

Recommendations for Developing National Action Plans:

The Sustainable Livelihood and Natural Resources Management in Afghanistan



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Table of Contents

Acknowledgements.....	II
Table of Contents	III
List of Tables.....	V
List of Figures	VI
Abbreviations and Acronyms.....	VII
Chapter 1.....	- 1 -
EXECUTIVE SUMMARY	- 1 -
KEY FINDINGS.....	- 5 -
CONCLUSIONS.....	- 6 -
RECOMMENDATIONS	- 8 -
FORWARD.....	- 9 -
REPORT STRUCTURE.....	- 10 -
Chapter 2.....	- 11 -
INTRODUCTION.....	- 11 -
APPROACH AND METHODOLOGY OF THE STUDY.....	- 13 -
2.1 Background.....	- 13 -
2.2 Methodological approach of the study	- 16 -
2.2.1 Delphi survey study and set of criteria and indicators	- 18 -
2.2.2 Study methods and research process.....	- 20 -
2.2.3 Desk study review.....	- 21 -
2.2.4 Information sharing and feedback	- 23 -
2.3 The challenge of synthesizing research	- 24 -
CHAPTER 3	- 27 -
SUSTAINABLE LIVELIHOOD AND NATURAL RESOURCE MANAGEMENT - 27	
-	
3.1 The concept of Sustainable Livelihood.....	- 27 -
3.2 The concept of Sustainable Natural Resource Management	- 30 -
3.3 Linking Sustainable livelihood and Natural Resources.....	- 31 -
CHAPTER 4	- 34 -
CASE STUDY: AFGHANISTAN.....	- 34 -
4.1 Background.....	- 34 -
4.1.1 Islamic Republic of Afghanistan: National Strategy and Action Plans	- 34 -
4.2 A set of Indicators and brief descriptions	- 41 -
4.3 Delphi experts participating in the survey	- 44 -
4.4 Result and analysis based on the preference elicitation.....	- 45 -
4.4.1 Preference elicitation on Criteria Set 1 (Disaster Risk Management)	- 46 -
4.4.2 Preference elicitation on Criteria Set 2 (Forest management).....	- 47 -
4.4.3 Preference elicitation on Criteria Set 3 (Land Use, Biodiversity and Pasture Land Management)	- 48 -

4.4.4 Preference elicitation on Criteria Set 4 (Environment and Ecosystem Management)	50 -
4. 4.5 Preference elicitation on Criteria Set 5 (Livelihood Promotion)	52 -
4. 4.6 Preference elicitation on Criteria Set 6 (Co-ordination. Co-operation and other cross-cutting issues).....	53 -
4.5 Assessment of Problems, Activities and Recommendation for National Action Plans.....	55 -
4.5.1 Assessment of Problems, Activities and Recommendation on Criteria Set 1 (Disaster Risk Management), Afghanistan	56
4.5.2 Assessment of Problems, Activities and Recommendation on Criteria 2 (Forest management), Afghanistan.....	58
4.5.3 Assessment of Problems, Activities and Recommendation on Criteria Set 3 (Land Use, Biodiversity and Pasture Land Management), Afghanistan	62
4.5.4 Assessment of Problems, Activities and Recommendation on Criteria Set 4 (Environment and Ecosystem Management), Afghanistan.....	65
4.5.5 Assessment of Problems, Activities and Recommendation on Criteria Set 5 (Livelihood Promotion), Afghanistan.....	67
4.5.6 Assessment of Problems, Activities and Recommendation on Criteria 6 (Co-ordination, Co-operation and other cross-cutting issues), Afghanistan.....	70
CHAPTER 5	73
5. CONCLUSIONS AND RECOMMENDATIONS	73
5.1 Conclusions	73
5.2 Recommendations	75
6. REFERENCE	89
ANNEX.....	91

List of Tables

Table 1: Respondents of Delphi survey from three countries (Source: Delphi survey, 2012)	- 4 -
Table 2: The study team members for the Delphi study, Afghanistan.....	- 19 -
Table 3: Lists of possible standard set for Sustainable Livelihood and Natural Resource Management, PAMIR Project/ Afghanistan.....	- 42 -
Table 5: Stakeholder preference for the indicators of criteria 2 (Forest management and Biodiversity Conservation), Afghanistan.....	- 47 -

List of Figures

Figure 4.1: Applicability at National, Province, District and Local level by Stakeholder Preference elicitation for the indicators on Criteria Set 1 (Disaster Risk Management), Afghanistan	46 -
Figure 4.2: Overall importance by Stakeholder preference for the indicators on Criteria Set 1 (Disaster Risk Management), Afghanistan	47 -
Figure 4.3: Overall importance by Stakeholder preference for the indicators on criteria 2 (Forest management and Biodiversity Conservation), Afghanistan....	48 -
Figure 4.4: Applicability at National, Province. District and Local level by Stakeholder Preference elicitation for the indicators on Criteria Set 3 (Land Use, Biodiversity and Pasture Land Management), Afghanistan.....	49 -
Figure 4.5 Overall importance by Stakeholder preference for the indicators on Criteria Set 3 (Land Use, Biodiversity and Pasture Land Management). Afghanistan	50 -
Figure 4.6: Applicability at National, Province, District and Local level by Stakeholder Preference elicitation for the indicators on Criteria Set 4 (Environment and Ecosystem Management). Afghanistan.....	51 -
Figure 4.7 Overall importance by Stakeholder preference for the indicators on Criteria Set 4 (Environment and Ecosystem Management), Afghanistan....	52 -
Figure 4.8: Applicability at National, Province, District and Local level by Stakeholder Preference elicitation for the indicators on Criteria Set 5 (Livelihood Promotion). Afghanistan.....	52 -
Figure 4.9 Overall importance's by Stakeholder preference for the indicators on Criteria Set 5 (Livelihood Promotion). Afghanistan.....	53 -
Figure 4.10: Applicability at National, Province, District and Local level by Stakeholder Preference elicitation for the indicators on Criteria Set 6, Afghanistan	54 -
Figure 4.11: Overall importance by Stakeholder preference for the indicators on Criteria Set 6 (Co-ordination, Co-operation and other cross-cutting issues). Afghanistan	54 -

Abbreviations and Acronyms

ADB	Asian Development Bank
AKN	Aga Khan Network
ANDS	Afghanistan National Development Strategy
BOKU	University of Natural Resources and Life Sciences
CARE	Cooperative for Assistance and Relief Everywhere
CBNRM	Community-based Natural Resource management
CBO	Community-based Organization
CDS	Country Development Strategy
DFID	Department for International Development
DRR	Disaster Risk Reduction
EC	European Commission
ESMF	Environmental and Social Management Framework
EU	European Union
FAO	Food and Agriculture Organization
FUG	Forest User Group
GDP	Gross Domestic Products
GESI	Gender Equity and Social Inclusion
GTZ	Gesellschaft für Technische Zusammenarbeit
HFA	Hyogo Framework for Action 2005–2015
HWA	Hilfswerk Austria International
ICIMOD	International Centre for Integrated Mountain Development
IDS	Institute for Development Studies
IKE	International Key Expert
INRM	Integrated Natural Resource Management
JFM	Joint Forest Management
LDCs	Least developed countries
M&E	Monitoring and Evaluation
MDGs	Millennium Development Goals
MRI	Mountain Research Initiative

MSDSP	Mountain Societies Development Support Programme
NAPs	National Action Plans (NAPs)
NCSA	National Capacity Needs Self-Assessment for Global Environmental Management
NGO	Non-governmental Organization
NAPA	National Adaptation Programme of Action
NEPA	National Environmental Protection Agency,
NRM	Natural Resource Management
OECD	Organisation for Economic Co-operation and Development
PAMIR	Poverty Alleviation by Mitigation of Integrated high-mountain Risk
PAR	Participatory Action Research
PRS	Poverty Reduction Strategy
PRSP	Poverty Reduction Strategy Plan
R&D	Research and Development
SFM	Sustainable Forest Management
SLM	Sustainable Land Management
SLNRM	Sustainable Livelihood and Natural Resource Management
SMLM	Sustainable Mountainous Land Management Model
SNAP	Strategic National Action Plan for Disaster Risk Reduction
SPNA	Specially Protected Nature Areas
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
USGS	United States Geodetic Survey
WB	World Bank
WSS	Water Law and the Water Sector Strategy

Chapter 1

EXECUTIVE SUMMARY

The study report has been prepared as a part of the **Poverty Alleviation through Mitigation of Integrated high Risk (PAMIR)** project and analyzes the existing policy provisions and development of national initiatives and strategies of sustainable livelihood and natural resources management that can enhance and contribute to disaster risk reduction, poverty reduction, sustainable land use and forest management and environmental sustainability of Central Asia in general. Hilfswerk Austria international (HWA) has been working in Tajikistan since 2001 as a humanitarian support and is currently implementing a European Union (EU) funded project with its implementing partners PAMIR project (University of Natural Resources and Life Sciences (BOKU), FOCUS Humanitarian Assistance (Affiliate of Aga Khan Network), Tajikistan/Afghanistan and Mountain Societies Development Support Programme (MSDSP) in Kyrgyzstan (Affiliate of Aga Khan Network). In the Pamir region, several other organizations are working to promote sustainable development and reduce poverty with incorporating mountain perspectives and in doing so, increase community resilience. Therefore, the study also contributes to identifying the elements of sustainable livelihood and natural resource management and the way in which the interaction with the help of stakeholders' perception is structured. The study also contributes to a coherent debate about the many factors that affect Disaster Risk Reduction (DRR), Forest Management, Land Use, Biodiversity and Pasture Land Management, Environment Management, Livelihood promotion and Co-operation, Co-ordination and other cross-cutting issues. The other objectives of the study are to recommend strategic entry points, to support natural resources management and livelihood at the regional level (country specific) and to provide a proposal and a recommendation for Sustainable Livelihood and Natural Resources Management (SLNRM) in the regional context which will help to develop and agree on next steps during the upcoming regional conference, Aug, 2013.

In this context, the report has been focusing on facilitating and developing the national action plans (NAPs) for disaster risk reduction, poverty reduction and environmental protection in Afghanistan, Kyrgyzstan and Tajikistan in the framework of **Sustainable Livelihood and Natural Resources Management**. Three countries (Afghanistan, Kyrgyzstan and Tajikistan) were selected to conduct studies and identify useful information for the development of

national standards in the framework for sustainable livelihood and natural resources management. The specific objectives of the study were to gather ideas, information and feedback from the experts, determine the extent of consensus among the survey participants , and to establish the priority or importance assigned to each of the items/issues (hereafter indicators) related DRR; Forestry, Land Use, Livelihood for each country. This process was made possible thanks to the participation of diverse groups of stakeholders at the national level, especially the scientific community, experts, researchers, government officials and the members of civil society.

In order to identify the key recommendations on sustainable livelihood and natural resources management, several face-to face meetings and one national workshop among the key stakeholders in each country were organized. The purpose was to share information and knowledge as well as to develop the study methodology and common approaches for addressing all three dimensions: poverty reduction, disaster risk reduction and environmental sustainability. The research ideas and the methodology were discussed at a preparatory meeting held in Dushanbe on December 2011 and Bishkek on January 2012. The detailed research design and the plan for the desk study were reviewed and the Delphi survey was shared at an expert meeting held in Vienna from 18 to 20 April, 2012. The Delphi survey was conducted between June and Nov 2012 and preliminary findings of the study were presented in the national workshop which was held in Osh, Kyrgyzstan (Aug 2012), Dushanbe; Tajikistan (Sep 2012) and Kabul (Dec 2012). This document is now being circulated among the project co-ordinator and all project team leaders for their genuine inputs, comments, insights and observations concerning the study.

During the 14 months of the implementation period, including 40 days consultancy job, the activities were organized in four different phases as shown below:

<i>Phase</i>	<i>Main tasks addressed</i>	<i>Period</i>
Phase I	Field plan and design of the study	Oct-Nov, 2011
Phase II	Desk study, developing study methodology and face to face meeting with stakeholders and project staff workshop	Nov 2011 to Jan 2012
Phase III	Details concerning the development of the survey questionnaire and methods discussed in expert-meeting and scientific forum. Finalizing the details for the Delphi survey procedure and questionnaire	Apr-May, 2012

Phase IV	Conducting the Delphi survey and presenting the preliminary finding at a national workshop	June to Dec, 2012
Phase V	Analysis and write up of the reports for each country	Jan-March, 2013

Phase I

With PAMIR staff, the international key expert (IKE) prepared a preliminary methodology based on the available information and national strategies and actions plans for poverty reduction, disaster risk reduction and forest and land use management in Afghanistan, Kyrgyzstan and Tajikistan. Under the supervision of project co-ordinator, one consultant was recruited and three working groups in each country were proposed to assist and guide the study. The preliminary Delphi survey methodology was presented in Tajikistan and Kyrgyzstan and discussed for further development in phase II.

Phase II

The study team conducted office visit and face to face meetings with policy makers and experts, who are directly working in the field of DRR, Poverty Reduction Strategy Programme (PRSP) and Sustainable Forest Management (SFM), to get ideas and identify the major areas of concern in formulating the Delphi questionnaire and personal commitment, as well as to obtain feedback for supporting the research survey. The team met more than 30 experts from two countries personally and received their ideas and shared the study methodology along with the conceptual recommendations for the development of national action plans. The stakeholders' meetings and office visits offered the partners opportunities to share information about the PAMIR project and the preliminary finding and activities. They enabled information exchange regarding the possibilities for the widespread practice of project initiative in developing the regional strategy in Central Asia.

Phase III

Additionally, the methodology of this study was shared in an expert meeting/PAMIR project, April 18-20, 2012, Vienna, Austria and MRI Key Contact Workshop Meeting, 21 April 2012, Vienna, Austria. It was a rigorous discussion in small groups with scientists' related methodological parts. The final Delphi questionnaire along with the evaluation criteria was fixed, based on the received feedback. The meeting with scientific team helped improve the rating scale of indicators and provided scientific validity and more practical means.

Phase IV

The main idea of the proposed Delphi Survey was to initiate the national process of developing national action plans for DRR, PRSP and sustainable natural resources management for each country. The task team members for Delphi study consisted of international key experts, team leaders for the three countries, HWA country representatives, Dushanbe and an International Project Co-ordinator for PAMIR project and formed three study committees with members from each country. Being a country co-ordinator from Delphi study, the team leader of PAMIR project collected and updated the list of representatives of science, government authorities, and stakeholders from different disciplines constituting the experts' panel. Members of the Delphi study were invited to participate in the study based on a screening of their individual knowledge and experience. The Delphi panel used a five-choice Likert scale (e.g. 1=very low applicable, 5 =very high applicable) for assessing the applicability and overall importance of each indicator with respect to the national, regional and local level.

Table 1 shows the total of 104 respondents (23 from Afghanistan, 28 from Kyrgyzstan and 53 from Tajikistan) including more than 35% females and consisting of representatives of government (38%), international and non-governmental organizations (48%), universities (6%) and associations (9%). Out of the 104 respondents, experts from the natural resource management sector were in the majority, making up as much as 33%. Of the rest, 18% had an environmental background, 14% represented social sciences, 10% were experts in economics, 6% represented politics and 20 % were categorized as coming from politics and other areas.

Table 1: Respondents of Delphi survey from three countries (Source: Delphi survey, 2012)

Gender	Afghanistan	Kyrgyzstan	Tajikistan	Total
	Received Responses	Received Responses	Received Responses	
Female	5(21.7%)	12 (42.86)	19 (35.8%)	36 (34.6%)
Male	18 (78.3%)	16 (57.14%)	34 (64.2%)	68 (65.4%)
Affiliation	Received Responses	Received Responses	Received Responses	Received Responses
Government	2 (8.7%)	6(21.43%)	31(58.5%)	39 (37.5%)
I/NGOs	18 (78.2%)	15 (53.57%)	17 (32.1%)	50 (48.1%)
University	2 (8.7%)	4 (14.29%)	0	6 (5.8%)
Association	1 (4.3%)	3 (10.71%)	5 (9.4%)	9 (8.7%)

Expertise	Received Responses	Received Responses	Received Responses	Received Responses
NRM	3 (13%)	9(32.14%)	22 (41.5%)	34 (32.7%)
Environment	2 (8.7%)	7(25%)	10(18.9%)	19 (18.3%)
Social science	4(17.4%)	3 (10.71%)	7 (13.2%)	14 (13.5%)
Economics	3 (13%)	1(3.57%)	6 (11.3%)	10 (9.6%)
Politics	4 (17.4%)	1(3.57%)	1 (1.9%)	6 (5.8%)
Others	7 (30.45)	7(25%)	7 (13.2%)	21 (20.2%)
Total	23 (100%)	28(100%)	53 (100%)	104 (100%)

Phase V

The key findings and outputs of the study were developed based on the analysis of the Delphi survey and policy documents. The Delphi questionnaire has been developed in a structured way and experts provided their personal views on each set of questions. The experts gave their assessments of the indicators, with a view on their importance to sustainable livelihood and natural resource management for proposed countries, as well as assessments of a multitude of related policy measures. The findings are based on the identified indicators for the applicability and importance of national, regional (Province and District) and local levels and feedback from the national workshop. The key elements in target countries concerning disaster preparedness and disaster management, forest management, land use and pasture management, environment management, livelihood and other cross cutting issues, especially framing, were identified. The MDG goals 1 (poverty) and 7 (environmental sustainability) of the PAMIR project were outlined. Developed and tested using practical methodology (hereafter Delphi survey) they are carried out to assess the applicability and importance of measuring elements linked with the development of natural resources and disaster risk management policies and finally to assess and outline the extent to which national action plans should be given high priority as policy options.

KEY FINDINGS

Firstly, the identification of a restricted set of indicators which address livelihood, poverty, disaster preparedness and management, sustainable forest management and land use practices was required. These indicators needed to be linked explicitly to an analytical framework linking natural resources use to rural livelihoods in order to be used for recommendations for NAPs. They must also had to offer realistic prospects of being systematic, measurable and practical in sustainable natural resources management and improvement of livelihoods of

Central Asia, particularly in the case study countries (Afghanistan, Kyrgyzstan and Tajikistan).

Secondly, the set of indicators had to be assessed in the three countries, understood to be in a more or less homogeneous agro-ecological or climatic zone of Central Asia each of countries having contrasting legal, social, political and economic endeavors. We have developed a common set of indicators and employed the Delphi survey to assess the set of indicators covering a wide range of natural resources and livelihood management contexts for evaluation of the applicability and importance of sustainability indicators at different geographical scales: National, regional (Province and District for Tajikistan and Kyrgyzstan and Provincial and District for Afghanistan) and local. All the diverse groups of stakeholders and individuals provided their opinions, views and perceptions by giving their preferences for recommending the NAPs.

The study identified several problems/issues, activities and recommendations for each indicator that have hindered risk reduction and early warning initiatives, livelihood promotion, sustainable forest and land use management, environment management, ecosystem management and regional co-operation related to identification of regional agendas, trans-boundary co-operations and human and natural resources. The identified issues related to improving policies and legal frameworks, improving DRR processes, forestry, biodiversity, land use practices, pasture land management, poverty, improving data and joint research efforts, fund allocation, hazard and risk identification, forecasting, modeling, the role of underlying risk factors (underlying vulnerability), improving monitoring and evaluation systems, using rights and equitable distribution, social justice, resource governance, the perennial issue of preparedness, livelihood promotion and environmental management are described.

CONCLUSIONS

In this study, we categorize the 52 identified indicators into six categories: 1) Disaster Preparedness and Management, (2) Forest Management, (3) Land Use, Biodiversity and Pasture Land Management, (4) Environment Management, (5) Livelihood Promotion and (6) Co-operation, co-ordination and other Cross-Cutting issues. From the findings of the study it is evident that more than 47 indicators were judged as having high importance and most indicators were highly applicable under Criteria 6 (Co-operation, co-ordination and other cross-cutting issues). Most of the indicators related to DRR at provincial, district and village

levels were seen as highly applicable in the context of Afghanistan. The holistic plan is required to enhance a broader sense of thinking about regional co-operation, reforestation strategy, livelihood issues, good governance, power dynamics, gender, rights and equitable distributions. The study found in the NAPs can serve as a yard stick for the government and other involved parties who are willing to evaluate and improve their service in order to better the livelihoods of disaster-affected people, reduce gender gaps, improve governance and institutional re-arrangement at all level. A common understanding of livelihood and sustainable resources management based on the socio-economic, biophysical and political context of the regions should be developed. The regional co-operation strategy and research agenda, which are undervalued in the existing plans, should also be addressed. It can be concluded that SLNRM practitioners have their own perceptions and working definitions and areas including gaining a better understanding of its attributes of livelihood and natural resources. Therefore, these findings and conclusions can be considered a basis for re/formulating based on the joint agreed vision, goals and action priority of respective countries and stakeholders which supports the discussions on existing policy processes as well as on new policy instruments for application in Central Asia. It is concluded that the political will and governance system is essential to implementing and addressing the issues of such complexity and keeping the overall goals of sustainable livelihoods and natural resources management in developing policy and decision-making process.

Delphi questionnaire was set up and based on the existing policy and strategy documents of each country but it was hard to judge and specify the highest importance indicators or strategies for the specific countries. Although a structured questionnaire was provided in the Delphi process, some respondents made quite different interpretations and objected to specific questions/indicators, the use of terminologies or phrases used to define terms as well as the lack of 'described' definitions was pointed out. Some respondents complained that the number of questions or indicators was too high and some of them had difficulties to judge the relevance of the indicator or its data requirements. However, we found that the Delphi approach was easiest to carry out when managing a structured questionnaire survey as there was less room for varying interpretations among different stakeholder groups. The weaknesses of Delphi studies were the fact that they required much time and raised some difficulties regarding coordination and communication to build a consensus among the experts.

During, and in the aftermath of the armed conflict in Afghanistan, there have been increased calls for ad hoc legal mechanisms and questions regarding the implementation of endorsed policies and plans. It ultimately affects the wise use of resources as a result of degraded natural resources and bio-diversity. Therefore, certain actions and implementing mechanisms require identifying the socio-economic context, information and capacities of government institutions. The strategy for sustainable natural resources and livelihood improvement is to recommend a holistic and area-based planning approach to deal with the issues and problems related to the specific areas.

RECOMMENDATIONS

The study reflects on, and recommends developing a clear and coherent common agenda (or set of priorities) for SLNRM through perceptions and opinions of different stakeholders. The NAPs allows space for the meaningful participation of local stakeholders including marginalized groups and takes into account potentially differentiated perspectives and interests. It is recommended to identify the regional agenda with high priority in each country and promote regional co-operation through high-level consultation process. The national co-ordination and expert-led team, which will create a high-level trust and facilitate the implementation, and prepare integrated plan or framework to support the sustainable natural resources management and livelihood promotion, should be formed. For the specific regions like Pamir, the areas-based comprehensive strategy and plan should consider the elements of socio-economic, bio-physical, and cultural settings as well as the regional level agenda like trans-human boundary, landscape and livelihood of mountain people. The strategy should be based on trans-boundary, biodiversity management, Sustainable Mountainous Land Management Model (SMLM) and climate change adaptation, social afforestation and reforestation strategy, community-based natural resource management (e.g. community forestry, community watershed management, community rangeland management, forest management strategy or community participation in forest management). The recommendations for the specific countries have been described in the section 4.2 and 5.3 in details. The general recommendations for developing national action plans for SLNRM are:

- Strengthening and facilitating the establishment of high-level collaboration between the science community and key policy makers in the Central Asia. This provides an active and efficient science-policy interface and fosters an inspiring and dynamic science-policy dialogue for developing strategy on livelihood and natural resources - related issues.

- Considering the main agenda of Mountain Ecosystem and Livelihood of Rural People which directly or indirectly supports a large population of Central Asia regions in terms of diverse ecosystem goods and services. Therefore, the need is to continue the supply of these products and services in a sustainable manner to maintain the ecological integrity of the area.
- Developing networking for regional capacity building, and policy and institutional support, capacity for sustainable livelihoods in border regions tackled through developing environmental processes and adaptation strategy, promotion of cultural conservation, sustainable economic and rural energy development and income generation activities, issues of governance, policies, institutions, gender, and equity concerns for the development strategies.
- Encouraging building of partnerships between appropriate GOs, NGOs, CBOs, civil society organizations (CSOs), development agencies and private sectors for effective planning, implementation of strategic interventions and monitoring of sustainable natural resource and livelihood promotions.

A holistic approach is the only approach that seems likely to provide adequate leverage on some of the more daunting issues of developing countries like Afghanistan. Therefore, international donor communities, World Bank and other multilateral development and lending institutions should provide technical and financial support for improved governance and capacity building and institutional development of government and non-government actors. The long-term financial and holistic plan should be developed and capacitated to stakeholders to encourage following the legal provisions and wise usage of natural resources.

FORWARD

This report is intended to support with highlighted recommendations a sustainable natural resource management (NRM) and livelihood activities corresponding to work package 5 of PAMIR project. It tried to:

- Suggest ways to improve livelihood options and sustainable natural resources management in three countries.
- Clarify the concepts of livelihood strategies and natural resources management as well as poverty reduction and environmental sustainability.
- Identify the key indicators at different geographical scale according to its applicability and importance.

- Identify the details of problems/issues, activities and recommendations against all indicators which were judged as highly applicable and important by the findings of the Delphi survey.
- Provide general conclusions and recommendations and also specify recommendations for each country.

The recommendation of NAPs illustrates, based on PAMIR project's experiences which stress the need to emphasize the mountain ecosystem, systems and services to link the livelihood strategies and enable the environmental sustainability. This is possible through assessing, designing, implementing and monitoring elements of livelihood and NRM in the regions. The study also supports the relationship between natural resources use and management and rural livelihood options through reviewing sustainable livelihood approaches and outlining the recommendations for developing national action plans for sustainable NRM and livelihood activities.

REPORT STRUCTURE

The report is organized in five chapters, which outline essential components of national strategies and action plans for sustainable natural resources management and livelihoods. These essentials include key concepts, strategies, issues, study methods and recommendations that build on the directions set up for poverty reduction, disaster risk reduction, and NRM and livelihood activities. In the first chapter, the executive summary, key findings and way forward based on the findings of study is presented. The detailed approach, case studies methodology including the background, context of the project and the challenges of the research are described in Chapter 2. The general framework of SLNRM are described in Chapter 3. The findings for each country are described in Chapter 4, which also includes the description of major strategies and action plans and more detailed analysis of strategies for sustainable livelihood and natural resource management and its problems, activities and recommendation in relation to the six identified criteria: Disaster Risk Reduction, Forest Management, Land use, Biodiversity and Pasture land management, Environment Management, Livelihood and Co-operation, collaboration and other cross-cutting issues. Conclusions, recommendations and policy implications of the study are discussed in Chapter 5.

Chapter 2

INTRODUCTION

Sustainable development includes a number of interdependent elements and attributes including social, economic, political, natural resources, equity and environmental. The unifying theme of sustainable development was central to the Rio Declaration signed by 178 countries at the United Nations Conference on Environment and Development held in Brazil in 1992. Agenda 21, the Programme of Action of the Conference, calls for countries to formulate and adopt notational strategies for sustainable development and to achieve the institutional and resource-based changes for long-term development. In doing so, a number of policies, approaches and strategy plans were recognized as essential requirements. The member countries are developing for taking action on sustainable natural resources management, livelihood, poverty reduction, disaster risk reduction/disaster risk management and environment management in Central Asia, however it is questionable whether it is donor-driven or demand-driven. It has demonstrated the lack of common understanding and comprehensive picture of existing plans and identified the gap in understanding among stakeholders regarding increasing effectiveness and integration of the following components: livelihood, forest/land use management, disaster risk reduction and natural resources management. Some studies substantially support the examination and integration of the linkages between poverty and environment, disaster and poverty, forestry and livelihood options and highlight the emerging issues, challenges and opportunities. It is a rather less consultative stakeholder process of formulating the plan and strategy to integrate environment and disaster risk reduction dimensions. Moreover, there are still no clear road maps for entry points including a better understanding of the social-cultural context and real problems in specific contexts. Therefore, the study supports formalization, reproduction and a comprehensive and transparent process of policy planning for sustainable livelihood and natural resources management. In each country, the demand for multi-disciplinary and multi-stakeholder approaches may enhance the multiple interactions in developing and formulating the national action plans.

Against this background, the **P**overty **A**lleviation by **M**itigation of **I**ntegrated high-mountain **R**isk (PAMIR) -EU funded project aims to generate and appraise knowledge about the linkages between environment, disaster risk and poverty in selected communities alongside

the Pyanj River (Tajikistan/Afghanistan) and Chong Alai valley (Tajikistan, Kyrgyzstan). It aims to increase resilience of mountainous communities to geo-hazards and to provide a platform for negotiating strategies for integration of environmental sustainability into policies among stakeholders of all levels, creating awareness on causes and effects of un-sustainable environment and disseminating knowledge on efficient interventions. The aim of the study was to analyze the existing policy provisions and development of national initiatives and strategies for sustainable natural resources management and livelihood that can enhance and contribute to poverty reduction and environmental sustainability.

The PAMIR project has initiated a series of studies on working packages relevant to the poverty reduction, forestry sector, climate change, disaster preparedness and disaster management plan including: a) Mountain Geo-Risk Assessment Model, b) Sustainable Mountainous Land Management Model (SMLM), c) policy and institutional arrangement and land-use dynamics and tenure system, d) Bio-physical assessment and feasibility of Afforestation in the Pamir regions, and e) Socio-economic and vulnerability and climate impact assessment. In order to support the PAMIR project and develop policy recommendations on effective and multi-dimensions measures, it was necessary to work on the recommendation for developing SLNRM focusing on linkages DRR, environmental degradation and poverty, which has been carried out under work packages 5: increased awareness on linkages between environmental protection, DRR and livelihood among political decision-makers and donor agencies through implementation of sharing processes.

This study presents the methodology used for the case studies on the sustainable natural resources management-livelihood linkages in Afghanistan, Kyrgyzstan and Tajikistan to initiate and accommodate the views of policy makers, development agencies, and stakeholders. The proposed methodology provided a sound and objective basis for information and knowledge sharing among the stakeholders. The findings and the recommendations can be widely disseminated to foster regional cooperation. The study represents a part of the regional approach to integration of DRR and environmental protection for sustainable poverty reduction and environmental sustainability in Pamir region, Central Asia.

APPROACH AND METHODOLOGY OF THE STUDY

2.1 Background

The Pamir Mountains are an extremely isolated high-mountain region which is located at the crossroads between China to the east, Afghanistan to the west, Pakistan to the south, and Kyrgyzstan to the north. It is highly susceptible and well-known as fragile ecosystem in Central Asia with several environmental problems and facing poverty issues. The main reasons due to irrational use of natural resources and subsequent degradation of ecosystem, shrinking forests, degrading agriculture lands which impact and threat of growing social and ecological vulnerability from climate change and loss of bio-diversity. Such negative impacts and natural disturbance ultimately affect sustainable livelihood for the current and future generations. These negative environmental and poverty conditions have recently become global issues and challenges, which are affecting everyone in all corners of the world, causing more frequent and destructive natural disasters, such as erosion, landslides, avalanches and floods. To address these challenges the world's governments committed themselves at the United Nations Millennium Summit to the Millennium Development Goals (MDGs), including an overarching goal of halving extreme poverty and environmental sustainability by the year 2015. In order to promote sustainable development in the Pamirs, facing great challenges from the political, economic, social and ecological perspectives, Hilfswerk Austria International has been working in Tajikistan since 2001 as a humanitarian support and currently is implementing the EU funded project entitled 'Poverty Alleviation through Mitigation of Integrated high Risk (**PAMIR**) in collaboration with the University of Natural Resources and Life Sciences (BOKU), FOCUS Humanitarian Assistance (Affiliate of Aga Khan Network), Tajikistan/Afghanistan, Mountain Societies Development Support Programme (MSDSP) in Kyrgyzstan (Affiliate of Aga Khan Network).

In this context, the governments of the Islamic Republic of Afghanistan, Republic of Tajikistan and Kyrgyz Republic have ratified the MDGs and major international environmental, DRR and poverty reduction obligations and international and sub-regional initiatives which enhance sustainable livelihood and natural resources management. To tackle the environmental degradation and reduce poverty, several strategies and action plans along with relevant documents have been developed in each country (e.g. Country Development Strategy (CDS), Poverty Reduction Strategy (PRS), Disaster Risk Management Strategy,

Environment and Natural Resource Management, National Action Plan for Forestry and several other national action plans).

First, the documents were developed following intensive discussions within the PAMIR project team and comments and feedback were compiled. The study referred to the on-going policy documents, international and national initiatives, which have then been assembled. The standard set of questionnaires on the importance and linkage of livelihood, disaster risk reduction, poverty reduction, environmental and natural resources management was translated in order to gather the ideas and personal views of experts, who are working in respective scientific disciplines. The main purpose of the study is to point out significant policy opportunities and give recommendations for moving the sustainable livelihood and natural resources management agenda forward. In order to do so, the methodological report for developing NAPs on SLNRM was created and presented at the regional steering committee meeting which was held in March, 2012. The participants highly appreciated the methodological concepts and suggested to recommend the elements of sustainable livelihood and natural resources management instead of developing national action plans.



PAMIR project team in Afghanistan

The study has the following specific objectives:

- Identify the relative significance and the important indicators of sustainable natural management and livelihood promotion, as well as the way of interaction based on the

stakeholders' perception obtained through a structured and coherent debate about the many factors that affect livelihood, poverty reduction and disaster risk reduction.

- Recommend strategic entry points to support natural resources management and livelihood at the regional level and country specific.
- Provide a proposal and recommendations for natural resources management and livelihood promotion in the regional context, which will help to develop the agreed next steps at the upcoming regional conference, Aug, 2013.



The first Regional Steering Committee Meeting in Dushanbe, March, 2012

In this context, this report has been prepared as part of the PAMIR project for facilitating and developing the NAPs for DRR, poverty reduction and environmental protection in Afghanistan, Kyrgyzstan and Tajikistan in the framework of ***Sustainable Livelihood and Natural Resources Management***. Three countries (Afghanistan, Kyrgyzstan and Tajikistan) were selected to conduct studies and identify information needed for the development of national standards in the framework of sustainable livelihood and natural resources management of each country: Afghanistan, Kyrgyzstan and Tajikistan. The specific objectives of the study were to get ideas, information and feedback gained from experts, and to identify the extent to which consensus among survey participants emerged, as well as the priority or importance assigned to each of the items/issues related DRR; PRSP and sustainable natural resources management for each country. This process was made possible thanks to

participation of diverse groups of stakeholders at the national levels, especially members of scientific community, experts, researchers, government officials and civil society.

With the aim of preparing a methodology approach for developing NAPs, the project team and team leaders jointly discussed and shared information on the on-going development in the fields ranging from reducing vulnerability to the risk of disasters within the context of the country development plan and strategy for poverty reduction plan and sustainable forest management e.g. Disaster Risk Management Initiative, which is in line with the Hyogo Framework for Action 2005-2015 (HFA), PRSP-UNDP supported plan and country strategy plan for forestry sector, sustainable land management model etc. The team also discussed all the project activities which can be incorporated based on the experiences of the project e.g. the feasibility study on social afforestation as sustainable mitigation measure, the policy framework studies, the database of structural mitigation works developed as a result of the Hazard and Social Vulnerability Risk Assessment for Natural Resources Management (HSVRA) for 120 villages in Tajikistan, Afghanistan and Kyrgyzstan. The research methods were developed in a participatory manner with input from the project partners, policy makers and donor organization.

2.2 Methodological approach of the study

Workshop: Concept and Development of Methodological approach

The team leaders of the workshop, which was held in Tajikistan on 25-26, Nov 2011, as well as the stakeholder groups meeting held in Nov-Dec, 2011, proposed the research methodology and recommendations for developing the NAPs. It was proposed to form a study team in each country and brought forward an idea to purposely incorporate the diverse views, opinion, judgment and experiences of experts and stakeholders against each set of indicators for sustainable livelihood and natural resource management into the study method. In this context, the Delphi survey and its details methodological process were discussed and it was agreed to conduct the survey to assess a set of generic Criteria and Indicators (C&I) with regard to the applicability and importance of national, regional and local context. The study team and project team discussed the feasibility from a methodological point of view and its practicality to encourage the participatory process. In general, the expert-led (Top-down, Delphi Survey) approach was designed whereas the proposed methodology identified the role and participation in the action of the various stakeholders and their involvement in developing the national action plans for each country.



During the team leaders meeting in Dushanbe, November, 2011

Face to face meeting with policy makers and experts groups

The discussion with the several policy makers and expert groups had a purpose of ensuring the adoption of PAMIR project results which would possibly enhance livelihood and natural resources management through information sharing process and integration of the knowledge about environmental protection, DRR and Livelihood among political decision-makers and donor agencies in the project countries. In order to discuss and share the ideas of the research study proposal, the team members conducted face-to face meetings with several organizations and their personnel and increased the capacity of negotiating strategies on integration of livelihood and resources management into poverty reduction among stakeholders. The research team met more than 30 experts from two countries Tajikistan and Kyrgyzstan to share the research concept for developing the NAPs and has received their ideas and feedback. Consultation and engagement of diverse stakeholder groups was essential for the development of future strategies incorporating the major issues in integrating three major components: DRR, PRSP and SFM.



Stakeholders' meeting in Ishkashim, July, 2012

2.2.1 Delphi survey study and set of criteria and indicators

The task team for Delphi study consisted of international key expert, team leaders for the three countries, country representatives of HWA, Dushanbe and the international coordinator of PAMIR project and formed three study committees with members from each country. Being a Delphi country coordinator, the team leader of PAMIR project collected and updated the list of expert panel members consisting of representatives of science, government authorities, and stakeholders from different disciplines (Table 2). The study team and expert panel consisted of representatives of science, government authorities, and stakeholders from different disciplines. The objective of the study was to identify useful information for the development of national standards in the framework of sustainable livelihood and natural resources management for each country: Afghanistan, Kyrgyzstan and Tajikistan.



Team leaders' meeting in Dushanbe, November, 2011

Table 2: The study team members for the Delphi study, Afghanistan

Name	Office Address	Responsible	Email Address
Chiranjeevee Khadka	BOKU University, Austria	Study coordinator	Chiranjeevee.khadka@boku.ac.at
<i>Task team, Afghanistan</i>			
Mr. Ikramuddin Bahram	Focus Humanitarian Assistance	Delphi study coordinator	ikramuddinbahram@focus.humanitarian.org
Mr. Umed Aslanov	Hilfswerk Austria International	Member	aslanov@hilfswerk.tj
Ms. Gulnaz Jalilova	Hilfswerk Austria International	Member	gulnaz.jalilova@hwa.or.at
<i>Steering committee, Afghanistan</i>			
Mr. Ghulam Malikyar	Agency for Environmental Protection in Afghanistan	Member	malikyar@gmail.com
<i>Study secretariat</i>			
Ms. Muazzama Marufi	Hilfswerk Austria International in Tajikistan	Secretary	moya_jona@yahoo.com

The Delphi method is based on a structured process of collecting and distilling knowledge from groups of experts by means of a series of questionnaires interspersed with controlled opinion feedback (**Khadka and Harald 2012**). The questionnaires designed to elicit and develop individual responses to the problems posed and to enable the experts to refine their views with the group's work progresses and the option to discuss the findings at the round table meeting. The experts provided their assessments on criteria and indicators, with a view to their importance for mountain societies in proposed countries, as well as assessments on a multitude of related policy measures.

A Delphi methodology has been selected as the most appropriate means to achieve the goals and objectives of the research because it provides a way to solicit and gain experts' consensus on an emerging issue while ameliorating problematic group processes such as bias and pressure (**Hasson et al. 2000, van Zolingen and Klaassen 2003, Landeta 2006**). We applied five features of the Delphi method: anonymity (experts are unknown to each other and nameless), iteration (feedback given at least twice), controlled feedback (appreciation of new ideas), statistical measures (aggregation of individual preferences) and convergence (multiple reverse feedback and final results) (**Khadka and Vacik 2012**). The Delphi process involves: expertise and/or specialization of selected respondents in the subject matter being considered, a process of multiple iterations or repetitions and providing controlled feedback to the experts enabling the experts to reflect and interact via the questionnaire instrument, limiting extraneous information, and insuring anonymity. As the Delphi process is an anonymous one,

it has advantages over the normal unmediated face-to-face interactions between participants as the usual problems of group dynamics are thus completely bypassed (Stewart et al., 1999).

2.2.2 Study methods and research process

The respondents comprising representatives of government, international and non-governmental organizations, universities, associations, research institutions and freelancers took part in the study. To avoid response bias associated with the interview, the questions were reviewed carefully to avoid misunderstandings and failures based on poor wording. The study kicked-off by June 2012 and at least around 200 experts were contacted in the first round of e-mails from three countries. We did not presume to have generated a complete list of experts as the only suitable respondents for the Delphi process. For example, we first contacted, acknowledging the boundaries and limitations of the system, only those with access to electronic mail and possibility to provide their personal views on the elements. As this kind of survey is quite new in Central Asia and some of experts have no internet access, we provided them with printed questionnaires in order to overcome the technical problems and increase the number of respondents. The total of 104 respondents (23 from Afghanistan, 28 from Kyrgyzstan and 53 from Tajikistan) replied and most of them participated in the national workshop to provide their final inputs. An invitation letter, materials about Delphi background as well as Delphi questionnaire form were sent to all listed individuals by the Delphi coordinators of each country. Delphi coordinator sent out the set of Delphi survey documents (in order: Official request letter_1, Background report_2, List of indicators_3, Personal details of expert_4, Delphi questionnaire_5) to all listed individuals by 7th June, 2012. In order to achieve common understanding, we have discussed each element of the questionnaire set within the study panel. In the beginning, 82 indicators were formulated for pre-testing. They were later refined and developed into 52 indicators comprising the final set for the survey. The research team did not collect specific characteristics of individual respondents to fulfill ethics and confidentiality requirements. Additional research, examining the gaps in policy and its implementation strategy, was analyzed for the scope of this study. All elements which are identified by the experts as 'very important' or "important" were discussed at the national workshop with the purpose of finalizing a national set of recommendations for the national action plans.

All the experts were supposed to respond to the close-ended questions, and the information received was compiled according to question number for each country in a SPSS data base.

The statistical package for the Social Sciences (SPSS, version 17) was used for data analysis, which helped to generate descriptive statistics for all the items. As the significant outcome of this process was documented, an extensive list of responses from the experts corresponding to each question was developed.

Following the completion of the study, the results of the study were presented at a national workshop on sustainable livelihood and natural resources management. The resulting dialogue has enriched the interpretation and the understanding of the outcomes of the Delphi process, and is therefore, reflected upon in the results and identified in the general recommendation for national action plans for each country. To receive reliable results, anonymity, iteration, controlled feedback and statistical aggregation of group responses are key factors (**Wolfslehner et al., 2003**). Two rounds are usually sufficient to achieve consensus (**Rowe et al., 1991**). The final national workshop on sustainable livelihood and natural resources management supported the C&I process for incorporating and integrating the dimensions of DRR, PRSP and SFM.

2.2.3 Desk study review

In this study, we reviewed and referred to a selected set of indicators based on the policy documents and internationally negotiated national initiatives based on existing action plans/strategies in the field of Natural Resources Management, Poverty Alleviation, Disaster Risk Reduction, Country Development, Biodiversity Conservation and Forestry management plan, Land Use Management and other related Action Plans in the three countries. At the end, the study identified the key elements of SLNRM by consulting and meeting governmental and non-governmental organizations at national levels and reflecting on the activities of pilot studies.

Basically, we referred the following documents:

- 1) National Disaster Risk Management Strategy (2010 – 2015), Republic of Tajikistan.
- 2) National development strategy of the republic of Tajikistan for the period to 2015.
- 3) Poverty reduction strategy of the republic of Tajikistan for 2010–2012.
- 4) National Programming Framework, Republic of Tajikistan, Central Asian Countries Initiative for Land Management.
- 5) Strategy and Action Plan for sustainable land management in the high Pamir and Pamir-Alai Mountains.

- 6) National strategy on integrated safety of population and territories of the Kyrgyz Republic in disasters and emergencies for 2011-2015.
- 7) Kyrgyzstan: Environment and Natural Resources for Sustainable Development. – B. 2006, 85 p. ISBN 9967-23-868-2.
- 8) National Forestry Program for the period from 2005-2015, Kyrgyz Republic.
- 9) National Action Plan for Development of Forestry of the Kyrgyz republic in the period from 2006 to 2010.
- 10) Concept of forestry sector development in the Kyrgyz Republic
- 11) Risk assessment for Central Asia and Caucasus Desk Study Review, Central Asia and Caucasus Disaster Management Initiatives (CAC DRMI).
- 12) Country Development Strategy (2009-2011); Kyrgyz Republic.
- 13) Afghanistan National Development Strategy, Islamic Republic of Afghanistan.
- 14) Islamic Republic of Afghanistan: Poverty Reduction Strategy Paper, May 2008 IMF Country Report No. 08/153.
- 15) Linking poverty reduction and Environmental management: Policy challenges and opportunities, 2002.
- 16) Poverty reduction strategies and the millennium development goal on environmental sustainability: Opportunities for alignment, 2003.
- 17) United Nations Development Assistance Framework: In Support to the Afghanistan National Development Strategy, 2010 – 2013.
- 18) Islamic Republic of Afghanistan: Afghanistan National Development Strategy 1387-1391 (2008-2013); A strategy for Security, Governance, Economic Development and Poverty Reduction.
- 19) Islamic Republic of Afghanistan: Afghanistan's Fourth National Report to the Convention on Biological Diversity, Submitted by the Ministry of Agriculture, Irrigation and Livestock (MAIL), 2009.
- 20) Promotion of Sustainable Livelihood Programme, United Nations Development Programme Afghanistan Country Office, December, 2008.
- 21) Draft Country Programme Document for Afghanistan (2010-2013)
- 22) United Nations Development Assistance Framework: In support of the Afghanistan National Strategy, 2010-2013.
- 23) The Integration of Biodiversity into National Environmental Assessment Procedures National Case Studies Afghanistan, Produced for the Biodiversity Planning Support Programme by GEF, UNDP, UNEP, and the World Bank, 2001.

- 24) Biodiversity Profile of Afghanistan, An Output of the National Capacity Needs Assessment for Global Environment Management (NCSA) for Afghanistan; United Nations Environment Programme Post-Conflict and Disaster Management Branch, 2008
- 25) Islamic Republic of Afghanistan: National Environmental Protection Agency Strategy for Afghanistan National Development Strategy (with focus on Prioritization), 2007
- 26) UNEP in Afghanistan: Laying the Foundations for Sustainable Development, United Nations Environment Programme, 2009.
- 27) National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) and National Adaptation Programme of Action for Climate Change (NAPA) of Afghanistan: Final Joint Report. February 2009: United Nations Environment Programme.

2.2.4 Information sharing and feedback

In order to identify the key recommendations for sustainable livelihood and natural resources management, several face-to-face meetings and three workshops for the key stakeholders in each country were organized to share information and knowledge, to develop study methodology and common approaches addressing all three dimensions: poverty reduction, disaster risk reduction and environmental sustainability. The research ideas and elements of the methodology were discussed at a preparatory meeting held in Dushanbe on Dec 2011 and in Bishkek on January 2012.





Mid term expert meeting in Vienna, April 2012

The details of the research design and a plan for the desk study review and Delphi survey were shared in expert meeting held in Vienna from 18 to 20 April, 2012. Additionally, the methodology of this study was shared at the PAMIR project expert meeting in April 18-20, 2012, Vienna, Austria and at the MRI Key Contact Workshop Meeting, 21 April 2012, Vienna, Austria. After the presentation, small groups including scientists provided constructive suggestions in order to improve the scientific validity and introduce more practical means such as:

- Balancing composition of respondents and number of experts;
- Likert scale (either 1 to 4 or 1 to 5 or 7);
- Communication skills and personal linkages and team work;
- Engagement of policy makers and dialogue between the stakeholders;
- Recommendation after identifying issues and problems of each element;
- Feedback mechanisms. Expert meeting workshop in Vienna, April 2012.

2.3 The challenge of synthesizing research

While study team members were developing and analyzing criteria and indicators and making recommendations for developing national action plans on the sustainable livelihood and

natural resource management, poverty reduction, environmental sustainability and disaster risk reduction, they confronted the different stakeholders' values and the tradeoffs between different perspectives of stakeholders had to be taken into account. However, it was the best way to identify the problems and make good decisions for evaluating the proposed set of indicators varying according to different geographical scales, socio-economic, political and ecological contexts. It also helped the comparison with the purpose of finding the similarities and dissimilarities and their applicability and importance at different geographical levels which has not been dealt with in this report. We found that the major challenges were to define the terms of measures across the scale, interpretation and analysis for the different disciplines. First, it was challenging for the study team to develop a comprehensive set of indicators for all levels and for the evaluation of the national and the management level as a whole. As suggested by the experts, developing indicators was based on the best and most current knowledge and, at the same time, had to be simple with the minimum set of indicators developed to be integrated into the existing management system and at national levels.

The perceptions and judgments of the stakeholders were competing and contradictory in their respective fields, affiliations with organizations and expertise. The trade-off between importance of indicators at national, regional (Provincial and District) and local levels and others had to be negotiated between different interest groups, otherwise open contradictions may have emerged. In such circumstances, identifying the overall importance of an indicator considering groups of stakeholders among which many have different values and objectives for the sustainable livelihoods and natural resources management remains problematic. Therefore, there is still a need to negotiate or explore to reach common consensus involving a broad set of stakeholders. Furthermore, the ownership of the research finding and recommendations and identifying acceptable tradeoffs are crucial parts of the study. Key challenges in livelihoods and natural resources management include defining meaningful indicators and an appropriate timescale and managing large amounts of information and data. Some indicators related power to people, user rights, reducing vulnerability, increasing access to natural resources and equity and benefit-sharing were more representative of the priorities of the poor. However, such indicators are also more difficult to measure and need a more comprehensive justification in the forms of cross-cutting issues in both livelihood and natural resources management framework. Therefore, the focus on poverty and livelihood and its best practices to sustainable livelihood is greatly appreciated in the analysis of the report.

The study was conducted using a structured questionnaire and discussed in workshop with some open-ended questionnaire in World Café procedure therefore it does not restrict the ideas and perspectives of any stakeholders on the framework of the applicability of the strategy and plans. The report has been documented without any triangulation of information between the views of stakeholders and with not enough reference and proper logical framework that can be achieved in the certain period of time. The respondents were flexible to provide their perceptions on each indicator but it was difficult to judge how they perceived and evaluated the indicators and inconsistency in the judgment was found. The objectives of this study were very pragmatic and vague and thus it is difficult to form recommendations for specific areas. The recommendations of NAPs are basically linked with the objectives of PAMIR project which has been focusing on DRR, poverty reduction, environmental sustainability, livelihood but it is again difficult to interlink cross-cutting issues and the relationship between their causes and effects with respect to the specific objectives.

CHAPTER 3

SUSTAINABLE LIVELIHOOD AND NATURAL RESOURCE MANAGEMENT

3.1 The concept of Sustainable Livelihood

The Sustainable Livelihoods (SL) framework has been widely discussed in terms of the analysis of links between livelihoods and natural resources in the recent years. This approach came to prominence at the Department for International Development (DFID) from 1998 which has obtained very diverse views from different development agencies and co-operations. The concept frequently varies from one organization to the other in terms of defining the primary framework and focus areas, strategies approaches, asset ownership, income levels, age, gender, caste, social and political status. The Cooperative for Assistance and Relief Everywhere (CARE) and United Nations Development Programme (UNDP) and other organizations had been provided with the sustainable livelihood approaches in the late 1990 which have developed into their own organizational perspectives and methodologies.¹

At the stage of implementation, they cover their activities at different levels: district, community level and household with different fundamental dimensions (policy, governance, empowerment and actions) and differed in the understanding of power dynamics as well as failed to take into consideration the informal structure of social dominance and power within the communities in social transformation process. A socially differentiated analytical approach to livelihood strategies is thus necessary in order to understand the formal and informal institutions, their underlying social architects, behaviors, relationships, and the power dynamics of stakeholder groups. It also helps to design support activities that build on the strengths of the poor. It is therefore essential that Sustainable Livelihood (SL) analysis fully involve the local people and let their knowledge, perceptions, and interests be heard, a practice which is recognized by most analysts using this concept.¹ However, all agencies have recognized that the concept of Sustainable Livelihood has to address the various factors and processes which either constrain or enhance poor people's ability to make a living in an economically, ecologically, and socially sustainable manner. The SL concept offers a more coherent and integrated approach to provide livelihood opportunities for the next generations

¹ This aspect is only incidentally touched upon in Scoones (1998), but is emphasized more by other IDS researchers, such as Chambers (1995) and Brock (1999).

(Chamber and Conway, 1992). The 1992 United Nations Conference on Environment and Development (UNCED) expanded the concept, especially in the context of Agenda 21, and advocated for the achievement of sustainable livelihoods as a broad goal for poverty eradication. It stated that sustainable livelihoods could serve as ‘an integrating factor that allows policies to address ‘development, sustainable resource management, and poverty eradication simultaneously’.²

“Sustainable Livelihoods Approach” (SLA) has broadened the scope of analysis to all relevant aspects of rural livelihoods with the ultimate goals of poverty reduction and improvement of the environmental sustainability. It also focuses on the diverse strategies employed for the poor section of societies and identifies the factors and causes and effect of poverty and searches of institutional arrangements which influence and implements the formulated strategies. In order to develop the concept and analytical framework of livelihood approaches, a number of development agencies have proposed an analytical framework model e.g. DFID, CARE, and OECD.

According to the working definition used by DFID, “a livelihood comprises the capabilities, assets . . . and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.”³

The Institute for Development Studies (IDS) team at the University of Sussex, Brighton, UK, and the British Department for International Development (DFID) team proposed a somewhat modified definition of SL:

A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base' (Chambers, and Conway, 1992).

² UNDP. **Promoting Sustainable Livelihoods: A Briefing Note** Submitted to the Executive Committee, June 4, 1997

³ DFID. 1999. Sustainable Livelihood Guidance Sheets. <http://www.livelihoods@dfid.gov.uk>

The report by Scoones elaborated especially on three of the elements of this framework: Livelihood Resources, Livelihood Strategies, and Institutional Processes and Organizational Studies. Four types of capital are identified in the IDS framework: natural, economic and financial, human, and social capital. As several authors have pointed out, this is particularly important in the case of the poor, who often rely on a number of different types of economic activities for their livelihoods, and where it is not any activity but their combined effect for the household economy that matters (Chambers, 1995; Hussein and Nelson, 1998). The concept of sustainable livelihood strategies offer a more appropriate basis to empower the ‘poorest of the poor’ to become active decision-makers in achieving certain outcomes in response to a particular ‘vulnerability context’ and in shaping their own livelihoods. The SL approach allows for more dynamic perspectives on livelihoods and is a useful approach to facilitate an understanding of the linkages between livelihood strategies and use of natural resources for reducing poverty and promoting environmental sustainability both at the local and at the policy levels.

It has therefore become increasingly recognized that poverty is multi-dimensional, and according to the Development Assistance Committee of the Organization for Economic Co-operation and Development (OECD), “*The dimensions of poverty cover distinct aspects of human capabilities: economic (income, livelihoods, decent work), human (health, education), political (empowerment, rights, voice), socio-cultural (status, dignity) and protective (insecurity, risk, vulnerability)*” (OECD, 2001).

The principle of the SL approach has been acknowledged and addressed and has had policy implications. It has added value to the efforts to reduce poverty. It serves to anchor development thinking and practice into the day-to-day reality and aspirations of rural communities and the poorest section of the world.

SL principles (as of 1999) Poverty-focused development activity should be:

People-centered: sustainable poverty elimination will be achieved only if external support focuses on what matters to people, understands the differences between groups of people and works with them in a way that is congruent with their current livelihood strategies, social environment and ability to adapt.

Responsive and participatory: poor people themselves must be key actors in identifying and addressing livelihood priorities. Outsiders need processes that enable them to listen and respond to the poor.

Multi-level: poverty elimination is an enormous challenge that will be overcome only by working at several levels, ensuring that micro-level activity informs the development of policy and an effective enabling environment, and that macro-level structures and processes support people to build upon their own strengths.

Conducted in partnership: with both the public and the private sector.

Sustainable: there are four key dimensions to sustainability – economic, institutional, social and environmental sustainability. All are important – a balance must be found between them.

Dynamic: external support must recognize the dynamic nature of livelihood strategies, respond flexibly to changes in people's situation, and develop longer-term commitments.

SL approaches are underpinned by a **commitment to poverty eradication**. Although they can, in theory, be applied to work with any stakeholder group, an implicit principle for DFID is that activities should be designed to maximize livelihood benefits for the poor.

Taken from: Ashley and Carney 1999, p. 7

3.2 The concept of Sustainable Natural Resource Management

Sustainable Natural Resource Management refers to the management of natural resources such as forest, land, water and other kinds of human and non-human being, with a particular focus on how management affects the quality of life for both present and future generations. It deals with managing the variety of sustainable strategies and /or approaches including land use planning, forest management planning, watershed management, biodiversity conservation, use of technologies, use of tools and decision support system models, involvement of stakeholder in resources management and local innovations and initiatives. NRM is also congruent with the concept of sustainable development that recognizes the health and productivity of landscapes in dealing with reducing poverty and supporting livelihood opportunities for people on the basis of environmental governance and security. Land use management, forest management, environment management are similar to natural resources management in the way that all advocate an integrated and holistic approach to managing natural resources. Population increase, resource use conflicts, urbanization, technological advancements, climate change, political stagnations and unsustainable use and harvesting of resources have all put more pressure on natural resources leading to land degradation and poverty. Therefore, NRM issues are particularly important where the livelihood of the majority of population is fully dependent on natural resources.

3.3 Linking Sustainable livelihood and Natural Resources

Natural resources management and livelihood is central to the achievement of most of the Millennium Development Goals which provide food for the large part of the world population⁴ and provide a wide range of other goods e.g. timber, fuel, fodder, medicine, clean water, building materials, input to industries and other ecosystem services. Natural resources and livelihood issues are increasingly interconnected with highly important political concerns and policy debates such as livelihood enhancement, poverty reduction, environmental governance, disaster risk management, sustainable resource management, climate change, and devolution for the resource management. Because of their widely cross-sectorial nature, these approaches emphasize the holistic conceptual frameworks, dealing with more complex strategies in formal and informal institutional and organizational settings. They also provide opportunities to enhance livelihood options arising out of the social analysis of institutional arrangement and encourage the active participation of different stakeholder groups in the planning processes, defining a set of objectives and analyzing linkages and trade-offs between different management options. To achieve the livelihood options, a wide range of intervention options through use of proper use of resources, forest-based enterprises and development and promote green job and economy in each country is required. It also requires significant engagement with other sectors such as forestry, agriculture, emergency, energy, water, environment, trade and climate change. In this context, research-based information and knowledge should be one of the central pillars for developing and linking the elements and options for sustainable livelihood and natural resources management.

The Evidence of linking Natural Resources and Livelihoods

Approximately two thirds of the world's poor live in rural areas and rely heavily on agriculture for their income.⁵ This includes not only agriculture in rural areas; 1.6 billion people rely on forest resources for all or part of their livelihoods,⁶ while around 150 million people count wildlife as a valuable livelihood asset⁷ and 200 million derive part or all their livelihood from fishing.⁸

During war in Afghanistan, it was directly favoured an anarchical exploitation of natural resources, particularly through illegal logging of natural forests and the conversion of pastures into cultivated

⁴ Pimental, D, M McNair, L Buck, M Pimental and J Kamil (1997), "The value of forests to world food security", *Human Ecology* 25, pages 91–120.

⁵ CIDA. 2000. *Towards a healthy, well-nourished world*, p. 4. Discussion paper.

⁶ Mayers, J and S Vermeulen (2002), *How Good Forest Governance Can Reduce Poverty*, WSSD Opinion Paper, IIED, London.

⁷ LWAG (2002), *Wildlife and Poverty Study*, Livestock and Wildlife Advisory Group, Department for International Development, London.

⁸ IUCN (2003), "Sustainable livelihoods", Media Brief for the World Parks Congress, IUCN, Gland.

rain-fed land⁹ and they claimed that local communities had lack of alternatives or no other options to survive for their regular life.

The poorest usually have the least secure and smallest entitlements to land, water and forest resources. For example, in Bolivia the richest 20 percent of the population owns 91 percent of the land while the poorest 1 percent owns 0.1 percent of the land.¹⁰ Worldwide, only 2 percent of all land is owned by women.¹¹ However, a vast majority of households, especially in developing countries, depend on land and other natural resources for satisfying and addressing their hand- to- mouth problems and expecting their long-term livelihood ambitions.

Furthermore, in many areas of Afghanistan, growing population and increasing rates of return of displaced people have increased the pressure on limited land and water resources (including forests, rangelands, rain-fed agriculture land, particularly on steep mountain slopes, etc.)¹². Along with the "forested areas", traditional management practices in wood cutting, nut harvesting and livestock grazing have been abandoned, the trigger for which was the need to survive in a war-ridden environment in which most people failed to consider their needs and those of their communities beyond a very brief time span¹³.

Millions of rural South Africans depend upon biological resources for day-to-day survival. Access to this "natural capital" provides a crucial contribution to livelihoods, a buffer against poverty and an opportunity for self-employment"¹⁴ For Africa, 57 % of the economically active people are still employed in Agriculture (against more than 74% in 1965).

Natural disasters, poverty and environmental conditions are closely correlated in least developed countries (LDCs): declining agricultural productivity from climatic shocks increases poverty and the intensive use of marginal lands by poor people contributes to increased disaster risks¹⁵

Of the 1.2 billion people estimated to live on less than US\$ 1 a day (i.e. those that are the target of MDG1), 70 per cent live in rural areas with a high dependence on natural resources for all or part of their livelihoods.¹⁶ At world level the per capita available land has been reduced from 0.39 ha in 1961 to 0.27 ha in the 1990s. The land/man ratio for the African continent has decreased from 0.62 ha in 1965 to merely 0.26 ha in 1995. In countries like Rwanda and Malawi this figure has even dropped to almost 0.15 ha¹⁷

In marginal rural areas, people's workloads are generally greater and rates of severe malnutrition and debilitating infectious diseases are higher than in urban areas¹⁸ Similarly, marine resources play a significant role in contributing to food security and sustainable local livelihoods (1 billion Asians rely on fish for their primary source of protein, while the global fishing industry employs some 200 million people¹⁹

"The 2007-2008 National Risks and Vulnerable Assessment (NRVA) found that 7.4 million people – nearly a third of the population- are unable to get enough food to live active, healthy lives. Another 8.5 million people, or 37 percent, are on the borderline of food insecurity"²⁰. "The 2007-2008 National Risks and Vulnerable Assessment (Despite having bumper wheat harvest in 2010, WFP

⁹ EC guidelines for grant applicants

¹⁰ Encuesta Condiciones de Vida. 1995. Elab. SISE.

¹¹ FAO. 1999. *Women's right to land and natural resources: Some implications for a human rights-based approach*. Rome.

¹² Ibid

¹³ Ibid

¹⁴ Wynberg, R (2002), "A decade of biodiversity conservation and use in South Africa: tracking progress from the Rio Earth Summit to the Johannesburg World Summit on Sustainable Development", *South African Journal of Science* No 98, May/June 2002.

¹⁵ UNDP. 2001. *Disaster Profiles of the Least Developed Countries: a report from the Third United Nations Conference on Least Developed Countries*, p. 2. (Held in Brussels.)

¹⁶ LWAG (2002), op. cit.

¹⁷ Varheye W., Brinkma R. and Sims D. (1997). *Elements of a Different Approach to Land Development Issues*. The Land, 1 (2): 143-152

¹⁸ FAO. 2000. *The State of Food and Agriculture 2000*, p. 221. Rome.

¹⁹ IUCN (2003), op. cit.

²⁰ www.wfp.org/countries/afghanistan

estimates continued food shortage in Afghanistan thus has planned to feed nearly 7.3 million desperate people in 2011²¹.

Key findings of the NRVA indicate that food poverty was estimated to affect around 45 percent of Afghans who are unable to purchase sufficient food to guarantee the world standard minimum food intake of 2,100cal/day. Furthermore, 20 percent were situated slightly above the poverty line indicating a high level of vulnerability

In a period from 1978 to 2004, agriculture production declined by an average of 3.5 percent a year²². Since 1979, agriculture production has declined by more than 50 percent leading to persistent food shortage²³. Once food sufficient country, Afghanistan today imports nearly 2 million tons of cereals each year²⁴.

²¹ www.wfp.org/news/news-release/afghan-wheat-hungry-afghans-wfp-buys-local

²² Afghanistan National Development Strategy (ANDS)

²³ Saba, Daud (2003), Afghanistan's Natural Heritage, Problems and Perspectives.

²⁴ Asian Development Bank, www.adb.org/documents/reports/Afghanistan/pnarro9.pdf

CHAPTER 4

CASE STUDY: AFGHANISTAN

4.1 Background

The main idea of the proposed survey was to initiate the national process for recommending the elements for developing NAPs on SLNRM in Afghanistan. The elements of action plans were developed based on several strategies and action plans which have been developed in relation to the issues of DRR, forestry, land use system, environment management and poverty reduction. The action plan gives a status and problem and potentials, and indicates the general future directions with specific recommendations for each elements/problems. The identification of the key stakeholder, the formation of an expert and technical team for the study, communication and preparation of the working documents as well as the Delphi survey questionnaire were the major tasks of this study.

4.1.1 Islamic Republic of Afghanistan: National Strategy and Action Plans

Afghanistan is a land-locked country bordering with Iran to the west, Turkmenistan, Uzbekistan, and Tajikistan to the north, a tiny border with China at the northeast, and Pakistan to the east and south. It is among the least developed countries (LDCs) of the world and considered to be the poorest in the Asia and Pacific region.²⁵ It also ranks at the bottom of the list of 135 countries in terms of human deprivation, characterized by short life, lack of basic education and lack of access to public and private resources measured by the UNDP's Human Poverty Index. UN estimates the country's population at 28.15 million and an urban population of 22 per cent. However, based on the NRVA sampling procedure, the population of Afghanistan is about 25 million. According to ADB, the national gross domestic product (GDP) grew by 15.1 per cent from 2000 to 2009. NAPA estimates that up to 80% of the people rely on the country's natural resources base for their livelihoods, however the share of the agricultural output of the country's economy based on Gross Domestic Product (GDP) declined to 31.6 per cent in 2008 from 57 per cent in 2000.

²⁵ Asian Development Bank, 2009 Asian Development Bank, undated Afghanistan: Fact Sheet Afghanistan: Fact Sheet, Manila.



Figure: Map of Afghanistan (Source:http://www.lib.utexas.edu/maps/middle_east_and_asia/txu-oclc-309295540-afghanistan_pol_2008.jpg)

Afghanistan is an arid country that covers slightly over 652,000 km²²⁶, around 12.1 percent (7.9 million ha) is arable land (including a 5 percent irrigated land), 45.2 percent is under permanent pastures and 2.1 percent is forest, 37.3 percent is barren and mountainous, 0.05 percent is urban area and the remaining 3.25 percent is made of water bodies, marshlands and permanent snow cover. It snows in the mountainous areas of the northeastern and central highlands. In the winter and spring months, mountain areas are very prone to floods. Afghanistan has approximately 3,000 glaciers that are major water sources and help regulate annual and long-term cycle of stream flow, according to the United States Geodetic Survey (USGS). The snowmelt from Hindu Kush is the source of more than 80% of the country's water. Most of Afghanistan is in the Hindu Kush Mountains, with some lower-lying desert areas. The highest point in Afghanistan is Mount Nowshak at 7,484 meters and the lowest is the Amu Darya River Basin, at 258 meters (846 feet). Approximately 27 percent of

²⁶ National Geographic Society 1995. National Geographic Atlas of the World-Revised Sixth Edition. Washington, D.C.)

Afghanistan lies above 2,500m elevation.²⁷ Afghanistan can be divided into three zones – the northern steppe, the southern desert plateau, and between them the massive spine of the Hindu Kush mountain range. The climate is described as continental, with air temperatures ranging from 45 deg. C in summer to -20 deg. C in winter. The average annual rainfall is estimated at 250 mm; the wettest parts in the high altitude northeastern region receive as high as 1,200 mm while the driest parts in the southwest get only 60 mm annually.

Due to nearly three decades of war and conflict, military activities, refugee movements, Afghanistan has faced a collapse of government institutions at national, provincial and local levels which resulted with high level of poverty and a high rate of degradation of natural resources. However, the governments of Afghanistan have endorsed several international initiatives including Millennium Development Goals (MDGs)²⁸ and committed to implementing the national development strategy programme. The international communities, government institutions and other service providing agencies are facing significant challenges in addressing equitable and sustainable pro-poor growth. To tackle the poverty, that is deeply embedded in rural areas, national priorities (the *Afghanistan National Development Strategy (ANDS)* 1387-1391 (2008-2013) insist on pro-poor policies and explore ways of providing equitable access to natural resources to benefit the poor focusing on a strategy for security, governance, economic growth and poverty reduction. The ANDS is a Millennium Development Goals- based plan that will follow the Country's Poverty Reduction Strategy Paper. Another strategy and action plan related to the Disaster Risk Reduction in order to address the country's transitions from recovery and reconstruction to a broad-based sustainable development is the Strategic National Action Plan for Disaster Risk Reduction: Towards Peace and Stable Development (SNAP). This initiative provided a road map to "*A Safer and More Resilient Afghanistan*" by addressing the risks of future disasters and climate change impacts in a cohesive way. The plan also identified the strengths and opportunities presented by stakeholders, as well as recognized, in accordance with Hygo Framework and Action (HFA), the weaknesses and gaps in governance, risk assessment and early warning, knowledge management, vulnerability reduction and disaster preparedness.

²⁷ United Nations Environment Programme (UNEP). 2003a. *Post-conflict environment assessment. Afghanistan*, UNEP, Geneva. 176pp

²⁸ Afghanistan endorsed the MDGs in 2004, much later than other countries due to the ongoing conflict at the time of the Millennium Summit in 2000. As a result Afghanistan has an extended deadline (2020 as opposed to 2015) and due to the particular post conflict challenge of the country, it has one added goal—"Goal 9: Enhancing Security

Afghanistan has committed to disaster risk reduction through the SNAP with a difference, i.e., the process reflects a bottom-up approach as it is initiated by the National Disaster Risk Reduction Platform. In relation to one of the environment and natural resources management strategy and action plan, UNEP and GEP supported the development *National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) and National Adaptation Programme of Action (NAPA)*. Its vision is to increase awareness of the effects of climate change and climate variability on all stakeholders' lives and to develop specific activities that build capacity to respond to current and future climate change threats. To address the daily needs, widespread environmental degradation the **Natural Resource Management Programme, 2009** was developed under the National Agriculture Development Framework, Afghanistan which is as an integrated part of the comprehensive Agriculture Development Strategy and elaborates the community-based approaches for the Natural Resource Management. Several policies and frameworks were developed related to environment, land, water and pasture management, climate change and livelihood improvement of rural communities e.g. Environmental and Social Management Framework (ESMF); Water Law and the Water Sector Strategy (WSS, 2012), National Environmental Protection Agency (NEPA), Environment Law of Afghanistan, 2007, Law on the Preservation of Afghanistan's Historical and Cultural Heritages (2004). Some of the most promising strategies and plans related to natural resources management and are described briefly below:

Afghanistan National Development Strategy (ANDS), 1387-1391 (2008-2013):²⁹ The Afghanistan National Development Strategy (ANDS) is a Millennium Development Goals (MDGs)-based plan that serves as Afghanistan's Poverty Reduction Strategy Paper (PRSP). It is underpinned by the principles, pillars and benchmarks of the Afghanistan Compact. The pillars and goals of the ANDS are: Security; Governance, Rule of Law and Human Rights and Economic and Social Development. Thorough development activities are now guided by the Afghanistan National Development Strategy (ANDS), 2008-2013, the government, non-governmental, private and international finance institutions, and civil society organizations, who are working towards building peace through humanitarian aid and development efforts. With a commitment to achieve the MDGs set for 2015, the development process for Afghanistan has, since 2008, been guided by the ANDS, a product of intensive multi-stakeholder consultations and collaboration. The vision for Afghanistan by 2020 consists of:

²⁹ See Islamic Republic of Afghanistan: Afghanistan National Development Strategy 1387-1391 (2008-2013); A strategy for Security, Governance, Economic Development and Poverty Reduction.

- A stable Islamic constitutional democracy at peace with itself and its neighbors, standing with full dignity in the international family;
- A tolerant, united, and pluralistic nation that honors its Islamic heritage and the deep seated aspirations toward participation, justice, and equal rights for all:
- A society of hope and prosperity based on a strong, private-sector led market economy, social equity, and environmental sustainability.

The first annual report on the ANDS (2008/2009) indicates that the foundation has been established and that implementation of programmes needs to speed up. Much still needs to be done to reduce poverty, increase income generating activities, solve chronic health problems and ameliorate the poor state of infrastructure. The same report states that ANDS operates under “a stressful environment”; the country has serious security concerns, recurring natural disasters, capacity constraints and a range of governance issues which combine to obstruct the ability of the government to implement the much needed economic reforms and improvements in other areas embodied in the ANDS.

Strategic National Action Plan for Disaster Risk Reduction, 2011 (SNAP):³⁰ SNAP was formulated for the promotion of peace building and stable development including peace; security; development and disaster risk reduction which comprise the central focus of Afghanistan. The proposed DRR strategies are aligned with the Afghanistan National Development Strategy 2008-2013 (ANDS) to reinforce the objectives and outcomes of its sectors and pillars, especially governance, economic and social development, and social protection.

In order to formulate the SNAP, the results of the consultations through the multi-stakeholder workshop on the Hyogo Framework for Action 2005-2015 were used to formulate the strategy in different planning phases: short-term (2011), medium-term (2011-mid 2013), and long-term (2011-2015). SNAP will help attain the vision of the National DRR Platform, i.e. “A Safer and More Resilient Afghanistan.”. Prepared Afghan communities and capacitated institutions are good investments to keep people out of harm’s way and minimize the risks posed by hazards, and extremes of weather and climate and are the main targets of the SNAP. The SNAP envisages achieving two goals during the period.

³⁰ See in details the report: Afghanistan Strategy National Action Plan (SNAP) for Disaster Risk Reduction: Towards Peace and Stable Development, Government of the Islamic Republic of Afghanistan, March 2011

- To develop the linkages between disaster risk reduction strategies, climate change adaptation processes and invulnerable development paradigms with focus on social protection measures and inclusiveness in order to support various initiatives taken up under ANDS, United Nations Development Assistance Framework (UNDAF), etc. to promote the ‘community at peace’ principle in Afghanistan;
- To minimize losses caused by disasters and climate change impacts through strategies guided by HFA, with the backdrop of peace and development.
-

Focusing on DRR concerns, which that link with peace building and a stable development, the SNAP has six objectives – three under each goal. To attain the six objectives, the Action Plan consists of seven major programs/projects that serve to link the related on-going and future actions/activities within the ANDS framework. Having a five year span (2011-2015), it extends beyond the period of the current ANDS and can therefore provide future direction in certain areas, especially where little has been done. Apart from the framework provided by the HFA, SNAP builds upon the existing studies and plans relevant to disaster risk management such as the ANDS, Disaster Management Plan (MP), National Adaptation Programme of Action (NAPA), Humanitarian Action Plans, sectoral master plans, and other planning documents developed and being implemented following 2001. It also adheres strategically to the Common Country Assessment/United Nations Development Assistance Framework (CCA/UNDAF) that guides the United Nations Country Team and the Regional Roadmap and Action Plan on DRR through CCA in Asia and the Pacific Asian Ministerial Conference for Disaster Risk Reduction (AMCDRR).

National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) and National Adaptation Programme of Action (NAPA), 2008:³¹ The National Environmental Protection Agency (NEPA) has been established as an independent agency with the goal to “protect the environmental integrity of Afghanistan and support sustainable development of its natural resources through the provision of effective environmental policies, regulatory frameworks and management services that are also in line with the Afghanistan Millennium Development Goals (MDGs)”. In the light of this situation, the

³¹ National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) and National Adaptation Programme of Action for Climate Change (NAPA) of Afghanistan: Final Joint Report. February 2009: United Nations Environment Programme

Global Environment Facility (GEF) supports the implementation of the National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) and National Adaptation Programme of Action for Climate Change (NAPA) Projects. These projects, which have been combined into one process in Afghanistan, support the identification of priority capacity needs for the implementation of the Rio Conventions, namely, the United Nations Convention on Biological Diversity (UNCBD), United Nations Convention to Combat Desertification (UNCCD) and the United Nations Framework Convention on Climate Change (UNFCCC), and the identification of key activities that can mitigate the effects of climate change.

The objectives of the NCSA are to: (1) identify, confirm or review priority issues for action within the thematic areas of biodiversity, climate change and desertification, respectively; (2) explore related capacity needs within and across the three thematic areas; (3) catalyze targeted and coordinated action and requests for future external funding and assistance; and (4) link country action to the broader national environmental management and sustainable development framework. The NCSA Action Plan was developed according to seven broad areas of intervention derived from the cross-cutting analysis of capacity building needs and opportunities identified during the thematic assessments. The objective of the NAPA is to serve as a simplified and direct channel of communication for information relating to the urgent and immediate adaptation needs of Afghanistan to the effects of climate change. NAPA are to: (1) identify priority projects and activities that can help communities adapt to the adverse effects of climate change; (2) seek synergies with existing multi-lateral environmental agreements (MEAs) and development activities with an emphasis on both mitigating and adapting to the adverse effects of climate change; and (3) integrate climate change considerations into the national planning processes.

Natural Resource Management Programme, 2009, Afghanistan: The overall objective of the NRM Programme is to ensure that: *Afghanistan's natural resource base is rehabilitated and used in a productive and sustainable way by sedentary and migratory population* This general objective was to achieve both by establishing a supportive policy and regulatory framework at the national level, and by combining participatory planning methods with advanced technical opportunities in natural resources planning and management at the local level. Ministry of Agriculture, Irrigation and Livestock and other government institutions recognize the importance of sustainable management of natural resources to maintain and

expand agriculture production without compromising its environmental, social and long-term economic functions. The programme identified the challenges and opportunities to establish regimes of natural resources use (i.e. forestry, rangeland, wildlife and medicinal plants) in relation to: the types of land use, systems for natural resources management and systems of rights and access to natural resources. To achieve its objectives, the NRM programme is comprised of three coordinated and mutual complementing sub-programmes: Natural Resource Surveillance, Planning and Regulation, Protection and Conservation and Community Management of Natural Resources.



Pamir Landscape, July, 2012

4.2 A set of Indicators and brief descriptions

The indicators were numbered and the experts were asked to evaluate each indicator individually and they were free to comment on, add or delete indicators in a structured questionnaire survey process. As the applicability of an indicator could vary between different scales, the assessment was carried out in reference to various geopolitical and geographical specifications. To avoid response bias associated with the interview, the indicators of same components were not in order and they were later divided into six criteria based on their nature and contributions. They may be listed in one criterion, but they often contribute to more than one criterion or element. Further analyses of the strategies are presented after the findings of Delphi survey which shows the various proposed identified indicators being

evaluated by the different experts at different geographical scales: National, Regional (Oblast Province and District) and local. In total, 52 indicators were developed for the final set for the survey (see details in Annex 1). All elements which were identified by the experts as ‘very important’ or “important” were discussed at the national workshop with the purpose of finalizing the national set.

Table 3: Lists of possible standard set for Sustainable Livelihood and Natural Resource Management, PAMIR Project/ Afghanistan

I.1 Regional co-operation	<i>The regional cooperation should facilitate harmonization of standards and regulation to enhance cross border initiatives</i>
I.2 Reduce Environment risk	<i>The strategy should prioritize measures in order to reduce environmental risks</i>
I.3. Community-level activities and Hazard, Vulnerability and Socio-Risk Assessment	<i>Community-level activities and Hazard, Vulnerability and Socio-Risk assessment should be determined and recognized as essential component of the disaster risk reduction</i>
I.4 Assessment of risk zones and monitoring	<i>Information about potential hazards, vulnerability and risk for all inhabited areas should be provided and the capacity for monitoring at all national and district levels should be strengthened</i>
I.5 Improve environment security	<i>Improved environment security should ensure sustainable development with minimum negative impacts to environment</i>
I.6 Use of the Sustainable Livelihood framework (SLA)	<i>SLA should be chosen as a conceptual and methodological framework for linkages between the context, vulnerability, poverty and access to forest/ resources</i>
I.7 Ecosystems approach into environmental management	<i>Introducing the ecosystems approach into environmental management should be taken as a key condition for achieving sustainability of the environment and management of natural resources</i>
I.8 Plantation and design and layout of plantations	<i>Concern authorities promote plantation in order to maintain the ecosystem function and the forest area and design and layout of plantations</i>
I.9 Social security	<i>Concerned authorities should promote social security specially for identified deprived, asset less and marginalized community</i>
I.10 Integration of DRM and national land use and land planning policy	<i>Disaster risk management issues should be integrated into the process of development of the national policy and decision-making related to land use and land planning</i>
I.11 Disaster Preparedness and Response	<i>National Disaster Preparedness and Response Framework Plan should be introduced and prepared at the national, regional and district levels</i>
I.12 Public awareness programme for disaster reduction	<i>Concerned authorities should establish nationwide infrastructure to increase awareness of disaster risk reduction methods</i>
I.13 Monitoring and Biodiversity	<i>There should be conducted long-term monitoring of status of biodiversity and studies on restoration and ecosystems</i>
I.14 Private sector involvement	<i>Concern authorities should involve the private sector in the sustainable management of natural resources</i>
I.15 Ecosystem functions and services	<i>Ensuring the integrity of ecosystems and their components is a primary task for sustainable livelihood and natural resource management</i>
I.16 Conflicting laws	<i>Concern authorities evaluate and develop mechanisms to address conflicting laws</i>
I.17 Income generation activities	<i>Particular attention should be paid to catalyzing alternative livelihoods and small businesses, and facilitating local natural resources management planning</i>
I.18 Environmental governance	<i>Concerned authorities should be strengthening environmental governance</i>
I.19 Scientific research team	<i>Concern authorities promot scientific research team for conducting disaster risk management, linkage poverty and environment</i>
I.20. Customary tenure or use rights	<i>Government protects the customary tenure or use rights of the natural resources</i>
I.21 Early warning systems	<i>Concerned authorities should be developing prompt warning of the relevant disaster response services and public about potential disasters</i>

I.22 Institutional and environmental sustainability	<i>There should be strengthened institutional potential with a view to promote environmental sustainability</i>
I.23. Reform of the social welfare system	<i>There are plans to enact and implement reform of the social welfare system to take the conditions of the market economy into account</i>
I.24 Indigenous people	<i>Concerned authorities identify indigenous people with customary/traditional rights to forest resources</i>
I.25 Illegal and unauthorized activities	<i>Forest management protects from illegal harvesting, encroachment, illegal settlement and other unauthorized activities</i>
I.26 Planning and implementation	<i>Forest management consults local communities for planning and implementation of forest management</i>
I.27 Access to natural resources	<i>Forest management clearly defines access to natural resources</i>
I.28 Equal rights and opportunities	<i>Government/local authorities should eliminate gender inequality and provide equal rights and opportunities</i>
I.29 Local processing and new markets	<i>Concerned authorities encourage the optimal use and local processing of forest diversity of products and new markets</i>
I.30 Land management	<i>Concerned authorities are required to improve and coordinate legislation on environmental protection in order to establish the institutional conditions to successfully combat desertification</i>
I.31 Genetic diversity, native species diversity and endangered species	<i>Concern authorities maintains genetic diversity, native species diversity and conserve rare, threatened and endangered species</i>
I.32 Climate change and payment system for ecosystem services	<i>Concerned authorities should be developing the norms necessary for adaptation to climate change and introduce payment system for ecosystem services, not only for natural resources use.</i>
I.33 Comprehensive assessment of the impact of economic activity on the environment	<i>Implementing and applying a short-term comprehensive assessment of the impact of economic activity on the environment should be recognized as being necessary for promoting sustainable natural resources management.</i>
I.34 Integration into Land Use Planning and Management	<i>The capacity of national and local institutions should be formulated and integrated into land use planning and management</i>
I.35 Institutions and Policies for Pastureland Management	<i>Management should create institutional and policy pre-conditions for investments in pasture rehabilitation</i>
I.36 Implementation of Sustainable land management (SLM) projects	<i>National institutions should improve their capacity to integrate SLM considerations into their operations and budgets and to design and implement SLM projects</i>
I.37 Encroachment and grazing	<i>Concern authorities control encroachment and impacts of grazing</i>
I.38 Stakeholder participation and participatory decision making	<i>Concerned authorities should widen participation in decision making and contribution to SLM by civil society and other stakeholders</i>
I.39 Conservation and management of biodiversity	<i>Government/local authorities should be promote conservation and proper management of biodiversity effectively</i>
I.40 Power and voice	<i>Area of forests should be managed by user groups with representatives of the poor</i>
I.41 Sustainable utilization of NTFPs	<i>Concern authorities should develop management guidelines for NTFPs</i>
I.42 Awareness of environmental management	<i>Forest authorities should develop awareness strategy for conservation, secure and sustainable environment</i>
I.43 Wildlife farming and hunting	<i>Concern authorities promote measures for wildlife farming and hunting</i>
I.44. Foster equitable land distribution	<i>Policies should foster equitable land distribution and agriculture intensification. to reduce pressure to settle marginalized lands</i>
I.45 Professional and technical personnel	<i>SFM allows access to an adequate number of professional and technical personnel</i>
I.46 Knowledge management and transfer	<i>Research institutions develop mechanisms and necessary knowledge management and transfer</i>
I.47 Implementation of Joint forest management and leasing relations	<i>Concern authorities ensure the implementation of joint forest management and leasing relations</i>
I.48 Reforestation concept/Strategy	<i>Concerned authorities should develop nationwide reforestation concepts</i>
I.49 Pasture management and productivity of livestock	<i>SLM ensures sustainable pasture management and enhancement of productivity of livestock farming</i>

I.50 Tran boundary co-operation	<i>SLM supports trans-boundary co-operation and programmes for biodiversity conservation, poaching control and environmental education</i>
I.51 Transparency in decision-making, annual programme and budget	<i>Concern authorities ensures transparency in decision making processes</i>
I.52 Effective inter-sector and inter-agency coordination	<i>Mechanisms for effective inter-sector and inter-agency coordination shall be put into a more efficient system of institutional management of natural resources and the environment.</i>

4.3 Delphi experts participating in the survey

The Delphi survey was conducted between July and October 2012 and the preliminary findings of the study were presented at the national workshop entitled ‘Understanding the linkages between Poverty, Environment and Disaster Risk Reduction’, which was held in Sufi Inn, Kabul, Afghanistan (3 Dec 2012). The 23 participants representing Provincial Women Council of Badakhshan, planning office, Community Case Worker, FOCUS Afghanistan, National Environmental Protection Agency, Social Security, MRRD, Rural Development, AKF and PAMIR project staffs participated in the National workshop.



National workshop in Kabul, December 2012

In Delphi survey, the total of 23 respondents took part in the study. Of all the participants representing only 22% were female. The respondents comprised of government representatives (9%), international and non-governmental organizations (78%), universities (9%), and associations (4%). Out of the 23 respondents, experts from the field of social science and politics (17%) were in the majority. Of the rest, 13% were from the field of

natural resources management, 9% were from the environment, and 13% from economics and 31% were categorized as being from other occupations (see **Table 4**).

Table 4. Descriptive statistics of Delphi experts participating in the survey of C&I development for National Action Plans, Afghanistan (Source: Delphi Survey, 2012)

Gender	Received Responses
Female	5(21.7%)
Male	18 (78.3%)
Affiliation	Received Responses
Government	2 (8.7%)
I/NGOs	18 (78.2%)
University	2 (8.7%)
Association	1 (4.3%)
Expertise	Received Responses
NRM	3 (13%)
Environment	2 (8.7%)
Social science	4 (17.4%)
Economics	3 (13%)
Politics	4 (17.4%)
Others	7 (30.45%)
Total	23 (100%)

4.4 Result and analysis based on the preference elicitation

For a quantitative analysis of the expert evaluations of the indicators regarding the applicability and importance of indicators for different geo-political and geographical regions with respect to SLNRM was assessed on the basis of a rating using the Likert scale (where 1 = least applicable/ importance and 5 = very high applicable/ importance). The 52 key indicators identified in the target countries are categorized under six Criteria: (1) Disaster Preparedness and Management, (2) Forest Management, (3) Land Use, Biodiversity and Pasture Land Management, (4) Environment Management, (5) Livelihood Promotion and (6) Co-operation, co-ordination and other Cross-Cutting issues (see variation of order of the indicators are numbered). Based on the preference elicitation of experts, the average rating of 4 and above were considered a bench mark for highly applicable and important indicators, whereas rating lower than 4 was considered as not highly applicable and important for the further analysis. For each indicator of key criteria, it was possible to calculate the cumulative average sum for each indicator to allow an interpretation of the overall applicability and importance of an indicator. We organized the results of the Delphi survey in terms of the information and

feedback gained from experts, the extent to which consensus among survey participants emerged, and the priority or importance assigned to each of the items/issues.

4.4.1 Preference elicitation on Criteria Set 1 (Disaster Risk Management)

The ratings obtained from the experts were used for assessing the applicability and importance of indicators with respect to SLNRM at the national, province, district and local levels under Criteria Set 1 (Disaster Risk Management). All the stakeholders gave quite diverse opinions in different geographical scales. The result indicates that the only two indicators ‘Disaster preparedness and Response (I.11)’ and ‘Public awareness programme for disaster risk reduction (I.12)’ were judged as highly applicable at national, province, district and local levels, whereas the ‘Scientific research team (I.19)’ indicator was the only one that was presented as less applicable at district and local levels. Additionally, the applicability of two indicators ‘Scientific research team (I.19)’ and ‘Early warning systems’ were was judged as low at province level (Fig 4.1).

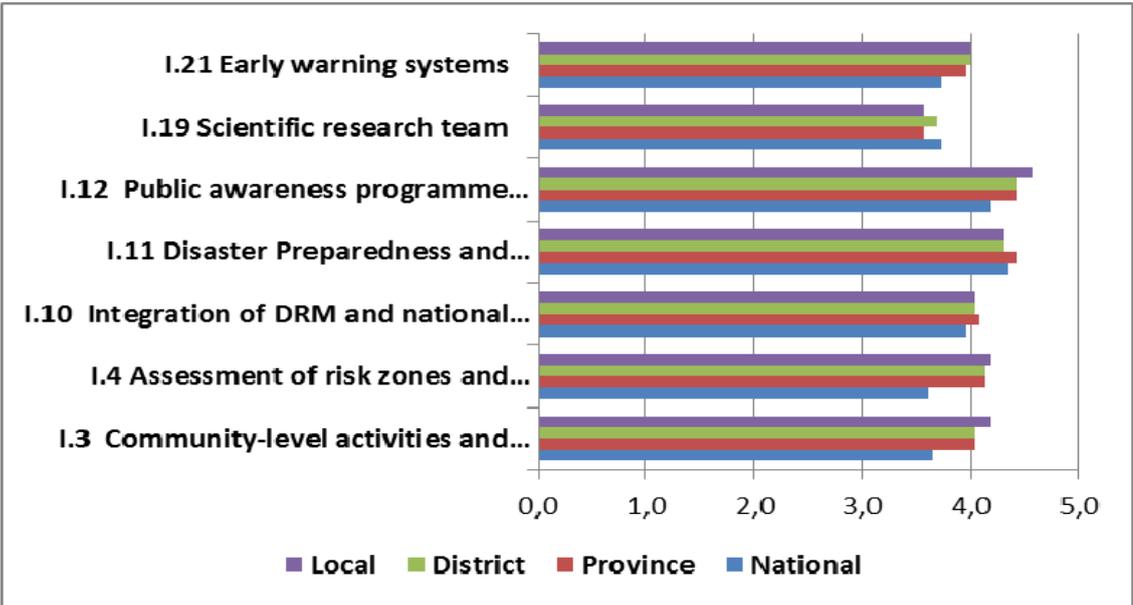


Figure 4.1: Applicability at National, Province, District and Local level by Stakeholder Preference elicitation for the indicators on Criteria Set 1 (Disaster Risk Management), Afghanistan

The results indicate that all indicators were judged with high importance under Criteria Set 1 (Disaster Risk Management). Under this category, the indicator ‘Disaster preparedness and Response (I.11)’ and ‘Public awareness programme for DRR (I.12)’ are presented as having

the highest importance according to the overall judgment of stakeholder preference elicitation (Fig 4.2).

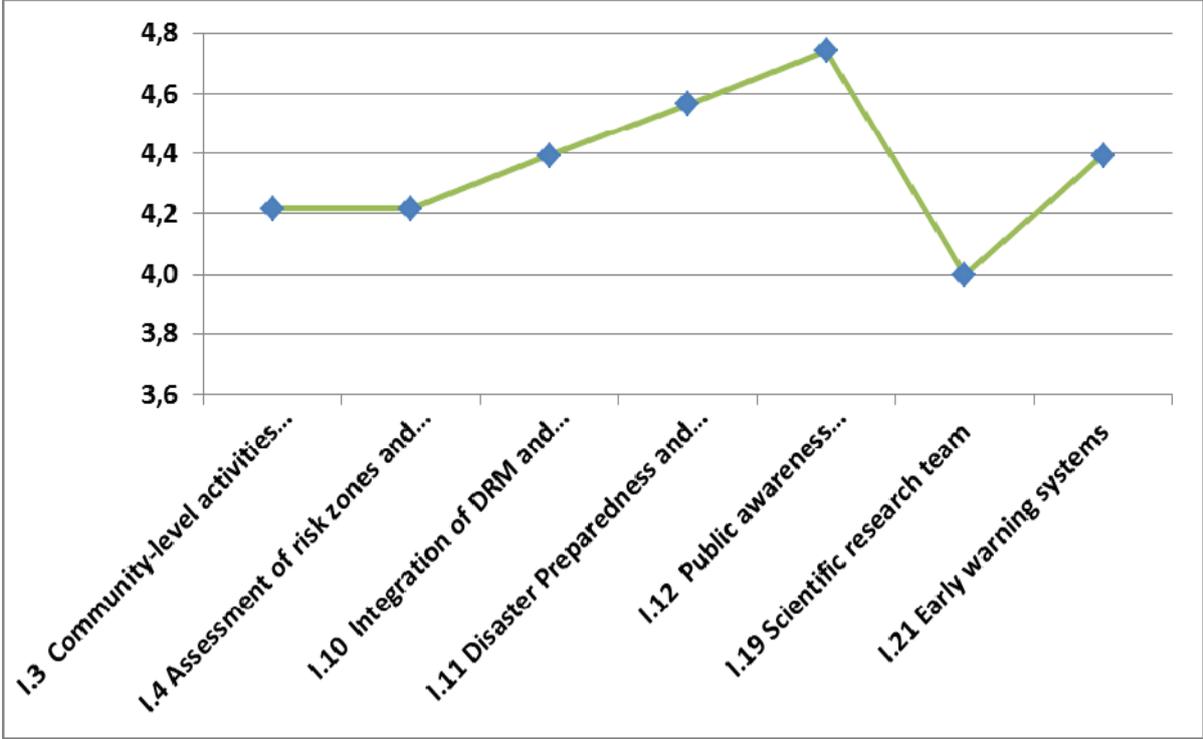


Figure 4.2: Overall importance by Stakeholder preference for the indicators on Criteria Set 1 (Disaster Risk Management), Afghanistan

4.4.2 Preference elicitation on Criteria Set 2 (Forest management)

Having a closer look at the overall applicability of all indicators under Criteria Set 2 (Forest management), it becomes evident that the development of nationwide reforestation/strategy (I.48) was judged with the highest applicability of the 12 indicators at national level. Based on the stakeholders’ preferences, the indicators: ‘plantation and design layout of plantation (I.8)’, ‘indigenous people rights (1.24), ‘protection from illegal harvesting, encroachment, illegal settlement and other unauthorized activities (I.25)’, ‘planning and implementation (I.26)’ and ‘development of nationwide reforestation/strategy (I.48)’ were judged as highly applicable at local levels. The applicability of each indicator varies at different geographical levels, and shows its degree of applicability in overall judgment.

Table 5: Stakeholder preference for the indicators of criteria 2 (Forest management and Biodiversity Conservation), Afghanistan

Indicators	National	Province	District	Local
I.8 Plantation and design and layout of plantations	3.87	4.26	4.13	4.30
I.15 Ecosystem functions and services	3.78	4.04	3.96	3.74
I.20 Customary tenure or use rights	3.43	3.39	3.52	3.57

I.24 Indigenous people	3.52	3.70	3.74	4.13
I.25 Illegal and unauthorized activities	3.65	4.00	4.04	4.00
I.26 Planning and implementation	3.78	3.83	4.04	4.09
I.27 Access to natural resources	3.87	3.83	3.91	3.91
I.29 Local processing and new markets	3.61	3.74	3.78	3.74
I.37 Encroachment and grazing	3.78	3.74	3.91	3.87
I.41 Sustainable utilization of NTFPs	3.52	3.78	3.74	3.65
I.47 Implementation of Joint forest management and leasing relations	3.83	3.70	3.83	3.83
I.48 Reforestation concept/Strategy	4.04	4.13	3.91	4.00

The results indicate that all indicators under this category, except ‘sustainable utilization of NTFPs (I.41)’, were judged as highly important. Based on the stakeholders’ preferences, the indicators ‘planning and implementation (I.26), ‘plantation and design and layout of plantations (I.8) and ‘reforestation concept/strategy (I.48) were rated as highly important respectively (see **Fig 4.3**).

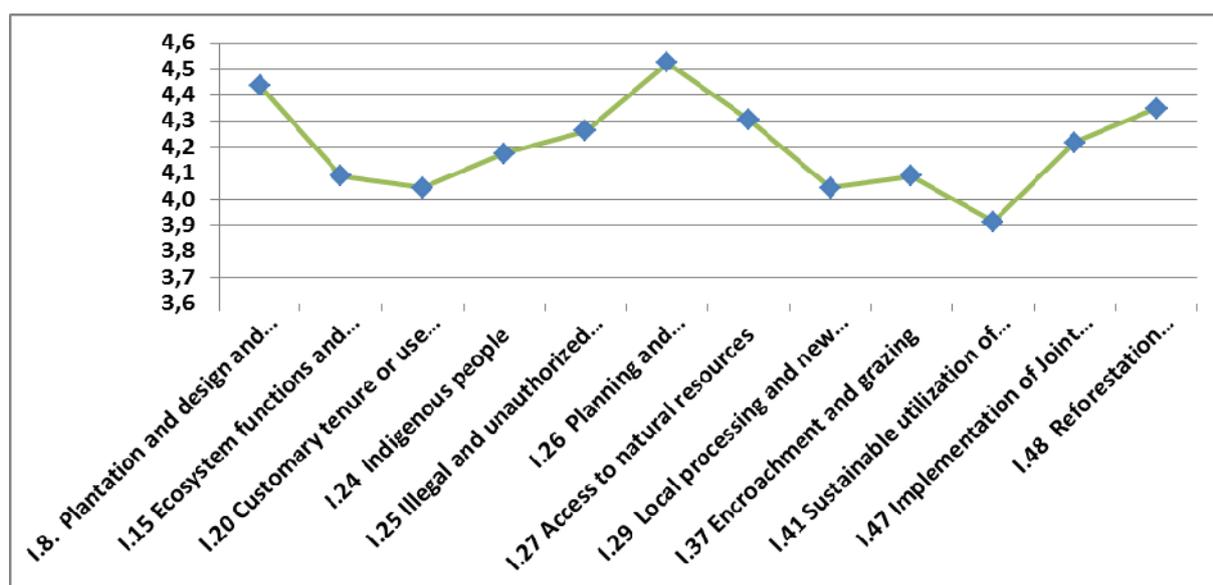


Figure 4.3: Overall importance by Stakeholder preference for the indicators on criteria 2 (Forest management and Biodiversity Conservation), Afghanistan

4.4.3 Preference elicitation on Criteria Set 3 (Land Use, Biodiversity and Pasture Land Management)

Having a closer look at the overall applicability of all indicators under this category, the results indicate that all indicators were judged with low applicable except the ‘pasture management and productivity of livestock (I.49)’ were rated as highly applicable at local level under the Criteria Set 3 (Land Use, Biodiversity and Pasture Land Management). In general,

the indicator ‘genetic diversity, native species diversity and endangered species (I.31)’ were judged as least applicable out of nine indicators (Fig 4.4).

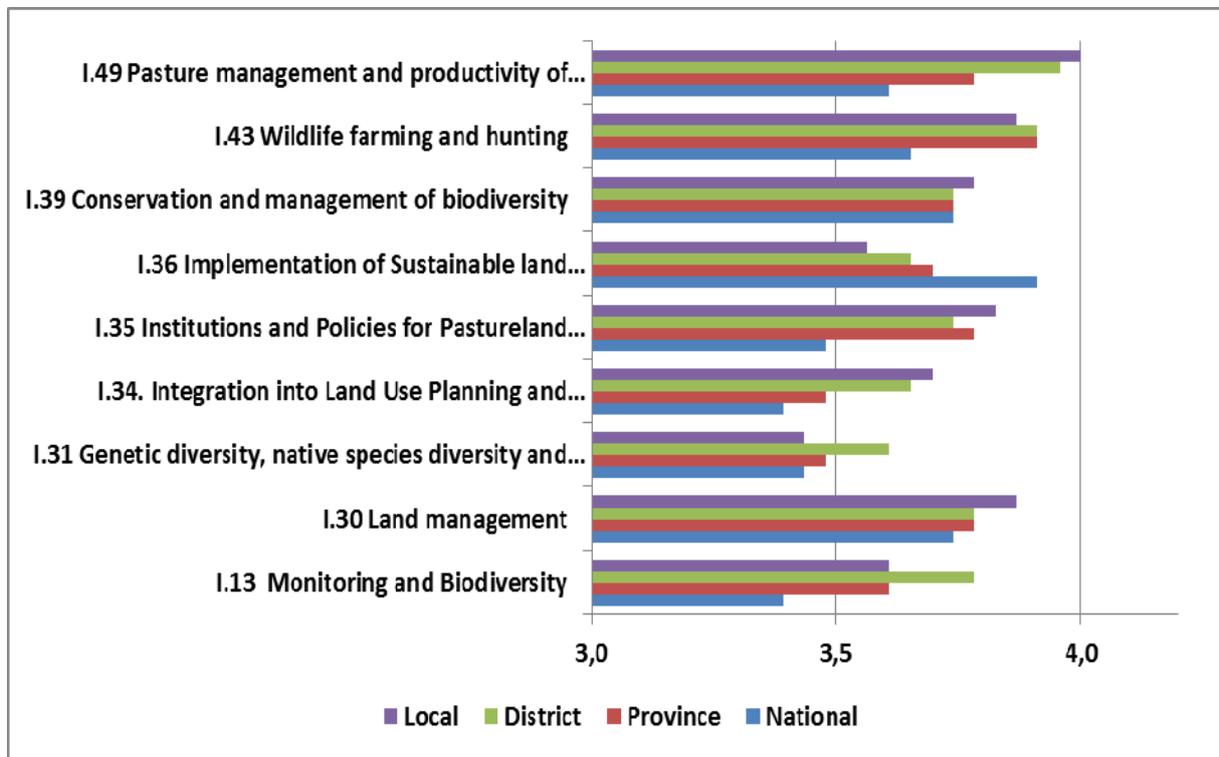


Figure 4.4: Applicability at National, Province, District and Local level by Stakeholder Preference elicitation for the indicators on Criteria Set 3 (Land Use, Biodiversity and Pasture Land Management), Afghanistan

The ratings obtained from the experts were used for assessing the importance of at the national, province, district and local levels. Based on the average ratings under the Criteria Set 3 (Land Use and Pasture Land Management), all indicators except ‘genetic diversity, native species diversity and endangered species (I.31)’ were judged as highly important based on the stakeholders’ preferences. The result indicates that ‘land management (I.30)’ and ‘pasture management and productivity of livestock (I.49)’ were rated with the highest importance among the nine indicators.

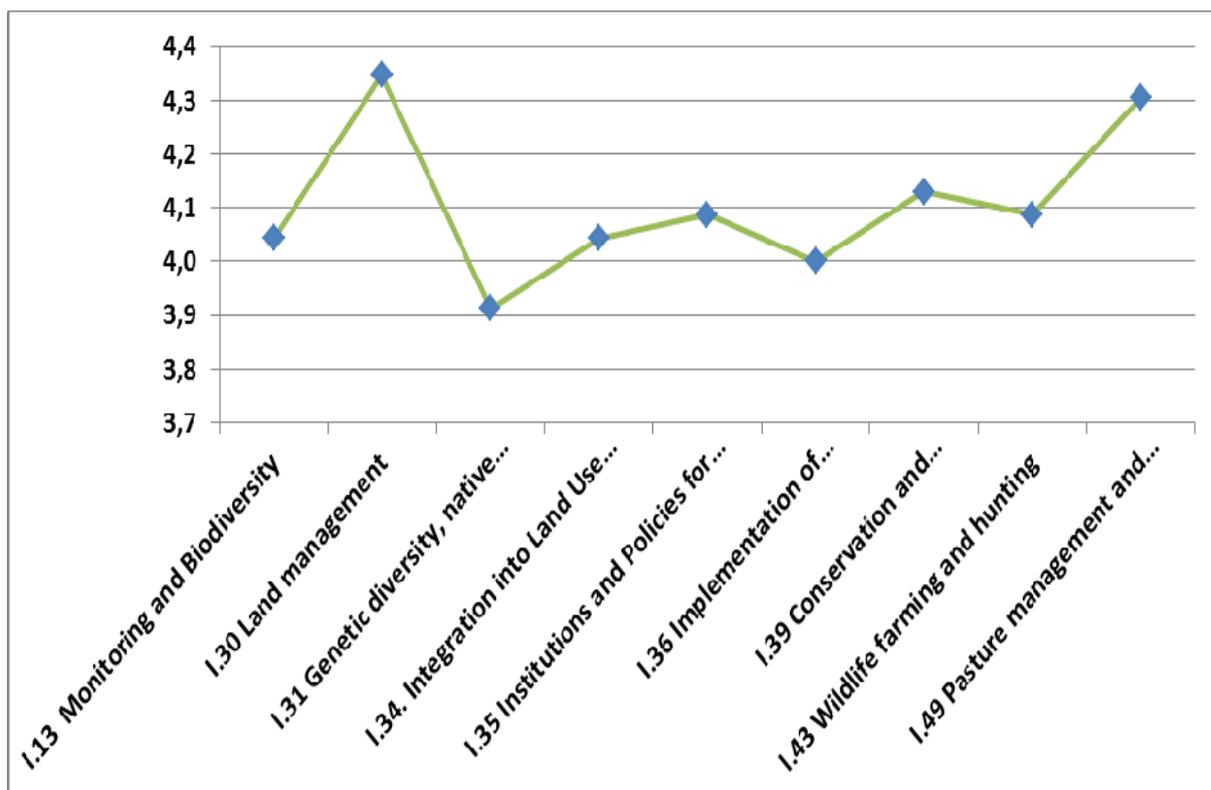


Figure 4.5 Overall importance by Stakeholder preference for the indicators on Criteria Set 3 (Land Use, Biodiversity and Pasture Land Management). Afghanistan

4.4.4 Preference elicitation on Criteria Set 4 (Environment and Ecosystem Management)

Based on the evaluation of stakeholders' elicitations, the results indicate that the importance of awareness strategy for conservation and secure and sustainable environment (I.42) was judged as highly applicable at geographical scale whereas introducing the ecosystem approach into environmental management (I.7) and development of the norms for adaptation to climate change and introducing a payment system for ecosystem services (I.32) were judged with low applicability according to stakeholders' preferences elicitations. Having a closer look at the overall applicability of all indicators under this category, it is evident that the improvement of environment security (I.5) was rated as highly applicable at national and province levels but less applicable at local level based on judgement of the stakeholders (**Fig 4.6**).

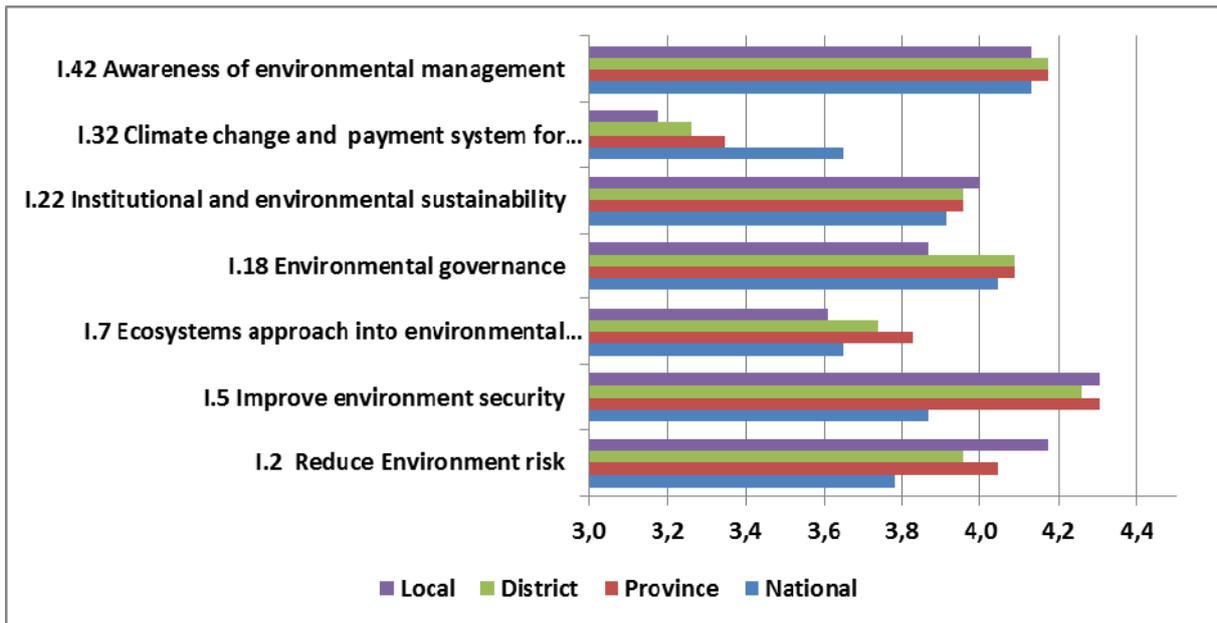


Figure 4.6: Applicability at National, Province, District and Local level by Stakeholder Preference elicitation for the indicators on Criteria Set 4 (Environment and Ecosystem Management). Afghanistan

Figure 4.7 shows only two indicators as having low importance under the Criteria 4 (Environment and Ecosystem Management). The results indicate that the ‘improvement environment security (I.5)’ and ‘climate change and payment of system for ecosystem services (I.32)’ were judged as having low importance out of seven indicators. ‘The awareness of environment management (I.42) and ‘reduce environment risk (I.2) were evaluated as having the highest importance respectively (Fig 4.7).

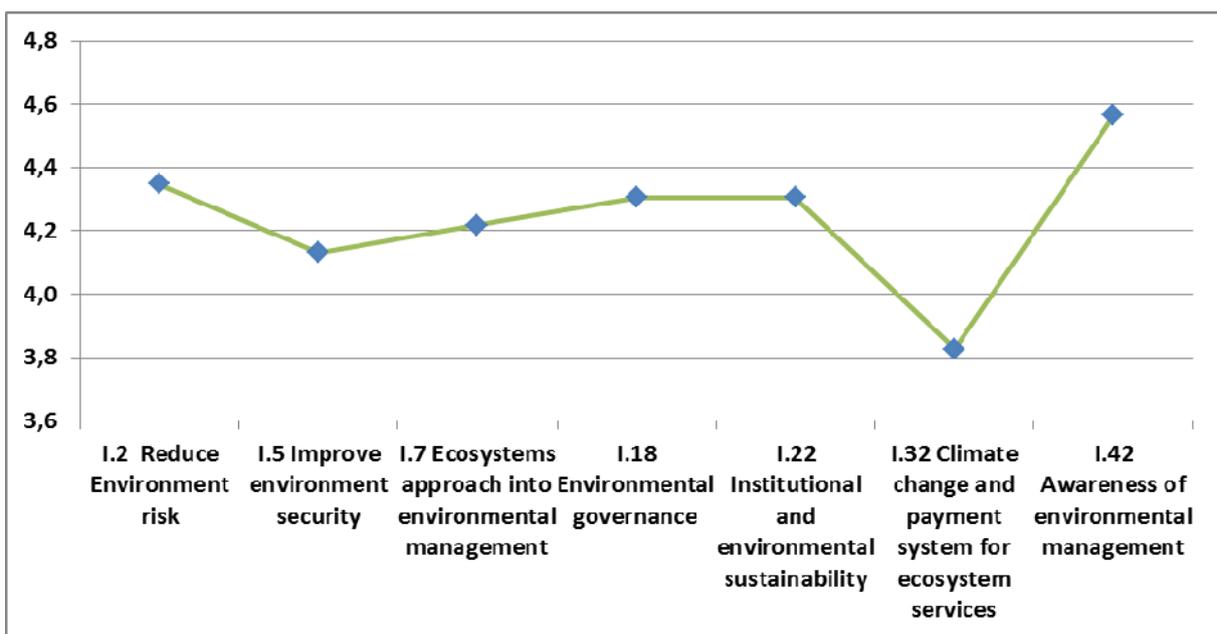


Figure 4.7 Overall importance by Stakeholder preference for the indicators on Criteria Set 4 (Environment and Ecosystem Management), Afghanistan

4. 4.5 Preference elicitation on Criteria Set 5 (Livelihood Promotion)

Based on the average ratings for Criteria Set 5 (Livelihood Promotion), the applicability of each indicator varies in different geographical levels. Its degree of applicability is shown in the overall judgment. The results indicate that ‘the use of the sustainable livelihood framework (I.6)’ was judged as highly applicable only at the local level whereas ‘income generation activities (I.17)’ were presented as highly applicable except for the national level. ‘The promotion of social security (I.9)’ was also judged as highly applicable at all levels except the province level (Fig 4.8).

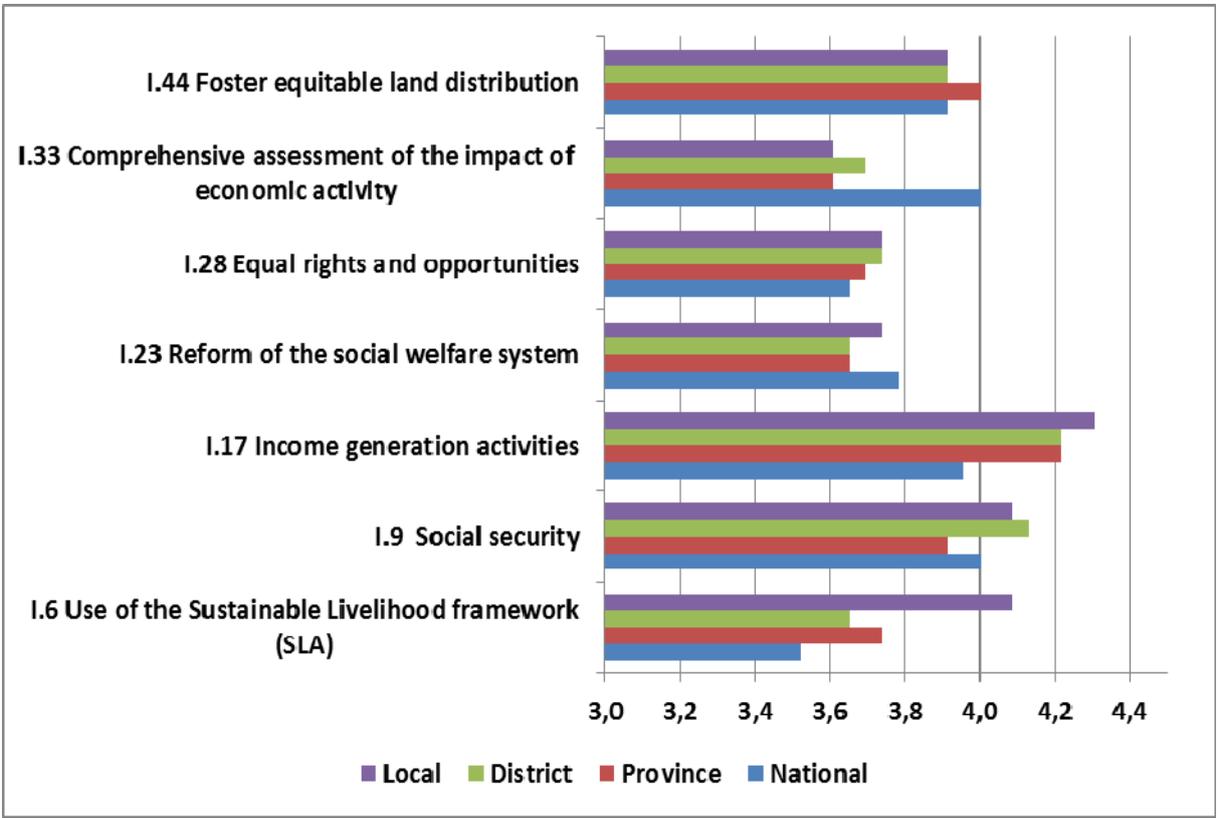


Figure 4.8: Applicability at National, Province, District and Local level by Stakeholder Preference elicitation for the indicators on Criteria Set 5 (Livelihood Promotion). Afghanistan

Based on the overall judgment of stakeholders’ preferences, all indicators were judged as highly important except ‘comprehensive assessment of the impact of economic activity (I.33)’. The results indicate that ‘income generation activities (I.17)’, ‘social security ((I.9)’ and ‘use of Sustainable Livelihood Framework (I.6) were rated with highest importance out of the seven indicators (Fig 4.9).

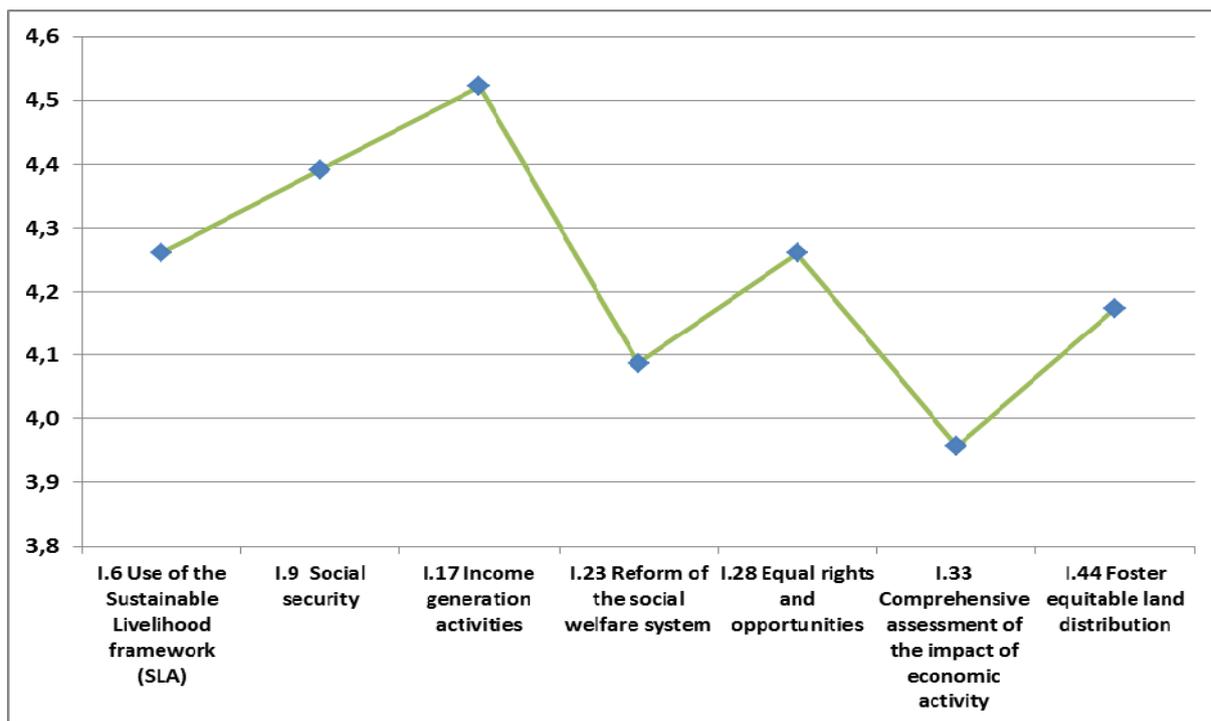


Figure 4.9 Overall importance's by Stakeholder preference for the indicators on Criteria Set 5 (Livelihood Promotion). Afghanistan

4. 4.6 Preference elicitation on Criteria Set 6 (Co-ordination. Co-operation and other cross-cutting issues)

A closer view at the overall judgement of stakeholders, reveals that ‘the study on conflicting law (I.16)’ was judged as highly applicable at all geographical scales. The ‘trans-boundary co-operation (I.50)’ was rated with highest applicability out of all eight indicators at the national level, whereas it has low applicability at province, district and local levels. Likewise, ‘transparency in decision-making, annual programme and budget (I.51)’ and ‘effectiveness of inter-sector and inter-agency coordination (1.52)’ were evaluated as highly applicable at national, province and district levels but it has lowest applicability at the local level (**Fig 4.10**).

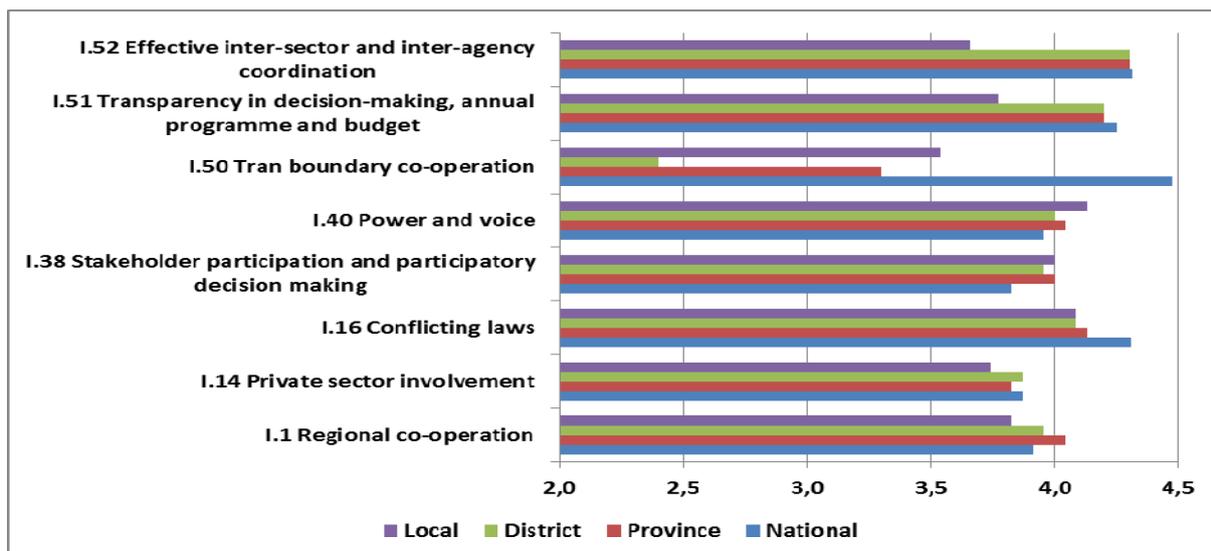


Figure 4.10: Applicability at National, Province, District and Local level by Stakeholder Preference elicitation for the indicators on Criteria Set 6, Afghanistan

The results indicate that only one indicator shows low importance under the Criteria Set 6 (Co-ordination, Co-operation and other cross-cutting issues). Surprisingly, ‘trans-boundary co-operation (I.50)’ was judged as having low importance whereas all other seven indicators were evaluated as highly important (Fig 4.10).

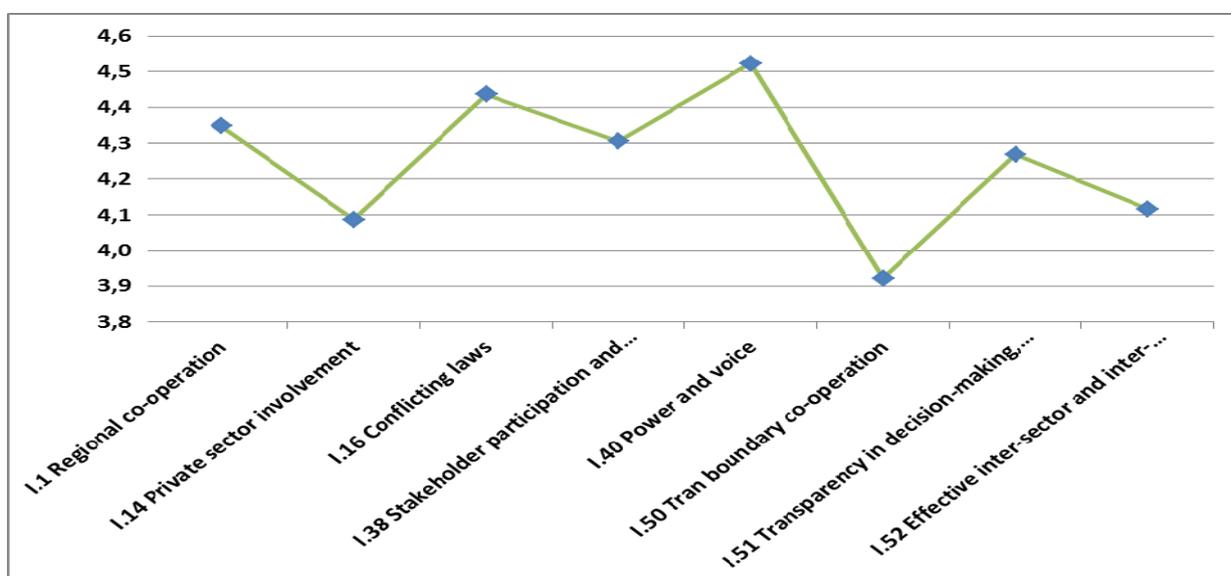


Figure 4.11: Overall importance by Stakeholder preference for the indicators on Criteria Set 6 (Co-ordination, Co-operation and other cross-cutting issues). Afghanistan

4.5 Assessment of Problems, Activities and Recommendation for National Action Plans

Based on the above findings, all highly important and highly applicable indicators at national levels were discussed at national workshops and they have been assessed according to the identified problems/issued. Activities and recommendations according to each indicator on Criteria level were proposed.

4.5.1 Assessment of Problems, Activities and Recommendation on Criteria Set 1 (Disaster Risk Management), Afghanistan

Problems/Issues	Activities	Recommendations
I.3 Community-level activities and Hazard, Vulnerability and Socio-Risk Assessment		
<p>Need to improve the policy process to recognize Community-level activities and Hazard, Vulnerability and Socio-Risk assessment as an essential component of the DRR.</p> <p>Lack of accurate information on role of gender, power dynamics in relation to access natural resources. Vulnerability and adaptation assessments have been mostly qualitative.</p>	<p>Allow risk plans and information provision to be updated regularly (e.g. Natural and Hazard Map, risk mapping).</p> <p>Invest in institutional capacity building, collaborative project and network.</p> <p>Implication of HSVRA approach in regional and local levels.</p>	<p>Develop DRR management models and methodologies at regional, local and community levels for facilitating vulnerability assessments.</p> <p>Identify the hazards, vulnerability, natural risks and socio-economic conditions through participatory assessments.</p> <p>Develop DRR management models and methodologies at regional and local levels.</p>
I.4 Assessment of risk zones and monitoring		
<p>Improve and access data through joint research efforts (droughts, wind erosion, Seismic risk zone, risks from landslides, mudslides and avalanches).</p> <p>Improve meteorological networks and ground reality.</p>	<p>Support technical advances, improve modeling and forecasting application.</p> <p>Improve monitoring systems for evaluation of risk.</p> <p>Strengthen the capacity for monitoring at all national and district levels.</p> <p>Support technical advances in identification and evaluation of risk and improve monitoring systems for evaluation of risk.</p>	<p>Strengthen the capacity for monitoring at all national and district levels.</p> <p>Develop strategy and priority measure in order to reduce environmental risks.</p> <p>Revise development approval processes and guidelines to required hazard and risk assessments of development initiatives, particularly in hazard prone areas.</p>
I.10 Integration of DRM and national land use and land planning policy		
<p>Lack of efficient monitoring of services provision based on the qualitative, valid information, as well as fragmentation of responsibilities on the national and local levels.</p>	<p>Prepare guidelines on DRM integration into land use plans.</p>	<p>Regular review and refinement of DRR & DM national action plan linked to national development plan and budget processes, meeting the Government's commitment to the international and regional initiative.</p> <p>Revise infrastructure development planning and approval guidelines in all sectors to reflect requirements for hazard and risk assessments.</p>

I.11 Disaster Preparedness and Response		
Lack of a uniform plan in case of a disaster. Lack of preparedness and response plan for recovery. Lack of capacity to provide timely response and co-ordination of DM capacity.	Training for specific disaster preparedness and plans. Inter-sectorial working group and volunteer team formation.	Develop National Disaster Preparedness and Response Framework. Focus on emergency response and restructure rather than prevention and adaptation.
I.12 Public awareness programme for disaster reduction		
Lack of special tool kits, manuals and willingness to campaign to raise public awareness about disaster risk reduction.	Prepare training manuals and kits. Develop guidelines for public awareness programme. Building understanding and awareness of disaster prevention including such activities as providing user-friendly information and training on risks and means of protection.	Establish nationwide infrastructure to increase awareness of disaster risk reduction methods. Strengthen the capacity for monitoring at all national and district levels.
I.19 Scientific research team		
Insufficient collaboration and networking within scientific research team from diverse disciplines: DRR, forestry, emergency, social/economic science. Lack of common understanding among scientists, policy makers and scientists to integrate poverty reduction, DRR and environment protection.	Functional and Research council with diversified scientific research team. Capacity assessment and sources of funding. Develop common understanding and improvement and integration between poverty reduction, DRR and environment protection.	Establish research council with representative of diverse disciplines science; Develop scientific research project linking disaster risk management, poverty and environmental management programme.
I.21 Early warning systems		
Irregularity in assessment of early warning systems and upgrading and enhancing early warning capacity and improvement of the existing early warning systems.	Establishment of early warning systems. Prompt warning system for potential disasters for the relevant disaster response services and the public.	Support technical advances, improve modeling and forecasting application. Identify, assess and monitor disaster risks and enhance early warning. Review the end-to-end warning system for each disaster category, to identify how to strengthen monitoring, the generation of appropriate information and the communication of early warnings to communities

4.5.2 Assessment of Problems, Activities and Recommendation on Criteria 2 (Forest management), Afghanistan

Problems/Issues	Action plans	Recommendations
I.8 Plantation and design and layout of plantations		
Lack of reforestation project and intervention, low level of budget allocation. Not specifying the possible plantation areas and restoration of ecological balance.	Details of layout of plantation blocks. Plantation operational plan, use of suitable tree species. Establish Wildlife corridors, streamside zones.	Promote plantation in order to maintain the ecosystem functions, the forest areas and the design and layout of plantations. Restoration and prevention of ecosystem degradation. Encourage the establishment of nursery, campaign of afforestation strategy including, e.g. school nursery, community nursery, demonstration plot.
I.15 Ecosystem functions and services		
Lack of national wide SLMM plan, knowledge in SPNA programme and irregular ecological assessment and capacity building programme. Degradation of the natural resources base due to conflict, droughts, etc. and the impact on food security and vulnerability to natural disasters (e.g. landslides).	Ensure the sustainable management of the land resources. Preserving biodiversity within the Specially Protected Nature Areas (SPNA). Extend SPNA and introduce integrated water resources management, cut emissions of greenhouse gases and determine ecological capacity of areas.	Ensuring the integrity of ecosystems and their components is a primary task for the sustainable livelihood and natural resource management. Awareness raising programme for ecosystem function. Apply ecosystem based adaptation strategy for natural resources conservation. Promote trans- boundary cooperation for the: Conservation of vulnerable ecosystems, Sustainable use of natural resources, ecosystem goods and services.
I.20 Customary tenure or use rights		
Ineffective in controlling legal or customary tenure or use rights, to the extent necessary to protect their rights or resources, over forest operations. Conflicts over land (between pastoralists and settled farmers). Unclear land tenure and inadequate dispute resolution mechanisms.	Proper documentation of ownership of use rights to resources. Ensure the use rights in management plan. Identification of major disputes and precluding certification of the authorized agencies.	Protects the customary tenure or use rights of the natural resources. Provide land use and tenure rights to local communities. Compensate and subsidy mechanisms.
I.24 Indigenous people		
Lack of clear definition and process to identify the indigenous people.	Provision of legal rights and certificate. Forest management plan and areas marked on maps.	Identify indigenous people with customary/traditional rights to forest resources. Provide land use rights to indigenous communities.

	Documentation of traditional, cultural, religious, economic and ecological importance.	Investigate the constraints that limit the ability of mountain people, especially indigenous people, to reap the full benefits of their unique environment.
25. Illegal and unauthorized activities		
Improper mechanism for controlling illegal harvesting, encroachment, illegal settlement and other unauthorised activities. Lack of settlement, resettlement policies, refugee and migrant issues due to conflict and war. Over-exploitation (in particular illegal exploitation) of certain resources <i>butta</i> in pasture, trees, wildlife)	Authority instances and mechanisms, reward or punishment system. Verify the status of illegal settlement of forest land, the causes of displacement and resettlement packages. Identify the primary and secondary stakeholders, illegal settlers, livestock grazing groups, and other various interest groups.	Protect from illegal harvesting, encroachment, illegal settlement and other unauthorized activities. Evidence-based policy formulation and establishment of regulatory frameworks for natural resources management and conflict resolution.
I.26 Planning and implementation		
Lack of genuine participation, decentralization and devolution for forest management and planning. Low level of participatory forest management experiences and experimental studies. Lack of data on situation of natural resources. Limited capacity for planning, preparation and enforcement of regulatory frameworks.	Guideline for participatory forest management. Develop Communication strategy and feedback mechanisms. Guideline for co-management arrangements; Establishment of a comprehensive baseline and a system for natural resource. Conduct a baseline assessment of the status of key natural resources. Produce maps that delineate critical forest, rangeland and watersheds. Conduct a national forest resource inventory.	Provide legal rights to local communities for planning and implementation of forest management. Follow both hybrid approach: Top down and bottom up approach. Apply adaptive forest management planning process for ecosystem management. Evidence-based policy, programme and project. Establishment of a comprehensive NRM monitoring and surveillance scheme.
I.27 Access to natural resources		
Lack of Legal framework to protect and access to forest and forest resources (e.g. land use right certificate, customary rights, or lease agreements).	Ownership of land use right certificate. Registration status. Agreement with authorities.	Clearly define access to natural resources. Awareness raising for forest development and extension of forest areas. Promote Sustainable and efficient use of land, water and forest resources.

I.29 Local processing and new markets		
<p>Lack of experiences and provisions for local processing.</p> <p>Need of business plan, enterprise development, market survey and co-operative mechanisms.</p> <p>Lack of knowledge on resource value and its management.</p> <p>Low level of participation and mechanisms of public-private partnership for using resources and seeking market opportunities.</p>	<p>Promote Local product processing system Linkage Marketing system.</p> <p>Provide sufficient or allocated budget. Develop guideline for business plan, enterprise development, co-operative systems, public-private partnership mechanisms.</p> <p>Assessment of forest-based industry feasibility and market demands and supply.</p>	<p>Encourage the optimal use and local processing of forest diversity of products and new markets. Promote public-private partnerships for resource value use and market development.</p> <p>Formulate practical and realistic legal framework and incentives for non-timber forest products processing, improve local storage and transportation facilities and facilitate effective marketing procedures.</p>
I.37 Encroachment and grazing		
<p>Lack of enforcement and legal provisions to penalty.</p> <p>Free grazing practice and improper livestock management.</p>	<p>Guideline for enforcement procedure.</p> <p>Protect illegally encroached areas.</p> <p>Develop livestock management guidelines and strategy.</p> <p>Study on carrying capacity and livestock ratio.</p>	<p>Develop strict procedures to control encroachment, grazing and illegal exploitation of forest. Implement rangeland and pasture land management policy effectively.</p> <p>Proper livestock management for increasing productivity and economic benefits rather large-scale rearing of low productive livestock.</p> <p>Establish the livelihood significances of crops and livestock among the populations.</p> <p>Determine the distribution of crop production, landholding and livestock.</p>
I.47 Implementation of Joint forest management and leasing relations		
<p>Lack of pilot study on joint forest management initiatives and lessons learnt from the whole country.</p> <p>Issue of people participation in forest management.</p> <p>Lack of knowledge about JFM and SFM and</p>	<p>Pilot and experimental plot for Joint Forest Management.</p> <p>Formation of commissions or task teams for formulating rules, regulations, guidelines.</p> <p>Development of Joint Forest Management Operational Guidelines.</p>	<p>Develop the general regulations on the joint forest management, procedure.</p> <p>Promote community participation as important means of protecting and implementing forest management. Ensure to implement joint forest management and leasing relations.</p>

<p>limited forest areas.</p> <p>Lack of data on land tenure and use rights of natural resources.</p>	<p>National platform for mainstreaming JFM and other similar kinds of initiatives.</p>	<p>Continue engagement with partner institutions to promote joint forest management and community-based resources management systems across Central Asian Regional Programmes.</p> <p>Guidelines for community forestry management.</p>
<p>I.48 Reforestation concept/Strategy</p>		
<p>Legal provisions and strategy of Reforestation.</p> <p>Insufficient budget and skilled manpower.</p> <p>Lack of funding in forest development.</p> <p>Lack of skilled manpower and concern expert/specialist.</p>	<p>Campaign for Reforestation/Afforestation.</p> <p>Establishment of demonstration plot and nursery establishment at community, local and regional levels.</p> <p>Maintain documents of community of practice and best practices for the reforestation strategy</p>	<p>Develop nationwide reforestation concepts and strategy. Allocate sufficient budget and technical assistance based on scientific knowledge.</p> <p>Initiate reforestation projects of critically endangered areas.</p> <p>Establishment of community-run nurseries.</p> <p>Pilot projects for sustainable use of non-timber forest products (NTFP).</p>

4.5.3 Assessment of Problems, Activities and Recommendation on Criteria Set 3 (Land Use, Biodiversity and Pasture Land Management), Afghanistan

Problems/Issues	Activities	Recommendations
I.13 Monitoring and Biodiversity		
Insufficient, scientific research on the status of severely threatened and endemic species.	Specific action for conservation of wild flora and fauna on the scientific basis.	Conduct long-term monitoring of status of biodiversity and studies on restoration and ecosystems.
Lack of priority to engage the scientists and academician in a long-term biodiversity management research.	Develop biodiversity conservation strategy.	Provision of monitoring of the condition of the environment and rational nature management.
I.30 Land management		
Lack of monitoring system to assess the desertification process and environmental aspects of rehabilitating degraded pastures.	Support a sustainable mechanism of coordinating activities to combat desertification.	Improve and coordinate legislation on land management in order to establish the institutional conditions to successfully combat desertification.
Need of scientific land reform policy. Absence of systematic land use planning.	Introduce Pasture conservation methods. Mapping of Natural Resources & Land Use Classification. Conduct a comprehensive land use and land cover survey. Conduct a comprehensive survey of water sources and water bodies.	Commissions for the land re-form policy through multi-stakeholder and political process. Determine the land distribution pattern, livestock, crop protection.
I.34. Integration into Land Use Planning and Management		
Improper land use distribution and quality of land.	Assessment of county's land resources and its scientific distribution ration.	Formulate and integrate use planning and management into land.
High dependence of the rural population on land resources.	Update Poverty Assessment and its driving factors. Formulate Rural Development Strategy plan.	Develop Rural Development Strategy where an account Land conservation has an important place. Improving livelihoods.
Scarcity of land resources and issues of proper land management. Inappropriate land use and farming practices.	Rehabilitation and protection field belt.	
I.35 Institutions and Policies for Pastureland Management		

<p>Not enough mobile SLM training centers. Lack of assessing the carrying capacity of the lands.</p> <p>Lack of livestock breeders to take into account carrying capacities of their forage areas.</p> <p>Conflict and tension within and between sedentary and nomadic farmers. Lack of animal feed production.</p>	<p>SLM training/ community centers.</p> <p>Quality and quantity improvements in animal feed production.</p>	<p>Creating institutional and policy pre-conditions for investments in pasture rehabilitation.</p> <p>Institutionalization of incentive-based grazing and seasonal practice for grazing in ecologically vulnerable areas.</p> <p>Establishment of Rangeland improvement trials. Pilot initiatives for sustainable rangeland management.</p>
I.36 Implementation of Sustainable land management (SLM) projects		
<p>Need to recognize as a budget category in relevant ministries and in PIP.</p> <p>Tremendous efforts to develop the SLM policies and guidelines.</p> <p>Lack of common understanding on SLM framework.</p>	<p>Review of PRSP and the role of SLM.</p> <p>Completion and endorsement of policies.</p> <p>Sensitization of SLM policies and its activities. Support to CBNRM at field level.</p> <p>Assistance with design of participatory land-use plans at field level including watershed management plan.</p>	<p>Improve their capacity to integrate SLM considerations into their operations and budgets and to design and implement SLM projects.</p> <p>Recognize in the PRSP; formulate policy frameworks for sustainable management of pasturelands, rainfed lands and forests.</p> <p>Develop mechanisms for local-level involvement in protection of natural resources.</p> <p>Dissemination of best practices and strengthening technical skills on CBNRM and participatory land-use planning.</p>
I.39 Conservation and management of biodiversity		
<p>Need of public-private partnership in use and management of natural resources.</p> <p>Lack of public debate on Biodiversity conservation.</p> <p>The lack of awareness and conservation strategies.</p>	<p>Campaign for an awareness raising programme.</p> <p>Develop a policy on public-private partnership.</p>	<p>Promote conservation and proper management of biodiversity.</p> <p>Develop public-private partnership mechanisms with a view to promote environmental sustainability.</p> <p>Implement measures to preserve specially protected natural areas and restore forest resources and pastureland</p>

		<p>Identify adverse environmental impacts zone.</p> <p>Establish coordination mechanism with the National Environmental Protection Agency (NEPA) and other relevant institutions.</p>
I.43 Wildlife farming and hunting		
<p>Not clear policy on wildlife farming and hunting.</p> <p>Lack of guidelines on hunting and licence.</p> <p>Low level of awareness and capacity for wildlife farming and development.</p>	<p>Develop Policy guidelines for wildlife farming.</p> <p>Update Biodiversity assessment and carrying capacity for hunting.</p> <p>Develop wildlife management plan and hunting procedure and plan.</p>	<p>Promote measures for wildlife farming and hunting. Develop legislative text for wildlife farming and hunting and the harvesting of wild produce.</p> <p>Support and assist local people and their organizations in creation and maintenance of wildlife biological corridors to minimize human-wildlife conflicts.</p> <p>Promotion of wildlife farming with appropriate incentives</p>
I.49 Pasture management and productivity of livestock		
<p>Lack of scientific knowledge on pasture management.</p> <p>Improper policy and lack of budget allocation from the government.</p> <p>Quality of livestock and service centers.</p>	<p>Prepare pasture land management guidelines and strategy plans.</p> <p>Prepare improved livestock farming guidelines.</p> <p>Engagement association groups for pasture management and market linkages for productivity.</p>	<p>Ensure sustainable pasture management and enhance productivity of livestock farming.</p> <p>Enhancement of farmer's knowledge and skills, creation of marketing and associations for mutual support and management of livestock.</p> <p>Maintenance of pasture rotation, grazing control, weed control, removal of barriers to use of summer pastures, farming resources.</p> <p>Promote local institutionalization for range land management and livestock development programme.</p> <p>Study role of livestock in social relations and livelihoods.</p>

4.5.4 Assessment of Problems, Activities and Recommendation on Criteria Set 4 (Environment and Ecosystem Management), Afghanistan

Problems/Issues	Activities	Recommendations
I.2 Reduce Environment risk		
<p>Lack of proper training of all groups of the population on how to respond to emergencies in case of natural disasters.</p> <p>Assess and reduce chronic environmental risk to human health.</p>	<p>Identify the driving factors to reduce Environment risk.</p> <p>Conduct training of local communities in order to response to emergencies.</p>	<p>Develop strategy and priority measure in order to reduce environmental risks.</p> <p>Implement a comprehensive programme for the sensible use and conservation of land resources with the aim of improving the quality of reclaimed land, reducing the area of land affected by salinization and swamping, and ensuring a reasonable supply of water for irrigation.</p>
I.5 Improve environment security		
<p>Overlapping contradictory provisions have been formulated based on various principles of law and a large volume of reference norms and gaps.</p> <p>Lack of balanced mechanisms for regulating environmental tax policies and irrational use of natural resources and degrading the state of the environment.</p>	<p>Mine clearance programme allowing extensive land to be taken back into use for farming and development.</p> <p>Increase fees, tariffs and fines for environmental pollution.</p>	<p>Promote sustainable natural resources management and community involvement in the resource management.</p> <p>Introduce the ecosystem and adaptive management approaches into environmental management.</p>
I.7 Ecosystems approach into environmental management		
<p>Heavy pressure on natural resources and the environment through the immediate extraction of resources.</p> <p>Lack of entrepreneurship and knowledge about product processing rather than selling them in the form of raw materials.</p> <p>Limited enhancement of environmental awareness.</p>	<p>Promote entrepreneurship for product processing rather than selling them in the form of raw materials.</p> <p>Develop guidelines and training materials for environmental awareness and education.</p> <p>Curriculum for effective environmental education at schools.</p> <p>Training and awareness programmes on the Environmental Impact Assessment.</p>	<p>Introducing the ecosystems approach into environmental management as a key condition for achieving sustainability of the environment and management of natural resources.</p> <p>Raise environmental awareness among the public and businesses to promote the sound use and conservation of natural resources.</p> <p>Implement measures to preserve specially protected natural areas and to restore forest resources and</p>

		pastureland.
I.18 Environmental governance		
Lack of legal and policy framework for SL management and enforcement and overall regulatory framework for enabling environment and biodiversity conservation. Inadequate access to environmental information and lack of public participation in environmental decision-making etc.	Develop legal and policy framework for forest governance. Develop the corresponding mechanisms for inter-sectorial coordination of policies, plans and actions aimed at environmental protection and sustainable use of natural resources. Upgrade the environmental monitoring system. Promotion of participatory land use plans.	Strengthening environmental governance and taking into account trans boundary impacts, as a result of economic activity of the country. Increase human capacity, capacity of the legislative of central and local institutions and organizations in the process of natural recourses and environment management. Upgrade the environmental monitoring system.
I.22 Institutional and environmental sustainability		
Lack of effective mechanisms for coordinating interaction between state bodies, natural assets and civil society.	Priority of programme and government fund and foreign aid. Environmental monitoring system. Policies, plan and action plans. Improve environmental legislation. Develop the corresponding mechanisms for intersectoral coordination of policies, plans and actions aimed at environmental protection and sustainable use of natural resources.	Strengthen institutional potential with a view to promoting environmental sustainability. Resolve problems associated with natural disasters through their prevention and the effective management of natural resources. Promote conservation and proper management of biodiversity and ecosystems. Development public-private partnership mechanisms with a view to promoting environmental sustainability.
I.42 Awareness of environmental management		
Need of study on linking EM and livelihood and creating common understanding and allocating sufficient budget for the public.	Develop EM management guidelines and its campaigns. Conduct trainings and workshops related to community based natural resource management.	Develop awareness strategy for conservation as well as for a secure and sustainable environment.

4.5.5 Assessment of Problems, Activities and Recommendation on Criteria Set 5 (Livelihood Promotion), Afghanistan

Problems/Issues	Activities	Recommendations
I.6 Use of the Sustainable Livelihood framework (SLA)		
Lack of experience and updated information in related SLA to examining the poverty and the forestry-poverty linkage in a broad sense.	<p>Collect and compare the information gathered from the different sources.</p> <p>Evaluate the level of knowledge of actors, evaluate the national poverty reduction policy from the point of view and voices of rural people.</p>	Chose SLA as a conceptual and methodological framework for linkages between the context, vulnerability, poverty and access to forest/ resources.
I.9 Social security		
<p>Limited progress on improvement of the development of the environment through better social and political stability, institutional strengthening of state agencies.</p> <p>Lack of policy processes for integration and reflection of social, gender and governance policies (local, national, regional and networks).</p> <p>Lack of trained specialists, insufficient coverage of social services types, lack of interest in their provision by local self-governance bodies.</p>	<p>Equal distribution of income from natural resources use and access to them.</p> <p>Develop and implement PRSP, gender and social inclusion policy.</p> <p>Establish livestock and livelihood profile based on land and animal ownership patterns.</p> <p>Identify the food security parameter.</p>	<p>Promote social security especially for identified deprived, asset less and marginalized communities.</p> <p>Ensure proper reflection of marginalization and deprivation issues in Natural Resource Management Groups' legislation and operation plan (e.g. Forest operation plan).</p> <p>Mechanism for implementation of the innovation system, development of a state policy throughout the country: formation of integral of organization, legal, economic and other forms of innovation encouragement, support and regulation, increase of the off-budget resource share as innovation project.</p>
I.17 Income generation activities		
<p>Lack of access and potential for long term livelihood security.</p> <p>Duplication of activities by service providing and development agencies.</p>	Establish Demonstration plots and model sustainable livelihood options (beekeeping, medicinal plant production).	<p>Catalyzing alternative livelihoods and small business, and facilitating local natural resources management planning.</p> <p>Integrating and strengthening holistic views for planning and management.</p> <p>Develop and introduce into practice measures enabling interconnection of local communities needs' satisfaction with integrity of the environment.</p> <p>Integrate mechanisms of improved sectorial coordination</p>

		<p>of natural management and environmental management.</p> <p>Extension services and other interventions should take into account constraints placed on women's participation and income earning opportunities. A full involvement in natural resources management is a means to ensure effective and appropriate design and implementation.</p>
I.23 Reform of the social welfare system		
<p>Lack of established, clear definitions by the authorities of agencies responsible for the development, implementation and regulation of social welfare policies particularly to vulnerable segments of the population, as well as lack of plans.</p>	<p>Data on employment, migration and social security services.</p> <p>Social Welfare Fund and banks.</p> <p>Restoration and reinforcement of social service institutions.</p>	<p>Plans to enact and implement reform of the social welfare system taking into account the conditions of the market economy.</p> <p>Increased representation of women and men at the decision-making level in government agencies.</p> <p>Participatory poverty assessment and role of natural resources in the livelihood systems of the poor.</p>
I.28 Equal rights and opportunities		
<p>Lack of access, especially for women and poor people, to secondary and higher education, as well as lack of equal access to lending and information, eliminating gender stereotypes in the public consciousness, prevention of violence against women.</p> <p>Lack of empowerment of local people to exercise their rights to services.</p> <p>Gender issues have not been adequately addressed in the principal government strategies, however, and institutional gender policy mechanisms are limited.</p> <p>An ineffective statistical base and data collection system are limiting opportunities to advance the cause of gender equality.</p> <p>Women's opportunities to protect their own</p>	<p>Gender sensitive strategy plan.</p> <p>Increased representation of women at the decision-making level.</p> <p>Partnerships and coordination in the implementation of gender policy.</p> <p>Creation of effective mechanisms for the implementation of gender policies as part of public administration reform.</p> <p>Ensuring equal access for men and women to resources in the entrepreneurial sphere.</p> <p>Eliminating gender inequality in the development of</p>	<p>Develop strategy to eliminate gender inequality and provide equal rights and opportunities.</p> <p>Social partnership mechanisms should be properly developed to allow cooperation between the state, civil society and businesses in the implementation of gender policy.</p> <p>Enhancement of institutional mechanisms and the regulatory legal framework for gender policy, and consideration of gender issues in the drafting of budgets.</p> <p>Improvement of the statistical base for gender analysis and assessment of successful strategy implementation based on improvements in gender statistics.</p> <p>Strengthening partnerships and coordination in the implementation of gender policy.</p> <p>Raising the educational level and competitiveness of</p>

interests are extremely limited both at the level of society as a whole and at the local community and household level.	human potential.	women entrepreneurs. Eliminating gender stereotypes in the public consciousness with regard to equal rights and opportunities.
I.33 Comprehensive assessment of the impact of economic activity		
<p>Lack of comprehensive assessment of the impact of the economic activities on environment, natural resources management.</p> <p>Complex system for assessing and measuring in quantitative form.</p> <p>Need to integrate and link environment management to poverty reduction.</p>	<p>Conduct environment assessment and the impact of the economic sector.</p> <p>Prepare sectorial and regional development programme report.</p> <p>Prepare socio-economic development plan.</p>	<p>Implementing and applying a short-term comprehensive assessment of the impact of economic activity on the environment should be recognized as being necessary for promoting sustainable natural resources management.</p> <p>Mainstreaming strategic environmental assessment as a compulsory procedure in developing and implementing country development programs and plans.</p> <p>Cross-cutting promotion of environmental security and sustainability in sectorial and regional development programmes and considering natural resources sustainable management issues at local level within local socio-economic development plans.</p>
I.44 Foster equitable land distribution		
<p>Lack of special plan, agricultural research, extension and education towards improving farming systems and land management practices in marginal or fragile lands.</p> <p>Conflict over land and other resources or between new settlers and indigenous inhabitants and between pastoralists and agriculturalists.</p> <p>Unequal access to resources and control over resources (property, land, credits, and so forth).</p>	<p>Conduct an awareness raising programme.</p> <p>Conduct research, extension and education.</p> <p>Identify causes of decline in the resource base in terms of quality, productivity or resource degradation and land holding-ration.</p>	<p>Fostering equitable land distribution and agriculture intensification to reduce pressure to settle marginalized lands.</p> <p>Ensuring equal access for men and women to resources in the entrepreneurial sphere.</p> <p>Raising the educational level and competitiveness of women entrepreneurs.</p>

4.5.6 Assessment of Problems, Activities and Recommendation on Criteria 6 (Co-ordination, Co-operation and other cross-cutting issues), Afghanistan

Problems/Issues	Activities	Recommendations
I.1 Regional co-operation		
<p>Lack of facilitation for harmonizing standards and lack of regulation to enhance cross border initiatives.</p> <p>Limited cross-sectorial co-ordination, especially at the national level.</p> <p>Lack of proper legal framework and absence of CA regional cooperation framework.</p>	<p>Establish Regional co-ordination forum/meeting.</p> <p>Establish Central Asian regional platform of all countries and relevant donors.</p> <p>Establish strong technical linkages with SAARC, ICARDA and ICIMOD.</p> <p>Establish education linkages and develop relationships between MAIL and regional universities for external as well as in-country training with the assistance of NRM partners.</p>	<p>Enhance regional cooperation and provide an opportunity to enhance the resources management, trans-boundary co-operation, and common resources utilization, social and cultural development.</p> <p>Provide technical support for policy formulation at regional level for example by creating or supporting regional policy forums to tackle issues at a regional level.</p> <p>Design programme for Climate change, river basin, watershed and the establishment of trans-boundary protected areas.</p>
I.14 Private sector involvement		
<p>Lack of a policy enabling an environment for partnerships between government and the private sector on a mutually beneficial basis.</p> <p>Piecemeal cooperation with donors and regional partners and little allocation of budget for risk reduction and adaptation efforts.</p>	<p>Introduce and disseminate best practices of sustainable natural resources use by the private sector.</p>	<p>Develop incentive policy for long-term investment into renewability and maintainability of natural resources.</p> <p>Encourage the private sector and business partners in Central Asia to adopt policies to ensure only legal provisions and follow the rule of law in any kinds of supply chains: timber and non-timber productions.</p>
I.16 Conflicting laws		
<p>Overlapping contradictory provision and conflicts between national and local laws.</p> <p>Many laws (draft laws) contain sectorial or corporate interests, which contradict state policies.</p> <p>Different legal frameworks in different countries.</p>	<p>Active regulatory bodies and other stakeholders.</p> <p>Establish conflict resolution mechanism.</p> <p>Establish networking to review the regional and national level conflicting law and possible actions.</p>	<p>Evaluate and develop mechanism to address conflicting laws.</p> <p>Setting up regularly active public council and expert working groups under the republican and regional management bodies as a priority measure to involve the public in making and controlling the implementation of decisions.</p>
I.38 Stakeholder participation and participatory decision making		

<p>Lack of provisions of budgets for NGOs involvements as facilitators in Programme's activities.</p> <p>Less percentage of women represented in the decision-making and implementing programme's activities.</p>	<p>Promote participatory forest management.</p>	<p>Widening participation in decision making and contribution to SLM by civil society and other stakeholders.</p> <p>Simplification of natural management permissive system. Enhancing environment regulation enforcement.</p> <p>Analyzing the role of civil society organizations and their effectiveness, commitment and participation in the planning and management of activities.</p>
I.40 Power and voice		
<p>Need for local participation in forest management.</p> <p>Not recognizing the local voice in planning and decision making.</p> <p>Lack of women voice and their role in resources management.</p>	<p>Pilot programme for participatory forest management.</p> <p>Increase their role in decision-making and income-generation through community management of natural resources.</p> <p>Ensure local participation in NRM.</p>	<p>Access to good land and women's access; access to good land and productivity of land; ability to decide how to use and manage natural resources.</p> <p>Develop a comprehensive plan for community mobilization, gender master plan for natural resources management.</p> <p>Build confidence of local users, who are real managers of local resources.</p> <p>Assess the institutional framework of support organizations for the delivery systems i.e. special provisions for people in need, research, extension, training, skills and IGAs.</p>
I.50 Tran boundary co-operation		
<p>Limited political commitment, co-ordination, leadership or formalization of policy within prescribed way.</p> <p>Absence of proper vision on trans-boundary activities.</p> <p>Lack of integrated regional development programme. Environment and social programme is chaotic and unregulated and</p>	<p>Initiatives for a trans-boundary platform and exchange of knowledge.</p> <p>Conduct exchange programme to share research knowledge.</p> <p>Conduct more trans-boundary research (SLM, water, DRR, NRM).</p>	<p>Supporting trans-boundary co-operation and programmes for biodiversity conservation, poaching control and environmental education.</p> <p>Promote networking and collaboration at regional level for example by facilitating collaboration to deal with trans-boundary and inter-cooperation issues.</p> <p>Use of existing resources, water and energy, for trans-</p>

ineffective enforcement of the laws		boundary regions.
I.51 Transparency in decision-making, annual programme and budget		
Lack of transparency and public audit system. Lack of proper mechanisms for ensuring participatory decision making at all levels of natural resources and environmental management	Targeted sensitization campaign. Information and communication strategy. Public auditing system.	Ensures transparency in decision making processes. Awareness of policy and strategy of all concerned stakeholders.
I.52 Effective inter-sector and inter-agency coordination		
Limited cross-sectorial coordination, especially at national level. Lack of understanding of benefit of inter-sector and inter-agency cooperation. Lack of network development strategy for information exchange and capacity building at local level.	Legislative amendment and country's commitments. Public awareness programme (outreach and ecological education). Common monitoring systems and data base of monitoring outcomes. Introduce common standards into the system. Effective knowledge management platform.	Create a more efficient system of institutional management of natural resources and the environment. Promote dialogue between different stakeholders from communities, disaster experts, scientific specialists, urban planners and government departments. Improve the understanding of strategic and cross-sector, inter-cooperation policy issues based on existing scientific knowledge and expertise.

CHAPTER 5

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

In this study, we categorized the 52 identified indicators into six categories : 1) Disaster Preparedness and Management, (2) Forest Management, (3) Land Use, Biodiversity and Pasture Land Management, (4) Environment Management, (5) Livelihood Promotion and (6) Co-operation, co-ordination and other Cross-Cutting issues. It is evident from the findings of the study that more than 47 indicators were judged as highly important and most of indicators were highly applicable under Criteria 6 (Co-operation, co-ordination and other cross-cutting issues). Most of the indicators at province, district and local levels related to disaster risk reduction were seen as highly applicable in the context of Afghanistan. It can be concluded that SLNRM practitioners have their own perceptions, working definitions and areas including gaining a better understanding of its attributes of livelihood and natural resources.

The findings of the study concerning the NAPs can serve as guidelines for government and other involved parties willing to evaluate and to improve their services related to the improvement of livelihood of disaster-affected people. Issues such as reducing gender gaps, institutional re-arrangement at all levels, common understanding of livelihood and sustainable resources management, regional co-operation strategy and research agenda, which were undervalued in the existing plans, should be addressed as well. It is worth restating that SL and natural resources management is a way of thinking and an approach to development, not a clear-cut recipe for how we should proceed in dealing with complex poverty related issues. However, it emphasizes a dynamic learning process rather than a blue-print assessment. It requires a multi-layer analysis and cross-cutting from different disciplines or areas of development. The approaches support the enhancement and broadening of thinking about regional co-operation, reforestation strategy, livelihood issues, good governance, power dynamics, gender, rights and equitable distributions. The study recognized the concept of natural governance system. Particularly the rights, roles and responsibilities of diverse actors are a problematic issue which demands appropriate and meaningful indicators and must be developed with rigorous discussion with stakeholder from the beginning of the planning process. Therefore, this findings and conclusions can be considered as an essence to re/formulate based on the joint agreed vision, goals and action priorities of respective

countries and stakeholders, which supports the discussions on existing policy processes as well as on new policy instruments for application in Central Asia. It is concluded that the political will and governance system are essential to implement, address and deal with such complexity and keep the overall goals of sustainable livelihoods and natural resources in developing policy and decision-making process. In this regard, the regional and national policy should be formulated paying adequate attention to the local level with regard to local aspirations, its demands and its links with national and region (province and district) levels. All concerned actors from their respective countries must share the common vision and goals and set of regional agenda (e.g. trans-boundary cooperation and ecosystem management approaches in Central Asia) by ensuing sustainable use of resources and enhancing livelihood of local people living both upstream and downstream.

Delphi questionnaire was set up based on the existing policy and strategy documents of each country but it was hard to judge and specify the highest importance indicators or strategy for the specific countries. Although a structured questionnaire was provided in the Delphi process, some respondents made quite different interpretations and objected to specific questions/indicators, the use of terminologies or phrases when defining terms as well as to the lack of ‘described’ definitions. Some respondents complained that the number of questions or indicators was too high and some of them had difficulties to judge the relevance of the indicator or its data requirements. However, we found that the Delphi approach was easiest when managing a structured questionnaire survey as there is less room for varying interpretations. The method is feasible to get the ideas from diverse stakeholders but the trade-off analysis between stakeholders’ opinions has been figured out based on the expert opinions. It dramatically reduced the potential for generating new ideas, the views from organizations, political ideology and objective judgment in closed questions. Reasons for the difficulties may lay in the high degree of uncertainty related to the complex issue of Sustainability (Mrosek et al. 2006). It was observed that personal attitudes of some experts and their affiliation to an organization affected the overall results which did not always reflect their experiences. Such misleading stereotypes can create impediments to the development of trust, relationship building and effective communication (Kearney *et al.*. 1998). The weaknesses of Delphi studies include the fact that they require much time and raise difficulties regarding coordination and communication for consensus building among experts. Most of the national strategy and the plan were developed without proper design to monitor the implementation mechanisms, therefore there is not enough evidence to demonstrate that

the common framework for developing strategy should be included in national strategy plans. Therefore, it is suggested to develop a common framework with monitoring mechanisms for the implementation strategy and a periodical assessment must be carried out.

During and in the aftermath of the armed conflict in Afghanistan, there have been increasing calls for ad hoc legal mechanisms that could hold governments and individuals financially accountable for damages to natural resources and bio-diversity. Therefore, certain actions require information, knowledge, and capacity of responsible government institutions and encouragement to follow the international policy mechanisms to mitigate negative environment impact in affected areas. The strategy for sustainable natural resources and livelihood improvement is to recommend a holistic and area-based planning approach to deal with the issues and problems related to the specific areas. The long-term and broad-based research study would be an option to identify the peace zone areas as conservation, protected areas, national parks and research areas and develop possible actions to address the problems accordingly. In such circumstances, it is essential to promote the networking with research and academic institutions in the knowledge-to-action process, and to assist in strengthening the capacity of government and non-government institutions and individuals to generate and apply knowledge enhancing the livelihood of rural communities in real-world situation.

5.2 Recommendations

The study reflects on, and recommends developing a clear and coherent common agenda (or set of priorities) on SLNRM based on the perceptions and opinions of different stakeholders. The national action plans allow space for the meaningful participation of local stakeholders including marginalized groups and take into account potentially differentiated perspectives and interests. NAPs should formulate their activities and plans through consultation process with several environment/forestry/social/DRR related government and non-governmental organization, NGOs, CSOs and CBOs. This action plan also encourages the development of national action plans on DRR, forest management, land use, biodiversity, pasture land management, livelihood and environment management through a multi-layer and multi-stakeholder consultation process with the stakeholders. It is recommended to identify the regional agenda with high priority from each country and to promote regional co-operation through high-level consultation process. The national co-ordination and expert-led team should be formed, to create a high-level trust and facilitate the implementation, and prepare

integrated plan or framework to support the sustainable natural resources management and livelihood promotion.

The action plans must make full use of existing institutions and structures in the public as well as the private sector by avoiding, wherever possible, the introduction of new governmental organizations and agencies. It is recommended to encourage socially and environmentally responsible practices by the private sector, particularly companies operating from other countries focusing on the need of proper mechanisms to use and extract resources effectively. The national action plans that should be focused on and foreseen to be carried out over the next decade are the integrated global and national initiatives that aim to enhance the management and use of resources, sustainable land user practices, participatory forest management, disaster preparedness and disaster risk management, consideration of afforestation and reforestation concepts/strategy as a way to improve livelihoods and sustain natural resources management.

Future strategy programme should be based on trans-boundary, biodiversity management, SMLM and climate change adaptation, social afforestation and reforestation strategy, community-based forest management strategy: e.g. Joint forest management or community participation in forest management. The general recommendations for national action plan are to

- Revise/refine the current disaster risk management, PRSP, Environment, Forestry, Land Use policy, strategies and action plans in partnership with relevant stakeholders to increase ownership and to make it more effectively implementable.
- Due to the extremely diverse policy environment which affects resources and increasing demands on resources and challenges to address the demands of society, the establishment of high-level collaboration between the science, community and key policy makers in the Central Asia should be strengthened and facilitated. This provides an active and efficient science-policy interface and fosters an inspiring and dynamic science-policy dialogue for developing strategy on livelihood and natural resources related issues.
- The mountain ecosystem directly or indirectly supports a large population of Central Asia regions in terms of diverse ecosystem goods and services. Therefore, there is a need to continue the supply of these products and services in a sustainable manner to maintain the ecological integrity of the area.

- Participating countries to focus on both research and development to take this initiative further through collaborative and multidisciplinary research with a clear focus on livelihood development and policy issues in relation to poverty and vulnerability in mountain areas.
- Identify and test the NRM and livelihood related policy questions to build a common understanding and solve the problems in an iterative and adaptive process to identify future directions and develop a vision, mission, goals and strategies and to focus on the needs of Central Asian member countries and to adjust strategies to take changing circumstances into account.
- Review and develop national policies for forest conservation and development to include forest resources inventory, bio-diversity studies, reforestation and community forest management strategies, land and water use planning
- Periodic monitoring and assessment of programme priorities and resources allocation in line with national plans such as PRSP, biodiversity conservation strategy, sustainable land use plan, national forestry sector plan in order to ensure effective implementation in the specific areas.
- Develop networking for regional capacity building, policy and institutional support, capacity for sustainable livelihoods in border regions. Tackle, through developing environmental processes and adaptation strategy, the promotion of cultural conservation, sustainable economic development, and sustainable mountain tourism and income generation activities, issues of governance, policies, institutions, gender, and equity concerns.
- Promote institutional development of local associations responsible for sustainable forest management, including local communities, NGOs, local bodies and other service providing agencies.
- Ensure and promote community based organization for forest, watershed management, reforestation, agro-forestry and other local initiatives.
- There still remains an urgent need for systematic research on the linkages between environmental stewardship, sustainable land use management, watershed management and risk reduction strategies, regional conflicts and stability in Central Asia as part of a regional environmental agenda. The cross-border initiatives and regional cooperation on natural resources management that recognize the need to preserve something for the future should be built.

- Develop appropriate publicly available information dissemination system related to policies, legislation, directives, executive orders, relevant publications, data, programmes and projects at the center and in the districts.
- Encouraging partnership building between appropriate GOs, NGOs, CBOs, civil society organizations (CSOs), development agencies and private sector for effective planning, implementation of strategic interventions and monitoring of sustainable natural resources and livelihood promotion.

Furthermore, the NAPs should consider both upstream and downstream population of the mountain area which may appear more technical in nature, but is believed to lead to secure livelihood and well-being of the people of the area, while protecting their right to life and property. Looking forward to Pamir regions, the criteria and indicators of Pamir disaster risk, land use and ecosystem should be identified and a comprehensive plan should be developed focusing especially on the present socio-economic and natural conditions. It is further recommend that the programmes of the different governmental and non-governmental agencies working in the region should be focused specifically on the core Pamir areas instead of main accessible and urban areas. For instance, the donor communities, local institution as well as central government agencies should realize the importance of Pamir regions and should give priority to programme and planning.

The recommendation for developing national action plans for Afghanistan is identified based on key findings of Delphi survey, face to face meetings with policy makers, experts and researchers, policy documents and the outputs of national workshop which are designed to make a significant contribution toward the vision, strategic objectives, and system-level outcomes. It is described based on the contribution of in each criterion: 1) DRR, 2) Forest Management, 3) Land use, Biodiversity and Pasture land management, 4) Environment and Ecosystem management, 5) Livelihood promotion and 6) Cooperation, collaboration and other cross-cutting issues.

Designing long term financial plan rather than piecemeal budget

A holistic approach is the only approach that seems likely to provide adequate leverage on some of the more daunting issues of developing countries like Afghanistan. Therefore, International Donor communities, World Bank and other multilateral development and

lending institutions should provide technical and financial support for improved governance and capacity building of government and non-government actors and supply legal and sustainably use of natural resources on a long-term basis (it is now arguing on 50 years of project design) which is highly demanding in a conflict setting.

Identify the management areas in Conflict zones

There should be clearly identified management zones within the parks and protected areas taking into consideration the ecological values, cultural values, archaeological and historical values, as well as human interventions (tourist locations, buffer zones, reserves, hunting zones etc.).

Reduce conflict over Resources, Livelihoods and Security

The situation in Afghanistan is especially alarming facing war conflict, natural degradation and several environment challenges including severe deforestation, landslide, glaciers and severe drought. The high level forum should focus on networking, coordination and conflict resolution, concerning inter-policy conflicts over resources, as well as develop proper resources utilizations mechanisms and formulate policy guidelines concerning peace, resources, livelihood and security.

Need of institutional commitment towards law enforcement

There should be an effective monitoring system and adequate institutional commitment to law enforcement, contradictory laws and policies related to conservation and utilization should be identified and ownership of new policies, acts and legislations should be adopted.

To Do No Harm and Appreciative Inquiry: Conflict of interest

The NAPs should be developed to lower the level of conflict of interest balanced with a requirement To Do No Harm and the Appreciative Inquiry Principle in conflict-affected areas should be adopted to ensure the environmental sustainability and poverty reduction.

Avoid the duplication of plan and possible integration plan

Avoiding duplication of action plans is necessary as are the commitments and development of programmes and plans with identifying a synergy solution and common agreed decisions and action plans to inter-link DRR, environment, forestry and poverty issues aiming for the

milestone of achieving a time-bound target under the mandates of various agencies (Environment/ Agriculture/Forestry/ Emergency etc.).

Periodic monitoring and performance analysis

Periodic monitoring and performance analysis should be conducted on a regular basis. Vision, goals and objectives considering the changing context: political model, development objectives, climate change and adaptation, international initiatives and process should be developed. Current disaster risk management, PRSP, Environment, Forestry, Land use policy, strategies and action plans should be revised/refined in partnership with relevant stakeholders in order to increase ownership and to make it more effectively implementable.

Avoid stereotypes and negative images of the regions

External viewers should avoid stereotypes and negative images of the regions while formulating policy in such conditions. The contexts of regions are varied and the utilization of richness of culture, biodiversity, and natural resources and especially the importance of trans-boundary landscape issues should be highlighted.

Addressing Knowledge base and cross-border challenges

Concerned agency should establish an ecosystem and biological, climate and forestry data bank to facilitate the storage and retrieval of data on the ecosystem goods and services, species, climatic modeling, distribution pattern of species and regeneration data. Cross-border challenges and opportunities should be addressed through the development of a regional framework (e.g. The Karakoram-Pamir Landscape Initiative as a trans-boundary effort) for cooperation incorporating the development of an improved regional knowledge base, information and experience sharing, capacity building, and promotion of stakeholder consultation and community participation.

Re-designing analytical framework of Hazard Social Vulnerability Assessment framework

The analytical framework of HSVRA should be re-designed combining vulnerability analysis and stakeholder analysis of the nature of natural resources practices, gender and social roles, community power dynamics of resources use and so on. A standardized framework for assessing vulnerability to climate change impacts should be developed.

Focusing on both disaster preparedness and early recovery system

More attention must be paid to the disaster preparedness and the development of early recovery systems, infrastructure rehabilitation, and ensuring the indefinite provision of basic services in the absence of a state-led alternative. Such plans should focus on identifying, assessing and monitoring disaster risks and enhancing early warning and developing communication strategies for presenting these concepts in an accessible way in local languages. A key recommendation would be to assess the need for an effective and decentralized multi-hazard early warning system, including the way of designing such a system, linked to stronger monitoring, information analysis, communication, and outreach.

Preparing Mountain GeoRisk Assessment Model and forecasting

‘Mountain GeoRisk Assessment Model and forecasting, data sharing and early warning, coordination of disaster mitigation, preparedness and response, community preparedness and vulnerability assessment and enhance ecosystem and socio-economic resilience should be prepared. A state system of integrated monitoring and forecasting of hazardous natural processes based on GIS and remote sensing should be created.

Considering DRR initiatives in national development planning

Integrating disaster risk reduction initiatives should be considered in national development planning and budgeting processes at national, provincial, district and village/settlement levels, and in design development.

Improving resources governance to promote sustainable livelihood

Promoting sustainable livelihoods, alleviating poverty and contributing to national development through wise management, protection, preservation and restoration of forest and ecosystems should all be the basic elements of national and local government policy. A pro-people, pro-poor and pro-environment policy legislative framework with local and civil society’s involvement in resource conservation and management should be developed.

Introducing innovative financing mechanisms for natural resources management

The national action plans should be introduced and, in cooperation with partners, address the areas of economic valuation of ecosystems and innovative financing mechanisms for natural resources management, including mechanisms such as Reducing Emissions from

Deforestation and Forest Degradation (REDD+), payments for ecosystem services, climate change, adaptation strategy, and access and benefit sharing, just to name few.

Ensuring the integrity of ecosystems and their components

A sustainable management of land resources, preservation biodiversity both within Specially Protected Nature Areas (SPNA) and productive landscapes, extension of the SPNA, introduction of integrated water resources management are recommend.

Introduction of a common system of monitoring natural resources and environment

The national action plans should develop a common monitoring system and create a data base for monitoring the outcomes and harmonizing and introducing common standards into the system of environment observation.

Focusing on Sustainable land use Planning

Sustainable land use planning (agriculture, forestry, pasture land, watershed management and other resource value) is as a pivotal component of the development agenda. Therefore, the national actions should be prepared to meet local needs and aspirations as well as to attain national goals, with wider level stakeholders' consultation at national and regional levels, focusing on sustainable land use planning at the district and village levels. Appropriate land use planning guidelines should be developed as per ecological regions or geographical areas in consultation with land use practitioners, policy makers, planners and experts. A mechanism for planning, monitoring and following up on sustainable land use management and innovation local farming practices should be established through local institutions.

Linkage between natural resources degradation, livelihoods and population growth

Livelihoods are based upon a symmetrical relationship between the people's needs and carrying capacities of resources. In Afghanistan, annual rate of human population growth is exceeded by more than 4 percent which mainly affects survival strategies along with livelihood insecurity and pressure on land holding, both in terms of size and intensity of use. Therefore, there is a need for the development of strategies for rangeland management, grazing improvement and balancing carrying capacity of arid and semi-arid pastureland and productivity of livestock with more technical packages and services from government line agencies and other service providing organizations.

Recognizing tenure and user rights

The marginalized and rural communities e.g. nomadic pastoralists and indigenous people must be recognized in terms of their historic tenure and user rights while developing action plans.

Enhancement of Integrated Natural Resources Management

The resources value biodiversity measures, ecosystem services and possible maintenance of ecosystem have not yet been identified and judged properly, therefore the integrated natural resources management and biodiversity in national planning and strategies formulation process should be enhanced.

Implementation of a Reforestation Plan

The government of Afghanistan should intervene in forest management on various levels by for example taking action to reduce illegal activity, as well as implementing a national reforestation campaign which would involve such initiatives as rehabilitating degraded forest areas and promoting viable alternatives for fuel wood and timber. Integrated watershed management at river basin and forest, water and range land management through community mobilization are also suggested to improve the landscape and livelihood of rural communities.

Promote Area-based adaptive management approach

Area-based adaptive management approach with the capabilities of community organization concerning elements such as participatory watershed, agro-ecological zones, and community forestry management should be enhanced.

Supporting alternative energy programme

NAPS should support building on the institutionalization of incentives such as alternative energy (ICS, biogas), fodder and forage promotion, veterinary services, rangeland management at local level.

Stakeholder participation in planning and decision-making

Due to the lack of wider consultation process to formulate the programme, effective implementation and ownership of the programme which ultimately affects the sustainability or wider replication of the programme remains uncertain. It is recommended to contribute and develop new research approaches and methods in forest management planning, giving due

attention to the genuine needs of all stakeholders at all policy and decision making as well as all planning phases.

Mainstreaming of issues of environmental security and sustainability

It is recommended to mainstream strategic environmental assessment as a compulsory procedure in developing and implementing country development programmes and plans, cross-cutting promoting environmental security and sustainability in sectorial and regional development programmes, and considering natural resources sustainable management issues at local level within local socio-economic development plans.

Encourage private sector and civil society participation

A policy environment that adopts a balance approach to sustainable production and conservation and encourages private sector and civil society participation and involvement in input supply, research, and market and enterprise development should be ensured.

Harmonizing conservation measure

There should be a conservation measure harmonized with other government efforts to promote environmental sustainability through developing financial and economic mechanisms and improve the sound use of natural resources in various sectors of the economy.

Establishing catchment conservation areas

It is recommend to establish catchment conservation areas, within which land productivity should be improved through construction of water reservoirs and irrigation facilities and the establishment of nurseries and tree plantations.

Promote multiple-partnership approach

It is recommended to implement a diverse set of strategies with multiple partnerships to achieve the regional and national goals of tackling the environmental issues.

Considering Upstream-downstream linkages

Particular attention should be given to upstream-downstream linkages, watershed management, resources distribution, rural-urban linkages, the development of value chains, and the service sector and market dimensions.

Focus on the restoration and sustainable use of basic environmental goods and services.

The national action plans should focus on protecting the resources and weave them into sustainable economic sectors (dry fruits, fruits) and restore the resources to enhance the environmental goods and services.

Strengthen institutional capacity and Private sector Involvement

The autonomy and self-reliance of offices should be increased and their institutional capacity should be strengthened to maintain ecological restoration and regulate private sector involved in natural resources and the environment, especially during transition periods.

Strengthening regional cooperation and cross boarder initiatives

The strengthening of regional cooperation and cross boarder initiatives should focus on identifying the regional agenda and enhancing trans-boundary cooperation, inter-governmental agency coordination, resources management, common resource utilization and social and cultural development.

Funding for a rehabilitation, restoration of ecological /environmental functions

It is particularly important to plan for contingency environmental funding for rehabilitation, restoration of ecological /environmental functions during the transition to peace, when the risk of environmental damage is high.

Developing Gender Equity and Social Inclusion (GESI) Guidelines

The action plans should be developed including the GESI perspective and creating an enabling environment for all relevant stakeholders.

Mechanisms for the implementation of gender policies

Effective mechanisms for the implementation of gender policies as part of public administration reform should be created.

Participatory assessment of poverty and livelihood issues

The capacity of project partners to assess and analyze poverty and livelihood issues in a participatory manner as a mechanism for effective project planning and implementation should be improved.

Combining pro-poor policy framework with improving good governance and institutional arrangements

The pro-poor policy framework combined with improving good governance and institutional arrangements at all decision and political levels should be enhanced in order to address the social structures and social transformation processes. The action plans should promote stronger local land and resources rights for local users, improved local participation in decision-making and leadership, increased transparency and responsibilities of local resources management institutions and stronger functional linkages among stakeholder groups.

Generating the livelihood options

The people living in the mountains have limited livelihood options owing to the difficult access and absence of market centers. Therefore, the livelihood options and opportunities to minimize the pressure on mountain ecosystem, natural resources, and environment should be generated.

Conducting promoting Participatory Action Research for environmental governance

Participatory Action Research should be designed with the active involvement of local communities and civil society for promoting resource governance including the investment in sustainable land use management, social protection and equitable resource distribution. The research should focus on the sound natural resources management policy and a quick response capacity to environmental disasters and a grass root awareness of co-responsibility for natural resources conservation and management, conflict prevention, reconciliation and post conflict reconstruction.

Develop vision and attempt to establish Central Asia regional cooperation

Regional cooperation should be encouraged to include "sustainable development through livelihood promotion and natural resources management" as one of its core principal objectives, as well as to develop vision, policy guidelines, identification of forms of regional cooperation and comparative study of other countries' experiences, for consideration by the members countries and attempt to establish Central Asia regional cooperation.

- Regional cooperation should be encouraged to include "sustainable development through livelihood promotion and natural resources management" as one of its core principal objectives and develop policy guidelines for consideration by the members countries.

- The regional cooperation must be encouraged and promoted among Central Asian countries, to exchange programmes related to research, education, training and extension in the fields of livelihood and natural resources conservation and management.
- Private sector and business partners in Central Asia should be encouraged to adopt policies to ensure only legal provisions and follow the rule of law in any kinds of supply chains of timber and non-timber productions.

Understanding of cross-sector and inter-cooperation policies issues

The understanding of the strategic and cross-sector and inter-cooperation policy issues should be improved based on existing scientific knowledge and expertise. The essential strategy is to adopt national mainstreaming and harmony through inter-agency coordination for meaningful partnership and coordination for implementable actions.

Enhancing science-policy dialogue

The national action plans should enhance science-policy dialogue across all stages of the policy process of designing, formulating, monitoring and evaluating livelihood, forest, land use and DRR-related policies, programmes, instruments and strategies as well as governance development. A periodic policy dialogue to update the policies and ensure smooth and effective implementation of sustainable natural resources and livelihood strategies should be conducted and reviewed at central, regional and district levels.

Strengthening regional cooperation and cross boarder initiatives

The strengthening of regional cooperation and cross boarder initiatives should focus on identifying the regional agenda and enhancing trans-boundary cooperation, inter-governmental agency coordination, resources management, common resource utilization and social and cultural development.

Promote cross-sectorial collaboration within government and with civil society

Inter-sectorial collaboration often becomes vitally important in the context of Afghanistan. Cross-sectorial collaboration within the government and with civil society should maintain the flow of information, and find collaborative solutions to common problems to support human livelihoods through wise natural resources use.

Identifying the regional and emerging strategies' issues through Policy dialogue

High level political dialogue should be facilitated by targeting high-level events for focused discussion for policy makers, identifying emerging strategic issues (e.g. Himalayan University Consortium, trans-boundary landscapes, River basins, Mountain Environment Regional Information System, Climate change and adaptation) between scientists, decision makers and stakeholders.

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ANNEX

Annex 1: List of participants in National Workshop, Kabul, Afghanistan (Dec, 2012)

<i>SN</i>	<i>Name</i>	<i>Designation/Organization</i>
1	Zufinoon Haam Natiq	Head of Provincial Women Council of Badakhshan
2	Muhammad Asif Rahimi	Manager Crisis Planning of DJ
3	Zabiullah Rasa Akbari	Lead officer Crisis Planning of DJI
4	Mehr Angaiz Ahmadi	Community Case Worker of NC
5	Feroogh Amiri	Community Case Worker of NC
6	Salima Naikbeen	Communication Officer, FOCUS Afghanistan
7	Sayed Amin Hashimi	Assistant Professor, Geo-Sciences Department. Kabul University
8	Moor Muhammad Faqati	Director of Sustainable Development and Monitoring. National Environmental Protection Agency
9	Eng. Ezatullah Sediqi	Social and Development Advisor. National Environmental Protection Agency
10	Mir Ghulam Rabbi	Monitoring Officer of the Directorate of Social Security. MRRD
11	Mohammad Asif	Head officer of the Directorate of Development. MRRD
12	Garry Shea	Director of Rural Development. AKF
13	Malohat Shoinbodova	Project Manager DIPECHO, FOCUS Afghanistan
14	Aleeza Mitha	Programs Officer, FOCUS Afghanistan
15	Noor M. Kashani	Senior Program Manager, FOCUS Afghanistan
16	Dr. Rahim Rashid	Emergency Preparedness Officer, FOCUS Afghanistan
17	Sofia Jadavji	Monitoring and Evaluation Manager, FOCUS Afghanistan
18	Safdar Zaheer	Regional Program Coordinator. FOCUS Afghanistan
19	Ikramuddin Bahram	PAMIR Project Country Research Team Leader
20	Ali Reza	PAMIR Project Mitigation Engineer
21	Muhammad Nazar Joya	PAMIR Project Social Mobilizer
22	Dawlat Baik	PAMIR Project Junior Geologist
23	Bizhan Bida	Risk Analyst. FOCUS Afghanistan