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Clima East Pilot Project "Sustainable management of pastures and forest in Armenia to demonstrate climate change mitigation and adaptation benefits and dividends for local communities" UNDP/EU

Report on Lessons Learnt from Ecosystems Rehabilitation and Biodiversity Conservation Projects Implementation in Armenia

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ClimaEast

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Introduction

Current report aims at providing an analysis of lessons learned from the completed and ongoing environment-related projects in Armenia. Purpose of the study is to identify the success factors of project implementation and sustainability.

Projects implemented in Armenia

1. Natural Resource Management and Poverty Reduction Project

Funded by:	The World Bank; Swedish International Development Cooperation Agency
Implemented by:	Ministry of Nature Protection
Implementation Timeline:	2002-2009
Project Status:	Closed
Project Budget:	
Total Project cost:	$10.87 M
Committed by WB:	$8.30 M
Data Source:	http://www.worldbank.org/projects/P057847/natural-resources-management-poverty-reduction-project?lang=en

1.1. Project Description

Natural Resources Management and Poverty Reduction Project for Armenia aimed at adoption of sustainable natural resource management practices and alleviation of rural poverty in mountainous areas where degradation reached a critical point. The project purpose was to support to averting further deterioration of natural resources (soil, water, forest, fishery, and biodiversity) and stabilizing incomes in the local communities.

The project included three components:

1. Preparation and implementation of community forest management plans; local assistance initiatives which benefit biodiversity conservation through community small grants; community

pasture management; sustainable agricultural practices; community infrastructure and income generation; and development of community institutions.

2. Rehabilitation, protection, and sustainable management of state forests in the project area; improving the forest sector's institutional, legal, and policy framework; and enhancing institutional capacity to monitor and control forest operations.

3. The third component supported measures to improve the role of two key protected areas in the conservation and sustainable use of the region's biodiversity and sustain these improvements; also improvement of the capacity of the Department of Bio-resources and Land Protection of the Ministry of Nature Protection to meet its conservation mandate.

Project was implemented in Tavush and Gegharkunik.

1.2. Project Indicators and Results

Indicator	Achievement
Increase of income in farms of project villages compared to non-project villages	Achieved. Average income indicated 17% raise in project villages compared to 6% decrease in non-project villages
Increased crop and livestock productivity in project villages compared to non-project villages	Achieved. Comparison of yields: ◆ Wheat - +33% ◆ Barley - +32% ◆ Milk - +31% ◆ Wool - +31% ◆ Ship weight - +15% ◆ Cattle weight - +14% Reported increased community participation to decision making.
Natural resource management in villages negligible	Achieved. 40 communities implemented project using participatory approach. *Development of participatory plans was one of the recommendations of midterm review conducted in 2005.*
Reduction of illegal activities destroying the forest cover	Partially achieved. Illegal logging action plan was developed and implemented, life of project achievement - 50% decrease in illegal logging. Decrease is not to be attributed to the project only, since one of the main factors was the improvement of population's socio-economic situation and diversification of heating sources. Legislative and institutional framework to reduce illegal logging was also developed in the frames of the project.

Reversal of degradation in pasture vegetation cover	Partially achieved. 40 communities developed gazing management plans. Access to around 20000 ha of remote pastures was improved, reducing the pressure on nearby pastures. Vegetation cover improvement reported due to rotational gazing. *However, the achievement is measured by beneficiary survey only, no objective measurement methodology was used.*
Increased quality, quantity and productivity of forest cover	Partially achieved. Management plans completed for 128000 ha of forests. 7000 ha reforested or protected for regeneration. *Some planned project activities for this indicator were not completed, including road rehabilitation and pest management.*
Development of protected areas management plans (Lake Sevan and Dilijan Nature Reserve)	Partially achieved. No reviews have been completed throughout the duration of the project.
Stable or increasing number of key indicator species	Partially achieved. No baseline data key indicator species was available. Project served to determining key indicator species and establishing monitoring protocols.
Village micro-catchment plans implemented	Achieved. 40 catchment plans and 40 resource management plans developed. Designed measures were implemented.
Community capacity for sustainable use of common resources developed	Partially achieved. 40 communities developed and implemented gazing management plans; only 7 communities developed and implemented forestry management plans.
Measures for effective protection of mountain biodiversity at watershed level effectively implemented	Partially achieved. 24 small grant schemes and 4 awareness raising grants were implemented. *Only half of originally planned schemes was implemented as of limited biodiversity focus. 4 additional grants with stronger focus were implemented after the project midterm review.*
Income opportunities for rural communities increased	Partially achieved. Temporary job opportunities for local population have been created in the frames of the project. *However no exact quantitative data is available on this indicator, and the income opportunities were not sustainable after the project completed.*
Sustainable forest management practiced in selected pilot areas	Achieved. 5 plans covering 128000 ha were developed.
Technical assistance for effective forest management delivered to Hayantar district branches, Department of Protected Areas, local environmental authorities and communities	Achieved. Project contributed to National Forest Policy and Strategy; Illegal logging action plan; National Forest Program; New forest Code; Community forest management regulation

Effective management of Dilijan and Lake Sevan parks	Achieved. Capacity improved, facilities upgraded and relevant equipment for effective management was procured and provided.
Enhanced planning and management capacity of protected areas and increased public awareness	Partially achieved. Management plans for 2 target national parks developed, and management of systems of the national parks improved. Best practices adopted for planning and zoning of the national park areas, still need refinement.

1.3. Project Sustainability Approach

The project established a PIU (Project Implementation Unit) and funded it throughout the life of the project. The Ministry agreed to maintain the PIU after the project completion to provide management services to other Ministry projects. Also, the project sustainability was ensured through built capacity of local authorities and communities; prepared plans for forest and pasture resource management.

1.4. Project Lessons Learnt

Summary	Description
Project design should be based on a shared understanding of objectives and outcomes as well as an accurate assessment of local implementation capacity to achieve them.	Introducing new approaches, such as beneficiary participation in selecting activities, initially created confusion and implementation inefficiencies. Also, project implementers were overburdened with a multitude of project subcomponents involving different institutions and stakeholders.
Project design should take into consideration timing requirements if project objectives rely on policy and legal changes, or objectives should be aligned with the existing policies and legal framework if the timeframe is tight.	Several project activities depended on legal reform, which created delays for these activities and others dependent on them, effectively compressing much of project implementation in the last two years of project life.
Sustainable Natural Resource Management requires strong beneficiary commitment.	After the Midterm review, Project activities were funded only after villages had signed resource management agreements that committed them to managing natural resources in accordance with watershed and grazing management plans; when this process was followed, the likelihood of sustainability increased.

	Early in the Project, activities were implemented in villages without this prior commitment, and as such, were largely ineffective.
Participatory approaches require extra time to introduce the concept and involve local stakeholders.	The time for developing management plans was underestimated for Lake Sevan and Dilijan National Parks because the concept was new to Government and clearance procedures took a long time. Delays in development and adoption of management plans are common for Armenia, so developing protected area management plans should occur early in the project cycle to allow for implementation.
The capacity of Bilateral donors to supervise parallel financed activities should be assessed during design.	Institutional and legal reforms in a sector such as forestry, characterized by multiple conflicting interests, require time and continual oversight. Parallel grant financing from Sida (the FISP support) was essential to Project achievements; however, its monitoring was complex. The second Sida grant (i.e., co-financing) was more successful in mainstreaming project activities in the Ministries because it was directly managed by the PIU, and had clearer TORs and monitoring.
Donor coordination and collaboration are essential to tackle complex problems such as illegal logging that benefit from harmonizing experiences and funding potential.	Collaborating early on is important, as is coordinating funding from multiple outside sources, as in this Project. In Armenia, an Illegal Logging Action Plan was developed early on using a participatory process as well as applying funds and expertise from, inter alia: the PRSC-DPL (a prior action); PHRD grant (technical assistance to the FSMC); Sida (financing for advancing legislative and institutional reforms and training); IDF grant (strengthening monitoring capacity) and this Project (ensuring an overall, cohesive approach).

2. Community Agricultural Resource Management and Competitiveness Project (CARMAC)

Funded by:	The World Bank
Implemented by:	Agricultural Project Implementation Unit
Implementation Timeline:	2011 - 2016
Project Status:	Active
Project Budget:	
Total Project cost:	$21.33 M

Committment by WB:	$16.0 M
Data Source:	http://www.worldbank.org/projects/P057847/natural-resources-management-poverty-reduction-project?lang=en

2.1. Project Description

Purpose of the project is that selected livestock based communities practice more competitive and sustainable pasture/livestock livelihood systems. This would be evidenced by: (i) increased livestock productivity as measured by milk productivity and increased growth rates of animals (daily animal weight gain); (ii) increased fertility of communal pasture areas (DM/ha); and (iii) increased farm net income from livestock.

The project had 3 components:

1. Community pasture/livestock management system development and implementation to contribute to reversing the trend of destructive grazing, using pastures more efficiently, improving fodder production and animal feeding systems and raising the efficiency of animal production.

2. Strengthening institutions and support services in the pasture and livestock production services, including technical advisory services for pasture management and veterinary and breeding services.

3. Improving business opportunities and market access for livestock production market, promote food safety practices and create opportunities for introduction of new technologies in agribusiness.

The project is being implemented in Aragatsotn, Lori, Shirak, Gegharkunik, Tavush and Syunik.

2.2. Project Indicators and Achievement

Attached table (from a donor report submitted to the World Bank) includes information on all indicators and their level of achievement as of last measurement in Nov 2013.

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure		Baseline	Current	End Target
Increased livestock productivity measured by milk productivity (kg/year, for cattle)	☐	Percentage	Value	100.00	111.00	120.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		The baseline value for this indicator as measured by kg/ year was estimated at 1,428 while the current estimation is 1,585.	
Increased livestock productivity measured by milk productivity (kg/year, for sheep)	☐	Percentage	Value	100.00	106.00	110.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		The baseline value for this indicator as measured by kg/ year was estimated at 66 while the current estimation is 70.	
Increased livestock productivity measured by growth rates of animals (gram/day, for cattle)	☐	Percentage	Value	100.00	112.00	120.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		The baseline value for this indicator as measured by gram per day was estimated at 320 while the current estimation is 380.	
Increased livestock productivity measured by growth rates of animals (gram/day, for sheep)	☐	Percentage	Value	100.00	103.00	105.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		The baseline value for this indicator as measured by gram per day was estimated at 81 while the current estimation is 83.	
Increased efficiency of communal pasture management, as measured by increased communal budgetary revenues from lease of pastures	☐	Percentage	Value	100.00	155.00	130.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		The current average value per community is 509,884 AMD as compared with the baseline value of 328,893 AMD.	
Increased sales from livestock by livestock raising households (AMD/household)	☐	Percentage	Value	100.00	148.00	120.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		The current average value per household is 787,829 AMD as compared with the baseline value of 532,147 AMD.	
Increased Pasture Management Effectiveness (scoring system)	☐	Number	Value	0.00	33.00	60.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments			
Clients who have adopted an improved agr. technology promoted by the project	☒	Number	Value	0.00	471.00	
			Date	13-Aug-2012	01-Nov-2013	
			Comments	This core indicator has been added as per retrofiting	The above number is based on a survey.	
Clients who adopted an improved agr. technology promoted by project – female	☒	Number Sub Type Breakdown	Value	0.00	158.00	
			Date	13-Aug-2012	01-Nov-2013	
			Comments	This core indicator has been added as per retrofiting	The above number is based on a survey.	

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure		Baseline	Current	End Target
Number of pasture management plans developed and agreed by the communities	☐	Number	Value	0.00	55.00	46.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		For all 55 communities envisaged under the project Pasture Management and Livestock Development Plans (PMLDP) have been developed and approved and currently are under implementation.	
Areas of pastures and grasslands leased (%)	☐	Percentage	Value	100.00	119.37	140.00

			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments			
Number of farmers associations established	☐	Number	Value	0.00	6700.00	46.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		All envisaged 55 communities are already actively involved in the project and registered Pasture User Cooperative (PUC). Additional12 communities were involved under the project and registered PUC.	
Percentage of winter fodder requirements met	☐	Percentage	Value	45.00	65.00	80.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments			
Adoption rate by farmers in targeted communities	☐	Percentage	Value	70.00	89.00	90.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		The above number is based on a survey.	
Improved outreach and performance as measured by increased share of revenue from contracts	☐	Percentage	Value	6.00	19.00	10.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		The above number is based on a survey.	
No. of trained and certified community veterinarians providing services	☐	Number	Value	0.00	67.00	48.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		Instead of planned 48, the number of trained vets is 67 but number of participants is 76. The training program started in February and the first set of modules were completed in April encompassing artificial insemination (AI), reproductive diseases, dehorning andhoof trimming, and setting up a veterinary practice. The remaining modules will be delivered in the autumn. The training has	
					covered 76 veterinarians with the inclusion of some additional participants, and has also involved students from the veterinary faculties of the Armenian National Agrarian University.	
Percentage of grants completed with satisfactory rating	☐	Percentage	Value	0.00	100.00	80.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		Ten grants (out of 30) have been completed and evaluation by independent experts has started. All remaining grant projects (except from the finished ones) from the first four rounds are on track. About 98% of the grant funds have been disbursed for the 8 first round grants signed on 30 September 2011, 93.5% for the 9 second round grants signed on 2 May 2012, and 82.4% for the 7 third round grants signed on 3 December 2012. 73.3% for the 6 fourth round grands signed 02.07.2012. Total amount of paid grants for 1 to 4 roundsis 87.78%. The additional beneficiary cash contribution of US$ 162.600 represents 32% of the disbursed amount, while an estimated 58% of the total cost is being contributed by the beneficiaries either as cash or in-kind.	
No. non-recipients adopting similar technical innovations outside the grant scheme	☐	Number	Value	0.00	30.00	250.00
			Date	01-Apr-2011	01-Nov-2013	30-Sep-2016
			Comments		30 of the grant recipients have carried out technology transfer below mentioned activity so far. 67 seminars –	
					3,197 participants, 3,620 leaflets, 31 TV programs, 32 open-door activities, 4 articles, 25 posters, 820 brochures and 2 activities.	

2.3. Project Results - Related Risks Outlined in the Design

1. **Legal framework, institutional capacity and technical expertise.** No dedicated legal and institutional system exists to regulate pasture resources management and use; Armenia's institutional capacity and technical expertise in pasture/grassland management is weak.

To mitigate this risk, the project operates within the existing legal framework and primarily at the community level, where pasture management plans will be part of signed lease contracts between village authorities and Pasture User Associations. The residual risk after mitigation is Moderate.

2. **Acceptance and continuation of pasture management regulations by communities.** Productivity increases may take longer than expected, thus impacting on the local communities acceptance and continuation of management regulations, in particular access restrictions to areas for regeneration. Mitigation measures will enable essential investments to mobilize communities and build capacity in community organizations for pasture resource management. The pasture management measures will be complemented with sufficient direct investments in order to generate short-term benefits. Village allocations for implementation of management plans will be released in tranches during the first three years of project implementation, and will be triggered by successful implementation of agreed management measures. Project financing would introduce and support a bottom-up approach, allowing livestock herders to join Pasture User Associations, and enabling communities to manage their resources through developing capacities and mechanisms for decision making about common resource management frameworks. The residual risk after mitigation is Moderate.

2.4. Project Sustainability

- Change incentives, behaviour and motivations for behaviour, thereby demonstrating to stakeholders that sustaining the project approach is in their own interest. The component is based on:
  - Interlinked environmental and poverty reduction objectives
  - Community-level stakeholders participation

- Cost sharing between public and private stakeholders, providing incentives to farmers to continue adopting good practices for pasture management and livestock production.

- Establishment of the model of Pasture Users Associations, making them sustainable based on the lease contractual arrangements and pasture fees

- Improvement of agricultural advisory system, provision of paid services and ensuring cost recovery, thus contributing to long term sustainability of the advisory (and veterinary) system.

2.5 Lessons learnt

- Competitive grants: these are proven to be effective to support emerging rural businesses and ensure their sustainability. The following points need to be taken in account:
  - Strong monitoring and evaluation system for the small grants; high extent of accountability of the beneficiaries
  - Focus on technology
  - Simple milestone-based approach
  - Clear and transparent procedures in relation to grant processing, beneficiaty selection, evaluation.
- Advisory services: these are supporting productivity of small farms; and is an accepted practice for project implementation in all our region. Points to take in account:
  - Demand-driven and decentralised approach;
  - Clear work plans and budgets
  - Training, including on-job training
  - Use of modern information and communication technologies
  - Cost recovery through provision of paid services
- National Resource Management:
  - Combining effective natural resource use with income generation and poverty reduction activities
  - Providing incentives for adoption of sustainable practices
  - Monitoring of behaviour changes

- Community mobilisation
  - Essential capacity building for local authorities and existing community organisations
  - Design and implementation of community infrastructure rehabilitation mini-projects

3. SDC - Rural Market Development Projects

Funded by:	SDC
Implemented by:	Strategic Development Agency (SDA); Shen
Implementation Timeline:	2011 - 2014; 2009-2012
Project Budget:	
Livestock Development in Syunik	CHF 3,950,000
Markets for Meghri	CHF 1,850,000

3.1. Project Description

The Making Markets Work for the Poor (M4P) approach, which had been implemented through the two mentioned projects, searches for and aims at systemic changes to improve the working of markets with higher inclusion and/or profitable inclusion of poor people. Linking poor farmers to products, services, markets should increase their income and employment by more than what they could achieve through continued subsistence farming.

The specifics of both projects is the combination of environmental, poverty reduction and agriculture development approaches used. Environmental component in particular relates to pasture rehabilitation, and, as consequence, income generation opportunities improvement in rural communities.

Project objectives included:

1. Livestock Development in Syunik

- Access to milk market is ensured through upgrading existing market linkages and promotion of new ones between farmers and processors enabling wider market opportunities and more sustainable relationship between the parties.

- Access to meat market is ensured through development of meat market mechanisms and linkages between meat market players and farmers at upper scale level (of two regions: Goris and Sisian) to assure sustainable access to better organized meat market
- Access to farm support services and inputs is ensured such as Veterinary Services, Artificial Insemination and breed improvement, agricultural inputs, machinery and mechanization services etc. through limited investment initiatives and local capacity building of existing service providers and bringing new ones into project area to strengthen efficiency, level of usage and sustainability of provided support services and inputs to farmers
- Capacity and skills of farmers are improved in terms of new approaches and techniques in farm management, planning, breed improvement through both: strengthening extension service providers, input & services providers and other market players to advise farmers and training, day-to-day consulting, exchange and information dissemination provided by the project on other relevant issues.

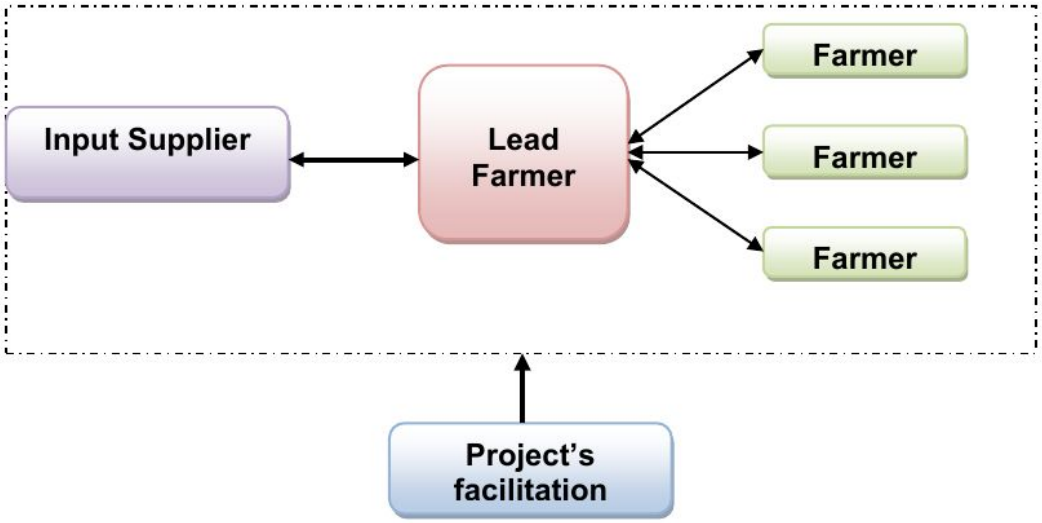
Project demonstrated direct impact on poverty reduction (-7%), income generation (+22%), and, indirectly, migration of youth from the target 3000 households in 16 target communities.

Environmental components of the project included establishing gazing management, thus contributing to pasture rehabilitation and income increase of farmers occupied with livestock breeding. This included both capacity building and collaboration with local authorities in target communities.

2. Markets for Meghri

- Improved skills and inputs for farmers
- Improved access to quality trees
- Business management skills and access to financial services
- Value addition of fresh and processed fruits

The project resulted in increased capacity of farmers in Meghri, increased area under cultivation and productivity, increased income of individual farmers and communities. The project collaborated with Marz Agriculture Development Center by providing relevant training to their staff. Having project effectiveness and sustainability in mind, the model of Lead Farmers had been developed and implemented. Lead farmers are considered to be main hubs for capacity building and demonstration project implementation. The model is presented on chart below:



Links with financial service providers were also established. Collaboration with local canneries allowed to strengthen a full value chain for the subtropical fruit producers.

3.2. Sustainability Mechanisms

The project assumed capacity building and strengthening the public-private partnerships as crucial for sustaining and developing the project results. In the frames of both projects in Syunik, extensive capacity building, targeting local businesses, population and public actors.

Demonstration projects have been proven to be an effective way of capacity sustaining and dissemination from lead farmers to their peers in the frames of Markets for Meghri project, which is proven by the project results, including the increase of area under cultivation, farmer yields and incomes.

3.3. Lessons Learnt

- Creating a local network of lead farmers was an effective way to sustain the capacity and coordinate the inputs flow
- Strong inclusion of local governments in capacity building and in project interventions
- Mainstreaming cross-cutting themes (environment, gender, etc) on the level of management approach
- Strong communication between the implementing agency, the donor and local government to avoid any misperceptions in regard to what the project is doing

4. Other smaller-scale projects

4.1. Enhancing Local Capacity and Regional Cooperation for Climate Change Adaptation and Biodiversity Conservation in the South Caucasus

The project is aimed to increase local capacity and regional cooperation for the identification and mitigation of risks likely to be exacerbated by climate change, through the lens of Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and biodiversity conservation.

Implemented in Georgia, Armenia and Azerbaijan.

- Georgia Regions: Samtskhe-Javakheti Region, Kvemo Kartli Region, and Kakheti Region
- Armenia - Lori Marz
- Azerbaijan - Agsafa,Tovus, Shamkir and Samukh Rayons in Azerbaijan

Project srarted in 2011 and will continue till the end of 2014.

The project implementer is Mercy Corps Scotland. Implementation counterpart in Armenia was Green Lane NGO.

The NGO has implemented the stakeholder assessment part in Lori marz of Armenia; is continuously implementing stakeholder meetings, information campaingns and training, targeting different layers of stakeholders, including children of Lori marz.

4.2. Gegharkunik Marz Agricuture Support Center - Technology Evaluation Projects

The Technology Evaluation Projects implemented by Gegharkunik Marz support Center are aimed at piloting new approaches in agriculture which, depending on results, may be replicated by the farmer community in future. These are mainly aimed at testing productivity of new approaches and demonstration of success stories for their further replication. The projects are implemented in 5 main categories:

- Potato (piloting new seeds; disease prevention and fertilisation methodologies)
- Wheat and other crops (projects aimed at selection of effective domestic types; fertilisation methodologies and disease prevention)
- Restoration of previously produced, but currently abandoned crops, such as linseed, peas and artichokes
- Animal breeding, particularly sheep-breeding, increase of productivity (milk, meat)

The projects are implemented by individual farmers. The Support Center is helping the farmers with results demonstrations and success stories dissemination, is providing advisory services.

4.3. Regional Environmental Center for Caucasus (REC Caucasus)

REC-Caucasus implements two major projects aimed at biodiversity conservation and ecosystems protection:

- Support Development of Biodiversity Conservation Policies and Practices in Mountainous Regions of South Caucasus
- Identification and Implementation of Adaptation Response to Climate Change Impact for Conservation and Sustainable Use of Agro-Biodiversity in Arid and Semi-Arid Ecosystems of South Caucasus

The projects were funded by the Norwegian Ministry of Environment and the EU and aimed at building the capacity of local communities and authorities to address biodiversity loss in forest, semi-arid and arid ecosystems. The project was implemented in Armenia, Georgia and Azerbaijan.

The projects assumed raising knowledge and awareness; introduction of practices of biodiversity management planning; demonstrate practical application through implementation of mini-projects; support development and implementation of coping mechanisms to improve resilience of local communities to future climate change through introduction of sustainable agricultural practices. Project implementation started in 2011 and is assumed to finish in 2014.

Key sustainability factors and lessons learnt for the project assumed:

- National steering committees, including different governmental agencies and NGOs
- High extent of involvement of communities into the project, especially in the elaboration of biodiversity conservation plans.
- Inclusion of biodiversity conservation plans into regional development plans to make sure they are implemented and updated after the project ends
- In the context of climate change, the effectiveness of proposed interventions may decrease through the duration of project implementation. Since this is relatively unpredictable factor, the monitoring of activities and the change produced shall be in place to be able to adjust ongoing intervention for higher effectiveness.

Summary of lessons learnt

The summary below is presented without any particular logical order. For details on each, please see the Recommendations part.

- Support development of and monitor implementation of gazing and forest management plans
- Support development of methodology to objectively measure pasture/forest rehabilitation. All previously implemented projects were using indirect indicators for this, mostly - the community feedback.
- Collaborate with existing systems and structures and use already piloted models to avoid confusion among the communities and authorities, which will result in delays in project implementation.
- Where applicable, technology piloting shall be used, and lessons learnt from technology piloting shall be shared, as done by Agriculture Support Centers.
- Demonstration projects implementation by selected key farmers is effective way to develop and sustain the capacity in target areas, as well as to demonstrate upcoming income increase incentives
- Effective and safe Natural resource use activities, where possible, shall be combined with poverty reduction approaches, to which they indirectly (or directly) contribute. This will help to make the implementation smoother and ensure higher extent of commitment from communities.
- Participatory design shall be done involving all local stakeholders, including the private sector and local authorities
- Monitoring the behaviour change is critical throughout the project implementation
- Climate change may have unpredictable results on project implementation, and may reduce the change achieved by half compared to planned, as the experience of CARMAC project shows. So the project needs to be flexible enough to be able to mitigate this kind of risk and provide maximum effectiveness.

- Strong communication between all project parties, including the implementing agency, lead farmers, leads of demonstrative projects, authorities and donors is important to ensure absence of any misperceptions in regard to project aims and objectives, methodology, indicators, interim and final results.

Recommendations

Project Assessment

Project assessment shall inform the project design with key information about the area and the communities. The scope of assessment may include the following questions about the communities to enable proper selection of communities for the project and collecting information for adjusting the project design:

1. Area:
    a) community land, area of currently used and abandoned pastures;
    b) Availability of pasture management plans in community
    c) area of forests, current practices of forest use
    d) Availability of forest management plans
2. Population and property:
    a) # of households; average income of a household, structure of income
    b) % of households involved in animal breeding
    c) Animals bred in # and % by categories: cattle; sheep/goats; swine
    d) Community population migration
3. Previously implemented similar projects and local organisations:
    a) Have the community been involved in any major agricultural/ecological projects?
    b) If yes, are there or were there any community-based organisations/structures established in the frames of these projects? What are their current involvement with the communities? If the structures existed but are not operating now, what are the reasons for that?
    c) Are there any farmers involved in technology piloting projects implementation with the Marz Agricultural Support Services?

d) Are any agriculture-related private organisations/businesses operating in the communities? What exactly they do?

4. Community Development Plans
   a) What are the agricultural/ecological priorities outlined in the community development plans?
   b) Are gazing management plans available? If yes, to which extent are they implemented? Who monitors the implementation of those?
   c) Are forest management plans available? If yes, to which extent are they implemented? Who monitors the implementation of those?
   d) If gazing and forest management plans are available but not implemented, then what are the constrains?
5. Capacity issues
   a) Training previously received by community authorities
   b) Knowledge of legislative aspects related to biodiversity conservation
   c) Understanding the link between managed use of natural resources and biodiversity conservation; what practical steps are done in communities to achieve this
6. Climate change impact on the community life
   a) Was there any change in climatic conditions in last 5 years?
   b) If yes, then what was the impact of climate change on resource management models and the income of households?
   c) Were there any practical steps to adjust to climate changes?

Project Design

Assessment findings shall inform the project design. Project design shall be done in a participatory manner, involving potential project partners:

- Marz and local authorities,
- local organisations (if any), focusing especially on those established in the frames of previous similar projects. A good example can be the Pasture Users Associations established in the frames of CARMAC project, which have already participated in capacity building initiatives. Local businesses, related to agriculture, shall also be considered.

- active farmers, such as those participating in the technology piloting projects implemented by the Marz Agriculture Support Centers; if applicable - farmers participated in demonstration projects
- Other programmes/projects implemented in same areas, such as CARMAC; projects implemented by REC Caucasus.

A valuable lesson learnt from implementation of large-scale projects is that ecological objectives shall be combined with the economic, or poverty reduction objectives, to which they indirectly contribute. This kind of approach may be considered as an incentive to the community to participate in project implementation and sustain the project results after it ends, based on proven fact of income increase. This assumes inclusion of household income size and structure related indicators into the project design. However, this needs to be balanced with the fact that the change in socio-economic situation in the communities may not be that immediate, since the ecosystems may require longer than planned time for rehabilitation (a lesson learnt from CARMAC).

Introducing new (non-piloted) local partnership approaches, as the experience of National Resource Management Project demonstrates, may result in confusion and consequently implementation inefficiencies. To avoid this, the messages to future local partners shall be very clear from the design stage, so the mutual expectations are realistic and there is no confusion about future (expected) roles and responsibilities.

Using participatory approach will also help to assess the capacity of local partners for project implementation, and thus adjust the design.

Project design shall consider use of community-based structures that have been created in frames of other projects. Such, utilising the capacities of Pasture User Associations created in the frames of CARMAC project may be a practice that will help to ensure the project sustainability by continuously implementing the gazing management plans.. Same relates to creation and sustainable implementation of forest management plans.

There are local practices, that are implemented on routine basis by some of the local partners. A good example of this are the Marz and Community Development Plans, which exist, are updated and are reported to the government on ongoing basis. Involvement of some of the project outputs

into the community development plans shall result in higher extent of sustainability of the project outputs and the change the project produced, since the local authorities are accountable for implementing these and providing reporting to relevant Marz authorities and governmental ministries/agencies. This will also allow to monitor the sustainability of the change the project produced after the project ends.

Project baseline shall be done on design stage. The baseline shall include objective indicators, measurement of which can be replicated on midterm and final evaluation stages. Qualitative indicators related, for example, to behaviour and attitudes, shall be quantified using a ranking methodology to allow objective comparison in future. Baseline information, when collected, shall amend the project design.

Development of objective methodology of measurement of pasture and forest rehabilitation shall also be included in the project objectives. Previously implemented projects, like National Resource Management project, relied on indirect indicators for measuring this.

Technology piloting related approaches can also be used wherever possible, as the experience of the Marz Agricultural Support Centers shows. Important here is to organise proper lessons learnt sharing from each of the technology piloting projects. Given achieved satisfactory results compared with the current practice, these pilot projects will contribute to sustainable use of new approaches in future.

Monitoring of behaviour changes in communities shall be clearly described in the project design, with exact measurable indicators, relating to both short-term and longer-term objectives. Monitoring the behaviour change is important to make sure the project is flexible enough and can be quickly adjusted to deliver the best outcome.

Monitoring can be split between different partners, each having their level of accountability for it. This will allow to collect a wide spectrum of data from different angles in a cost-saving manner on ongoing basis.

Stakeholder reporting on the project shall be described in the project design. Besides the donor reports, stakeholder reports need to be prepared and shared to keep all project stakeholders - local organisations, authorities on different levels, community stakeholders, “on the same page”. Clarity of reporting to local stakeholders was a lesson learnt from implementation of both the National Resource Management Project and CARMAC; projects implemented by SDC in Syunik.