

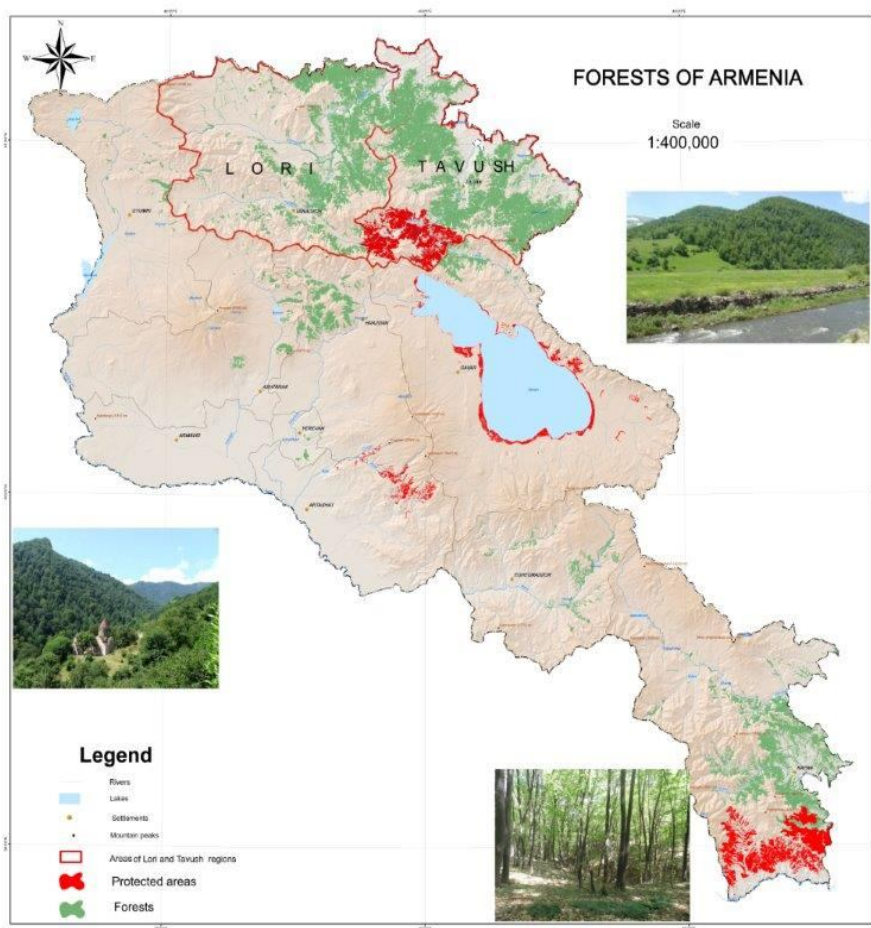
18th Council of Europe Meeting of the Workshops for the implementation of the European Landscape Convention

"National policies for the implementation of the European Landscape Convention: challenges and opportunities"

The application of “landscape concept” for the sustainable management of north-eastern mountain forest ecosystems of the Republic of Armenia

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FORESTS OF ARMENIA

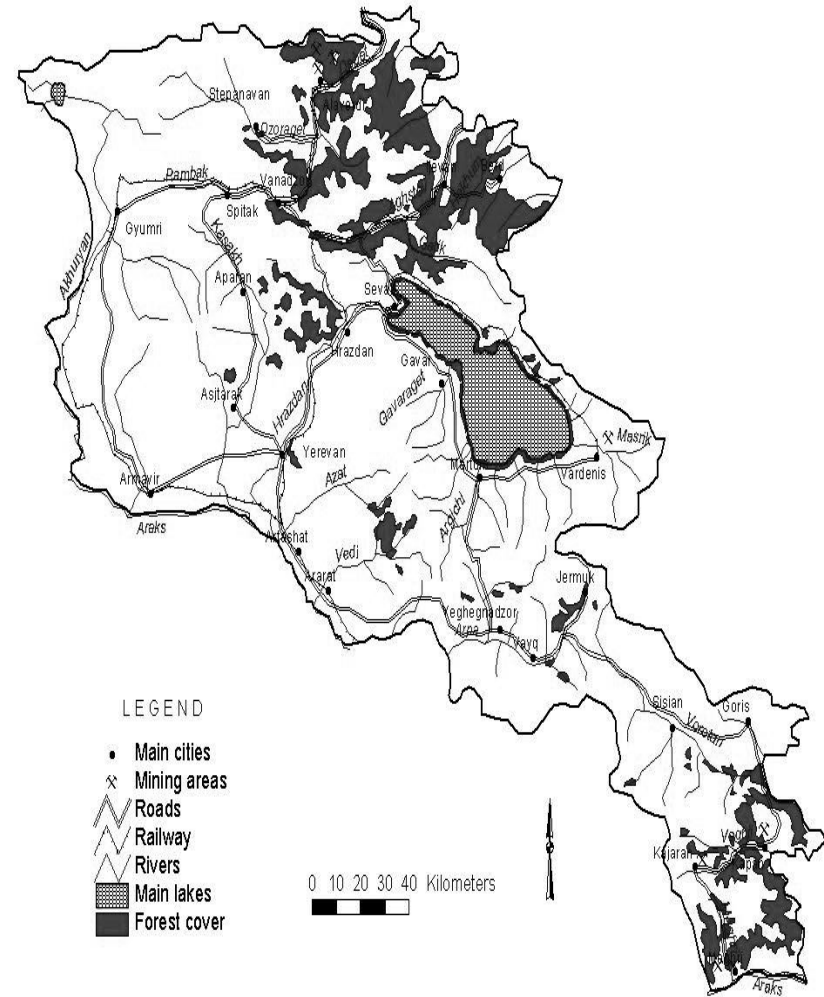
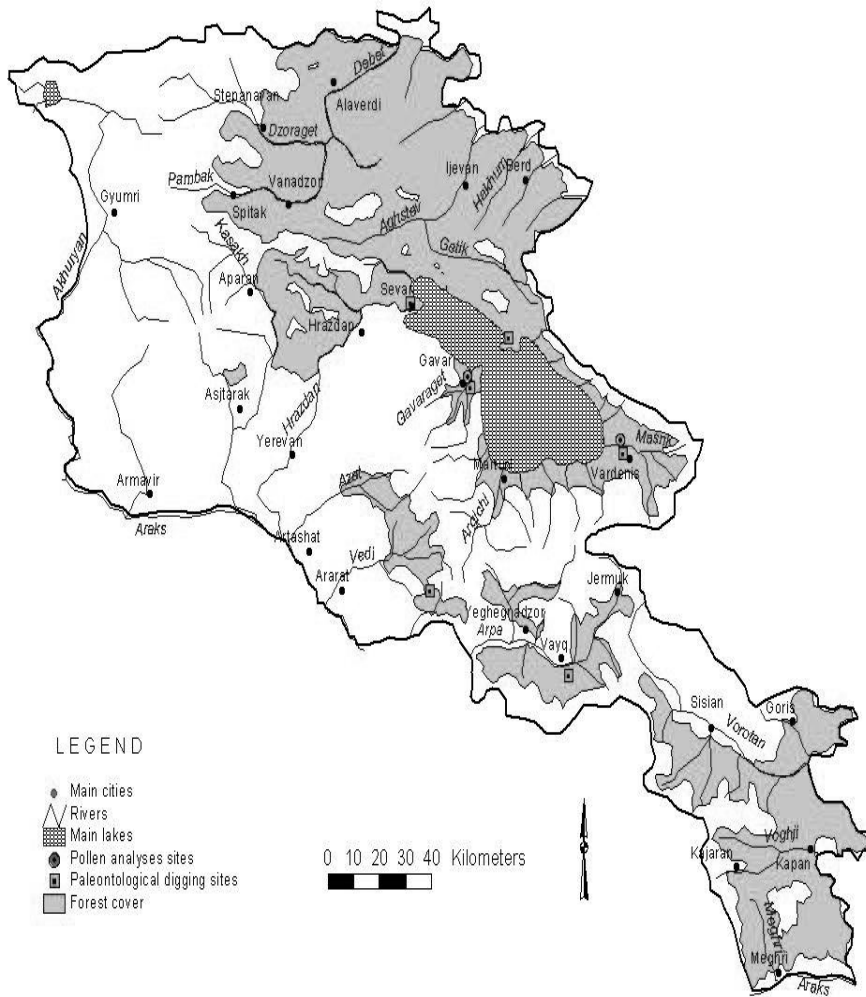


- The forests of Armenia cover 334,100 ha (11.5% of a historic coverage of >30%), which includes 283,600 ha of natural forests and 50,500 ha of plantation forests.

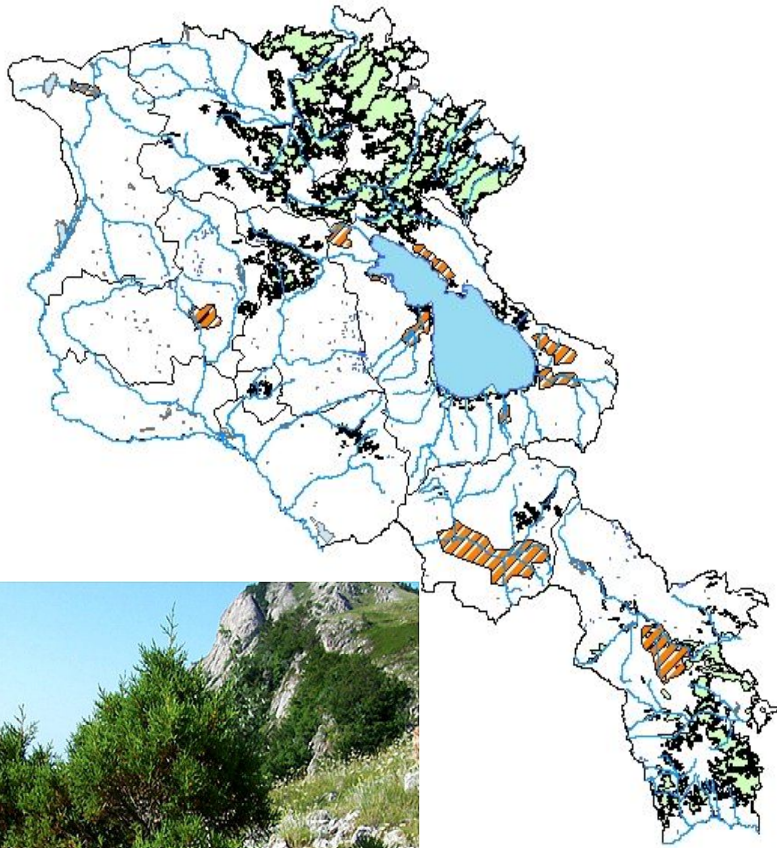
- Forests of Armenia outside of official protected areas are managed by the state, through “Hayantar” State Non-Commercial Organisation (SNCO – state-owned enterprises) and its sub-ordinated forest enterprises of the Ministry of Agriculture

- Oriental beech (*Fagus orientalis*), the Georgian oak (*Quercus siberica*), the Oriental oak (*Quercus macranthera*), the Caucasian hornbeam (*Carpinus caucasica*) and the Pine tree (*Pinus kochiana*) form 97.2% of the forested territory in Armenia and 97.2% of the overall forest mass. Armenian forests include a number of endemic and rare species

HISTORICAL AND CURRENT FOREST COVER OF ARMENIA

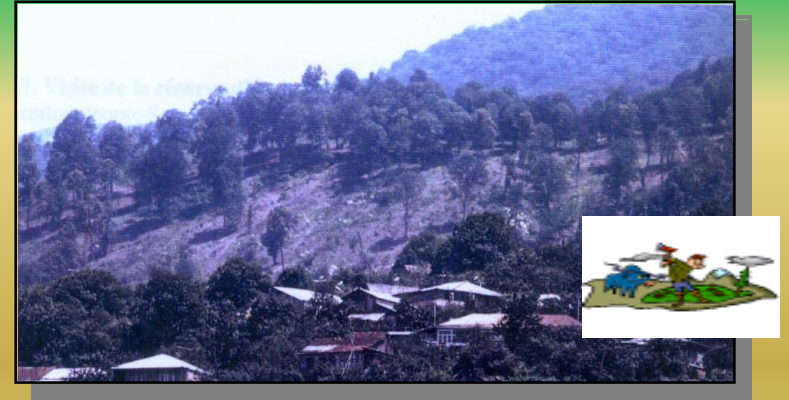


The current forest cover along with the remnants of previous forest cover



SOME REASONS OF FOREST COVER LOSS

- Antropo-ghenic factor
 - Logging (un-regulated and over-logging)- both in historical and contemporary context
 - Grazing, Hay-making
 - Man-induced forest fires
- Natural-climatic factor
 - Aridization of climate
 - Dry climate induced forest fires, diseases, pests outbreaks



Unregulated logging in Dilijan Nat.Park



Fire trace



Overgrazing in Armenian forests

Some consequences of forest cover loss

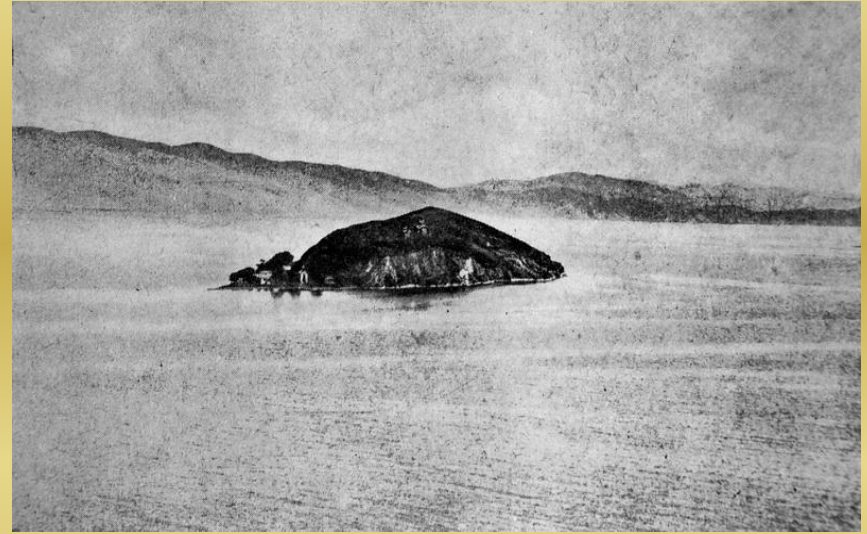


The most re-shaped landscape of Armenia

The island and the monastery of Sevan during the 19th century (Paris, 1869, T. Deyrolle)



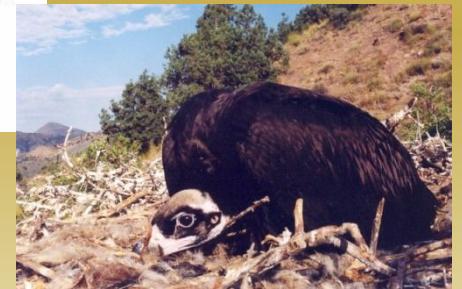
SEVAN ISLAND, 1937



SEVAN PENINSULA, 2010



Meanwhile diverse forest landscapes hosts high biodiversity and provides plenty of ecosystem services



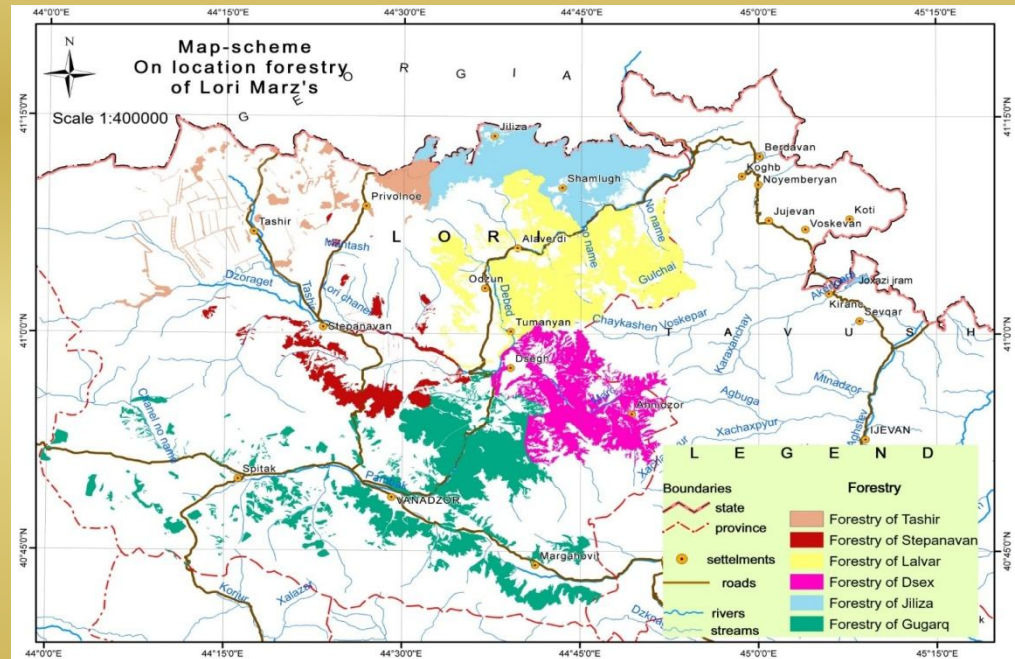
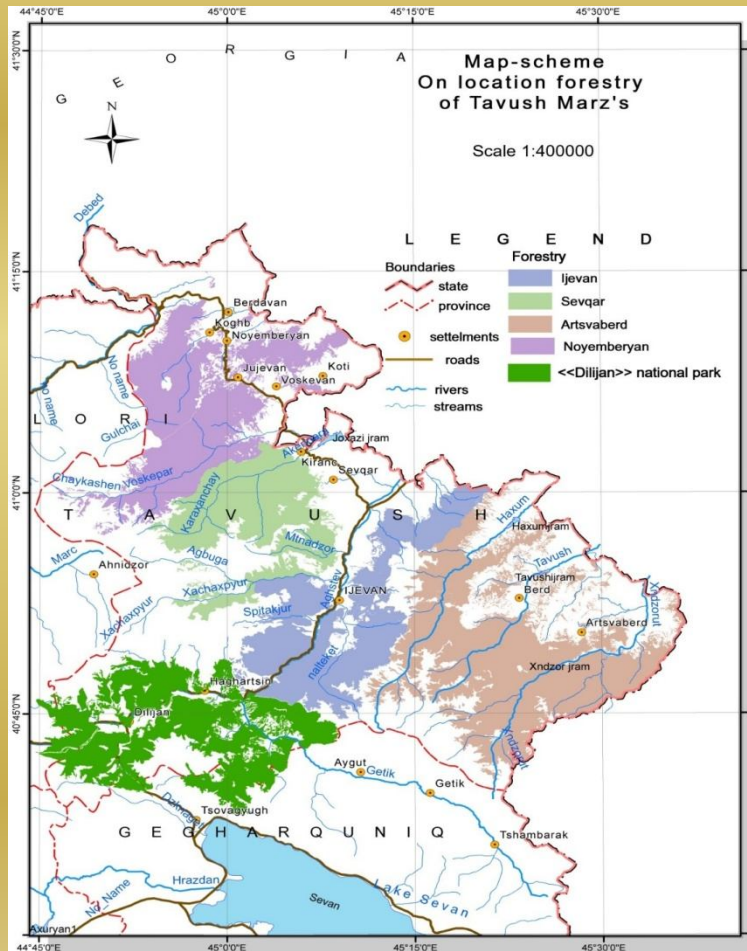
What concept could compromise the effective functioning of forest ecosystems and continuous flow of multiple ecosystem services ?

The answer is: “landscape concept” and landscape level planning

- Perception of forest landscapes as continuous spatial-temporal phenomena, that includes forests of different categories (productive, protective, special meaning), open-lands, protected forest zones, natural-historical sites, etc. i.e. complete natural-territorial complexes
- “Interpretation” of forest landscapes through already well-processed landscape-level planning tool, particularly the following highlights:

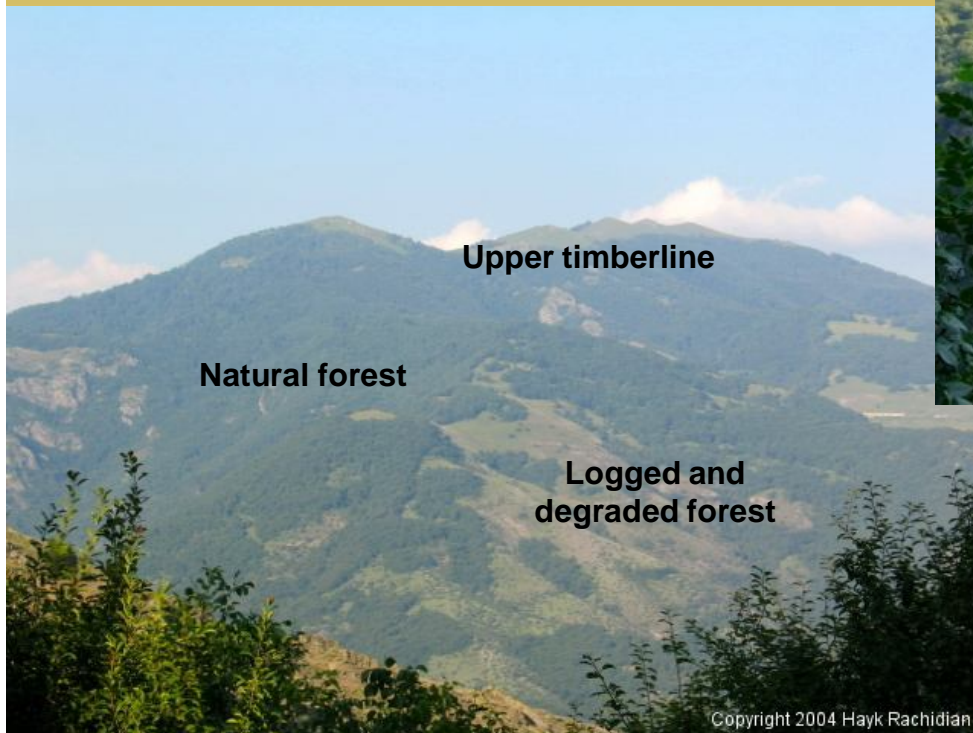
- Flexible instrument to study and assess status, significance, sensitivity of natural components and social-economic development potential (**Systematization**)
- Tool for strategic land use assessment and evaluation in compliance with international standards (**Comprehensive assessment**)
- Tool interconnecting various agencies and policy-makers at different levels (**Management**)
- Tool for the extensive involvement of public in the planning process (**Involvement**)
- Tool providing transparency (**Transparency**)

Thus 64% national forest resources are concentrated in project target area, providing essential ecosystem services, such as water provision, landslide prevention and carbon sequestration



The target area organized and managed by 11 FE- belonged to Hayantar (State forest service, SNCO) and 9 specially protected areas belonged to MoNP

Typical Forest Landscapes from North-Eastern Armenia



Barriers to address threats to the Land and Forest Resources SFM of North-eastern Armenia

- Continuous overexploitation of natural resources
- Inadequate planning, regulatory and institutional framework for Integrated Forest and Land Resource Management
- Minimal experience among key government and civil society stakeholders in developing and implementing SFM practices on the ground,
- The lack of incentives and benefits to local communities to participate in forest management and conservation
- Lack of proper financial mechanisms

Necessary steps towards sustainable land and forest management in north eastern Armenian forest landscapes

2 major outcomes are envisaged to shift to sustainable land and forest management concept and practices:

- **Enabling environment for the 2 regions in Northeastern Armenia to plan, monitor and adapt sustainable forest and land management** to address the barrier related to deficiencies in the current inadequate planning, regulatory and institutional framework for integrated forest resource management.
- **Investment in demonstrating improved sustainable forest and land management practices to reduce pressure on high conservation forests and maintain flow of ecosystem services.** This outcome will demonstrate on-the-ground approaches to improving sustainable land and forest management within a production landscape covering an area of around 220,000 hectares of forest lands in the forest enterprises.

The matrices of Sustainable Land and Forest Management in North-Eastern Armenia

<u>Existing situation</u>	<u>Previewed steps</u>	<u>Continuous flow of ecosystem services</u>
<p>Degradation of dry forests landscapes through:</p> <ul style="list-style-type: none"> -Illicit felling of trees for fuel wood and timber -Overgrazing of forest land -No rehabilitation of degraded areas -No incentive for community forest conservation and management and for participation in sustainable NTFP use 	<p>Improved forest management planning operational zed in 11 forest districts.</p> <p>Sustainable forest management practices implemented:</p> <ul style="list-style-type: none"> - Forest exclusion zones and set aside of 85,000 ha as High Conservation Value Forests, replacement of productive logging by conservation forestry with possible engagement of local communities, - Recommendations for reducing wood collecting pressures developed, - Restoration of degraded forests at 4,932 ha through assisted natural forest regeneration incentives for communities to refrain from unsustainable forest use created through the NTFP use and alternative livelihoods support scheme 	<ul style="list-style-type: none"> - increased water availability, better stream flow and quality - reduced grazing pressure on forests - reduced danger of landslides - increase in Biodiversity Intactness in forests - increase in annual household income from sustainable NTFP and Agro-forestry products. - carbon stocks and sequestration - Increase in management effectiveness of protected areas and high biodiversity conservation set-asides over project period.

Examples of previewed Integrated territorial planning

- Newly created Ijevan state sanctuary management plan will be integrated into overall Ijevan Forest management plan along with incorporated biodiversity, ecosystems services and carbon sequestration protocols
- “Mshkavanq” school forest district (situated inside of the Noyemberyan FE) management plan will be developed in line with Noyemberyan forest enterprise management plan, providing local communities schoolchildren to become an active stakeholder in sustainable use and conservation of natural resources
- Updated forest management plans, beside inclusion of high conservation value landscapes, ecosystem and carbon protocols, will enable local community members to actively participate in preparation of management plan and monitor its realization.

Global Benefits

- Pressures on forest landscapes in the two regions covering 650,000 ha reduced and conditions of forest ecosystems improved
- Improved ecosystem services (such as water supply at forests, land slide protection, etc....) as measured by carbon benefits and reduced loss of selected indicator species
- Increase in management effectiveness of protected areas and high biodiversity conservation set-asides over project period
- Avoided emissions of CO₂ as a result of introduction of designation protective forests in productive forest category and carbon sequestration on account of assisted natural regeneration of forests
- Increase in annual income of households depending on forest



Thank you !

