

Draft for Discussion Only

Central Asian Countries Initiative for Land Management

Republic of Tajikistan

National Programming Framework

Prepared by

UNCCD National Working Group of the Republic of Tajikistan

DRAFT

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## ABBREVIATIONS

AAS	Agricultural Academy of Science
ACTED	Agence d'Aide a la Cooperation Technique et Developpement
AKDN	Aga Khan Development Network
ASAP	Agriculture Sector Assessment Project
CACILM	Central Asian Countries' Initiative for Land Management
CAMP	Central Asia Mountain Partnership
CGIAR	Consultative Group on International Agricultural Research
CSIP	Consolidated State Investment Program
CIMMYT	Centro Internacional de Mejoramiento de Mais y Trigo
GEF	Global Environmental Facility
GL-CRSP	Global Livestock-Collaborative Research Support Program
GM	Global Mechanism
GOT	Government of Tajikistan
GTZ	German Agency for Technical Cooperation
ICARDA	International Council for Agricultural Research in Dryland Areas
ICRISAT	International Crops Research Institute for the Semi Arid Tropics
ICWC	Inter-State Commission for Water Coordination
IFAD	International Fund for Agricultural Development
IFAS	International Fund for the Aral Sea
IFAD	International Fund for Agricultural Development
ILRI	International Livestock Research Center
IMF	International Monetary Fund
JDC	Jamoat Development Committee
JRC	Jamoat Resource Center
LM	land management
LMMCTF	Multicountry Task Force
M&E	monitoring and evaluation
MOA	Ministry of Agriculture
MOET	Ministry of Economy and Trade
MWRLR	Ministry of Water Resources and Land Reclamation
NAPCD	National Action Plan to Combat Desertification
NEAP	National Environmental Action Plan
NIS	Newly Independent States
NPF	National Programming Framework
NPRS	National Poverty Reduction Strategy
NSAPCSUB	National Strategy and Action Plan for Conservation and Sustainable Use of Biodiversity
OP	Operational Program
PA	protected area
PAU	Poverty Assessment Update
PCR	Project Completion Report
PIP	Public Investment Program
PIU	Project Implementation Unit
PRGF	Poverty Reduction and Growth Facility
PRSP	Poverty Reduction Strategy Program
RETA	Regional Technical Assistance
SCEPF	State Committee for Environmental Protection and Forestry
SCLM	State Committee for Land Management

SDC	Swiss Development Corporation
SEDP	Social and Economic Development Program
SLM	sustainable land management
SME	small and medium enterprises
SP	Strategic Partnership
SSO	State Statistical Office
TFRI	Tajikistan Forest Research Institute
TRP	Technical Review Panel
TRT	Technical Review Team
TSSRI	Tajikistan Soil Science Research Institute
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
VO	Village Organization
WOCAT	World Overview of Current Approaches and Technologies
WUA	Water Users' Association

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## EXECUTIVE SUMMARY

1. The National Programming Framework (NPF) presented in this document is a road map for Tajikistan to counter and reverse a decline in land productivity and degradation of land ecosystems observed in particular during the last fifteen years. The NPF is the result of a review and analysis conducted under Central Asian Countries Initiative for Land Management (CACILM), a multicountry and multi-donor partnership initiated in 2003 to support integrated and consistent approaches to investing in sustainable land management (SLM) in each of the countries of Central Asia over a period of the next 10 years. The NPF builds on earlier attempts to make a synthesis of the problem, in particular the National Action Plan to Combat Desertification (NAPCD) prepared in 2000-2001 as part of Tajikistan's activities under the United Nations Conventions to Combat Desertification (UNCCD).
2. The problem of land degradation in Tajikistan has its roots in the interplay of natural and anthropogenic causes the latter group undergoing major changes in the wake of the collapse of the collectivized management of land of the soviet period and disappearance of the secure outlet for agricultural production.
3. The principal categories of land degradation in Tajikistan include (i) irrigation-related land degradation, in particular secondary salinity, waterlogging and irrigation-related soil erosion, (ii) soil erosion in rainfed farmlands, (iii) pasture degradation, (iv) degradation of forests and related loss of biodiversity, and (v) other forms of land degradation (e.g. soil contamination, damage created by careless infrastructural development). Concerns also exist about degradation of parts of the nature reserves and fragmentation and reduced resilience of important land ecosystems such as semi-desert pastures or several of the special types of forest and shrubs of the middle mountains.
4. The severity of most of these problems increased after 1990 as a result of civil strife and the difficulties of economic transition that saw a rapid emergence of poverty in most rural area where three quarters of Tajikistan's population live. In a country that continues to depend on land use for much of employment and about a third of national income, land degradation matters. ministries with principal responsibilities for land management (Ministry of Agriculture, The number of stakeholders is large, starting with land users in the midst of an incomplete land reform, the technical Ministry of Water Resources and Land Reclamation, State Committee for Land Management, and State Committee for Environmental Protection and Forestry), affiliated agencies of the Government, local administrations, and civil society.
5. The fundamental cause of degradation has been lack of incentives to invest in safeguarding or enhancing long-term productivity of land. Observed technical causes of land degradation are usually only symptoms of the more fundamental reasons. In Tajikistan these reasons typically include one or more of: (1) insufficient stake in the outcome of the investment (linked to restricted ownership, or incomplete management autonomy), (2) an environment that makes investment risky (extortion, corruption, etc.) or lowers its profitability (e.g. high transport cost, trade barriers, dys-functional regulations, etc.), (3) low capacity on the part of the authorities to impartially enforce laws and regulations, (4) uncertain and changing policies, (5) poverty, (6) undeveloped use of credit, (7) insufficient or inappropriate technical know-how, and (8) reaction to a sudden change in the financial and livelihood parameters confronting local communities. Where integrity of ecosystems matters, the causes include also factors that contribute to the decline of the ecosystems' critical mass: policies uncoordinated in space,

investment support conceived without account of eco-system conservation requirements and the power of tradition.

6. The overwhelming need is to pursue and improve the process of land reform as a principal driver of SLM of irrigated lowlands, and extend the process to other lands. It is essential to fill several gaps in the enabling environment: (1) absence of policies on management of pasturelands, other rainfed lands, and forests, (2) poor state and management of information relating to the conditions of land, (3) slow and superficial implementation of the land reform; (4) insufficient collaboration among the key Government agencies charged with land administration and management; (5) under-funded research out of tune with the needs of a land-using sectors undergoing extensive restructuring, and (6) poor translation of SLM priorities into regular budgets and official investment programs, to mention only the most important.

7. A reform and investment program is formulated in this NPF in which the overall program's objective to help restore, sustain and enhance the productive functions of Tajikistan's land resources will be pursued through activities under ten program areas, namely (1) Strengthening the Enabling Environment (2) Integration of SLM into Land Use Planning and Management, (3) Sustainable Development of Rainfed Lands, (4) Sustainable Development of Irrigated Crop Lands, (5) Sustainable Forest and Woodlands Management, (6) Sustainable Pastureland Management, (7) Targeted Research, (8) Integrated Resource Management, (9) Protected Area Management and Biodiversity Conservation, and (10) National Program Coordination and Management. The ten-year investment program is divided into three phases (2006-08, 2009-13, and 2014-16, respectively) and its initial structure envisages a total investment of about \$75 million by the Government and donors (including a co-financing by GEF of about \$14 million) to complement investments made by the Program's target beneficiaries. This amount is expected to increase over time as more activities are added to the Program under specified eligibility, implementation and monitoring and evaluation rules.

## I. INTRODUCTION

### A. Rationale

8. Tajikistan's topography and climate makes it one of the most varied but also environmentally fragile of countries. The people who inhabited the area that is now Tajikistan have always sought ways to manage this complex dry environment. With a fraction of today's population they practiced irrigated agriculture in the lowlands and made a modest use of mountain lands. To this day, the Tajiks take pride in their long farming tradition. By the time of Tajikistan's formal inclusion into USSR in the late 1920s, some 150,000 ha of irrigated land were farmed. The Soviet era saw the area of irrigated farming expand to about 750,000 ha, and land use in the mountains changed by subsidies for energy supply and provision of social services. The population of Tajik SSR had expanded from about 1.5 million in mid-1920s to about 5.5 million by the end of 1980s. Collectivized agriculture within a borderless planned economy with a heavy emphasis on cotton production, characterized by large-scale production units, narrow specialization and a pattern of infrastructural and technical support serving the plan determined the land use. The model delivered a much expanded agricultural production and productivity (to say nothing of industrialization) and for a while was seen as the answer to the nature's challenge despite signs of its un-sustainability in the final years of the USSR.

9. The collapse of the Soviet Union exposed the limitations of that model and added major new challenges: disappearance of the assured outlet for agriculture production, emergence of internal and international barriers to the flow of farm output, lack of experience in supporting and regulating a market economy on the part of the Government and little experience of operating within it on the part of former kolkhoz employees, and a slow emergence of the market itself. In environmental terms, the Soviet model led to contradictory outcomes: improved agricultural productivity was sometimes achieved at the cost of a loss of valuable ecosystems (e.g. *tugai* forests), improved provision of social services in the countryside co-existed with much increased agro-chemical pollution, and hastily built irrigation infrastructure dramatically improved productivity in the short run but sowed seeds of a later decline.

10. Regardless of the model used, land degradation in Tajikistan has always combined natural processes with anthropogenic influences the magnitude and pattern of which shaped by institutional and incentive environment. If the seriousness of land degradation has often been judged by changes in agricultural productivity and output, it is clear that agricultural productivity depends on much more than the state of land resources and must include factors such as the quality of management, institutional environment, market incentives and many others. Indeed in all countries of Central Asia, the problem of land degradation has been intertwined with the more complex problem of agriculture sector performance, and economic performance more generally. The two have often alternated between being the cause and the effect. Poor performance of agriculture is a concern both for livelihoods but also for future conditions of land. Poorly functioning economy tends to be an enemy of good land management and, conversely, degradation of land resources contributes to poor economic performance.

11. Land degradation matters hugely in Tajikistan given the fact that three quarters of the country's population depend on land for livelihood and that almost two thirds of that population is poor (65% earning less than \$2.15 equivalent a day in 2003) and a fifth extremely poor (18% earning less than \$1.15 equivalent a day in 2003). Even if rural out migration has served as something of a safety valve and a means of livelihood support in recent years it can hardly be

considered a solution that instead needs to be sought in the area of agricultural and other reforms.

12. Land degradation in Tajikistan matters also to the region and the world. Tajikistan (and neighboring Kyrgyz Republic) feature physical environments with a topographical variety and biological specificity that are unique. Tajikistan's mid-mountain xerophytic forest with its wealth of native fruits (almond, jujube, pistachio etc.), for instance, is priceless. So are the mid-mountain juniper forests, high mountain meadows and plant communities (*teresken*, wormwood), semi-desert and desert landscapes with saxaul and saltwort, or the *tugai* forests mentioned earlier on. Some or all of these eco-systems are under a variety of pressures that range from a winter energy deficit leading to deforestation to pastureland mismanagement (or lack of management). The pattern of degradation poses threats to the integrity of these regionally and globally important ecosystems.

13. Tajikistan shares three transboundary rivers with the region: the Syr-Darya, the Amu-Darya and the Zeravshan. Although Tajikistan uses a small proportion of the annual flow of these rivers and tributaries for irrigation (except for the Zeravshan), the management of irrigated lands (including the drainage effluent) and the build-up of salinity have regional repercussions.

- **Country's accession to UNCCD and other conventions and other instruments on combating land degradation**

14. The prospect of securing outside assistance for the fight against land degradation and forming new partnerships dedicated to such a fight were among the reasons for the country to sign the United Nations Convention to Combat Desertification (UNCCD) in 1997 and ratify it a year later.

15. Tajikistan is also a signatory of the UN Convention on Biological Diversity (since 1997), the Ramsar Convention on Wetlands Protection (since 2001), and the UN Framework Convention on Climate Change or UNFCCC (since 1997, still not ratified) to mention only those environmental conventions of greatest importance in the present context.

16. The UN environmental conventions mentioned above have served an important initial function of tying Tajikistan to the global environmental mainstream and "standardizing the language". Their impact on field realities has been modest so far.

17. Many in Tajikistan understand the significance of land degradation. Perhaps not always well articulated, the concern has nevertheless featured in projects and programs targeting mainly stagnating agricultural productivity and the state of the irrigation infrastructure. The same is true also of the land reform, the centerpiece of the Government's program for the rural sector. Seen mainly in terms of its hoped-for boost to agricultural productivity and rural empowerment it is also recognized by many as a tool of renewed and sustained investment in land productivity.

## **B. Overview of the National Action Plan and Other Relevant Environmental Action Plans**

18. Several documents have helped shape the discussion of land degradation and present a sufficiently broad view of the subject matter. The National Action Plan to Combat Desertification (NAPCD), drafted to fulfill Tajikistan's obligations under UNCCD in 2000, was endorsed by GOT in December 2001.

- **Main Elements of the National Action Plan**

19. NAPCD extensively describes the geographical, climatic, edaphic and other physical features of Tajikistan. The consequences of land degradation and desertification are cast in agricultural productivity- and soil loss terms. The majority of the Plan's recommendations aim at strengthening the technical base of efforts to counter land degradation including information systems, cartographic work on desertification and the analysis of the dynamics of land use change, improved monitoring of the land degradation processes at national and local levels and environmental monitoring in general. NAPCD makes references to rational use of natural resources and calls for mitigation measures ranging from forest rehabilitation and development of alternative energy sources to various other technical measures. The Plan contains general calls for social and economic mechanisms to counter desertification and land degradation and for improved legislation and regulations relating to protected areas. Enhanced international cooperation in activities relating to desertification is seen as essential. The timing of the Plan's preparation, before many important reforms relating to land use were initiated, in part explains the Plan's emphasis on technical rather than also the socio-economic aspects of land degradation, and the pattern of incentives and obstacles to sustainable land use. The National Programming Framework presented here takes NAPCD as a point of departure and supplements it drawing on other relevant documents (see below) and elements of fresh analysis.

- **Main Elements of Other National Environmental Plans**

20. National Strategy and Action Plan on Biodiversity Conservation and Sustainable Use, more narrowly focusing on conservation, was completed in 2002, and approved by the government in 2003. The Poverty Reduction Strategy Program (PRSP) of 2002 sets out a broad reform agenda, including that considered necessary in agriculture and land use, with poverty reduction as a focus. Additional analyses prepared by international agencies active in Tajikistan exists considering different aspects of land degradation.

- **Subregional Action Program (SRAP/CD)**

21. The 2004 Subregional Action Program for the Central Asian Countries on Combating Desertification within the UNCCD Context ("the Subregional Action Program") was formulated to give additional impetus to the implementation of national programs. It identified six priority areas for possible joint sub-regional or national pilot implementation, i.e. (1) monitoring and evaluation of desertification processes, (2) improved water use in agriculture, (3) agroforestry and management of forest resources and watersheds, (4) pastureland management, (5) biodiversity conservation and development of eco- and ethno-tourism, and (6) capacity building of local communities. SRAP/CD emphasizes synergy of any proposed measures with other environmental conventions and contains a menu of project ideas suitable for implementation in all CA countries including Tajikistan.

### **C. Central Asia Countries Initiative for Land Management (CACILM)**

- **Outline of the CACILM Initiative**

22. Central Asian Initiative on Land Management (CACILM) is a multi-country and multi donor partnership<sup>1</sup> to support integrated and consistent approaches to investing in sustainable land management (SLM) in each of the CA partnership countries and across the region over a period of the next 10 years. CACILM was preceded by the formation of a Strategic Partnership for UNCCD Implementation in the Central Asian Countries (SPA) that brings together donor organizations with a common interest in assisting the NIS of Central Asia in reaching the objectives of UNCCD.

23. CACILM was conceived in response to the concept of Country Pilot Partnerships (CPP) promoted by the GEF under its Operational Program 15 (OP 15) to enhance the Program's effectiveness by creating complementarities and reducing transaction costs associated with GEF and other donor financing. The integrated and consistent approach to SLM investment is achieved through the development in each CA country of a similarly structured National Programming Framework (NPF) –the present document.

- **Country's participation in CACILM development**

24. Tajikistan has played an active role in CACILM right from the beginning. A national Working Group was established in 2003 to facilitate the preparation of NPF. The Working Group has ten members and is chaired by the UNCCD Focal Point in Tajikistan, the Chairman of the State Committee on Land Management. Tajikistan hosted two national workshops to obtain stakeholders' inputs into NPF formulation. The CACILM process in Tajikistan has brought together nearly all the principal donors supporting SLM in the country and is now considered a unifying and central initiative targeting SLM.

- **CACILM multi-country partnership agreement**

25. In addition to developing a NPF for each of the CACILM CA partnership countries, a protocol is required to ensure efficient and fair management of GEF and other funds contributed to CACILM national and multi-country initiatives. This protocol is referred to as CACILM multi-country partnership agreement and it is described further below.

## II. SITUATION ANALYSIS

### A. Macroeconomic Situation

26. Tajikistan experienced a deeper and longer contraction of GDP in the wake of independence (and a civil war that finished only in 1996) than all other NIS with the exception of Georgia and Moldova. Tajikistan's 2004 GDP was 67.6 per cent of its 1990 levels. Once population growth is added, Tajikistan's real GDP per capita today is still only about half of what it was in 1990. Tajikistan is the poorest of the Central Asian Countries although signs of recovery have been obvious in the last few years.

27. The rebound in the economy from the very depressed levels that started in Tajikistan in 1997-1998 has been greater in agriculture than in the industry (but not as great as in the service

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<sup>1</sup> At the time of writing, the partnership (SPA) included, besides each national government usually represented by the organization hosting the UNCCD focal point, GEF and its facilitator (GM), ADB, GTZ, UNDP, ICARDA, CIDA, IFAD, SDC and the World Bank as observer.

sector). Agriculture accounted for 21.6 per cent of GDP and 67.6 per cent of total employment in 2003. If working age population at home is added to the former total, the percentage of those whose livelihood depends on agriculture increases further, to about 75 per cent.

28. Tajikistan's exports, worth \$915 million in 2004, depend disproportionately on just two commodities: aluminum (62.5 per cent of the total) and cotton fiber (about 18 per cent). Among other items, Tajikistan continues to import wheat, flour, cooking oil and sugar. Foodstuffs accounted for about 12 per cent of the country's total imports in 2004. Tajikistan has consistently recorded a deficit on its trade account partly compensated for by the inflow of remittances estimated at between \$400 and \$600 million per annum in 2003 and 2004 or about 20-25 per cent of the GDP.

29. The Government budget expenditure of 1,273 million Somoni (about \$400 million equivalent) in 2004 amounted to about 21 % of the country's GDP. The externally funded Public Investment Program fluctuated in recent years and was 188 mil Somoni (or about \$58 million) in 2004. Tajikistan had a relatively low and declining public sector debt of \$822 mil in 2004 and \$170 million of private external debt, mostly by the cotton sector.

30. The collapse of the assured market for output for local producers, discontinuation of large subsidies from Moscow, the civil war and several other factors resulted in a rapid slide into poverty of a large proportion of the citizens of the newly independent Tajikistan. In 1999, no less than 81 % of Tajikistan's population was poor (84% in rural areas) and 36 per cent were extremely poor (38% in rural areas). A reduction in poverty incidence was recorded between 1999 and 2004 when the overall poverty declined to 64% (65% in rural areas) and extreme poverty to 18% (same for urban and rural areas). The improvements were the greatest in the two poorest regions of the country, i.e. the Gorno-Badakshan Autonomous Region (GBAO) and Khatlon. Rural poverty declined by slightly more than urban poverty.

## **B. Trends in Land Degradation**

31. Of the total land area of Tajikistan of 14.3 million ha, just over a half (approximately 7.8 million ha) are areas considered suitable for production purposes. 3.0 million ha were nature reserves of different kinds in 2004 and 2.8 million ha was the state reserve land, mostly (92%) unsuitable for production (e.g. mountain areas) with the balance represented by settlements and infrastructure. Of the land potentially suitable for production, about 2.6 million ha were forestlands (whether forested or not), and 4.6 million ha was the "state land reserve", i.e. land potentially available for agriculture. Of that, about 3.7 million ha were classified as pastures in 2004, 0.72 million ha as arable land (usually understood in Tajikistan as land that can be irrigated) and about 0.15 as areas of perennial crops and hayfields. There is a general agreement that a significant percentage of forestlands, exceeding 50%, have been used as pastures and a significant acreage (perhaps 0.2-0.3 million ha) of pastureland have been cropped in recent years.

32. The land degradation that gets attention of policy makers in Tajikistan is first and foremost that which affects the land suitable for production. However, concerns also exist about degradation and threat of degradation of parts of the nature reserves currently consisting of 4 strict nature reserves (*zapovedniki*), 13 habitat management areas (*zakazniki*) and 2 national parks.

33. The principal categories of land degradation in Tajikistan are similar to those in other CA countries. They include (1) irrigation-related land degradation, in particular secondary salinity, waterlogging and irrigation-related soil erosion (2) soil erosion in rainfed farmlands, (3) pasture degradation, (4) degradation of forests and related loss of biodiversity, and (5) other forms of land degradation (e.g soil contamination, damage created by careless infrastructural development etc.).

34. As to category (1), 2000 data indicate that about 90,000 ha of irrigated land (out of 720,000 ha irrigable) were in “unsatisfactory” condition, about half of that on account of waterlogging, a quarter because of salinity and the remaining 25% experiencing both conditions. Neither salinity nor waterlogging are post-independence problems but the trend has been one of a moderate increase in salinity occurrence and a significant increase in the incidence of waterlogging. Data on land not cultivated show a peak in 2001 when about 60,000 ha of land (of which 17,000 ha of irrigated lands) traditionally cultivated were not cultivated although lack of regular irrigation supplies rather than salinity or waterlogging was the principal cause in the case of irrigated lands. The situation has improved in the last three years. Data on irrigation-related soil erosion show its widespread occurrence and seriousness especially in “new” irrigated areas (in Tajikistan, those commissioned after 1970).

35. With respect to category (2), its significance and trend are affected by a surge in wheat growing on former pasturelands at the height of food shortages during the emergency conditions of the mid-1990s. Some of these areas may yet revert back to pastures. The fragility of these lands is obvious as is the absence of soil conservation measures by the temporary managers. Elsewhere in rainfed areas, a mixed picture is observed in terraced lands not necessarily immune to erosion the seriousness of which depends mainly on the quality of the initially terracing.

36. NAPCD reported 97 per cent of Tajikistan’s lowland (winter) pastures to suffer from medium or worse soil erosion (0.5 tons per ha p.a. or more) in the late 1990s while the figure for upland (summer pastures) was only a little less worrying (89 per cent, with medium values of 2 tons per ha p.a.). A progressive replacement of long-term fodder plants with powerful roots by fast growing annual plants with a superficial root system was also underway. As in all other NIS, a key concern is overgrazing around settlements and an imbalance between the use of winter and summer pastures with the former often used throughout the year. After a major decline in livestock population throughout the 1990s, the livestock numbers are almost back to what they were in 1990 while the pattern of pasture use has changed significantly. Seasonal pressure on pastures is heightened when a reserve fodder constituted by trees and bushes is becoming scarce, as it has been in Tajikistan in the wake of coal and electricity supply interruptions that resulted in cutting down of trees and shrubs for fuel.

37. More than two thirds of land designated as forest in Tajikistan serves as pastureland. Lightly forested areas, if used intensively as a winter pasture, can be destroyed by introduction of non-tree invasive species that interfere with forest regeneration. Forests and livestock make good cohabitants only under careful management, a condition largely absent in present-day Tajikistan. Most damage to forest is anthropogenic. Too many trees and shrubs [saxaul in the lowlands, *teresken* in the Pamirs] are cut for fuel to ensure survival in the harsh winter conditions. Deforestation is believed to have seriously worsened the land- and mudslide damage sustained in recent years in Tajikistan.

38. Information about land degradation linked to infrastructure-, mining and other projects in Tajikistan is not organized systematically to make useful generalizations. Nevertheless the

database of the Ministry of Emergency Situations makes it possible to link the considerable damage to infrastructure and productive lands caused by frequent landslides and flash floods (sometimes triggered by earthquakes) to erosion processes, both natural and man-made.

### C. Stakeholder Analysis

39. All those in Tajikistan whose livelihood depends predominantly on land and its conditions, the 75% of the country's population mentioned earlier on, have a direct stake in the land's conditions and that stake increases in proportion to their ability to enjoy the fruits of their efforts to fight land degradation. For many, land degradation ("milking the land") was a form of financing current consumption when that consumption was under severe pressure, a form of borrowing against the future. The nature of the process as mainly disinvestment in asset maintenance is obvious in the case of irrigated lands or disappearing trees or shrubs, and somewhat less obvious but no less real in the case of pastures. Among key objectives of CACILM in Tajikistan is to help create or reinforce the conditions that make maintenance of the land asset ("fight against land degradation" writ small) a worthwhile objective.

40. The Government, if successful, creates conditions for SLM, and benefits from better land conditions and resulting rural prosperity indirectly via land- and other taxes. The distribution of such potential benefits between central and local governments remains a subject of some complexity but in this, Tajikistan only resembles the rest of the world. The Government, too, is engaged in a difficult trade-off. It can limit the expenditures on the maintenance of the commons (forest lands, protected areas) today at the cost of higher budget expenditure on protecting livelihoods tomorrow. CACILM menu of investments should offer attractive choices of government expenditure and their phasing.

41. The number of government stakeholders is large. At the central level, it includes the apparatus of the President (and its Agro-Industrial Complex Department) and four technical ministries with varying, and sometimes overlapping, responsibilities for land management, i.e. State Committee for Land Management (SCLM), State Committee for Environmental Protection and Forestry (SCEPF), the Ministry of Agriculture (MOA) and the Ministry of Water Resources and Land Reclamation (MWRLR). Local governments (*hukumats*) play a vital role, among other things, in the implementation of the land reform, underway since 1999. Research organizations, traditionally subordinated to one of the technical ministries, much weakened compared to Soviet times, have been struggling to survive financially and adapt to new realities.

42. Rural prosperity is good for everyone especially local communities. The vulnerable within these communities can be made less vulnerable if the conditions of lands improve even if the very essence of vulnerability is the exclusion from –or a disproportionately low share of— any new prosperity. Therefore in the case of vulnerable groups, extra steps are needed. A much better understanding exists now about the pattern of vulnerability in Tajikistan (led by rural families with more than 5 children, single-headed households, families with little or no *dehkan* lands, farmers in most cotton-growing areas and refugee or returnee households) and this makes it somewhat easier to target remedial investments. As to NGOs, success in promoting effective ways of countering land degradation gives them additional legitimacy (if local NGOs) and is a source of motivation to them and a spur to the Government. A number of international NGOs in Tajikistan implement agricultural and resource management programs. Among the most important are the Aga Khan Foundation (or Aga Khan Development Network), CARE International, German Agro-Action, Agence d'Aide à la Coopération Technique et au Développement (ACTED) and Mission Øst. Novel programs in the uplands with pastureland and

renewable energy components are implemented by CAMP (Central Asia Mountain Partnership). If little is said about the private sector (other than the emerging group of *dehkan* farmers) and its role in SLM in Tajikistan it is a reflection of the sector's current weakness (or non-existence) in Tajikistan rather than doubts about the contribution that a vigorous supply- and service-providing sector can make to land productivity and rural prosperity.

43. The National Strategy and Action Plan for Conservation and Sustainable Use of Biodiversity (NSAPCSUB) makes an eloquent case for considering Tajikistan's lands an asset of not only national or regional but also global importance. Conservation of unique or rare ecosystems of which Tajikistan has an important share can simultaneously address local, nation-wide and global sustainability objectives. "The world", in other words, is also an important stakeholder and GEF probably its easily recognizable agent. Among GEF implementing agencies, UNDP, World Bank and ADB have a permanent presence in Tajikistan, others (IFAD, UNEP) maintain close contacts with the Government. On the research side, the UNCCD perspective is best promoted in Tajikistan by ICARDA with ICRISAT and ILRI also active in the region. The sub-regional (Central Asia) bodies with a stake in mitigating the pressures on land are IFAS, ICSD, and ICWC.

44. With donor funding playing a major role in helping shape and implement SLM policies in Tajikistan the donors (starting with the members of CACILM Strategic Partnership) have a lot to gain or lose: professional reputations, gratitude or resentment of the recipients of assistance and the proverbial tax-payer, and success or failure in the field.

#### **D. Policy, Legal, Regulatory, and Institutional Barriers and Constraints**

45. A large number of reforms have been initiated in Tajikistan since political stability was restored, in 1996-1997. The most successful may have been macroeconomic stabilization, an important pre-condition for other reforms and for investment. Essential as such stabilization is, even for land management, it is not enough especially in a land-locked and small country like Tajikistan where new obstacles to regional and foreign trade in agricultural produce (e.g. export of fruits, agro-based products) have powerful repercussions on land use. There is little point in, for instance, terracing land to plant fruit trees or rehabilitating Soviet-time orchards if foreign markets for the produce are closed and the local market is small. In circumstances where border clearance is long and unpredictable one of the attractions of cotton growing in Tajikistan—with its controversial influence on the pattern of land degradation—is its non-perishable nature. Calls for self-sufficiency in grains, another policy favorite with significant land-use and environmental repercussions in Tajikistan, seem to be also driven by the hard realities of regional trade restrictions. In a different domain, the conditions of local transport (state of the roads and extortion along them) are a powerful disincentive to investing in land productivity. These examples serve as reminders that the analysis of barriers to SLM in Tajikistan can start in unexpected quarters. If trade- and transport-related factors are usually ignored in the discussion of SLM it is not because they are unimportant but because they are considered to be beyond control of the technical agencies dealing with SLM. CACILM may not be able to change these factors but it needs to be aware of them.

46. The centerpiece of the Government's efforts to raise land productivity has been the land reform. The aim is to transform the old collectivized agriculture consisting of about 500 large kolkhozes and sovkhoses (active in all types of productive lands including pasturelands) into a more responsive and efficient sector by creating new forms of farm enterprises supported by the right to lease land. By 2004, a total of about 13,500 units had indeed been created of which

10,600 were individual *dekhan* farms, and another 2,100 *dehkan* farms groupings (to be distinguished from the old kolkhozes). In a formal sense, the land reform has been largely implemented but a closer examination reveals a number of unresolved problems, a superficial nature of the change, and weakness or absence of several attributes that provide the incentive to take care of the land (length of the lease, adequate legal protection, transferability etc.). Important to note is that Tajikistan's land reform exclude the possibility of individual *ownership* of land, and this is widely agreed to weaken the reform's impact. As a generalization, the policy towards land management has been right but shallow and incomplete with implementation the weak link. The incompleteness is a matter of pastureland and foreland management, the two neglected until now in an understandable effort to address the most productive lands -the irrigated lands—first. As it is, no formal policy has been formulated for the management of pasturelands the field realities determined by inconsistent awards of grazing permits and uncertain management oversight by *hukumats*. The forestry sector has been in crisis for many years, run as a technical service largely divorced from local communities. The management of forestlands, especially the de-forested parts of the forest estate, remains ineffective or downright absent.

47. The transition from a planned to market-based agriculture has proven relatively difficult to accomplish in Tajikistan and state intervention in cotton farming carried out by the supposedly transformed (and independently-acting) production units persists. Cotton farms' indebtedness is an obstacle to their further restructuring and it delays the prospect of renewed investment in land productivity. The problem has been rightly receiving much attention in the last two years.

48. A complex set of issues relates to irrigation and the policy of maintaining low irrigation fees. This indirectly favors extension of irrigated farming into high-cost or environmentally fragile areas potentially denying resources to other forms of land use, socially more profitable (e.g. improved management of pasture lands, investment in forest rehabilitation or a gradual transition from pump irrigation to improved gravity irrigation).

49. Technical support to land managers continues to be skewed towards the kolkhoz-type farming methods. Scientific research institutions and technologies are being slowly re-oriented towards scales of production and management approaches that take account of changed resource costs and endowments, and changed nature of decision making.

50. A simplification of the tax system introduced in 2005 promises to remove tax disincentives to investing in the maintenance and improvement of land productivity although it is too early to say how effective the introduction of a single land tax in place of 7 different taxes to which farm enterprises were liable until 2005 has been.

## **E. Current Status of Monitoring and Research Programs**

51. The war-related, financial and other problems that led to a drastic reduction of many government activities affected the state of information management and monitoring. Nonetheless, Tajikistan succeeded in maintaining a skeleton of information-gathering structure, but with very few elements dealing directly with the conditions of land resources.

52. Apart from monitoring hydrometeorological conditions, SCEPF is responsible for environmental categorization of land and monitoring of soil toxicity while SCLM checks compliance with designated use of land. The Tajik Forest Research Institute has conducted periodic assessments of forest cover and pastureland conditions. MWRLR has produced

surveys of the state of irrigated lands on portions of Tajikistan's territory. The common feature is absence of continuous monitoring of parameters relating to the conditions of soils and vegetation.

53. For a long time after independence, the majority of research institutions "treaded water". That situation is slowly beginning to change and it is no surprise that most new initiatives depend on donor funding. Much of that funding is of regional character but that does not necessarily diminish its relevance to Tajikistan. Some progress can be reported.

54. With ADB support, ICARDA initiated in 2000 a three-year regional applied research project on soil and water management. The project addressed major on-farm soil and water management constraints with the aim to increase agricultural production through maintaining soil fertility, enhancing nutrient-use efficiency and improving the productivity of water use.

55. Tajikistan Soil Science Research Institute (TSSRI) took part in ICARDA-sponsored meetings in Dushanbe in 2001 and 2002 and is a member of WOCAT (World Overview of Conservation Approaches and Technologies). Tajik scientists have been involved in some training (e.g. groundnut breeding in ICRISAT). Also, under GTZ-CIMMYT Project, research into performance of improved wheat varieties took place. A little unfortunately, Tajikistan missed out on the IFAD-supported Integrated Feed and Livestock Production in the Steppes of Central Asia Project implemented by ICARDA, GL-CRSP, IFPRI, ILRI and relevant national research organizations in the other countries of Central Asia. The project is involved in adaptive research on integrated rangeland-livestock-crop management and development technologies.

56. There are several other interesting examples of donor-funded research of relevance to Tajikistan. The first model is typified by the involvement of the Centre of Development and Environment (CDE) of the University of Bern as a contractor under Swiss supported activities aimed at resource management. Several research projects by young Swiss researchers (e.g. on energy use in the mountains) have substantially expanded our knowledge about the topic. In another example, Global Livestock Collaborative Research Support Program (GL-CRSP) has been involved in a number of livestock-related research projects in Central Asia including Tajikistan.

57. Under domestically funded efforts, TFRI has been conducting research on soil erosion in Dangara, Televishka, Loshkaf and other field sites since 1998, apart from work on forest degradation. *Tajikzaminsoz* has done work on valuation of lands since 2002, on physical and chemical properties of irrigated soils and conducted geo-botanical research in irrigated and rainfed lands.

## **F. Current Land Management Practices – Strengths and Weaknesses**

58. Official data on cropping patterns show relatively little change between the last year of the Soviet period (1990) and now, the total area of irrigable land (i.e. land with existing irrigation infrastructure whether operating or not) remaining stable around 725,000 ha though the area of irrigated crops declined from about 570,000 ha in 1990 to just over 500,000 ha reflecting the deterioration of irrigation network and deterioration of soil conditions as well as livelihood concerns that led many to turn to rainfed cereal production (for which official data do not exist but even a casual look reveals their importance). Household plots (*priusadbenie uchastki*) that occupied 80,000 ha in 1990 now cover more than 200,000 ha. Official data indicate a small increase in the area of summer pastures (from 1.92 mil ha in 1990 to 2.08 mil ha in 2004),

and increases of winter and permanent pastures (from 0.56 and 0.23 mil ha respectively in 1990 to 0.68 and 0.27 mil ha in 2004).

59. On most irrigated lands two crops a year are a norm. The rainfed zone is mainly used for cultivation of grains and rainfed gardens and vineyards. The term “rainfed zone” does not exclude small areas irrigated by simple gravity systems<sup>2</sup>. Here, too, it is possible to get two crops under favorable conditions. Livestock is an important complement of rural households’ incomes in the rainfed zone.

60. Household plots have always played a disproportionately important role in domestic food supply, the original 10 per cent of total arable land they occupied producing over 25 percent of the value of crop production providing a powerful illustration of the role that incentives play in land productivity. Household plots are critical to rural livelihoods in Tajikistan. Around 94% rural households having access to some land for farming and 92% have a household plot. Even thirty eight percent of urban households have plots for small-scale fruit and vegetable production. Interesting differences in the way these plots are used are observed in different parts of the country but their function in significantly supplementing each rural family’s subsistence or income is common to them all.

61. About a third of existing irrigation systems (240,000 ha in all) rely on pumping water into gravity distribution systems. About 75,000 ha involve a pumping lift of over 150m. These are highly energy intensive and are in poor condition. A failure of these systems would place a large number of rural population at risk of losing their livelihoods, a factor that weighs heavily on the reform of the approach to irrigation. About 60,000 ha are irrigated from wells. The overall irrigation efficiency (conveyance losses combined with on-farm losses) of 17% is very low by most standards. The drainage network covers about 350,000 hectares, or half of the total irrigable area. Between 50-80 per cent was in a poor state of repair at the turn of the decade. This or outright absence of the drainage system and poor on farm management are the major causes of waterlogging and secondary salinity. The difference between plentiful water from the mountains and water delivered sustainably to the fields, less plentiful and involving high cost, is beginning to be better understood in Tajikistan even by traditional opponents of “commoditizing water”.

62. As to grazing, the natural conditions of Tajikistan and the underlying economics favor open grazing over intensive management. The actual pattern of use has long departed from old-established pasture suitability classification and it reflects the demise of the large-scale livestock production by state and collective farms and generally reduced livestock mobility. The total numbers of cattle, small stock and poultry have declined significantly since 1990 while pasture degradation has intensified. More than half of all households in Tajikistan had at least one cow at the turn of the decade providing mainly for the subsistence needs of the extended family.

63. The most common livestock system in the plains that account for more than 60 percent of rural households who have cattle and/or small stock is based on local summer grazing in and around the village on areas that are typically heavily overgrazed. In some cases, livestock are trekked or trucked to hill pastures for the summer. Scant winter grazing is supplemented by residues collected from the harvest of maize and other crops. Much grazing in open areas is managed though communal herding. Extensive grazing takes place on forestland and this

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<sup>2</sup> “Irrigated agriculture” in Tajikistan normally means irrigation in the lowlands on areas under the responsibility of MWRLR.

grazing is largely uncontrolled now that the former kolkhozes operating on forestland are no more.

### **G. Lessons Learned – Current and Recently Completed Projects**

64. The experience of efforts to arrest and reverse land degradation in Tajikistan is affected by their late start caused by the civil war and its aftermath during which emergency activities rather than systematic development efforts dominated. Some lessons for CACILM emerge from that experience also.

65. Several groups of activities generate insights. The first is emergency assistance by the Aga Khan Development Network in the Pamirs that gradually evolved into more traditional development assistance. Activities supported by SDC in the mountains of Tajikistan belong to the same group of interventions with development objectives present right from the beginning. Other early assistance implemented by bi-lateral donors combined elements of emergency relief and development. The most important lessons probably relate to community organization and decision-making. A transition from passive implementation of planned tasks and heavy subsidies of the mountain communities during the Soviet times to a more independent decision-making under increased livelihood pressures has not been easy. Depending on the location, somewhat different mechanisms (Village Organizations or Jamoat Resource Centers pioneered by UNDP) were created to substitute for or supplement a weakened government. Such mechanisms are particularly important in multi-component activities. Sensitivity to the local context is essential and the mechanisms used should not be considered permanent substitutes for regular government structures. NGO facilitators are frequently indispensable and their contribution strongly positive. Attention to winter energy supplies, energy efficiency, conservation of the woody vegetation and grazing regimes have been among the themes running through mountain-based programs. Single class of interventions (e.g. introduction of improved potato varieties in parts of the Pamirs) can sometimes result in profound and rapid changes in local land use.

66. The second group is World Bank and ADB-financed activities directed at rehabilitation of irrigation and drainage systems. These programs confronted the hard reality of the poor fit between inherited irrigation and drainage infrastructure and the changing face of farming in Tajikistan. Rehabilitation of infrastructure has to be tied to a new (for Tajikistan) pattern of assigning responsibility and financing maintenance, structured around water user associations. Implementation of loan projects demands extensive upgrading of project administration and management skills and familiarization of the staff of executing government agencies with the procedures and standards of the financing organizations. The general knowledge of project preparation techniques (technical, economic, social and environmental) remains insufficient in most cases. The still weak levels of management counsel avoiding complex multi-component projects.

67. The third is the experience of policy and strategy formulation, especially the documents prepared under GEF and UNDP support. These attest to the existence of good local technical expertise not matched however by the depth of economic and social analysis. Few lessons clearly emerge from the process other than the possibility that the gaps in recent data on the pattern and seriousness of land degradation need not be fatal provided sufficient use is made of insights and monitoring results generated by the growing number of donor-funded field activities. Inter-agency working groups created to prepare policy documents and plans rarely rise above the minimum required of them. The process of matching the investment

recommendations of these documents with existing budget processes (including the Public Investment Plan) has not truly begun.

## **H. Development Coordination Arrangements**

68. By now, the independent Tajikistan is securely integrated into the international community. Tajikistan joined IMF in 1993 and began regular co-operation with IMF immediately after the end of the civil war in 1996. The centerpiece of the cooperation is lending under the Poverty Reduction and Growth Facility. PRGF is supported by the National Poverty Reduction Strategy (NPRS), a point of reference for all donor assistance in Tajikistan. Apart from supporting macroeconomic stabilization and structural reforms necessary to achieve it, PRGF-supported programs –often prepared with World Bank’s technical inputs-- include elements such as poverty assessments, monitoring, structural and sectoral issues, social issues, and costing of priority poverty-reducing spending. NPRS displays a keen awareness of the role that land resources and their condition play in safeguarding livelihoods. Annual consultations with IMF and reviews by its staff are the standard form of coordination.

69. Coordination between Tajikistan and multilateral development institutions (ADB, EBRD, World Bank) revolves around multi-year assistance programs prepared separately by each institution (and the Government), followed by regular consultations during the period of each program. Similar general approach applies to the larger of the bi-lateral donors working in Tajikistan (Switzerland, EU, USAID). The coordination at the level of programs is carried out by the Ministry of Finance. An Aid Coordination Unit has been set up with ADB’s support reporting to the Executive Office of the President.

70. The office of the UNDP acts as a coordinator and official point of contact with the Government for all programs and projects of the technical agencies of the United Nations (other than the World Bank). Among the UN technical agencies of relevance to this document, only FAO has a semi-permanent office in Tajikistan while UNEP maintains contact with the Tajik authorities through its Regional Office for Asia and the Pacific in Bangkok. UN-sponsored environment-related conventions of relevance to this report (UNCBC, UNCCD) work through their focal points, i.e., the Head of the National Biodiversity and Biosafety Center acting on SCEPF’s behalf and the Chairman of the SCLM, respectively. UNDP has implemented the majority of GEF-financed activities in Tajikistan so far. UNEP implementation of GEF-funded projects targeted regional activities the largest of which has been the Sustainable Land Management in High Pamir and Pamir-Alai Mountains Project.

71. At the technical level, donors work with different implementing agencies, typically individual ministries and state committees. The coordination between donor and implementing agencies is of the familiar kind, namely technical reviews and day-to-day (or month-to month) joint efforts to resolve the many challenges that implementation of any project or program normally involves.

72. The relationship and coordination between donors and non-government organizations and civil society varies. Some donors have an assistance window specifically designed for implementation by NGOs in which case the coordination is directly between the donors and the NGOs with an uncertain degree of government oversight. In other cases, large components of donors’ programs and projects are implemented by international NGOs such as CARE, ACTED, or AKDN. Other donors (e.g. OSCE in their support of environmental governance) work exclusively through NGOs. A partnership between a Swiss contractor (University of Bern) and

local NGO (Central Asian Mountain Partnership) implements an important component of the Swiss assistance to Tajikistan.

73. The principal element in donors' coordination in Tajikistan is annual Donors' Consultation meetings organized to determine the size and composition of the Public Investment Program. For most donors, the Consultation Meeting is an opportunity to match their own country assistance program with the programs of other donors. The meeting confirms a broad division of involvement by principal donors for the forthcoming period, usually three years. Donors' less formal consultation, intensive during the finalization of each agency's assistance program, takes place among the organizations concerned.

74. Informal also is coordination among donors that takes place at the level of technical working groups set up by the Tajikistan government for agriculture and land reform under the auspices of the Ministry of Agriculture. No similar working group exists for environmental management. Environmental management is seriously handicapped by this absence of donor coordination that results in tiresome overlaps at a superficial level (reporting on the existing situation) but dearth of analysis at a policy level or technical assistance with a realistic chance of leading to meaningful investments.

### **III. PROBLEM ANALYSIS**

#### **A. Root causes of land degradation**

75. In all cases involving the production use of land, the fundamental cause of degradation is lack of incentives to invest in safeguarding or enhancing long-term productivity of land. Observed technical causes of land degradation are usually only symptoms of the more fundamental reasons. In Tajikistan these reasons typically include one or more of: (1) insufficient stake in the outcome of the investment (linked to restricted ownership, or incomplete management autonomy), (2) an environment that makes investment risky (extortion, corruption, etc.) or lowers its profitability (e.g. high transport cost, trade barriers, dys-functional regulations, etc.), (3) low capacity on the part of the authorities to impartially enforce laws and regulations, (4) uncertain and changing policies, (5) poverty, i.e. absence of the means to invest, (6) insufficient or inappropriate technical know-how and (7) undeveloped use of credit. In some cases, land degradation is a (8) reaction to a sudden change in the financial and livelihood parameters confronting local communities: The slashing of subsidies to mountain areas in the wake of independence, for instance, caused immediate non-sustainable coping behavior (e.g. cutting of the forest) and the challenge is to create a new sustainability without reverting to the original form or scale of the subsidy.

76. The incentive-centered view of land degradation favored here needs to be qualified. Safeguarding land productivity may be different at the level of a farm enterprise (the focus of the attention above), and an eco-system. The latter often requires a minimum and coordinated level of virtuous activity: A small number of enterprises each conserving its pastures, for instance, may not be enough to conserve the pasture ecosystem as a distinct eco-system with internal resilience. Once the concept of land degradation is widened to mean degradation of land eco-systems, the causes need to be expanded also to include (9) all those factors that contribute to the decline of the critical mass: policies uncoordinated in space, investment support conceived without account of eco-system conservation requirements and the power of tradition.

77. The view of land degradation that leans heavily towards the role of incentives in maintaining (or not) land values assumes a responsive farmer. Farmers are that most of the time but their risk-filled occupation also makes them reluctant to depart from tried methods. Creation of appropriate incentives needs to be accompanied therefore by training, demonstrations and other confidence-building “interventionist” steps.

- **Priority problem areas**

78. Priority land degradation problems in Tajikistan can be identified and organized by the type of activities considered in greatest need of strengthening, the type of land management with which they are associated, and by administrative or geographic areas. It is also possible to say what the principal problems are, viewed from a global perspective. Below the sequence leading from problems to priorities is described starting with the problem statement:

**(i) Capacity Limitations**

79. The transformation of Tajikistan’s agriculture and land use in general is unfinished, the progress influenced by incomplete policy, and low implementation capacity. The legislative environment has improved substantially but the land reform is far from complete. Legislation may be “in place” but it does not necessarily have the most appropriate form. The absence of the right to own land and the limits placed on land transferability remain as major disincentives to investment in land productivity. The proliferation of new laws relating to land hinders clarity. The prospective beneficiaries of the land reform, the former kolkhoz and sovkhos members, remain poorly informed about important aspects of the land reform and their rights and obligations in the new circumstances. *Hukumats* continue to have a vested interest in influencing production decisions of “their” farmers undermining their managerial autonomy. There are instances of unfairness in the initial allocation of former collectively managed land. The land registration and cadastral process suffers from lack of tools and skills at the local level. The continuing absence of farm credit for any activities other than cotton production (itself in deep crisis) and general inexperience with credit and its management add to the reluctance of many new land managers to invest. When the weakened farm support system and various obstacles to the transport of produce and inputs are added, the barriers to investment in land productivity are formidable.

80. Policy on forestland management has not been formulated yet. SCEPF’s recent Concept of Forest Sector Development till 2015 is not reformist enough besides lacking specificity. The change is most needed in re-orienting forest management towards helping meet the altered needs of the local communities (e.g. for wood-based energy), towards co-management of woodlots and shelterbelts, better coordination of forest management and grazing inside and outside forest lands, and more active promotion of on-farm and household tree planting.

81. With the demise of collectivized management of livestock, the rules of pastureland use have broken down or are being applied inconsistently by *hukumats*. The formal designation of pastures as summer, winter or permanent has become substantially divorced from the reality in post-kolkhoz circumstances with no plan in sight how best to rehabilitate and maintain the huge resource that pastures represent. Information about the current use of pastureland is held by *hukumats* but is not systematized, providing a weak basis for analysis and policy recommendations. Eco-system considerations applying to pastureland management take a secondary place and rehabilitation of certain ecosystems such as semi-desert pastures is undertaken sporadically and in an uncoordinated fashion.

82. Land use planning and management are not absent from the national vision and this is an important plus. Land reform features importantly in NPRS and PRSP in Tajikistan is more than a document to please the donor community (although it is that, also). Land degradation is a major concern of the Government's Program of Economic Development until 2015. On the other hand, in the work of Tajikistan's "four land sisters" (SCLM, SCEPF, MOA and MWRLR), land degradation as an integrating theme is normally subordinated to the principal mandate of each ministry (land administration, environmental protection, agricultural production and supply of irrigation water, respectively). NAPCD has not yet become the unifying tool that it would ideally be. In part this is because it papered over difficult subjects of policy and institutional reform and was prepared without any financing commitments. The Government's endorsement was given in a similar non-binding way largely to facilitate hoped-for inflow of donor assistance. NAPCD did not have the profile and level of support that was given to PRSP.

83. In a country susceptible to natural disasters that has witnessed a much overdue increase in donor (SDC, EU, DFID, UNDP) attention to disaster preparedness in the last two years, the link between various disaster preparedness initiatives and land management has not been fully explored and developed.

#### **(ii) Sustainable Agriculture in Rainfed Lands**

84. Rainfed crops do not feature as a category in the national statistics of land use where only non-irrigated perennial crops (fruit trees and vineyards, for the most part) appear. Yet a large percentage of the 323,000 ha reported as planted to wheat in 2004 involve rainfed lands, a major increase from about half of this figure in 1990. Self-sufficiency in grains is a stated policy objective and continued cultivation of pasturelands converted to wheat at the height of domestic food emergency in the mid-1990s looks set to continue.

85. Rainfed agriculture in Tajikistan takes place in sloping lands, here and there supplemented by gravity irrigation. The technical level of mountain agriculture in Tajikistan is low. The majority of new managers lack the traditional know-how lost during the kolkhoz era. Farming is practiced on slopes of up to 25 degrees without anti-erosion measures. The outcomes are predictable. The erosion tends to be particularly heavy during spring rains following the initial plowing up of land. Poorly constructed terracing sometimes found in rainfed gardens and vineyards to stop erosion often contributes to it and accelerates the erosion processes. Outright loss of cultivated land to unevenly eroded and gullied fields overrun by weeds is not uncommon. Deflation of soils is widespread as is the loss of humus and nutrient content of soils.

86. Tree crop cultivation suffered enormously by the disintegration of USSR as practically the whole sector had been developed to supply that market. Maintenance of orchards and vineyards was suspended for most of the 1990s. There are signs of revival of fruit tree and vineyard planting in the last two years attributable to economic recovery and possibly the land reform.

#### **(iii) Sustainable Agriculture in Irrigated Crop Lands**

87. By far the best-documented form of irrigation-related land degradation is secondary salinity caused by poorly managed irrigation that results in over-watering, gradual rise of the water table, and salinity build up. Irrigation-related soil erosion is another concern: Careless irrigation leads to a washout of soil that in some cases turns into gullies or even ravines. Poor

initial layout and technical preparation of land, the silting of irrigation canals and drainage collectors, inappropriate amounts of water and manner of irrigating the field are the main technical causes. The scale of irrigation-related erosion increased in line with the extension of the irrigation system into more fragile lands in the last twenty years of the USSR. The newer irrigated areas tend to suffer from more serious erosion.

88. Unreliable irrigation water delivery in a country where more than 40 per cent of all irrigation supplies are delivered by pumping is a key immediate concern behind which lies the complex issue of how to rehabilitate, maintain and manage the irrigation infrastructure that was designed for another time and another production system. Indirectly, the problems are related also to the supply and pricing of electricity supply for the pumping stations. The question of cost recovery (how much, uniform or differentiated, etc.) has not been fully resolved. Viable alternative livelihood opportunities for populations now served by the most inefficient irrigation systems have not been formulated. On-farm management of water through WUAs is emerging as a necessity and there is a general agreement that low irrigation efficiency needs to be improved although the technical means of achieving this have been easier to agree on than deciding who should do what and how to pay for it, and what the best incentive framework for increased efficiency of water use is.

#### **(iv) Sustainable Forest and Woodland Management**

89. Much of the land designated as forest in Tajikistan serves as pastureland. The dismantling of former kolkhozes and sovkhoses operating on forestland that used to combine livestock production with forest work was a direct cause of the loss of control on grazing inside forestland. The decline of the budget of the Forest Service (formerly *Tajikles*, now a unit of SCEPF) throughout the 1990s was a contributing cause.

90. Besides grazing, most pressure on forest is related to worsened availability of energy during winter. Here the subject of deforestation touches on the complex regional debate about the energy-water trade as well as the subject of energy efficiency. Deterioration of winter energy supplies has resulted in cutting of trees and shrubs [saxaul in the lowlands, teresken in the Pamirs] for fuel to ensure survival in the harsh winter conditions. Lack of systematic attention to energy efficiency in a country long used to being the premier supplier of hydroelectricity to the region is another proximate cause of the pressure on forest and shrub biomass. Thanks to the work of NGOs the scope for improving energy efficiency in the countryside is better known but not yet acted upon.

91. Official forest management has not yet responded to recent changes in resource availability and decision-making in the countryside and most initiatives to achieve sustainability of forest and biomass management in and around settlements have come from international and local NGOs. Important source of synergy is therefore being lost.

#### **(v) Sustainable Pastureland Management**

92. Decreased fodder efficiency as a result of anthropogenic influences has been characteristic of Tajikistan's pastures. For a while it seemed that the much-reduced national herd during the 1990s could come to the rescue of the pasturelands but that hope has turned out to be hollow. First, the size of the herd today is almost back to what it was in 1990. Second, the damage caused by inappropriate management of a smaller herd is greater than that under efficient management of a large herd. Crucial to the pattern and seriousness of the damage is

the spatial and temporal use of the pasture resource, in turn affected by factors such as ownership of pastureland, the cost of seasonal migration, and several others. Concentration of livestock around settlements reflecting greater post-kolkhoz individual ownership of livestock in response to economic uncertainty is a key factor. The result has been overuse of near-by pastures and generally lowered pasture rotation so essential to pasture health.

93. Application of the land reform has proceeded more slowly in pasturelands than in croplands, especially irrigated ones. Like croplands, pastures cannot be individually owned under the land reform legislation and the various weaknesses of land reform's application observed in the context of croplands apply also to pastures.

94. No clear assignment of responsibility for those pastures (still a majority) not leased to individual managers or management groups and absence of official policy of pastureland management have contributed to an opportunistic issuance of grazing permits by *hukumats*. Taxation of pasturelands is unclear and may contribute to their degradation.

#### **(vi) Research**

95. Leaving aside the serious underfunding that has marked it ever since independence, land-related research in Tajikistan has two principal weaknesses. First, it has not yet adjusted to the fundamental changes underway in the structure of land use and the resulting shift in the pattern of demand for "research products". Second, the land-related research has not integrated across disciplines and it risks following the narrow research specialization once an important component of central planning but inappropriate in today's conditions.

#### **(vii) Integrated Resource Management**

96. Integrated resource management at present applies only to selected communities and areas where the physical configuration (a valley, for instance) and social organization encourage an integrated vision of resource use and where an active proponent of that vision (international NGOs or a small number of bi-lateral donors) is backing it up financially and technically. On a wider scale, it is a model envisaged for World Bank-GEF Community Agriculture and Watershed Management Project. The potential to reap several kinds of synergies (technical, organizational, financial) is the attractive part of the approach while its high management demands (and cost) can act as a deterrent.

97. The pre-conditions for an integrated approach to fighting land degradation are not strongly present in Tajikistan. The four main technical protagonists of SLM (SCLM, SCEPF, MOA and MWRLR) collaborate little and superficially, and do not easily share information or shed redundant mandates. The donors who advocate the approach often find it difficult to practice it themselves. Most local communities and *jamoats* outside pilot areas have had little experience in the formulation of local development priorities, mobilizing local stakeholders and establishing mechanisms to sustain new initiatives. Some successes in this area (e.g. in microcredit use) have been achieved, however.

#### **(viii) Protected Area Management and Biodiversity Conservation**

98. The PA system survived, weakened, the worst of the crisis of the 1990. It remains underfunded and dependent on donor support. It is insufficiently linked to effort to conserve land eco-systems. Landscapes and eco-systems in Tajikistan are unlikely to be safeguarded only by attention to official protected areas even if the management and protection of these areas were

suddenly to intensify. Promotion of eco-system integrity outside PAs could become a much-needed reinforcement of the PAS and an opportunity to capitalize on the commercial potential of biodiversity that may be unavailable in PAs themselves. Existing protection and conservation areas do not sufficiently benefit local populations and are thus unsustainable. Biodiversity and eco-system protection have a relatively narrow constituency in Tajikistan centered on the Academy of Sciences and SCEPF. Commercialization of biodiversity (of which Tajikistan has an interesting history, mainly in the processing of medicinal plants) has suffered by the general problems of supply disruption and loss of secure outlets. The subject of how best to achieve the complementarity between the PAs and land management investments outside them has not been sufficiently explored so far.

## **B. Needs Assessment**

99. The term “needs” can be understood in several different ways, as the amount and type of resources that should be mobilized and deployed to tackle the underlying problem, as a locus of greatest deprivation caused by land degradation, as steps most likely to create an environment in which land management thrives, and several more. To an economist, the needs are the greatest where the economic profitability of land rehabilitation investments is the greatest due account taken of the expected distribution of the gains. The society should seize the most profitable investment opportunities rather than some other ones. Once a poverty dimension is added the needs are greater among the poor and vulnerable, other things being equal. At the same time, the poor (and the not so poor) are not well served by unprofitable investments.

100. Unlike investments in specific projects, the economic profitability of different forms of institutional and policy adjustments that feature prominently here is not usually quantified but based on a broad enough experience of similar activities and interpretation of partial evidence. This is also the approach used here, supplemented by good knowledge that exists in Tajikistan of areas of greatest degradation pressures, distribution of poverty and limited but improving evidence of financial viability of different rehabilitation measures.

101. Among the most complex aspects of identifying what is most needed is the institutional viability and social acceptability of potential remedial measures. The desirable profile of costs and benefits over time (economic viability) assumes that the measures in question are acceptable in the first place. In practice it is important to admit the possibility that steps that promise to significantly improve collective welfare (e.g. discontinuation of irrigation in areas where supply of irrigation water is vastly uneconomic, removal of semi-compulsory cotton farming) may be politically unacceptable or –worse- that political process favors interventions that lower collective welfare though benefit a particular segment of the national community. All of these influences are present in Tajikistan (as they are in most other countries) whether it is a delicate regional balance or a strong cotton lobby. In this document, we do not attempt to dissect these or try to adjust the recommendations by own interpretations of political realities. Instead a program is charted and the political process is left to impose its own constraints and adjustments.

The needed steps are organized below by the categories used earlier on.

### **(i) Capacity Building – Strengthening the Enabling Environment**

102. The overwhelming need is to pursue and improve the process of land reform as a principal driver of SLM of irrigated lowlands, and extend the process to other lands. The

execution of the land reform and its several components (farm restructuring procedures, use rights of individual *dehkan* shareholders, flow of information on individual land rights to farmers, local administrations and judges, use of Reserve Land to compensate for uneven or unfair allocation, the land registration process, etc.) needs to be strengthened. Transferability of land leases other than through inheritance, and possibility of sale of long-term leasehold rights need to be introduced.

103. Ministry of Agriculture's role needs to change from production management to facilitation of production by the private and household sector, and its regulatory functions need to be limited to key areas of public interest. MOA needs to adopt more consultative approaches in working with the farming community.

104. In irrigated land management, MOA and MWRLR need to abandon a policy of "irrigation at any cost" and begin to take a harder look at the social profitability of irrigation and begin to evaluate different ways of irrigating. Rehabilitation of degraded irrigated lands should not be undertaken in an unreformed local environment. Legislative changes are needed to allow for the use of land as collateral. The resolution of the farm debt issue should be completed. The capacity of MWRLR in financial management, legal issues, water management and investment planning, and cost recovery procedures need to be enhanced. Mechanisms facilitating voluntary re-location of land in areas affected by waterlogging and salinity should be promoted.

105. In rural finance, community-level savings and lending systems and institutions need to be encouraged to make it possible to move from traditional reliance on credit via cotton buyers to direct credit. Legislative changes are needed to allow the establishment of microfinance and credit unions.

106. In rainfed areas, until now relatively neglected, the greatest need is for implementation of the land reform despite the higher administrative cost. An enforceable policy needs to be formulated for the use of steep lands with special attention to safeguards for vulnerable groups. Better knowledge about the existing use of rain-fed lands is needed. Government needs to develop a position on (a) a subsidy to environmental protection measures in sloping lands, and (2) re-location incentives to bring people down from the environmentally most fragile areas.

107. In pasturelands, responsibility for their management at the local level needs to be clearly assigned. A review of pastureland use including pastures within the state forestlands is needed, as are studies of the social profitability in Tajikistan of pastureland rehabilitation as inputs into a pastureland management policy. Amendments to the Land Law are needed that would allow long-term leases to winter and year-round pastureland. Valuation methodology for pasturelands needs to support of the leasing option.

108. Improved management of forestland demands a more radical look at existing policy. The activities in the sector need to be more closely aligned with the needs to local communities. The forestry know-how needs to be applied outside the forestlands and supplemented by the mushrooming experience of NGOs.

109. In protected area management, the greatest need is for management concepts for different ecosystems and buffer zones and a transparent legal and management status of all parties inside protected areas and in buffer zones. Such arrangements should make it possible for local population to benefit more directly from their contribution to ecosystem and biodiversity conservation.

**(ii) Capacity Building -Integration into Land Use Planning and Management**

110. CACILM process should be a tool of integration of SLM into the policies of technical ministries and local governments. SLM needs to be more securely linked to the budget process. This may include making NPF a subcomponent of PRSP and more clearly assigning responsibility for implementation of different components of NPF to national agencies.

111. Suitable arrangements are needed to facilitate the formulation, budget-preparation and implementation of area-based land management and livelihood projects and programs where close inter-agency coordination is indispensable. Such integration needs to take place both at the central and local (*jamoat*, usually) levels and it needs to be preceded by a strengthening of local capacity and creation of consultative mechanisms. CACILM should build on recent initiatives in disaster preparedness in Tajikistan (e.g. DIPECHO, Disaster Response Strategy for Central Asia) to make SLM a more telling component of disaster preparedness and link the two activities more securely.

112. Elimination of needless duplication of information-gathering activities and mandates by technical agencies of the Government needs to be seriously pursued as a means of freeing resources for a more effective inter-agency collaboration.

113. Integration of SLM into daily activities of key agencies needs to be supported by material strengthening of these agencies, in particular SCLM as State land administrator. Technical support to water resources management agencies (for water measuring devices, communications etc.) is needed besides a support for the promotion of service culture inside both MWRLR and MOA.

**(iii) Sustainable Agriculture in Rainfed Lands**

114. An integrated approach to rehabilitation of sloping lands based on watersheds needs to be given more prominence.

115. Trees and protective vegetation and soil conservation practices need to play a bigger role in the management of rainfed lands. Tree planting and water conservation by households should be more actively promoted. There is a need to revive selected traditional technologies of working rainfed lands and learn from the best experience outside Tajikistan.

116. Rehabilitation and promotion of horticulture in the field needs to go hand in hand with steps to promote trade and agro-processing. The ecological virtues of Tajik horticultural output need to be actively promoted.

117. Government needs to learn more about NGO experience in rainfed and mountainous areas and incorporate the lessons into own policy for these lands. Greater room deserves to be made for local NGOs as facilitators of government SLM programs.

**(iv) Sustainable Agriculture in Irrigated Lands**

118. At this phase of agricultural restructuring in Tajikistan a shift from larger to smaller scale units, and from capital to labor intensive technologies, should be encouraged.

119. The problems of high lift pumping areas and subsidy policies for dealing with them deserve to be reviewed as is a partial re-orientation from irrigated areas in higher elevations served by pumped irrigation towards use of plantation crops using much less water and resulting in less waterlogging and salinity.. Alternative agricultural and non-agricultural livelihood possibilities for areas on which irrigation is not economically viable need to be more aggressively sought.

120. The organization and management systems of the primary and secondary irrigation networks need to be further decentralized. Water users' associations should be encouraged and created. Information and training among new *dehkan* farmers and WUAs about the environmental aspects of irrigation management need to be intensified and WUA operations manuals and training prepared.

121. Technical support to water resources management agencies for better water use and water table monitoring and reporting merits support as do soil fertility improvement and land reclamation techniques.

#### **(v) Sustainable Forest and Woodlot Management**

122. Attention needs to be given to full restructuring of kolхозes and sovkhoses formerly operating on forestland.

123. Forest management needs to embrace local communities. The range of supply enhancement options needs to be widened to include, as appropriate in local conditions, farm forestry, household-based firewood cultivation, rehabilitation of existing mini-hydro power stations, use of passive solar power through architectural adaptations, other use of solar power, and coal mining in "right" areas. External options (large-scale reforestation, provision of coal, diesel, kerosene with or without subsidy or extension of grid) should not be excluded out of hand. Demand reduction options, too, need to be widened to include better insulation of buildings, promotion of energy-saving appliances as well as lower population growth (family planning).

#### **(vi) Sustainable Pastureland Management**

124. A shift in the regulation of pasture use on publicly managed pasturelands is needed from area control towards the carrying capacity of the lands in question. Mechanisms are needed to encourage seasonal transhumance to even out the pastures' use. The focus of initial effort should be pasture degradation around settlements.

#### **(vii) Targeted Research**

125. The land management research in Tajikistan should be of the applied kind and should serve the new *dehkan* clientele. Research needs to target areas such as soil fertility, land reclamation and rehabilitation techniques with emphasis on economic viability and efficiency of investments, land and water conservation methods by decentralized and autonomously managed smaller units, sustainable management of sloping lands, and efficiency of the irrigation water use. Maximum opening needs to be created for the dissemination of the best of applied research in drylands farming relying on ICARDA and ICRISAT.

126. The research needs to be more closely integrated into advisory and other support (including farmer to farmer approaches) and be accompanied by demonstrations.

#### **(viii) Integrated Resource Management**

127. All investments in SLM in Tajikistan need to be supported by cross-agency consensus and be integrated in that sense. Assignment of implementation responsibility to one agency should not imply that supporting components and involvement of other organizations is not desirable. Nonetheless area-based land-rehabilitation and conservation interventions need to be applied selectively and the organizational and management demands of multi-component programs carefully weighed against expected synergistic benefits.

#### **(ix) Protected Area Management and Biodiversity Conservation**

128. Management of protected areas needs to be more closely linked to sustainable management of key land eco-systems and be coordinated with (a) pastureland policy; and (b) tourism development, including international trophy hunting.

129. Rehabilitation of important land eco-system needs to target buffer zones and be based on models that generate local benefits (multi-zone protected status, biosphere reserve)

130. Protected areas and special ecosystems need to be more creatively presented to the international community. The Government needs to work more closely with the donors to reform the management of Tajikistan's airports to allow easier entry by foreign nature lovers and reduce other obstacles to eco-tourism.

### **C. Priorities**

131. The priorities, i.e. priority reforms and investments, are derived from the statement of key problems and identification of areas of greatest need. The priorities are presented generically here and deliberately kept to a small number, and organized into clusters of activities rather than specific projects. In Part IV, the priorities are translated into specific investment proposals. Organized by categories, the priorities are as follows:

- **Capacity Building – Strengthening the Enabling Environment**
  - (i) Support for efforts to improve the quality of land reform, its extension into areas of rainfed farming and pasture lands, and related strengthening of SCLM.
  - (ii) Addressing the gaps and weaknesses in policies directly or indirectly affecting land use, especially pasturelands and forestland management.
  - (i) Strengthening the capacity of MOA and MWRLR for a better defense of long-term land productivity.
- **Capacity Building - Integration into Land Use Planning and Management**
  - (i) Integration of SLM and NPF into the existing budget process
  - (ii) Improved management of land-related data with emphasis on less duplication and on elimination of conflicting mandates.

- (iii) Strengthening local governments and communities for implementation of area-based land rehabilitation and conservation projects.
- (iv) Integration of SLM into national disaster preparedness strategies and plans.

- **Sustainable Agriculture in Rainfed Lands**

- (i) Integrated approach to rehabilitation of sloping lands based on community involvement, and introduction of new practices. Diversification of land use with combinations of subsidized environmental protection (through woodlots planting, etc.) and shorter-term livelihood support.
- (ii) Involvement of NGOs with experience in land management in rain-fed areas as facilitators.
- (iii) Promotion of horticulture in conjunction with a removal of obstacles to trade and agro-processing.

- **Sustainable Agriculture in Irrigated Lands**

- (i) Introduction and dissemination of more efficient and less damaging irrigation practices. Information dissemination, training of farmers in land reclamation and erosion control measures in irrigated areas. Demonstrations of soil fertility enhancement and land reclamation techniques.
- (ii) Development of alternative livelihoods for populations currently served by uneconomic, high-cost, pumped irrigation.
- (ii) Support for WUAs for improved irrigation management in the new de-collectivized setting. Inclusion of anti-degradation measures in the scope of work or reformed rural advisory service.

- **Sustainable Forest and Woodlot Management**

- (i) Restructuring of the Forest Service to achieve a better fit with community needs and environmental objectives.
- (ii) Integrated local energy management centered on the management of local forest and shrubs. Widening the scope of energy supply-enhancing and demand-reducing options.

- **Sustainable Pastureland Management**

- (i) Integrated approach to the management of pastures around settlements. Measures facilitating increasing pasture rotation.
- (ii) Introduction of international experience in pastureland management in settings similar to those of Tajikistan

- **Targeted Research**

- (i) Adding to and disseminating the results of applied research in drylands farming relying ICARDA and ICRISAT.

- **Integrated Resource Management**

- (i) Scaling up successful land-oriented area development projects.

- **Protected Area Management and Biodiversity Conservation**
  - (i) Strengthening the capacity of production-oriented government agencies to think and plan also in ecosystem terms.
  - (ii) Creation of PA buffer zones as areas combining livelihood improvements with ecosystems' conservation. Commercialization of biodiversity.

#### IV. NATIONAL PROGRAM

##### A. The vision

132. In physical terms, CACILM's vision for Tajikistan is this:

- (i) On sloping lands: Rows of multipurpose (fuel, fodder etc.) trees and shrubs in combination with fruit trees, on household- or community-managed plots. New things becoming common: Fishponds, biogas and new technologies (passive solar heating, new types of irrigation, water storage, better insulation of houses, etc.) make their way into these areas. Grains, tubers for local consumption, with improved varieties and much improved soil and water conservation practices. Community-based constraints on the use of public pasturelands.
- (ii) On irrigated land in lowlands: Initially small land holdings on irrigated land, gradually increasing in size as consolidation takes hold. Diversified farming by increasingly confident managers based on a sense of security and fairness and improved efficiency in land administration. Investment in maintaining and enhancing productivity of each plot. Gradual emergence of technical support, market-based. Developments outside land use –such as better prospects for local agro-processing, improved farm to market roads, less extortion along the way, etc—as an additional bonus. Substantial improvement in the efficiency of irrigation water use linked to continuing water pricing reform, especially in areas served by high-cost pumped irrigation.
- (iii) On forest lands: Reformed Forest Service more closely working with local communities, sustainable production of fuelwood actively pursued in combination with measures by other organizations and local communities to increase winter energy availability. Tied grants to communities for forest maintenance (“Social services-for-trees”) becoming common, better marketing of non-forest products. Responsibility for the management of all sub-areas of the forest estate, especially pasturelands, clearly assigned. Boundaries of the forestland adjusted to better pursue environmental objectives.
- (iv) On pasturelands: Semi-desert and desert pastures being rehabilitated and maintained on a scale that ensures ecological integrity of these ecosystems. Management of pastures either by individual (of groups of) leaseholders under secure leases, or by the State sub-contracting with local communities. Reduced pasture degradation around settlements resulting from the impact of land reform, changed tax regime and reduced dependence of individual households on

livestock ownership. Gradual improvement in the efficiency of haymaking and fodder management supported by appropriate mechanization.

- (v) Important ecosystems: Greater realization that conservation of ecosystems can have benefits that go beyond the narrow circle of local users. Well-chosen semi-desert and desert landscapes featuring in rehabilitation schemes in creative combinations of productivity enhancement and conservation.
- (vi) Along roads and close to other infrastructural facilities: Management of sloping lands becomes also a tool of natural disaster mitigation, though land stabilization. Terracing of all kinds flourishes.

133. The vision is for CACILM to exert significant influence on the approach to SLM in Tajikistan. In that approach the key to arresting land degradation is creation of incentives for sustainable and profitable *investment* in land by diverse partnerships of land users, government and donors. Such investments must be:

- Profitable in a private sense (make farmers better off) and in a social sense (the community or the world gain something, farmer's improved well-being does not come at the cost of less for others).
- Targeted to areas of a high social profitability in which each of cash incomes, food security, environmental merit, vulnerability reduction and sustainability have a place.
- Linked to national priorities (PRSP, ESDP) and budgets.

134. Institutionally speaking, CACILM becomes the driver of streamlining of responsibilities for land management among the four key technical agencies (SCEPF, SCLM, MOA and MWRLR, the "four sisters"), eliminating overlaps and conflicting mandates, and adding clarity where such clarity is absent. This frees resources for SLM-related tasks. The agencies become more motivated as technical support and training is provided to their staff. Transparent, competent and principled land administration is agreed to be indispensable and is well supported technically.

135. CACILM activities are tied to a wider institutional and public expenditure reforms that (1) deepen the land reform in the direction of greater land ownership, (2) make the principal technical agencies better able to respond to new demands; and (3) more effectively link stated priorities to budget allocations.

## **B. Overview of the Program Design and Monitoring Framework**

136. The overall goal of CACILM program<sup>3</sup> in Tajikistan is to restore, maintain and enhance the productive functions of Tajikistan's land so as to improve the economic and social well-being, and reduce poverty of those who depend on these resources while preserving the environmental functions of these lands in the spirit of UNCCD. The program seeks to capitalize on the land- and other reforms to encourage private and other investments in the maintenance and improvement of land assets. In environmental terms, the program seeks to mitigate the causes of land degradation and its negative impacts on the functional integrity of principal ecosystems through the promotion of SLM at different administrative levels.

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<sup>3</sup> In what follows, the terms "CACILM" and "Program" are used interchangeably even is, strictly speaking, the National Program is an outcome of CACILM.

137. The expected outcomes of the Program are of three broad kinds: (1) Improved capacity of Tajikistan's national institutions to integrate SLM considerations into their operations and budgets and improved ability to promote and implement investments in SLM, (2) Rehabilitation and enhancement of the productive functions of selected lands to improve livelihoods while giving direct and indirect protection to ecosystems, and (3) Widening of the support to SLM in Tajikistan to include service providers and civil society.

138. The Program's overall objective will be pursued through ten groups of activities or program areas, namely (1) Strengthening the Enabling Environment (2) Integration of SLM into Land Use Planning and Management, (3) Sustainable Development of Rainfed Lands, (4) Sustainable Development of Irrigated Crop Lands, (5) Sustainable Forest and Woodlands Management, (6) Sustainable Pastureland Management, (7) Targeted Research, (8) Integrated Resource Management, (9) Protected Area Management and Biodiversity Conservation, and (10) National Program Coordination and Management. The ten groups are structured to respond to the analysis presented in Parts II and III of the report (activities 1 to 9) supplemented by the tenth group, described further below.

139. The success of the Program will be judged by performance indicators, duly verified. The achievement of the overall objective of the Program demands that the welfare of those relying on land resources be demonstrably improved, the trend of land degradation in Tajikistan arrested, and Government agencies shown to have greater ability to address land degradation. It will also require a proof that land reform does indeed lead to greater maintenance of land under management and that the Government is better able to match investments to socio-environmental priorities. And the success of the Program's environmental objectives will be judged by a demonstrable reduction in the extent and severity of land degradation within selected areas and ecosystems (e.g. improved watershed protection leading to greater water storage and availability for the lowlands or net gain in carbon sequestration due to expansion of standing woody biomass and better conditions of pastures).

140. Consideration of the Program's outcomes will demand evidence that the legislative, regulatory and policy frameworks for SLM, proposed in the Program, have indeed been formulated and that the land reform deepened. The Program's field outcomes will be measured by the rate of adoption of improved land use practices resulting in improved productivity of privately managed land (i.e. less degradation). The value of contracts and body of guidelines and procedures developed to promote the participation of service providers and civil society in different elements of SLM will be an indicator of the achievement of this category of expected outcomes.

141. Each of the ten groups of activities will consist of one or more specific investment or TA projects accompanied by a statement of financial contributions (inputs) and expected results (outputs). The degree of success will be measured by the customary indicators of project performance.

142. Several sources of verification and reporting mechanisms will be used combining those already in existence (e.g. ADB or WB's PCR and post-evaluation reports, SCLM reporting on the state of the county's land resources) with those specifically developed under CACILM (socio-economic impact surveys, local and national environmental impacts surveys, beneficiary impact assessments, socio-economic surveys, land- and soil-degradation surveys, Program and GEF progress and evaluation reports, and others). More information is contained in Section E and the Program Design and Monitoring Framework (Appendix 2).

143. The formulation of the Program contains and number of assumptions and embodies a view of risks. The most important is assumed existence of a commitment by the Government to land reform as a principal avenue to renewed investment in land maintenance and improvement and a commitment to continued improvement of economic and environmental governance. Among other important assumptions is that land degradation in Tajikistan is overwhelmingly anthropogenic in origin, that sufficient area of degraded lands and ecosystems exists that can be economically rehabilitated, and the economic and political stability can be maintained so that allocation of resources is not driven mainly by emergency circumstances but substantially by market forces.

## **C. Program Areas**

### **1. Capacity Building**

#### **1.a. Strengthening the Enabling Environment– Mainstreaming Sustainable Land Management**

144. Parts II and III described a much improved but far from complete policy and legislative environment for SLM in Tajikistan. The aim of the first program component is to help strengthen it. Two main groups of activities are required. The first seeks to ensure that SLM is given the necessary standing in key plans (PRSP, SEDP, plans and strategies of sectoral ministries) and budgets –the much desired mainstreaming of SLM-- and that a unity of purpose is created across a very large number of different documents that have something to say about land management in Tajikistan. The second group of activities aims at overcoming the various weaknesses of the policy and legislative environment.

145. Land management is a crosscutting theme without a single institutional champion in Tajikistan even if SCLM of SCEPF come somewhat close to it. There is no single plan for SLM at present (and the National Action Plan to Combat Desertification is a strategic document rather than a plan in a bureaucratic sense of the term) or a budget category SLM. Instead, planning of and budgeting for SLM emerges from the plans and budgets of the institutions that play some role in SLM, most notably MOE, MWR, SCLM, and SCEPF. The success of translating the policy intent into budgets depends on the ability of individual agencies to formulate policies, and on the quality of the process that translates these policies into budgets. Both leave something to be desired.

146. The process of policy formulation within each ministry is weak at present, resulting in a non-responsive public expenditure, driven mainly by inertia and old habit of norm-based (rather than output-oriented) budgeting. The agencies with the greatest administrative stake in SLM (SCLM, SCEPF) are handicapped by their perceived status as “mere” administrators rather than production tsars (as are MOA, MWRLR), a carry-over from the prioritization in a centrally planned economy. They have not fully succeeded in securing greater support for SLM for which they bear extensive responsibility. Another gap separating policy intentions and their funding is found in the narrow definition of land improvement that has long been regarded in Tajikistan as synonymous with the activities of MWRLR and with irrigated lands, as if lands could be improved only through irrigation. Rainfed lands and pastures have been largely neglected and left outside the financial mainstream. This is not necessarily to argue in favor of a wholesale re-allocation of investments from irrigated lands to non-irrigated ones. SLM in non-irrigated lands in Tajikistan is costly (if only because of the high transport cost and low population density) and unlike in irrigated lands where investment cost can in principle be recovered from direct beneficiaries, the benefits of investment into SLM in sloping lands are divided among the local

population and the lowlanders and others benefiting indirectly (via flood control, integrity of ecosystems, carbon sequestration, etc.). This dilution of benefits creates problems of cost recovery and contributes to the difficulties of ensuring that more funds are channeled towards the ecologically vital sloping lands. The point is that investment in better management of non-irrigated lands needs better explanation in Tajikistan to gain acceptance.

147. The place SLM received in cross-sectoral documents varies. SLM is dealt with adequately in PRSP (although it does not appear there as a separate budget category), but does not feature as a topic in the Socio-Economic Development Plan, another point of reference in the budget process. PRSP and SEDP remain largely unrelated. Co-existence of two guides to budget formulation makes it more difficult to align policies with budgets. At present, the budget incorporates the Centralized State Investment Program (CSIP) and is supplemented by the Public Investment Program (PIP). Between them (each accounting for about 3-4 per cent of GDP), CSIP and PIP finance virtually all-new public investments, the former using budget funds, the latter mainly donor-funds. PIP is not integrated with the budget itself for now. CSIP is part of the existing budget process but its financing priorities conflict with PRSP.

148. CACILM will support efforts to bring about a change in the planning and allocation of budgets to combat land degradation. In the first place, this will be done by aligning itself with the ongoing (but far from finished) reform of public expenditure process in general that seeks to overcome the poor formulation of policies and the fit between them and the budgets. This may necessitate that position papers and policies be developed by (or for) these ministries to overcome that weakness. CACILM will contribute to creating a suitable policy framework for the use of pastures; rain-fed sloping agricultural lands and forestlands. These three categories of lands are not well managed in Tajikistan. Unlike irrigated lands where the role of the government should be limited to efficient land administration, the fight against degradation on other lands justifies a more active involvement of the Government for reasons given earlier on. CACILM will initiate a change of approach to the financing of land use, in particular by defending the principle that the ecological dimension of land use needs to be translated into the structure of budget support. Specifically, CACILM will promote the notion of compensation for landscape and ecosystem maintenance that should be translated into a subsidy to those in the uplands that contribute to better state of watersheds.

149. Second, CACILM will encourage steps that make it possible to present SLM as a coherent budget category. The budgets that are divided among four principal agencies (MOA, SCLM, SCEPF and MWRLR) may have to continue to be divided (for simple administrative convenience) but their formulation needs to be mutually coordinated and all four budgets need to be coordinated with PIP and CSIP. Mutual coordination means that each technical agency is aware of principal current and planned SLM-relevant activities of its partners to allow this knowledge to be reflected in own budget proposals. Coordination with PIP is a matter of ensuring that the donors can react to a coherent SLM program rather than individual projects. It is expected that the National Steering Council and National Secretariat will assist in or directly perform this coordination task. At present the Tajikistan PIP does not contain SLM (or environment protection, for that matter) as a separate category<sup>4</sup> and perhaps it should, especially if the key ministries in their own budget preparation are expected—as part of the calls for SLM mainstreaming—to structure their budgets with SLM considered a distinct priority.

150. Third, CACILM will promote closer integration between the budget process, the PRSP as its policy core, and the strategic documents prepared under UN environmental conventions,

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<sup>4</sup> Environment does feature in the TA section (only) of the PIP.

starting with NAPCD. So far none of the principal “UN” strategic documents (NAPCD, NSAPCSUB, NAPCC and the still unfinished NEAP) has acquired a status necessary to influence policy and field realities and it is only by aligning them more closely with those documents that do influence policy and budgets (PRSP first and foremost) that this can happen. The message of NAPCD and other NAPs (supplemented by fresh analysis) has been the basis of this document (NPF) and it is the contents of this document that need to be incorporated into PRSP as PRSP further evolves. CACILM will work towards such integration in close collaboration with the World Bank and IMF.

151. Fourth, SLM is already an important element of donor programming (under many different labels). This is true of the members of the Strategic Partnership. The Program, acting through the National Steering Group will assist other donors who consider expanding their role in SLM in Tajikistan to suitably structure their assistance.

152. In its approach towards creating an environment conducive to improved land management, CACILM will promote the idea that a reversal of land degradation demands creation of conditions for greater and investment by land managers themselves. The Government’s has a vital role in facilitating this process. Donor assistance is also badly needed but neither government nor donor support can be a substitute for individual efforts. Creation of suitable conditions for productivity enhancing investments by diversified land users demands principled but light regulation, adapted to the existing situation. CACILM will support measures that shape such land use regulation and administration. Its features are simplicity, transparency and adaptability.

153. The land reform implemented in Tajikistan has been complex but relatively shallow and has faced implementation problems. Yet, it the land reform that represents the greatest single hope for sustainable land use. CACILM will support efforts to simplify and improve current land-related legislation and measures that promise to improve the efficiency of land reform implementation following the analysis and suggestions made by members of SP. The principal objective of legislative reforms must be increased transferability of land use entitlement, and ideally, full ownership of land (with suitable guarantees against abuse, concentration of ownership and exclusion). Special attention must be devoted to pasturelands and forestlands where the right mix of private and government roles is crucial. Secure tenure comprises a number of elements (legal backing for the right sort of ownership, efficient land administration, etc.) all of which need to be present for the tenurial security to be real.

154. The implementation of land reform has been slow and patently inefficient at the local level. In part, this is due to unnecessary complexity. Complex land administration is inappropriate to Tajikistan at present. It slows the progress and depth of land reform. Among other things, modern low-cost data storage and retrieval devices (and GPS) offer significant possibilities to improve and speed up many steps in land administration. Simplicity is not to be mistaken for sloppiness. The land administration agency of the country needs be strengthened at the local level and strengthened in novel ways. Also, land administration procedures need to be made known to the Government’s clients, the farmers and herders. They must be written in a simple language and “posted on all *jamoat* and village walls”. At present, they are neither known nor posted. CACILM will seek to help remedy this situation.

### **1.b. Integration of Land Use Planning and Management Systems**

155. The term integration of land use planning and management systems is here understood in a GEF sense, as all those measures that increase the capacity of national and local

institutions to formulate and implement broad-based (integrated) and participatory responses to the problem of land degradation. These include a range of activities from improved information management to reforms of the incentive environment (in part entering also the Component 1.a). What is being integrated are the environmental, economic and social considerations used to design and implement SLM activities.

156. Integrating different perspectives inevitably leads to the question of the roles played by different institutions in SLM in Tajikistan. CACILM proposes no new institutions. If anything, the situation analysis suggests that in a country very short of financial and administrative resources, there is a proliferation of activities, often overlapping and each conducted at an unsatisfactorily low level, to some a sign of integration but in reality a muddle. CACILM is keenly aware of the inadequate cooperation and coordination among the “four land sisters”. CACILM will favor simplification, clear mandates, and transparency (perhaps, once more, “posting the rights and duties on jamoats’ walls”). Needed is a negative list for each organization, i.e. responsibilities that the organization should not be involved in or try to be involved in. These, ahead of complex institutional revamps, are considered key to improved functioning of the State bureaucracy, including their impact on SLM. Only by eliminating superficially performed overlapping duties can resources be mobilized for essential activities that can then be performed well. The clear spelling out of mandates is required in particular at the local level both in the relationship among the staff of technical agencies and between them and the *hukumats*.

157. CACILM will strive to keep the theme of land degradation at the forefront of attention within the four principal technical agencies in charge of land use and in the apparatus of the President that often performs an integrating role. This will be done by more clearly presenting available evidence on the pattern of land degradation and explaining the practical ways in which the problem can be mitigated and eventually reversed.

158. CACILM will support the policies of reinforcing the core mandates of MOA and MWRLR (policy-formulation, facilitation, and regulation) and support divestiture of subsidiary production-related units of these ministries as an opportunity to strengthen the SLM know-how of these ministries. CACILM will favor a major boost to the role and local capacity of SCLM and similar re-focusing of SCLM on its primary mandate of land administration.

159. NPRS devoted much attention to natural disasters, their high material and human cost in Tajikistan and the fact that no national strategy of disaster preparedness had been formulated yet. Several recent donor-supported initiatives have begun to change this situation. The topic of SLM is closely linked with natural disasters and valuable experience exists in Tajikistan in disaster prevention and management. CACILM will support efforts to integrate SLM and its institutional aspects into the emerging national disaster preparedness strategy.

160. The situation update has highlighted significant gaps in the authorities’ knowledge of the current state of land and land cover and, in particular, in the management of available information. The analysis indicates that major reforms in information management are required inside each of the “four sisters” (SCEPF, most notably) and among them and their specialized institutes.

161. Information about land and its conditions is incomplete, out of date, scattered, often not used, hard to access and often irrelevant to changing realities. CACILM will support efforts to centrally manage information concerning the condition of land resources. Such centralization must be accompanied by elimination of duplication in information acquisition and clear obligations of the central managers to supply information to government partners and the public.

Two main alternatives suggest themselves: First, all responsibilities for information about the conditions of lands within protected areas and forest lands would be assigned to SCEPF, and all responsibility for the monitoring of the conditions of all other agricultural lands to MOA. SCLM would rely on data supplied by MOA in its cadastre and land valuation-related work. Second, SCLM rather than MOA would be solely responsible for the monitoring of the conditions of all agricultural lands. CACILM will insist on a review of the management of all information regarding the condition of land resources. CACILM's funding of new information acquisition and management within any government organization will be conditional on the completion of such a review and endorsement of the proposed changes by GOT and SP. CACILM is not in favor of simply restoring soviet-times scale and manner of information gathering. By contrast, CACILM will support efforts to make better use of information, and use more relevant information, often generated by existing donor-financed projects. Little systematic use has been made of this information except by several ongoing university dissertations by outsiders and consulting teams working on project design for international donors. The demands of performance monitoring under new participatory land management projects in the absence of sophisticated equipment also dictates simpler approaches. One of the troubling aspects of today's Tajikistan is how little of the often relevant information generated by a very large number of donor funded projects is centralized and systematically analyzed. The way forward is probably in learning to work efficiently with such distributed databases and learn to use more creatively indirect indicators of land degradation in which some loss of accuracy is outweighed by the information timeliness.

162. The World Bank-commissioned 2000 Poverty Assessment and its Update in 2004 in particular provide an excellent blueprint and guide to indicator development that can be applied also to SLM. The first requirement may well be not that new indicators be developed but that those developed for other purposes (such as poverty assessments) be "mainstreamed".

163. Efforts to establish clear data sharing protocols including the right of the public of access to this information within the framework of the Aarhus Convention to which GOT is a party will also be supported by CACILM. Information acquisition has an important place in monitoring and evaluation of all CACILM intervention and all CACILM interventions will pay attention to this aspect.

164. CACILM will support novel ways of information acquisition, handling and processing and use of new technologies for the task, such as digital data organizers and other devices that partly overcome the logistical obstacles standing in the way of data gathering in Tajikistan and will take a pragmatic view of complex technologies such as GIS. Training in new ways of acquiring, analyzing and managing data will be among CACILM priorities.

165. CACILM will encourage a change in attitude to information acquisition and use from a passive waiting for the right information to "arrive" to an active search and questioning of the information's relevance and quality, based on curiosity and commitment.

## **2. Sustainable Agriculture**

### **2.a Rainfed Lands**

166. The heart of the remedial program for rainfed lands must be (1) a transition from insecure and opportunistic management of these lands for mainly grain production to a permanent and more diversified farming that incorporates soil and fertility conservation measures, (2) support to horticulture that goes beyond additional planting and maintenance of tree crops to embrace

reforms of and support for the marketing chain for horticultural output. Revival of horticulture in Tajikistan should include steps to preserve and commercialize traditional varieties of fruits and capitalize on their biological purity.

167. The Program must promote those interventions that are so patently absent in today's use of sloping lands: soil stabilization measures, crop rotation, improved tillage, use of a whole range of SALT technologies and introduction of improved (and sometimes re-introduction of traditional) varieties suitable for rainfed sloping lands. These new techniques need active encouragement, training and demonstrations financed by the Government and donors with linkages to international networks (such as WOCAT) and support of international applied research bodies (ICARDA, ICRISAT). There is scope for other interventions that complement improved land use: water harvesting, introduction of alternative livelihood (fish ponds), popularization of biogas, etc.

168. Improved management of sloping lands for cropping (both annual and perennial) must be undertaken in an integrated manner in which the ecological benefits are a by-product of the search for financial viability and the approach has local acceptance. CACILM will insist on investments in the rehabilitation of sloping lands being based on solid socio-economic survey foundations addressing the role of traditions, gender, aspirations, and the pattern of vulnerability in the target areas.

169. CACILM needs to confront also the unnecessary degradation or loss of land caused by inappropriate location of agricultural and other activities, most of them in sloping lands. Two principal categories are: (1) marginally profitable lands the use of which entails a high environmental cost; and (2) lands exposed to a high risk of floods, slides and other natural calamities. In both cases, mechanisms are needed to encourage relocation of present managers and assistance in creating alternative livelihoods and CACILM will support development of such mechanisms.

## **2.b. Irrigated Lands**

170. The direction of the Program in irrigated lands is to take full advantage of the potential of the land reform to increase the productivity of these lands and lessen the overwhelming dependence on one or a small number of crops (e.g. cotton). Continuing reform of the management of irrigation water is essential, and demands creation of water user associations to manage irrigation supplies in the new situation characterized by a vastly increased number of MWRLR's clients and smaller sizes of average holdings.

171. Transition to a more sustainable lowlands agriculture demands recognition of the real cost of water and power and acceptance of the idea that water delivered to the fields is a precious resource that must be used accordingly. Between half and two thirds of irrigated lands in Tajikistan (depending on assumptions about future crop prices) would not be viable if water were priced at its opportunity cost. For Tajikistan to reduce poverty sustainably, a shift is required away from high-irrigation-cost agriculture to a different type of agriculture and land- (and water-) use. CACILM considers further reform of irrigation water pricing indispensable. Such a reform should drive the transition towards less water intensive crops and increased water use efficiency with environmental benefits (less waterlogging, salinity and soil erosion) as an important environmental benefit. Deliberate steps that accelerate this shift might be needed rather than waiting for the adjustment to take place via the market forces. Creation of self-financing advisory services dealing with advanced method of irrigation and tenure-related matters could be an important factor facilitating this transition.

172. The most complex to deal with are several areas currently served by pump irrigation where continuation of farming is financially marginal and economically unprofitable and the subsidy of these areas comes at a cost of improved water deliveries to other, more suitable, areas, most notably those served by gravity irrigation. CACILM will support formulation of alternative, more water efficient, cropping systems and livelihood strategies for these high cost areas.

173. Historically, expansion of irrigated farming has often come at the expense of lowland forests and habitats, in particular *tugai*. It is desirable to restore some of these habitats to help improve irrigated lands' safeguards (e.g. river banks, embankments of major irrigation canals), and to restore impoverished landscapes and biodiversity. Such rehabilitation efforts should target the most seriously degraded segments of irrigated lands where the economic viability of rehabilitation is low. Creation of field-protecting tree strips on irrigated lands was practiced for a while before 1990 but seriously curtailed thereafter.

### **3. Sustainable Forest and Woodland Management**

174. The aim of this component is to lay foundations for a reversal in the continuing decline of forest cover and forest quality in Tajikistan. This will be achieved by (1) making the question of energy supply in the countryside an important theme of forestry policy rather than something that is outside the boundaries of the forestland and therefore is of no concern to the Forest Service, (2) a review and reform of the management of the forest estate. Among others, that reform must provide a sense of direction, justification for the current balance of forest and pastureland, appreciation of the scope for natural regeneration under grazing restrictions, a plan of how to implement grazing restrictions inside the forest estate in the post-kolkhoz conditions, realistic assessment of the scope for forest planting (and subsequent maintenance and protection), and a road map for the most productive involvement of the populations residing on forest land. It may require an update of forest inventory (3) a public awareness campaign among rural communities that changes expectations that the government will solve all problems, encourages local initiatives, publicizes successful examples, offers models of state-donor-community partnerships for forest rehabilitation and makes tree planting and maintenance a national obsession.

175. A rethink is needed of state-implemented reforestation taking into account past successes and failures and experience that saw the Forest Service (*Tajikles* then) undertake also income generating activities such as establishment of walnut and pistachio plantations and production of medicinal plants on a semi-industrial scale.

176. CACILM will support forest rehabilitation and maintenance mainly as components of integrated resource management under community-based projects but may consider a stand alone forest rehabilitation investments (e.g. insider forest lands). Rehabilitation or re-establishment of riverine forest and re-vegetating silt deposits in watersheds should be undertaken as components within an integrated approach to rehabilitation of lowland irrigated lands and related landscapes.

### **4. Sustainable Pastureland Management**

177. The situation analysis pointed to a divorce of livestock ownership –private, after the dismantling of most sovkhoses-- from control over pastureland management --most of it in local government hands with no satisfactory regulation of the access to the pastureland-- as a key

policy failure in the sub-sector. When the discontinuation of organized fodder supply and near collapse of state veterinary services are added, the pastureland decline was almost virtually inevitable.

178. Supported by the formulation of a policy for pastureland management (under Component 1.a), and implementation of the land reform in pasturelands, this component will focus on (1) improved management of pasturelands around settlements. Here, measures are required such as strengthening the administration of pasturelands in respective *hukumats*, implementation of reformed taxation of pasturelands, and training of *hukumat* staff in the regulation of pastureland use (2) physical restoration of critical semi-desert and desert pasturelands not leased to individuals, undertaken in conjunction with community organization with binding agreements on local grazing regimes. The financial and technical support will be an aspect of such agreements. (3) a review of the changing practices of pasture rotation and formulation of new mechanisms encouraging a more balanced use of the national pasture resource.

179. CACILM will encourage solutions to the presently poor co-existence of livestock and forests/shrubs inside and outside the state forest domain. This will require closer cooperation between SCEPF (Forest and Hunting Department) and MOA.

180. Together with forest management, this Program component is one where the scale of activity is important if external (both downstream and global) benefits are to be realized. Investments in pastureland rehabilitation will consider the scope for restoring or safeguarding the integrity of the most valuable of pastureland ecosystems.

## 5. Targeted Research

181. Land-related research is only now beginning to show signs of a modest revival after a decade of decline. In general, land management in Tajikistan suffers from a poor fit between the body of technical, scientific and administrative experience developed to serve the collectivized land use, and the emerging new requirements. The objective therefore is not to restore research to its former scale and breadth but re-orient it to current and emerging priorities of the day. Research needs to take into account different scale and structure of land use units, and needs to be less "botanical" and more management-oriented.

182. Tajikistan needs to co-operate fully with the CGIAR system, principally ICARDA but also ICRISAT and ILRI to benefit from the advances made world wide in sustainable production-oriented research. Recent links with the international research community are promising but more is needed and CACILM will facilitate these links. The personal links many in Tajikistan have with their counterparts in the research institutes of other countries of Central Asia is an asset that should not be allowed to wither away.

183. In the area of ecosystem conservation research, CACILM will foster close collaboration of Tajikistan's institutions with IUCN, other international NGOs and academic institutions abroad. CACILM will support steps to create "centers of land research relevance and excellence" in the Tajik Soil Science Institute and Tajik Forest Research Institute.

184. There is a need to maintain and intensify sponsored research in Tajikistan by outside researchers (used widely, for instance, under SDC-financed land management programs) and offer higher education training and scholarship programs to young promising Tajiks. The new breed of researchers need to be able to work in English as well as Russian (and Tajik). Higher

education training and scholarship programs are important and CACILM will act as a go-between between promising individuals and potential sponsors. Among other things, CACILM will encourage donors to consider sponsoring the posts of visiting research advisers to AAS, TSSI and TFRI.

## **6. Integrated Resource Management**

185. In its interventions, especially those in mountainous environments, using valley- and watershed- based approaches to planning and structuring the investments offers advantages and a clearer picture of economic and ecological interconnectedness. In most circumstances, only an integrated approach to land degradation that combines food-security, cash-generation, energy provision and livestock components stands a chance of success. For CACILM, land degradation is not only about land and sometimes it may not even be *mainly* about land (e.g. provision of energy).

186. CACILM will support and build on the most relevant lessons of community-based projects with important land use content. This form of support could take the form of expansion or replication of existing projects in new locations, and demonstrations and training in improved land uses, and community-based monitoring of effectiveness.

187. In implementing investment activities at the local level, CACILM will favor strengthening the Jamoat Development Committees and novel structures pioneered by AKDN and UNDP in Tajikistan, namely Village Organizations (VOs) and Jamoat Resource Centers (JRCs).

## **7. Protected Area Management and Biodiversity Conservation**

188. A shift of the approach to degradation and desertification is needed, including a rethink of the notion that all desertification is bad. Some deserts (or “deserts”) are highly productive ecological systems the disturbance of which is not always justifiable on ecological and economic grounds. With the benefit of hindsight, perhaps too large an area of desert has been radically but unsustainably (as it now turns out) converted to irrigated and other farmland in Tajikistan. This position need not conflict with effort to fight the mismanagement of lands that under no circumstances should be allowed to degrade. The greater appreciation of the need for calibrated response is among the program objectives.

189. CACILM encourages an ecological approach (backed by economics) to the decisions about land use and its financing. This approach spills into the policy of landscape and biodiversity protection.

190. The Program will seek a closer linkage between protected area management and activities in surrounding lands. It will favor implementation of integrated resource management in key buffer zones the location of such zones based on a technical and socio-economic review of local conditions and participatory development of the management regimes for these zones.

191. The Program will support measures that capitalize on and further enhance the value of Tajikistan’s biodiversity. Some of these, such as conservation and commercial development of native fruits wild berries (hawthorn, sea buckthorn, barberries, raspberries, etc.), stone fruits (wild apple, plum, cherry plum, pistachio, almond, pear etc.) will likely be implemented under other Program components (e.g. rainfed agriculture development). Separate attention might be required to tapping the potential of medicinal plants and to developing recreational and eco-tourism opportunities.

## D. Investment Program

### 1. Overview of Program

192. The CACILM Program in Tajikistan seeks to eliminate the most costly (in a social sense) forms of land degradation and create institutional and policy preconditions for that to happen, and gradually extend the scope of land improvement activities. The preconditions include the creation of enabling policy, legislative, institutional and incentive frameworks for SLM, mainstreaming SLM into national development planning and budgetary processes, establishing bio-geographic and community priorities for action, fostering mechanisms of broad stakeholder participation, and monitoring to ensure learning and adjustment. Whether it is creating preconditions or working in the field, the Program's implementation requires resources. Creating pre-conditions is a form of investment just like developments in the field. By and large therefore, the whole Program is an investment program even if there may well be certain complementary activities (e.g. improved understanding of the underlying conditions by stakeholders, commitment to the general direction of the Program, adjustments of organizational and institutional nature, etc.) that may be undertaken by stakeholders as part of their routine operations, without requiring additional resources.

193. Viewed through the investment prism, the Program has a multi-component structure built around programmatic components described above, each component consisting of one or more projects that are either of the on the ground or technical-assistance kind, and sometimes both. The Program is a ten-year program divided into three phases, namely the inception phase (1 July 2006 - 31 December 2008), full implementation phase (1 January 2009 - 31 December 2013) and consolidation phase (1 January 2014 -30 June 2016). As the names suggest, the first phase is intended mainly to improve the enabling environment while the second and third phases contain mainly on-the-ground investments. Some latitude however exists in phasing different types of projects, depending mainly on the progress in developing different elements of the enabling environment.

194. The Program is not being implemented in a void. It needs to be inserted into a "moving train" of ongoing Government's and development partners' activities. Several projects with a substantial SLM content (sometimes carrying seemingly unrelated names) are being implemented or have been substantially prepared for implementation, with financial commitments. CACILM needs to take note of the former group and include the latter group as well as activities that are newly planned where the financial commitments have yet to be obtained<sup>5</sup>. This co-existence in CACILM of projects at different stages of preparation or even implementation also explains the need for a flexible approach to phasing of activities mentioned earlier on.

195. The overall size of the Program demands a sense of proportion supplied by the macroeconomic parameters and the evolving size and structure of Government budget and public expenditure process. This is, among other reasons, because the Program calls for some contribution by the Government to supplement grant and loan resources of Tajikistan's development partners, in particular those of the Strategic Partnership.

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<sup>5</sup> Where particular SLM-type investments are substantially completed by now, they are not included in the Program and instead simply acknowledged in describing the background to the Program. Project being implemented are included only in those (rare) cases where they require additional funding and such funding can be grafted onto the underlying structure of project financing.

196. The program is related to the needs as established in Section III.B and responds to the priorities enumerated in Section III.C. The reader is referred to the logical framework matrix (Section B above and Appendix 2) to cross-reference investment activities to CACILM's objectives. As formulated, the Program does not pretend to address all the needs identified. However, it does address a significant portion of them besides opening the way for additional investments to be grafted onto the Program to reinforce its direction (see further below). The investments are divided into a total of ten programmatic areas, two of which directed at strengthening capacity in the sense described in Part III, one directed at targeted research, and six are different classes of on-the-ground investments that are what the name suggests but will typically include elements of training, community organization, public awareness etc. that facilitate and enhance the impact of the investments undertaken. A tenth category of investment is National Program Coordination and Management that is both programmatic and utilitarian as described further below.

197. The investments included into the Program are those that satisfy the criteria developed by the Task Force (see Section E.3 below)<sup>6</sup>. They combine the criteria formulated by SP members other than GEF, and the criteria of GEF in those cases where the initiative envisages GEF co-financing. This is necessary because the Program includes projects that will have no GEF funding and those where GEF is expected to be one of the sources of funds, even the principal source. Where it is used, GEF resources will fund only the incremental cost (in a GEF sense of the term) of any project in question and the baseline (i.e. non-incremental) portion of the cost will require separate financing.

198. Table 1 below contains the Program as it stands in January 2006. The column "financing" makes it clear whether the Project in question has firm financial commitment ("F") or whether such commitments are yet to be obtained ("TBO"). Firm financial commitment will normally require that the investment in question is included in (1) PIP and/or (2) assistance program of the development partner. For now, the cost estimates in the table are net of the beneficiaries' contributions expected under all on-the-ground investments. All newly formulated proposals for Phase 1—and only they—are accompanied by project concepts that are attached in Appendix 3. The Program as presented is not to be interpreted as "final Program". CACILM is an evolving program to which new eligible investments may be added and from which some proposals, though eligible, may be dropped when more appropriate ones are found or when the policy and institutional conditions change rendering them inappropriate or no longer needed. For that reason, the Program has a date attached (January 2006) and the total amount of investment predicted now is likely to be smaller than the ultimate amount of investments committed to the Program. The Program areas 5 and 9 are entered initially without specific project proposals pending their formulation. The investments expected to be co-financed by GEF are shaded.

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<sup>6</sup> At this stage, the compliance with the criteria is presumed rather than confirmed. The check of compliance with the criteria will be among the activities under the component National Program Coordination and Management.

## 2. Investment Table

**Table 1. Sustainable Land Management Investment Program, January 2006**

Program category	Project / brief description	Cost Estimate US\$ M	Financing			Imple- menting agency (IA)	Phase
			Gov't	Donor	GEF		
1. Capacity Building – Strengthening the Enabling Environment	Institutions and Policies for Pastureland Management (To create institutional and policy pre-conditions for investments in pasture rehabilitation)	0.575 (TBO)	<b>0.025</b>	<b>0.050</b>	<b>0.500</b>	IFAD	1
	Making Forestry Count: Support for Forestry Re- orientation (To help re-orient forestry towards a community- centered activity and increase its contribution to land conservation)	0.610 (TBO)	<b>0.025</b>	<b>0.600</b>	nil	SCEPF	1
	Creation of mobile SLM training center	0.500	<b>0.025</b>	0.475	nil	SCLM	
2. Capacity Building - Integration into Land Use Planning and Management	Rural Development Strategy for Zeravshan Valley (To prepare the first ever rural development strategy in Tajikistan in which land conservation has an important place)	<b>0.525 (F)</b>	<b>0.025</b>	<b>0.500</b>	nil	MOA /DFID	1
	Rehabilitations and creation protected field belt on the agricultural lands	0.700	0.025	0.675	nil	MOA/ SCLM/ SCEPF /ICARDA/ UNDP	1
3. Sustainable Agriculture – Rainfed Lands	Increasing Land Productivity and Land Conservation in Shartooz (Improving livelihoods and conserving local ecosystems relying on JRCs as local implementers)	<b>1.150</b>	<b>0.050</b>	<b>0.10</b>	<b>1.0</b>	UNDP	1
	Rural Development (A balance of interventions to improve livelihoods outside cotton-growing areas with attention to natural resource conservation)  Rehabilitation orchards and	<b>21.70</b>	<b>1.0</b>	<b>17.35</b>	<b>3.5</b>	ADB/ MOA	1, 2

Program category	Project / brief description	Cost Estimate US\$ M	Financing			Imple- menting agency (IA)	Phase
			Gov't	Donor	GEF		
	vineyards in rainfed zone	0.825	0.025	0.800	nil	MOA/ SCEPF	1,2
4. Sustainable Agriculture – Irrigated Crop Lands	Beyond Salinity Control: Improved Management of Irrigated Lands (Rehabilitation of degraded irrigated lands and development of a voluntary relocation mechanism serving the overall rehabilitation objectives)	<b>5.0 (TBO)</b>	<b>1.0</b>	<b>3.5</b>	<b>1.0</b>	<b>MOA</b>	<b>2, 3</b>
	Activity development on updating and rehabilitation of drainage network and O&M	1.0 (TBO)	0.050	0.950		MWR&M/ MOA	1.2
5. Sustainable Forest and Woodland Management	Forestry inventory	<b>0.525</b>	<b>0.025</b>	<b>0.500</b>		<b>SCEPF</b>	<b>1,2</b>
	Forestry antierosion measures at the sloping area	0.725	0.025	0.700		<b>SCEPF/M OA</b>	1,2
	Conducting forestry management and reforestation	0.525	0.025	0.500		<b>SCEPF/M OA</b>	1,2
	Forestry fix measures of the River bank	3.0	0.050	2.950		<b>SCEPF/M OA/ SCLM</b>	
6. Sustainable Pastureland Management	<i>Pasture Rehabilitation and Conservation of Semi-Desert Ecosystems</i> (Rehabilitation of semi-desert ecosystems with broad local participation with a focus on vulnerable groups)	<b>6.5 (TBO)</b>	<b>0.5</b>	<b>5.0</b>	<b>1.0</b>	<b>ADB</b>	<b>2</b>
	<i>Development and introduction of crop rotation recommendations on the arable lands and pastures in the north of Tajikistan</i>	0.525	0.025	0.500		<b>SCEPF/M OA/ SCLM</b>	2,3
	<i>Development of Forestry national strategy</i>  <i>Pasture monitoring</i>	0.300	0.050	0.250		<b>FAO/ UNDP/ SCLM</b>	2

Program category	Project / brief description	Cost Estimate US\$ M	Financing			Imple- menting agency (IA)	Phase
			Gov't	Donor	GEF		
		0.725	0.025	0.700		SCEPF ADB FAO/ UNDP/ SCLM SCEPF	1,2,3
7. Targeted Research	<i>Building on Experience: Multiplying the Best in Land Conservation and Ecosystem Protection</i> (To disseminate the most relevant and successful practices of sustainable use of sloping lands)	<b>0.660 (TBO)</b>	<b>0.025</b>	<b>0.05</b>	<b>0.6</b>	IFAD/ ICARDA	2
8. Integrated Resource Management	<i>Community Agriculture and Watershed Management</i> (To improve the livelihoods of highlands population in five watersheds and improve ecosystems)	<b>19.8 (F)</b>	<b>1.3</b>	<b>15.0</b>	<b>3.5</b>	<b>World Bank</b>	<b>1, 2</b>
	<i>Watershed Management and Community Development</i> (Replication of the first World Bank watershed rehabilitation project (see 1. above) with modifications based on acquired implementation experience)	<b>16.0 (TBO)</b>	<b>1.25</b>	<b>13.0</b>	<b>1.75</b>	<b>World Bank</b>	<b>3</b>
9. Protected Area Management and Biodiversity Conservation	<i>Biodiversity conservation and attraction of local community to manage forest resources</i>	<b>1.0</b>	<b>0.050</b>	<b>0.950</b>		FAO/ UNDP/ SCLM SCEPF	<b>1,2,3</b>
	<i>Organization of pistachio protected area</i>	0.300	0.020	0.280		SCLM SCEPF	
	<i>Creation of Fast growing tree plantation</i>	0.200	0.010	0.190		SCLM SCEPF MOA	
10. National Program Coordination and Management	<i>Integrated Management of Land Degradation Information</i> (To help create a unified database on land degradation in Tajikistan and make necessary institutional modifications)	<b>1.3 (TBO)</b>	<b>0.25</b>	<b>0.55</b>	<b>0.50</b>	UNDP/ TACIS	
<b>Total Cost</b>		<b>85.76</b>	<b>5.830</b>	<b>66.08</b>	<b>13.85</b>		

### 3. Phases and Schedule

199. The proposed sequencing of activities under the Program places the creation of a suitable investment environment, the focus of the Program's Inception Phase, ahead of the principal field activities that dominate during the Full Implementation and Consolidation phases. Nonetheless, this general rule is not interpreted rigidly as several field activities (e.g. Community Agriculture and Watershed Management Project) have developed suitable policy preconditions for implementation and delaying the implementation would serve no useful purpose. Similarly, it is possible and indeed likely that the enabling environment – never a static concept—may require additional attention well past the Inception Phase.

Figure 1 below summarizes the proposed timing of Program's activities.

### 4. Phase 1 Activities

200. Phase 1 activities lean towards filling the gaps in the institutional and policy environment identified in Parts II and III of this document, namely (1) the inadequate policy for the management of pastureland, rain-fed lands and forests, and (2) the unsatisfactory state of information relating to land degradation and its management. In both cases, the Program envisages technical assistance to overcome these weaknesses.

201. **The Institutions and Policies for Pastureland Management proposal** is intended to fill the policy void on pastureland use in the post-kolkhoz conditions affected by inadequate legislative and regulatory side of pastureland use, unclear state of pasturelands within the ongoing land reform, non-transparent role of local governments (*hukumats*) in pastureland allocation, and incomplete knowledge about current pasture use, to name only the most important. The proposed project is an institutional and policy review of the sector with key recommendations for institutional realignment, legislative and regulatory reforms, and policy directions suitable for pastureland use within the substantially privatized agriculture. The proposal complements earlier efforts of the Asian Development Bank (especially the Agriculture Sector Assessment Project). The goal of the project is to create conditions for improved and sustainable use of pasturelands in Tajikistan.

202. **The Making Forestry Count:** Support for Forestry Re-orientation proposal's point of departure are recent reviews of the forestry sector that describe forestry in Tajikistan as a sector weakened by (1) insufficient funding, (2) failure to adapt itself to changing institutional and physical circumstances and (3) unclear about the direction to be taken. The absence of donor support to the sector is in part explained by the outdated approach to forests and their management until now that made forestry a sector with limited contacts with local population and one that offered few development impacts. The need is to change the approach, make people-oriented tree and woody biomass management the core of the agency's mandate and make the agency itself a more attractive partner for donor organizations. An earlier attempt by FAO to support forestry in Tajikistan never reached a stage of serious consideration.

203. **Rural Development Strategy for Zeravshan Valley** will build on recent initiatives in the Valley (a disaster preparedness strategy, food security activities) to formulate a rural development program in the watershed of Tajikistan's important transboundary river, with sustainable land management occupying an important place.

204. **The Integrated Management of Land Degradation Information project** seeks to lay foundations for a much improved way of generating, analyzing, using and disseminating

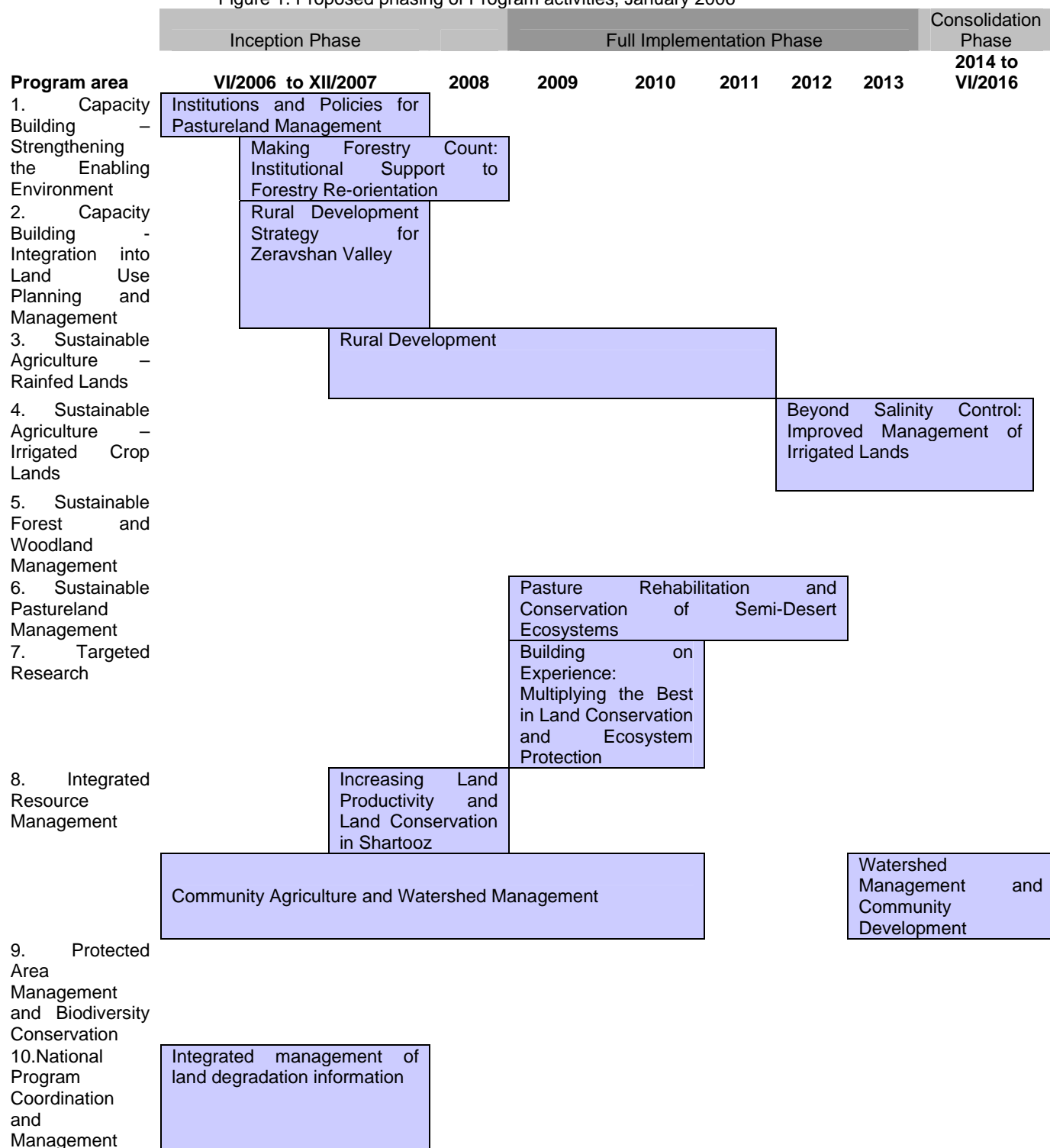
information about land degradation in Tajikistan and at the same time create the Land Degradation and Sustainable Land Management Information System directed towards monitoring the performance of the CACILM Program and its impact in Tajikistan (as explained further below).

205. The remaining three activities included in the Inception Phase have all been supported by preliminary study and preparation. In the case of World Bank-supported *Community Agriculture and Watershed Management* Project, the formulation and appraisal have been completed and the Project has now been approved and is ready for implementation. It targets a complex mix of stagnating agricultural productivity, land degradation and threats to the often special ecosystems of some 36,000 sq km in Surkhob, Vanj, Zeravshan and Toirsue watersheds in Kulyab region (southeast of Tajikistan). It builds on an increasing amount of experience with local community involvement in land use activities such as land use allocation, organization of irrigation activities and tree planting that is emerging through the involvement of international NGOs such as CARE, AKDN and others. The objective of the project is to build up land productivity in a sufficiently large area represented by several watersheds and do so in an integrated manner that allows for a balance of complementing measures to be taken under a single and consistent management approach.

206. **The Increasing Land Productivity and Land Conservation in Shartooz** proposal selects Shartooz rayon, an environmentally fragile and poverty-ridden area of Khatlon Province, as a location for rehabilitation of 1000ha of land utilizing a model of community involvement proven during the implementation of UNDP-led reconstruction and rehabilitation efforts in late 1990s. Shartooz location close to the Tigrovaya Balka *zapovednik* makes land rehabilitation in Shartooz a form of a buffer-zone development. A GEF PDF A proposal has been completed and a PDF B proposal for a medium-sized-project is under preparation, expected to be approved early in 2006.

207. The *Rural Development* project, currently under formulation by ADB, envisages an integrated area-based approach comprising a number of contiguous districts with a substantial area of rain-fed lands. It will develop a prioritized strategy for an increase in the productivity of farms and non-farm enterprises within an environmentally sustainable management framework, and increase the scope and depth of economic opportunities for farm and non-farm rural residents. It seeks more effectively to stimulate private sector development through farmers' groups, cooperatives and private companies, and provide a more dynamic environment for implementing policy and institutional reforms.

Figure 1. Proposed phasing of Program activities, January 2006



## E. Implementation Arrangements

### 1. Organizational Structure

208. Until now, the Working Group has acted as a steering group providing an oversight of, as well as directly participating in, CACILM-related activities. It has been provided with a secretariat to assist with the current phase of CACILM preparations. The implementation mechanisms will build on that structure. In particular, the Working Group will be restructured based on administrative provisions suitable for this purpose and renamed, the National Coordinating Council (NCC), NCC's creation will be expected to receive the Government's endorsement. The NCC's main functions will be to

- (i) Coordinate the overall implementation of projects and activities mandated by the National Programming Framework;
- (ii) Supervise implementation of the activities that are direct responsibility of NCC;
- (iii) Monitor performance of all project and activities and report to the CACILM Steering Committee (see below); and
- (iv) Review and endorse proposals for consideration by the CACILM Steering Committee (see below)

209. A representative of the Strategic Partnership will continue to be a member of NCC. A technical review panel (TRP) will be created to advise the NCC on matters relating to prioritization and selection of projects for funding under CACILM. The TRP will deliberate quarterly and consist of two national specialists and a representative of the donors nominated for a fixed period.

210. A National Secretariat (NS), successors to the present Working Group Secretariat, will support the NCC in the overall implementation of projects and activities mandated by the National Programming Framework. Its responsibilities will include:

- (i) Monitoring performance of all project and activities undertaken;
- (ii) Annual reporting to the CACILM Steering Committee on NPF implementation;
- (iii) Providing secretarial and logistical support to NCC meeting and workshops;
- (iv) Supervision of specific activities that are the direct responsibility of the NCC, and
- (v) Provide guidance and assistance in the preparation of the project proposals.

211. The National Secretariat will be strengthened to be able to operate in English, effectively liaise with local partners, have the technical ability to screen projects for compliance with CACILM eligibility and be familiar with donors' project management requirements.

212. The Program's implementing agencies are those government agencies, international organizations, and civil society organizations that will actually implement specific elements of the Program. These CACILM Implementing Agencies will be responsible also for reporting on project performance to the National Coordinating Council.

213. The national level implementation structure will be meshed into a multi country implementation and coordination structure because CACILM is a multi-country partnership in which implementation in each country benefits by sharing of insights with partners, because in addition to the national content, there may be some multi-country components (described later on), and because allocation of GEF funds under CACILM is predicated on a multi-country partnership.

214. The multi-country mechanism chosen parallels the national implementation structure and consists of the CACILM Steering Committee (CSC) and the CACILM Secretariat (CS). The CACILM Steering Committee will comprise: (i) representatives of the governments of Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan; (ii) GEF Implementing Agencies (World Bank, UNDP, and UNEP); (iii) GEF Executing Agencies (ADB, FAO, and IFAD); (iv) bilateral agencies acting as CACILM implementing agencies or participating in projects or activities through co-financing; and (v) other international organization participating in CACILM project and activities. The CSC will be responsible for:

- (i) Overall direction of the CACILM Multi-Country Partnership Framework;
- (ii) Approval and endorsement of proposals for submission to GEF;
- (iii) Oversight of those multi-country project and activities that the direct responsibility of the Steering Committee;
- (iv) Monitoring performance of the multi-country projects and activities undertaken the Multi-Country Partnership Framework; and
- (v) Reporting to GEF on all project and activities undertaken CMPF

215. The CACILM Secretariats will support the CACILM Steering Committee in the overall implementation of projects and activities mandated by CACILM Multi-Country Partnership Framework, including:

- (i) Monitoring performance of all project and activities undertaken;
- (ii) Annual reporting to the CACILM Steering Committee on CMPF implementation;
- (iii) Providing secretarial and logistical support to CMPF meeting and workshops;
- (iv) Supervision of specific activities that are the direct responsibility of the CACILM Steering Committee, and
- (v) Provide guidance and assistance in the preparation of the project proposals.

216. Like the National Steering Committee, the CSC and CS will be able to draw on a three-person GEF technical review team (TRT) from within the Multi Task Force members, such nominations rotating every year. TRT will not include any representative of the five CA countries to avoid any suspicion of partisanship in determining access to GEF resources.

## **2. Roles and Responsibilities of National Partners**

### **2.a. Roles and Responsibilities of Each Stakeholder**

217. CACILM's principal government partners are the technical agencies with responsibilities for the management, administration and monitoring of land resources, i.e. the State Committee for Land Management (SCLM), State Committee for Environmental Protection and Forestry (SCEPF), the Ministry of Agriculture (MOA) and the Ministry of Water Resources and Land

Reclamation (MWRLR) and their subordinated units. The subordinated units are understood to include research centers (e.g. Agriculture Academy of Sciences, National Biodiversity and Biosafety Center, Tajik Soil Sciences Research Institute, Tajik Forest Research Institute) and the agencies' local branches. The Agro-Industrial Complex Department in the Office of the President is an important stakeholder. *Hukumats* play an important role. Civil society stakeholders include local and international NGOs as well as local bodies (e.g. "village organizations") set up to facilitate implementation of the Program.

218. Most roles in the Program are common to all stakeholders while a small number are specific to a particular group. The common roles and responsibilities are the following:

- (i) Implement Program's activities in accordance with specific undertakings relating to the investment in question whenever the stakeholder has a formal role in it;
- (ii) Provide information to NCS and NS that facilitates monitoring of the Program's progress whenever the stakeholder has a formal role in implementing any of the Program's components;
- (iii) Contribute ideas for new activities and possible modifications of existing Program.

The specific roles and responsibilities include:

- (i) In the case of SCLM, to (a) host the National Secretariat; (b) to propose a membership of the National Coordination Council, obtain endorsement for the proposal by the Multi-Country Task Force and secure the Government's endorsement;
- (ii) In the case of the Agro-Industrial Complex Department in the Office of the President, to (a) ensure that adequate understanding of the Program exists within the apparatus of the President; and (b) working with other units of the Presidential Apparatus and Ministry of Finance, to make the Program a separate entry in future Public Investment Programs;
- (iii) In the case of the Ministry of Economy and Trade, to recognize the Program in drafting future Socio-Economic Development Plans;
- (iv) In the case of local and international NGOs, regularly inform its membership about the Program.

## **2.b. Coordination Mechanisms**

219. The coordination body in CACILM implementation is the National Coordination Council supported by the National Secretariat. Coordination at the level of the Program means (a) ensuring that Program implementation throughout is supported by adequate understanding by each stakeholder of their respective roles, expected contributions and their timing; (b) informing stakeholders about the progress of "their" project(s) in the processing cycle (from proposal to post-evaluation) to ensure timely delivery of necessary inputs; and (c) communicating to stakeholders any changes in the implementation environment that may necessitate corrective or facilitating action on their part. Coordination will rely on the usual methods of communications that may however require some strengthening (under the National Program Coordination and Management component).

220. Coordination at the level of individual investment activities will be built into the design of each investment initiative rather than resting on a general coordination formula.

221. The CACILM Steering Committee assisted by CACILM Secretariat will coordinate at a multi-country level and between the countries and GEF (see Section E.1).

### 3. Proposal Submission and Approval Process

222. The projects included into the national CACILM Program will need to comply with the following criteria, developed by the Multi-Country Task Force (Table 2).

**Table 2: Criteria for Inclusion of Projects in the CACILM Program**

<b>No.</b>	<b>Proposed Projects Must Be Consistent With Or Attain:</b>	<b>Comments</b>
1	Definitions and provisions of the UNCCD	All projects should demonstrate consistency with and contributions to UNCCD implementation
2	Provisions of the relevant NAP(s) and/or SRAP	All projects should demonstrate consistency with and contributions to NAP and/or SRAP implementation
3	Principles laid out in the 2003 Tashkent Platform	Shows relevance to agreed directions, including participatory principles and links to NCCs
4	Provisions of the SPA Memorandum of Understanding	Shows partner coordination and demonstrated adherence to partnership principles
5	Approval of the UNCCD National Focal Point after consultation with the CCD Working Group	Required for GEF funding and shows engagement with CCD Working Group
6	Key provisions of the CACILM Concept Note as agreed by the Task Force members	Required for any GEF funding and also shows consistency with agreed directions
7	Provisions of GEF OP-15	Required for GEF funding
8	Provisions of Draft GEF CPP Framework	Required for GEF funding
9	Approval of the GEF Operational Focal Point	Required <i>only</i> for GEF funding
10	Agreement of the partner agency	May require other governmental approvals as well
11	Commitment by Government of financial contribution	Applies to government investment projects, with at least in-kind contributions required for technical assistance projects

223. The investment projects listed in Table 1 have been included in the Program as they satisfy the selection criteria *prima facie*. A formal check of compliance of each proposed investment with the selection criteria will be completed by March 2006.

224. Any new or replacement project proposals to be included into the Program will typically have their origin in the donor-government dialogue and most new proposals are likely to originate in one of the Government agencies. However, consideration will be given also to proposals initiated by international or local NGOs, or local communities where these are sufficiently organized. The proposals will be submitted in the first instance to the National

Secretariat that will check the proposal's compliance with Program criteria. The rules of eligibility will apply equally to loans and technical assistance.

225. Prioritization of proposals for possible additions to the program will be made by NCC, assisted by the NS, both aided by the Technical Review Panel. Where proposals do not seek GEF co-financing the prioritization will be based on criteria that will include the proposal's (i) likely financial and economic profitability, (ii) likely contribution to removing policy and institutional barriers to SLM; (iii) a pattern of expected benefits favoring the poor and the vulnerable; (iv) role given to local communities and civil society in the proposal's implementation; (v) demonstrated commitment of proposed stakeholders to the project, and (vi) the quality of monitoring and evaluation provisions built into the proposal.

226. In the case of proposals seeking GEF co-financing, the prioritization by NCC will constitute only a preliminary phase while the final prioritization, possible approval and submission to GEF will be undertaken by the CACILM Steering Committee. In their prioritization, CSS and its technical review team will use "global" weights based on elements such as the proposal's potential for (i) restoring degraded ecosystems in the wider landscape; (ii) increased diversity of biological resources in restored ecosystems and habitats, (iii) reduced stress on trans-boundary water bodies from sedimentation and pollution from land management; (iv) increased carbon stocks and reduced carbon emissions, and (v) reduced frequency of dust storms.

227. In terms of the flow of finance for the Program, several modalities will be available, as shown below:

- (i) Additional grant funds channeled to CACILM to be administered by the national Program structure (the NCC and the NS) as either earmarked funds where the donor designates the project or activities for which the funds are to be used but the administration of these funds is undertaken by the NCC/NS, or free-standing funds where the best use of the funds is determined by the NCC.
- (ii) Activities to be financed by IFIs in support of CACILM that follow the IFIs' usual financial and monitoring procedures.
- (iii) Activities to be financed by bi-lateral sources under own management of the finance and own monitoring procedures.
- (iv) Other financing mechanisms

228. The activities to be co-financed by GEF will be funded out of Tajikistan's share of GEF financing determined within the Multi-country Partnership Framework, once this Framework is approved by GEF. In this case, the funds will be channeled to official GEF Implementing and Executing Agencies (GEFEIAs) within the Strategic Partnership (i.e. World Bank, UNDP, ADB and IFAD). Organizations other than GEF Implementing and Executing Agencies will be able to gain access to GEF funds by forming project-specific partnerships with any of the GEFEIAs.

#### **4. Monitoring and Evaluation System**

229. CACILM assigns an important role to monitoring and evaluation (M&E) both at the Program and activity level. At the Program level, the M&E will be supported by the development of a Land Degradation and Sustainable Land Management Information System (LDLMSIS) directed towards monitoring the performance indicators in the NPF Logical Framework (see Appendix B) but with a wider applicability as a tool of long-term monitoring SLM in the country. The System will include:

- (i) Acquisition of economic, social, and environmental data and information;
- (ii) Procedures, protocols and guidelines for data acquisition including all necessary survey instruments, sampling methods, analytical methods, and reporting formats;
- (iii) Computer databases and analytical programs, including geographic information systems, for storing and analyzing data and information;
- (iv) Computer based systems, including geographic information systems, for presenting results and generating reports on the results of the Program monitoring; and
- (v) Systems for managing monitoring field teams in the collection and reporting of all necessary economic, social, and environmental data and information

228. Development of Idslmis will be supported under the project coordination and monitoring component of the program. At the level of individual projects, m&e will be supported by project performance monitoring system (ppms). The ppms system will consist of:

- (i) Provisions for monitoring the achievement of land degradation and sustainable land management objectives of the Project in question;
- (ii) Mechanisms for monitoring compliance with environmental and social safeguards that may be stipulated in SPA Members co-financing agreements;
- (iii) Monitoring of project implementation including work plan progress, and tracking of all project inputs activities; and
- (iv) Project financial monitoring including annual disbursements, contracts awarded and annual audited financial statement.

229. Under most projects, it will be necessary to design and develop (i) guidelines for data acquisition including all necessary survey instruments, sampling methods, analytical methods, and reporting formats; (ii) Computer databases and analytical programs, including geographic information systems for storing and analyzing data and information; (iii) Procedures and formats for reporting on the project monitoring; (iv) Computer based systems, including geographic information systems, for presenting results and generating reports on results of the project monitoring; (v) training courses on all aspects of the PPMS; and (vi) systems of reporting on the Project's effectiveness and the effectiveness of Project implementation.

230. Monitoring and Evaluation (M&E) design, in particular the compatibility of each investment proposal's M&E design with existing UNCCD, GEF (in projects to be co-financed by GEF) and other donor's monitoring systems will be one of investment proposals' prioritization criteria. Another will be the degree to which the each proposal is structured in a logical framework fashion that facilitates M&E.

231. Besides agencies implementing and co-financing the project in question, M&Es reports will be submitted to the NCC through the NS for centralized use to facilitate Program-wide M&E. A bi-annual review of all M&E reports for all five CACILM countries will be conducted by an evaluation specialist engaged by a donor agency not represented in the Strategic Partnership.

## 5. Mechanisms for Stakeholder Participation

232. The principal mechanisms for stakeholders' participation in the Program are

- (i) Multi-Country Partnership (Task Force) where donors and representatives of NCC/NS Formulation periodically to chart directions and assess progress
- (ii) Donor Coordination Meetings that each year bring the donors and the Government together for the purpose of formulating the Public Investment Program. The Donor Coordination Meetings are not specific to the Program. Nevertheless one of the objectives of CACILM is to make SLM as a distinct category of PIP attracting donor funds;
- (iii) National Coordination Council that allows key national stakeholders, representatives of civil society and a representative of the donor Strategic Partnership to confer on a variety of matters described earlier on in this document;
- (iv) Regular government-donor and civil society-donor dialogues that serve to inform the parties about future possibilities in developing SLM activities, and learning from existing experience;
- (v) Other types of consultation, e.g. those between the members of CGIAR (whether members of the Strategic Partnership or not) and local institutions active in SLM applied research, workshops with SLM as one of the themes, or deliberations of thematic working groups with relevance for SLM (e.g. Working Group on Land Reform).

233. The participation of civil society is ensured through the representation of NGOs on the NCC. In view of civil society's diversity, however, separate attention is needed. The National Secretariat assisted by national consultants will prepare for approval by the NCC a special folder for NGOs describing (1) the CACILM Program and its individual components, (2) the for NGO involvement, and (3) a simple description of the ways in which to participate in CACILM.

## 6. Communication Plan and Information Dissemination Strategy

234. Communications and information dissemination here refer to communications about the Program rather than dissemination of information about various aspects of SLM (e.g. improved land management practices) that may feature in individual investment projects or even be a separate investment project.

235. A Communication Plan and Information Dissemination Strategy (CPIDS) will be formulated by the NCC by the end of 2006 to serve national purposes. CPIDS will spell out (i) the mechanisms of communicating Program-related information within the country, and the target audience; (ii) the role and responsibilities of NCC/NS in implementing CPIDS; (iii) selection of information to be placed in the public domain; (iv) mechanisms of communicating Program-related information to regional partners and further; (v) the budget of information-related activities.

236. At the multi-country level, CACILM web site ([www.adb.org/projects/CACILM](http://www.adb.org/projects/CACILM)) will be the principal communication tool for CACILM-related development. The web-site will contain not only administrative matters but serve as a forum for the exchange of ideas on sustainable and improved land and water management practices.

### Inventory of Current and Recently Completed Projects and Programs

Two main categories of projects and programs are distinguished below. The first are activities relating to land degradation under international environmental conventions (Table 1.1). The second are activities relating to land degradation under bilateral or multilateral donor funded programs and projects in Tajikistan with no formal links to global environmental conventions (Table I.2).

**Table 1.1. Projects relating to land degradation under financed under international environmental conventions in Tajikistan**

Project Title	Funding Agency	Project Duration	Budget (in USD million)	Implementing Agency
1. General				
1.1.1. National Capacity Needs Self-Assessment for Global Environmental Management	GEF	2002--	0.21	UNDP Tajikistan
Sub-total General			0.21	
2. Air				
2.1. Climate Change Enabling Activity	GEF	2002--	0.11	UNDP Tajikistan
2.2. Enabling the Republic of Tajikistan to Prepare its First National Communication in Response to its Commitments to UNFCCC	GEF	2003--	0.514	UNDP Tajikistan
Sub-Total Air			0.528	
3. Biodiversity				
3.1. Dashtidzhum Biodiversity Conservation Project	GEF	2004--	0.943	World Bank Tajikistan
3.2. Biodiversity Strategic Action Plan with Clearing House Mechanism	GEF	2001--	0.203	UNDP Tajikistan
3.3. Additional Financing for Capacity Assessment in Biodiversity Priority Areas	GEF	2004--	0.252	UNDP Tajikistan
3.4. In Situ/On Farm Conservation and Use of Agricultural Biodiversity (Horticultural Crops and Wild Fruit Species) in Central Asia (KAZ-KYR-TAJ-TUR-UZB)	GEF	2005-2010	12.24	UNEP; State Committee for Environmental Protection and Forestry
3.5. Development of the Econet for Long-term Conservation of Biodiversity in the Central Asia Ecoregions (KAZ-KYR-TAJ-TUR-UZB)	GEF	2003-2005	0.75	UNEP; State Committee for Environmental Protection and Forestry
3.6 Hissar Mountains Biodiversity Project	GEF	2003-	1.0	UNDP/CARE
Sub-Total Biodiversity			14.388	
4. Desertification/Land management				
2.1 Water and Environmental Management in the Aral Sea	GEF	200?-	12.025	World Bank
4.1. Enabling the Republic of Tajikistan to Prepare its First National Communication in Response to its Commitments under UNCCD	GEF	2000--	0.337	UNDP Tajikistan
4.3 Sustainable Land Management in High Pamir and Pamir-Alai Mountains (TAJ-KYR)	GEF	2003-2005	n.a.	UNEP, State Committee for Environmental Protection and Forestry
4.4. Community Agriculture and Watershed Management Project	GEF	2004-2011	10.80	World Bank; Ministry of Agriculture
4.5 Convention Project to Combat Desertification (TUR-UZB-KAZ-KYR-TAJ)	GEF	2001-		UNCCD, GTZ
<b>Sub-Total Desertification/Land management</b>			<b>11.137+</b>	

Source: Asian Development Bank, CACILM

In Table I.2 below, principal donor-funded projects targeting land degradation during the last five years, not formally linked to global environmental conventions are listed. The list contains projects in sectors with important linkages to land degradation such as water management and energy but it excludes projects funded by international and local non-government organizations. It also does not include projects implemented during the period 1996-1998 dominated as they were by relief-type of support in the wake of the civil war. For the sake of perspective, the total Government revenue on 2004 was about \$300 million equivalent.

**Table I.2. Activities relating to land degradation under bilateral or multilateral donor funded programs and projects in Tajikistan with no formal links to global environmental conventions**

Project Title	Funding Agency	Project Duration	Budget (in USD M)	Implementing Agency
1. General				
1.1. Swiss Disaster Reduction Program in Central Asia (with focus on Tajikistan)	SDC	2004-2008	1.10	SDC
1.2. EBRD South Caucasus & Central Asia Trust Fund	CIDA	2004-2006	1.00	EBRD Tajikistan
1.3 Regional Strategy and Action Plan for Sustainable Mountain Area Development in Central Asia	ADB/FINNIDA			
1.4 Regional Environmental Action Plan for Central Asia	ADB	2001-2003		
1.5 Central Asia Mountain Partnership	Swiss Development Corporation			Centre for Environment and Development, University of Bern
1.6 Central Asia Natural Resource Management Project	USAID			
1.7 Disaster Preparedness Program (DIPECHO)	EU/ECHO	2003, 2004	4.0	
1.8 Disaster Risk Management Project	UNDP	2004-		
1.9 Strengthening Disaster Preparedness in Zeravshan Valley	DFID	2004		
Sub-total General			6.10+	
2. Energy				
2.1. Pamir Private Power Project	SECO; World Bank	2002-2006	31.50	Aga Khan Fund for Economic Development
2.2. Power Rehabilitation Project	ADB	2000-2005	62.80	Barki Tojik
2.3 Promotion of Renewable Energy, Energy Efficiency and GHG Abatement	ADB/ Netherlands	2000-		
<b>Sub-Total Energy</b>			<b>94.30</b>	
3. Agriculture/ land management				
3.1. Farm and Privatization Support Project	World Bank	1999-2005	23.5	Ministry of Agriculture
3.2. Farm and Privatization Support Supplemental Project	World Bank	2001--	3.60	Ministry of Agriculture
3.3. Agriculture Sector Rehabilitation Project	ADB	2002-2009	43.75	Ministry of Water Resources and Land Reclamation
3.4. Rural Development (technical assistance)	ADB	2004--	0.7	Ministry of Agriculture
3.5. Improving Rural Livelihoods	ADB, GoJ, GTZ, HH the Aga Khan,		2.42	Aga Khan Foundation

Project Title	Funding Agency	Project Duration	Budget (in USD M)	Implementing Agency
	NOVIB, USAID			
3.6. Tajikistan Rural Poverty Reduction Project	ADB	2002-2005 01-03?	1.45 3.2?	Ministry of Agriculture; AKDN; CARE Tajikistan
3.7. OSRO/Taj/202/SWE	SIDA	2002-2006	0.563	FAO
3.8. Seed and Fertilizer Agricultural Rehabilitation Project	GAA	1999-2005	0.03	Ministry of Agriculture
3.9. Food and Economic Security in Tajikistan	EuropeAid	2002-2005	0.75	ACTED
3.10. OSRO/Taj/201/SWE Please get full name	SIDA	2002-2006	0.469	NGOs, UNHCR, UNTOP, WFP, WHO
3.11. Food Security for Vulnerable Rural Groups	EuropeAid	2002-2005	0.395	ACTED
3.12. Rural Development and Cross-Border Cooperation	ICCO	2003-2004	0.092	ACTED
3.13. Support to Dekhkan Farming Communities	Government of Japan	2000--	0.014	UNDP Tajikistan
3.14. Rehabilitation of irrigation pumping stations	Government of Japan	2002--	0.012	Ministry of Water Resources and Land Reclamation
3.15. Rehabilitation of Irrigation pumping stations	Government of Japan	2002--	0.015	UNDP Tajikistan
3.16. Increasing Food Security and Improving Rural Livelihoods	CIDA, EC, ECHO, GTZ, NOVIB, USAID, USDA	On-going	2.6	Aga Khan Foundation
3.17. Farmer Ownership Model Project	SECO	2001-2005	3.92	IFC Private Enterprise Partnership (IFC PEP)
3.18 Land Rights and Economic Security for Rural Women in Tajikistan	UNIFEM	2003-2005	0.05	State Committee for Land Management
3.19 Land Tenure Legislation Updating (under NRMP Program)	USAID	2004-		
3.20 Agriculture Sector Assessment	ADB	2000-2001	0.515	Ministry of Agriculture
3.21 On Farm Soil and Water Management for Sustainable Agricultural Systems in central Asia (TAJ, UZB, TUR, KAZ, KYR)	ADB/ICARDA	1999-	1.2	Ministry of Agriculture
<b>Sub-Total Agriculture</b>			<b>87.51</b>	
<b>2. WATER</b>				
2.2. Rural Infrastructure Development Project	World Bank	2000-2006	24.00	Ministry of Water Resources and Land Reclamation
2.3. Irrigation Rehabilitation Project (sometimes as Yavan Rehabilitation)	ADB	2004--	29.01	Ministry of Water Resources and Land Reclamation
2.4 Irrigation in Dangara Valley	IDB	2001-2004		Ministry of Water Resources and Land Reclamation
2.4. Water Resources Development and Rehabilitation	ADB	2003--	0.60	Ministry of Water Resources and Land Reclamation
2.5. Rehabilitation of water supply system (delete?)	COOPI	2003-2006	1.49	Ministry of Water Resources and Land

Project Title	Funding Agency	Project Duration	Budget (in USD M)	Implementing Agency
				Reclamation
2.6. Hydro-Meteorological Forecasting Project in Tajikistan	SECO	2000-2004	0.95	Swiss Federal Office for Water and Geology and State Agency for Hydrometeorology
2.7. USAID Water and Energy Program (Water User Association Support Project)	USAID	2005	1.50	USAID Tajikistan;
2.8. Water Management Training Project (KAZ-KYR-TAJ-TUR-UZB)	CIDA	2000-2005	0.29	McGill University (Canada); Mount Royal College (Canada); SIC ICWC (Tashkent)
2.9 Flood Disaster Management	ADB	1999-2000	0.205	
2.10 Strategy for Improved Flood Management	ADB	2000-2001	0.550	
<b>Sub-Total Water</b>			<b>57.849</b>	

Source: Asian Development Bank, RETA 6236

### Program Design and Monitoring Framework

Intervention logic	Indicators of performance	Sources of verification	Assumptions and risks
<b>Program Impact</b>			
<p><b>1. Overall</b> Restoration, maintenance and enhancement of the productive functions of Tajikistan's land leading to improved economic and social well being of those who depend on these resources while preserving the environmental functions of these lands in the spirit of UNCCD.</p>	<p>The overall trend of land degradation in Tajikistan arrested.</p> <p>Improved welfare of those relying on land resources.</p> <p>Share of SLM investment in (a) government budget, (b) PIP</p>	<p>SCEPF and SCLM enhanced reporting on the state of the county's land resources.</p> <p>MOA and MWRLR enhanced reporting on the productive use of lands.</p> <p>Poverty Assessment Updates</p> <p>Ministry of Finance and IMF</p>	<p>Commitment to continued improvement of economic and environmental governance</p> <p>Economic and political stability can be maintained so that allocation of resources is not driven by emergency circumstances but substantially by market forces</p>
<p><b>1.1. Development impact</b> Greater and more efficient private and other investments in the maintenance and improvement of land assets backed by land- and other reforms</p>	<p>Trend of (a) average productivity and (b) average financial profitability on each class of production lands.</p> <p>Percentage of <i>dehkan</i>-managed land supported by cadastre and registration in each class of productive land</p>	<p>MOA enhanced reporting</p> <p>Socio-economic impact surveys developed under Land Degradation and Sustainable Land Management Information System (LDSL MIS)</p> <p>SCLM enhanced data on the progress of land reform</p> <p>Surveys of agro-industry investment climate</p>	<p>Commitment to land reform as a principal avenue to renewed investment in land maintenance and improvement.</p> <p>Land reform can be implemented in Tajikistan in ways that enhance productivity.</p> <p>Sufficient area of degraded lands and ecosystems that can be economically rehabilitated exists.</p>
<p><b>1.2 Environmental impact</b> Mitigation of the causes and negative impacts of land degradation on the structure and functional integrity of principal ecosystems through renewed investment in land productivity and promotion of land conservation measures.</p>	<p>Reduction in the extent and severity of land degradation within selected areas and ecosystems of Tajikistan</p> <p>Improved conditions of watersheds leading to greater water storage and less erosion.</p> <p>Net gain in carbon</p>	<p>- Enhanced data by MOA, MWRLD on the conditions of irrigated lands and pasturelands (MOA)</p> <p>- Enhanced data by SCEPF on the conditions of forestlands including woody vegetation outside the forest estate.</p> <p>Watershed environmental impact surveys developed under LDSLMIS.</p> <p>Analysis based on the</p>	<p>Land degradation is overwhelmingly anthropogenic in origin</p> <p>Proposed program interventions will gradually improve the protective and other environmental functions of the lands targeted</p>

Intervention logic	Indicators of performance	Sources of verification	Assumptions and risks
	sequestration due to expansion of woody biomass and better conditions of pastures	results of surveys of pastureland and woody vegetation.	
<b>Program outcomes</b>			
Improved capacity of Tajikistan national institutions to integrate SLM considerations into their operations and budgets and to design and implement SLM projects.	<p>SLM recognized as a budget category in relevant ministries and in PIP.</p> <p>NPF accepted by the Government as an action-oriented culmination of the NAPCD.</p> <p>NPF recognized in the PRSP.</p> <p>Policy frameworks for sustainable management of pasturelands, rainfed lands and forests formulated.</p>	<p>Instructions by the Government to its agencies to undertake the changes necessary.</p> <p>Reviews of evolving public expenditure practices, the role of PRSP and the role of SLM in PRSP.</p> <p>Completion and endorsement of policies for rainfed lands, pasturelands and forests.</p>	Readiness to deepen the reform of institutions and public expenditure practices.
Rehabilitation and enhancement of the productive functions of selected lands thereby improving livelihoods and according indirect protection to ecosystems.	<p>Adoption of improved land use practices resulting in improved productivity of privately managed lands</p> <p>Number of land managers receiving exposure to SLM</p>	<p>Farm practice surveys developed under LDSLMIS.</p> <p>Land- and soil-degradation surveys under LDSLMIS</p> <p>Program and GEF progress and evaluation reports</p> <p>LDSLMIS summaries of training, public awareness and demonstration activities.</p>	<p>Under suitable structure of incentives, targeted ecosystem can respond to the right types of technical and management interventions.</p> <p>Enhanced private profitability can co-exist with public benefit rather than compete with it.</p>
Enhanced protection of ecosystems' integrity	<p>Number of rural communities involved in integrated land management</p> <p>Area of different ecosystems where public-private partnerships for natural resource conservation is established</p> <p>Area of PA buffer zones under active multiple-use management</p>	<p>National Secretariat database</p> <p>SCEPF enhanced database</p>	<p>Technical agreement exists on minimum conditions necessary to preserve ecosystems' integrity.</p> <p>Coordinated attention given to the question of energy provision in the mountainous areas unconnected to the grid.</p>

Intervention logic	Indicators of performance	Sources of verification	Assumptions and risks
Widened participation in and contribution to SLM in Tajikistan by civil society and other stakeholders.	<p>Budgets for NGO involvements as facilitators in Program's activities</p> <p>Number of private-sector SLM service providers (land reclamation advice, extension, etc.)</p> <p>Percentage of women represented in the local bodies implementing Program's activities.</p>	<p>Periodic (quarterly, yearly) reports by the National Secretariat</p> <p>MOA enhanced database.</p>	<p>Sufficient number of qualified and motivated service providers exists and their skills can be easily upgraded if necessary.</p> <p>Experience in implementation of SLM interventions is transferable</p>
<b>Activities</b>			
Program Areas	Projects	Inputs (US\$ mil)	
1. Capacity Building – Strengthening the Enabling Environment	<p>Institutions and Policies for Pastureland Management</p> <p>Making Forestry Count: Institutional Support to Forestry Re-orientation,</p>	<p>GOT: 0.025, GEF: 0.500, IFAD: 0.050</p> <p>GOT:0.025, Donor (tbd):0.60</p>	
2. Capacity Building - Integration into Land Use Planning and Management	Rural Development Strategy for Zeravshan Valley	GOT:0.025, DFID:0.40, UNDP:0.10	
3. Sustainable Agriculture – Rainfed Lands	Rural Development	GOT: 1.0; ADB: 17.35; GEF: 3.50; Beneficiaries: tbd	
4. Sustainable Agriculture – Irrigated Crop Lands	Beyond Salinity Control: Improved Management of Irrigated Lands	GOT: 1.0 Donor (tbd): 3.0; GEF: 1.0; Beneficiaries: tbd	
5. Sustainable Forest and Woodland Management			
6. Sustainable Pastureland Management	Pasture Rehabilitation and Conservation of Semi-Desert ecosystems	GOT:0.5; ADB: 5.0; GEF: 1.0; Beneficiaries: tbd	
7. Targeted Research	Building on Experience: Multiplying the Best in Land Conservation and Ecosystem Protection	GOT: 0.025; ICARDA:0.05, GEF:0.6	
8. Integrated Resource Management	<p>Community Agriculture and Watershed Management</p> <p>Increasing Land Productivity and Land Conservation in Shartooz</p> <p>Watershed Management and Community Development</p>	<p>GOT: 1.3; WB: 15.0; GEF: 3.0; Beneficiaries: tbd</p> <p>GOT:0.05, UNDP:0.10; GEF: 1.0; Beneficiaries: tbd</p> <p>GOT: 1.25; WB: 13.0; GEF: 1.75; Beneficiaries: tbd</p>	
9. Protected Area Management and Biodiversity Conservation			
10. National Program Coordination and Management	Integrated management of land degradation information	GOT:0.025; TACIS:0.50; UNDP: 0.05; GEF:0.50	

## PROJECT CONCEPT PAPERS FOR PHASE 1 FINANCING

### PROPOSAL 1: INSTITUTIONS AND POLICIES FOR PASTURELAND MANAGEMENT

#### 1. Rationale

There is a general agreement among Tajik and foreign specialists that the management of pasturelands and forestlands is the Achilles heel of the efforts to tackle land degradation in the country. The 3 million ha or so of pastures are by far the most important category of agricultural lands in Tajikistan. The legislative and regulatory side of pastureland use is inadequate, the state of pasturelands within the ongoing land reform unclear, the role of local governments (hukumats) in pastureland allocation non-transparent, the knowledge about the size of the herd in each location shaky. The position of pastures within the state forestlands remains undefined. No policy of pastureland use has been formulated and various initiatives directed at improved pasture use are confronted with an institutional and policy vacuum. The proposed project is an institutional and policy review of the sector with key recommendations for institutional realignment, legislative and regulatory reforms, and policy directions suitable for pastureland use within the substantially privatized agriculture. Separate efforts are being considered to deal with forestlands (see Proposal 2). The proposal complements earlier efforts of the Asian Development Bank (especially the Agriculture Sector Assessment Project)

**Impact:** Conditions are created for an improved and sustainable use of pasturelands in Tajikistan

**Outcome:** A set of reform recommendations targeting the policy, legal and regulatory provisions and institutional re-alignment allowing a more efficient use of pasturelands.

Eligibility Criteria: The proposal satisfies all the conditions for inclusion in CACILM.

#### 2. Project Components

The project has two principal components with self-explanatory activities under each:

Component 1: Analysis of existing use of pasturelands including those located within the state forestlands.

Component 2: Drafting of recommendation for institutional, policy and legislative reforms of the sub-sector

The Project will have its base in Dushanbe but its implementation will require extensive periods of time spent in various field locations.

#### 3. Institutional arrangements

Executing Agency: MOA.

Project Management Arrangements: MOA. A team of international consultants will work with local specialists under the supervision of the funding agency.

#### 4. Financial Arrangements, Cost Estimate and Schedule

The Project will be financed by a bi-lateral grant source with an in-kind contribution of the Government.

The cost of the Project is estimated at \$525,000 consisting of bi-lateral funding of \$500,000 and \$25,000 equivalent in in-kind contribution of the Government. The source of the bi-lateral funding is yet to be identified. The project would be implemented over a period of 18 months between 2006 and 2007.

#### 5. Monitoring and Evaluation Framework

Monitoring Framework: The implementation will be reviewed through regular project reviews of the bi-lateral funding partner.

### PROPOSAL 2: MAKING FORESTRY COUNT: INSTITUTIONAL SUPPORT TO FORESTRY RE-ORIENTATION

#### 1. Rationale

Recent reviews of the forestry sector describe forestry in Tajikistan as a sector weakened by (1) insufficient funding, (2) failure to adapt itself to changing institutional and physical circumstances and (3) unclear about the direction to be taken. The just adopted “Concept of Forest Sector Development till 2015” of SCEPF shows awareness of the need to change but lacks the specifics necessary to convert the concept into practice.

The absence of donor support to the sector is in part explained by the outdated approach to forests and their management until now. Traditionally the responsibility of a separate state agency operating more like an industrial enterprise, a sector with a management structure with limited contacts with local population offers few development impacts. The need is to change the approach, make people-oriented tree and bush management the core of the agency’s mandate and make the agency itself a more attractive partner for donor organizations. An earlier attempt by FAO to support forestry in Tajikistan never reached a stage of serious consideration.

**Impact:** Forestry becomes a more active and telling component of efforts to arrest land degradation

**Outcome:** An agency of SCEPF that promotes models of forestry development that correspond to new institutional and physical situation in Tajikistan in which the planting, protection and use of trees and bushes take place with close cooperation with local communities.

**Eligibility Criteria:** Prima facie, the proposal satisfies all the conditions for inclusion in CACILM; some approvals have not been secured yet. The inclusion of the project in the form presented here in donors’ assistance program yet to be discussed.

## 2. Project Components

The project has four principal components:

1. Development of a new structure of the Forestry and Hunting Department (FHD) of SCEPF in support of “Concept till 2015”
2. Development of a detailed plan of activities of the restructured agency in support of “Concept till 2015” structured around “people-oriented forestry”
3. Training of staff of the Forestry and Hunting Department at the central and local levels in the new approaches to managing trees and bushes.
4. Support to information management at the local and central levels.

The principal activities under each component are as follows:

Component 1: Consultant-prepared analysis of the most efficient ways of turning forestry around and restructure FHD

Component 2: (a) Consultant-prepared models of forest and bush management by local communities with technical support of FHD, structured into flexible modules for local implementation, by representative classes of conditions, building on NGO experience in Tajikistan.

(b) Consultant-prepared recommendations for the application of land reform on enterprises (kolkhozes and sovkhoses) previously operating on forest land and currently in disarray

(c) Consultant-prepared recommendations for the management of pastureland located on state forestland

(d) Consultant prepared recommendation about the best ways of reviving the work of the Tajik Forest Research Institute

Component 3: In-house and in situ training of FHD in the community development aspects of forestry; Training in the use of compact modern technology of data acquisition and management (data organizers, etc)

Component 4: Supply of data organizers to the local level forestry staff to establish a benchmark for monitoring and evaluation of activities at the local level.

The Project would take place in Dushanbe for the central level component, in oblast offices of FHD and in selected field locations (the training component).

### **3. Institutional arrangements**

SCEPF and its FHD will be responsible for implementing the Project. SCEPF will be responsible for communicating with SCLM in all matters relating to delineation of lands to enter into new forestry-related activities of FHD. SCEPF will establish a regular dialogue with selected NGOs on ways of combining FHD's work with that of local government and NGOs.

Executing Agency: SCEPF

Project Management Arrangements: Consultant team would be based in SCEPF in Dushanbe and work with FHD's staff. Separate arrangements will be made for the team's visits of local offices and field locations.

### **4. Financial arrangements, cost estimate and cost schedule**

The expected sources of financing are: (1) the Government, in kind, \$25,000; (2) bi-lateral co-financing (FINNIDA or SDC), \$600,000

Preliminary cost estimates (with contingencies) are: Component 1: \$100,000; Component 2: \$350,000; Component 3: \$75,000; Component 4: 75,000. The project will be implemented over a period of 18 months between 2006 and 2008.

### **5. Monitoring and evaluation framework**

Monitoring Framework: The implementation would be reviewed through regular project reviews of ADB and ADB's Project Completion Review. The outcome and initial impact would be assessed by post-evaluation reporting of ADB.

### **Proposal 3: Rural Development Strategy for Zeravshan Valley**

#### **1. Rationale**

The Zeravshan is one of three transboundary rivers of Tajikistan (with the Syr-Darya and Amu-Darya the other and better known two). The upper watershed of the Zeravshan has experienced most of the problems associated with rural poverty and land degradation found elsewhere in Tajikistan. The communities of the Zeravshan Valley had access to some emergency assistance during the late 1990s but it is only more recently that more systematic development efforts began with EU-sponsored food security assistance and DFID-supported Disaster Preparedness Plan.

Favorable conditions exist for taking a more systematic and integrated approach to rural development in Zeravshan Valley that would build on the work done to-date but would take it further and make sustainable management of the watershed a well articulated priority.

The Project will develop a rural development strategy for the whole of the Valley and pilot its elements in parts of it.

Impact: Conditions will be created for effective implementation of future investment projects targeting SLM and rural livelihoods, and environmental protection of the upper watershed of a transboundary river

Outcome: A rural development strategy will be formulated, supported by the preparation of local institutions and communities to implement it.

Eligibility Criteria: Prima facie, the proposal satisfies all the conditions for inclusion in CACILM; approvals have not been secured yet.

#### **2. Project Components**

The project has three components

Component 1: Formulation of an integrated rural development strategy with SLM at its core.

Component 2: Strengthening local Jamoat Development Councils and village organizations for the formulation and implementation of local SLM activities.

Component 3: Piloting of SLM activities in parts of the Watershed

#### **3. Institutional arrangements**

Executing Agency: MOA.

4. Financial arrangements, cost estimate and cost schedule

GOT: \$ 0.05 mil, Bilateral donor (DFID): \$0.5 mil; Beneficiaries: (tbd)

#### **5. Monitoring And Evaluation Framework**

Monitoring Framework: The implementation would be reviewed through regular UNDP and GEF monitoring.

## **PROPOSAL 4: INCREASING LAND PRODUCTIVITY AND LAND CONSERVATION IN SHARTOOZ**

### **1. Rationale**

Shartooz rayon is located in an environmentally fragile area of Khatlon, in an area long suffering from livelihood pressures. Shartooz location close to the Tigrovaya Balka zapovednik makes land rehabilitation in Shartooz a form of a buffer-zone development.

The Project seeks to combine livelihood improvements with environmental protection utilizing a model of community involvement proven during the implementation of UNDP-led RRDP. The Project aims to rehabilitate 1000 ha of land within a wider community development framework. Directly and indirectly, the Project will also improve the state of crucial ecosystems of lower mountains.

The Project is an adaptation of Proposals No.13 and 16 of the Draft National Environmental Action Plan ("Rehabilitation of Teresken and Saxsaul Shrubs in the Khursav, Kabodien, Shaartuz and Murgab Districts", and "Reforestation") and Proposal No.4 of the NAPCD. A PDF A proposal has been completed and a PDF B proposal for a MSP is under preparation, expected to be approved early in 2006.

**Impact:** Livelihoods improved and landscape functions partly restored in Shartooz

**Outcome:** An area of 1000 hectares of degraded lands upgraded, resulting in appreciable increase in productivity. Another sizeable area of land reforested and placed under community management and protection.

**Eligibility Criteria:** Prima facie, the proposal satisfies all the conditions for inclusion in CACILM; some approvals have not been secured yet.

### **2. Project components**

The project has four principal components

Component 1: Allocation of additional lands, including local pasturelands and rainfed croplands to dehkans for management

Component 2: Technical support for rehabilitation of degraded pastures by individual dehkan managers

Component 3: Community rehabilitation of degraded ecosystems

Component 4: Other assistance to local communities in project areas

The Project will be implemented in 6 jamoats of Shartooz rayon.

### **3. Institutional Arrangements**

Implementing and Executing Agency: UNDP.

**Project Management Arrangements:** The project will be implemented by UNDP using a JRC development model of local community implementation.

### **4. Financial arrangements, cost estimate and cost schedule**

GEF and UNDP grants together with a Government in-kind contribution.

Preliminary total cost estimate (with contingencies) of 1.060 million, to be financed by GEF (\$1.0 million), UNDP (\$50,000) and GOT (\$50,000 equivalent) with a yet undetermined contribution by beneficiaries. The project would be implemented over a period of 2 years, in 2007 and 2008.

### **5. Monitoring and evaluation framework**

**Monitoring Framework:** The implementation would be reviewed through regular UNDP and GEF monitoring.

## Proposal 5. Rural Development Project

### 1. Rationale

While agriculture is contributing to the Tajikistan economy, it is underperforming and therefore is not significantly reducing rural poverty. The main factors inhibiting more effective agriculture growth and development of rural areas include (i) incomplete land reform with local difficulties in its implementation; (ii) low farm productivity and marginal profitability under existing cropping patterns; (iii) deterioration of irrigation systems (iv) soil degradation in irrigated areas and similar degradation in rain-fed areas. (v) deforestation (vi) limited availability of and access to finance; (vii) technical obsolescence and poor state of repair of agricultural equipment and a mismatch between existing mechanization and changing structure of farming; (viii) agricultural research and extension and statistical information services that are generally ineffective and do not address the needs of emerging private farms in a market-oriented economy; (ix) constraints to marketing, both domestic and export, by numerous informal trade barriers, generally weak local demand for agro-products and poorly understood functions of organizations and personnel that manage market structures; (x) the vocational education system does not offer the formal and informal training needed by farmers and small businesses, many of whom have limited business experience; (xi) livestock sector that is mainly household-based but faces unclear pasture access conditions; (xii) limited value-added agro processing; (xiii) poor coordination among public sector agencies that lessens their ability to implement reforms and project activities; (xiv) inadequate access to opportunities and land provided to women (xv) too slow an emergence of private sector agricultural service providers; and (xvi) inexperience of local government and communities in initiating and implementing projects in an environment that no longer relies mainly on command.

A more holistic and coordinated approach is proposed to address problems and constraints, enhance opportunities, and integrate agriculture more effectively into the rural economy through a coherent rural development framework or strategy.

**Impact:** The overall objective of the project to increase the productivity of farms and non-farm enterprises within a sustainable land management framework in mixed irrigated/rainfed farming areas in a number of contiguous raions (districts), with a sufficient attention to rain-fed areas, both farmed and used as pastureland.

**Outcome:** A clear, realistic, and prioritized strategy that will increase the productivity of farms and non-farm enterprises and increase the scope and depth of economic opportunities for farm and non-farm rural residents.

**Eligibility:** The Project appears to satisfy the eligibility criteria of CACILM Program. Formal confirmation will take place during the Project's formal appraisal by ADB early in 2006.

### 2. Project components

The project is currently being formulated and is likely to include: (i) development of farms as commercial enterprises, (ii) sustainable land management activities, (iii) promotion of agribusiness services, (iv) improvements of market infrastructure, (v) strengthening of government administrations at local levels and support to water-user and farmer associations, (vi) vocational training; and (vii) implementation of reform policies at the local level in support of market based agriculture.

The Project envisages GEF co-financing (see below). GEF incremental activities will include: (i) introduction of and demonstration of improved land management techniques and adaptations of traditional practices, (ii) capacity building and institutional strengthening to mainstream sustainable land management and adopt integrated land-use planning systems at the rayon level; (iv) promotion of up-scaling and replicability of Project results for wider implementation, and (v) development and implementation of indicators and monitoring and evaluation of SLM at the local level.

### 3 Institutional arrangements

The executing agency for the Project will be Tajikistan Ministry of Agriculture. ADB will be the GEF executing agency for the GEF component.

### 4. Financial arrangements, cost estimate and cost schedule

The Project envisages an ADB Loan and ADF Grant totaling \$17 million, GOT counterpart funds of \$1.0 million and a GEF grant of \$3.5 million. Detailed cost by components is being developed at present.

The project will be implemented over five years starting in 2006.

### 5. Monitoring and evaluation framework

The project design and monitoring framework is under development.

## **Proposal 6: Community Agriculture and Watershed Management**

### **1. Rationale**

The Government, through its PRSP, has been attempting to give greater weight to local decision-making at the jamoat level. The PRSP also highlights special difficulties faced by mountainous areas. The problems of these areas are a complex mix of stagnating agricultural productivity, land degradation and threats to the often-special ecosystems of these watersheds. On the positive side, an increasing amount of experience with local community involvement in land use activities such as land use allocation, organization of irrigation activities and tree planting is emerging through the involvement of international NGOs such as CARE, AKDN and others.

The objective of the project is to build up land productivity in a sufficiently large area represented by several watersheds and do so in an integrated manner that allows for a balance of complementing measures to be taken under a single and consistent management approach.

The project is being implemented in about half of the highland area covering about 36,000 sq km of highland areas with about 42 % of all highland population of Tajikistan in Surkhob, Vanj, Zeravshan and Toirsue watersheds in Kulyab region (southeast of Tajikistan), with about 32,000 households participating in one or another type Project activities.

Impact: Sustainable and improved land use in targeted watersheds and a changed approach to the development process.

Outcome: Improved land use by targeted households, new areas placed under a sustainable regime contributing to the restoration of environmental functions of the watersheds

Eligibility: Eligibility confirmed by the approval by GEF of its co-financing.

### **2. Project components**

The project has five principal components:

1. Rural production investments consisting of sub-component A: Farm productivity Improvements; and sub-component B: Sustainable land management
2. Rural Infrastructure Improvements
3. Applied and adaptive research
4. Community mobilization
5. Project management

The principal activities under each component are as follows:

Sub Component 1A: Investments in improved or increased inputs for income generation land-based activities including both cropping and horticulture, processing, distribution, and equipment leasing.

Sub-Component 1.B: Adoption of longer-term measures to conserve and increase productivity of near-by lands through activities such as planting of fruit trees, woodlots, fodder production, water harvesting, soil moisture conservation etc. The extent of this activity would be expected to go beyond the purely national needs and would benefit from a GEF subsidy.

Component 2: Small packages of infrastructural improvement selected by the local communities and implemented by them. Typical improvements would be directed at drinking water supply, local power distribution or repairs, repairs of access tracks etc.

Component 3: Delivery of improved on-farm practices and materials such as seeds, breeding services etc, by local technical and research institutions working closely with the CGIAR partner organizations.

Component 4: Training of Jamoat Development Committees or similar organizations in local planning and implementation of livelihood and land management and conservation measures.

Component 5: Project coordination, procurement, monitoring and evaluation, reporting and others.

### **3. Implementation arrangements**

Watershed Development Committees (WDCs) with rayon representation of technical ministries and elected local officials will be set up for each watershed. WDCs would approve all investments smaller than a specified sum. State Level Steering Committee with representation of the key line ministries will approve large investments; provide coordination at the central level and liaison with the donor community. Most work in the field will be coordinated by Jamoat Development Committees suitably strengthened for the task under Component 4.

Executing Agency: Ministry of Agriculture; Implementing Agency for GEF co-financing: World Bank

Project Management Arrangements: PMU is set up in Dushanbe within MOA, building on PMUs used to implement other projects in the agricultural sector. A Project Coordination Units acts act as a secretariat for each the WDCs and liaises with JDCs and NGO facilitators used widely to implement different elements of the Project.

### **4. Financial Arrangements, Cost Estimate and Schedule**

The sources of financing is: (1) IDA credit (\$5.0 mil); (2) IDA grant (\$5.0 mil); (3) GEF credit (\$4.5 mil); (4) Government budget (0.9 mil), and (5) beneficiaries' contribution (not specified). All financing is firm following the Project's formal approval by GOT, World Bank and GEF.

The Project will be implemented over 4 year (2005-2009).

### **5. Monitoring and Evaluation Framework**

Developed fully to comply with World Bank and GEF requirements.

## **Proposal 7: Integrated Management of Land Degradation Information**

### **1. Rationale**

The analysis undertaken in the course of NPF preparation underscored weaknesses of data relating to the condition of land resources and the management of those data. The problems include gaps in information caused by discontinuation or severe scaling down of monitoring duties during the crisis conditions of the 1990s, loss of reliability, and little adaptation of information management to new and changing circumstances. Old tradition of simply accepting data produced by official sources without questioning them or reconciling them across sectors and agencies remains strong. There is considerable duplication of information duties that are performed at a superficial level. Information about land conditions is not centralized and little use has been made so far of the data generated by a number of donor-financed projects or potentially available. Government agencies do not share information easily, and there is a creeping and inappropriate commercialization of information that ought to be in the public domain.

This situation threatens long-term prospects of SLM in Tajikistan as well as the ability of CACILM stakeholders to monitor the effectiveness of the National Program. The Project intends to create the foundations of an improved and integrated system of land degradation monitoring in Tajikistan and create a Land Degradation and Sustainable Land Management Information System (LDSLMIS) monitoring the performance indicators in the NPF.

**Impact:** Improved ability of the Government and other stakeholders to learn about the trends in the condition of the country's 's land resources as a basis for policy adjustments and strategic investment decisions.

**Outcome:** Recommendations for a reform of information relating to the acquisition, analysis and management of information relating to the condition of land resources. Creation and operation of (LDSLMIS) to monitor the performance of CACILM National Program.

**Eligibility Criteria:** Prima facie, the proposal satisfies all the conditions for inclusion in CACILM; The inclusion of the project in the form presented here in donors' assistance program yet to be discussed.

### **2. Project Components**

The project has three principal components:

1. Review of existing systems and practices of managing LM-related information in all relevant agencies of the Government
2. Proposal for a reform leading to a nation-wide integrated system of managing information on the condition of land resources (a Land Degradation and Sustainable Land Management Information System or LDSLMIS).
3. Pilot-testing LDSLMIS in monitoring the performance of CACILM National Program

The principal activities under each component are as follows:

**Component 1:** Consultant-prepared analysis of the most important elements of current duties and practices relating to the management of land-related information in (1) SCLM, (2) SCEPF, (3) MOA, (4) MWRLR, (5) National Statistical Agency, (6) selected research institutes, with recommendations directed at simplification, elimination of overlapping duties, sharing protocols, and assessment of the potential for utilizing project-based information on land degradation to supplement existing data sources and data acquisition routines.

**Component 2:** Formulation and introduction of a national Land Degradation and Sustainable Land Management Information System consisting of: (i) Acquisition of economic, social, and environmental data and information; (ii) Procedures, protocols and guidelines for data acquisition including necessary survey instruments, sampling methods, analytical methods, and reporting formats; (iii) Computer databases and analytical programs, including geographic information systems, for storing and analyzing data and information; (iv) Computer based systems, including geographic information systems, for presenting

results and generating reports for SLM stakeholders; and (v) Systems to guide field teams in the collection and reporting of necessary economic, social, and environmental data.

Component 3: Applying the LDSLMIS to the CACILM National Program including monitoring of performance indicators, and reporting practices.

### **3. Institutional arrangements**

The Department of the Agro-Industrial Complex (DAIC) in the Office of the President will be responsible for executing the Project and will host the Consultant team. DAIC will maintain close liaison with the CACILM National Coordination Council.

Implementing agency for GEF co-financing: UNDP

### **4. Financial arrangements, cost estimate and cost schedule**

The expected sources of financing are: (1) the Government, in kind, \$25,000; (2) bi-lateral co-financing (TACIS or EC), \$300,000; UNDP: 0.050; GEF:0. 50

### **5. Monitoring and evaluation framework**

The implementation would be reviewed through regular project reviews of the bi-lateral partner and GEF.