Terminal Evaluation Report

UNDP – GEF Project

Developing Institutional and Legal Capacity to Optimise Information and Monitoring System for Global Environmental Management in Armenia

Project Name	Developing Institutional and Legal Capacity to Optimize Information and Monitoring System for Global Environmental Management in Armenia
UNDP Project ID	2800
GEF PIMS ID	3332
Funding Source	GEF Trust Fund
Country	Armenia
Region	Europe and Central Asia
Focal Area	Multi Focal Area
Operational Program	CB
GEF Agency	UNDP - United Nations Development Programme
Executing Agency	Ministry of Nature Protection (MNP), Armenia

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Evaluator: German Kust

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Content

Evaluation team

The terminal evaluation was performed by an international evaluator German Kust. The UNDP Armenia did not hire a local evaluator.

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Acronyms and Abbreviations

APR	Annual Project Review
AWP	Annual Work Plan
CEO	Chief Executive Officer
EA	Executing Agency
EMIMS	Environmental Monitoring and Information Management System
FAO	Food and Agriculture Organization of United Nations
GEF	Global Environment Facility
GOA	Government of Armenia
IA	Implementing Agency
IT	Information Technology
LFA	Logical Framework Analysis
M&E	Monitoring and Evaluation
MENR	Ministry of Energy and Natural Resources
MNP	Ministry of Nature Protection
MTE	Mid-Term Evaluation
MSP	Medium Size Project
NCSA	National Capacity Self Assessment
NSS	National Statistical Service
NGO	Non-Government Organization
PDF	Project Development Facility
PIR	Project Implementation Report
PIT	Project Implementation Team
PLF	Project Logical Framework
PTL	Project Team Leader
RA	Republic of Armenia
SC	Steering Committee
SNCO	State Non-Commercial Organisation
TE	Terminal Evaluation
TER	Terminal Evaluation Report
ToR	Terms of Reference
UN	United Nations
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
USAID	United States Agency for International Development
USD	United States Dollar
WB	World Bank

Executive summary

PROJECT SUMMARY TABLE

Project Title:	*Developing Institutional and Legal Capacity to Optimize Information and Monitoring System for Global Environmental Management in Armenia*			
GEF Project ID:	3332		*at endorsement (Million US$)*	*at completion (Million US$)*
UNDP Project ID:	00060892	GEF financing:	0.475	0.475
Country:	Armenia	IA/EA own (in-kind):	0.3	0.3
Region:	Europe and Central Asia	Government:	0.1	0.1
Focal Area:	Multi Focal Area	Other (UNDP/ Czech Trust Fund):		0.021675
FA Objectives, (OP/SP):	CB-2	Total co-financing:	0.13	0.151675
Executing Agency:	Ministry of Nature Protection, Armenia	Total Project Cost:	0.605	0.626675
Other Partners involved:		ProDoc Signature (date project began):		June 4, 2008
		(Operational) Closing Date:	Proposed: December 31, 2011	Actual: August 31, 2012

Brief description of the project

The 3-year UNDP/GEF project "Developing Institutional and Legal Capacity to Optimise Information and Monitoring System for Global Environmental Management in Armenia" was approved in mid-2008. Its actual start indicated by different events was extended up to August 2009 Due to delays at the start, the project was extended at no-cost basis for 8 months until August 31, 2012.

The project idea is originated mainly from the results of the National Capacity Self Assessment (NCSA) process for global environmental management. In 2003-2004 the NCSA project, funded by UNDP-GEF, has qualified the strengthening of the national monitoring system and the establishment of an environmental monitoring coordination body as the main priority actions for the country. This study also found that the key agencies have either no database or access to each other's databases for information exchange and accessibility. There were also no institution/agency or expert based network that can ensure collaborative and coordinated data and information collection, exchange, analysis, interpretation and maintenance.

Therefore, the **goal of the project** was to introduce a national integrated and coordinated environmental information management and monitoring system in order to strengthen the environmental information availability and the national environmental reporting capacity of Armenia to fulfil its obligations under the 3 Rio Conventions. Its **objective** was to introduce legislative and institutional changes needed to reform the existing environmental information management and monitoring system as well as ensuring that these reforms are well funded by the state budget for the long term sustainability and standards and norms are developed for improving the national reporting capacity and the public access to environmental information. According to that, the project was aimed to contribute to the GEF's strategic priority to enhance capacity for global environmental management by leveraging financial and technical resources to address country needs for capacity to better manage global environmental issues.

This objective was planned to be reached through three **main outcomes**: Strengthened legal and regulatory framework to enable a coordinated multi-agency information management and monitoring system; Strengthened institutional framework capacity to enable a coordinated multi-agency information management and monitoring system; Upgraded environmental information management

and monitoring standards, norms, procedures and IT architectures which meet the current national and international environmental information and monitoring needs,

The project is a GEF MSP grant with the total budget of $605,000, including $130,000 of governmental contribution. Additional co-financing of leveraged funds was granted by Czech Trust Fund -$21,675

Context and purpose of the evaluation

The objective of the Evaluation was to assess the achievement of the project objective, the affecting factors, the broader project impact and the contribution to the general goal/strategy, and the project partnership strategy.

The evaluation focused on the following aspects: Project design and its relevance, Performance, Timeliness and Management arrangements, Monitoring and Evaluation, and overall success with regard to the criteria of Impact, Global environmental benefits, Sustainability, Replication

Evaluation approach and methods

An overall approach and method for conducting terminal evaluation was based on the five major criteria: *relevance, effectiveness, efficiency, results, sustainability,* and used the following basic tools: documentation reviews, stakeholder interviews, questionnaires, outsource information gathering (internet, mass-media, etc).

Project success was measured based on the Revised Project Logical Framework, which provided clear performance and impact indicators for project implementation along with their corresponding ways of verification. Using results of the CD scorecard, the TE assessed the sustainability of the progress made in developing capacities for environmental information and monitoring systems for improving the national reporting capacity and the public access to environmental information. In addition to a descriptive assessment, the GEF rating system was applied to assess project relevance, effectiveness and efficiency, as well as the quality of M&E systems.

Main conclusions and lessons learnt

The general overall project strengths and shortcoming are summarized in the table below

Strengths	Shortcomings
Very successful and fruitful in time and funding context	Ambitious in objectives at the initial state and at the beginning, resulted in unjustified expectations of a few key stakeholders
Interesting design: flexible to integrate wide scope of national priorities in environmental monitoring and information with international requirements of 3 Rio conventions and use the last as a starting point for the development and improvement of the whole national EMIMS, conducting needs assessment and relevant studies, and after providing supporting activities to key strategic elements, and to successful and cost-effective demonstration activities	Weak coordination and working contacts with other donors, which resulted in weak accounting of accompanied funds as well as strategies for corresponding ongoing and planning activities. Due to this, the overall picture and integration of the different measures on improving national EMIMS remains not clear even to the governmental bodies. The better contacting could provide more transparent and accurate action plan for the project follow up
Changed the concept/approach to environmental monitoring and information system in the country, launching the dialog between all stakeholders and reached the basic agreements between major players	The action plan to support sustainability of the project outcomes and impacts not yet developed
Net winning in the context of catalytic role and replications. Could be recommended as a model approach for the same activities at least in the countries with transition economy (CIS and former socialist countries primarily)	The project did not use all capacity of the MTE process to revise key project performance indicators and outcomes that resulted in their low formal rating evaluation

High analytical scope – on the base of participatory discussions and decision making the project clarified what need to be done in the mid-term and long-term context on a different development issues on national EMIMS	The present design and effective functioning of national EMIMS to the moment are considered to depend mainly on the government support and initiatives. The role of private, public and NGO sectors supposed to be more active only in long-term. But the strategy of involvement of these sectors is not thought over even in the concept.
Definite breakthrough in the study and definition of the role of private sector in the process of environmental monitoring and information, and its provision through enforcement of the Law on environmental self-control	

Main Recommendations

- The design of such projects should be less ambitious in time and expected outcomes. The overall frame strategy could be better clarified and targeted during inception stage and after MTE.
- The design and implementation of such comprehensive and multilateral projects should provide close permanent cooperation with other state and donors projects in close areas, supporting interlinks and mutual strategies.
- To support the flexibility of the project design and implementation strategy the project had to use less key indicators. All indicators should be reliable, especially if to use financial indicators in the countries with high inflation rate and unsustainable economy
- The mechanism of risk mitigation should be cleared from the project start and regularly updated during project implementation
- The effectiveness of the state environmental monitoring and information centre as an EMIMS focal point within any line ministry supposed to be low in present conditions. More successful could be an intersectoral independent agency, e.g. under President's apparatus.

The following groups of follow up actions catalyzed by the project (see more details in ch. 4.3.2.) have been identified during this evaluation:

- initial outcomes and outputs not fully achieved by the project, but with high potential to be finalized in future,
- awareness raising and knowledge management,
- development and cooperation in governmental and sectoral programmes and initiatives (including donors' financed).

It is recommended to pay attention on the risks that are still valid and can jeopardize project impacts and sustainability, and should be taken into account in the process of the project impact monitoring and follow up activities:

- Legislation proposed by the project and identified standards, norms and procedures are not adopted by the Government and/or the Parliament or require additional resources to be monitored and implemented, which might not be available
- Contradictions between different national authorities such as ministries, services, committees (and even divisions of the same ministries) on the use and management of environmental information are still taking place, and moreover, there is inconsistency with demands and requirements of private business and civil society. So, no institutional changes may occur despite new legislation and regulations for EMIMS adopted.
- High turnover of experienced and skilled personnel in state institutions because of low salaries.

Main Proposals for Future Directions Underlining Main Objectives

- National programme for the development of EMIMS is still needed, including action plan, terms and responsibilities of all parties involved. The project just created a necessary background for this comprehensive programme, and identified priorities.
- The government and NSS still acts as driving force for the EMIMS process, but next steps should stipulate measures for active involvement of public and private sectors in the EMIMS implementation and support.
- Great attention should be given in nearest future to the development of the education/knowledge system of environmental information management.
- To develop and strengthen project results the government and other parties involved should address their activities to land degradation and biodiversity conservation problems and apply approaches provided by the project to these issues.

Rating Project Performance

Monitoring and Evaluation	
Overall quality of M&E	S (satisfactory)
M&E design at project start up	S (satisfactory)
M&E Plan Implementation	S (satisfactory)
IA & EA Execution	
Overall Quality of Project Implementation/Execution	S (satisfactory)
Implementing Agency Execution	S (satisfactory)
Executing Agency Execution	S (satisfactory)
Outcomes	
Overall Quality of Project Outcomes	S (satisfactory)
Relevance	HS (R) (highly satisfactory, relevant)
Effectiveness	S (satisfactory)
Efficiency	HS (highly satisfactory)
Catalytic Role	
Production of a public good	yes
Demonstration	yes
Replication	yes
Scaling up	yes
Sustainability	
Overall likelihood of risks to Sustainability:	ML (moderately likely)
Financial resources	L (likely)
Socio-economic	ML (moderately likely)
Institutional framework and governance	ML (moderately likely)
Environmental	N/A (not applicable)

Overall Project Results	S (satisfactory)

1. Introduction

1.1. Purpose of Evaluation

The objective of the Evaluation was to assess the achievement of the project objective, the affecting factors, the broader project impact and the contribution to the general goal/strategy, and the project partnership strategy.

According to the TOR and "Guidelines for GEF Agencies in Conducting Terminal Evaluations" (2008), the evaluation focused on the following aspects:

Project design and its relevance in relation to: a) *Development priorities* at the national level; b) *Stakeholders* – assessment of correspondence to the specific needs; c) *Country ownership / drivenness* – participation and commitments of government, local authorities, public services, utilities, residents; d) *UNDP mission to promote sustainable human development* by assisting the country to build its capacities in the focal area of environmental protection and management;

Performance - the progress that has been made by the project is relative to the achievement of its objective and outcomes: *Effectiveness* - extent to which the project has achieved its objectives and the desired outcomes, and the overall contribution of the project to national strategic objectives; *Efficiency* - assess efficiency against overall impact of the project for better projection of achievements and benefits resulting from project resources, including an assessment of the different implementation modalities and the cost effectiveness of the utilisation of GEF resources and actual co-financing for the achievement of project results; *Timeliness* of results.

Management arrangements focused on project implementation: General implementation and management; Financial accountability; Monitoring and Evaluation at the project level.

Overall success of the project with regard to the following criteria: *Impact, Global environmental benefits; Sustainability; Contribution to capacity development*; *Replication* – analysis of replication potential of the project positive results in country and in the region, outlining of possible funding sources; replication to date without direct intervention of the project; *Synergies* with other similar projects.

1.2. Key Issues of Special Consideration

The Evaluation reviewed and assessed changes in development conditions, with a focus on the perception of change among stakeholders, and addressing the following issues:

- Changes in the legal and regulatory framework for environmental information and monitoring systems.
- Changes in the perception among the staff in relevant institutions and other stakeholders of mechanisms and approaches for improving environmental management information and monitoring system as tools to improve the national environmental reporting capacity in Armenia
- Changes in the understanding and knowledge of environmental information management and monitoring systems as tools to address the national environmental reporting capacity issues in the context of Armenia's national development
- Development of sustainable mechanism for improving the national environmental reporting capacity with the approaches institutionally and technically appropriate for Armenia
- Changes in stakeholder behaviour to address national reporting capacity
- Creation of any basis for the long-term sustainability of project outcomes
- Factors beyond the project's immediate control that influence the project achievements, especially changes of government counterpart personnel, and the wider economic and political development context of Armenia.
- Extent of the project support to the development of sustainable capacities.

The Evaluation Report also focused on recommendations and lessons of broader applicability for follow-up and future support of UNDP and/or the Government, highlighting the best and worst practices in addressing issues relating to the evaluation scope.

1.3. Methodology of Evaluation

An overall approach and method for conducting terminal evaluation was based on the five major criteria: *relevance, effectiveness, efficiency, results, sustainability,* and used the following guidelines:

- Terms of Reference for Terminal Evaluation of the UNDP/GEF Project: PIMS 3332 - "Developing Institutional and Legal Capacity to Optimize Information and Monitoring System for Global Environmental Management in Armenia". UNDP-Armenia, March 2012.
- UNDP Evaluation Guidance for GEF-Financed Projects, 2011 (with a few specific clarifications taken from "UNDP Evaluation Guidance for GEF-Financed Projects. Version for External Evaluators. Final Draft, March 17, 2011")
- Monitoring Guidelines of Capacity Development in Global Environment Facility Projects. UNDP, UNEP, GEF. September 2010
- The GEF Monitoring and Evaluation Policy. 2010. Evaluation Document. November 2010, No. 4
- Handbook on Planning, Monitoring and Evaluating for Development Results. United Nations Development Programme, 2009
- UNDP. Addendum. June 2011. Evaluation. Updated Guidance on Evaluation in the Handbook on Planning, Monitoring and Evaluating for Development Results (2009)

This TE used the following basic tools: documentation reviews, stakeholder interviews, questionnaires, outsource information gathering (internet, mass-media, etc).

Project success was measured based on the Revised Project Logical Framework (see **Annex 3**), which provided clear performance and impact indicators for project implementation along with their corresponding ways of verification.

Using results of the CD scorecard over the life of the project (inception (baseline), mid-term and final), the TE assessed the long-term sustainability of the progress made in developing capacities for environmental information and monitoring systems for improving the national reporting capacity and the public access to environmental information.

In addition to a descriptive assessment, the GEF rating system was applied to assess project relevance, effectiveness and efficiency, as well as the quality of M&E systems. It is important to note that the

Rating Scales		
Ratings for Outcomes, Effectiveness, Efficiency, M&E, I&E Execution	Sustainability ratings:	Relevance ratings:
6. Highly Satisfactory (HS): no shortcomings	4. Likely (L): negligible risks to sustainability	2. Relevant (R)
5. Satisfactory (S): minor	3. Moderately Likely (ML): moderate risks	1. Not relevant (NR)
4. Moderately Satisfactory (MS):moderate	2. Moderately Unlikely (MU): significant risks	
3. Moderately Unsatisfactory (MU): significant shortcomings	1. Unlikely (U): severe risks	
2. Unsatisfactory (U): major problems		
1. Highly Unsatisfactory (HU): severe		
Additional ratings where relevant: Not Applicable (N/A) Unable to Assess (U/A		

Rating scales differ for different criteria according to the UNDP Evaluation Guidance For GEF-Financed Projects (2011)[1].

1.4. Structure and Procedure of Evaluation

The evaluation was conducted by a single independent evaluator and was scheduled to take place between April 30 and June 30, 2012.

The evaluation process comprised four phases.

The first phase was one of data and information collection. It started with a review of relevant documents made available electronically by the Project Manager and various project stakeholders. In addition, relevant websites were also visited and studied. This phase was finalized with an extended questionnaire – evaluation matrix related to the main stakeholders (Annex 2), and a list of main project stakeholders to be interviewed during field visit, which have been presented to UNDP-Armenia and Project Manager for consideration and cross matching.

This was quickly followed by the second phase with country visit to the project sites in Yerevan, meetings, discussions and interviewing with major project stakeholders, consultants, parties involved (Annexes 11,12). The aim was to capture as broad assortment of views and opinions as quickly possible within the time available, as well as to collect more project specific documents.

The third phase consisted of analysis, discussions and drafting home based/on-desk. This phase was concluded with the production of a draft report which was submitted to the Project Manager and UNDP-Armenia for comments invited from all concerned.

The fourth and final phase refined the draft in light of the comments received, and produced this final evaluation report.

This evaluation fits the context of the Project overall M&E plan and concludes the range of regular annual Project Implementation Reports (PIRs), and also takes into account their main conclusions, and conclusions made in MTE report.

To the requirements of ToR for TER this report is limited to 30 pages, so the major number of confirmation examples have not been included, and stored in evaluator's archive, but can be delivered on the special request.

2. The project and its development context

2.1. Basic Project Dates, Start and Duration

Milestone	Expected date	Actual date
PDF-A Approval Date		July 29, 2005
Pipeline Entry Date		December 18, 2006
CEO endorsement/approval		February 25, 2008
Agency approval date (UNDP)	May 2008 (endorsement letter)	June 04, 2008 (Pro Doc signature page)
Implementation start	July 26, 2008	November 1, 2008
Midterm evaluation	October 2010	December, 2010
Project completion	July 2011	August 31, 2012 (no-cost extension)
Terminal evaluation completion	December 2011	June 30, 2012
Project closing	December 31, 2011	December 31, 2012

[1] These scales used in the TER do not fully correspond to those recommended in TOR (Annex 1), as the last contains contradictions in the application of ratings (e.g. ratings in table 1, annex 5 do not relate to those recommended in 2011UNDP Evaluation Guidance For GEF-Financed Projects, and a range of ratings in table 2 differ from those recommended in Annex 3a)

The UNDP/GEF project "Developing Institutional and Legal Capacity to Optimise Information and Monitoring System for Global Environmental Management in Armenia" was approved in mid-2008. Its actual start indicated by different events was extended up to August 2009 (first disbursement in October 6, 2008, hiring of the Project Team Leader in November 2008, kick-off workshop was held on December 5, 2008; and an inception workshop and 1st Project Steering Committee (SC) meeting on August 14, 2009). Due to delays at the start, the project was extended at no-cost basis for 8 months until August 31, 2012.

2.2. Problems that Project Seeks to Address and Expected Results

The project idea is originated mainly from the results of the National Capacity Self Assessment (NCSA) process for global environmental management. In 2003-2004 the NCSA project, funded by UNDP-GEF, provided resources to the Government of Armenia to identify and determine the nature of critical capacity constraints and priority capacity needs faced by Armenia, as they related to global environmental management. The NCSA process in Armenia described the low quality of environmental monitoring information and data and lack of information management system. Monitoring and information management considered to be critical for understanding the current status and dynamic changes in the state of environment, for the development of adequate national environmental policies, for the implementation of environmental projects and overall for the fulfilment of commitments related to the implementation of the 3 Rio Conventions ratified by Armenia. The NCSA has qualified the strengthening of the national monitoring system and the establishment of an environmental monitoring coordination body as the main priority actions for the country.

During the NCSA process, assessments were conducted in each thematic area (biodiversity, climate change and desertification) to assess the existing capacity in Armenia to implement the 3 Rio Conventions; including their integration within the various sectoral development strategies and plans. Then, based on these 3 thematic assessments, 7 specific cross-cutting areas were identified for in-depth analyses. They included:

- Environmental policy and legal frameworks, including regulation and enforcement;
- Institutional management, including national-regional-local linkages;
- Monitoring and access to information;
- Financial instruments and mechanisms;
- Inter-sectoral, integrated and coherent planning of natural resource use;
- Public awareness and environmental education;
- Scientific information, applied research and available technologies

These seven cross-areas were considered to be common across the 3 Conventions and correspond to national development priorities. There are all tools for environmental policy development. However, among all these issues the main outcome of the NCSA process representing the main issue to be addressed is the need to develop the capacity and optimize the information and monitoring system for global environmental management in Armenia.

The previous studies such as the UNECE's[(2)] assessment of State of Environment (SoE) reports also confirmed and indicated some common and nation specific issues that related to monitoring and information management systems. The assessment report indicates that the development of State of Environment reports is prone to serious difficulties, mainly associated with:

- Data collection, analysis and interpretation;
- Inter-ministerial coordination to develop the SoE reports;
- Underdeveloped legal framework for the development of SoE reports;
- Identification of clear objectives for the SoE reports and their structure;

[(2)] United Nations Economic Commission for Europe, Working Group on Environmental Monitoring "Environmental Reporting in New Independent States", 2002.

- Establishment of procedures for the development of SoE reports that will define: the institutional framework of SoE reports; the topics/content; the indicators; the timeline; the use of SoE reports for the development of environmental policies; and the convenience of use of SoE reports, and public access to these reports.

This study also found that the key agencies have either no database or access to each other's databases for information exchange and accessibility. There is also no institution/agency or expert based network that would ensure collaborative and coordinated data and information collection, exchange, analysis, interpretation and maintenance.

Therefore, the **goal of the project** was to introduce a national integrated and coordinated environmental information management and monitoring system in order to strengthen the environmental information availability and the national environmental reporting capacity of Armenia to fulfil its obligations under the 3 Rio Conventions. Its **objective** was to introduce legislative and institutional changes needed to reform the existing environmental information management and monitoring system as well as ensuring that these reforms are well funded by the state budget for the long term sustainability and standards and norms are developed for improving the national reporting capacity and the public access to environmental information. According to that, the project is aimed to contribute to the GEF's strategic priority to enhance capacity for global environmental management by leveraging financial and technical resources to address country needs for capacity to better manage global environmental issues.

This objective is planned to be reached through three **main outcomes**:

1. Strengthened legal and regulatory framework to enable a coordinated multi-agency information management and monitoring system;
2. Strengthened institutional framework capacity to enable a coordinated multi-agency information management and monitoring system;
3. Upgraded environmental information management and monitoring standards, norms, procedures and IT architectures which meet the current national and international environmental information and monitoring needs,

and appropriate adaptive management with a separate outcome on Monitoring, Learning, Adaptive Feedback & Evaluation

During Inception phase of the project the expected results have been revised in terms of performance indicators, baseline and target values. The Revised Logical Framework with Project Performance Indicators served as a major working M&E instrument and a baseline for Project Overall Workplan and Annual Workplans (Annex 4).

The Project work plan contains the following **major outputs**:

- The Laws and Codes contain the proper legislation, which will provide the necessary provisions to strengthen the existing environmental information management and monitoring system
- The legislation details the appropriate institutional framework
- An environmental monitoring coordination mechanism is established under the MNP
- The relevant institutions for a coordinated multi-agency information management and monitoring system have the necessary capacity to fulfil their mandate
- Training curricula for environmental information management and monitoring system developed and integrated into the in-service training system for State Servants
- Standards, norms, procedures and architectures are developed to support the implementation of an effective environmental information management and monitoring system
- Lessons learned are documented and disseminated in Armenia and throughout the region

2.3. Key project stakeholders[3] identified at the preliminary and inception stages were:

- Ministry of Nature Protection (MNP) including sub-divisions dealing with environmental monitoring and information management and State Non-Commercial Organisations (SNCO) (state of the environment)
- Ministry of Agriculture (land and forest monitoring activities)
- Ministry of Health (noise and pollutants monitoring activities),
- National Statistical Service.
- NGO sector/public environmental information centres

3. Financing and Project Framework

The project is GEF MSP grant with the total budget of $605,000, including $130,000 of governmental contribution. Associated financing was designed to be provided from the USAID project in the amount of USD 8,000,000[4]. Another possible source of associated financing from the FAO also has been pointed in the annex of UNDP Project Document, nevertheless both sources were not recorded either in the ProDoc itself (signature page), or in the Inception report. Additional co-financing of leveraged funds was granted by Czech Trust Fund - $21,675

Project component	Activity type	GEF financing (in $)		Cofinancing (in $)	
		Approved (original budget from Pro Doc)	Actual (final approved Budget Revision)	Committed	Actual
1. The legal and regulatory framework is strengthened to enable a coordinated multi-agency information management and monitoring system	Technical assistance (local and international consultants, contractual services-companies)	62,000	96,734	100,000 (GOV)	100,000 (GOV)
2. The institutional framework capacity is strengthened to enable a coordinated multi-agency information management and monitoring system	Technical assistance (local and international consultants, contractual services-companies) Investment (Monitoring equipment for stakeholders)	214,400	171,973	UNDP/ Czech Trust Fund- 21,675	UNDP/ Czech Trust Fund- 21,675
3. Environmental information management and monitoring standards, norms, procedures and IT architectures are upgraded and respond to current national and international environmental information and monitoring needs	Technical assistance (local consultants, contractual services-companies) Investment (IT equipment for Project's stakeholders)	138,600	110,959		
4. Monitoring, Learning, Adaptive Feedback & Evaluation		60,000	95,334	30,000 (GOV, in kind contribu-tions)	30,000 (GOV, in-kind contribu-tion)
Total		475,000	475,000	151,675	151,675

[3] The full list of the project stakeholders is given in Annex 8

[4] Detailed information on the project framework and co-financing is provided in Annex 4

4. Findings and Conclusions

4.1. Project Formulation

4.1.1. Implementation Approach: Conceptualization and Design

The basic initial idea that is laid in the background of the project concept was a development of general national system of environmental information in frames of the common Pan European environmental information system.

Frankly speaking, at the first glance the project concept causes discrepant impressions.

From one the hand, the goal and objective of the original project scope seemed rather ambitious in terms of resources ($605,000) and timeframe (3 years) available for its achievement and implementation of all outcomes. This relatively short period would not provide enough time to introduce a national integrated and coordinated environmental information management and monitoring system, and to introduce legislative and institutional changes needed to reform the existing environmental information management and monitoring system as well as ensuring that these reforms are well funded by the state budget for long term sustainability and standards and norms are developed for improving the national reporting capacity and the public access to environmental information. Each of these objectives is rather time-demanding and would require multiple consecutive years and more resources for successful implementation.

On the other hand, exactly to a wide and ambitious overall scope the project was able to be flexible in identifying the main gaps and hot spots in the national system of environmental monitoring. After interviewing project stakeholders it became clear that at the project start, and even so far there is no clear understanding of the concept of the national/governmental environmental monitoring and its purposes, but the urgent needs for such a system are clear to all governmental bodies and strata of the civil society. Contradictions between different national authorities such as ministries, services, committees (and even divisions of the same ministries) on the use and management of environmental information are still taking place, and moreover, there is inconsistency with demands and requirements of private business and civil society.

Nevertheless, these discrepancies do not mitigate the importance and timeliness of the project, which (thankful to its informal adaptive management and inception assessment) managed to find the most crucial gaps and related effective activities for further development and strengthening of the national environmental monitoring and information system. In this case, the idea to use requirements of 3-Rio conventions on environmental data as a starting point to coordinate national environmental information/monitoring system seems to be productive and helpful to provide common platform for cooperation of different stakeholders involved. The development of this platform through identification of legislation and institutional gaps, preparation and providing examples of legislation updating and enforcement, capacity building for environmental monitoring coordination mechanism, improving national standards and norms, and raising public awareness with good reason supposed to be successful and sustainable.

The weak participation of nongovernmental sector (NGOs and private sector) in the project design could also be considered more as a national peculiarity and project specificity than as a shortcoming. Definitely, the project looks like a state governmental action, and the system of environmental monitoring is developing more as a state and governmental application than for wide national use. Despite the overall national environmental monitoring in general is more effective, the non-governmental sector in Armenia is not well developed and strengthened enough for such objectives. In this situation, the government acts as a driving force at the moment, building capacities for public and private sectors. Interviews with project partners and stakeholders, as well as information from mass-media evidently show the growing interest of NGOs and private sector to the developing environmental information system, especially in the case of public hearings and discussions of the laws and regulations developed.

4.1.2. Logical Framework Analysis (Project Logic/Strategy; Indicators)

Despite its ambition, the project strategy is very logic, and did not change a lot during the inception phase. A few minor changes and clarifications have been done at the inception phase to the project expected outputs, performance indicators and Baseline and Targets Values, and project risks which were reflected in the overall Project Log Frame (Annex 1 to TOR). This logical framework was further used during the implementation for the development of overall and annual work plans, and as a management and M&E tool and did not changed even after MTE. Risk assessment for the project was well prepared and actually defined key causes which could jeopardize the project results.

Nevertheless, a few comments should be made to the project LFA that seem to be useful to avoid shortcomings which can decrease the general project rating if done in a formal way.

a) The definition and target of the indicator 1 are vague. National environmental monitoring includes different sources of financing, not only government budget, but resources of NGOs, private business, scientific research, etc. Criteria for "Adequate national budget allocation to environmental monitoring" should not be only an increase in government budget allocation (especially if it was planned as only 2.7% for 3 years, and inflation rate in Armenia in 2011 was 7.7%, in 2010 – 9.4%, and even in 2008 it was 5.2%), but the clearance that all key partners involved in the system of national environmental monitoring get obvious support for their responsibilities. Moreover, the definition of the objective shows ("ensuring that these reforms are well funded by the ***state*** budget for long term sustainability") that the project design has been mainly aimed at the governmental top-down reforms, but not bottom-up initiatives. By the end of the project, this statement played a nasty trick with the project despite of its numerous effective and successful results: the government budget allocated to environmental monitoring according to the UNECE data decreased 5 times in 2010 in comparison with 2007, and even to 2005 was 2 times less[5]. Unofficial data received from governmental sources during the evaluation shows that in 2011 this financing dropped at least 7 times in comparison to 2007! Because of the vague definition of this indicator, its evaluation does not in fact say much about actual project achievements and institutional changes.

b) The use of Capacity development monitoring scorecard (CDMS) rating as a separate indicator seems to be a tricky thing. The project LFA itself contains a big number of indicators (10!) which is hard to control for such a small project, and CDMS is a system of 15 additional indicators! The focus on such a variety of project key indicators diminishes the advantages of the project strategy flexibility designed at the preliminary phase. To support its flexibility the project should use not more than 5 SMART baseline indicators.

c) Despite the positive indirect impact of the project activity on the quality of State environmental reports, the third indicator cannot be applied for the evaluation, because no national communication to Rio conventions had a chance to use the project achievements. It was obvious since the project preparatory stage that the process of necessary legislation changes, its adoption and enforcement according to the legislative proceedings in Armenia n practice needs at least 2.5 years and would not be finalized by the project official end. So, Indicator 3 is not SMART in terms of achievability.

d) Indicator 5 duplicates with small clarifications the part of CDMS indicator and seems unnecessary.

e) Indicators 6 and 7 reflect results of the similar activity and could be combined.

f) Indicators 8 and 9 reflect results of the similar activity and could be combined.

g) Despite key risks were well assessed at the preliminary and inception phases, the project offered no clear mechanism to mitigate these jeopardy. The absence of the risk mitigation and

[5] UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE. Consultation meeting on the priorities for implementation of the ENPI Shared Environment Information System (SEIS) project. Brussels, 11-12 November 2010

alternatives strategy in the beginning of the project has let a few risks (e.g. risks 2, 3) to be evident, and also diminished the quality and rate of expected results.

h) As the project did not achieve a few of its formal expected results, some risks are still valid and can jeopardize project impacts and sustainability, and should be taken into account in the process of the project impact monitoring (risks 6, 7, 8, 10, 11).

i) The risk of the GOA restructuring has not been taken into account, that actually provide some difficulties in participation of the Ministry of Energy and Natural Resources in the project and also in the process of further development of the national system of environmental monitoring after shifting the department of mineral resources from MNP to MENR.

Despite the fact that the revised Log Frame indicators, targets and baseline seem formally to be improved during inception phase, after more detailed analysis it is clear that even the revised indicators and targets are not fully appropriate to measure project achievements and results. It was obvious that a few indicators, targets and risks had to be revised at the MTE stage, but it has not been done, because it was not formally recommended by the evaluator. As a result, so far the full scope of project activities implemented is not fully reflected with the project indicators. The indicators rather tend to follow the original structure and scope of the project activities.

4.1.3. Lessons from Other Relevant Projects (e.g., same focal area) Incorporated into Project Implementation

This project has its own original design and has no exact prototype. It has been mentioned above that the Project has originated from the National Capacity Self Assessment (NCSA) process and considered all its lessons, especially in the project strategy formulating and stakeholders' coordination and cooperation. Also, the project design took into account the experience of other environmental projects implemented by UNDP-Armenia.

From the certain point of view the evaluating project took a few ideas also from the UNDP/GEF "Integrating Global Environmental Issues into Bulgaria's Regional Development Process (Rio Conventions Project)" implemented in Bulgaria in 2006-2010, but the scope of Bulgarian project was relatively less and limited mainly to mainstreaming global environmental considerations into the regional development and spatial planning.

4.1.4. Country Ownership/Drivenness

Armenia ratified the UNCBD (1993), UNFCCC (1993), and UNCCD (1997), Kyoto Protocol (2002), Cartagena Protocol on Biodiversity (2004) and is eligible for receiving assistance from the GEF and UNDP:

Armenia was amongst the first countries of the region that embarked on a National Capacity Self Assessment (NCSA) process for global environmental management. The main issues identified during this comprehensive and fully country-driven self-assessment were problems with the current information management system, including data collection, maintenance, analysis, information exchange and information accessibility, and also the quality and accessibility of relevant data and information on the current state of the environment. This GEF MSP directly addresses these priority issues.

During the preparatory stage the project has been closely linked with relevant on-going activities such as the Poverty Reduction Strategy Paper (PRSP) discussions and the initiation steps of its implementation in Armenia, the identification of the Millennium Development Goals and their indicators, the process of Environment for Europe, multilateral regional (Caucasus, CIS countries) environmental agreements, the development of a national policy on sustainable development and also with the UN Development Assistance Framework (UNDAF) and the UNDP Country Programme Document. The capacity assessments were fully conducted within the context of these activities to ensure the project responsiveness to the national context and priorities.

4.1.5. Stakeholder Participation

Stakeholders' participation and interaction considered to be critical for such type of the projects. The project design provided a wide range of different stakeholders, which can be subdivided into the following groups:

- *National authorities*, including governmental bodies (line ministries such as Ministry of Nature Protection, Ministry of Agriculture, Ministry of Health, Ministry of Economy and Finance, Ministry of Territorial Administration, Ministry of Urban Development, Ministry of Education and Science, Ministry of Emergency Situations, Ministry of Trade and Economic Development, Ministry of Energy, Ministry of Justice, State committees for Water systems and Real-Estate Cadastre) and National Statistical Service supervised by president's administration
- *International donors'* community, including UNEP as GEF Implementing agency, FAO, USAID, WB, WHO, UNECE, WWF, and others working in Armenia on development and environmental issues.
- So called *State Non-commercial organizations* (SNCO), working under the authority of different line ministries and implementing different activities related to environmental monitoring: Environmental Impact Monitoring Centre, Armenian State Hydrometeorological and Monitoring Service, Nature Protection Expertise, Forest Research-Experimental Centre, Information Analytical Centre of MNP
- State protected areas
- Local governance (marz governors' administrations and Local Self-Governing Bodies)
- Academic Institutions and universities
- Private Sector,
- Civil Society Organizations (numerous different NGOs dominantly), a majority of which are organized under so called Aarhus Centres (OSCE centres for sustainable development and public environmental information)
- General Public

The most active and comprehensive interactions between all stakeholders groups have been taking place at the preparatory phase, mainly under the NCSA project. The process included: workshops and seminars on thematic needs assessments on UN Conventions on Biodiversity, Climate Change and To Combat Desertification, Cross-Cutting Assessments of Environmental policy and legal frameworks, Institutional management, Monitoring and access to information; Financial instruments and mechanisms; Inter-sectoral, integrated and coherent planning of natural resource use; Public awareness and environmental education; Scientific information, applied research and available technologies.

The National Action Plan was developed based on the findings and recommendations identified during the assessment processes. It identified the measures, funding sources, timeframe of planned activities, as well as the responsibilities and the cooperating agencies. 11 memoranda of understanding (MOU) at pre-project phase have been signed with stakeholder ministries and scientific research institutes, as well as international organizations, the private sector and community based NGOs.

Therefore, to the project start effective and comprehensive partnership arrangements have been established for the implementation of the project with relevant stakeholders involved.

The project also expected partnership agreements with the relevant Stakeholders to implement sets of activities will be drawn and signed by all parties as required. It is supposed to contain the planned activities to be conducted, the expected results, the resources allocated by each party and the mode of operation among the parties. It is also supposed to be the main guidance document to implement activity and disburse project funds.

The project design is supposed to support and develop further interactions between stakeholders through the project Stakeholder group or Steering Committee (SC) and other means (workshops, consultations) with overall coordination role of the MNP as a focal point of 3-Rio conventions. The Project Steering Committee had to provide political oversight for the project, project progress, and general advice for project implementation policy ensuring the project's consistency with the other ongoing development processes in the country. Apart from the MNP and UNDP, the SC included representatives of other ministries and agencies, such as Ministry of Agriculture, Ministry of Health, National Statistical Service, State Real Property Cadastre and so forth as well as academic institutions and CSOs. For this particular project the National Commission on Environmental Monitoring Activities Coordination considered to serve as the project's inter-institutional Steering Committee. The Committee chaired by the First Deputy Minister of Nature Protection planned to meet on a semi-annually basis (unless otherwise is required) to review the progress of the project and provide guidance and assistance for the resolution of any difficulties encountered during the implementation (if any).

The SC consists of 17 members – representatives of line ministries (MNP prevailing), UNDP, Rio-conventions focal points, SNCOs, NGOs. It planned to meet twice a year to discuss current issues and approve working plans and budgets. Such a big quantity of members makes this body less workable and more consultative, what has been confirmed in interviews with SC members. The council or any kind of working bureau could be more operable and helpful for project purposes.

4.1.6. Replication Approach

A replication approach contains implicitly in the project design and strategy and is expected at all levels. Scaling up was supposed to be through the national acceptance and enforcement of laws on regulating environmental monitoring and information system, and acceptance of developed standards, norms and procedures. Replication was considered mostly on international level, as the project has been designed as a pilot initiative to find sufficient mechanisms to strengthen national environmental information availability and environmental reporting capacity to fulfil country's obligations under the 3 Rio Conventions. Replication and Demonstration activities were expected through awareness raising and training of specialists and individuals from the government offices and NGOs on various aspects of environmental management and monitoring. Production of public good is supposed to have such activities as providing some specific analytical and monitoring, as well as computer and demonstration facilities for the purpose of receiving, analysis and storage of environmental information.

4.1.7. Cost-effectiveness

The main cost-effective factor applicable to the project preparation phase is the compliance with the incremental cost criteria. GEF funds were expected to finance activities that would not take place without GEF funding in Armenia and in this case GEF grant is considered to serve as a starting mechanism to improve national system of environmental monitoring and information. Created institutional and legislative mechanisms are expected to increase national budget, leveraged funds and associated funding for environmental monitoring purposes. To this factor the project seemed to be cost effective, because besides direct governmental support of the project committed at $130000 in cash and in kind, and the government budget allocated to environmental monitoring was more than $2,6M.

Another cost effective factor applicable was a benchmark approach. The GEF funding did not exceed the cost levels of the most relevant UNDP/GEF project in Bulgaria mentioned above (GEF USD 499,000).

4.1.8. UNDP Comparative Advantage

The motivation to assign UNDP as an Implementing Agency was driven by the aim to utilize the project funds in an effective way and use UNDP country office experience and knowledge received under the implementation of the National Capacity Self Assessment (NCSA) project and several projects on the preparation of National communications to Rio conventions.

The project fits into UNDP priorities and programming, basically within the UN Development Assistance Framework (UNDAF), National Priority 4: Promote effective management of natural resources in line

with sustainable development principles, UNDAF Outcome 4: Environment and disaster risk management is integrated into national and local development frameworks; and UNDP Country Programme Action Plan: Programme Component Promoting energy efficiency and Environmental sustainability. The project directly corresponds to the UNDP mission to assist the country in building its capacity in the focal area of environmental protection and management.

4.1.9. Linkages between Project and other Interventions within the Sector

The project with its original multi-focus design serves as a link between different UNDP country projects on socio-economic, democratic and environmental governance, and crisis prevention (disaster risk reduction).

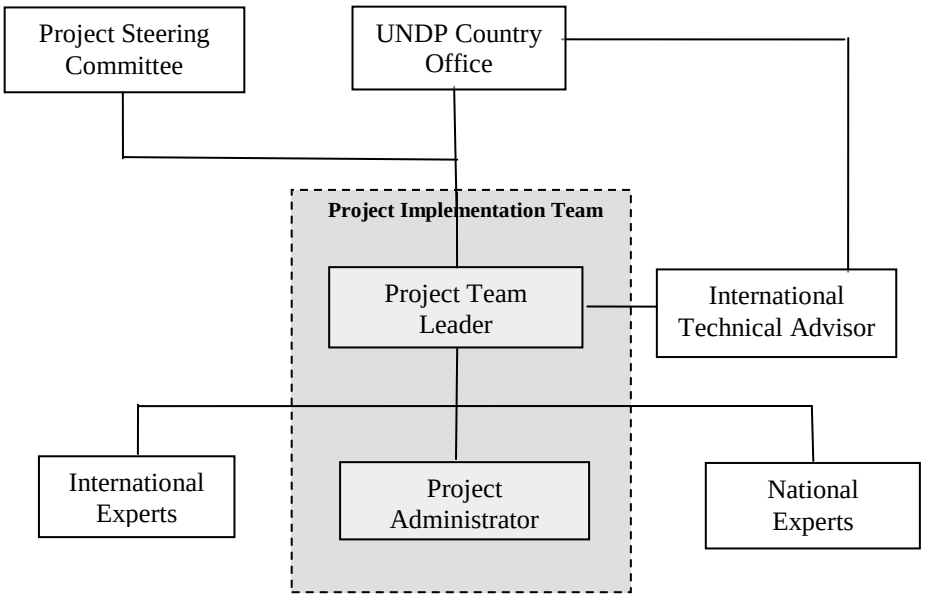
Within the sector of environmental governance the project is closely related to the following current and completed UNDP projects in Armenia: “Developing the Protected Area System of Armenia”, “The GEF Small Grants Programme in Armenia”, “Adaptation to Climate Change Impacts in Mountain Forest Ecosystems of Armenia”, “Enabling Activities for the Preparation of Armenia’s Second National Communication to UNFCCC”, “Enabling Activities for the Preparation of Armenia's Third National Communication to the UNFCCC”, “2010 Biodiversity targets national assessment project”, “Development of the Second National Environmental Action Programme”.

4.1.10.Management Arrangements

UNDP Country Office serves as the GEF Implementing Agency for this project and provides necessary support to the project implementation activities in accordance with UNDP standard rules and procedures, including monitoring and evaluation, budget revisions, disbursements, record keeping, accounting, reporting, auditing, procurement and contracting, assistance for public advocacy purposes, etc.

UNDP Program Manager (AWP coordinator, Project Team Leader) provides overall coordination of the project activities and serves as a financial authorizing officer. The PM/PTL is responsible for planning, implementation quality, reporting, timeliness and effectiveness of the activities carried out and the proper use of funds.

Organizational Structure of the Project.



The Ministry of Nature Protection as a government designated authority responsible for environmental policy and management serves as an Implementing Partner and is responsible for the execution of the project and achievement of the planned project Activities/Outputs. The National Portfolio Director oversees the project on behalf of the ministry and represents the ministry in the decision-making

related to the project implementation. The Project Responsible Person appointed by the ministry to liaise with UNDP and to be in charge of project implementation ensuring its conformity and synergy with the provisions of national environmental policy.

The Project Steering Committee provides political oversight for the project.

A small Project Implementation Team (PIT) headed by the Team leader was contracted by UNDP and placed at the MNP. The Project Team leader (PTL) is responsible for project operations and activities (preparation/updates of project work plans; record keeping, accounting, reporting; drafting of terms of reference, technical specifications and other documents as required; identification, pre-screening of consultants/sub-contractors; coordination and supervision of consultants/sub-contractors/ suppliers, preparation of quarterly and annual work plans, progress reports, etc), acting in consultation with the Project Responsible Person reporting to UNDP Programme Manager.

International and national experts, advisors and consultants have been contracted on a short-term basis for specific tasks

Project monitoring and evaluation was conducted in accordance with the established UNDP and GEF procedures and provided by the project team and the UNDP Country Office with the support from UNDP/GEF. The Logical Framework Matrix with performance and impact indicators formed the basis for the project's M&E system. Detailed schedule of project review mechanisms is presented in the table below:

Management Mechanism	Schedule
Project Steering Committee	Biannually. Once meeting to focus on the work plan for the following year and the second one to focus on project progress/performance.
Stakeholder Workshops and Seminars	These workshops and seminars will be organized on an as needed basis to engage Stakeholders in project processes seek their views and obtain feedback on project activities and progress. The timing of these workshops and seminars will correspond to the achievement of major project milestones.
International Technical Advisor	One mission per year, *timed with the participation to SC meetings.*
External Mid-Term Evaluation (MTE)	To review the progress of the project and its implementation arrangements, review the work plan for the remaining period and assess any areas that need improvements.

4.1.11. General Strengths and Weaknesses of Project Formulation

Strengths:

- Logical and clear project idea and strategy
- Flexibility in strategy provided pilot and exploratory nature of the project
- Good background: originated from successful NCSA project

Weaknesses:

- Ambitious in outcomes and objectives
- Top-down strategic approach
- Weak appreciation of the difference between national and governmental environmental monitoring and information system
- Poor participation of NGOs at the preliminary stage
- Weak risk mitigation strategy

Peculiarity: as a pilot project has a right to make slight deviations and mistakes

4.1.12.Rating of Project Formulation

Implementation approach	S
Project logic /strategy; Indicators)	MS
Country ownership/Drivenness	HS
Stakeholder participation (*)	S
Replication approach	HS
Cost-effectiveness	S
UNDP comparative advantage	HS
Management arrangements	HS
Overall rating of Project Formulation	S

4.2. Implementation

4.2.1. Implementation approach

The project has been implemented mostly according to its work plan, design, and management arrangements designed and slightly reviewed after inception period. The annual work plans (AWP) have been developed after the analysis of lessons of previous periods and also included updating of needs assessment provided by the SC. Agreed by UNDP as IA and MNP as EA such plans were/are the main documents for implementation, budgeting, monitoring and evaluation of the project activities. The Standard Progress Reports (SPR) for each year have been prepared by the PIT and included necessary information on the project resources used, activities and main results related as well as future work plan and budgeting proposal.

During the project implementation the total project staff financed from the GEF budget consisted of 2 full time members of the PTU (Project team Leader and Project Administrator), and 7 part time consultants (International Technical Advisor, National Consultant on environmental information management, National Consultant on Institutional Framework, National Consultant on legal issues, Local Consultant on IT Architecture and Information System, Local Consultant on training, Local consultant on Environmental Monitoring Indicators).

The impression of the evaluator is that the project is professionally managed, with a clear division of responsibilities, and good coordination in place. All staff and consultants have a good overview of the status of the project, in terms of activities and budget, and remaining tasks to be implemented. Their TORs are/were relevant, clear, and comprehensive.

Although there were a few delays in the beginning of the Project (hiring Project Manager, tenders re-announcing in early 2009, etc), this did not affect the quality of the project activities and results and its cost effectiveness except for the relevant delay of the project completion, as it was time extended for 8 months.

4.2.2. Logical Framework

The approach to Log Frame is fully in line with UN/GEF recommendations. Comparison of the PLF with AWPs, PIRs, APRs obviously shows that the LFA was definitely used as a baseline for the project implementation and as a management and M&E tool on the basis of adaptive approach at all management levels: UNDP as IA, MNP as EA, SC as consultative body of stakeholders, PIT and temporary consultants/advisers, and different beneficiaries. In addition to the general Revised Logical Framework, the special Excel form for annual project planning and control includes logical frames for output targets, quality, issues, lessons learned and project monitoring schedule. A special UNDP corporative Excel form for Annual Project Reviews (APR) and Project Implementation Reports (PIR) also includes an overall information of the project basic information, activities and expected outputs, budget, performance

indicators, stakeholders, etc. The impression of evaluator is that the overall project management and decision making process was definitely identical to the designed procedures with addition of national peculiarities of different informal discussions between parties at preliminary stages aimed at finding consensus before making final decision.

4.2.3. Effective Partnership Arrangements Established for Implementation of the Project with Relevant Stakeholders Involved in the Country/Region

It is necessary to note, that in general the project succeeded to develop constructive and cooperative relations between main stakeholders and to prevent acute tensions and sharp conflicts.

From the other hand, a partnership cooperation actually established in the project does not fit completely with what has been planned in the project design and even at the inception phase. There are the following main discrepancies:

- Not all governmental bodies and national authorities planned in the project proposal have been actively involved in the project process and implementation, e.g. the role of the Ministries of Territorial Administration, Urban Development, Education and Science, Emergency Situations, Trade and Economic Development, State committees for Water systems and Real-Estate Cadastre was weak, and is unclear to the moment
- The project did not manage to involve actively marz governors' administrations and Local Self-Governing Bodies in the project implementation and even in preliminary assessment of the current results
- The same concerns academic Institutions and universities, and private sector
- The project was not able to establish expected partnership agreements with the relevant Stakeholders with identification of planned activities, expected results, allocated resources and the mode of operation among the parties either.

The MTE also noted that that some beneficiaries had not realized the importance of the respective Project issues, particularly, the ideas of legal framework and institutional improvements; some SC members were not motivated to participate in the project, in some cases because of not seeing direct relations to their fields of expertise, and even MTE underlined that the knowledge of some SC members in environmental monitoring system, particularly indicators, was rather limited. To the end of the project the situation became slightly better thankful to several awareness raising efforts supported by the project, but in general remains quite the same, and even more – a few stakeholders decreased their activity by the end of the project (mostly those waiting for fast benefits, and due to political changes)

We also want to note that the project did not directly promote establishing close cooperation and links with donors' community working on the similar issues on sectoral environmental monitoring and information system.

Not all stakeholders of the project were acting equal and adequate to their anticipated functions (Annex 8). Except MNP the most active have been the State Council on Statistics, Ministry of Health, Environmental Impact Monitoring Centre, and a few environmental NGOs. Others behaved themselves mostly as observers, even 3 Rio-conventions focal points. The interest of the last started to grow only to the end of the project.

After several key interviews the evaluator can underline with confidence that these discrepancies were not resulted from the weakness of the project management but from the ambitious idea to develop a national system of environmental management and information on the unique platform in a very limited time with a particularly small resources. The level of civil society in Armenia (including government and public bodies, academician institutes and universities, and private business) is that while there are still no clear incentive to unite the numerous environmental information resources and monitoring capabilities under the jurisdiction of various agencies in a general national system for mutual use. The process of capacity building for such system is too complicated and needs more time for awareness raising and incentives growing.

Nevertheless the definite positive steps to this target have been created by the project (see also below), and specifically in case of the growing involvement of environmental NGOs. By the end of the project it became clear that a great boost can be given to the project process by so called Aarhus centres which represent a set of 15 regional offices over the whole country and position themselves as public intermediaries between governmental bodies and civil society, especially on the environmental issues. Mobilization of Aarhus centres to maintain the project achievements in application and enforcement of updated legislation and environmental standards can provide a great support for the project sustainability by implementing appropriate outreach and public awareness campaigns.

Another growing point on partnership arrangements found by the project concerns the indirect involvement of the private sector in the process of environmental monitoring by force of development of regulations for the Law "On Realizing Self Control Towards Nature Protection Legislation".

Moreover, during project implementation the project staff, consultants and contractors forced themselves to consult with and make use of the skills, experience, and knowledge of the appropriate government entities, nongovernmental organizations, community groups, private sector entities, and academic institutions in the design, implementation, and evaluation of different project activities, especially in the form of public hearings on changes in legislation.

Taking into account these findings, and regular routine procedure of stakeholder cooperation actually used by the project in the form of SC meeting, as well as workshops and seminars, the overall partnership organised in the project can be assessed as effective, developing and growing. For instance, there were 4 SC's meetings organized where the members reviewed the progress of the project and discussed plans as well as provided guidance and assistance for solving any difficulties. All general decisions were reflected in the minutes of SC's meetings.

However, to support the sustainability of its results the project should give more concern to the widening of the set of those bodies that have an interest or stake in the outcomes of the Project, particularly inviting the wider scope of them to the final stakeholder workshop.

4.2.4. Feedback from M&E Activities Used for Adaptive Management

After inception phase a feedback from M&E activities was not rather high in total. The MTE did not provide any strong recommendations although there were a few important findings on weaknesses in the SC work, "risk for the project's long-term sustainability in aging of human resources engaged in the environmental monitoring system", and specific concern to the project Web-site.

An audit of the Statement of Expenditure for the period from 1 January, 2008 to 31 December, 2010 as well as Statement of Assets and Equipment and Statement of Cash Position also did not find any disadvantages.

More feedback has been provided by the analysis of annual results provided by UNDP, PTU, MNP and SC. A number of few activities, such as maintenance of MNP WEB-site, purchasing computers and lab equipment for Environmental Monitoring Centre, support of municipal WEB-sites, etc., have been added to the annual work plan in connection with the current small budget savings. These additions did not change the project strategy but provided opportunities to maintain some important specific activities and also increase the interest of few key project partners in its results and outcomes. All these project changes were articulated in writing and then considered and approved by the SC.

4.2.5. Financial Planning

Financial planning process in the project in the limits of GEF and governmental co-financing resources was very effective. It included strong financial controls, including reporting, and planning that as a feedback of M&E allow the project management to make informed decisions regarding the budget at any time, allows for a proper and timely flow of funds, and for the payment of satisfactory project deliverables. As mentioned above, the bidding procedures assumed in the project provided possibility to save some funds for widening initial project scope and workplan. Undisbursed funds were promptly allocated for additional project related activities.

Government co-financing was adequate and timely. $100000 in cash was committed to support implementation of the first component/outcome, and $30,000 in kind was given in the form of supporting PTU office, communication and miscellaneous (4th component/outcome). There was sufficient clarity in the reported co-financing to substantiate in-kind and cash co-financing

The project also managed to leverage co-financing resources (Annex 4) from UNDP/Czech Trust Fund for the study tour for 12 national specialists from MNP and different SNCOs (mainly information and monitoring centres) to Czech Republic on Capacity Building of Armenian Public Employees on Environmental Monitoring, Information Management and Reporting. For this event the total budget of the project increased from initial $605,000 to $626,675

Unfortunately, the project did not leverage more funds, but at the same time provided indirect possibilities for further funding of its follow-up activities and impacts (see below).

Among shortcomings of the project financial management, I would like to note a low concern of the project management to the associated activities of other donors on the same monitoring and environmental information system topics and supporting joint links and mutual strategies. It is more important in the case that the project has lost a link to proposed financing for associated activities of $8,000,000 (USAID project with proposed financing ended in 2008[6]), and at the same time it is obvious from different documents assessed (e.g. Republic Of Armenia. MNP. Ministerial Report. 2007 – 2011. Yerevan 2011) that funding of corresponding activities under a number of the projects of other donors during last three years was not less than $3,000,000. Establishing of links with other donors and mutual efforts on environmental monitoring and information system could provide more assurance for the sustainability of the project outcomes and impacts follow-up.

4.2.6. Monitoring and Evaluation

The project expenditures are heavily controlled under UNDP financial system Atlas, and all current planning and monitoring activities as well as for measuring progress and performance were carried out according to the UNDP corporate Handbook on Planning, Monitoring and Evaluating for Development Results (2002, reviewed in 2009). In these cases no special project operational manuals or guidelines for monitoring and evaluation have been developed.

Although the special M&E budget has not been planned, the project, as it was mentioned above, uses a UNDP corporate comprehensive system of cross-linked working documents (PLF, AWP, detailed annual Logs, PIR-APR, SPR) that provides current M&E planning and implementation. This system considers well articulation of baseline conditions, methodology and roles, and responsibilities are well articulated. M&E plan was well conceived by all project partners and sufficiently articulated to monitor specific project results and track progress toward achieving objectives.

From the EA's side the project has been subject to regular review of the Steering Committee that took place once or twice a year, and on the quaternary base - of the PTU evaluation and reporting prepared in close cooperation with National Project Coordinator.

Double-sided (both IA and EA) cross reviews made project progress and financial reporting of good quality and timeliness

The shortcomings of the system of performance and progress indicators, and risk mitigation strategy have been discussed in Chapter 4.1. The Project Team Leader while interviewing noted that he also was not satisfied with several indicators, because of their vagueness and unfeasibility. On the other hand, to clarify the actual results the project used an updating system of quality logs, risk logs, and issues logs which provided opportunities for actual management response, current control and evaluation of each activity. In my opinion, especially the Project logs system was detailed enough for a daily project management and monitoring of all detailed project results – including deadlines and budget per specific activity and sub-activity, necessary measures to mitigate progress jeopardy. The UNDP corporate

[6] Frankly speaking, this was a cost of the whole USAID project on Water Management Strengthening in Armenia, with a monitoring activities pillow around $1M.

PIR/APR system was also flexible and helpful for clarification of vague general indicators in annual context.

Key M&E events took place according to the project workplan with small shifts which did not influence the quality of evaluations (Annex 10).

4.2.7. Management. Coordination and Operational Issues

UNDP Country Office (IA)

According to the project design, the project was supervised by the UNDP country office with a key mandated officer: Programme Analyst, Environmental Governance. UNDP served in accordance with designed management arrangements described in p. 4.1.10. The UNDP supervision over the Executing Agency was adequate, transparent and frankly, focused on results and responsive, professional and timeliness. The cooperation between IA and EA is quite fruitful and effective in all relations.

Ministry of Nature Protection (EA)

Similar to IA, the EA project team was also oriented on results, professional and timeliness, candor and responsive, adequate in management, budgeting and procurement. Having more current contacts with other donors than UNDP, MNP managed to find additional funds to support project impact and sustainability despite the lack of governmental funding (see below), organize close contacts and cooperation with active project partners and keep transparency for different stakeholders, including NGOs and private sector. At the same time the rigid system of state governance did not allow MNP team to implement the idea to combine different national resources on environmental monitoring and information in joint common system. Moreover, inflexibility of governmental management from time to time caused certain difficulties in the project implementation, for example, it was almost impossible to organize promptly key stakeholders meetings or on-line adequate discussion of the hot problems with key civil servants. Indeed, it was also difficult to control some unpredictable risks, e.g. to react to some changes in government, for example, when monitoring of natural resources was transferred to the Ministry of Energy and this pillow suddenly became out of the project attention

4.2.8. General Strengths and Weaknesses of Project Implementation

Strengths:

- Professional and effective adaptive management based on creative approach to M&E and LFA application
- Cost-efficient financial planning
- Successful cooperation with Aarhus centres, and mobilization of their capacities
- Fruitful cooperation between implementing agency (UNDP) and executing agency (MNP)

Weaknesses:

- Weak participation of the secondary project partners and stakeholders in the project implementation and evaluation of the intermediate results
- Poor cooperation with donors community

4.2.9. Rating of Project Implementation

Implementation approach	HS
Effective partnership cooperation	MS
M&E, and adaptive management	HS
Financial planning	HS
Overall rating of Project Implementation	S

4.3. Results

4.3.1. Overall results (Achievement of Objectives). Outputs and Outcomes.

It was noted in the beginning of Chapter 4.1., that the project concept causes discrepant impressions. The same can be underlined for the project results. The overall results of the project are of high quality and impressive, but formal comparison of these results with project indicators (Annexes 5,6) and targeted activities (Annex 7), outcomes and outputs shows that a lot was not achieved. In this case we can make a point that the flexibility of the project design that provided a wide range of possibilities at the inception phase, which can be assessed as a project design asset, appeared to be a project shortage at the phase of terminal evaluation. It means that the project missed a point when the expected results might be specified and formulated in more targeted and less ambitious form. It is quite clear from Annex 7 that all shortcomings have become transparent already in 2010, and the most convenient moment for this was an MTE finalized in December 2010. Therefore, we have to conclude that MTE was not successful and this fact decreases our expert evaluation of the overall project management.

In this case, taking into account the ambiguous character of the project results (we've got enough evidence of the project success during country visit, and on the other hand, cannot pass beyond formal assessment of the project outputs and outcomes relating to the project indicators), we suggested the bilateral approach to evaluate the project outputs and outcomes reflected in two tables below. This approach provides two columns of evaluation and rating (both from the same expert, but from different points of view): Formal Assessment and Rating, and Actual Expert Assessment and Rating.

Bilateral Assessment of the Project's Outputs

Expected Outcomes	Expected Outputs	Formal assessment and rating	Expert assessment and Actual rating
Outcome 1: The legal and regulatory framework is strengthened to enable a coordinated multi-agency information management and monitoring system	**Output 1.1:** The Laws and Codes contain the proper legislation, which will provide the necessary provisions to strengthen the existing environmental information management and monitoring system Ambitious in terms of time and resources	**MS -** The Laws and Codes have been prepared, but are in line of the governmental/parliament circulation. The risk of failure still remains active	**HS –** a great work of multisectoral and cross-sectoral consultations have been fulfilled. Packages of the draft laws on changes and amendments in the fundamental environmental codes and laws (3 codes, 6 laws) have been developed together with numerous regulations (35, including 13 related to the "Law on self-monitoring") which will fill the legislative gaps and/or ensure regulation of information management and monitoring system
	Output 1.2: The legislation details the appropriate institutional framework Ambitious in terms of time and resources	MS – necessary arrangements have been prepared but not applied yet	HS – Complicated and comprehensive work has been done to prepare the proposal package on revision of the RA current legislation that assumes integrated framework of environmental monitoring and information system. Conceptual approaches/principles on legislative reforms and reviewed institutional framework of EMIMS have been elaborated.
Outcome 2: The institutional framework capacity is strengthened to enable a coordinated multi-agency information management and monitoring system	**Output 2.1:** An environmental monitoring coordination mechanism is established under the MNP	U – no mechanism established except for informal consultations	MS – a mechanism is not documented, but the necessary cross-links for further development (including those under support of UNECE project) have been established on the basis of a system of cross-sectoral target-oriented workshops and SC meetings
	Output 2.2: The relevant institutions for a coordinated multi-agency information management and monitoring system have the necessary capacity to fulfil their mandate	HS – all institutions to date passed an official procedure to change their charters	HS – all institutions to date passed an official procedure to change their charters

Expected Outcomes	Expected Outputs	Formal assessment and rating	Expert assessment and Actual rating
	Output 2.3: Training curricula for environmental information management and monitoring system developed and integrated into the in-service training system for State Servants	HS – the relevant training curricula has been developed and integrated	HS – the relevant training curricula has been developed and integrated
Outcome 3: Environmental information management and monitoring standards, norms, procedures and IT architectures are upgraded and meet current national and international environmental information and monitoring needs	**Output 3.1:** Standards, norms, procedures and architectures are developed to support the implementation of an effective environmental information management and monitoring system Ambitious in terms of time and resources for the whole scope of the issue	MS-S. Only a part of necessary standards and architectures developed. Such norms and procedures as observations and sampling will be developed as a follow up of the project	HS – a large number of necessary and critically important documents, especially standards and architectures were developed and agreed on with key stakeholders despite the lack of funding and time
Outcome 4: Monitoring, Learning, Adaptive Feedback & Evaluation	**Output 4.1:** Project well managed including progress reports as per UNDP and GEF standards.	**S-** Project well managed except for a few delays and shortcomings in risk management	**S-** Project well managed except for a few delays and shortcomings in risk management
	Output 4.2: Lessons learned documented and disseminated in Armenia and throughout the region.	MU – no documentary evidence of lessons learned dissemination	HS - Developed and launched Project web site, as a prototype of public environmental information web portal with permanently growing auditory. Started process of the follow up activities on the strengthening of the national EMIMS with international and foreign donors

Bilateral Assessment of the Project's Outcomes

Expected Outcomes	Formal assessment and rating	Expert assessment and Actual rating
Outcome 1: The legal and regulatory framework is strengthened to enable a coordinated multi-agency information management and monitoring system	**MS –MU.** Coordinated multi-agency information management and monitoring system was not enabled. A few opportunities to strengthen the legal and regulatory framework is provided	**S -** The legal and regulatory framework is strengthened. Packages of the draft laws on changes and amendments to the fundamental environmental codes and laws filled the legislative gaps and/or ensure regulation of information management and monitoring system
Outcome 2: The institutional framework capacity is strengthened to enable a coordinated multi-agency information management and monitoring system	**MS –MU.** Coordinated multi-agency information management and monitoring system was not enabled. Sufficient results have been achieved only in reviewing of organization charters of mandated SNCOs	HS – all institutions to date passed an official procedure to change their charters, as well as a number of training curricula have been developed and integrated in in-service training system for civil and public servants
Outcome 3: Environmental information management and monitoring standards, norms, procedures and IT architectures are upgraded and meet current national and international environmental information and monitoring needs	MS-MU. Standards and norms are not upgraded yet, but only developed for their further adoption by the state parliament	HS – a large number of necessary and critically important documents, especially standards and architectures were developed and agreed on with key stakeholders despite the lack of funding and time
Outcome 4: Monitoring, Learning, Adaptive Feedback & Evaluation	MS -S. The project was well managed except for shortcomings with risk management and weak MTE.	S - The project was well managed; MTE and audit did not make strong recommendations. A few shortcomings in risk management, dissemination of the results and MTE results

Even a quick glance at these table shows, that although overall project results can be assessed as successful and highly successful, the formal rating is relatively low. Nevertheless, below we shall use the actual informal evaluation results, because the project indeed provided very important benefits and

built capacity for the further effective development of the national EMIMS, and the global environmental benefits of the project in regional and capacity building cases are obvious.

Summarizing the major project outcomes, we can highlight the following successful results serving as growing points for follow up actions

- A package of laws and regulations on EMIMS
- Capacity assessment and mandating of bodies and institutes responsible for EMIMS,
- Identification of needs and incentives of the main stakeholders and start of the dialog and agreements process,
- An initial package of national environmental standards and norms based on the requirements of 3 Rio conventions for further development and creation of a national EMIMS,
- Although the package of laws and regulation is not adopted by Parliament, the process of collecting environmental information in systematic way has been started by National Statistic service and by line ministries involved,
- Awareness raising and active participation of Aarhus centres in the development of EMIMS,
- Educational and training curricula developed and adopted by the responsible governmental bodies, and implemented in universities and thematic training courses.
- WEB-site of the project as a portal for environmental information management,
- Saving project funds and small targeted institutional maintenance for key stakeholders by extra contingent activities, which support interest of key partners to the project strategy/idea.

Besides these main growing points we would like to underline the following project's achievements additional to the main outcomes and outputs:

- Capacities built to decrease significantly the expenses for national overall environmental monitoring by savings from stopping duplicate activities of different state organizations
- Supporting WEB-sites of several municipalities
- Stimulation of GIS-based approach for the further development of EMIMS on the background of separate GIS systems existing in different organizations
- Promotion of different forms of environmental education, e.g. proposal to open a new teaching discipline in universities on environmental information management; training modules and manual for trainers on environmental policy, information management, and sustainable natural resources management; formation of libraries and reference base on environmental information management in universities

4.3.2. Impact Assessment, Catalytic Role and Replications

The main project impact is that it indeed has launched the comprehensive national programme of the development of environmental monitoring and information management system, which goes far beyond 3 Rio conventions and aims the national development goal in general

The project by its nature and design provided a number of impacts, ideas and follow-up at different scales[7] which can be arranged in the following blocks:

<u>Formal initial outcomes and outputs not fully achieved by the project, but with high potential to be finalized in future (direct impact)</u>

- Further development of environmental legislation. There are efficient initiatives in MNP and maintained by NGOs to develop several environmental laws: Law on Monitoring, Law on

[7] The Project's contribution to all activities/projects/ideas listed below is quite different: from directly creating a background and building capacities for further development (e.g. for environmental standards and procedures) to indirect pushing up and informal support of some relevant measures (e.g. State programme for ecosystem monitoring of lake Sevan). In any case the project sowed a big number of development ideas in different directions).

Environmental and Natural Resources Information System, and initiatives on the further matching of branch regulations

- Improving of National communications to basic environmental conventions, and Line Ministries regular reports by those data collected, structured and analyzed within the EMIMS
- Development of cross-sectoral national EMIMS, agency coordination mechanism, and public environmental information service
- Further development of standards, norms, procedures, IT architectures for monitoring of soils, biodiversity, waste products as well as the preparation of a full set of observation and sampling environmental standards of other life support environments.
- Development of a national environmental monitoring and information portal on the basis of the project Web-site, MNP and municipal sites supported by the project

Other donors' and governmental Initiatives for the development of EMIMS and environmental management (mostly indirect impact and decisions support through awareness raising and exchange of ideas between project stakeholders)

A number of initiatives appeared in Armenia in the field of environmental management since the project start. It is obvious that it was not a single cause of this, but made a great input in the background and understanding of the current issues and planning activities. For instance, there are the following governmental and branch programmes and initiatives (including donors' financed), which uses/used the project results:

- National Statistical Service prepared a perspective working plan for the development of the national environmental information system for 2013-2015
- State programme for ecosystem monitoring of lake Sevan
- Strategy on National environmental security and plan for 2008-2012
- State programme on urban ecology
- State project on the development of regional classifiers and municipal databases (includes a block of environmental information)
- State programme on the forest monitoring in several areas of Armenia
- United Nations Economic Commission For Europe - ENPI Shared Environment Information System (SEIS) project
- Cadastre of greenhouse gases (UNDP-GEF)
- Agricultural competitiveness project (WB-GEF), including activities on monitoring of agriproducts and agroecosystems
- Twinning project on the System of Integrated Pollution Prevention and Control (IPPC)
- GEF-UNDP small grants programme with a number of supporting activities for environmental monitoring, e.g. Pilot programme on register of pollutants as a model for agreement of standards between stakeholders
- OSCE Civil Activity for Secure Environment - small grants programme to support activities of the civil society organizations, e.g. GIS-based model on environmental information and monitoring management
- Regional USAID projects, e.g. "Clean Water" and "Clean Energy"
- Monitoring project of American University of Armenia
- Etc.

Catalytic role for the development and awareness raising objectives

Generally the project performed a conceptual breach in the field of environmental monitoring in Armenia. If even 5 years ago the collection of environmental information has been a sluggish inertial residual of the Soviet period, the project initiated a hot discussion on the objectives of this process, its methods, main stakeholders and beneficiaries. On the background of fast developing civil society

initiatives it provides further grow of the interests and incentives to the transparent environmental information. The conflict between requirements and demands of the civil society and governmental opportunities became obvious, and the project decreased its tension to definite extent in due time. At present the project create a few specific capacities which indirectly promote the strengthening of further civic initiatives and governmental development strategy, e.g.:

- Including of environmental issues into different governmental development programmes
- Use of environmental arguments in the programmes of all political parties, that was clear during the past Parliament elections
- Support and promoting development of WEB-sites, including those on municipal level
- A system of Aarhus centres in Armenia practically applies the project achievements (reports, web-resources, etc) in their current work and provides a feedback for the further improvement of the project outcomes. On the basis of the project studies the Aaurhus process in Armenia increase environmental incentives on the part of the Civic Initiatives Forum.
- Including of environmental assessment documents in the strategic documents of big enterprises, and enforcement of the State Law "On Realizing Self Control Towards Nature Protection Legislation"
- Country Human Development Index: UNDP seek to use environmental indicators in the set of indicators of sustainable development

Obvious increase of people awareness in the field of environmental indicators leads to their activity in social life. E.g. more than 80 applications from environmental NGOs and local people have been received by the State Inspectorate on Nature Protection. About 50% have been subjected to inspection, and about 50% of them were confirmed. At the same time NGOs consider that although the national system of environmental monitoring based on the "bottom up approach" and self-control could be more effective and sufficient in the long term, but at present the governmental environmental control and information monitoring system is a priority, because the institute of civil control is rather weak and undeveloped.

Catalytic role for the environmental objectives

It is obvious that improved and structured sustainable and transparent EMIMS would indirectly catalyze improvements in ecological status, and reduction in stress on ecological systems. According to the achieved results, the first impact will be connected with such life support environments as air and water, and partly forests. Soils, waste products, noise are still not under coverage that might be catalyzed in the short term.

Catalytic role for educational objectives

The project obviously confirmed that environmental/ecological education and training are among major demands of civil society, but not among major priorities of the government. A few project steps in this direction, e.g. support of the environmental literature data bases in universities, including of environmental curricula prepared within the project in governmental educational standards, appearance of a few specific courses in international environmental legislation, environmental management, etc., shows a high growing interest of youth to these issues. In this case the UNDP initiative on the project targeted at further development of environmental education and awareness raising could be very successful and timely.

As it is clear from what has been said above, the catalytic role of the project is very close to what has been approached in the project design, and demonstrates all levels from the bottom to the top : production of public goods, demonstration, replication, and scaling up. Scaling up at international level is not yet obvious, but a success of this project and its lessons prove it can be replicated at the international level, at least in major CIS countries, which carry the same difficulties in developing modern environmental monitoring and information management system.

4.3.3. Relevance and Global Environmental Benefits

Relevance.

The project's outcomes are consistent with the GEF strategies. The overall logic from a global perspective was to launch NCSAs process in GEF recipient countries aimed to assess countries opportunities and actual possibilities to implement global conventions through two main approaches: three main thematic assessments: climate change, biodiversity and land degradation, and an assessment to identify cross-cutting issues. The process, based on the NCSA, for addressing country priorities identified in the NCSA and action plan was called CB2-GEF. CB2-Armenia project was the only focusing on environmental monitoring. To date, the project outcomes are consistent with a new GEF5 Cross-Cutting Capacity Development (CCCD) strategy. :

Achieving global environmental benefits is through strengthening national capacities to better fulfil its obligations under the 3 Rio Conventions and other global conventions, in particular to strengthen/introduce a national integrated and coordinated environmental information management and monitoring system

The country priorities in the case of environmental monitoring and management also still closely correspond to GEF environmental strategies, which are obvious from the analysis of the ongoing environmental and development national programmes and initiatives listed in the project Document and in ch. 4.3.2.

4.3.4. Effectiveness & Efficiency

Effectiveness.

As discussed above, the project indicators and outcomes as defined in the Log Frame, on the one hand, were too ambitious, and on the other hand have limited explanatory power, and do not fully reflect all project achievements which are described separately more in detail. Despite these difficulties the project has in general achieved its objectives, and actually has significantly exceeded those results consistent with the project time and funding, especially in terms of the project impacts and follow-ups.

However, there still remain key barriers preventing well-developed and effective environmental monitoring coordination mechanism, which provide difficulties in seeking, collection and analysis of the major environmental data for improving national environmental reporting capacity under the 3 Rio Conventions, and the public access to transparent environmental information.

The project also formally did not achieve its ambitious objective to ensure long term sustainability by well funding of the EMIMS from the state budget, mainly as a result of the consequences from the financial crisis. On the other hand, as a result of the lack of budgeting, the key stakeholders started trying fundraising and managed to find additional sources for follow up actions and supporting results sustainability.

Efficiency.

As discussed earlier, the project is GEF MSP grant with a total budget of $605,000, including $130,000 of governmental contribution. Additional co-financing of leveraged funds was granted also by the Czech Trust Fund -$21,675. Associated financing designed as from USAID project in amount of 8,000,000 USD was not provided. To our expert opinion, as we have noted already, the project activities planned under this limited budget were too ambitious, but the pilot nature of the project gave a chance for seeking approaches and for shortcomings. In these conditions the project management found the way of the most effective use of financial resources, restricting them to the most effective pilot actions, and moreover, managed even to save some funds for extending the initial project scope and work plan for some effective measures. As a result of this flexible adaptive approach, the scope of activities implemented corresponds well to the total budget. Several randomly selected activities have been screened for cost-effectiveness, and have been found to be cost-effective and priced competitively based on effective tender procedure.

4.3.5. Mainstreaming

As it was noted above, the objectives and outcomes of the project conform to the UNDP country programme strategies as well as GEF-required outcomes towards global environmental benefits.

Summarizing the information discussed above, in case of mainstreaming we can underline the following peculiarities of the project:

- The project obviously will have an impact on stipulating sustainable natural resource management with local groups, improvement in policy framework for resource allocation and distribution. The remarkable examples of positive results for civil society are strengthening of the knowledge and capacities of NGOs, mainly through cooperation with Aarhus centres, and strengthening of the environmental educational and training opportunities
- The project direct impacts were targeted at the improvement of the national legislation and regulations that promote updating and modernization of governance approaches at the state level, and also the project made a few effective interventions (support of web-sites) at the municipal level
- Indirectly the project contributed to better preparations to cope with natural disasters through its cooperation on the elaboration of environmental indicators with Armenian State Hydrometeorological and Monitoring Service, which acts as a part (SNCO) of the Ministry of Emergency system
- Role of NGOs, academic sector, universities and other public entities has been discussed earlier and demonstrate a growing rate in the project activities and follow-up
- The gender issue was not raised by the project specifically, but the project team composition, representatives of the key stakeholders, composition of the SC shows obviously that there were no gender restrictions during project implementation: ladies are even more active in the discussions and decision making in the project issues rather than the stronger sex.

4.3.6. Rating of Project Results

Achievement of Objectives/Outcomes	S
Catalytic Role and Replications	HS
Relevance	HS (R- relevant)
Effectiveness	S
Efficiency	S
Overall rating of Project Results	S

4.3.7. Sustainability

The sustainability of the project outcomes considerably depends on the success of its continued benefits and impacts discussed in ch. 4.3.2. To the general expert assessment the project benefits seem to be highly sustainable and an operation and maintenance of the EMIMS are expected to be continued in the long-run as well, thanks also to national legislation and growing capacities of civil society, NGOs and private business as well on the local level. Generally the project design itself were initially aimed at the long-term sustainability as it provided capacity building for the development of the integrated and comprehensive national EMIMS using the requirements of 3 Rio conventions as a starting point for that.

The implementation of the EMIMS are designed to continue and to be financed from governmental sources allocated for national priorities and programmes as well as by several donors' projects for at least another three years after the GEF assistance will be terminated in August 2012. After next two or three years, the EMIMS is expected to be even more operational and effective, because the process of the circulation of the full package of laws and regulations (listed in Annex 9) is supposed to be finalized to the end of 2013 or a bit earlier, and the legislation will come in full force. The government (MNP) has a great wish to ensure the follow-up actions on the development of EMIMS.

UNDP as an implementing agency also plays a key role in the sustainability of the project results: UNDAP is fully interrelated with governmental priorities, UNDP-Armenia projects are usually more effective by cost-outcomes ratio than in many other countries, UNDP-Armenia environmental pillow are the biggest by a number of various projects and also big by amount of funds allocated.

The following groups of risks in accordance with GEF guidelines for TE were separately evaluated and rated on the likelihood and extent that risks will impede sustainability.

Financial risks that may jeopardize the sustainability of project outcomes are high, as it is obvious from the drop of direct governmental resources for environmental monitoring purposes in 2011 and 2012 discussed above. From the other hand, the environmental monitoring issues are reflected in a number of state programmes listed earlier, and approximate analysis of such funds shows even higher guess of cash funding ($2.5-3M per year) that has been supposed by Indicator 1 in the project Log Frame. The comparable figures guess the funding of consistent environmental monitoring and information management and mainstreaming activities by other donors. Moreover, the "RA Law on Conducting Self-monitoring for Fulfilment of Requirements of the Environmental Legislation" which supposedly will be enforced until the end of 2012, can make a great push to the environmental monitoring activity of private enterprises (and a few evidences of this process are clear: e.g. procurement of expensive laboratory equipment by big mining enterprises).

To clarify the steps to mitigate these risks the project should make more accurate calculation of associated funds for coherent current and planning activities. The possible ways to increase the fund flow for EMIMS through stipulating private business initiatives, court ecological expertise and other stakeholders for environmental information inquiry were also discussed while TE with different stakeholders and project partners

Socio-economic risks. Due to its multilateral nature and big number of different stakeholders the project has various socio-economic risks of its sustainability. I see the following major risks of this type:

- Key ministries and other stakeholders still have no common view on the status and funding of the national environmental monitoring and information centre, even on the necessity of its development. A number of ministries do not hurry up to transfer their monitoring and information collection functions to a unified (or single) common body, considering the law enforcement as a more effective way for national integrated EMIMS than institutional and structural changes in the government. Nevertheless, the most effective way to solve the problem at the moment could be a support to organize such entity under the supervision of the National Statistical Service, because it is independent from the Government, has very wide authorities from President to collect information and is enough flexible to work with public and private sectors. In the future it is important to overcome rigid governmental approach to changing cooperation modality by government structure. The more long-term future of the common national centre for environmental monitoring is considered as the independent public entity with governmental/president participation, but it is not viable at the moment.
- At the moment the governmental and president structures are the only source providing political and economic sustainability of information systems in Armenia, but unfortunately they are not initiative. On the other hand, the incentives of initiative public sectors are not yet clear, but the growing points from environmental NGOs, especially Aarhus centres, and from private sector are tracked, and should be assessed by the main project stakeholders for the follow up supporting actions in future
- New Parliament elected in May 2012 also can provide delays for circulation and passing laws and regularities drafts produced by the project. This risk is hard to be evaluated, but a guess is that it is not high, because the dominant party saved the majority in the Parliament and other parties have definitely positive environmental policies in their strategic programmes. In any case, the drafts of major legislative documents have passed the first hearings in the past Parliament that confirmed the success supposed. The main cause of the possible delays is a low level of ecological culture and environmental management skills of the majority of deputies,

their high politicized rate, and dependence on investors and private business. In this case the awareness raising activities targeted at new deputies could be helpful.

Institutional Framework and Governance Risks

- High turnover of skilled governmental staff and civil servants due to low salaries can also delay project follow up actions and decrease the sustainability of the project results. This is a critical risk for the sustainability of the project's outcomes, because one of the specificities of Armenia type of governance is high dependence on personal relations. In this case for this project highly dependent on governmental authorities the political will from key people is crucial, and personally many project follow ups unfortunately depend on a couple of clearly identified project informal leaders, who initially designed the project and its implementation, serve as the project's locomotives and consider its success as a starting point for further development of the national EMIMS. Fortunately to the project sustainability these persons realize the situation well and undertake clear actions for the increasing of knowledge and skills of their staff, promoting training and educational programmes in universities, creating of phased self-supporting system.
- Due to the first risk discussed in the socio-economic block, and lack of project funds, the integration of the EMIMS designed to the moment and reflected in draft legislation with other components not yet reflected (soils, waste products, norms and standards for observations and sampling) are not clear. It is a risk of long-term additional matching process which can decrease the effectiveness of the project results and follow up. The main stakeholders from NSS should definitely include the corresponding activities in their current plans not to miss the integrity of the initially designed EMIMS as its main advantage.
- WEB-site of the project as a background for the further national Web-portal for EMIMS is one of the main advantages of the project, and growth of visitors is quite transparent. Despite web-hosting is purchased for 2 years ahead, the content needs permanent assistance, development and updating. The sources for these actions are not clear enough, although the support from Aarhus centres, UNDP and MNP was voiced. The confirmation of this support and development plan of the Web-portal is needed.

Environmental risks of the project which are not tracked as natural processes do not influence the project, except for force-majeure at the national level that can crush majority of environmental oriented national programmes (e.g. natural disasters and catastrophes)

Summarizing the discussion on the sustainability risks, it is obvious to underline the necessity of the programme/plan for these risks mitigation that should be agreed on between stakeholders before the project end.

Project sustainability ratings

Financial	Likely (L): negligible risks to sustainability, with key outcomes expected to continue into the foreseeable future
Socio-economic	Moderately Likely (ML): moderate risks, but expectations that at least some outcomes will be sustained
Institutional framework and governance	Moderately Likely (ML): moderate risks, but expectations that at least some outcomes will be sustained
Environmental	n/a
Overall sustainability rating	**Moderately Likely (ML)**

4.3.8. Country Ownership

Country ownership by the end of the project is even more developed than at the beginning. Although expectations of a few stakeholders were not realized, the overall cooperation between key governmental bodies and public partners has developed. As it was discussed above, the project played a

great catalytic role in the concept of national EMIMS and supported to launch several new country initiatives supported and/or initiated by the government and listed in 4.3.2., including Governmental strategy on the development of environmental monitoring with corresponding Action Plan. It evidently confirms that the project fits within the environmental sector development priorities, and also that new environmental laws and regulations on development of national EMIMS have been elaborated with the direct involvement from government officials and will be adopted into the national strategies, policies and legal codes. The government has maintained its promised financial commitment to the project

4.3.9. Contribution to Upgrading Skills of the National Staff

As it was noted in several chapters above, the project provided a definite contribution to upgrading skills of the national staff. The benefits of this type are direct and indirect both manifesting at national and local levels and in different sectors. The following table explains briefly what has been contributed.

<table>
<tr><td colspan="4">Directs outputs and outcomes</td></tr>
<tr><td>National level</td><td>Local level</td><td>Civil servants level</td><td>Public sector and NGOs level</td></tr>
<tr><td>Project web-site as a prototype of national environmental monitoring web-portal

Training needs assessment on strengthening of environmental monitoring and reporting capacity of Armenia

State institutions responsibility for the training of public/civil servants identified

Training modules and curricula elaborated and applied by national environmental education system

The “Guideline for Assessment of the State of Environment” and “Model Format for Preparation of National Reports and Communications” prepared</td><td>Support to the Web sites on municipal level</td><td>Training for civil and public servants on “Environmental Information Management and Reporting” (106 trained personnel)

Study Tours For high level national staff (project stakeholder representatives): to the Czech Republic in Capacity Building on Environmental Monitoring, Information Management and Reporting, and to Transboundary Air Pollution Monitoring Station in Amberd

Thematic modules elaborated, published and institutionalized in the RA Civil Servant’s Council Decision №618-A: a) Legal regulation of environmental information flows and monitoring; b) Environmental information management and reporting; c) Environmental information systems and IT management;

Sessions of thematic training are piloted for: civil servants - on Land/Forest Information Management and Reporting</td><td>Thematic training for public servants - on Environmental Information Demand, Quality, Accessibility/Availability and Integrated Environmental Databases;

Aarhus training for NGOs and public servants

REC joint trainings for Civil/Public Servants

On-the-job individual training of stakeholder specialists (civil/public servants)</td></tr>
<tr><td colspan="4">Indirect impacts</td></tr>
<tr><td>National level</td><td>Local level</td><td>Civil servants level</td><td>Public sector and NGOs level</td></tr>
<tr><td>University courses on environmental management and environmental information management, international legislation and regularities,

“Testing” approach for the</td><td>Raising interest to environmental information</td><td>Increase of environmental component soundness in governmental documents</td><td>Environmental training stipulated

A special environmental pillow became more active in Aarhus process in Armenia

New knowledge management</td></tr>
</table>

assessing results and indicators of environmental trainings		Dialog with donors on environmental management issues became more substantial and effective	initiatives launched IT equipment and software is provided to Project stakeholders for data collection/retrieval, storage, processing, is also used for training purposes use

5. Conclusions, recommendations & lessons learnt

5.1. Corrective actions for the design, implementation, monitoring and evaluation of the project

- The design of such projects should be less ambitious in time and expected outcomes. The overall frame strategy could be better clarified and targeted during inception stage and after MTE. Each of the project objectives was rather time-demanding and required multiple consecutive years and more resources for successful implementation.
- The design and implementation of such comprehensive and multilateral projects should provide close permanent cooperation with other projects in close areas, supporting joint links and mutual strategies. IA and EA both should develop and update the information data base on state and donors projects/programmes.
- To support the flexibility of the project design and implementation strategy the project had to use less key indicators. All indicators should be reliable, especially if to use financial indicators in the countries with high inflation rate and unsustainable economy
- To avoid risks it is not enough to assess and define them. The mechanism of risk mitigation should be cleared from the project start and regularly updated during project implementation
- Stakeholders' participation and interaction considered to be critical for such type of the projects. From one hand, a few SC members were not motivated to participate in the project, and from the other, not all relevant governmental bodies and national authorities have been actively involved in the project process and implementation. Also marz governors' administrations and Local Self-Governing Bodies were not involved actively in the project implementation and even in preliminary assessment of the current results
- A big quantity of members in SC makes this body less workable and more consultative. The council or any kind of working bureau of SC could be more operable and helpful for project purposes

5.2. Actions to follow up or reinforce initial benefits from the project

The key agencies responsible for the development of EMIMS (MNP and NSS) fully understand the main strategy of follow up and reinforcement of the project benefits. The project has launched the national programme of the development of environmental monitoring and information management system, which goes far beyond 3 Rio conventions requirements. Project also plays a great catalytic role (see ch. 4.3.2.) on the strengthening of different environmentally oriented national projects and programmes.

The following groups of catalyzed follow up actions (see more details in ch. 4.3.2.) have been identified during this evaluation:

- initial outcomes and outputs not fully achieved by the project, but with high potential to be finalized in future
- awareness raising and knowledge management
- development and cooperation in governmental and branch programmes and initiatives (including donors' financed)

Except these actions we would like to pay attention on the remaining risks that are still valid and can jeopardize project impacts and sustainability, and should be taken into account in the process of the project impact monitoring and follow up activities:

- legislation proposed by the project and identified standards, norms and procedures are not adopted by the Government and/or the Parliament or require additional resources to be monitored and implemented, which might not be available
- contradictions between different national authorities such as ministries, services, committees (and even divisions of the same ministries) on the use and management of environmental information are still taking place, and moreover, there is inconsistency with demands and requirements of private business and civil society. So no institutional changes may occur despite new legislation and regulations for EMIMS adopted.
- High turnover of experienced and skilled personnel in state institutions because of low salaries.
- At present time the effectiveness of the state environmental monitoring and information centre as an EMIMS focal point within any line ministry supposed to be low. More successful could be an intersectoral independent agency, e.g. under President's apparatus.

5.3. Proposals for future directions underlining main objectives

Such proposals supporting sustainability of the project results have been already done above in ch. 4.3.7. Here we would like to underline the principal ones:

- National programme for the development of EMIMS is still needed, including action plan, terms and responsibilities of all parties involved. It should overview and take into account and coordinate, to identify gaps and take into account all sectoral programmes, donors projects, government and president initiatives, demands and requirements of private and civil sectors, as well as possible sources for funding and implementation. The project just created a necessary background for this comprehensive programme, and identified priorities.
- The government and NSS still acts as driving force for the EMIMS process, but next steps should stipulate measures for active involvement of public and private sectors in the EMIMS implementation and support. The project just traced possible mechanisms and approached to this in form of regulations for the enforcement of the Law of self-monitoring, of close cooperation with Aarhus centres, etc. Incentives of self-support of the EMIMS from the grassroots level (bottom up approach) should be identifies and maintained by the responsible governmental bodies, which will promote the sustainability and development of national (not only governmental!) environmental monitoring system.
- Great attention should be given in nearest future to the development of the education/knowledge system of environmental information management. In other words, all interested parties from grassroots level to responsible civil servants have to know what to do with different environmental information, and from the other hand, what specific information is required in different cases if necessary.
- The project shows excellent results in the development of environmental monitoring of air and water, especially pollution aspects. Unfortunately (and this is a common situation in the world, and especially in many developing countries), the land degradation and biodiversity conservation control are still at the low level, and were not covered by the project activities at the same rate. This does not mean that last issues are less hazardous to the nature and economics, and people health than air and water pollution, but that these aspects are more complicated in terms of monitoring and information management. Nevertheless, the government and other parties involved should address their activities to land and biodiversity problems. The project has provided a roadmap for these measures.

5.4. Best and worst practices in addressing issues relating to relevance, performance and success

The main project impact is that it indeed has launched the comprehensive national programme of the development of environmental monitoring and information management system, which goes far beyond 3 Rio conventions and aims the national development goal in general

This project has its own original design and has no exact prototype. Nevertheless, except a few shortcomings in Logical Framework, mainly indicators identification, the project strategy is very logic, and did not change a lot during the inception and even implementation phase. This Log Frame was further used during the implementation for the development of overall and annual work plans, and as a management and M&E tool. Risk assessment for the project was well prepared and actually defined key causes which could jeopardize the project results.

The project due to its high replicability can be considered as a model for the countries with transition economies, and as a creative workshop or art school for the design and implementation of such projects

General strengths and shortcomings of project formulation and implementation, and main successful results have been summarized in chs. 4.1.11, 4.2.8., 4.3.1., 4.3.2. Below we would like to highlight the major lessons learnt:

- Being originated from successful NCSA project, the flexible character of the Project strategy provided pilot and exploratory nature of the project implementation. However, the flexibility and ambitious character of the project design, which can be assessed as a project design asset at the inception phase, appeared to be a project shortage at the phase of terminal evaluation. The unsuccessful MTE was a critical point of M&E plan, when the expected results might be specified and formulated in more targeted and less ambitious form, and the project formal rating suffered from this,
- The project design and implementation images like a fully state governmental action, and the system of environmental monitoring was developed mostly as a state and governmental application than for wide national use. Nevertheless, this top-down approach and relatively weak participation of nongovernmental (NGOs and private) sector in the project design and implementation could also be considered more as a national peculiarity and project specificity than as a shortcoming. To our expert opinion, the nongovernmental sector in Armenia is not well developed and strengthened enough for such objectives. In this situation the government acts as a driving force, building capacities for public and private sectors (especially developing transparent environmental information system, or in the case of public hearings and discussions of the laws and regulations developed) to be involved later on. E.g., by the end of the project it became clear that a great boost can be given to the project process by so called Aarhus centres which represent a set of 15 regional offices over the whole country and position themselves as public intermediaries between governmental bodies and civil society, especially on the environmental issues,
- The project built capacities for participatory discussions and decision making but did not find a way for creative coordination and cooperation of the full range of current and possible stakeholders of EMIMS, as well as with donors community working on the similar issues on sectoral environmental monitoring and information system, that provides a growing risk of the project results sustainability after the project end,
- Weak risk mitigation strategy led to that some predictable fears have come true (e.g. risk #2), and a number of others are still valid and jeopardize the project results sustainability,
- The project did not leverage much funds, but at the same time provided indirect possibilities for further funding of its follow-up activities and impacts.