

LAKE ARPI NATIONAL PARK and Sanctuaries (Akhuryan Gorge, Ardenis and Alvar)



INVESTMENT & BUSINESS PLAN

PERIOD 2009-2014
draft

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Foreword

Over the past year members of the Management Planning Team of Lake Arpi National Park (LANP) negotiated agreements on the planning process and on substantive issues arising from the competing interests in the designated project area. The Planning Team members developed policies and management guidelines for the sustainable use of the communal lands located inside and outside the LANP and the sustainable development issues related to its Support Zone. The recommendations made by the Team in the resulting Management Plan have set the framework for this Investment & Business Plan. Both Plans are complementary to each other and reflect an interconnected set of agreements that together describe a consensus among the Planning Team members. The land and resource-use policies presented in both plans are synchronized with the policies and guidelines elaborated by Working Groups involved in the over-arching Integrated Spatial Land Use Planning (ISLUP) for the Shirak target area as part of this project. The results of the ISLUP process are summarized in a document called "ISLUP Atlas".

The recommendations incorporated into both Plans are an attempt to satisfy all of the interests in the LANP target area to the greatest extent possible. While each interest group represented by the Planning Team may not have achieved all of its original objectives, each is able to agree that its interests have been accommodated to an acceptable degree by this package of recommendations and policies.

This plan covers both the investment needs identified for setting up the LANP (administration, infrastructure, protection, outreach, tourism, etc.), the annual operational costs of the LANP over a five-year period, and a revenue forecast. As such it serves the purpose of guiding the final phase of the KfW funded project as well as providing a future perspective on the management and financing of the LANP.

It is evident that the sustainable protection and responsible management of the Lake Arpi National Park to be provided by a capable team of professionals will come at a cost. Apart from Core Funding expected to be provided by the Ministry of Nature Protection, parts of the operational costs of the LANP will be offset by the revenues to be generated from licenses and permits issued for the multiple use opportunities offered by the LANP. Potential LANP budget shortfalls, however, have to be covered by sources the Business Plan part will assist in identifying.

The rationale of this plan is to carefully assess the current and future financial situation of the target area by comparing investment- and forecasted operational costs with the revenues expected to be generated by the LANP. The overall goal of the Business Plan part is to provide a rational Exit Strategy for the initial donor commitment, aiming at the financial sustainability of the Lake Arpi National Park and associated Sanctuaries to be reached within a five-year timeline.

It is hoped that the Lake Arpi National Park will serve as a unique showcase for responsible and progressive ecosystem management for the economic benefit of local stakeholders and biodiversity conservation.

I take this opportunity to express my sincere thanks to the members of the Planning Team as elected representatives of the Lake Arpi National Park Support Zone and representatives from NGOs active in the target area for their input and enthusiasm in making the Management Plan and this supporting Investment & Business Plan a reality.

My thanks are extended to my colleagues from the WWF Team, in particular to Magnus Sylven who provided support and editorial services for the documents, Karen Manvelyan for his efficient organizational efforts in the field and his technical input, and Frank Mörschel for his technical support. My special gratitude goes to Tigran Melkumyan for providing all maps for the documents and being available at all times beyond the call of duty. I am grateful to Anna Tonoyan for her patience with me and her efficiency as my translator throughout the planning process.

Dr. Goetz Schuerholz
Duncan, BC, Canada
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EXECUTIVE SUMMARY

PURPOSE OF THIS INVESTMENT and BUSINESS PLAN

- Highlight the achievements made to date in the process of establishing the Lake Arpi National Park (LANP) and associated Sanctuaries.
- Highlight the key activities and investments needed for the LANP to become fully operational in accordance with the Management Plan.
- Provide stakeholders with information on the LANP's current operational and financial status and on strategies to be adopted to achieve its financial sustainability.
- To provide a meaningful document for donors interested in financing the harmonic, environmentally compatible and sustainable economic development of the Ashotsk/Javakheti Region.

This Business Plan is based on the Vision Statement, Goals and Management Prescriptions elaborated by the LANP stakeholders as part of the participatory management planning process for the LANP, its Support Zone and associated Sanctuaries. The plan provides financial spreadsheets on investment needs of the LANP and analyses its current and future operational costs. It compares expected operational costs with revenues expected to be progressively generated through sustainable water supply to downstream communities, resource use and tourism. Based on this information the Business Plan part will propose strategies that may enable the LANP to achieve financial sustainability.

This Investment & Business Plan covers the five-year period 2009-2014 in compliance with the proposed Exit Strategy for the LANP, namely to reach financial self-sufficiency by the year 2014.

BACKGROUND

1) Goals and Objectives of the LANP. The Key objective related to the LANP and associated Sanctuaries is to provide sustainable protection to ecosystems currently under-represented by the country's protected area system while permitting continuing resource use to be compatible with the overriding conservation objective for the target area.

2) Vision for the LANP and its Mission. The LANP adopts the Vision of the LANP Management Plan with focus on the following objectives and strategies:

- To establish and maintain the LANP as a viable conservation and renewable resource use area.
- To ensure the continuing support of the Support Zone communities through a participatory management of the LANP and Sanctuaries and the sustainable economic development of the LANP Support Zone.

- To develop sustainable resource use and tourism opportunities.
- To achieve financial sustainability through revenues generated from sustainable resource use in the LANP and Sanctuaries and other opportunities offered, such as tourism, and fines.

3) Achievements of the LANP. Since its official registration in 2002 substantial progress has been made towards achieving the overall LANP goals and objectives, in particular related to the legal establishment of the LANP and associated three Sanctuaries, and the participatory planning and preparation of the LANP Management Plan, which involved representatives of Support Zone communities, NGOs, Government Institutions and the Private Sector. One of the greatest achievements, undoubtedly, is the enthusiastic support and ownership by Support Zone Constituents in the Conservation Areas and the planned co-management strategy.

4) LANP Administration. The Lake Arpi National Park will operate under the umbrella of the Ministry of Nature Protection empowering an elected LANP Management Board to assume overall responsibility for the management of the park and sanctuaries. The LANP Management Board will be composed of representatives from the Ministry of Nature Protection, Ministry of Agriculture, Ministry of Territorial Administration, Ministry of Economic Cooperation and Development, one representative each of the Regional Governor's Office (Head of the Environment Department), the Transboundary Coordination Board, the local NGO Forum, and five representatives of Support Zone communities. The Management Board will be responsible for the approval and monitoring of the annual budget and operational plan of the LANP and will deal with other issues of concern related to the LANP and Support Zone.

For the day-to-day operation and management of the LANP a Park Authority will be established. The staff structure of the Park Authority, as proposed by the LANP Management Plan, requires 17 permanent employees. Eleven qualified, trained, motivated and well equipped staff supported by a six member support team and 18 Community Rangers for a National Park of 25,000 hectares appear sufficient to implement the proposed Management Programs and to protect the ecological integrity of the park's ecosystems. The LANP Headquarter is located at Lake Arpi.

5) Zoning of the LANP. The LANP has a total of 25,357 hectares. The LANP is composed of a Western Section with a Core Zone of 7,352 hectares - signed with the Border Control Authority regarding the Western Core Zone of the LANP and a "Traditional Use Zone" of 13,098 hectares entirely composed of communal lands dedicated to the LANP by Support Zone communities. The Eastern Section of the LANP has a Core Zone of 4,907 hectares. Associated with the LANP are two Wetland Sanctuaries (Alvar Sanctuary of 429 hectares and Ardenis Sanctuary of 99 hectares) and the Akhuryan Gorge Sanctuary of 1,374 hectares. The Core Zone of the LANP is free of consumptive resource use. The Traditional Use Zone has been set aside for sustainable livestock grazing, haying, bee-keeping, and tourist activities with major focus on Lake Arpi.

PENDING ISSUES

1) Official Approval of the Management Plan Government approval of the LANP Management Plan is a prerequisite for the acceptance of the LANP by the Support Zone communities.

2) Use Rights in the Traditional Use Zone of the LANP Since all of the LANP's Traditional Use Zone (half the size of the LANP) constitutes communal lands, it is of utmost importance for the Government of Armenia to honor existing user rights under controlled conditions, to be compatible with the stated conservation objectives of the LANP.

3) Community Empowerment Community Empowerment will be vital to the sustainable protection and management of the LANP. This is hoped to be achieved through the strong representation of Support Zone communities on the proposed LANP Management Board pending Government approval.

4) Community Rangers The Management Plan proposes the recruitment of 18 Community Rangers to assist the three LANP Rangers in their work focusing on the Traditional Use Zone of the LANP. The Community Rangers, recruited from and employed by the Support Zone communities, will be funded through the Support Zone Budget for an interim period of five years (until 2014) at which time this component will be incorporated into the financial structure of the Support Zone communities. The proposed arrangement depends on Government approval of the Management Plan, specifically with respect to guaranteeing continuing grandfathered rights to communal lands located in the Traditional Use Zone of the LANP and the proposed rights by Support Zone communities to co-manage the LANP.

5) Lack of Infrastructure To-date no infrastructure related to the LANP has been established. The LANP will only be fully operational with all infrastructure in place, as detailed by the Management Plan and this Business Plan.

KEY SUCCESS FACTORS

- Financial Support by the German Government for the establishment of the Lake Arpi National Park and associated Sanctuaries and the sustainable economic development of the LANP's Support Zone.
- Commitment by the Government of Armenia and its Regional Representation to the Project.
- Active support by local Communities to the LANP and Sanctuaries, which has been created through the participatory multi-stakeholder planning approach characterizing the elaboration of the LANP Management Plan and Support Zone Economic Development Plan.

IMPLEMENTATION STRATEGIES

1) The Management Plan of the Lake Arpi National Park. The Management Plan for the LANP provides the key policies and management guidelines related to

resource use and infrastructure development. The LANP Management Plan is a collaborative effort that is based on a participatory planning approach involving elected representatives of all Communities of the target area assembled in five work groups responsible for elaborating the policies and management guidelines for the Management Plan. The Management Plan covers a 20-year time horizon.

2) Strategic Direction. To ensure coherent, purposeful and effective implementation of the different policies and operational guidelines provided by the Management Plan and this Investment & Business Plan, the major thrust of the LANP development process is directed to:

- Implementing the Goal Plans of this Investment & Business Plan;
- Cooperation between Support Zone communities and Government in jointly achieving the LANP goals identified by their representatives in the LANP Management Plan;
- Establishing an effective and efficient LANP Management Board.

A concerted effort is needed by all parties involved to promote the LANP as a useful model for progressive land and resource management, compatible with overriding conservation objectives

3) Incentive-Based Performance. Motivation of LANP personnel will be promoted through an incentive-based performance evaluation system, to be implemented for each staff position/category on an annual basis.

4) Community Support and Participation. The LANP will closely collaborate with the Support Zone communities in an effort to achieve the goals set by the Support Zone Economic Development Plan related to the LANP.

5) Inter-Agency Cooperation. Formal cooperation agreements will be signed by the LANP Authority with Law Enforcement Agencies related to environmental law enforcement and the Border Control Authority. A special agreement will be signed with the Russian Military Authority regarding the Western Core Zone of the LANP. The LANP Management Board will be represented on the Transboundary Coordination Board.

6) Completion of the KfW sponsored Project. Central to the development strategy of the LANP will be the successful completion of the current Project in accordance with the infrastructure investment needs specified by this Investment & Business Plan. Of priority importance are the establishment of the LANP Headquarter, LANP access gates, and the timely establishment of the LANP Management Board and LANP Authority.

7) Development of the Tourism Sector. The development of the tourism sector will be a joint effort between the LANP Authority and the proposed Support Zone Tourism Committee.

8) Management Approach and Performance Monitoring. Recognizing that biodiversity holds different values for different people, the LANP Management Planning Working Groups have addressed and accommodated the different demands by consensus. The need to forge existing and new partnerships with various stakeholders as a way of conflict mitigation requires cooperation between the LANP Authority, the LANP Management Board and local resource users. It will be pivotal to the success of the LANP to prove to the Support Zone Constituents that the LANP will provide tangible benefits and assist in the economic enhancement of the Support Zone.

With the Business Plan and the Management Plan firmly entrenched, the LANP Authority will be able to carry out an effective activity-based planning and budgeting. A performance monitoring system will become an integral part of the annual budget planning process and will assist in identifying and/or precluding unnecessary activity delays.

9) Sustainable Financing. The LANP's financial sustainability is a priority issue to be addressed during this plan period. The systematic approach towards sustainable financing will include several revenue generating opportunities outlined by this Investment & Business Plan.

GOAL PLANS

1) Administration Program. The Administration Program of the LANP covers three Sub-Programs: (a) "Human Resources" dealing with the park's organizational structure, personnel requirements, functions and responsibilities, training etc., (b) "Accounting and Finance", and (c) "Maintenance" of equipment and infrastructure. The main objective of the Administration Program is to provide support services to the different Management Programs in terms of personnel, finance, procurement, and infrastructure and equipment maintenance. Key Infrastructure related to the Administration Program are: the LANP Headquarter, the LANP boundary survey and demarcation, and the construction of the LANP access gates.

2) Protection Program. The overall objective of this Program is the effective protection of the ecological integrity of the LANP's ecosystems in order to safeguard sustainable use opportunities for the benefit of Support Zone communities, the country of Armenia and visitors from abroad. This will be achieved through the services of a well trained, equipped and motivated LANP staff supported by 18 Community Rangers provided by Support Zone communities.

3) Resource Use Program. This Management Program is key to the success of the LANP by safeguarding the rights of Support Zone communities to continue with the traditional leasing system of communal lands dedicated to the LANP's Traditional Use Zone.

4) Tourism, Environmental Awareness and Public Relations Program. The LANP offers a unique learning experience to other communities and the country of Armenia at large. Its participatory multi-stakeholder management planning approach, the consensus decisions on a diversity of sustainable resource use opportunities for the benefit of all Support Zone communities, and its democratically elected Management

Board constitute a unique learning module that should be made known throughout the country and beyond. Tourism opportunities offered by the LANP are limited, primarily related to the use of Lake Arpi and the three associated Sanctuaries for bird-watching, camping, and recreational angling. Activities such as cross-country skiing, hiking and mountain biking will take place in both, the Support Zone and the Traditional Use Zone of the LANP.

Infrastructure affiliated with this Management Program concentrates on the Ghazanchi Visitor Centre, and facilities located mostly in the Support Zone of the LANP. Only one of the three camp sites planned for the Tourism Program is situated inside the Traditional Use Zone at the shoreline of Lake Arpi, the second inside the Akhuryan Sanctuary, and the third close to the Shaghik Community in the Support Zone.

5) Research and Monitoring Program. In accordance with the LANP Management Plan, the “Research and Monitoring Program” has been incorporated into the consolidated Program “Tourism, Environmental Awareness and Public Relations” for practical reasons. The Research and Monitoring needs for the LANP are relatively few, therefore not requiring a special staff position. Related activities will mainly focus on Lake Arpi and the Traditional Use Zone of the LANP requiring sound monitoring in order to prevent adverse environmental impacts, which may be caused through unsustainable land- and resource use. No specific infrastructure is planned for the Research and Monitoring Program,

FINANCIAL EVALUATION

1) Capital Investment. The total capital investment for the LANP is an estimated EUR 964,040. The majority of the capital investments are expected to be completed by September 2010. The projected investments are a prerequisite for the LANP to become fully operational. Investments cover all infrastructure, equipment, and the furnishing of buildings and structures specified by the spreadsheets appended to this plan.

2) Operational Costs. Operational costs cover all expenses related to personnel (wages, travel allowance, training), infrastructure, and equipment and vehicle maintenance and replacement as specified by the spreadsheets appended to this Investment & Business Plan. The forecasts for the LANP’s total Operational Budget after capital investments will be an estimated EUR 85,000 by the Year 2010 (Table 9.2). With an annual inflation rate of 3% the LANP’s Operational Budget will grow to approximately EUR 122,000 by the Year 2014. The additional expenses within 2014 are caused by the replacement costs of the LANP vehicles.

3) Projected Revenues Generated by the LANP. Projected revenues by the LANP are composed of Core funding provided by the Ministry of Nature Protection and income to be generated from: (a) resource use inside the Traditional Use Zone of the LANP, (b) tourism and fishing, (c) the Support Zone Development Fund (remuneration from water use by downstream communities), (d) the Caucasus Protected Areas Fund, and (e) donations resulting from LANP performed fund-raising. The revenue calculation compared to the Operational Budget is based on the premise that all revenues generated by the LANP through the sale of resource

use licenses and permits, concessions, gate fees, fishing, and fund-raising will be retained by the LANP to be paid into the Operational LANP Budget Fund.

The projected revenues for the LANP on completion of the LANP infrastructure development may produce a budget surplus of approximately EUR 10,000, a safe buffer to be re-invested into the LANP Operational Budget Fund for contingencies. Revenues are expected to progressively increase as a result of improved resource use management and improved marketing of the opportunities offered by the LANP.

4) Sustainable Financing of the LANP. The Exit Strategy of this Business Plan is for the LANP to reach financial self-sufficiency by the Year 2014. This is expected to be achieved entirely through revenues to be generated through sustainable resource use, tourism, the Caucasus Protected Areas Fund, and – eventually - remittance through the use of drinking- and irrigation water used by downstream communities, and the continuing commitment by the Government of Armenia to provide sustainable Core Funding that covers the personnel costs of the LANP.

CONCLUSIONS AND RECOMMENDATIONS

Although the LANP could eventually generate a surplus cash flow from projected revenues, it is prudent to provide for additional contingency funds in case the forecasts fall short of the expectations.

The prospects of the LANP to find international support are excellent considering that the LANP probably is the first of its kind within the Commonwealth of Independent States (CIS), which has been established in a truly participatory fashion to be co-managed by the LANP Support Zone communities and the Government of Armenia. The LANP is expected to serve as a model for a co-managed protected area capable of generating sufficient revenues from sustainable resource use and other sources to cover its operational costs.

Acronyms used

ABM	Agency of Bioresources Management
BMZ	German Ministry of Economic Development
BSAP	Biodiversity Strategy and Action Plan
CAMPFIRE	Communal Areas Management Program For Indigenous Resources
CBD	Convention on Biological Diversity
CBNRM	Community Based Natural Resource Management
CIS	Community of Independent States
GoA	Government of Armenia
IUCN	International Union for Nature Conservation
KfW	German Bank for Reconstruction and Development (“Kreditanstalt für Wiederaufbau”)
LANP	Lake Arpi National Park
MNP	Ministry of Nature Protection
MoU	Memorandum of Understanding
NGO	Non Governmental Non-for Profit Organization
NP	National Park
PA	Protected Area
R&M	Research and Monitoring
MA	Ministry of Agriculture
SNCO	State Non-Commercial Organisations
WWF	World Wide Fund for Nature

Lake Arpi National Park and Associated Sanctuaries Business Plan 2009-2014

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1. OVERVIEW

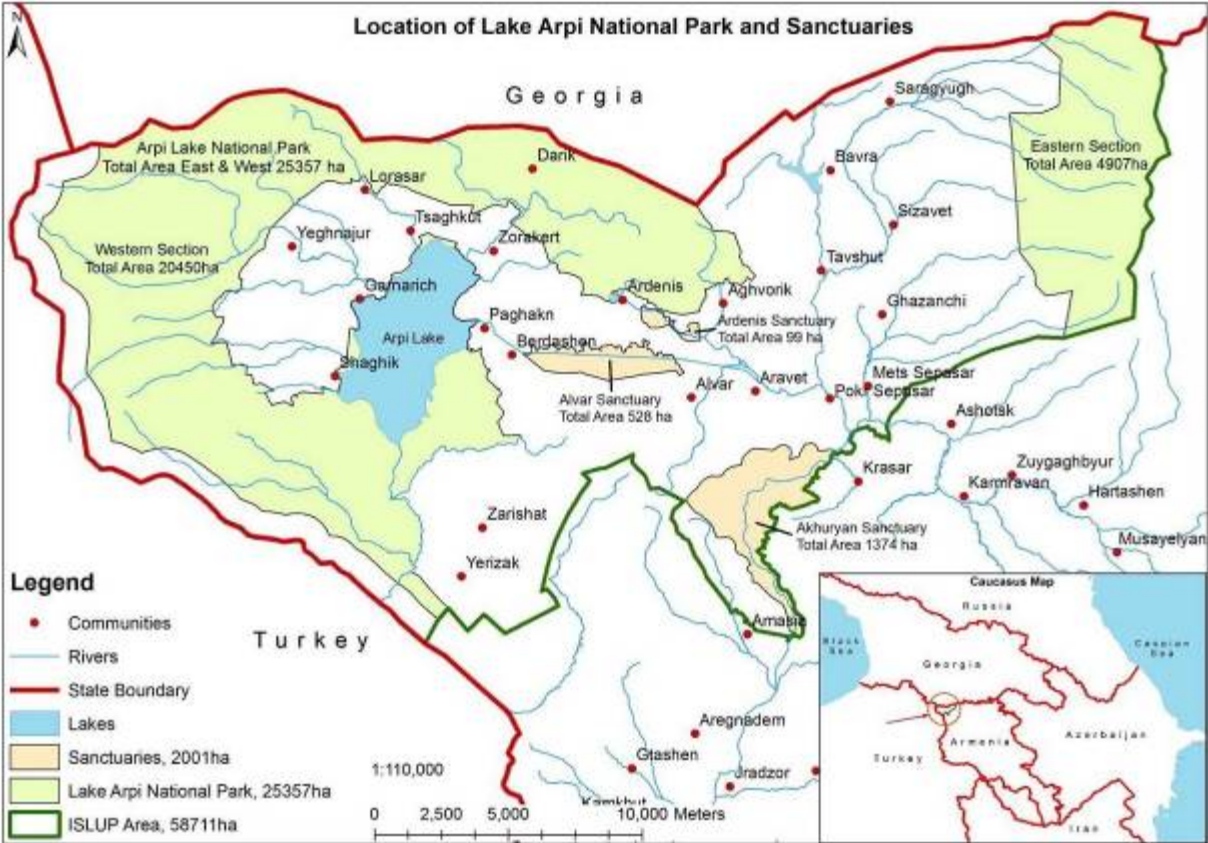
1.1 Introduction

Following its independence in 1991, Armenia's transformation process from a socialist central planning system to a market economy significantly affected rural areas where it led to a breakdown of economic structures and social services resulting in a high un-employment rate. Due to the lack of economic alternatives, numerous families reverted to a lifestyle centered on animal husbandry and subsistence agriculture. Poverty and the very high dependency on natural resources characterizing Armenia's predominantly rural economy are recognized root causes for the unsustainable utilization of natural resources resulting in growing deterioration of pastures, forest destruction, depletion of wildlife, and numerous other environmental problems - the target area of the Lake Arpi National Park and Ashotsk/Javakheti Plateau not being an exception.

The establishment of the LANP and Sanctuaries forms part of the "Caucasus Initiative", launched by the German Ministry of Co-operation and Development (BMZ), with focus on biodiversity conservation in the unique Caucasus Ecoregion and the promotion of trans-boundary cooperation for biodiversity conservation as one field of co-operation between Armenia and Georgia.

Following a feasibility assessment in 2003, the countries of Armenia and Georgia unanimously agreed on conservation efforts, financially supported by Germany through its Bank for Reconstruction and Development (KfW), to be concentrated on the Transboundary Javakheti-Shirak Priority Conservation Area (see Map 1.1). The target area straddles the border region between Turkey, Armenia and Georgia. Focus of this initiative is the establishment of a National Park and wetland conservation areas on either side of the international border and the sustainable development of the respective Support Zones of the conservation units.

The project to establish Lake Arpi National Park was launched in 2008, implemented by the World Wide Fund for Nature on behalf of of Armenia's Ministry of Nature Protection and with financial assistance from KfW. On completion and agreement of the LANP boundaries, Lake Arpi National Park was confirmed by the Government of the Republic of Armenia through Decision No. 405-N on the 16th of April 2009 (in compliance with the Part 1, Article 5 of the RA Law "On specially protected nature areas" and with the article 9 of the RA Law "On state non-commercial organizations" approving the establishment of "Lake Arpi National Park" in the Shirak Province as well as the "Lake Arpi National Park" state non-commercial organization (SNCO)".



Map 1.1: Size and Location of Lake Arpi National Park and Sanctuaries

1.2 The LANP Investment & Business Plan

The objectives of this plan are to:

- Highlight the achievements made to date in the process of establishing a functional LANP.
- Highlight the key activities and interventions needed for the LANP to become fully operational in accordance with the Management Plan.
- Provide stakeholders with information on the LANP’s current operational and financial status and on strategies to be adopted to achieve financial sustainability.
- To provide a meaningful document for donors interested in financing the harmonic, environmentally compatible and sustainable economic development of the Ashotsk/Javakheti Region.

This Investment & Business Plan is based on the Vision Statement, Goals and Management Prescriptions elaborated by the LANP stakeholders as part of the participatory management planning process for the target area. The Business Plan provides detailed financial spreadsheets on investment needs of the LANP and analyses its future operational costs. It compares expected operational costs with revenues expected to be generated through sustainable resource use, tourism, etc.

Based on this information the Investment & Business Plan will propose strategies that may enable the LANP to achieve financial sustainability within the timeline of this plan (2009-2014).

A review of the Business Plan part is recommended for the Year 2011 in order to check the validity of the financial forecasts after completion of the infrastructure development specified by the Management Plan and budgeted for by this plan.

1.3 Goals and Objectives of the LANP

The Key objective related to the LANP and associated Sanctuaries is to provide sustainable protection to ecosystems currently under-represented by the country's protected area system while permitting continuing resource use to be compatible with the overriding conservation objective for the target area.

Based on this long-term objective, the goals and short-term objectives are defined as follows:

Goal 1: Sustainable protection of the LANP's biodiversity and ecological integrity.

This will be achieved through:

- Zoning the LANP into different use areas;
- Implementing the Management Programs elaborated for the LANP Management Plan which guide the sustainable use and administration of the target area;
- Implementing the Management Plan through a competent, well trained and -equipped Team of professionals reporting to a Management Board;
- Demarcating the LANP- and Sanctuary boundaries and controlling access and resources use within;
- Establishing close collaboration between LANP administration, Community Rangers and resource users;
- Collaborating with the authorities for the Georgian National Park which will share a common border with the LANP, defining and implementing joint protection and use policies and jointly enforcing the rules and regulations applied to both areas;
- Collaborating with licensed resource users, Support Zone Constituents and leaseholders in defining joint protection and use policies and enforcement of rules and regulations applied to the LANP and associated Sanctuaries.

Goal 2: Commitment by the Regional Authority, Support Zone communities and LANP and Sanctuary users to the harmonic development and protection of the

conservation areas in accordance with the Management Plan and supporting Business Plan.

This will be achieved through:

- Promoting the importance of the LANP and sustainable Support Zone development on a national, regional and local level;
- Establishing the LANP and Support Zone as a useful model for community-based and operated land use management;
- Proving to the Support Zone Constituents that the LANP and Sanctuaries provide direct and indirect economic and social benefits.

Goal 3: The economic development of the Region and the Support Zone of the LANP is enhanced through the creation of the LANP.

This will be achieved through:

- Implementing the Management Plan and Business Plan and promoting the economic development of the LANP and the Shirak Region;
- Generating benefits to constituents through the use of LANP resources;
- Developing capacity of the co-managed LANP personnel and user groups and ensuring know-how transfer related to well-targeted and compatible Support Zone activities;
- Improving natural resource management and **protection of high quality water sources** originating from the LANP;
- Promoting inter-ministerial and international donor support for the benefit of regional development.

Goal 4: Promote the LANP and Support Zone as a tourist destination.

This will be achieved through:

- The elaboration of a well designed, targeted, marketed and implemented Tourism Program that makes full use of the cultural, educational and recreational opportunities offered through the LANP, its Support Zone and the Region within given limitations;
- The development of a visitor infrastructure meeting international standards within recognized limitations.

Goal 5: Financial sustainability of the LANP, associated Sanctuaries and Support Zone.

This will be achieved through:

- The elaboration and implementation of a sound Investment & Business Plan that makes full use of revenue-generating opportunities from the LANP centering on the sustainable protection and use of **high quality potable water** for downstream communities, the provision of irrigation water and water for downstream hydro-electric power plants.

Goal 6: The LANP and its Support Zone serve as a sound Community-based Natural Resource Management Model for the Republic of Armenia and neighbouring countries.

This will be achieved through:

- Hands-on training and capacity development in sustainable resource and land-use management;
- Participation of Support Zone communities in the elaboration and implementation of the LANP Management Plan, supporting Business Plan and the Support Zone Economic Development Plan to be embedded into a Spatial Integrated Land Use Plan for the Shirak Region that has been jointly developed by this Project with representatives from Support Zone communities and subject matter specialists;
- The LANP's contribution to the country's biodiversity conservation efforts and protected area system and the sustainable socio-economic development of the Region;
- Wide distribution of the LANP Management- and corresponding Business Plan and supporting sustainable Support Zone Economic Development Plan for learning purposes.

2. VISION AND MISSION

2.1 Vision

The LANP Business Plan adopts the Vision Statement of the LANP Management Plan which accurately states the current direction of the LANP. The Vision Statement reads as follows:

By the year 2030 Lake Arpi National Park and its Support Zone will be known as an outstanding community-planned area which is successfully protected and used as a result of an efficient and effective collaborative community-based management that is based on a sound Management Plan and Business Plan for Lake Arpi National Park and associated Sanctuaries, fully endorsed by the Government of Armenia. A representative sample of the unique sub-alpine grassland communities characterizing the Shirak Region enjoys sustainable protection which is extended to the protection of the watersheds feeding Lake Arpi, one of the most important water sources in Armenia. International and national investments in the LANP and Support Zone have contributed to the sustainable protection and management of the park and Lake Arpi stabilizing the livelihood of the Support Zone people. This has been achieved through an innovative approach to the sustainable economic development of the Support Zone based on the enhancement and diversification of the agricultural- and livestock sectors, supported through the successful establishment of on-site processing facilities handling locally generated products that are successfully marketed nationally and abroad. The target area is known for its high quality water resources, production of alternative energy, and successful creation of small-scale enterprises with focus on honey production, sheep-wool processing and traditional carpet making. The combined efforts have resulted in new job opportunities, rising living standards, stabilizing the population in Support Zone villages, a high level of environmental awareness, and visible improvement of the social infrastructure. The Lake Arpi area has evolved into a useful model for progressive community-based and land use planning and sustainable development in Armenia.

The LANP will achieve this Vision by implementing its Programs and activities through the key strategic thrusts of **biodiversity conservation, partnership and sustainable resource use.**

Key amongst the activities is the need to continue to be grassroots focused, and to be working in and through the community. The strategic direction taken by the LANP is reflected through its well planned Protection- and Resource Use Programs.

2.2 Mission Statement

On the basis of the goals which are derived from the Vision Statement the LANP's Mission Statement reads as follows:

“Establishing Lake Arpi National Park and associated Sanctuaries as well functioning, co-managed Conservation Areas permitting controlled multiple use of land- and resources in designated areas in accordance with the

Armenian Law, while providing sustainable protection to the ecosystems characterizing the LANP for the benefit of biodiversity conservation, the Support Zone communities and for the enjoyment and benefit of the people of Armenia and the World”

The primary implementation strategy for this Mission is to gain continuing donor support until the LANP has become fully functional and has reached financial self-sufficiency expected to be achieved by the Year 2014. The current phase of the LANP Project (2009-2011) focuses on the implementation of the LANP’s Management Plan based on this Investment & Business Plan. The second phase (2011-214) will focus on reaching financial sustainability. Key elements of the implementation strategy are:

- Establishment of the LANP’s administrative structure (i.e., LANP-Management Authority and the LANP- Management Board).
- Development of the LANP’s infrastructure.
- Implementation of Training Programs.
- Continuing protection of the LANP and Sanctuaries.
- Harmonic development of the multi-faceted Resource Use Program.
- Revenue generation from water resources protected by the LANP and Sanctuaries used by downstream Communities as drinking water and for irrigation.

3. BACKGROUND

3.1 Achievements of the LANP Project

Since the start-up of the KfW financed Project in September 2007, aimed at the creation of Lake Arpi National Park and associated Sanctuaries, substantial progress towards achieving the overall goals and objectives defined in the Vision- and Mission Statements of the LANP has been made. It is however realized that the development in all areas is still in its initial stage. There are no changes to the original targets of the project which remain the same for the time period covered by this Business Plan. Critical milestones reached to date include:

- **December 2007:** Establishment of Project Implementation Unit (PIU) in the city of Gyumri, staffed by a PIU Coordinator, one Translator one Secretary and one Driver.
- **January 2008:** Official Launch of the Project.
- **January 2008:** Creation of a Regional Advisory Council under the leadership of the Ministry of Environment.

- **January 2008:** Communication with the Trans-boundary Joint Secretariat for Southern Caucasus (TJSSC) has been formalized.
- **July 2008:** Definition of the preliminary boundaries of Lake Arpi National Park, its Support Zone and the larger Planning Area covering the Integrated Spatial Land Use Planning Model Area. Finalizing production of a 1:50,000 topographic base map for the entire Planning Area of the Ashotsk/Javakheti Plateau.
- **August 2008:** Baseline data collection by local and international Specialists finalized (socio-economic survey, surveys of flora and fauna, opinion poll); feasibility studies on (a) horseback riding potential, (b) tourism potential and (c) potential of economic alternatives for Support Zone communities finalized.
- **September 2008:** Base maps in a scale of 1:50,000 to be used for the Integrated Spatial Land use Planning Process (ISLUP) finalized (*Biophysical map layers:* geology/geo-morphology, hydrology, climate, soils, vegetation cover; conservation map; *socio-economic map layers:* demography, land tenure, actual land-use and land use distribution by land use category).
- **October 2008:** **Kick-off workshops for the start-up of the participatory planning processes** of the Lake Arpi National Park and Sanctuaries and for the Integrated Spatial Land Use Planning (ISLUP) Model Area. Establishment of five multi-stakeholder Work Groups for the LANP Planning Process and four Work Groups for the ISLUP Process.
- **April 2009:** Wrap-up workshops for the finalization of the participatory planning processes (LANP and ISLUP); consensus agreement and geo-referencing of the Lake Arpi National Park Boundaries; finalization of the Conservation Map; participatory elaboration of policy and management guidelines for the LANP Management Plan and baseline data compilation for the Business Plan jointly with Planning Work Groups.
- **April 2009:** **Official Declaration of Lake Arpi National Park.**
- **June 2009:** **Finalization of the LANP Management Plan.**
- **June 2009:** Architectural Design Competition for the LANP Infrastructure.
- **July 2009:** **Finalization of the LANP Investment & Business Plan.**
- **August 2009:** **Finalization of Lake Arpi National Park Support Zone Economic Development Plan.**
- **September 2009:** Finalization of the Integrated Spatial Land Use Plan Atlas.

3.2 LANP Governance and Administration

The administration and reporting system of the LANP is illustrated by Figure 3.2 pending governmental approval by the Republic of Armenia.

The Ministry of Nature Protection is the ultimate authority of the LANP. It agrees to delegate the management mandate to the LANP Authority which reports to an independent multi-stakeholder LANP Management Board with dual responsibility for the Lake Arpi National Park and Associated Sanctuaries and the LANP Support Zone.

Under the direction of the LANP Management Board, the LANP Authority will be responsible for the Management and Infrastructure Development of the National Park and related Sanctuaries in accordance with the LANP Management Plan and Investment & Business Plan.

The LANP Management Authority will assume full responsibility for the day-to-day activities of the LANP and its overall protection and management in accordance with the Management Plan, Investment & Business Plan, and Annual Operational Plans. More specifically the LANP will:

- Elaborate annual work plans and budgets for each Management Program to be consolidated by the LANP Director and senior staff;
- Provide Authority to the Chief Ranger to advertise and select Park Rangers in collaboration with the LANP Administration Unit;
- Community Rangers to be approved by the Chief Ranger;
- Be responsible for the implementation of the Operational Plan and Work Programs, their regular adaptation and impact-monitoring;
- Design, issue and enforce all relevant resource use licenses, permits and lease agreements (e.g. tourism operators) related to the LANP and associated Sanctuaries;
- Retain all revenues generated by the LANP to be deposited into the LANP Operational Fund (Trust Account) to be used for the LANP operations.

The staff structure proposed by this Management Plan will be 17 permanent LANP employees. Eleven well qualified, trained, motivated and well equipped staff supported by a six member support team for a National Park of 25,00 hectares of which only 14,000 hectares require active management, appears quite sufficient to implement the proposed Management Programs and to protect the ecological integrity of the park's ecosystems.

The staff positions will be filled on approval of the Management Plan in order for the LANP to become fully operational. The LANP Director will be appointed by the Ministry of Nature Protection; all other positions will be filled in accordance with

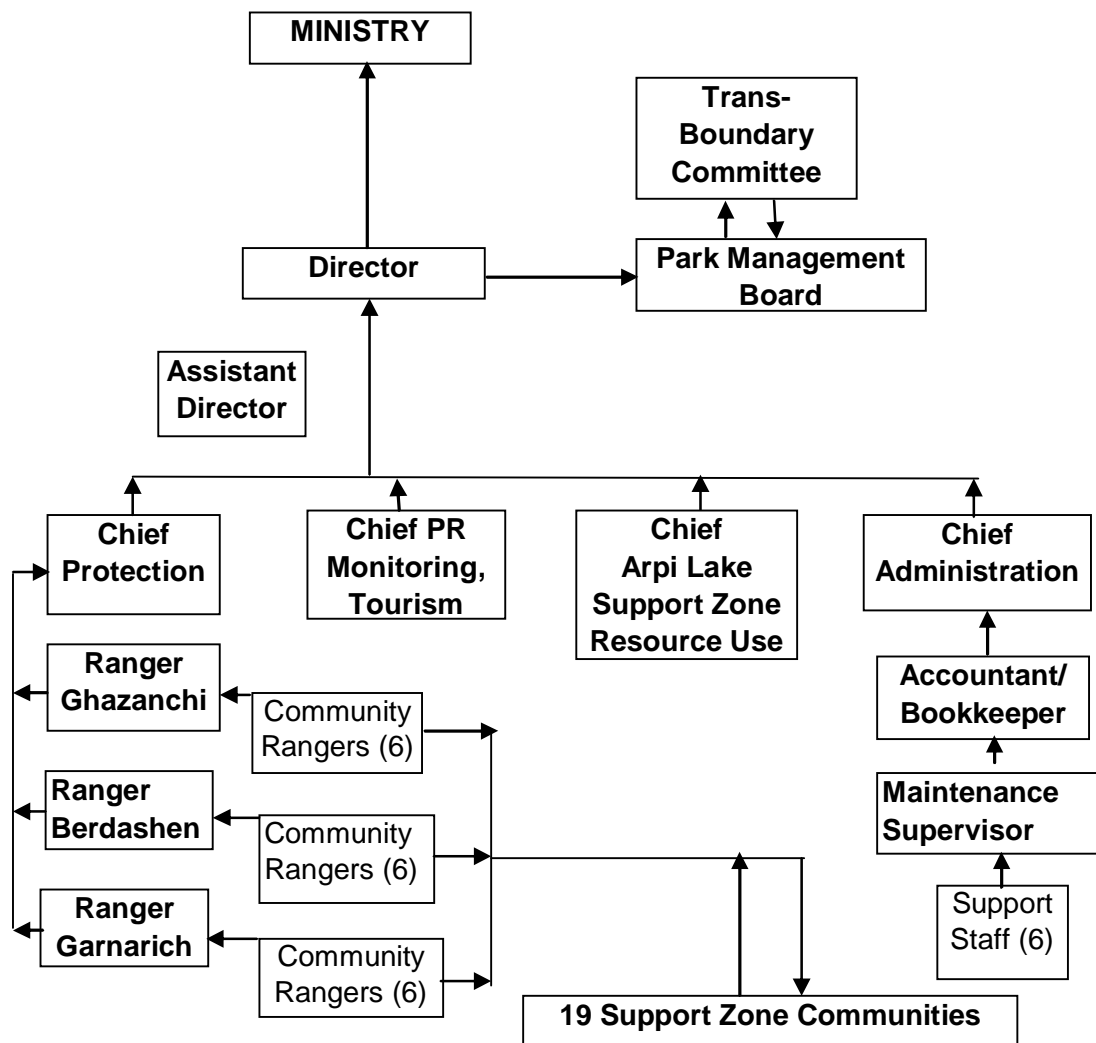
proper recruitment procedures. All recruitment procedures have to be transparent and fair. The Bookkeeper/Accountant and Office Clerk positions will be filled on approval of this Business Plan. The positions will be advertised and the successful incumbents approved by the LANP Management Board.

The total number of permanent staff of the LANP should not exceed a maximum of 20 persons at any time. Additional future positions may involve one Assistant to the Chief of the Monitoring/Tourism Program and one to two Assistants to the Chief of the Lake Arpi/Support Zone/Traditional Use Programs, depending on the work load. Also the Lake Arpi Management Program may require its own Chief over time.

Key functions of the 18 Community Rangers seconded to the LANP will be the enforcement of policies, rules and regulations related to the Traditional Use Zone of the LANP and associated Sanctuaries on behalf of the LANP and the respective community which employs the Community Ranger. Other responsibilities include enforcement of policies and rules and regulations applying to land-and resource use in the Support Zone, environmental Law enforcement and other tasks assigned to the Community Ranger by the respective Community Council. The Community Rangers operate under guidance of the LANP Rangers on all matters related to the LANP.

The Headquarters of the LANP will be strategically located at the intersection of the two access roads leading to Lake Arpi close to the Community of Paghakn.

Figure 3.2.: Organizational Structure of the Lake Arpi National Park Administration



3.3 Zoning Lake Arpi National Park and Sanctuaries

Lake Arpi National Park is divided into two Sections: the Western Section (20,450 has) protecting Lake Arpi, its tributaries, water catchment areas and corresponding mountain steppe ecosystems; and the Eastern Section (4907 has) protecting water catchment areas (and corresponding sub-alpine meadows) draining the west-facing slopes of the Javakheti Ridge. The LANP has been stratified into three Management Zones which facilitate protection and management:

- The Core Zone (7352 has) of the LANP Western Section and the Core Zone (4907 has) of the Eastern Section are free of resource use. The entire Western Core Zone along the Turkish border constitutes a Border Zone jointly controlled by Russian and Armenian border guards. No access and/or resource use is permitted within this zone except for a hay making enclave.

- The Traditional Use Zone (13,098 has) has been set aside for the sustainable use of livestock grazing, haying, bee-keeping, and agriculture. This Zone which is confined to the Western LANP Section will also accommodate some tourism.
- Lake Arpi's status is a combination of a Core Zone (confined to the two Lake Islands), and a "Multiple Use Zone". The latter allows for tourism, recreation and controlled commercial use of fish resources.

The two Sanctuaries Alvar (429 has) and Ardenis (99 has) have been set aside as part of the Lake Arpi registered Ramsar Site (i.e., wetlands of global importance) and the Akhuryan Gorge Sanctuary (1,374 has) to protect unique transitional ecosystems characterizing the ecotone between the high elevation Ashotsk/Javakheti Plateau and lower areas of the Shirak Region. Controlled resource use and regulated tourism is permitted in all three sanctuaries.

4. PENDING ISSUES

4.1 Implementation of the Management Plan

The implementation of the Management Plan as scheduled depends on final Government approval, the official Gazettment of Lake Arpi National Park and associated Sanctuaries, acceptance by Government of the administrative structure proposed by the Work Groups (Co-Management of the LANP involving Community Representation on the proposed LANP Management Board), continuing cooperation and commitment by the Support Zone communities, and secured sustainable Government Core funding to cover the major portion of the projected operational costs of the LANP.

4.2 Local Empowerment

It is widely recognized that local empowerment related to protected areas is Key to the successful establishment and sustainable management of a protected area. There is consensus that this may only be achieved through active community involvement in the planning and management of a protected area.

Community empowerment has been a critical premise for the creation of Lake Arpi National Park. Although this approach has been chosen with the approval by the Armenian Government, the LANP Charter does not explicitly empower the Support Zone communities of the LANP. The corresponding wording is rather weak, ambiguous and open to interpretation. In this context it is noteworthy that Support Zone communities volunteered large tracts of communal lands - essential to local livelihood- to be incorporated into the LANP, trusting that this will not change traditional user rights to these areas. Against this background it is of utmost importance for the Government of Armenia to honour community rights and empower Support Zone communities by giving them the formal right to co-manage the LANP and Sanctuaries. Failing this Government commitment the future of the LANP will remain in jeopardy.

4.3 LANP Management Board

The LANP Management Board will play a pivotal role in the management of the LANP the Support Zone. The LANP Management Board will ultimately be responsible for the implementation of the LANP Management Plan, this Business Plan and the LANP Support Zone Economic Development Plan Government approval of the proposed LANP Management Board which to date has not been established, will be critical to the success and sustainable protection of the LANP and Sanctuaries.

4.4 Lake Arpi Authority

No staff has been appointed yet for the LANP. Ideally the LANP Director and the Chief of Protection should have been appointed prior to the participatory planning process of the LANP in order to develop ownership in the resulting Management Plan. Timely staff appointment is of utmost urgency and should therefore be one of the top priorities.

The LANP Authority will operate under the supervision of the LANP Management Board and the Ministry of Nature Protection. The LANP Management Authority will assume full responsibility for the day-to-day activities of the LANP and its overall protection and management in accordance with the Management Plan, Business Plan and annual Operational Plans.

4.5 Community Rangers

The Protection Program for the LANP plans for three official LANP Rangers to be assisted by 18 Support Zone Community Rangers (one per Support Zone Community). The Community Rangers will be appointed by the Support Zone Community Councils and approved by the LANP Management Board. The proposed Community Ranger System still needs Government approval. To date no Community Ranger has been appointed.

4.6 Infrastructure

To date none of the Infrastructure proposed for the LANP and Sanctuaries is in place pending Government approval of the Management Plan. Priority issues for infrastructure development are the official LANP boundary survey and demarcation and securing the shoreline of Lake Arpi. The construction of the LANP Headquarters should also receive top priority. The establishment of proposed tourism infrastructure is of relatively low priority due to the relatively low economic importance of tourism to the LANP and Support Zone.

4.7 Unsecured Operational Funds

On termination of the KfW sponsored Project by December (proposed termination date September 2010), funding is needed to cover the LANP's recurrent costs. All infrastructure development is expected to be completed at that point, or within a

potential project extension, fully covered by project funds. Without guaranteed sustainable financing of the LANP's operational costs, the development costs of the LANP financed by the German Government will not be sustainable.

5. KEY SUCCESS FACTORS

5.1 Financial Support by the German Government

The establishment of the LANP and Sanctuaries in Armenia forms part of the "Caucasus Initiative", launched by the German Ministry of Co-operation and Development (BMZ), with focus on biodiversity conservation in the unique Caucasus Ecoregion and the promotion of trans-boundary cooperation for biodiversity conservation in the Shirak Javakheti Area as one field of co-operation between Armenia and Georgia.

Within the framework of the German sponsored Caucasus Initiative, the countries of Armenia and Georgia in 2003 unanimously agreed on conservation efforts to be concentrated on the Trans-boundary Javakheti-Shirak Priority Conservation Area, which straddles the border region between Turkey, Armenia and Georgia. Focus of this initiative is the establishment of two contiguous trans-boundary National Parks and associated Wetland Sanctuaries on either side of the International Border and the sustainable development of the respective Support Zones of the two conservation units.

5.2 Commitment by the Government of Armenia and Regional Authorities

The creation of Lake Arpi National Park and Sanctuaries enjoys full support by the Government of Armenia on the highest level, reflected by the timely preparation of a "Decision on the Creation of Lake Arpi National Park" as the third National Park of Armenia. The genuine interest in the establishment of the LANP by the Shirak Regional Government has repeatedly been demonstrated through active participation in the planning process related to the LANP creation and its proven commitment to the Integrated Spatial Land Use Planning Process as integral part of the Project.

The strong local commitment to the establishment of the LANP and its Support Zone is demonstrated by the leadership shown by Community Mayors and other local Authorities, who actively participated in the Working Groups of the LANP Planning Process.

5.3 Involvement of the World Wide Fund for Nature

The Project to establish Lake Arpi National Park in Armenia was launched in September 2007, implemented by the World Wide Fund for Nature (WWF) on behalf of the Armenia's Ministry of Nature Protection and with financial assistance by the German Bank for Reconstruction and Development (KfW). The involvement of WWF as one of the leading Conservation Non-for-Profit Organizations (NGO) in the Caucasus is considered a significant asset to the project because of WWF's high

standing in the country as a key advocate for nature protection and its relentless past and continuing efforts in support of biodiversity conservation as well as the expansion and stabilization of Armenia's Protected Area System. WWF's excellent working relationship with Armenia's Ministry of Nature Protection, Academia, and the Private Sector are highly advantageous for the establishment and promotion of Lake Arpi National Park and associated Sanctuaries.

5.4 Participatory Planning Approach and Community Empowerment

This Management Plan is unique as it is the first in Armenia that has been elaborated in a truly participatory multidisciplinary and multi-stakeholder fashion addressing the needs of the Support Zone communities of the Lake Arpi National Park while meeting the challenges of sustainable conservation and financial sustainability of the target area.

In order to adequately address the broad spectrum of issues and use potential of the Lake Arpi National Park, associated Sanctuaries and Support Zone six Working Groups were assembled composed of democratically elected representatives of Support Zone communities and NGOs active in the Lake Arpi planning region. Working through a sequence of workshops and special consultations, the Working Groups with assistance of local and international sector specialists and under guidance of the Management Plan Facilitator compiled information and interests, identified issues, reviewed the output of consultations, defined conservation values of the LANP and Sanctuaries, agreed on the LANP boundaries, resource and land use inside and outside the LANP and Sanctuaries, the Zoning of the LANP, and drew up a set of policies and guidelines that set the framework for the different Management Programs incorporated into the Management Plan. A process of consensus was used to resolve competing interests and produce a package of land use and resource management agreements which form the basis of the Management Plan. The planning process lasted a full calendar year.

The collection, presentation and discussion of data by the different work groups at cross-sectoral information and planning sessions helped establish a sound working relationship among members of the work groups and assisted in the development of true ownership in the Management Plan and the Lake Arpi National Park. Thanks to this highly participatory planning process an outstanding team spirit evolved amongst Working Group members as representatives of the Support Zone communities and other stakeholders that proved invaluable for management cooperation on all levels. The chosen planning method and process may, therefore, serve as a proven model to other protected areas in Armenia in need of Management Plans.

5.5 Support by the Support Zone Community Constituents

The LANP enjoys majority support by the Support Zone Constituents, especially by families depending on resource use and livestock grazing inside the designated Traditional Use Zone of the LANP. Realizing that better control will result in sustainability of grazing areas and potable water supply protected by the LANP, and

expecting to benefit from the sustainable economic development of the Support Zone, constituencies are committed to the successful establishment and protection of the LANP. Support Zone communities have developed true ownership in the conservation concept as reflected by their willingness to provide communal lands to the LANP and to provide Community Rangers to protect and control the communal lands in cooperation with LANP Park Rangers.

5.6 International Support

The interest expressed to date by the international donor community and Non-Governmental Organizations (NGOs) in the concept of the LANP as a good example of grassroots-oriented participatory planning and co-management of protected areas has to be seen in the light of international efforts searching for innovative approaches to rural poverty alleviation and sustainable biodiversity conservation. The LANP is expected to serve as a model for the successful integration of conservation into sustainable resource use in locally protected areas.

6. IMPLEMENTATION STRATEGIES

6.1 The Lake Arpi National Park Management Plan

In order to successfully achieve the Mission of the LANP, certain steps have to be taken to implement its development strategy as defined in the operational section of this plan and by the policies and management guidelines provided through the Management Plan. The Management Plan for the LANP is the key policy document that guides the LANP's development and sustainable use. It details policies and management guidelines on land- and resource use as well as infrastructure development needs of the LANP and associated Sanctuaries.

The LANP Management Plan is a collaborative effort that is based on a participatory planning approach involving elected Community Representatives from the LANP Support Zone and other key stakeholders. The Working Groups assembled to implement the participatory planning, elaborated the policies and management guidelines related to the Management Zones and Management Programs of the Management Plan. The policies defined in the Management Plan have been approved by the Support Zone Community Authorities and now guide the development process of the target area. All new policies will be subordinate to the Management Plan.

6.2 Strategic Direction

To ensure coherent, purposeful and effective implementation of the different policies and operational guidelines provided through the Management Plan and this Investment & Business Plan, deliberate and considered strategic operations and planning by all key players are crucial. The major thrust of the LANP development process will be directed to

- Implementing the LANP Management plan

- Implementing the Goal Plans of this Investment & Business Plan;
- Cooperating with Support Zone Community Authorities and the Regional Government in achieving the LANP goals identified by their representatives in the LANP Management Plan;
- Establishing an effective and efficient LANP Management Board;
- Assisting in the creation of a technically sound and well qualified LANP Authority Team able to assume full responsibility for the day-to-day management of the LANP and associated Sanctuaries;
- Securing financial sustainability of the LANP.

A concerted effort is needed involving all parties with a vested interest in the LANP as a useful model for progressive land- and resource use management used to lobby and achieve legislative changes which will allow the LANP to be a truly co-managed protected area legally permitted to retain revenues generated from the target area in full, and to conduct its own fund-raising.

6.3 Incentive-Based Performance

LANP motivation will partly be achieved through an incentive-based performance evaluation to be implemented for each staff position/category annually. The performance indicators to be assessed are attached to the LANP Management Plan. The performance related remuneration schedule will be developed by the LANP Management Board.

6.4 Community Participation and Benefit

The LANP Management Board and LANP Authority will guide the sustainable development of the Support Zone as an integral part of this German sponsored Project, in an effort to improve the economic conditions and stabilize the livelihood of the Support Zone Constituents. Income-generating pilot projects that are compatible with the overall conservation objective of the LANP will be designed and implemented jointly with community members. Capacity development of participating families and community members will be mainstreamed into all activities with due consideration of gender issues.

The creation of the LANP Management Board is expected to greatly enhance the relationship between the LANP and Support Zone by inviting local Community Representatives to actively participate in the decision-making process and management of the LANP.

6.5 Inter-Agency Cooperation

Formal cooperation agreements will be signed by the LANP Authority with Law Enforcement Agencies and the International Border Control for collaboration

regarding law enforcement matters related to the LANP. A special Memorandum of Understanding specifying access to the Border Zone via the Lake Arpi National Park will be signed with the Border Control Authority. Other collaborative agreements will be made with the Ministry of Agriculture (Arpi Lake water use) and agencies sharing environmental monitoring responsibilities. All official agreements require approval by the LANP Management Board.

6.6 Completion of the Lake Arpi National Park Development Project

Central to the development strategy of the LANP will be the successful completion of the KfW sponsored LANP project to be achieved by September 2010. Key to the exit strategy of this project is to finish all infrastructure needs specified by this plan (Chapter 7) on termination of the project. Of priority importance are the construction of the LANP Headquarters, the LANP boundary demarcation, access control, completion of all infrastructure related to Lake Arpi, the establishment of the three Camp Sites, and the construction of the Ghazanchi Visitor Center. The current KfW Project is expected to also cover the costs related to the establishment of the Community Ranger System, and all equipment and furnishing needs of the LANP as specified by the corresponding Goal Plan.

6.7 Development of the Tourism Sector

The development of the tourism sector will take place in accordance with the stipulations defined by the Management Plan, the Support Zone Development Plan and the regional tourism development initiatives. Due to the LANP's and Shirak Region's limited attraction as a single tourist destination, the LANP Planning Team agreed on a market-driven strategy, which allows for a slow growth of tourism in accordance with demand rather than creating an inflated infrastructure at this point which may never be utilized. In this light, tourism infrastructure will be kept to a realistic minimum with activities and opportunities offered that do not require large investments in the initial stage.

Because of the very limited tourist attractions inside the LANP - except for Lake Arpi offering mostly recreational opportunities - tourism related infrastructure will be primarily located inside the Support Zone of the LANP to be dealt with by the Support Zone Economic Development Plan.

6.8 Sustainable Financing

The LANP's financial sustainability is a priority issue to be addressed during this plan period. The systematic approach towards sustainable financing will include a wide spectrum of revenue generating opportunities, which may include active fund-raising if deemed necessary. Details on how this may be achieved will be provided by Chapters 8 and 9 of this plan.

6.9 Approach

Recognizing that biodiversity holds different values for different people, the LANP Management Planning Working Groups have addressed and accommodated the different demands by consensus. This also implies reconciliation of conflicts arising between those holding different values of biodiversity locally, nationally and internationally and between biodiversity and alternative land/resource uses. Furthermore, it underscores the need for developing and fostering existing partnerships with various stakeholders as a way of conflict mitigation. Close cooperation between the LANP Authority, the LANP Management Board and the LANP resource users are a critical part of this process. Implementing the Goal-related programs formulated by the LANP Management Plan and this Investment & Business Plan is expected to forge a sound working relationship between the LANP partners, Support Zone constituents and other stakeholders that is built on trust.

In order to achieve this true partnership, goal it is realized that conflict mitigation should embrace as wide an array of approaches as possible, including education, direct incentives to conserve wildlife, problem species control, and benefit sharing.

It will be pivotal to the LANP's success to prove to Support Zone constituencies that the LANP will provide direct and indirect economic benefits to be derived from the establishment of the LANP and its Support Zone and the sustainable use of its resources.

The broader approach to conservation in the target area calls for mobilising support and developing partnerships among the many different government agencies, local authorities, private and communal landowners, and other authorities with jurisdiction over land.

6.10 Performance Monitoring

With the Business Plan and the Management Plan firmly in place the LANP Authority will be able to carry out effective activity-based planning and budgeting. Activity schedules will dovetail into cash flow requirements that will guide fund disbursement to ensure timely implementation of planned activities. The LANP Authority, under the guidance of the LANP Management Board, will also be responsible for planning capital development and recurrent costs.

A performance monitoring system will become an integral part of the annual budget planning process (to be designed and implemented by the LANP Authority) and will assist in identifying and/or precluding unnecessary activity delays. Early detection of root causes for delays and poor performance will enable the LANP Authority to take immediate remedial action.

7. GOAL PLANS

The goal plans of this Investment & Business Plan are organized by Management Program. The Management Programs used are:

- Administration Program
 - Sub-Program: Human Resources*
 - Sub-Program: Accounting and Finance*
 - Sub-Program: Maintenance*
- Protection Program
- Traditional Use Program
- Tourism, Environmental Awareness, Public Relations Program
- Research and Monitoring Program

Management Programs set the framework for the long-term management goals and objectives detailed in the Vision and Mission Statements. Management Programs are particularly helpful for the preparation of annual work plans and budgets and for assigning overall and program-specific priorities.

The description of management activities associated with a specific “Management Program” facilitates the operations of the LANP. Because of their proven value to Managers, Management Programs have become one of the most important structural elements of long-term operational planning for protected areas.

7.1 Administration Program

The Administration Program of the LANP covers the three Sub-Programs: (a) “Human Resources”, dealing with the LANP’s organizational structure, and all aspects related to LANP personnel including in-service training; (b) “Accounting and Finance” dealing with all financial matters of the LANP; and (c) “Maintenance” of equipment and infrastructure.

The main objective of the Administration Program is to provide support services to the different Management Programs in terms of personnel, finance, procurement, and infrastructure and equipment maintenance.

The administrative Headquarters of the LANP is located at Lake Arpi within the vicinity of the Paghakn Community where the LANP senior management and administration staff are accommodated.

Official access gates will be established in strategic locations as part of the administrative infrastructure (Chapter 7.1.3.). The gates will be self-catered under the supervision of the LANP Rangers to be assisted by the Community Rangers.

Seasonal access gates (Chapter 7.1.3) will regulate the traffic of leaseholders with valid access permits using the communal land inside the Traditional use Zone of the LANP.

7.1.1. Sub-Program Human Resources

The LANP's organizational structure allows for easy and transparent expansion. In correspondence with the work volume and providing sufficient funds are available additional positions can be added as required, still maintaining clear reporting lines and responsibilities.

Although the Management Programs operate relatively independent from each other, cooperation is required in many areas. This applies in particular to the Protection Program with cross-sectoral responsibilities, but also to the other Management Programs. This close interrelationship requires good communication between the Program Chiefs and their dependents.

In order to permit staff management without frictions, it is important to precisely describe staff functions and responsibilities for each senior position and strictly adhere to the wage grading scheme to be approved by the LANP Management Board. Career development and staff training will proceed in accordance with the stipulations provided by the financial spreadsheets related to the operational costs of the LANP.

7.1.2. Sub-Program Accounting and Finance

The objectives of this Sub-Program are to handle the financial affairs of the LANP and all purchases in an efficient, professional and legal manner. The Head of this Sub-Program (Accountant/Bookkeeper) will be responsible for the overall annual budget of the LANP to be composed of the Management Program Budgets, to be prepared once per year by the respective Program Chiefs. The consolidated budget will be reviewed, discussed and amended jointly by the Program Chiefs and submitted together with an annual progress report by the LANP Director to the LANP Management Board for approval. The consolidated LANP Budget is divided into investments and operational costs complemented by a detailed statement of expected income for the following year.

Once approved, the budget guides all expenditures. The LANP Accountant/Bookkeeper will be responsible for overall budget control. Each Program Chief will assume full responsibility for the control of the corresponding component budget.

The LANP will follow a zero-base budgeting system where all expenditures have to be motivated from scratch each year, instead of adjusting the previous year's figures to arrive at a new budget. This will force Program Chiefs into structured planning of work programs and activity schedules on a priority basis and in accordance with the activity schedules attached to this plan.

The Sub-Program “Accounting and Finance” will also be responsible for the procurement of equipment and materials. All purchase requisitions have to be first approved by the Chief of the Management Program under which the requisition was prepared before submission to the Sub-Program Finance and Accounting. The Sub-Program will then cross-check the purchase requisition against the budget to make sure that the requested item is part of that year’s budget before final approval. Procurement has to follow common procurement procedures to be elaborated by the LANP’s future Procedure Manual.

7.1.3. Sub-Program Maintenance

The objectives of this Sub-Program are:

- Maintenance of the LANP’s infrastructure and equipment in accordance with an annually updated maintenance schedule to be prepared by the Management Program Chiefs.
- Assigning maintenance responsibilities for specific infrastructure and maintenance components to individual staff members.
- Preventing abuse of infrastructure and equipment.
- Ensuring standardization of equipment in order to facilitate servicing and repairs (electronic equipment and vehicles).

The Maintenance Sub-Program will be implemented by the Maintenance Supervisor under guidance of the Chief of the Administration Program. The Maintenance Supervisor will develop a standardized maintenance schedule for the infrastructure and equipment of the LANP. In cooperation and agreement with the Program Chiefs, the maintenance tasks will be assigned either to specific staff positions or out-sourced. LANP staff will do all routine maintenance.

The proposed LANP Headquarter Building will be composed of five offices serving the Park Director and the four Management Program Chiefs and their staff. The three Park Rangers will have one office each to be provided by the Community of the respective Ranger’s residence. An agreement between the Park Authority and the corresponding Community will specify the conditions for the space rental.

The LANP Headquarter Building will have a conference room and kitchen to be used for staff- and other meetings. Attached to headquarters will be outbuildings to accommodate LANP vehicles and equipment.

Two staff houses will be built as part of the LANP Headquarter Complex: one single family bungalow for the use of the LANP Director and his family and one duplex to accommodate two senior staff bachelors.

Other Infrastructure affiliated with the Administration Program are: four official LANP access gates, eleven seasonal access gates, four boat ramps at Lake Arpi, LANP boundary demarcation, billboards (Sanctuaries included), and road signs.

Infrastructure details (construction and work) are provided by the LANP Management Plan. An infrastructure development schedule for the Administration Program is provided by Table 7.1.3.

Table 7.1.3.: Key Infrastructure Development “Administration Program”

Period	2009	2010	2011
Activity			
Construct LANP Headquarter at Paghakn		■ ■ ■ ■	
Equip LANP headquarters		■ ■ ■ ■	
Construct staff bungalow		■ ■ ■ ■	
Construct staff duplex		■ ■ ■ ■	
Construct four LANP access gate facilities		■ ■ ■ ■	
Demarcate LANP boundary (by priority section)		■ ■ ■ ■	■ ■ ■ ■
Posting the three Sanctuaries		■ ■ ■ ■	
Place billboards and road signs		■ ■ ■ ■	
Furnish 3 offices of Park Rangers		■ ■ ■ ■	

7.2. Protection Program

The overall objective of this Program is the effective protection of the ecological integrity of the LANP’s ecosystems and the enforcement of controlled land- and resource within the Traditional use Zone of the LANP, associated Sanctuaries, and Lake Arpi. A critical part of the Protection Program will be community outreach (guiding principle for pro-active law enforcement).

The Park- and Community Rangers will be well equipped, fully mobile, and provided with proper radio-communication equipment in order to effectively carry out their work. All protection related infrastructure will be established within this plan period, more specifically, within the Year 2010. It is expected that the Protection Program will be fully operational within this plan period.

Although the primary function of the Park- and Community Rangers will be law enforcement Rangers will play an important role by representing the LANP to visitors and the public at large. The Rangers and their families are fully integrated into community life, which provides an opportunity to develop a relationship built on trust and mutual respect.

Rangers will implement most of the LANP’s Monitoring Program and participate in gathering ecological baseline data facilitating LANP management and protection. Infrastructure associated with the Protection Program has been covered under the Administration Program (Table 7.1.3).

7.3. Traditional Use Program

This Program is considered one of the most important for the LANP’s future providing tangible and intangible benefits to the Support Zone communities as specified by the Management Plan.

It is emphasized in this context that the right to continue the use of the communal lands inside the Traditional Use Zone under the same conditions as before will be Key to the sustainability of the LANP as a National Park. Part of the community

rights are to retain sole Authority over the issuing of land and resource use Lease Permits as in the past and to retain the annual revenues generated by the Leases. It is apparent that communities will not be able to function without this source of revenue. Under above mentioned conditions the Support Zone communities have agreed to adhere to a controlled use of land and resources inside the LANP that is compatible with the overall conservation objectives of the National Park.

As indicated by Table 7.3, Support Zone communities will enjoy a wide spectrum of benefits to be derived from the LANP including direct benefits from tourism and recreational opportunities offered by Arpi Lake. Guide services - provided by Communities - are required for sport angling and boating on Lake Arpi and for trail-riding inside the Traditional Use Zone of the LANP. The Communities will also be the direct beneficiaries of the Camp Sites to be established at Arpi Lake and the Akhuryan Gorge Sanctuary. Support Zone communities will benefit through Bed and Breakfast places to be established for the LANP and Support Zone visitors attracted by opportunities offered through the LANP, associated Sanctuaries and the Support Zone.

Table 7.3.a Support Zone Community Benefits Provided by the LANP

Resource Use Opportunity	Community Benefits	LANP benefits
Land-and resource use Leases	yes	yes
Livestock grazing	yes	yes
Hay production	yes	yes
Beekeeping Leases	yes	yes
Artesanal collection of medicinal plants	yes	yes
Artesanal collection of other plant products	yes	yes
Artesanal collection of mushrooms	yes	yes
Sport angling Lake Arpi and Akhuryan River	yes	yes
Commercial fishing Lake Arpi	yes	yes
Non-motorized boating Lake Arpi	yes	yes
Potable water supply	yes	yes
Irrigation Water (from Lake Arpi)		
Trail-riding	yes	yes
Hiking tourism (includes cultural tourism)	yes	yes
Original research opportunities	yes	yes
VIP visits	yes	yes

The long-term success of the LANP depends on maintaining a constructive, mutually beneficial relationship between the LANP, Support Zone communities and visitors to the LANP and Support Zone.

The LANP will assist in the sustainable economic development of the Support Zone; it will actively pursue cooperation with the international donor community and assist in acquiring funds to achieve this goal. It will be a priority task of the Program Chief to develop a strategic schedule that facilitates communication and cooperation with Support Zone constituencies to be based on mutual respect. Infrastructure planned for the Traditional Use Management Program is specified by Table 7.3.b., concentrating on the construction of livestock watering facilities, protection of potable water sources and establishment of temporary access gates to the LANP.

Table 7.3.b: Infrastructure Development “Traditional Use/Lake Arpi Program”

Period	2009	2010	2011
Activity			
Construct 11 temporary access gates and 2 road closures			
Construct 2 controlled access gates at Akhuryan Gorge			
Build barriers for permanent access closure to LANP (2x)			
Construct livestock watering troughs inside Traditional Use Zone (4x) and Support Zone Arpi/Ardenis (7x)			
Construct perimeter walls for wells inside LANP providing potable water to Support Zone communities (9x)			
Rehabilitate drinking water pipe system inside LANP			
Build concrete pads and docks at Arpi Lake (4x)			

7.4. Tourism, Environmental Awareness and Public Relation Program

The LANP is the first co-managed National Park in Armenia offering a unique learning experience to other communities of the country and beyond. Its truly participatory, multi-stakeholder management planning approach facilitating consensus decisions on a variety of sustainable land- and resource use opportunities for the benefit of Support Zone communities and the LANP, a democratically elected LANP Management Board with majority representation of Support Zone Community interests, and the LANP’s multifold financing mechanisms form a unique information “package” that should be made known throughout Armenia and beyond. This will be achieved through a well targeted Public Relation Campaign presenting the image of a well managed LANP, associated Sanctuaries and Support Zone in tune with the overall conservation management objective for the Shirak Region. This image will be widely advertised: locally, nationally, and internationally. The latter is of particular interest for tourism development and continuing efforts to secure long-term funding from the international donor community for the sustainable economic development of the Support Zone and the Shirak Region at large.

An important component of the overall LANP development strategy is a well targeted Environmental Awareness Building Campaign aimed at sensitizing Support Zone communities and land- and resource users of the LANP to the need of responsible land- and resource use management and the creation of a sustainable environment. This is a critical prerequisite for the creation of favourable framework conditions for tourism in the target area.

It is widely acknowledged that the remoteness of the LANP area characterized by a relatively homogenous landscape (open grasslands), harsh climate, and few tourist attractions - except for Lake Arpi - will be unable to create a tourism market on its own but rather depends on “windows of opportunities” , niche products within existing market opportunities. Tourism opportunities offered by the LANP are limited, primarily related to the use of Lake Arpi and the three associated Sanctuaries for bird-watching, camping, and recreational angling. Activities such as cross-country

skiing, hiking and mountain biking will take place in both, the Support Zone and the Traditional Use Zone of the LANP.

Infrastructure affiliated with this Management Program (see Table 7.4) concentrates on tourist- and visitor facilities located mostly in the Support Zone of the LANP. Only one of the three camp sites planned for the Tourism Program is situated inside the Traditional Use Zone at the shoreline of Lake Arpi, the second inside the Akhuryan Sanctuary, and the third close to the Shaghik Community in the Support Zone (?). Details on space, locations and the design of the Tourism-related infrastructure are provided by the LANP Management Plan.

Table 7.4.: Infrastructure Development “Tourism Program”

Period	2009			2010			2011		
Activity									
Construct Ghazanchi Visitor Center									
Establish Bavra Information Kiosk									
Construct Paghakn Information Kiosk and facilities									
Construct Mets Sepasar Point of Interest and facilities									
Construct Shaghik Camp Site									
Construct “Pine” Camp Site									
Construct “Aghvorik Gorge” Camp Site									
Place 10 Billboards									

7.5. Research and Monitoring Program

In accordance with the LANP Management Plan, the “Research and Monitoring Program” has been incorporated into the consolidated Program “Tourism, Environmental Awareness and Public Relations” for practical reasons. Research and Monitoring needs for the LANP are relatively few, therefore not requiring a special staff position. Related activities will mainly focus on Lake Arpi and the Traditional Use Zone of the LANP, requiring sound monitoring in order to prevent adverse environmental impacts, which may be caused through unsustainable land- and resource use. No infrastructure is planned for the Research and Monitoring Program, except for the rehabilitation of a water gauging site at the outflow of Arpi Lake. It is recognized that monitoring should be confined to indicators regarding ecosystem integrity and management efficacy. Costly surveys should be avoided.

Networking and cooperation should be promoted to obtain research and monitoring assistance if and when required, to share monitoring results and to avoid work duplication. It is recognized that data collection in the absence of an effective database- and data management system is futile and that the data base to be established should be processed in GIS format, and freely accessible to legitimate users. It will be the task of the Program Chief to render this possible.

7.6. LANP Personnel Training

As part of the career development, each LANP staff member is entitled to training opportunities. Preference will be given to in-service training. Special skills, which cannot be obtained through in-service training, will be subject to external training. In-service training will apply to all staff members. Senior staff will be given the opportunity to periodically participate in career advancing- and job-related seminars. The Training Program will be tailored to the needs and availability of funding once per year. Training will be monitored and evaluated annually.

It will be the responsibility of the LANP Director and senior park staff to propose an annual training schedule covering all LANP personnel (except support staff). The Training Program forms an integral part of the park's overall budget. The training schedule has to be approved by the Park Management Board. Park Rangers will receive a 14 - day base training when entering the service to be provided by Government personnel and specialists from the Private Sector. Community Rangers will receive a 10 - day base training under supervision of the Chief Ranger of the LANP.

The following annual in-service training schedule is proposed by the LANP Management Plan for LANP staff and Community Rangers: National Park Director 7 days; Senior LANP Staff and Professionals 7 days; Rangers 4 days; and Community Rangers 3 days.

8. PERFORMANCE INDICATORS

This Business Plan and attached financial spreadsheets have been designed to capture the "milestone" aspects of the main activities to be implemented during the plan period with specific time frames. It is for this reason that not only objectives and specific action strategies are stated but also performance indicators are given. It is realized that the KfW- financed project has a timeline of three years, expiring in September 2010. It has become apparent that it will not be possible to achieve all goals and complete all infrastructure within this time-frame. The spread-sheets of this Business Plan have therefore been extended by one year in order to accommodate activities that may not be completed within 2010. Part of the Exit Strategy of this Project is to extend the Project timeline until the LANP becomes fully operational. This however is subject to an agreement by KfW.

Performance indicators basically provide a mechanism for measuring how successful the LANP Authority has been in achieving the plan objectives/goals in time. Performance indicators are embedded in the investment tables and revenue tables of this Investment & Business Plan. A specific goal/objective (i.e. infrastructure measure, purchase of specific equipment, furnishing of buildings and offices etc.) has been achieved if the activity/item has been purchased, constructed, or completed in time, within the given budget and has passed the quality control if and when required. The specific goals for the forecasted revenue generation have been achieved if the revenues forecasted for a specific year match the projected

revenues generated by a specific activity, license and permit as specified by the revenue spreadsheet (Chapter 9.3.).

9. FINANCIAL EVALUATION

9.1. Capital Investment Summary

A summary of the LANP capital investment needs for the Business Plan Period (2009-2014) is provided by Table 9.1. The total investment costs are estimated at approximately € 964,000 including 3.5% contingency funds. Most Investments are expected to be completed on termination of the KfW- sponsored project by September 2010. Investments cover infrastructure development, equipment and the furnishing of buildings and other structures as specified by the detailed investment spreadsheets appended to this Business Plan (Annex 1).

The Administration Program of the LANP constitutes more than half of the overall capital investment (59%), the bulk being used for the construction of the LANP Headquarters, staff-housing and garage/storage facilities. Ten Percent of the budget related to the Administration Program is allocated to equipment, including vehicles, boats, and a tractor/trailer unit. The tractor-trailer unit attached to the LANP Headquarters is intended to be used primarily for road maintenance work and snow-removal. The Administration Program includes all costs related to the establishment of the permanent and seasonal access gates of the LANP and Akhuryan Gorge Sanctuary (Table 9.1).

Table 9.1: Lake Arpi National Park Capital Investment

Management Program	Total	2009	2010	2011	% of Total
Administration Management Program					
Total Infrastructure Administration Program	513,700	246,400	166,600	100,700	
Total Equipment Administration Program	56,415	-	56,415	-	
Total Administration Management Program	570,115	246,400	223,015	100,700	59%
Protection Management Program					
Total Infrastructure Protection Program	42,535	1,200	38,935	2,400	
Total Equipment Protection Program	33,900	4,840	29,060	-	
Total Protection Management Program	76,435	6,040	67,995	2,400	8%
Traditional Use/Lake Arpi Management Program					
Total Traditional Use/ Lake Arpi Management Program	151,270	-	14,220	137,050	16%
Tourism, Environmental Awareness, PR Management Program					
Total Infrastructure Tourism Program	151,020	114,000	36,620	400	
Total Equipment Tourism, Environmental Awareness, PR	13,400	-	2,250	11,150	
Total Tourism, Environmental Awareness, PR Management Program	164,420	114,000	38,870	11,550	17%
Research and Monitoring Management Program					
Total Traditional Use/ Lake Arpi Management Program	1,800	-	1,800	-	0%
Grand Total Investments LANP	964,040	366,440	345,900	251,700	100%

The boundary demarcation of the LANP and associated three Sanctuaries are the most costly item (EUR 18,000) of the Protection Program (total EUR 76,000). The Protection Program includes all Park Ranger equipment and the uniforms of the 18 Community Rangers (Table 9.1). It also covers furnishing and equipping the three LANP Ranger offices to be established within the communities of the Rangers' residence. Also included are snow-machines needed for winter control and a small power boat for law enforcement related to Lake Arpi (Table 9.1).

With a total of EUR 151,000, the Traditional Use/Lake Arpi Management Program covers all investment needs (90% of funds allocated to this Program) for the rehabilitation of the drinking water supply system for the Support Zone communities, which receive their potable water from springs located in the Traditional Use Zone of the LANP (Table 9.1). The remaining 10% of the Program's budget covers the construction of the four concrete launching pads and boat ramps proposed for Lake Arpi, which equally serves the Tourism- and other Management Programs (Table 9.1).

The proposed Ghazanchi Visitor Center constitutes 83% of the EUR 164,000 budget allocated to the Tourism/Awareness and Public Relations Program. This Program also covers the establishment of the three LANP-related camp sites, the posting of billboards and establishment of information kiosks, and the construction related to view points (Table 9.1).

Funds allocated to the Research and Monitoring Program (EUR 1,800) will be used for the GIS-related software package. All other costs affiliated with this Program are covered by other Programs.

9.2. Operational Cost Summary

Operational costs cover all expenses related to personnel (wages, travel allowance, training), infrastructure, and equipment and vehicle maintenance and replacement as specified by the spreadsheets appended to this Business Plan (Annex 2). The forecasts for the LANP's total Operational Budget after capital investments will be an estimated EUR 89,000 by the Year 2010 (Table 9.2). With an annual inflation rate of 3% the LANP's, the Operational Budget will grow to approximately EUR 122,000 by the Year 2014. The additional expenses within 2014 are caused by the replacement costs of the LANP vehicles.

The replacement of equipment, vehicles etc. will follow the guidelines of the Government's accounting procedure manual in principle taking local conditions in consideration. For this plan the average replacement period for motorcycles has been set at four year intervals, vehicles five years, electronic office equipment six years, and most other equipment items six to seven years. Uniforms are being replaced on a two-year cycle. More than 50% of the LANP Operational Budget is related to wages. The Administration Program absorbs 76% of the total budget (Table 9.2).

Operational costs of the Protection Program account for 9% of the total LANP Operational Budget. Recurring costs of the Protection Program are primarily related to the supply of uniforms for LANP Rangers and Community Rangers (Table 9.2).

The Traditional Use/Lake Arpi Management Program accounts for 8% of the LANP Operational Budget with more than half allocated to road maintenance.

Recurring costs related to the Tourism, Environmental Awareness and Public Relations Program constitute 7% of the overall Operational Budget with the majority expenses allocated to the production of the LANP brochure (every 4th year) and other public relation materials (Table 9.2).

The annual operational costs related to the Research and Monitoring Program amount to only 1%.

Table 9.2: Estimated Operational Cost of the Lake Arpi National Park after Investments
(including 3% annual inflation rate)

Management Program	Total	Year 1 2010	Year 2 2011	Year 3 2012	Year 4 2013	Year 5 2014	% of Total
Administration Program							
Subtotal Wages	44,760	44,760	46,103	47,486	48,910	50,378	
Subtotal Travel and Daily Allowance	3,135	3,135	3,229	3,326	3,426	3,528	
Subtotal Training	5,650	5,650	5,820	5,994	6,174	6,359	
Subtotal Infrastructure Maintenance	1,790	1,790	1,844	1,899	1,956	2,015	
Subtotal Equipment/Vehicle Maintenance	7,300	7,300	7,519	7,745	7,977	35,216	
Subtotal Operational Expenses	3,760	3,760	3,873	3,989	4,109	4,232	
Subtotal Miscellaneous Expenses	1,490	1,490	1,535	1,581	1,628	1,677	
Total Administration Program	67,885	67,885	69,922	72,019	74,180	103,405	76%
Protection Program							
Subtotal Infrastructure/Equipment Maintenance	290	290	299	308	317	326	
Subtotal Miscellaneous Expenses	7,340	1,040	7,560	1,103	7,820	1,171	
Total Protection Program	7,630	1,330	7,859	1,411	8,137	1,497	9%
Traditional Use/Lake Arpi Management Program							
Subtotal Infrastructure Maintenance	3,130	3,130	3,224	3,321	3,420	3,523	
Subtotal Road Maintenance	4,000	4,000	4,120	4,244	4,371	4,502	
Total Traditional Use/Lake Arpi Management Program	7,130	7,130	7,344	7,564	7,791	8,025	8%
Tourism, Environmental Awareness, PR Management Program							
Sub-Total Infrastructure Maintenance	1,250	1,250	1,288	1,326	1,366	1,407	
4.2. Sub-Total Miscellaneous Expenses	5,100	600	618	637	5,696	675	
Total Tourism/Environm. Awareness/PR	6,350	1,850	1,906	1,963	7,062	2,082	7%
Total Research and Monitoring Program							
	620	620	639	658	677	698	1%
Total LANP Annual Operational Costs after Investments							
Including 3% Annual Inflation	89,615	78,815	87,668	83,615	97,847	115,707	100%

9.3. Projected Revenues

Projected revenues by the LANP are composed of Core funding provided by the Ministry of Nature Protection and income possibly to be generated from: (a) resource use inside the Traditional Use Zone of the LANP, (b) tourism and fishing, (c) the

Support Zone Development Fund, (d) the Caucasus Fund and (e) potential donations resulting from LANP performed fund-raising. The revenue –operational cost estimates are based on the premise that all revenues generated by the LANP through the sale of resource use licenses and permits, concessions, gate fees, fishing, and fund-raising will be retained by the LANP to be paid into the Operational LANP Budget Fund. Core Funding by the Government of Armenia will cover all personnel costs of the LANP (i.e., wages, allowances, and training costs of permanent and seasonal staff).

It is evident that any financial forecasts are intrinsically biased because of the nature of assumptions being made. One possible scenario of revenues to be generated by the LANP is presented by Annex 3. The corresponding revenue estimates are arbitrary. This applies in particular to potential revenues from tourism and fishing and equally to projected returns from fines levied for violations of LANP rules and regulations. The forecasts of revenues from sustainable resource use (i.e., 7% of lease revenues of communal land located inside the Traditional Use Zone of the LANP) are based on recommendations made by the Planning Team of the LANP assembled to produce land- and resource use policies for the National Park.

The assumption made that the Government of Armenia is committed to cover at least the costs related to the personnel of the LANP (i.e., close to 60 % of the forecasted operational budget) will be critical to the sustainable funding of the LANP. As indicated by Table 9.3 the projected financial shortfall of the Annual Operational Budget of the LANP by the Year 2014 will be at least EUR 45,000 after deduction of the Government Core Funding for personnel of EUR 60,000 and internal revenues generated by the LANP through the sale of resource use licences, gate fees, lease contributions, and fines levied for LANP related violations (EUR 13,000).

Amongst the potential options to cover the projected budget shortfall, three key opportunities are highlighted by Table 9.3 which appear most appropriate under the given framework conditions:

- The Caucasus Protected Areas Fund (CPAF);
- Remuneration for potable- and irrigation water protected by the LANP for the benefit of downstream communities (see LANP Support Zone Economic Development Endowment Fund); and
- Revenues from sponsorship and donations.

The **Caucasus Protected Areas Fund (CPAF)** is a charitable foundation in support of sustainable biodiversity conservation in the southern Caucasus covering Armenia, Azerbaijan and Georgia. The CPAF is designed as a financing mechanism assisting to meet the ambitious objectives of the Eco-regional Conservation Plan (ECP) of the three countries involved.

The CPAF provides grants to cover shortfalls of operational budgets of protected areas with an assigned conservation priority status under the ECP. The Mission of

the CPAF is to provide a contribution to the financial sustainability of the regional protected area systems.

In the light of the CPAF's regional and trans-boundary character, it appears prudent for the CPAF to cover part of the expected operational budget shortfall of the LANP. This appears in particular appropriate in the light of the LANP forming an integral part of the trans-boundary Javakheti Conservation Area sharing a common boundary with the Javakheti National Park to be created on the Georgian side of the international border. It is suggested that the Caucasus Protected Area Fund matches the proposed Government Core Funding of EUR 60,000 until the LANP and Support Zone reaches financial self-sufficiency expected to occur latest on Government approval of the proposed water remuneration scheme described as follows.

The second even more logical potential source of revenue could result from **remuneration for downstream water use** of water originating from the Lake Arpi National Park protecting some of Armenia's most important water catchment areas. A total of 210 Million m³ of surface water per year is produced by the target area with an additional 50 Million m³ of high quality drinking water directly taken from groundwater aquifers on the Plateau, piped into the regional capital of Gyumri for domestic use. At current Lake Arpi provides 101 Million m³ of irrigation water used outside the planning area. Against this background it appears logical for downstream water users to contribute to the protection of those water sources located mostly inside Lake Arpi National Park.

The remuneration for water originating from the target area will become an important issue in context with the proposed creation of the LANP Support Zone Endowment Fund, which is expected to finance the sustainable economic development of the LANP Support Zone. Details on the proposed Endowment Fund are provided in the LANP Support Zone Economic Development Plan.

The total revenue to be generated in favour of the Support Zone Endowment Fund by the 50 Million m³ of drinking water for Gyumri is expected to be EUR 200,000/year equalling a modest 2 Armenian Drams per m³ (= 0,004 EURO Cents). Table 9.3 suggests a EUR 25,000/year contribution to the LANP Operational Budget from irrigation water used outside the target area (covering more than 50 % of the projected budget shortfall). The proposed contribution of this revenue to the operational budget would equal 12% of the total revenue generated by the sale of the drinking water to Gyumri.

It is suggested that of the 101 Million m³ irrigation water per year produced by Lake Arpi and currently being sold by private companies to downstream users at 7 Drums per m³, one Dram per m³ to be paid into the Support Zone Endowment Fund, resulting in an annual total of EUR 200,000 for the Fund. It is proposed to provide EUR 25,000 of this revenue to the LANP Operational Budget (Table 9.3).

The combined total of the proposed CPAF contribution and revenues generated from remuneration by users of potable and irrigation water would produce a budget surplus, a safe buffer for contingencies.

Active fund-raising by the Lake Arpi National Park Management Board could generate additional revenues from sponsorships and donations safeguarding the financial sustainability of the LANP, associated Sanctuaries and economic development of the Support Zone.

It should be in the interest of downstream water consumers (i.e., potable water and irrigation) to pay for the sustainable supply of water from sources protected by Lake Arpi National Park, its associated Sanctuaries and the Support Zone. Without the continuing water supply originating from the Javakheti/Shirak Plateau the livelihood of downstream communities would be seriously threatened. It is equally obvious that the sustainable protection of water sources comes at a cost to be carried by the consumer.

As shown by Annex 3, the projected revenues generated by the LANP on completion of the LANP infrastructure development and additional sources described above would be sufficient to cover the operational costs of the LANP by the year 2014, provided continuing commitment by the Government of Armenia in supplying the Core Funding for personnel and the willingness of the GoA to legalize revenue generation from the remuneration for water use by consumers as recommended by this plan. Revenues are expected to progressively increase as a result of improved resource use management and improved marketing of the opportunities offered by the LANP and its Support Zone.

The revenue forecasts, documented by Annex 3, reflect a conservative “baseline” scenario with options left open for the expansion of revenue generating opportunities within the time-line of this plan. This applies in particular to the water issue.

Table 9.3: Revenue Generation Model for Lake Arpi National Park

Revenue Source	Revenue in EUR
1. Government Core Funding	60,000
2. Estimated Total LANP-Generated Revenue	13,238
Total LANP Revenue Including Core Funding	73,238
<i>Estimated Operational Budget of LANP by the Year 2014</i>	<i>120,000</i>
Budget Shortfall (Conservative Estimate)	46,762
Other Potential Sources of Revenue (Budget Contributions in EUR/Year)	
3. Caucasus Biodiversity Endowment Fund	60,000
4. Water Protection (From Support Zone Development Fund)	
4.1. Potable Water Supply Gyumri (future prospects)	25,000
4.2. Irrigation water (future prospects)	25,000
5. Sponsorships and Donations (Estimate)	5,000
Subtotal Potential Revenue Sources	115,000
Total Available Operational Budget	188,238

10. SUSTAINABLE FINANCING OF THE LANP

The Exit Strategy of this Business Plan is for the LANP to reach its financial self-sufficiency by the Year 2014. This is expected to be achieved entirely through revenues to be generated through sustainable resource use, tourism, the Caucasus Protected Areas Fund, remittance through the use of drinking- and irrigation water used by downstream communities, and the continuing commitment by the Government of Armenia to provide sustainable core funding.

In due consideration of the volatility of the projected revenue options and the resulting insecurity regarding sustainable revenue generation by the LANP from these sources, it appears prudent to generate a large enough financial “cushion” in the LANP Operational Fund to account for years of poor revenue generation.

11. CONCLUSIONS AND RECOMMENDATIONS

Financial Co-operation funds will cover the proposed investments and projected operational costs of the LANP for the first two years (2009-2010) in full. Commencing by Year 4, the LANP is expected to generate sufficient revenues from the sources detailed by the business plan part to cover all of its operational costs provided the underlying assumptions are being correct. Any budget shortfalls after this point in time will be covered by the surplus accumulated in the LANP Operational Fund.

Although it appears that under ideal conditions the LANP may generate a surplus cash flow from projected revenues, it is prudent to provide for additional contingency funds in case the forecasts fall short of the expectations. Therefore it is recommended to establish an LANP Operational Fund (Trust Fund) in favour of covering financial shortfalls of the LANP Operational Budget in compliance with Armenian Law. It exceeds the scope of this Business Plan to provide details on the legal and procedural framework of setting up the Trust Fund. It will be the responsibility of the LANP Management Board to spearhead the process by appointing an LANP Trust Fund Board to promote and guide the process.

The prospects of the LANP to find international support are excellent considering that the LANP probably is the first of its kind within the Commonwealth of Independent States (CIS), which has been established in a truly participatory fashion to be co-managed by the LANP Support Zone communities and the Government of Armenia. The LANP is expected to serve as model for a co-managed protected area capable of generating sufficient revenues from sustainable resource use and other sources to cover its operational expenses. Furthermore, the LANP will be the first model area in Armenia created and co-managed by representatives of Support Zone communities empowered by the Government of Armenia to make their own decisions regarding sustainable resource use within the Traditional Use Zone of the LANP.

It is hoped that this Investment & Business Plan will provide the opportunity for potential donors to realize that community-based natural resource management and community empowerment are key in combating rural poverty in economically marginalized areas, ultimately benefiting the rural poor and biodiversity conservation alike.

ANNEXES

Annex 1: Capital Investment for the LANP

Annex 2: Estimated Operational Budget of the LANP

Annex 3: Forecasted Revenue for the LANP

ANNEX 1

Capital Investment for Lake Arpi National Park and Sanctuaries

Infrastructure and Equipment Investment Needs by Management Program (in EUR)

Management Program	Activity	Unit Total	Cost/Unit	Total	2009	2010	2011
1 Administration Management Program							
Infrastructure							
1.1. LANP Headquarters							
1.1.1 Architectural design (includes two staff buildings)	design	complete	lump sum	15.000	15.000		
1.1.2 Construction of building (325m square @ 600/m square)	construction	325	600	195.000	195.000		
1.1.3 Furnishing Headquarters (5 offices, meeting room, kitchen etc)	furnishing	complete	lump sum	8.000	8.000		
1.1.4 Landscaping (including perimeter stone wall)	landscaping	complete	lump sum	3.000	3.000		
1.1.5 Upgrading road to headquarters	road work	complete	lump sum	900	900		
1.1.6 Potable water system EUR 11/m	pipe	1.500	11	16.500	16.500		
1.1.7 Septic system	sewage system	complete	lump sum	5.000	5.000		
1.1.8 Power supply (underground line)	power system	complete	lump sum	3.000	3.000		
1.2. Single Family Bungalow							
1.2.1 Construction of building (137m square @ 600/m square)	construction	137	600	82.200		82.200	
1.2.2 Landscaping (including perimeter stone wall)	landscaping	complete	lump sum	700		700	
1.2.3 Upgrading road access	access road	complete	lump sum	1.000		1.000	
1.2.4 Potable water system (400m)	pipe	400	11	4.400		4.400	
1.2.5 Septic system	sewage	complete	lump sum	1.000		1.000	
1.2.6 Power supply	power system	complete	lump sum	1.200		1.200	
1.3. Duplex Staff House							
1.3.1 Construction of building (154m square @ 600/m square)	construction	154	600	92.400			92.400
1.3.2 Landscaping (including perimeter stone wall)	landscaping	complete	lump sum	700			700
1.3.3 Upgrading road access	access road	complete	lump sum	1.000			1.000
1.3.4 Potable water system (400m)	pipe	400	11	4.400			4.400
1.3.5 Septic system	sewage	complete	lump sum	1.000			1.000
1.3.6 Power supply	power system	complete	lump sum	1.200			1.200

Management Program	Activity	Unit Total	Cost/Unit	Total	2009	2010	2011
1.4. Storage Shed and Workshop							
1.4.1 Construction of building including toilet (120m square @ 400/m square)	construction	120	400	48.000		48.000	
1.4.2 basic furnishings (work benches, storage shelves/bins etc.)	furnishing	complete	lump sum	1.300		1.300	
1.4.3 Electrical, water supply and sewage disposal	utilities	complete	lump sum	6.000		6.000	
1.5. LANP Access Gate Paghakn (gate structure, parking area, WC)	access gate	complete	lump sum	2.500		2.500	
1.6. LANP Access Gate Shaghik (gate structure, parking area, WC)	access gate	complete	lump sum	2.500		2.500	
1.7. LANP Access Gate Zorakert (gate structure, parking area, WC)	access gate	complete	lump sum	2.500		2.500	
1.8. LANP Access Gate Sizavet (gate structure, parking area, WC)	access gate	complete	lump sum	2.500		2.500	
1.9. LANP Seasonal Access Gates (Schlagbaum with lock)	seasonal access	11	280	3.080		3.080	
1.10. LANP Access Closure (earth barrier)	access closure	2	80	160		160	
1.11. Akhuryan Gorge Sanctuary Seasonal Access Gates	seasonal access	2	280	560		560	
1.12. Miscellaneous and Contingency			<i>lump sum</i>	<i>7.000</i>		<i>7.000</i>	
Sub-Total Infrastructure Administration Program				513.700	246.400	166.600	100.700
Equipment							
1.1. LANP Headquarters							
1.1.1 Personal computer (GIS capacity)	computer	1	1.000	1.000		1.000	
1.1.2 Laptop (GIS capacity)	laptop	1	1.200	1.200		1.200	
1.1.3 Laptop (GIS capacity)	laptop	3	1.100	3.300		3.300	
1.1.4 Color laser printer Din 3	color printer	1	800	800		800	
1.1.5 Black & white printer	printer	2	250	500		500	
1.1.6 Complete set of office tools	office tools	5	150	750		750	
1.1.7 Landline telephones (five offices)	telephone system	complete	lump sum	260		260	
1.1.8 LCD projector	LCD projector	1	2.100	2.100		2.100	
1.1.9 Screen	screen	1	160	160		160	
1.1.10 TV set and DVD set	TV /DVD	1	500	500		500	
1.1.11 Flipchart	flipchart	1	130	130		130	
1.1.12 Digital cameras	camera	2	250	500		500	
1.1.13 Camcorder	camcorder	1	500	200		200	

Management Program	Activity	Unit Total	Cost/Unit	Total	2009	2010	2011
1.1.14 GPS	GPS	3	290	870		870	
1.1.15 Binoculars	binocular	2	150	300		300	
1.1.16 Spotting scope	spotting scope	2	200	400		400	
1.1.17 Set of basic carpentry tools	carpentry tools	complete	lump sum	260		260	
1.1.18 Set of basic mechanics tools	mechanics tools	complete	lump sum	380		380	
1.1.19 Set of basic masonry and gardening tools	masonry/gardeni ng	complete	lump sum	185		185	
1.1.20 Stand-by generator (5 KW)	generator	1	2.300	2.300		2.300	
1.1.21 Russian jeep	jeep	2	10.000	20.000		20.000	
1.1.22 Tractor and trailer, blade for snow removal	tractor unit	1	12.000	12.000		12.000	
1.1.23 Motorcycle	motorcycle	2	2.000	4.000		4.000	
1.1.24 First aid (complete set)	first aid kit	complete	lump sum	320		320	
1.2. Miscellaneous and Contingency			<i>lump sum</i>	4.000		4.000	
Sub-Total Equipment Administration Program				56.415	-	56.415	-
Total Administration Management Program				570.115	246.400	223.015	100.700
2 Protection Management Program							
Infrastructure							
2.1. Park Ranger Offices							
2.1.1 Furnish Park Ranger offices	furnishing	3	400	1.200	1.200		
2.2. Boundary Demarcation							
2.2.1 Priority high boundary LANP Western Section Arpi Lake (25,7 km)	billboard	12	200	2.400		2.400	
2.2.2 Priority high: boundary LANP Western Section Yeghnajur (29 km)	cairns	180	30	5.400		5.400	
2.2.3 Priority high: boundary LANP Western Section Yeghnajur (29 km)	cairns	200	30	6.000		6.000	
2.2.3 Priority medium: 23.1 km	signs	100	15	1.500		1.500	
2.2.4 Priority low: LANP Eastern Section (15 km)	cairns	60	30	1.800			1.800
2.2.5 Priority low: LANP Eastern section (15 km)	signs	40	15	600			600
2.3. Boundary Demarcation Alvar Sanctuary							
2.3.1 Signs along 15,3 km	signs	25	15	375		375	
2.4. Boundary Demarcation Akhuryan Gorge Sanctuary							
2.4.1 Signs along 26,9 km interspersed with cairns	signs	40	15	600		600	

Management Program	Activity	Unit Total	Cost/Unit	Total	2009	2010	2011
2.4.2 Cairns along 26,9 km interspersed with signs	cairns	34	30	1.020		1.020	
2.5. Boundary Demarcation Ardenis Sanctuary							
2.5.1 Signs along 7,2 km	signs	12	15	180		180	
2.6. Boat Shed at Arpi Lake							
2.6.1 Construction (46m square)	construction	46	350	16.100		16.100	
2.6.2 Shelves etc.	furnishing	complete	lump sum	160		160	
2.7. Buoys (Demarcation Lake Arpi Bird Islands)							
	buoy	30	40	1.200		1.200	
2.8. Miscellaneous and Contingency							
			lump sum	4.000		4.000	
Sub-Total Infrastructure Protection Program				42.535	1.200	38.935	2.400
Equipment							
2.1. Park Rangers							
2.1.1 Ranger kit (packsack, lantern, binoculars, first aid etc.)	ranger kit	4	300	1.200	1.200		
2.1.2 Horse tack and saddles	horse tack/saddle	4	350	1.400	1.400		
2.1.3 Horse shoeing/hoof care equipment	equipment for horses	complete	lump sum	240	240		
2.1.4 Metal boat (12')	boat	1	2.000	2.000		2.000	
2.1.5 Outboard engine (25hp)	outboard	1	3.000	3.000		3.000	
2.1.6 Life vests and other gear related to Lake control	gear	complete	lump sum	200		200	
2.1.7 Snowmobile	snowmobile	2	3.000	6.000		6.000	
2.1.8 Motorbikes	motorbike	2	2.000	4.000		4.000	
2.1.9 Cellular phones	cell phone	4	100	400	400		
2.1.10 Summer Uniforms (jacket, trousers, boots, shirt, hat)	uniform	4	300	1.200		1.200	
2.1.11 Winter Uniforms	uniform	4	400	1.600	1.600		
2.1.12 Rubber dinghy with oars	dinghy	1	400	400		400	
2.2. Community Rangers							
2.2.1 Ranger kit (reduced)	ranger kit	18	120	2.160		2.160	
2.2.2 Cellular phones	cell phones	18	100	1.800		1.800	
2.2.3 Summer Uniforms (jacket, shirt, hat)	uniform	18	150	2.700		2.700	
2.2.4 Winter Uniforms	uniform	18	200	3.600		3.600	
2.3. Miscellaneous and Contingency							
			lump sum	2.000		2.000	

Management Program	Activity	Unit Total	Cost/Unit	Total	2009	2010	2011
Sub-Total Equipment Protection Program				33.900	4.840	29.060	0
Total Protection Management Program				76.435	6.040	67.995	2.400
3 Traditional Use/Lake Arpi Management Program							
Infrastructure							
3.1. Boat Ramps Arpi Lake (concrete pad and floating ramp)							
3.1.1 Shaghik Community	boat ramp	complete	lump sum	3.000		3.000	
3.1.2 Garnarich Community	boat ramp	complete	lump sum	3.000		3.000	
3.1.3 Tsaghkut Community	boat ramp	complete	lump sum	3.000		3.000	
3.1.4 Berdashen Community	boat ramp	complete	lump sum	3.000		3.000	
3.2. Livestock Watering Troughs							
3.2.1 Traditional Use Zone	troughs for livestock	4	150	600		600	
3.2.2 Support Zone (Lake Protection)	troughs for livestock	7	150	1.050			1.050
3.3 Perimeter Walls Potable Water Springs Communities	well protection	9	180	1.620		1.620	
3.4 Rehabilitation Community Potable Water Supply Pipes							
3.4.1 Saragyugh and Sizavet (10 km pipe and well repair)	rehabilitation	complete	lump sum	20.000			20.000
3.4.2 Bavra (surface water collection system)	rehabilitation	complete	lump sum	40.000			40.000
3.4.3 Tavshut (well and pipe repair)	rehabilitation	complete	lump sum	15.000			15.000
3.4.4 Aghvorik major repairs needed, 3.5 km pipe from 2 springs)	rehabilitation	complete	lump sum	10.000			10.000
3.4.5 Ardenis	rehabilitation	complete	lump sum	6.000			6.000
3.4.6 Berdashen (underground pipe repair)	rehabilitation	complete	lump sum	8.000			8.000
3.4.7 Zarishut	rehabilitation	complete	lump sum	8.000			8.000
3.4.8 Paghakn	rehabilitation	complete	lump sum	2.000			2.000
3.4.9 Zorakert	rehabilitation	complete	lump sum	2.000			2.000
3.4.10 Tsgkhut	rehabilitation	complete	lump sum	12.000			12.000
3.4.11 Garnarich (6 km pipe)	rehabilitation	complete	lump sum	6.000			6.000
3.5. Miscellaneous and Contingency			<i>lump sum</i>	<i>7.000</i>			<i>7.000</i>
Total Traditional Use/Lake Arpi Management Program				151.270	0	14.220	137.050

Management Program	Activity	Unit Total	Cost/Unit	Total	2009	2010	2011
4 Tourism, Environmental Awareness, PR Management Program							
Infrastructure							
4.1. Camp Sites							
4.1.1 Camp Site Shaghik							
Access road (improvement)	access road	complete	lump sum	600		600	
Site preparation; tent sites; wooden table/benches; fire pit	camp site	complete	lump sum	3.000		3.000	
4.1.2 Camp Site Pine							
Access road (improvement)	access road	complete	lump sum	1.500		1.500	
Site preparation; tent sites; wooden table/benches; fire pit	camp site	complete	lump sum	3.000		3.000	
4.1.3 Camp Site Akhuryan Gorge							
Access road (improvement)	access road	complete	lump sum	200		200	
Site preparation; tent sites; wooden table/benches; fire pit	camp site	complete	lump sum	3.000		3.000	
4.2. Ghazanchi Visitor Center							
4.2.1 Construction of building (150m square indoors @ 600/m square)	construction	150	600	90.000	90.000		
4.2.2 Construction 120m square outdoors @ 200/m square)	construction	120	200	24.000	24.000		
4.2.3 Furnishing (restaurant, kitchen, reception/kiosk, gallery etc.)	furnishing	complete	lump sum	9.000		9.000	
4.2.4 Landscaping (including perimeter stone wall)	landscaping	complete	lump sum	2.000		2.000	
4.3. Bavra Info. Kiosk (Inside Comm. Admin. Building, 25m square)							
4.4. Paghakn Information Kiosk							
4.4.1 Site preparation including parking area, public toilets	site preparation	complete	lump sum	2.500		2.500	
4.4.2 Information boards etc.	info-stand	complete	lump sum	1.200		1.200	
4.5. Mets Sepasar Point of Interest							
4.5.1 New church roof and rehabilitation of footing	church repair	complete	lump sum	1.500		1.500	
4.5.2 Info bronze plate and stand at view point	info-plate	1	450	450		450	
4.5.3 Info boards (archaeological site and view)	info-boards	2	120	240		240	
4.5.4 Secure archaeological site	site preparation	complete	lump sum	600		600	
4.5.5 Visitor parking lot preparation (20 limousines, 2 buses capacity)	site preparation	complete	lump sum	1.000		1.000	
4.5.6 Public toilets (latrines)	latrine	1	800	800		800	
4.5.7 Trail marking (cairns) from parking lot to hilltop	trail markers	11	30	330		330	
4.5.8 Removal of hydro line and site improvement	site preparation	complete	lump sum	400		400	

Management Program	Activity	Unit Total	Cost/Unit	Total	2009	2010	2011
4.5.9 Remodelling concrete water basin (art exhibitions)	remodelling	complete	lump sum	900		900	
4.6. Billboards	placement	10	80	800		400	400
4.7. Miscellaneous and Contingency			<i>lump sum</i>	2.500		2.500	
Sub-Total Infrastructure Tourism Program				151.020	114.000	36.620	400
Equipment							
4.1. Tourism, Environmental Awareness, Public Relations							
4.1.1 LANP brochure (design and printing 5000 copies)	design and printing	complete	lump sum	4.500		2.250	2.250
4.1.2 LANP fact sheets (5000)	fact sheets	complete	lump sum	400			400
4.1.3 LANP posters (3 posters@ EUR 10/copy/poster), 50 copies each	posters	150	10,0	1.500			1.500
4.2. Miscellaneous and Contingency			<i>lump sum</i>	7.000			7.000
Sub-Total Equipment Tourism, Environmental Awareness, PR				13.400	0	2.250	11.150
Total Tourism, Environmental Awareness, PR Management Program				164420	114000	38870	11550
5 Research and Monitoring Management Program							
5.1 Arc view software package	software	1	1.000	1.000		1.000	
5.2. Miscellaneous and Contingency			<i>lump sum</i>	800		800	
Total Research and Monitoring Program				1.800	0	1.800	0
Grand Total Investments LANP			EUR	964.040	366.440	345.900	251.700

ANNEX 2

Estimated Operational Budget of the Lake Arpi National Park

Management Program	Unit	Unit Total	Cost / Unit	Total	Year 1 2010	Year 2 2011	Year 3 2012	Year 4 2013	Year 5 2014
1 Administration Program									
1.1. Wages									
1.1.1 LANP Director	month	12	300	3.600	3.600	3.708	3.819	3.934	4.052
1.1.2 Assistant Director	month	12	250	3.000	3.000	3.090	3.183	3.278	3.377
1.1.3 Chief Administration Program	month	12	250	3.000	3.000	3.090	3.183	3.278	3.377
1.1.4 Chief Protection Program (Chief Ranger)	month	12	200	2.400	2.400	2.472	2.546	2.623	2.701
1.1.5 Chief Tourism/ Environmental Awareness/PR/Monitoring Programs	month	12	250	3.000	3.000	3.090	3.183	3.278	3.377
1.1.6 Chief Resource Use/Arpi Lake/Support Zone Programs	month	12	250	3.000	3.000	3.090	3.183	3.278	3.377
1.1.7 Bookkeeper / Accountant	month	12	250	3.000	3.000	3.090	3.183	3.278	3.377
1.1.8 Maintenance Supervisor	month	12	200	2.400	2.400	2.472	2.546	2.623	2.701
1.1.9 Ranger (3 Rangers)	month	36	200	7.200	7.200	7.416	7.638	7.868	8.104
1.1.10 Secretary/Receptionist	month	12	170	2.040	2.040	2.101	2.164	2.229	2.296
1.1.11 Office Clerk	month	12	170	2.040	2.040	2.101	2.164	2.229	2.296
1.1.12 Driver (2 Drivers)	month	24	150	3.600	3.600	3.708	3.819	3.934	4.052
1.1.13 Cleaner (2 Cleaners)	month	24	150	3.600	3.600	3.708	3.819	3.934	4.052
1.1.14 Night Watchman 2 Night Watchmen)	month	24	120	2.880	2.880	2.966	3.055	3.147	3.241
Subtotal Wages				44.760	44.760	46.103	47.486	48.910	50.378
1.2. Travel and Daily Allowance									
1.2.1 Park Director 36 days @ 15/day	day	36	15	540	540	556	573	590	608
1.2.2 Assistant Director	day	28	15	420	420	433	446	459	473
1.2.3 Program Chiefs (4) @ 25 days/person	day	100	15	1.500	1.500	1.545	1.591	1.639	1.688
1.2.4 Senior Staff (3) @ 15 days/person	day	45	15	675	675	695	716	738	760
Subtotal Travel and Daily Allowance				3.135	3.135	3.229	3.326	3.426	3.528
1.3. Training									
1.3.1 National Park Director	day	7	100	700	700	721	743	765	788

Lake Arpi National Park Business Plan

Management Program	Unit	Unit Total	Cost / Unit	Total	Year 1 2010	Year 2 2011	Year 3 2012	Year 4 2013	Year 5 2014
1.3.2 Assistant Director	day	7	80	560	560	577	594	612	630
1.3.3 Program Chiefs (4)	day	32	80	2.560	2.560	2.637	2.716	2.797	2.881
1.3.4 Rangers (3)	day	12	40	480	480	494	509	525	540
1.3.5 Community Rangers (18)	day	54	25	1.350	1.350	1.391	1.432	1.475	1.519
Subtotal Training				5.650	5.650	5.820	5.994	6.174	6.359
1.4. Infrastructure Maintenance									
1.4.1 Headquarter building complex	annually		lumpsum	230	230	237	244	251	259
1.4.2 LANP entry gates (4)	annually	4	100	400	400	412	424	437	450
1.4.3 Seasonal access gates (15)	annually	15	10	150	150	155	159	164	169
1.4.4 Lake Arpi boat ramps (4)	annually	4	50	200	200	206	212	219	225
1.4.5 Boundary Markers	annually		lumpsum	200	200	206	212	219	225
1.4.6 Boundary and road signs	annually		lumpsum	250	250	258	265	273	281
1.4.7 Staff houses (2)	annually	2	80	160	160	165	170	175	180
1.4.8 Boat house and workshop/garage	annually	2	100	200	200	206	212	219	225
Subtotal Infrastructure Maintenance				1.790	1.790	1.844	1.899	1.956	2.015
1.5. Equipment/Vehicle Maintenance									
1.5.1 Office equipment (computers, printers etc. incl. replacement cost)	annually		lumpsum	600	600	618	637	656	675
1.5.2 Russian jeep (12,000 km/year, replacement after 5 years)	annually	2	2.500	5.000	5.000	5.150	5.305	5.464	30.628
1.5.3. Tractor and trailer, blade for snow removal (replacement 9 years)	annually	1	900	900	900	927	955	983	1.013
1.5.4. Motorcycle (replacement after 5 years)	annually	2	400	800	800	824	849	874	2.900
Subtotal Equipment/Vehicle Maintenance				7.300	7.300	7.519	7.745	7.977	35.216
1.6. Operational Expenses									
1.6.2 Telephone, Internet	monthly	12	60	720	720	742	764	787	810
1.6.3 Utilities (power, heat, water)	monthly	12	150	1.800	1.800	1.854	1.910	1.967	2.026
1.6.4 LANP entry/resource use permits, templates etc.	annually		lumpsum	40	40	41	42	44	45

Lake Arpi National Park Business Plan

Management Program	Unit	Unit Total	Cost / Unit	Total	Year 1 2010	Year 2 2011	Year 3 2012	Year 4 2013	Year 5 2014
1.6.5 Office expenses (paper, desk tools, cleaning materials etc.	monthly	12	100	1.200	1.200	1.236	1.273	1.311	1.351
Subtotal Operational Expenses				3.760	3.760	3.873	3.989	4.109	4.232
1.7. Miscellaneous									
1.7.1 Equipment (first aid, tools etc.)	annually		lumpsum	40	40	41	42	44	45
1.7.2 Generator (replacement after 10 years)	annually		lumpsum	50	50	52	53	55	56
1.7.3 VIP visits and entertainment allowance	annually		lumpsum	1.400	1.400	1.442	1.485	1.530	1.576
Subtotal Miscellaneous Expenses				1.490	1.490	1.535	1.581	1.628	1.677
Total Administration Program				67.885	67.885	69.922	72.019	74.180	103.405
2 Protection Program									
2.1. Infrastructure/Equipment Maintenance									
2.1.1 Ranger Posts (3)	monthly	3	30	90	90	93	95	98	101
2.1.2 Horse gear including replacement costs after 7 years	annually	4	50	200	200	206	212	219	225
Subtotal Infrastructure/Equipment Maintenance				290	290	299	308	317	326
2.2. Miscellaneous Expense									
2.2.1 Horse shoeing, medicare etc.	annually	4	60	240	240	247	255	262	270
2.2.2 Horse feed	annually	4	200	800	800	824	849	874	900
2.2.3 Park Ranger Uniforms winter	uniform	4	400	1.600	0	1.648	0	1.697	0
2.2.4 Park Ranger Uniforms summer	uniform	4	300	1.200	0	1.236	0	1.273	0
2.2.5 Community Ranger Uniforms winter	uniform	10	200	2.000	0	2.060	0	2.122	0
2.2.6 Community Ranger Uniforms summer	uniform	10	150	1.500	0	1.545	0	1.591	0
2.2.7 Ranger kit replacement after 8 years									
Subtotal Miscellaneous Expenses				7.340	1.040	7.560	1.103	7.820	1.171
Total Protection Program				7.630	1.330	7.859	1.411	8.137	1.497

Management Program	Unit	Unit Total	Cost / Unit	Total	Year 1 2010	Year 2 2011	Year 3 2012	Year 4 2013	Year 5 2014
3 Traditional Use/Lake Arpi Management Program									
3.1. Infrastructure Maintenance									
3.1.1 Livestock watering troughs	annually	11	70	770	770	793	817	841	867
3.1.2 Well perimeter walls (community potable water sources inside LANP)	annually	9	40	360	360	371	382	393	405
3.1.3 Community water pipeline maintenance (inside LANP)	annually		lumpsum	2.000	2.000	2.060	2.122	2.185	2.251
Subtotal Infrastructure Maintenance				3.130	3.130	3.224	3.321	3.420	3.523
3.2. Road Maintenance									
3.2.1 Roads inside LANP	annually		lumpsum	1.000	1.000	1.030	1.061	1.093	1.126
3.2.2 LANP service roads outside LANP (winter snow removal)	annually		lumpsum	3.000	3.000	3.090	3.183	3.278	3.377
Subtotal Road Maintenance				4.000	4.000	4.120	4.244	4.371	4.502
Total Traditional Use/Lake Arpi Management Program				7.130	7.130	7.344	7.564	7.791	8.025
4 Tourism, Environmental Awareness, PR Management Program									
4.1. Infrastructure Maintenance									
4.1.1 Camp Sites (3 sites @ 150 each)	annually	3	150	450	450	464	477	492	506
4.1.2 Ghazanchi Visitor Center	annually		lumpsum	200	200	206	212	219	225
4.1.3 Bavra Information Stand	annually		lumpsum	70	70	72	74	76	79
4.1.4 Paghakn Information Kiosk	annually		lumpsum	150	150	155	159	164	169
4.1.5 Mets Sepasar Point of Interest	annually		lumpsum	300	300	309	318	328	338
4.1.6 Billboards	annually		lumpsum	80	80	82	85	87	90
Sub-Total Infrastructure Maintenance				1.250	1.250	1.288	1.326	1.366	1.407
4.2. Miscellaneous									
4.1.1 LANP brochure (reprint 4 year intervals)	brochure		lumpsum	4.500	0	0	0	5.040	0

Management Program	Unit	Unit Total	Cost / Unit	Total	Year 1 2010	Year 2 2011	Year 3 2012	Year 4 2013	Year 5 2014
4.1.2 LANP fact sheets (reprint annually)	fact sheet		lumpsum	150	150	155	159	164	169
4.1.3 LANP poster and calendar (reprint annually)	poster/cal.		lumpsum	300	300	309	318	328	338
4.1.4 LANP Website maintenance (reprint annually)	website		lumpsum	150	150	155	159	164	169
4.2. Sub-Total Miscellaneous Expenses				5.100	600	618	637	5.696	675
Total Tourism/Environmental Awareness/PR Program				6.350	1.850	1.906	1.963	7.062	2.082
5 Research and Monitoring Program									
5.1. Field monitoring expenses	annually		lumpsum	180	180	185	191	197	203
5.2. Data processing and storage	annually		lumpsum	150	150	155	159	164	169
5.3 GIS data exchange Gyumri Regional Office & Ministry	annually		lumpsum	200	200	206	212	219	225
5.4. Map production	annually		lumpsum	90	90	93	95	98	101
Total Research and Monitoring Program				620	620	639	658	677	698
Total LANP Annual Operational Costs after Investments including 3% Annual Inflation				89.615	78.815	87.668	83.615	97.847	115.707

ANNEX 3

Forecasted Revenue for the Lake Arpi National Park

Revenue Source	Unit	Total Units	Revenue/Unit in Drum	Total Drum	7%	Revenue in Drum	Revenue in EUR
1. Government Core Funding (Year 2016)	personnel	18	lumpsum	31.199.473			60.000
2. Leases (Resource Use inside Traditional Use Zone @ 7% of Drum 3000/ha/a)							
2.1. Haying	ha	2.000	3.000	6.000.000	420.000	420.000	807
2.2. Agriculture	ha	1.000	3.000	3.000.000	210.000	210.000	404
2.3. Pasture (livestock)	ha	8.000	3.000	24.000.000	1.680.000	1.680.000	3.231
2.4. Beekeeping	ha	2.000	5.000	10.000.000	700.000	700.000	1.346
3. Fishing Licences							
3.1. Sport Fishing Day Permit	day	120	1.000	120.000		120.000	230
3.2. Boat Permit	boat/day	120	2.000	240.000		240.000	461
3.3. Commercial Fishing (500 kg/permit @20% of market value for LANP)	estimate	estimate	estimate	1.559.974		1.559.974	3.000
4. Camping							
4.1. Children	child/night	700	500	350.000		350.000	673
4.2. Adult	adult/night	800	1.000	800.000		800.000	1.538
5. Park Entry Fee							
5.1. Armenian	person/day	120	1.000	120.000		120.000	230
5.2. Foreigner	person/day	80	4.000	320.000		320.000	615
6. Tour Operators							
6.1. Guides	guide/group	9	4.000	36.000		36.000	69
6.2. Trailriding	horse/day	40	2.000	80.000		80.000	154
7. Fines for Violations							
7.1. Livestock (Exceeding Carrying Capacity)	cow or horse	15	5.000	75.000		75.000	144
7.2. Beekeeping	per violation	5	5.000	25.000		25.000	48
7.2. Agriculture and Haying	fine/ha	15	4.000	60.000		60.000	115
7.3. Sport fishing (above limit)	kg	15	1.000	15.000		15.000	29
7.4. Commercial fishing (above limit)	kg	5	5.000	25.000		25.000	48
7.4. Violations by Park Visitors (arbitrary)	person	25	2.000	50.000		50.000	96
Subtotal LANP Revenue Generation without Core Funding						6.885.974	13.238
Total LANP Revenue including Core Funding							73.238
Exchange Rate 25 July, 2009 1000 Armenian Dram = EUR 2.00							