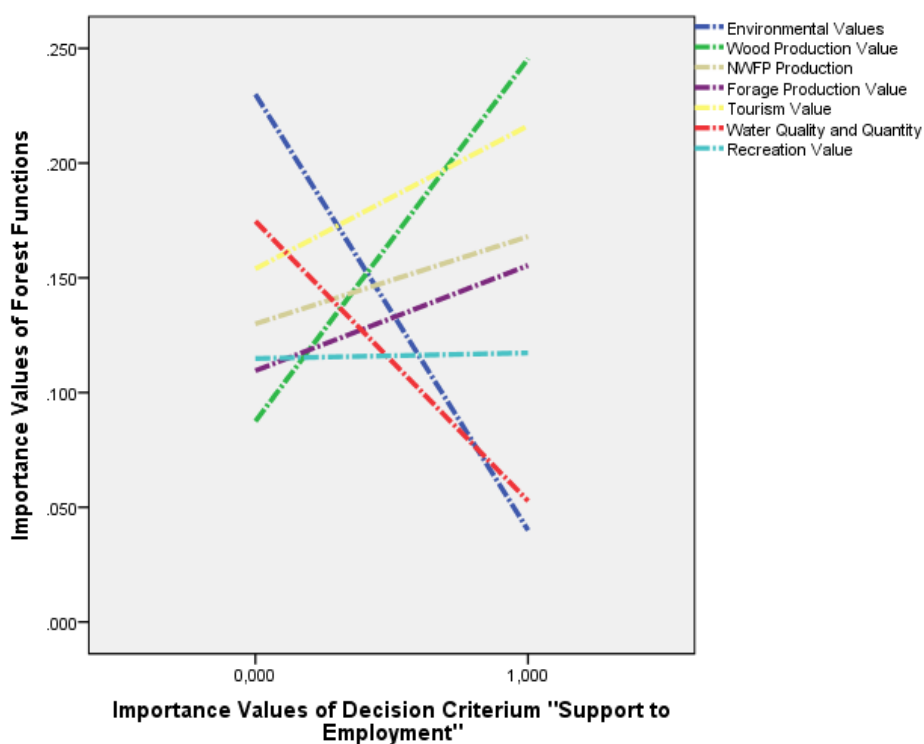


Figure 47: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion “Support to Exchange Savings” on the Importance Values and Ranking Orders of Decision Alternatives

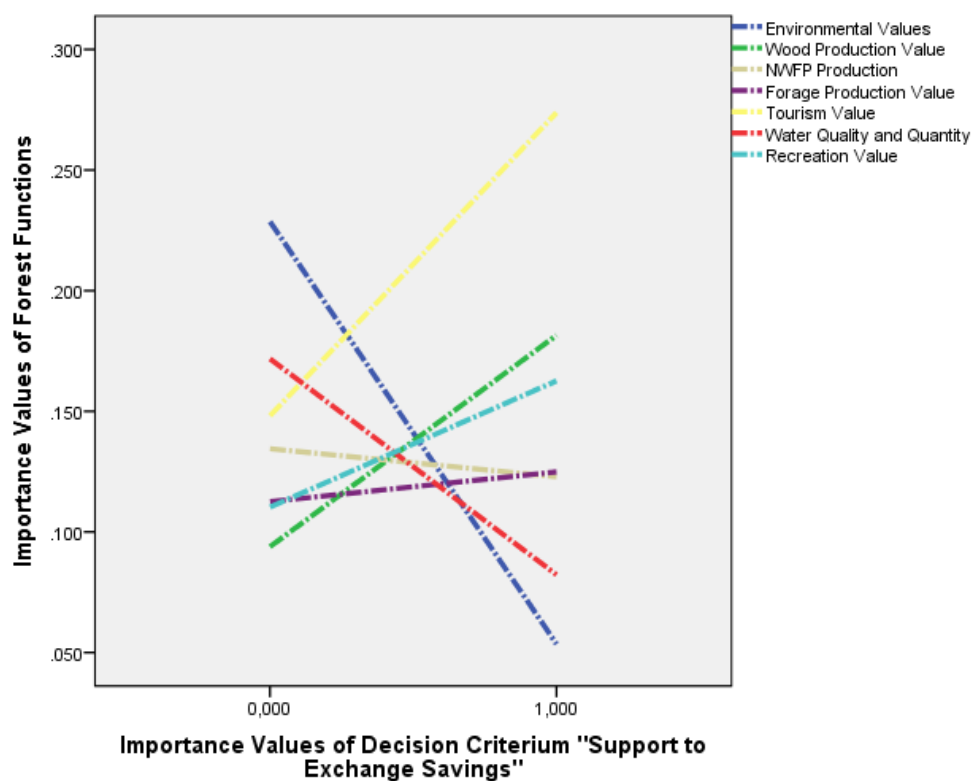


Figure 48: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion “Support to the Other Sectors” on the Importance Values and Ranking Orders of Decision Alternatives

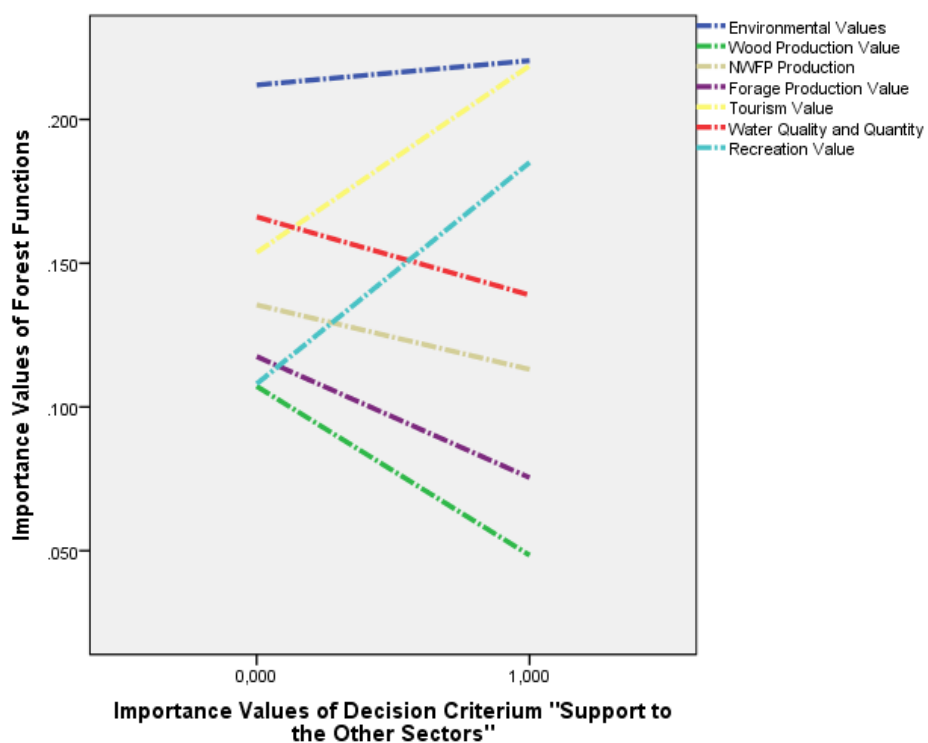


Figure 49: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion “Prominence Due to International Contractual” on the Importance Values and Ranking Orders of Decision Alternatives

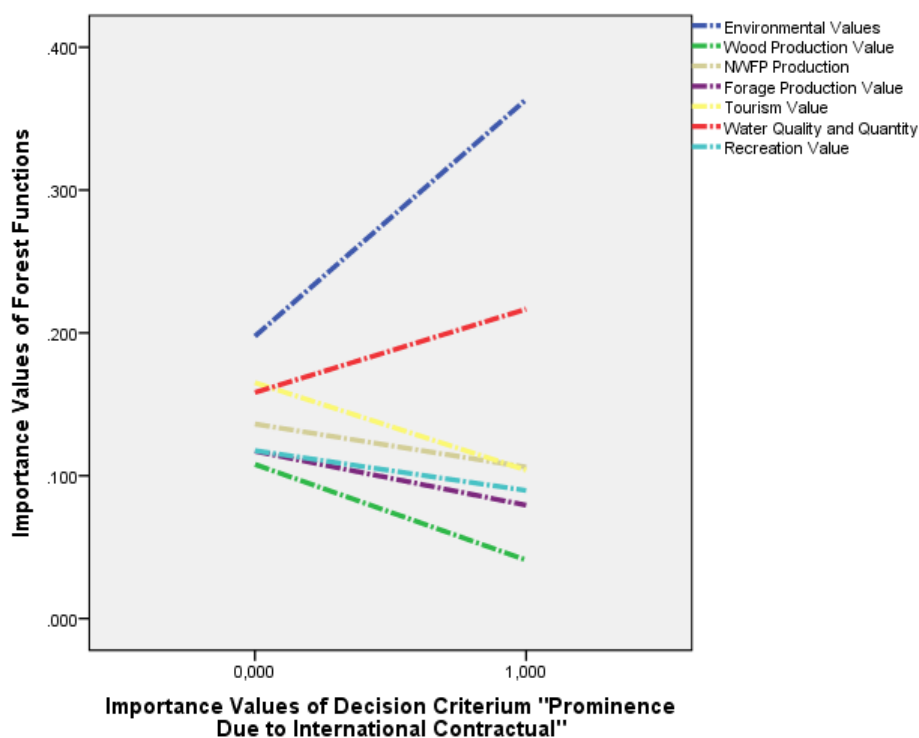


Figure 50: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion “Contribution to Comprehending of Importance of Forest Resources” on the Importance Values and Ranking Orders of Decision Alternatives

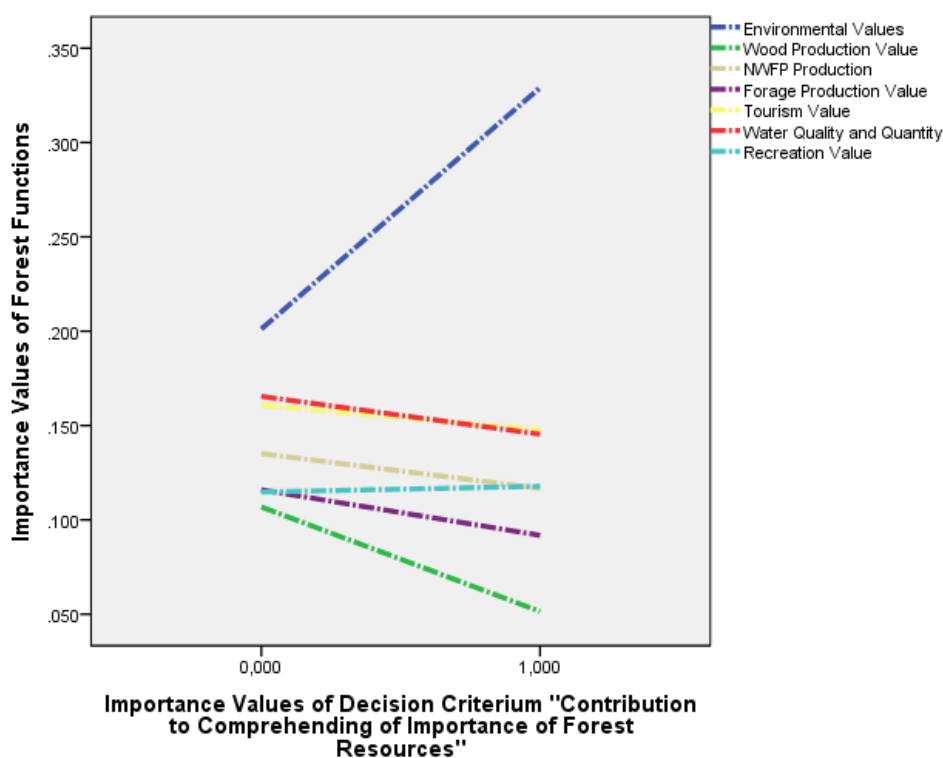


Figure 51: Sensitivity Analysis of the AHP Technique: the Effects of Weighting of Criterion “Strengthening to Professional Honour” on the Importance Values and Ranking Orders of Decision Alternatives

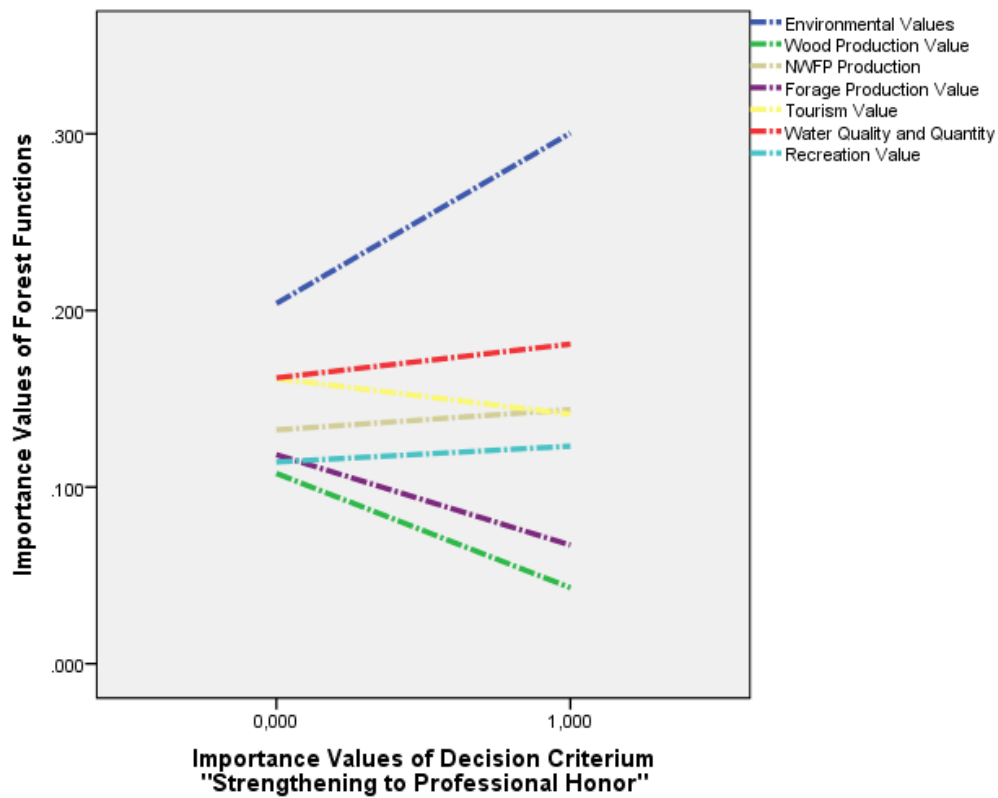


Figure 52: Percentage of Representatives of the Stakeholders’ Committee/Forum Participated in the Survey of Fourth Phase of the Participatory Approach by Education Characteristics

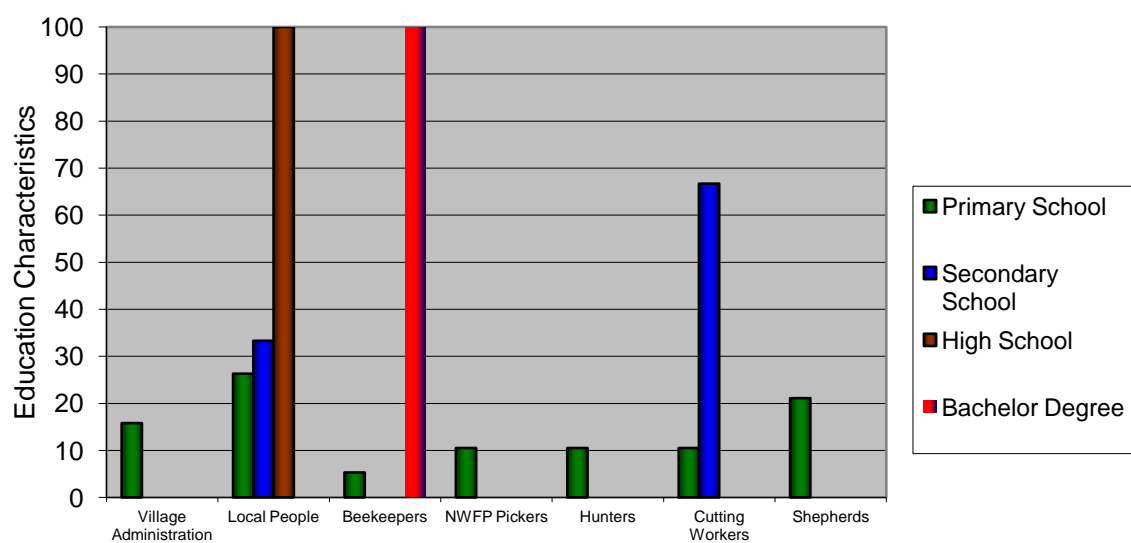




Figure 53: Percentage of Representatives of the Stakeholders' Committee/Forum Participated in the Survey of Fourth Phase of the Participatory Approach by Age Characteristics

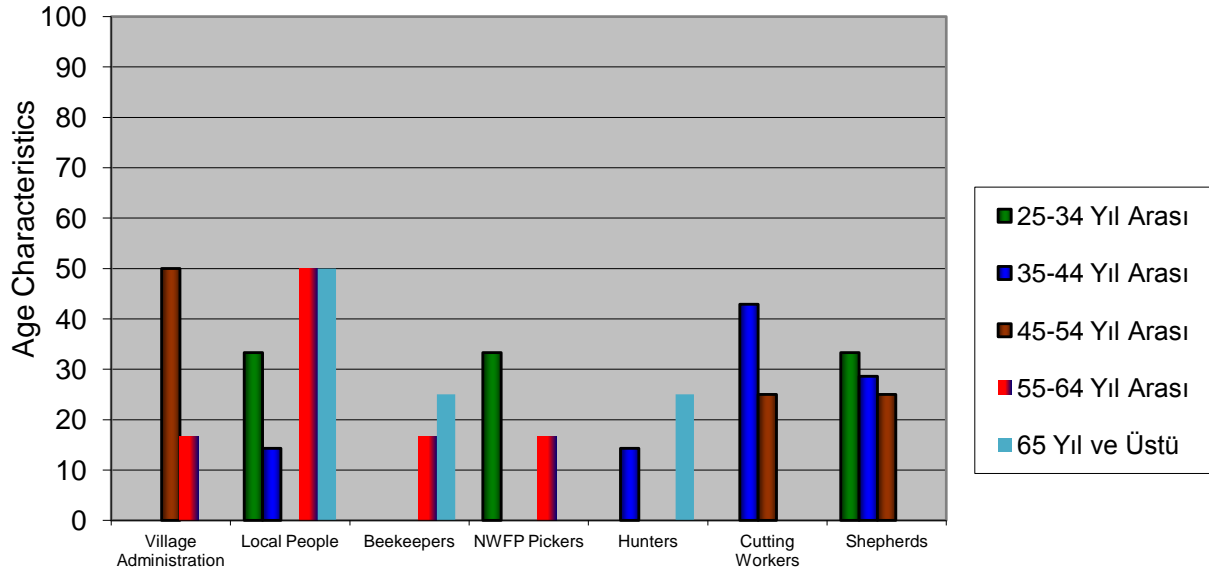


Figure 54: Percentage of Representatives of the Stakeholders' Committee/Forum Participated in the Survey of Fourth Phase of the Participatory Approach by Residence Village Characteristics

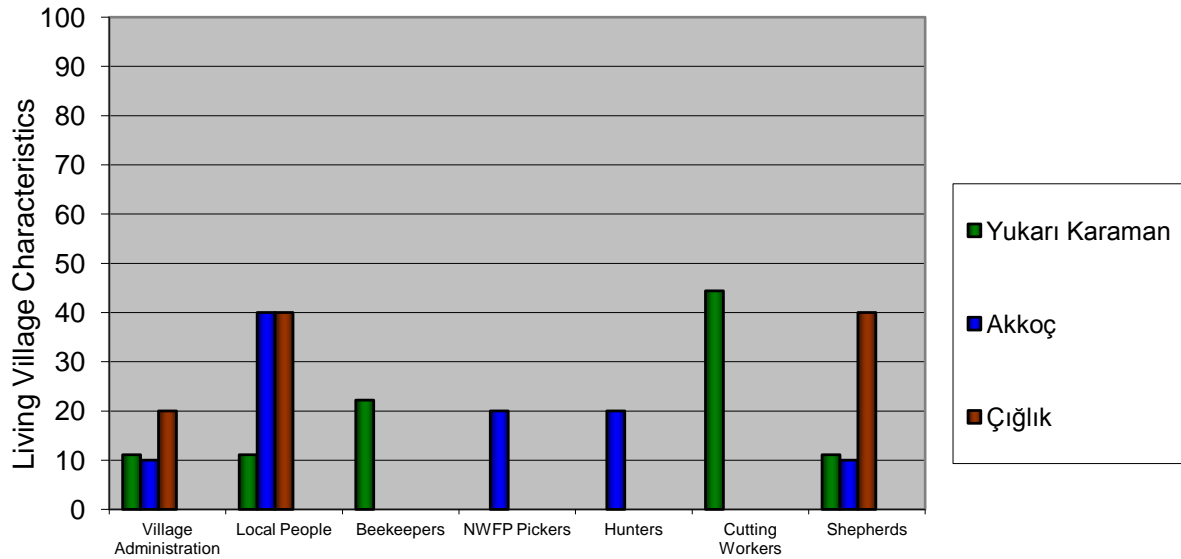
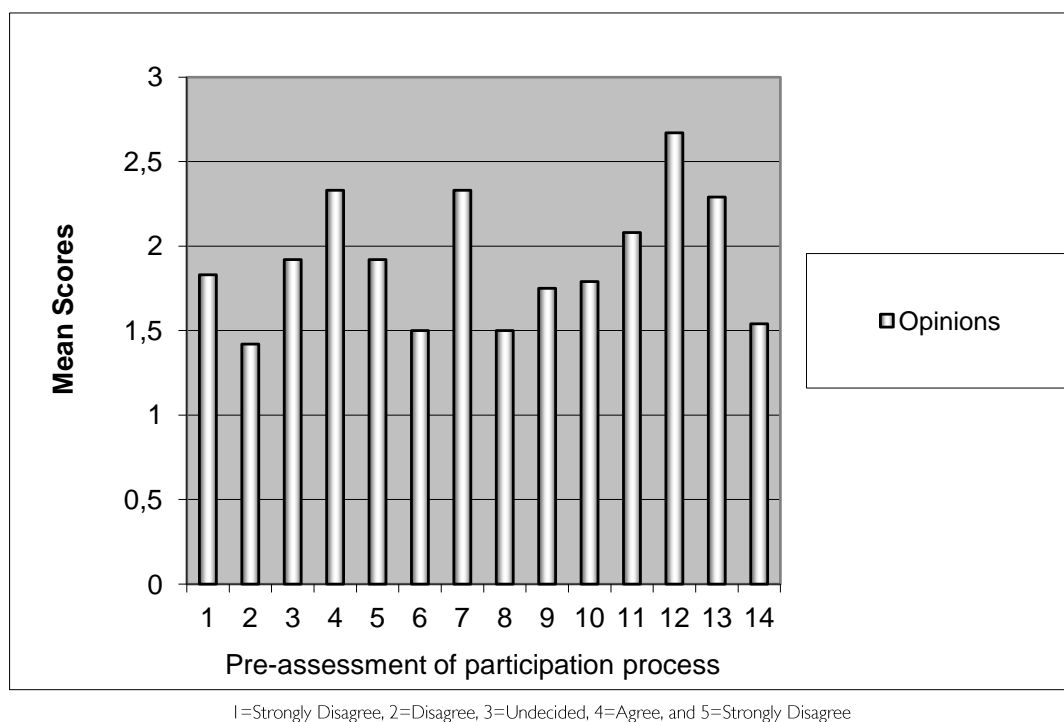


Figure 55: The Mean Scores for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of the Stakeholders' Committee/Forum in Düzlerçamı Pilot Site



ID	Questionnaire Items to Measure the Stakeholders' Committee/Forum Members' Current Opinions and Involvement in Forest Resources Management in Düzlerçamı Pilot Site
1.	Forestry Organization makes always its objectives and activities known to us.
2.	We know the plans and maps of forestry.
3.	We are aware of the forestry activities conducted by other users of the territory, except for Forestry Organization.
4.	Forestry Organization recognizes the legitimacy of our interests and rights.
5.	Our concerns, needs and values are directly incorporated into decision making by Forestry Organization.
6.	Forestry Organization modifies its plans and applications according to our opinions and expectations.
7.	Forest management plans take different forest resources and uses into account.
8.	Forestry Organization uses the surveys for taking our opinions.
9.	Forestry Organization organizes the meetings for taking our opinions.
10.	Forestry Organization applies the face-to-face meetings for taking our opinions.
11.	Frequency at which we meet the Forestry Organization is satisfactory.
12.	We have no conflict with other stakeholders.
13.	Forestry Organization gives importance to decisions about issues of the increasing our quality of life.
14.	Forestry Organization consults our opinions before decision making.

Figure 56: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of Village Administration at Stakeholders' Committee/Forum in Düzlerçami pilot site (%)

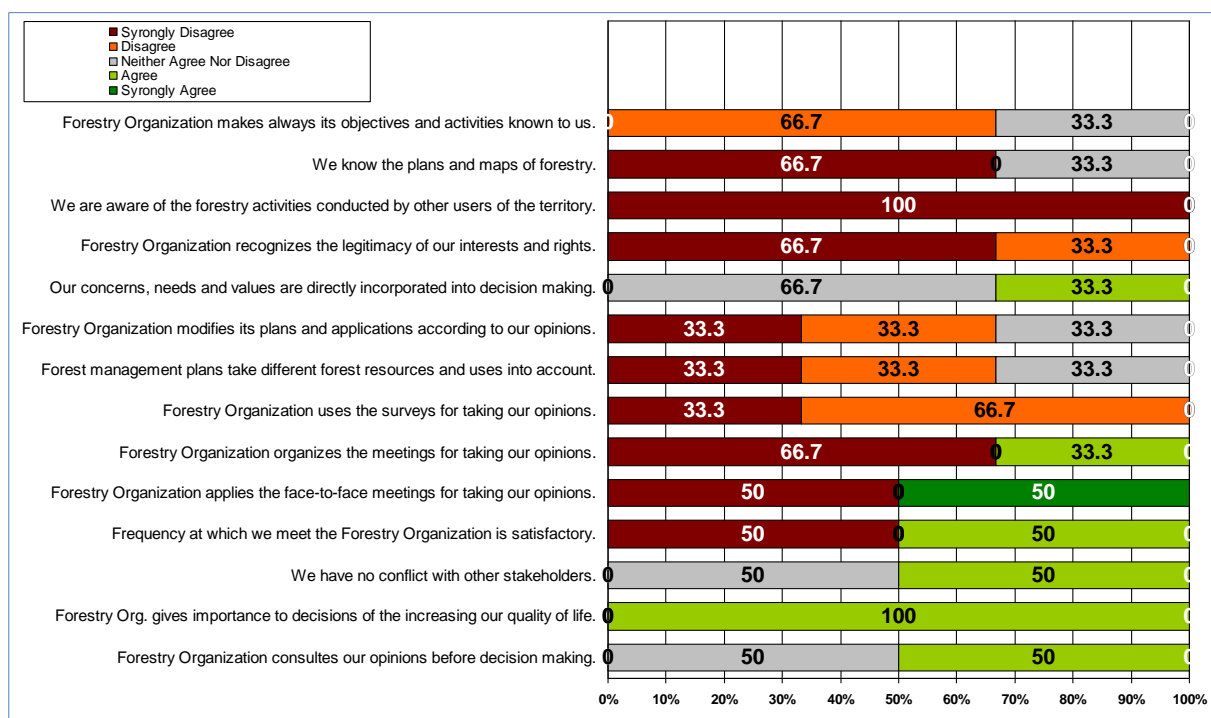


Figure 57: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of Local People at Stakeholders' Committee/Forum in Düzlerçami pilot site (%)

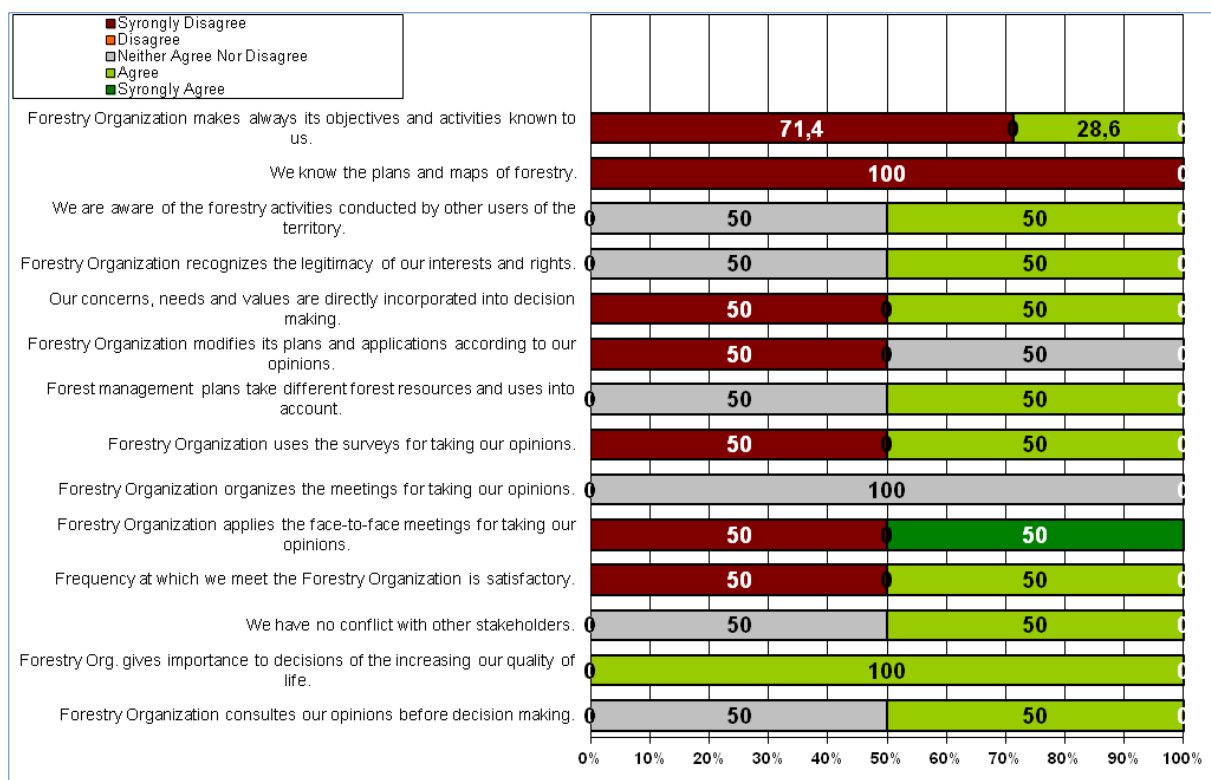


Figure 58: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of Beekeepers at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%)

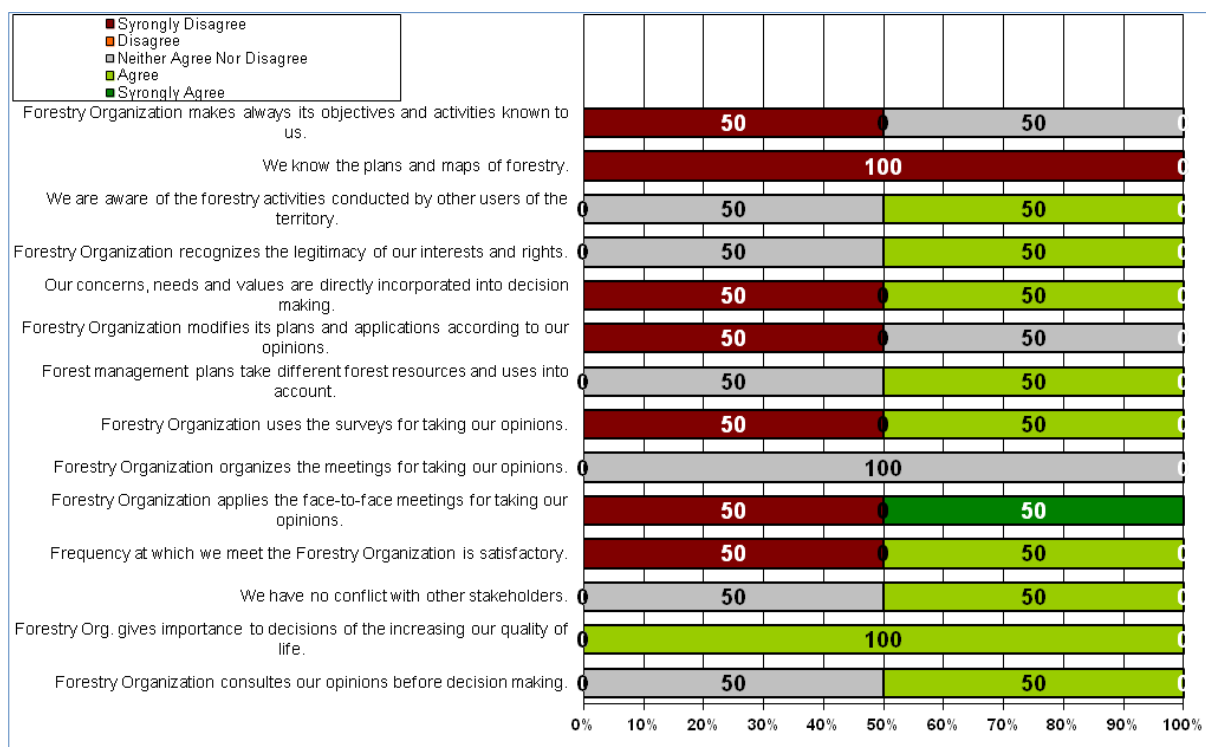


Figure 59: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of NWFP Pickers at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%)

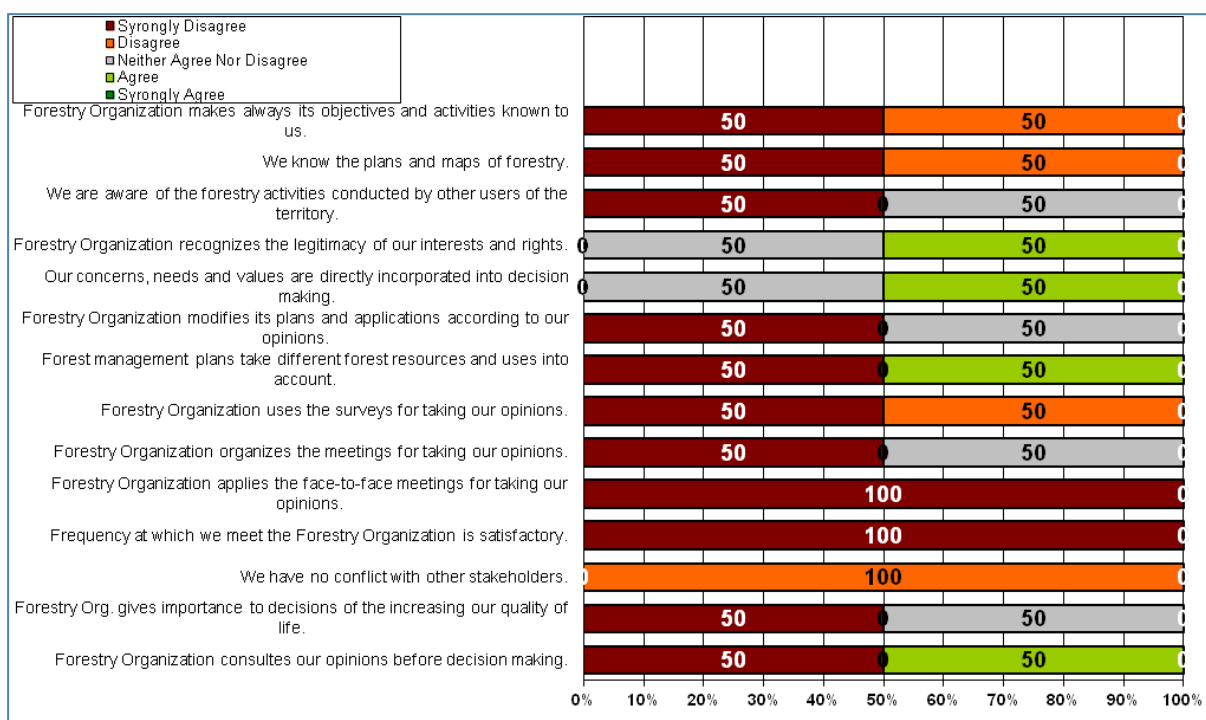


Figure 60: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of Hunters at Stakeholders' Committee/Forum in Düzlerçami pilot site (%)

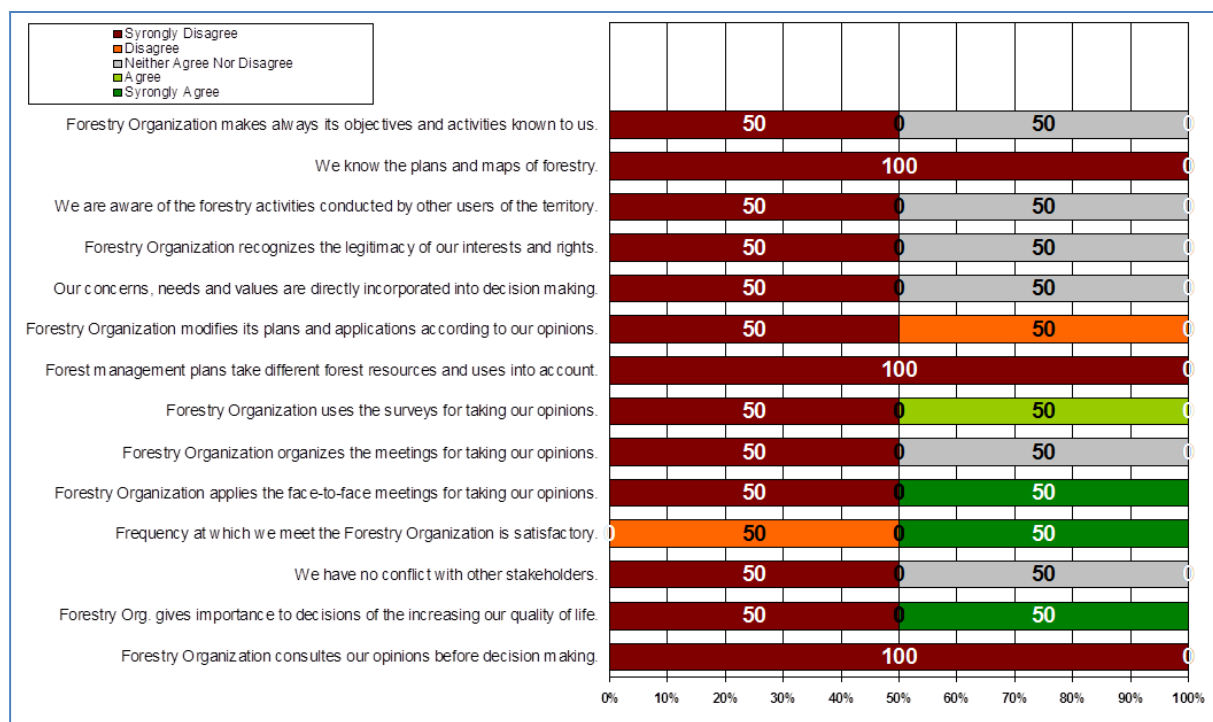


Figure 61: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of Cutting Workers at Stakeholders' Committee/Forum in Düzlerçami pilot site (%)

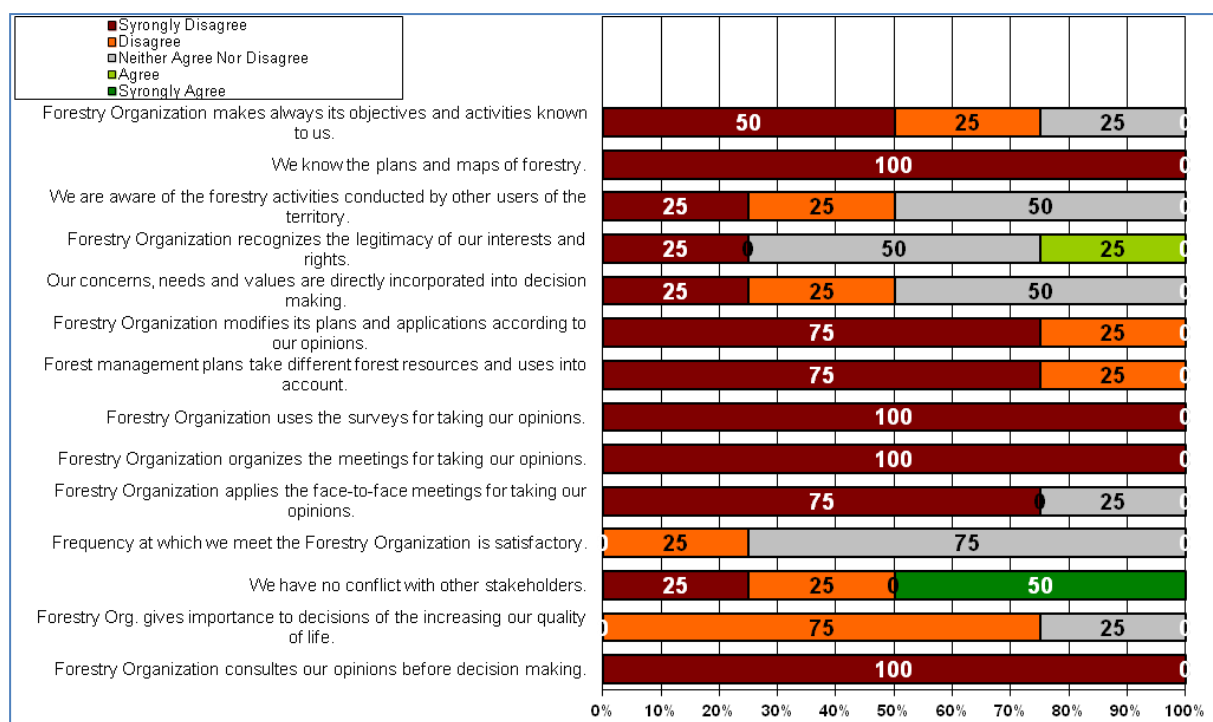


Figure 62: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for the Representatives of Shepherds at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%)

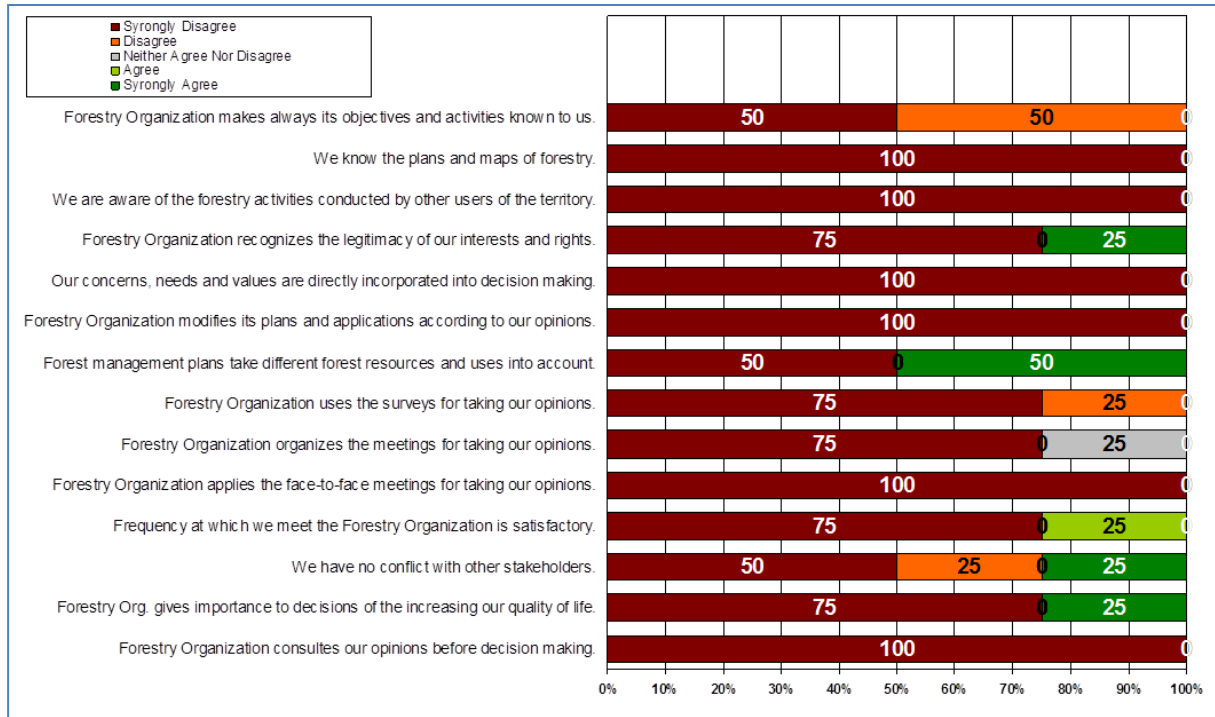


Figure 63: The Percentages for Each Item on the Scales of the Pre-Assessments of Participation Process for All Representatives at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%)

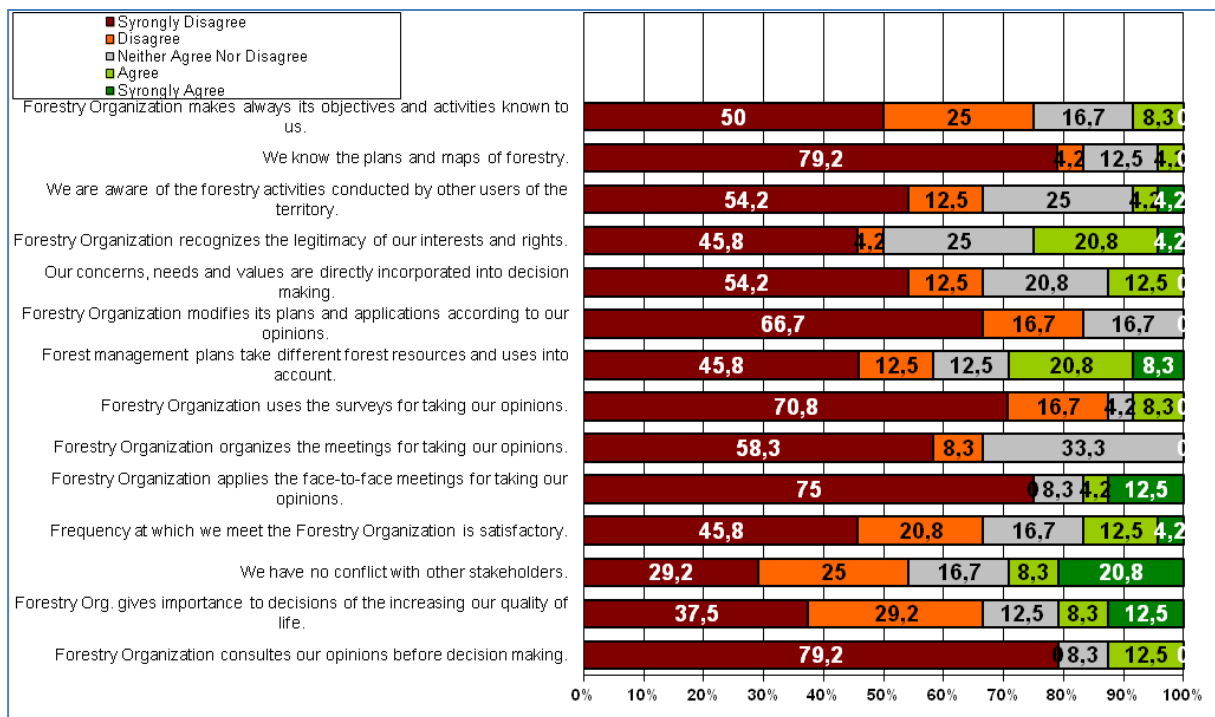
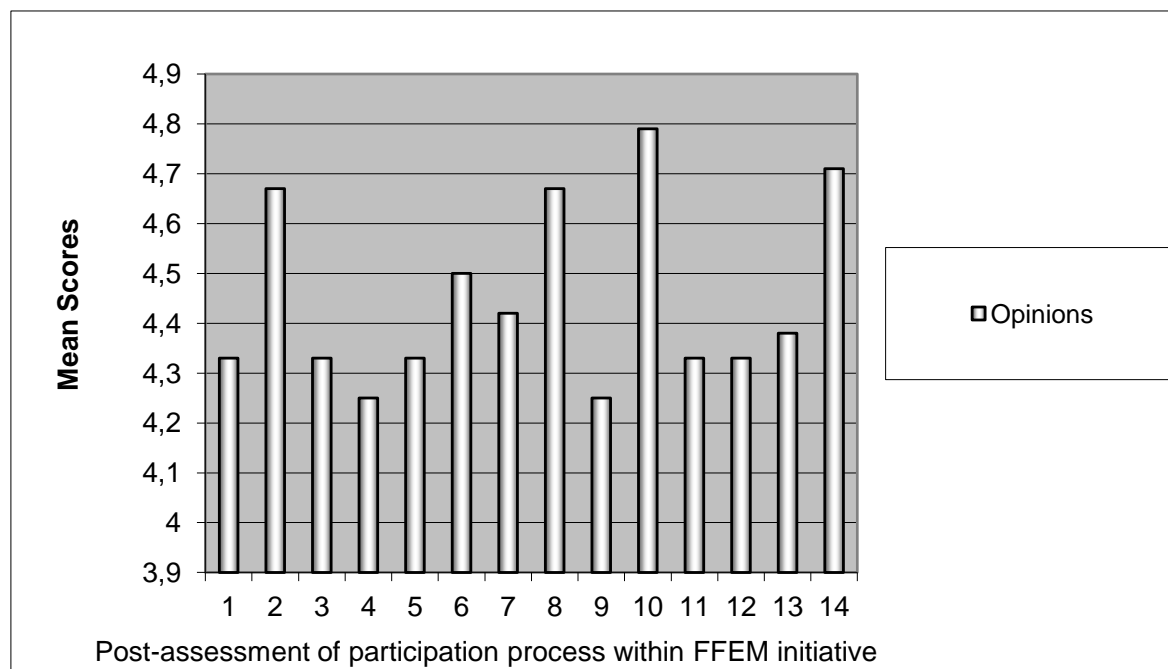


Figure 64: The Mean Scores for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of the Stakeholders' Committee/Forum in Düzlerçami Pilot Site



1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, and 5=Strongly Disagree.

ID	Questionnaire Items to Measure the Impacts and Results of Participation Process, and the Stakeholders' Committee/Forum Members' Satisfaction Levels Regarding Involvement in the FFEM Initiative In Düzlerçami Pilot Site
1.	Participation process was not biased to the Forestry Organization's viewpoint.
2.	Participation process was fair to me.
3.	There was opportunity to negotiate my needs and expectations during participation process.
4.	It was given the feelings that my opinions were important during participation process.
5.	Participation process was skillfully designed.
6.	The monetary cost of the participation process was suiAppendix Table.
7.	Participation process was efficient in terms of time, not boring and long.
8.	The final appeal decision seemed fair to me, and it was not biased.
9.	I felt my opinions and demands influenced the final appeal decision.
10.	The public opinions and demands were sufficiently served by the final appeal decision.
11.	The final appeal decision was environmentally sound.
12.	Implementation of the final appeal decision can be done in a financially sound manner.
13.	The final appeal decision was technically feasible.
14.	Implementation of the final appeal decision was possible in a short time.



Figure 65: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of Village Administration at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%)

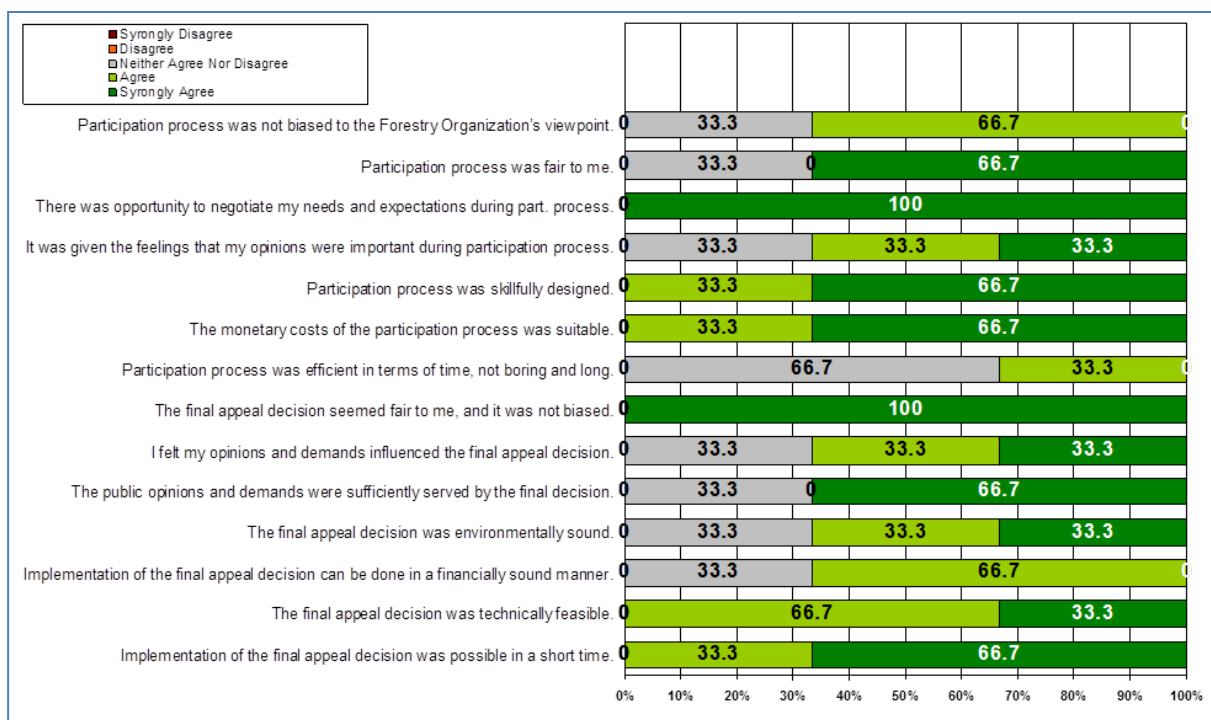


Figure 66: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of Local People at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%)

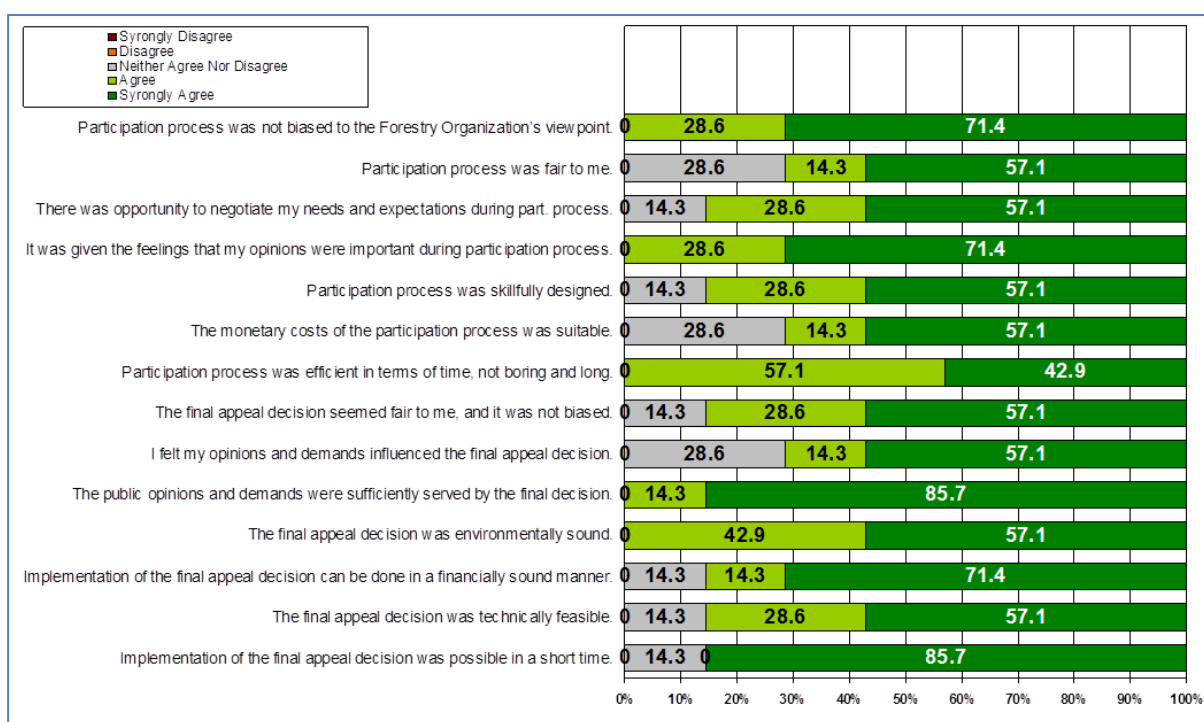


Figure 67: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of Beekeepers at Stakeholders' Committee/Forum in Düzlerçami pilot site (%)

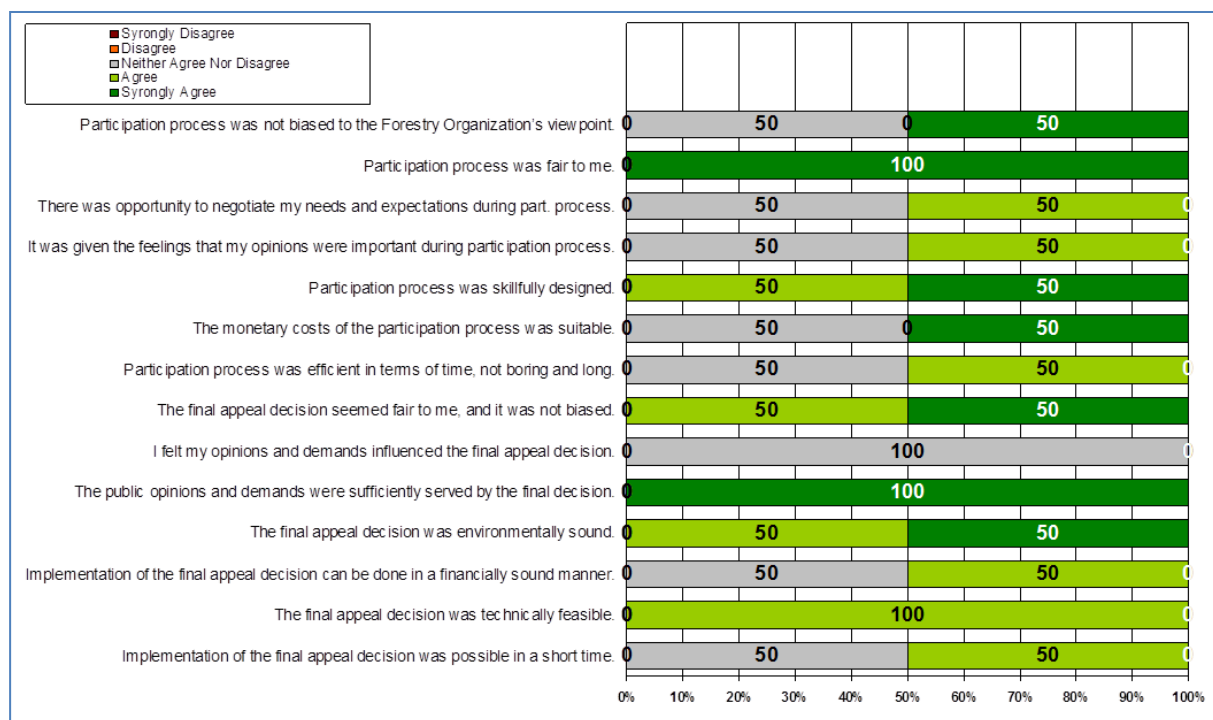


Figure 68: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of NWFP Pickers at Stakeholders' Committee/Forum in Düzlerçami pilot site (%)



Figure 69: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of Hunters at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%)

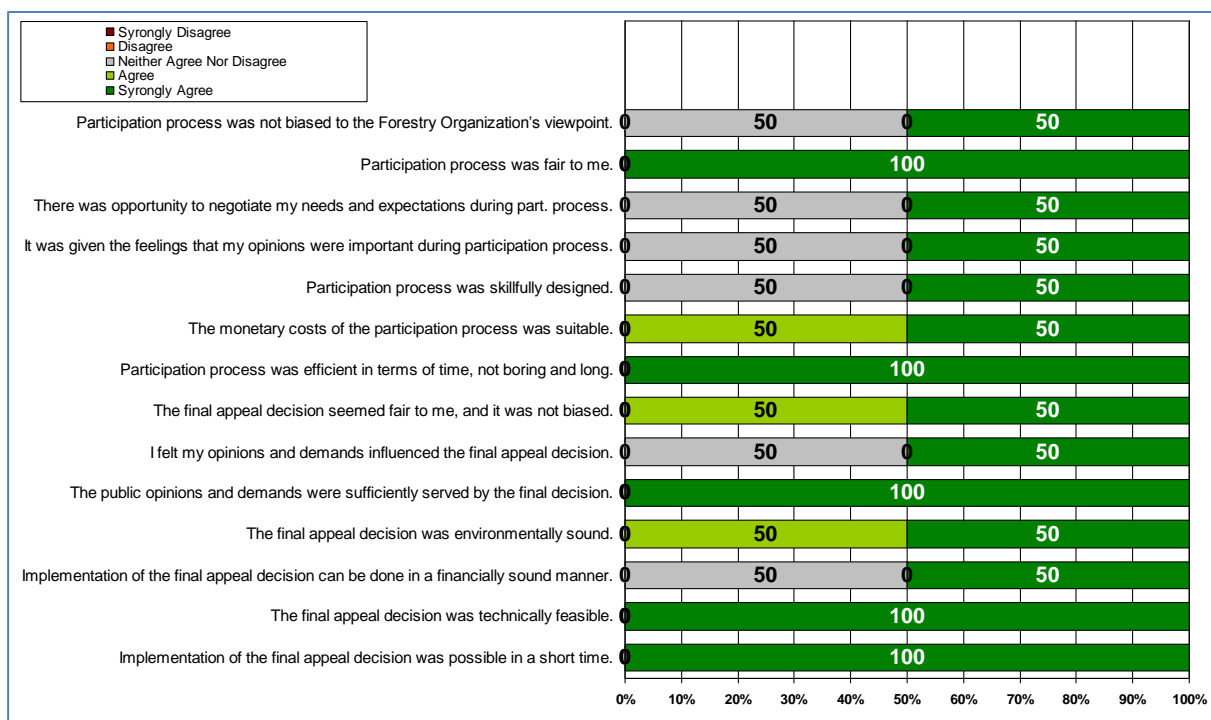


Figure 70: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of Cutting Workers at Stakeholders' Committee/Forum in Düzlerçamı pilot site (%)

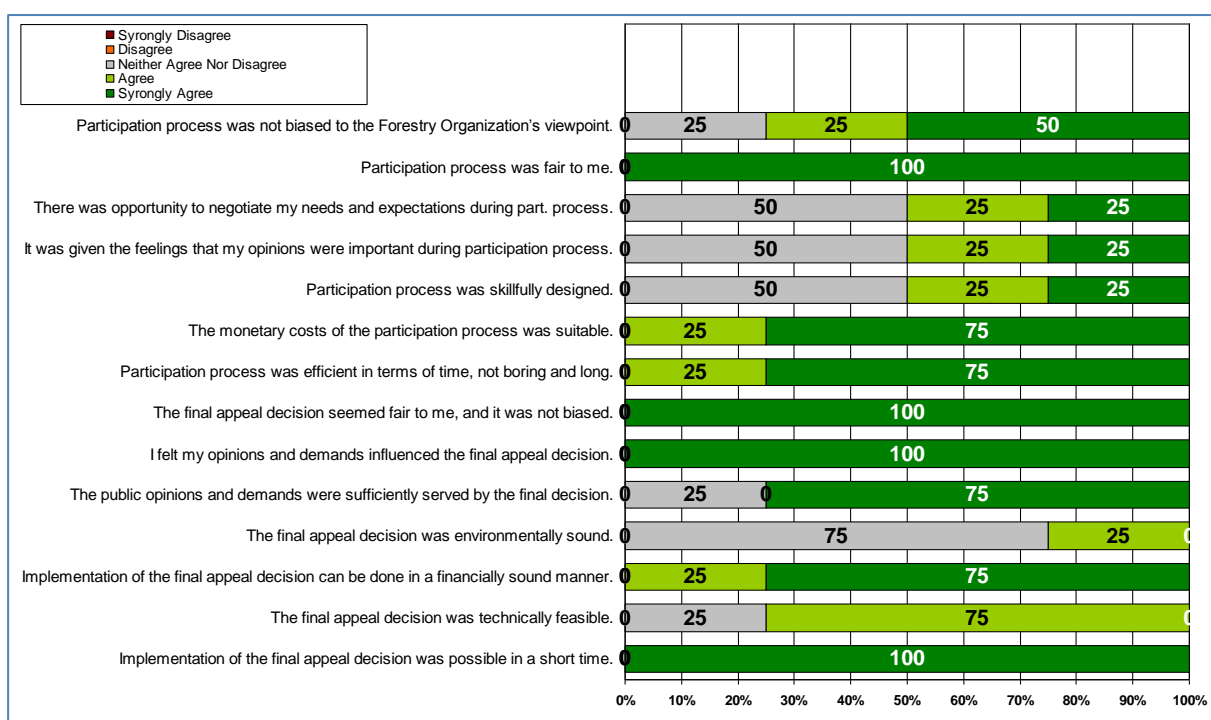


Figure 71: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for the Representatives of Shepherds at Stakeholders' Committee/Forum in Düzlerçami pilot site (%)

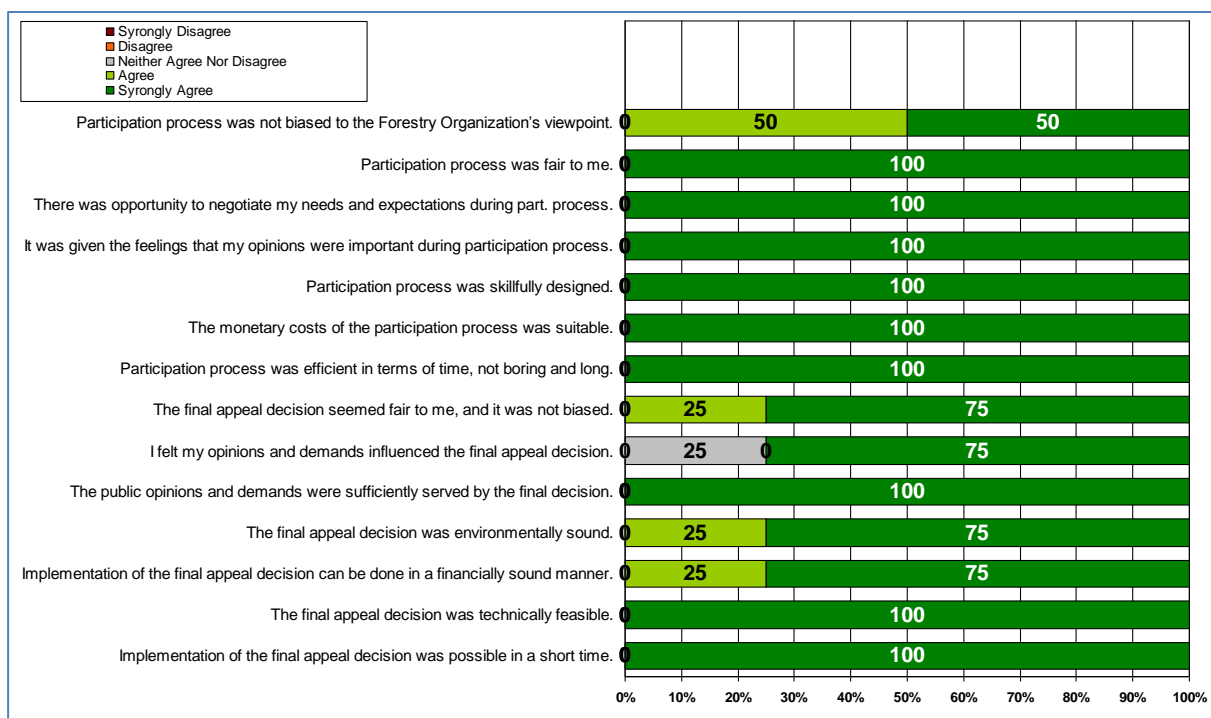
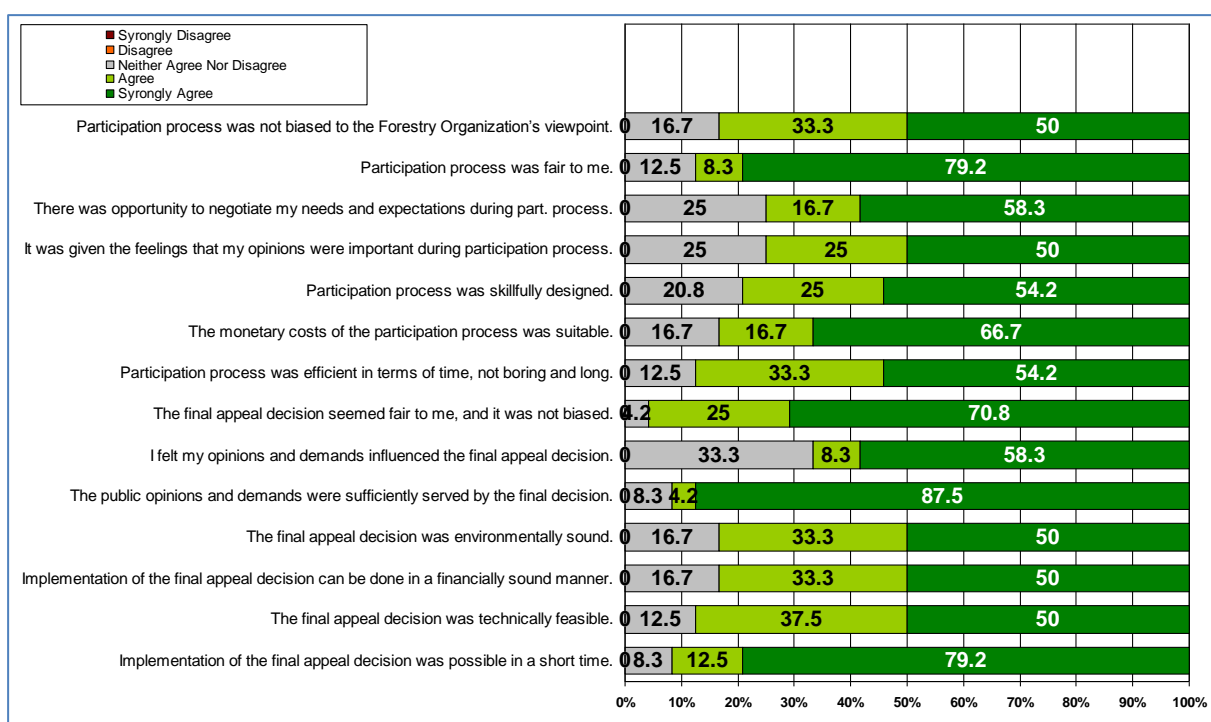


Figure 72: The Percentages for Each Item on the Scales of the Post-Assessments of Participation Process for All Representatives at Stakeholders' Committee/Forum in Düzlerçami pilot site (%)



## ANNEX 3: SURVEY FORMS

### Survey Form 1: "Questionnaire Forms of R'WOT Technique" Designed to Carry Out the Present Situation Analysis and to Determine the Most Suitable Forest Resources Management Strategies in Düzlerçamı Pilot Site, for Filling by Steering Committee, Scientific Committee, and Stakeholders' Committee/Forum

R'WOT TECHNIQUE QUESTIONNAIRE FOR STEERING COMMITTEE (DECISION MAKERS, SCIENTIFIC COMMITTEE (SECTOR EXPERTS), AND STAKEHOLDERS' COMMITTEE/FORUM (STAKEHOLDERS AND SUB-STAKEHOLDERS) TO CARRY OUT PRESENT SITUATION ANALYSIS AND STRATEGY FORMULATION

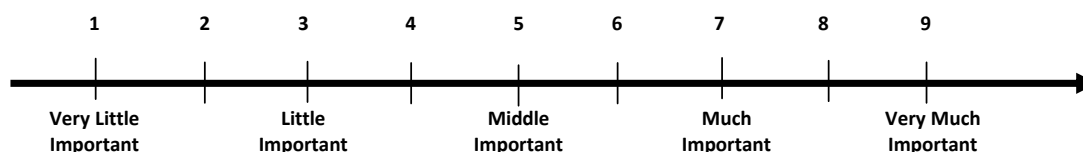
Date:        /        /2014

For Participants;

Name and Surname: .....

Duty : .....

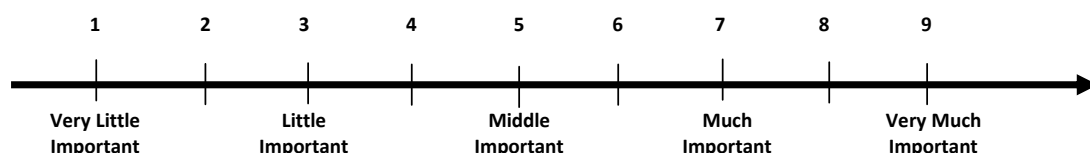
#### SCORE SCALE



Please evaluate the **Strength Factors** present in comparison, and then mark your degree of priority towards one factor over the other based on their own understanding.

SWOT Category: STRENGTHS for forest resource management in Düzlerçamı Pilot site	Degree of Priority
Forest enterprises having Infrastructure, facilities, machinery and equipment, budget, communication and expert personnel contributes social, economic, culture and environmental conditions of the regional development.	
The pilot site well suits to produce quite a lot and various forest resources based goods and services due to the region's having rich natural resources and ecologic characteristics.	
With respect to woody raw materials production the Pilot site, having relatively rich productive forests, is suiAppendix Table for the development of forest industry.	
Having rich and well quality fresh water and underground water resources and water production.	
Having in-forest pastures and grazing lands, which is important to sustaining wildlife and animal grazing.	
Having satisfactory level of wildlife population of both game animals and birds in the habitats, which are suiAppendix Table for hunting and hunting tourism.	
Having pristine natural resources, rich historical and cultural assets suiAppendix Table for recreation, ecotourism and outdoor sports (trekking, trailing, rafting, etc.).	
Having a better and easier highway and transportation system and to be close to downtown Antalya.	
Having a strong local support to social, economic, cultural, environmental and managerial approach and developments in the pilot site.	

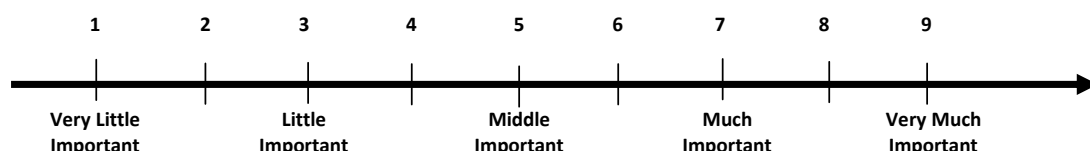
### SCORE SCALE



Please evaluate the **Weakness Factors** present in comparison, and then mark your degree of priority towards one factor over the other based on their own understanding.

SWOT Category: <b>WEAKNESSES</b> for forest resource management in Düzlerçamı Pilot site	Degree of Priority
Organisational problems such as lacking of well skilled, well qualified middle and lower level personnel to be used in forestry practices in local forest enterprises and overloaded works of forest chiefs and engineers.	
Not having reliable, correct, updated and accessible inventory data for non-wood forestry goods and services and forestry functions other than wood materials.	
Lack of legal provisions, measuring monetary values of forest resources, public relations and advertisements, infrastructures, capital availability, financial deficiencies, marketing and coordination in forest resources management.	
Lacking of advertisement, experience, infrastructures related to cultural and inheritance tourism, outdoor sports and recreation; not having a well-structured, planned and participatory management organisation.	
Lack of direct participation of interest groups in forest resources management, dominance of top down decision making culture and in this context lack of communication and cooperation in between forest enterprise and interest groups.	
Limited quantity of incomes from selling wood materials and lack of employment opportunities and thus resulting rural poverty and high unemployment rate.	
Lack of diversity in local economy.	
Lack of enterprising culture, vision and long run objectives and investments regarding natural resources in rural areas	
Migration of young population to urban areas and ageing of actual population.	

### SCORE SCALE

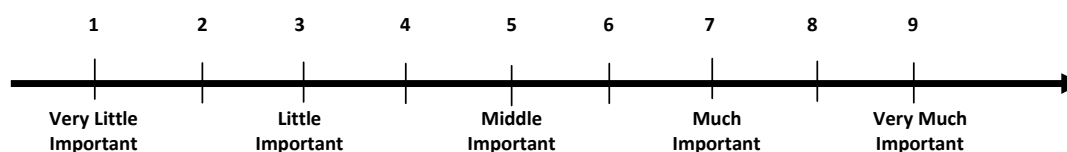


Please evaluate the **Opportunity Factors** present in comparison, and then mark your degree of priority towards one factor over the other based on their own understanding.

SWOT Category: <b>OPPORTUNITIES</b> for forest resource management in Düzlerçamı Pilot site	Degree of Priority
Increasing education, information and consciousness level of the public about the importance and sustainable management of forest resources at local, national and global level.	

Improvements in forestry enterprises with respect to multipurpose, multidisciplinary and multidimensional forest resources planning.	
The availability of new and contemporary planning methods to be possible used forest resources management (participatory planning, natural resources planning and integrated watershed management, etc.).	
Increasing importance and priorities of forest functions other than wood production and the increment and diversity in demand and expectations to those forest resources functions, and thus creating new markets as a result of increasing demand.	
Rural development as a result of forest resources management including wood productions and non-wood forest functions and thus making contributions to local economy, job creation and extra income sources.	
Voluntarily and passionately participation and contribution of public institutions, civil society organisation, local administrations and sectorial experts.	
Possibility of providing internal and inter institutional integration in forest resources management.	
Accessing research institutions and universities in the region, which conduct researches on forest resources management and planning.	
The opportunities and possibilities provided by rich community diversity, which made out of local population and the people travelled to the pilot site.	

#### SCORE SCALE

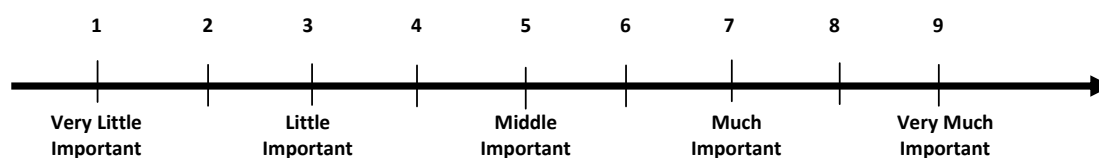


Please evaluate the **Threat Factors** present in comparison, and then mark your degree of priority towards one factor over the other based on their own understanding.

<b>SWOT Category: THREATS for forest resource management in Düzlerçamı Pilot site</b>	<b>Degree of Priority</b>
Decreasing revenue due to diminishing the quantity of wood production sold as a result of market fluctuation of supply and demand and market price and increment in harvesting costs.	
Natural resources disruption as a result of global warming, forest fires, insect-fungus and virus attacks and damages, drought, unplanned summer meadows grazing, uncontrolled grazing, illegal hunting, overexploitation, illegal poaching and logging, forestland encroachment.	
Political, economic and social pressures, influences and channelling.	
Restricted local, national and international alternatives and sustainable financial resources intended for natural resources management.	
Overlapping power and authorities inside the institutions and inter-institutions.	
Possible conflicts among Forestry Organization, the public, NGOs, private sector, and local administration (village administration, municipality, etc.).	
Unsatisfactory education, welfare and employment rate of forest villagers.	
Not to develop the possibility of employment and income sources to keep staying rural population and improve their welfare in their hometowns.	
Not to have awareness of the public, NGOs, private sector, and local administration on different forest values, except for timber products.	



### SCORE SCALE



Please evaluate the **SWOT Groups** present in comparison, and then mark your degree of priority towards one factor over the other based on their own understanding.

SWOT groups for forest resource management in Düzlerçami Pilot site	Degree of Priority
Strengths	
Weaknesses	
Opportunities	
Threats	

## Survey Form 2: Pair wise Comparison Forms for Determining the Importance of Stakeholders and Sub-stakeholders by the Members of Steering Committee

### AHP QUESTIONNAIRE FOR STEERING COMMITTEE (DECISION MAKERS)

Date:        /        /2014

For Participants;

Name and Surname: .....

Duty : .....

Compare each pair below and indicate your opinion of how important one item is over the other in the pair. Choose one number only for each pair.

If you think both are equally important, choose 1.

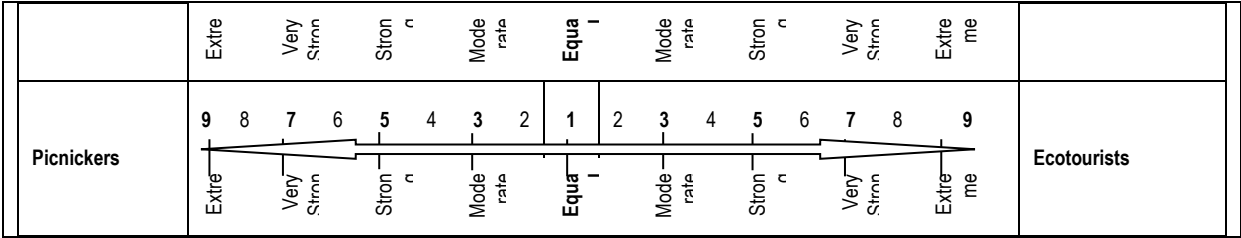
#### PAIRWISE COMPARISONS OF STAKEHOLDERS AND SUB-STAKEHOLDERS

<b>Local Administration</b> (1) Antalya Forestry Regional Directorate, (2) Sixth National Park Regional Directorate – Antalya Branch Directorate, and (3) Local Governments [(a) Governorship, (b) District Governorate, (c) Municipality, and (d) Village Administration]		<b>Local Users Living in the Site</b> (1) Local People, (2) Beekeepers, (3) Non-wood Forest Product Pickers, (4) Shepherds, and (5) Hunters
<b>Local Administration</b>		<b>Professional Interests</b> (1) South-west Anatolia Forest Research Institute, (2) University, (3) Other Public Institutions (General Directorate of Turkish State Meteorological Service, General Directorate of Land Registry and Cadastre, General Directorate of Health Services, General Directorate of National Property, and Gen. Dir. of Highway etc.), (4) Non-governmental Organizations, and (5) Chambers of Turkish Engineers and Architects
<b>Local Administration</b>		<b>Economic Interests</b> (1) Cutting Workers, (2) Private Sector (Forest Products Industrialists), and

		(3) Tourism Agencies
Local Administration		Users of the Catchment Area Coming from Outside (1) Picnickers, and (2) Ecotourists
Local Users Living in the Site		Professional Interests
Local Users Living in the Site		Economic Interests
Local Users Living in the Site		Users of the Catchment Area Coming from Outside
Professional Interests		Economic Interests
Professional Interests		Users of the Catchment Area Coming from Outside
Economic Interests		Users of the Catchment Area Coming from Outside
Antalya Forestry Regional Directorate		Sixth National Park Regional Directorate – Antalya Branch Directorate
Antalya Forestry Regional Directorate		Local Governments (a) Governorship, (b) District Governorate, (c) Municipality, and (d) Village Administration
Sixth National Park Regional Directorate – Antalya Branch Directorate		Local Administration
Local People		Beekeepers

Local People		Non-wood Forest Product Pickers
Local People		Shepherds
Local People		Hunters
Beekeepers		Non-wood Forest Product Pickers
Beekeepers		Shepherds
Beekeepers		Hunters
Non-wood Forest Product Pickers		Shepherds
Non-wood Forest Product Pickers		Hunters
Shepherds		Hunters
South-west Anatolia Forest Research Institute		University
South-west Anatolia Forest Research Institute		Other Public Institutes (Gen. Dir. of Turkish State Meteorological

		Service, General Directorate of Land Registry and Cadastre, General Directorate of Health Services, General Directorate of National Property, and Gen. Dir. of Highway etc.)
South-west Anatolia Forest Research Institute		Non-governmental Organizations
South-west Anatolia Forest Research Institute		Chambers of Turkish Engineers and Architects
University		Other Public Institutes
University		Non-governmental Organizations
University		Chambers of Turkish Engineers and Architects
Other Public Institutes		Non-governmental Organizations
Other Public Institutes		Chambers of Turkish Engineers and Architects
Non-governmental Organizations		Chambers of Turkish Engineers and Architects
Cutting Workers		Private Sector (Forest Products Industrialists)
Cutting Workers		Tourism Agencies



### Survey Form 3: Pair wise Comparison Forms for Determining the Importance of Decision Criteria by the Members of Steering Committee, Stakeholders' Categories (Local Administration, Local Users Living in the Site, Professional Interests, Economic Interests, and Users of the Catchment Area Coming from Outside), and Scientific Committee

#### AHP QUESTIONNAIRE FOR STEERING COMMITTEE (DECISION MAKERS), STAKEHOLDER CATEGORIES AND

#### SCIENTIFIC COMMITTEE (SECTOR EXPERTS)

Date : / /2014

For Participants;

Name and Surname: .....

Duty : .....

Compare each pair below and indicate your opinion of how important one item is over the other in the pair. Choose one number only for each pair. If you think both are equally important, choose 1.

#### PAIRWISE COMPARISONS OF DECISION CRITERIA

Monetary and Financial Contribution to the System of Ministry of Forest and Water Affairs	<div> <div>9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9</div> <div>Extre ma Very Stron Stron Mode rata Equa Mode rata Stron Very Stron Extre ma</div> </div>	Contribution to Food Security
Monetary and Financial Contribution to the System of Ministry of Forest and Water Affairs	<div> <div>9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9</div> <div>Extre ma Very Stron Stron Mode rata Equa Mode rata Stron Very Stron Extre ma</div> </div>	Support to Production of Natural Food
Monetary and Financial Contribution to the System of Ministry of Forest and Water Affairs	<div> <div>9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9</div> <div>Extre ma Very Stron Stron Mode rata Equa Mode rata Stron Very Stron Extre ma</div> </div>	Support to Forest Protection
Monetary and Financial Contribution to the System of Ministry of Forest and Water Affairs	<div> <div>9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9</div> <div>Extre ma Very Stron Stron Mode rata Equa Mode rata Stron Very Stron Extre ma</div> </div>	Support to Rural Development
Monetary and Financial Contribution to the System of Ministry of Forest and Water Affairs	<div> <div>9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9</div> <div>Extre ma Very Stron Stron Mode rata Equa Mode rata Stron Very Stron Extre ma</div> </div>	Support to Employment
Monetary and Financial Contribution to the System of Ministry of Forest and Water Affairs	<div> <div>9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9</div> <div>Extre ma Very Stron Stron Mode rata Equa Mode rata Stron Very Stron Extre ma</div> </div>	Support to Exchange Savings
Monetary and Financial Contribution to the System of Ministry of Forest and Water Affairs	<div> <div>9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9</div> <div>Extre ma Very Stron Stron Mode rata Equa Mode rata Stron Very Stron Extre ma</div> </div>	Support to the Other Sectors



Monetary and Financial Contribution to the System of Ministry of Forest and Water Affairs		Prominence Due to International Contractual
Monetary and Financial Contribution to the System of Ministry of Forest and Water Affairs		Contribution to Comprehending of Importance of Forest Resources
Monetary and Financial Contribution to the System of Ministry of Forest and Water Affairs		Strengthening to Professional Honour
Contribution to Food Security		Support to Production of Natural Food
Contribution to Food Security		Support to Forest Protection
Contribution to Food Security		Support to Rural Development
Contribution to Food Security		Support to Employment
Contribution to Food Security		Support to Exchange Savings
Contribution to Food Security		Support to the Other Sectors
Contribution to Food Security		Prominence Due to International Contractual
Contribution to Food Security		Contribution to Comprehending of Importance of Forest Resources

Contribution to Food Security		Strengthening to Professional Honour
Support to Production of Natural Food		Support to Forest Protection
Support to Production of Natural Food		Support to Rural Development
Support to Production of Natural Food		Support to Employment
Support to Production of Natural Food		Support to Exchange Savings
Support to Production of Natural Food		Support to the Other Sectors
Support to Production of Natural Food		Prominence Due to International Contractual
Support to Production of Natural Food		Contribution to Comprehending of Importance of Forest Resources
Support to Production of Natural Food		Strengthening to Professional Honour
Support to Forest Protection		Support to Rural Development
Support to Forest Protection		Support to Employment

Support to Forest Protection		Support to Exchange Savings
Support to Forest Protection		Support to the Other Sectors
Support to Forest Protection		Prominence Due to International Contractual
Support to Forest Protection		Contribution to Comprehending of Importance of Forest Resources
Support to Forest Protection		Strengthening to Professional Honour
Support to Rural Development		Support to Employment
Support to Rural Development		Support to Exchange Savings
Support to Rural Development		Support to the Other Sectors
Support to Rural Development		Prominence Due to International Contractual
Support to Rural Development		Contribution to Comprehending of Importance of Forest Resources
Support to Rural Development		Strengthening to Professional Honour

Support to Employment		Support to Exchange Savings
Support to Employment		Support to the Other Sectors
Support to Employment		Prominence Due to International Contractual
Support to Employment		Contribution to Comprehending of Importance of Forest Resources
Support to Employment		Strengthening to Professional Honour
Support to Exchange Savings		Support to the Other Sectors
Support to Exchange Savings		Prominence Due to International Contractual
Support to Exchange Savings		Contribution to Comprehending of Importance of Forest Resources
Support to Exchange Savings		Strengthening to Professional Honour
Support to the Other Sectors		Prominence Due to International Contractual
Support to the Other Sectors		Contribution to Comprehending of Importance of Forest Resources

Support to the Other Sectors		Strengthening to Professional Honour
Prominence Due to International Contractual		Contribution to Comprehending of Importance of Forest Resources
Prominence Due to International Contractual		Strengthening to Professional Honour
Contribution to Comprehending of Importance of Forest Resources		Strengthening to Professional Honour

## Survey Form 4: Pair wise Comparison Forms for Determining the Importance of Forest Values According to Each Decision Criterion by the Members of Scientific Committee

AHP QUESTIONNAIRE FOR SCIENTIFIC COMMITTEE (SECTOR EXPERTS)																		
Date :        /        /2014																		
For Participants;																		
Name and Surname: .....																		
Duty : .....																		
Compare each pair below and indicate your opinion of how important one item is over the other in the pair. Choose one number only for each pair. If you think both are equally important, choose 1.																		
<b>PAIRWISE COMPARISONS OF FOREST VALUES ACCORDING TO EACH DECISION CRITERION</b>																		
<ul style="list-style-type: none"> <li>COMPARISONS OF FOREST VALUES ACCORDING TO DECISION CRITERION "MONETARY AND FINANCIAL CONTRIBUTION TO THE SYSTEM OF MINISTRY OF FOREST AND WATER AFFAIRS"</li> </ul>																		
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Wood Production Value
	Extre		ma		Very		Stron		Equa		Mode		Stron		Very		Extre	
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Non-wood Forest Products Production Value
	Extre		ma		Very		Stron		Equa		Mode		Stron		Very		Extre	
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Forage Production Value
	Extre		ma		Very		Stron		Equa		Mode		Stron		Very		Extre	
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Tourism Value
	Extre		ma		Very		Stron		Equa		Mode		Stron		Very		Extre	
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Water Quality and Quantity Value
	Extre		ma		Very		Stron		Equa		Mode		Stron		Very		Extre	
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Recreation Value
	Extre		ma		Very		Stron		Equa		Mode		Stron		Very		Extre	
Wood Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Non-wood Forest Products Production Value
	Extre		ma		Very		Stron		Equa		Mode		Stron		Very		Extre	
Wood Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Forage Production Value
	Extre		ma		Very		Stron		Equa		Mode		Stron		Very		Extre	

	Extrema	Very Strong	Strong	Moderate	Equal	Moderate	Strong	Very Strong	Extrema									
Wood Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Tourism Value
Wood Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Water Quality and Quantity Value
Wood Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Recreation Value
Non-wood Forest Products Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Forage Production Value
Non-wood Forest Products Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Tourism Value
Non-wood Forest Products Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Water Quality and Quantity Value
Non-wood Forest Products Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Recreation Value
Forage Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Tourism Value
Forage Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Water Quality and Quantity Value
Forage Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Recreation Value
Tourism Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Water Quality and Quantity



	<div><div>Extrema</div><div>Very Strong</div><div>Strong</div><div>Moderate</div><div>Equal</div><div>Moderate</div><div>Strong</div><div>Very Strong</div><div>Extrema</div></div>																Value
Tourism Value	<div><div>98765432123456789</div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div>																Recreation Value
Water Quality and Quantity Value	<div><div>98765432123456789</div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div>																Recreation Value

COMPARISONS OF FOREST VALUES ACCORDING TO DECISION CRITERION “SUPPORT TO PRODUCTION OF NATURAL FOOD”

Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Wood Production Value
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Non-wood Forest Products Production Value
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Forage Production Value
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Tourism Value
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Water Quality and Quantity Value
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Recreation Value
Wood Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Non-wood Forest Products Production Value
Wood Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Forage Production Value

Wood Production Value		Tourism Value
Wood Production Value		Water Quality and Quantity Value
Wood Production Value		Recreation Value
Non-wood Forest Products Production Value		Forage Production Value
Non-wood Forest Products Production Value		Tourism Value
Non-wood Forest Products Production Value		Water Quality and Quantity Value
Non-wood Forest Products Production Value		Recreation Value
Forage Production Value		Tourism Value
Forage Production Value		Water Quality and Quantity Value
Forage Production Value		Recreation Value
Tourism Value		Water Quality and Quantity Value

<p><b>Tourism Value</b></p>		<p><b>Recreation Value</b></p>
<p><b>Water Quality and Quantity Value</b></p>		<p><b>Recreation Value</b></p>

COMPARISONS OF FOREST VALUES ACCORDING TO DECISION CRITERION "SUPPORT TO FOREST PROTECTION"

Environmental Values		Wood Production Value
Environmental Values		Non-wood Forest Products Production Value
Environmental Values		Forage Production Value
Environmental Values		Tourism Value
Environmental Values		Water Quality and Quantity Value
Environmental Values		Recreation Value
Wood Production Value		Non-wood Forest Products Production Value
Wood Production Value		Forage Production Value
Wood Production Value		Tourism Value

Wood Production Value		Water Quality and Quantity Value
Wood Production Value		Recreation Value
Non-wood Forest Products Production Value		Forage Production Value
Non-wood Forest Products Production Value		Tourism Value
Non-wood Forest Products Production Value		Water Quality and Quantity Value
Non-wood Forest Products Production Value		Recreation Value
Forage Production Value		Tourism Value
Forage Production Value		Water Quality and Quantity Value
Forage Production Value		Recreation Value
Tourism Value		Water Quality and Quantity Value
Tourism Value		Recreation Value

Water Quality and Quantity Value		Recreation Value
COMPARISONS OF FOREST VALUES ACCORDING TO DECISION CRITERION "SUPPORT TO RURAL DEVELOPMENT"		
Environmental Values		Wood Production Value
Environmental Values		Non-wood Forest Products Production Value
Environmental Values		Forage Production Value
Environmental Values		Tourism Value
Environmental Values		Water Quality and Quantity Value
Environmental Values		Recreation Value
Wood Production Value		Non-wood Forest Products Production Value
Wood Production Value		Forage Production Value
Wood Production Value		Tourism Value

Wood Production Value		Water Quality and Quantity Value
Wood Production Value		Recreation Value
Non-wood Forest Products Production Value		Forage Production Value
Non-wood Forest Products Production Value		Tourism Value
Non-wood Forest Products Production Value		Water Quality and Quantity Value
Non-wood Forest Products Production Value		Recreation Value
Forage Production Value		Tourism Value
Forage Production Value		Water Quality and Quantity Value
Forage Production Value		Recreation Value
Tourism Value		Water Quality and Quantity Value
Tourism Value		Recreation Value

Water Quality and Quantity Value		Recreation Value
COMPARISONS OF FOREST VALUES ACCORDING TO DECISION CRITERION "SUPPORT TO EMPLOYMENT"		
Environmental Values		Wood Production Value
Environmental Values		Non-wood Forest Products Production Value
Environmental Values		Forage Production Value
Environmental Values		Tourism Value
Environmental Values		Water Quality and Quantity Value
Environmental Values		Recreation Value
Wood Production Value		Non-wood Forest Products Production Value
Wood Production Value		Forage Production Value
Wood Production Value		Tourism Value
Wood Production		Water Quality and



Value		Quantity Value
Wood Production Value		Recreation Value
Non-wood Forest Products Production Value		Forage Production Value
Non-wood Forest Products Production Value		Tourism Value
Non-wood Forest Products Production Value		Water Quality and Quantity Value
Non-wood Forest Products Production Value		Recreation Value
Forage Production Value		Tourism Value
Forage Production Value		Water Quality and Quantity Value
Forage Production Value		Recreation Value
Tourism Value		Water Quality and Quantity Value
Tourism Value		Recreation Value
Water Quality and		Recreation Value

Quantity Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	
	Extre	ma	Very	Stron	Stron	Mode	Mode	Equa	Mode	Mode	Stron	Very	Stron	Extre	ma			
COMPARISONS OF FOREST VALUES ACCORDING TO DECISION CRITERION "SUPPORT TO EXCHANGE SAVINGS"																		
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Wood Production Value
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Non-wood Forest Products Production Value
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Forage Production Value
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Tourism Value
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Water Quality and Quantity Value
Environmental Values	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Recreation Value
Wood Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Non-wood Forest Products Production Value
Wood Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Forage Production Value
Wood Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Tourism Value
Wood Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Water Quality and Quantity Value

Wood Production Value		Recreation Value
Non-wood Forest Products Production Value		Forage Production Value
Non-wood Forest Products Production Value		Tourism Value
Non-wood Forest Products Production Value		Water Quality and Quantity Value
Non-wood Forest Products Production Value		Recreation Value
Forage Production Value		Tourism Value
Forage Production Value		Water Quality and Quantity Value
Forage Production Value		Recreation Value
Tourism Value		Water Quality and Quantity Value
Tourism Value		Recreation Value
Water Quality and Quantity Value		Recreation Value

# COMPARISONS OF FOREST VALUES ACCORDING TO DECISION CRITERION “SUPPORT TO THE OTHER SECTORS”

Environmental Values		Wood Production Value
Environmental Values		Non-wood Forest Products Production Value
Environmental Values		Forage Production Value
Environmental Values		Tourism Value
Environmental Values		Water Quality and Quantity Value
Environmental Values		Recreation Value
Wood Production Value		Non-wood Forest Products Production Value
Wood Production Value		Forage Production Value
Wood Production Value		Tourism Value
Wood Production Value		Water Quality and Quantity Value

Wood Production Value		Recreation Value
Non-wood Forest Products Production Value		Forage Production Value
Non-wood Forest Products Production Value		Tourism Value
Non-wood Forest Products Production Value		Water Quality and Quantity Value
Non-wood Forest Products Production Value		Recreation Value
Forage Production Value		Tourism Value
Forage Production Value		Water Quality and Quantity Value
Forage Production Value		Recreation Value
Tourism Value		Water Quality and Quantity Value
Tourism Value		Recreation Value
Water Quality and Quantity Value		Recreation Value

**COMPARISONS OF FOREST VALUES ACCORDING TO DECISION CRITERION “PROMINENCE DUE TO INTERNATIONAL CONTRACTUAL”**

Environmental Values		Wood Production Value
Environmental Values		Non-wood Forest Products Production Value
Environmental Values		Forage Production Value
Environmental Values		Tourism Value
Environmental Values		Water Quality and Quantity Value
Environmental Values		Recreation Value
Wood Production Value		Non-wood Forest Products Production Value
Wood Production Value		Forage Production Value
Wood Production Value		Tourism Value
Wood Production Value		Water Quality and Quantity Value
Wood Production		Recreation Value

Value		
Non-wood Forest Products Production Value		Forage Production Value
Non-wood Forest Products Production Value		Tourism Value
Non-wood Forest Products Production Value		Water Quality and Quantity Value
Non-wood Forest Products Production Value		Recreation Value
Forage Production Value		Tourism Value
Forage Production Value		Water Quality and Quantity Value
Forage Production Value		Recreation Value
Tourism Value		Water Quality and Quantity Value
Tourism Value		Recreation Value
Water Quality and Quantity Value		Recreation Value



COMPARISONS OF FOREST VALUES ACCORDING TO DECISION CRITERION “CONTRIBUTION TO COMPREHENDING OF IMPORTANCE OF FOREST RESOURCES”

Environmental Values		Wood Production Value
Environmental Values		Non-wood Forest Products Production Value
Environmental Values		Forage Production Value
Environmental Values		Tourism Value
Environmental Values		Water Quality and Quantity Value
Environmental Values		Recreation Value
Wood Production Value		Non-wood Forest Products Production Value
Wood Production Value		Forage Production Value
Wood Production Value		Tourism Value
Wood Production Value		Water Quality and Quantity Value
Wood Production Value		Recreation Value

Non-wood Forest Products Production Value		Forage Production Value
Non-wood Forest Products Production Value		Tourism Value
Non-wood Forest Products Production Value		Water Quality and Quantity Value
Non-wood Forest Products Production Value		Recreation Value
Forage Production Value		Tourism Value
Forage Production Value		Water Quality and Quantity Value
Forage Production Value		Recreation Value
Tourism Value		Water Quality and Quantity Value
Tourism Value		Recreation Value
Water Quality and Quantity Value		Recreation Value

## COMPARISONS OF FOREST VALUES ACCORDING TO DECISION CRITERION “STRENGTHENING TO PROFESSIONAL HONOUR”

Environmental Values		Wood Production Value
Environmental Values		Non-wood Forest Products Production Value
Environmental Values		Forage Production Value
Environmental Values		Tourism Value
Environmental Values		Water Quality and Quantity Value
Environmental Values		Recreation Value
Wood Production Value		Non-wood Forest Products Production Value
Wood Production Value		Forage Production Value
Wood Production Value		Tourism Value
Wood Production Value		Water Quality and Quantity Value
Wood Production Value		Recreation Value

	Extre ma	Very Stron	Stron	Mode rata	Equa	Mode rata	Stron	Very Stron	Extre me									
Non-wood Forest Products Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Forage Production Value
Non-wood Forest Products Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Tourism Value
Non-wood Forest Products Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Water Quality and Quantity Value
Non-wood Forest Products Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Recreation Value
Forage Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Tourism Value
Forage Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Water Quality and Quantity Value
Forage Production Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Recreation Value
Tourism Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Water Quality and Quantity Value
Tourism Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Recreation Value
Water Quality and Quantity Value	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Recreation Value

## Survey Form 5: Questionnaire Form for Measuring the Stakeholders' Committee/Forum Members' Current Opinions and Involvement in Forest Resources Management in Düzlerçamı pilot site for Pre-Assessments of Participation Process

### QUESTIONNAIRE PART THAT MEASURES THE PRE-ASSESSMENTS OF PARTICIPATION PROCESS

This questionnaire is designed to get your opinions to involvement in forest resources management in Düzlerçamı region. Please read each statement carefully, and then circle the answer that best describes your point of view. In other words, please circle the number of your answer that reflects how you feel about the statement. This is not a test. THERE ARE NO "RIGHT OR WRONG" ANSWERS to the questions. Your answer will be kept COMPLETELY CONFIDENTIAL. FILLING OUT THE QUESTIONNAIRE IS ENTIRELY VOLUNTARY, you can indicate your voluntary agreement to participate by completing this questionnaire. THANK YOU VERY MUCH.

ID	STATEMENTS	STRONGLY DISAGREE	DISAGREE	UNDECIDED	AGREE	STRONGLY AGREE
1.	Forestry Organization makes always its objectives and activities known to us.	1	2	3	4	5
2.	We know the plans and maps of forestry.	1	2	3	4	5
3.	We are aware of the forestry activities conducted by other users of the territory, except for Forestry Organization.	1	2	3	4	5
4.	Forestry Organization recognizes the legitimacy of our interests and rights.	1	2	3	4	5
5.	Our concerns, needs and values are directly incorporated into decision making by Forestry Organization.	1	2	3	4	5
6.	Forestry Organization modifies its plans and applications according to our opinions and expectations.	1	2	3	4	5
7.	Forest management plans take different forest resources and uses into account.	1	2	3	4	5
8.	Forestry Organization uses the surveys for taking our opinions.	1	2	3	4	5
9.	Forestry Organization organizes the meetings for taking our opinions.	1	2	3	4	5
10.	Forestry Organization applies the face-to-face meetings for taking our opinions.	1	2	3	4	5
11.	Frequency at which we meet the Forestry Organization is satisfactory.	1	2	3	4	5
12.	We have no conflict with other stakeholders.	1	2	3	4	5
13.	Forestry Organization gives importance to decisions about issues of the increasing our quality of life.	1	2	3	4	5
14.	Forestry Organization consults our opinions before decision making.	1	2	3	4	5

## Survey Form 6: Questionnaire Form for Measuring the Impacts and Results of Participation Process, and the Stakeholders' Committee/Forum Members' Satisfaction Levels Regarding Involvement in FFEM Initiative in Düzlerçamı pilot site for Post-Assessments of Participation Process

### QUESTIONNAIRE PART THAT MEASURES THE POST-ASSESSMENTS OF PARTICIPATION PROCESS

This questionnaire is designed to get your opinions to the impacts and results of participation process, and your satisfaction levels for post-assessments of participation process within FFEM initiative applied in Düzlerçamı region. Please read each statement carefully, and then circle the answer that best describes your point of view. In other words, please circle the number of your answer that reflects how you feel about the statement. This is not a test. THERE ARE NO "RIGHT OR WRONG" ANSWERS to the questions. Your answer will be kept COMPLETELY CONFIDENTIAL. FILLING OUT THE QUESTIONNAIRE IS ENTIRELY VOLUNTARY; you can indicate your voluntary agreement to participate by completing this questionnaire. THANK YOU VERY MUCH.

ID	STATEMENTS	STRONGLY DISAGREE	DISAGREE	UNDECIDED	AGREE	STRONGLY AGREE
1.	Participation process was not biased to the Forestry Organization's viewpoint	1	2	3	4	5
2.	Participation process was fair to me.	1	2	3	4	5
3.	There was opportunity to negotiate my needs and expectations during participation process.	1	2	3	4	5
4.	It was given the feelings that my opinions were important during participation process.	1	2	3	4	5
5.	Participation process was skilfully designed.	1	2	3	4	5
6.	The monetary costs of the participation process were suitable Table.	1	2	3	4	5
7.	Participation process was efficient in terms of time, not boring and long.	1	2	3	4	5
8.	The final appeal decision seemed fair to me, and it was not biased.	1	2	3	4	5
9.	I felt my opinions and demands influenced the final appeal decision.	1	2	3	4	5
10.	The public opinions and demands were sufficiently served by the final appeal decision.	1	2	3	4	5
11.	The final appeal decision was environmentally sound.	1	2	3	4	5
12.	Implementation of the final appeal decision can be done in a financially sound manner.	1	2	3	4	5
13.	The final appeal decision was technically feasible.	1	2	3	4	5
14.	Implementation of the final appeal decision was possible in a short time.	1	2	3	4	5

## Survey Form 7: Questionnaire Form for Determining the Sociodemographic Characteristics of the Stakeholders' Committee/Forum Members in Düzlerçamı Pilot Site

### QUESTIONNAIRE PART THAT DETERMINE THE STAKEHOLDERS' COMMITTEE/FORUM MEMBERS' SOCIODEMOGRAPHIC CHARACTERISTICS

Instruction: Please circle your answer for each question or complete all areas by checking the appropriate space.

1. Please indicate your highest level of education.

Elementary School\_\_\_\_\_

Secondary Education\_\_\_\_\_

High School\_\_\_\_\_

College/University\_\_\_\_\_

Undergraduate\_\_\_\_\_

Other (Please Specify)\_\_\_\_\_

2. Please indicate your age.

17 or Under\_\_\_\_\_

18–24\_\_\_\_\_

25–34\_\_\_\_\_

35–44\_\_\_\_\_

45–54\_\_\_\_\_

55–64\_\_\_\_\_

65 or Over\_\_\_\_\_

3. Please indicate your gender.

Male\_\_\_\_\_

Female\_\_\_\_\_

4. Please indicate your marital status.

Single\_\_\_\_\_

Married\_\_\_\_\_

Other (Please Specify)\_\_\_\_\_

5. Please indicate your main source of income and/or employment in the point of view forest resources relations in Düzlerçamı pilot site.

Village Administrating\_\_\_\_\_

Beekeeping\_\_\_\_\_

Non-wood Forest Product Picking\_\_\_\_\_

Hunting\_\_\_\_\_

Cutting Working\_\_\_\_\_

Shepherding\_\_\_\_\_

Local People\_\_\_\_\_



Other (Please Specify) \_\_\_\_\_

6. Please indicate your residence village in Düzlerçamı pilot site.

Yukarı Karaman village \_\_\_\_\_

Akkoç village \_\_\_\_\_

Çığlık village \_\_\_\_\_

## Survey Form 8: Questionnaire Form for Determining the Comments of the Stakeholders' Committee/Forum Members in Düzlerçamı Pilot Site

### QUESTIONNAIRE PART THAT DETERMINE THE STAKEHOLDERS' COMMITTEE/FORUM MEMBERS' OPINIONS

Instruction: Please provide additional comments that you believe are important in involving in current forest resources management, and in assessing the impacts and results of participation process and your satisfaction levels for post-assessments of participation process within FFEM initiative applied in Düzlerçamı region

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*Thank you for your cooperation in completing this questionnaire. We appreciate very much that you have taken time of your daily schedule to assist in this study. Be assured that your responses will be kept the strictest confidence.*

