



Ecosystem degradation in Georgia

Capacity-building workshop for Europe
on ecosystem conservation and restoration
to support achievement of the Aichi Biodiversity Targets

June 2 – 6, 2014, Isle Vilm

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Global Importance of Georgian Biodiversity



Population: 4.6 mln

Area: 69,700 sq km

- Georgia belongs to two out of the 34 Biodiversity Hot Spots identified by Conservation International
- Caucasian Ecoregion is recognized by WWF as a region of global importance out of 35 "priority places"



Ecosystems and Landscapes Diversity





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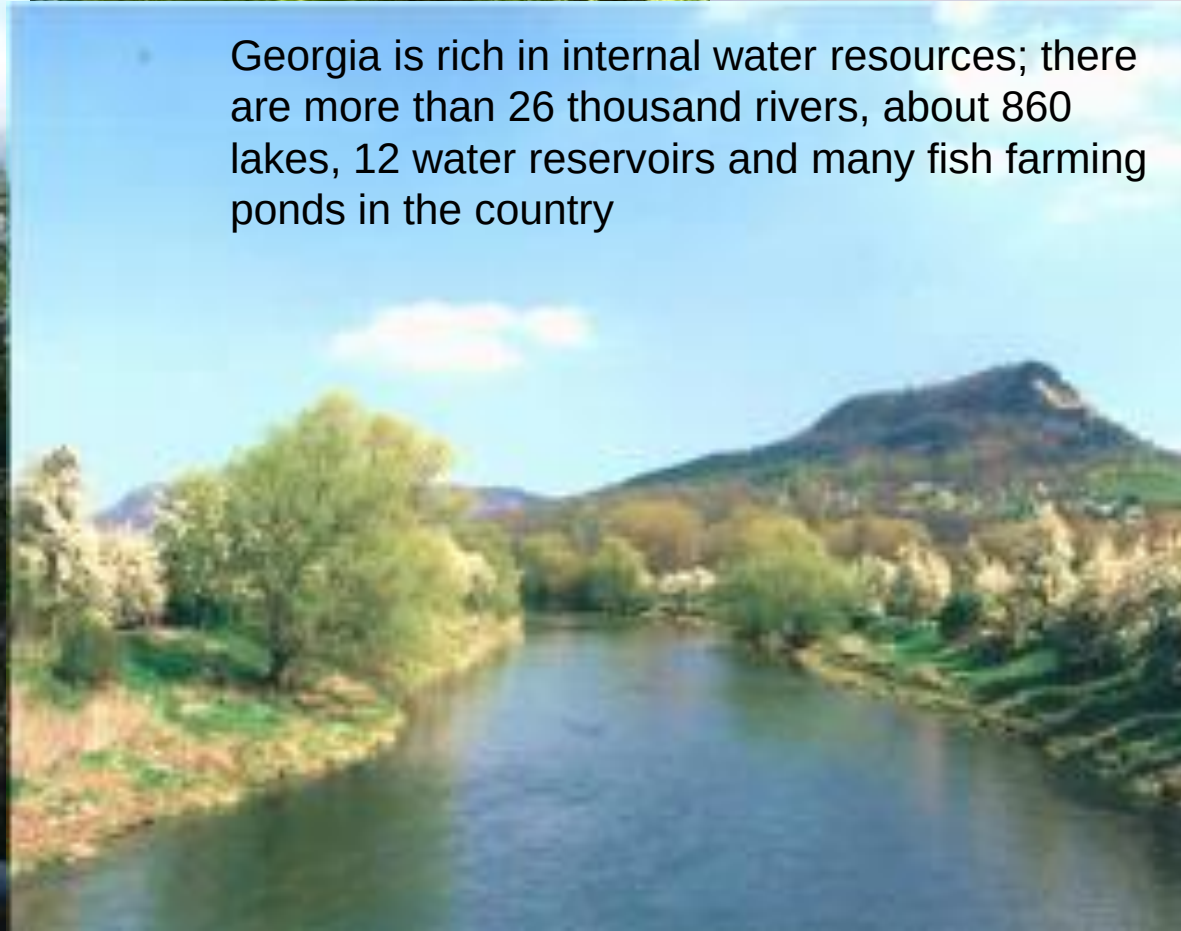


Ecosystems and Landscapes Diversity

- Forests cover about 40% of the territory of Georgia



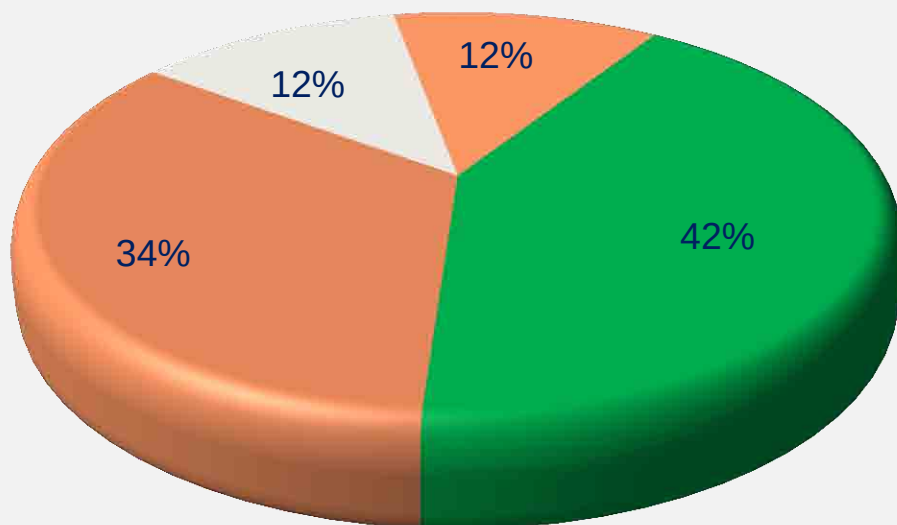
Georgia is rich in internal water resources; there are more than 26 thousand rivers, about 860 lakes, 12 water reservoirs and many fish farming ponds in the country



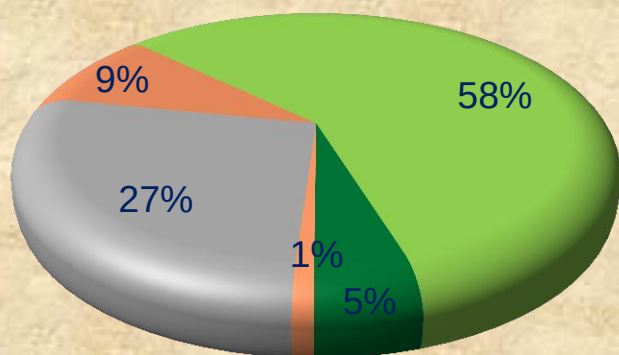
and Ispani Mires (total area designated as a Wetlands of importance since 1997



Land use in Georgia



- ტყის ფონდი
- წყლის ფონდი
- არასასოფლო-სამეურნეო
- სასოფლო-სამეურნეო



- სახნავი
- მრავალწლოვანი ნარგავები
- სამოვარი
- სათიბი
- საკარმიდამო

სასოფლო-სამეურნეო მიწის ფონდი დაახლოებით

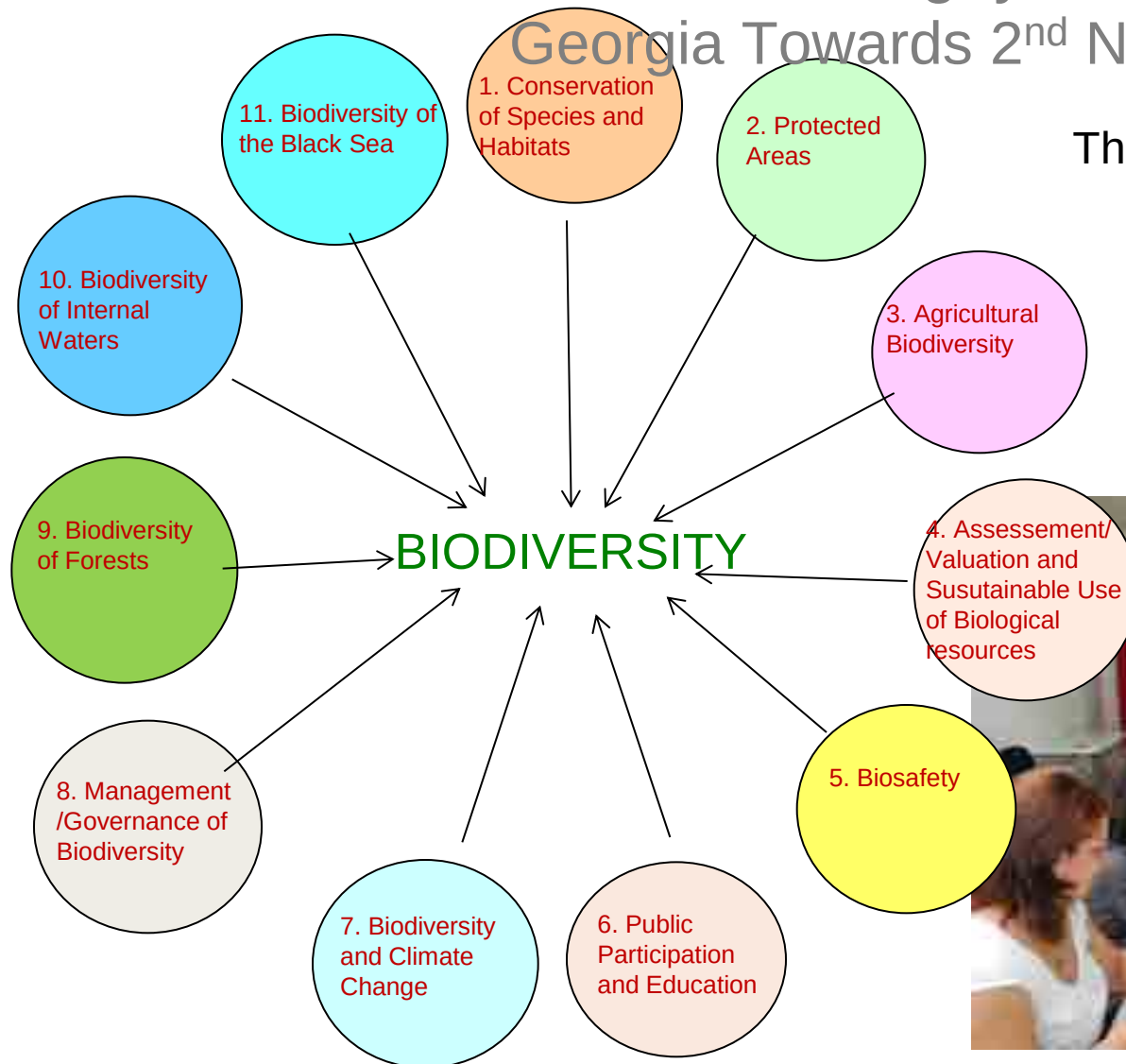
შეადგენს 3 მლნ ჰა-ს:

- სახნავი - 810 000 ჰა;
- მრავალწლოვანი ნარგავები - 270 000 ჰა;
- სათიბ-სამოვრები - 1 890 000 ჰა;
- საკარმიდამო - 30 000 ჰა.

After Nagoya – Georgia Towards 2nd NBSAP

Thematic Directions

In December 2011 NBSAP CC nominated qualified organizations (NGO and scientific organizations - 6 organizations in total) to coordinate 11 thematic directions of the NBSAP



After Nagoya – Georgia Towards 2nd NBSAP

Process:

1. Situation analysis
2. Development of Strategy, setting National Targets
3. Development of Action Plan



After Nagoya – Georgia Towards 2nd NBSAP Process:

Situation Analysis

- 1st step – to analyze the situation according to each thematic component; to identify
 - the status and trends of biodiversity;
 - the drivers of biodiversity loss,
 - relevant strategies, laws, policies and programs
 - lessons learned,
 - gaps and unmet needs

The condition of Georgia's biodiversity

139 animal species and 56 plant species are in the Red List of Georgia;
43 of the animal species and 20 of the plant species are categorized as endangered or critically endangered;
many of the animal species in the list are globally threatened.

Information on the condition of ecosystems, habitats and species has not been collected in a systematic way and the biodiversity monitoring system developed by the MoEP has been installed only recently.

According to studies carried out in the frame of various projects present the following picture:



Critical ecosystems and habitats are being degraded and fragmented

Forests are under pressure from **unsustainable logging** and **overgrazing** and **poor management practices**. **Forest fires** from **agricultural lands**, **pests** and **diseases** induce forest ecosystem degradation. A large part of the forest fund is severely degraded. In some places degradation has led to the **complete loss of forest cover** and the plant and animal communities that depend on it, with the result that the forest fund is becoming fragmented and its ability to provide life-supporting ecosystem services is being reduced. Fragmentation and loss of forest cover is posed by **poorly planned infrastructure development** also.



Critical ecosystems and habitats are being degraded and fragmented

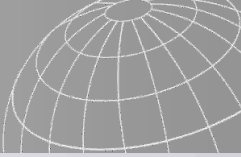
Semi-arid ecosystems, used as winter pastures for sheep, **overgrazing** is especially intense causing severe erosion. The problem is now critical and without urgent restoration activities may soon become irreversible. This particular form of habitat degradation, started in the Soviet period, has resulted in a dramatic reduction in the availability of natural graze and, in conjunction with hunting, has already led to the local extinction of the red deer and goitered gazelle



Critical ecosystems and habitats are being degraded and fragmented

Intensive grazing in the alpine zones of the Eastern Caucasus has resulted in a decrease in the feeding base and habitat quality of the wild ungulates (although hunting seems to be much more limiting factor for these species), particularly for the chamois, east Caucasian tur and red deer. The subsequent decrease in the wild ungulate numbers is probably one of the main causes of current conflicts between large carnivore species, such as the wolf, and local communities.









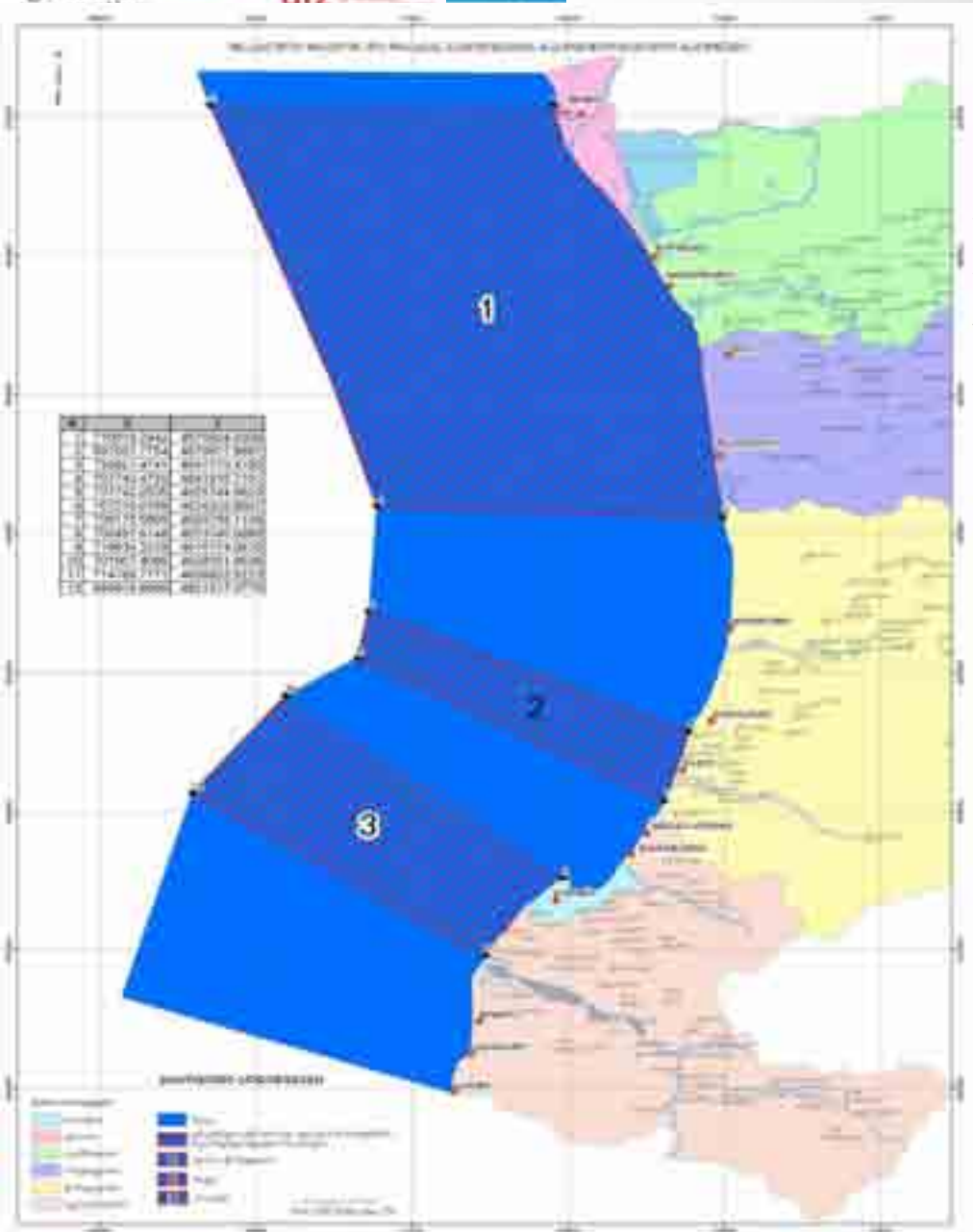


Water ecosystems have been intensively modified over the years as ***bogs have been drained*** and water levels in many lakes have been artificially regulated

Pollution from chemicals used in agriculture and discharge of industrial waste and human waste pollute *internal waters and the Black Sea*

Since 1995 pollution from non-industrial sources due to abandonment of water treatment facilities has increased and, at present, these facilities aren't functioning. Monitoring of water quality has been conducted only for 22 of the country's rivers and one lake, the Paliastomi. It is generally recognised that pollution now threatens many of the species associated with Georgia's wetlands. Pollution by organic substances is causing ***eutrophication*** of the Black Sea, ***resulting in "dead zones"***





Harmful fishing methods such as **bottom trawling**, the **use of nets with small mesh sizes** is causing serious damage to the **Black Sea ecosystem**



Overfishing is putting pressure on fish stocks in reservoirs and the Black Sea and reducing food supplies for animals higher up the food chain such as the Black Sea dolphin.

Dolphin specie	Conservation status according to IUCN Red List	Conservation status according to the Black Sea Red Book	Conservation status according to Georgian Red List
<i>Tursiops truncatus ssp. ponticus</i>	EN Endangered	DD Data Deficient	EN Endangered
<i>Delphinus delphis ssp. ponticus</i>	VU Vulnerable	DD Data Deficient	Not on the list
<i>Phocoena phocoena ssp. relicta</i>	EN endangered	DD Data Deficient	Not on the list

Critical ecosystems and habitats are being degraded and fragmented

Invasive alien species are threatening ***terrestrial and aquatic ecosystems***.

Habitats important for biodiversity are being lost to ***construction projects, including hydro-electricity generation infrastructure, electricity transmission lines, new roads and railways and industrial and urban development***.

There is ***significant lack of the information*** in regard to ecological condition of the ***soil cover*** of Georgia; most data available are in most cases ***outdated or not complete***.

Agro-ecosystems - Croplands and soils, because of inadequacy of agricultural practices applied, depending on : diversity of crops in farming systems, grazing density, crop rotation, rotation of pastures, windbreaks and live fences, melioration, drainage and irrigation systems, quality of irrigation water, proper application of fertilizers, pesticides and herbicides, cultivation methods etc are degraded in most cases





Climate change

Climate change can be viewed as the fifth key factor contributing to biodiversity loss together with habitat degradation, unsustainable use, environmental pollution and invasive species

The higher temperatures, and the decreased levels of precipitation that are predicted for some parts of Georgia, will put ecosystems – especially those which are at the margins of their natural range – under severe stress. Plant communities, and animal populations that depend on them – will change their distribution and some may disappear from Georgia because they are not able to move quickly enough or adapt to the changed climate.



Changes of annual air temperature



Changes in air temperature in the southern Caucasus (1935-2008 for Armenia, 1936-2005 for Georgia, 1960-2005 for Azerbaijan)

Underlying causes and enabling factors

Biodiversity loss has a number of underlying causes, the effects of which are facilitated by a number of enabling factors.

The main underlying causes of the pressures on biodiversity are the following:

- the poverty of many, who are driven to use natural resources unsustainably for energy, food and financial gain;
- the greed and irresponsibility of a few who take and spoil without regard for their impact;
- the ignorance about the importance of biodiversity and the impacts of people's own actions on biodiversity;
- the country's drive for economic development, which is essential for raising people out of poverty;

These underlying causes lead to the ***direct drivers of biodiversity loss***:

- Habitat loss
- Habitat fragmentation
- Overexploitation of natural resources (forests, pasturelands),
- Pollution,
- Alien invasive species and more lately,
- Climate change.

Underlying causes and enabling factors

The main enabling factors are the following:

- Lack of awareness of the importance of biodiversity and of what individuals and businesses can do to reduce the pressures on biodiversity;
- Legal shortcomings
- Institutional uncertainties (law coordination between national and local level authorities, centralized administration) and insufficient law enforcement
- Insufficient regard paid to the value of biodiversity and ecosystem services in policies, strategies and programmes;
 - *Strategic Environmental Assessment (SEA)*
 - *Environmental Impact Assessment (EIA)*
 - *Spatial planning*
 - *Ecosystem approach in PA planning (certain PA categories planning, although framework law on PA system envisages system's planning, PA network)*
 - *Economic valuation of biodiversity*
 - *Prevention of unsustainable infrastructure development*
- Inadequate and in some cases perverse laws regulating the use of biological resources ;
- Lack of resources to enforce regulations and implement procedures that are designed to safeguard biodiversity;



Part of Georgia's population including decision-makers, acknowledges the importance of its ecosystems and as a approval of this new NBSAP 2 revised in line with Global Biodiversity Strategic Plan 2011-2020, on May 8, 2014 has been approved by Government.





Thank you for attention!