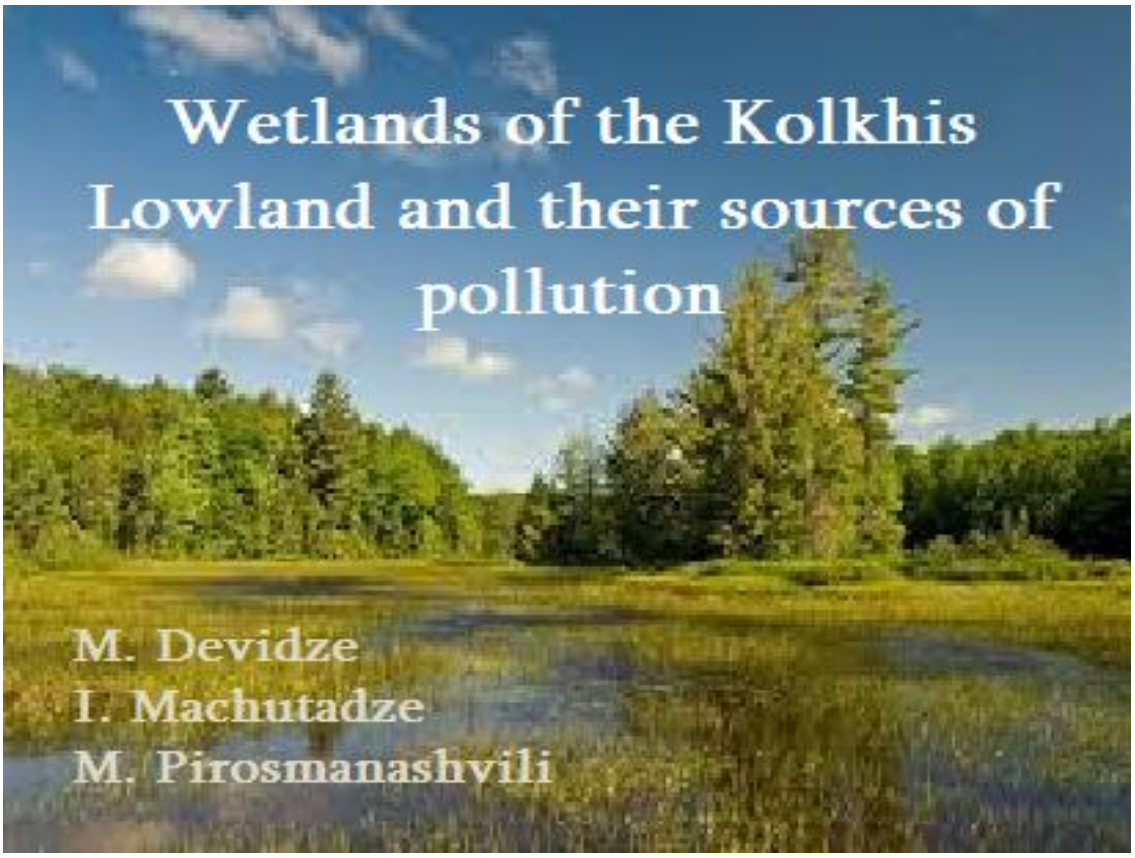

Foundation Caucasus Environment

Biolearn, CBC BSB -142.

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Common borders. Common solutions.

Content

Introduction

On the 2nd of February in 1971 in Ramsar (Iran) 18 countries signed the Convention of International Importance, especially as Waterfowl Habitat"

The convention is intergovernmental agreement, which aims protection of wetland territories and their sustainable use as and guarantee of international collaboration for this aim.

Georgia joined Ramsar Convention in 1996. Nowadays about 1366 wetland are announced as Ramsar territories or (so called) Ramsar sites. Their whole area is over 119.6 hectare.

It Should be noticed, that besides Ramsar, migratory birds are also protected by Bone convention. Georgia is the member of both conventions.

Wetlands in Georgia occupies especially large area on Kolkheti Lowland –about over 225 thousand hectare-less wetlands exist in Javakheti volcanic mountains and other regions of Georgia.

Wetlands in order to get the international status have to satisfy one of the three criterions: it should be naturally characteristic high humidity land for given geographic region, should be distinguished by biodiversity and should be a site of resting and spending winter for local birds and migratory bins. Kolkheti wetlands are unique because they satisfy all the three conditions. Kolkheti National Park was created in order to keep the non-stop immigration way of the African and Eurasian water and wetland migratory birds and at the same time Kolkheti lowland sites were announced as Ramsar sites.

Between the river mouth of rivers Enguri and Kintrishi are developed the most important massives of peat bogs: Anaklia, Churia, Nabada, Phichori, Imnati, Maltakva, Grigoleti, Kobuleti. Along with the peat bogs there is still reserved untouched or slightly modified Alder forests.

Wetlands absorb a large amount of water from the surface and underground waters as well, they support normal regulation of water regime, considerably decrease threat of floods, protect earth surface from washing.

At the same time wetlands play the role of natural filters. As they absorb a large amount of water, clean it from chemical and biological elements, and feed the rivers, lakes, horizons of underground waters and so on. Wetlands provide clean, fresh underground water stock. Polluting substances gather into the increasing layers of peat sediments, and that's why wetlands are called as "Landscape kidney".

Peat bogs have a very important role in creation of Carbone cycle. In the result of absorption of carbondioxide from the atmosphere by swamp plants, a large amount of carbon related to different organic compounds accumulate in peat boys. Draining and destroying peat bogs will cause convention of large number of fossil carbon into carbon dioxide. Due to above mention concentration of carbon dioxide will increase dramatically in the atmosphere and the value of its possible benefit –"trading in carbon" for the future generations will fall to zero.

Kolkheti National Park

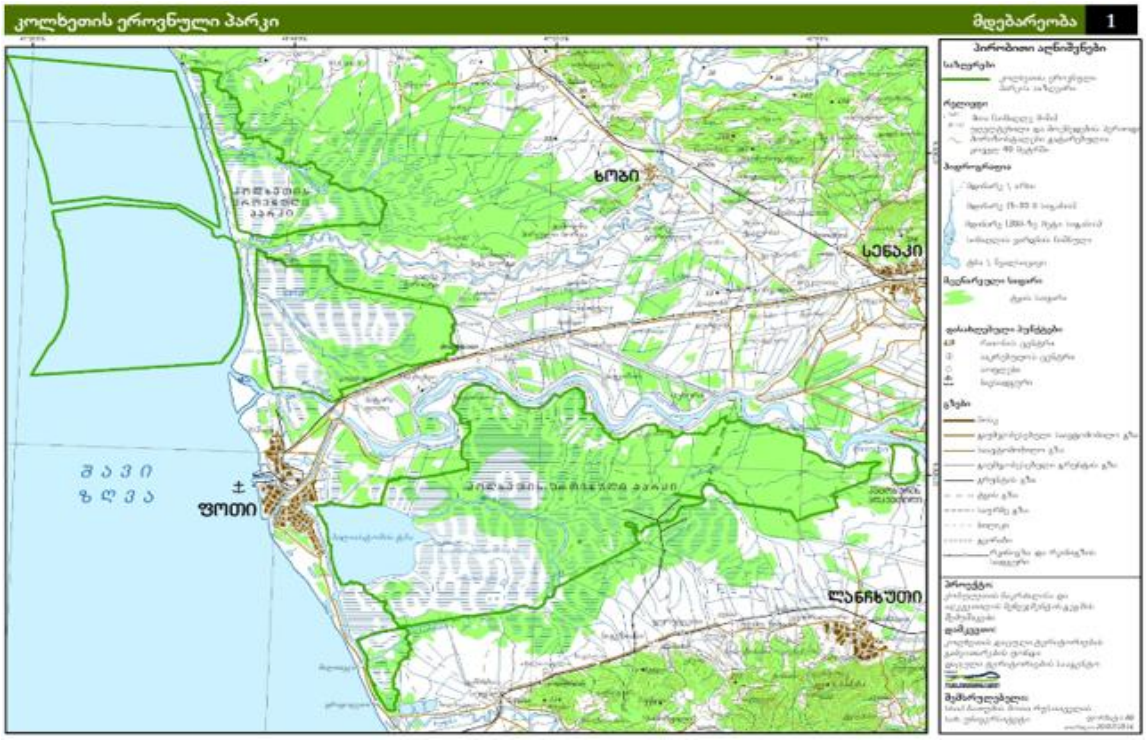
Kolkheti is among 36 hot spots of the world biodiversity kolkheti national park is located in the west Georgia. It occupies the eastern line of Black Sea coast and Paliastomi: Lake basin national park was created in 1999 to protect and keep Kolkhi high humidity ecosystems of international importance. The area of park is 28 571 hectare of land and 15 742 hectare of sea area.

Sites of National Park are located on the territory of five administrative districts: Zugdidi, Khobi, Senaki, Abasha, Lanchkhuti and they are parts of the historical lands of Georgia-Samegrelo and Guria.

Kobuleti protected areas. Photo – I Matchutadze

Kolkheti National Park is distinguished by lack of species but is distinguished by existing of globally unique habitats. Kolkheti National Park landscape is presented by such high humidity habitats as: live sphagnum peat bogs, relic forests, natural fresh water ponds, lakes, rivers, coastal dunes, wetland meadows.

Kolkheti peaty forests surround the sphagnum peat bogs like lace. In the forests there grow global red list wood species: Lafani (*Pterocarya fraxinifolia*), Colchian boxwood (*Buxus colchica*), Pomegranate *(Punica Granatum*), Figs (*Ficus carica*), Caucasian red list and Georgian res list species Hartvisi oak (*Quercus hartwissiana*) and so on.



Kolkheti National Park

Climate

Climate is unique and special in Kolkhety. Average annual temperature is 14.1 It is characterized by multitude of sediments and high relative humidity, which ranges annually from-70% to-83%. Frosts are rare.

In the warm period of the year western wind blows permanently from the sea to the land, but in cold period eastern wind blows from the land to the sea.

Existing environmental conditions create conditions for existing special Kolkheti habitats and biodiversity of unique species.

Mezoclimate. Between the climate and peat bogs are mutual relation. Kolkheti climate reacts on peat bogs and peat bogs themselves help climate regulation.

Hydrology

Hydrology and hydrological regime have special value vital importance for the habitat of the Kolkheti Natural Park. All the wetland habitats of National Park landscape are united by the unit hydrological network and hydrological regime.

Rivers. In National Park and at surrounding areas due to heavy rainfall flow mix feeding (snow, rain, underground waters) watery rivers. Some of them are transitive (Supsa, Rioni, Khobistskali, Tsivi, Tekhuri, Enguri), some of them origin from the swamps (Maltakva, Dedabera, Tsia, Tsiva, Churia and etc.).

Sea Area. The Black Sea coastal sea area along the Kolkheti National Park occupies the shelf, which extends from the coastal line averagely for 6-8 of kilometers. The maximum height of wave varies in the range of 3-6 m.

During the past decades in the sea area of Georgia, namely in Kolkheti National Park coastal sea area noticed process of sea water pollution by phenol, oil products nitrogen compounds

The most important component of Kolkheti National Park geological and hydrological network is lake Paliastomi and nearby Imnati peat bog.

The most part of high humidity territory of Kolkheti lowland is the territory of Kolkheti National Park.

Natural freshwater ponds. In 2015 the world red list officially gave the global vulnerable status to the Mediterranean Coastal ponds (which also includes Kolkhety lowland). Indicator species of freshwater ponds are: Water Nut (*Trapa natans*), Water Fern Salvinia (*Salvinia natans*). Such fresh water ponds are found in Anaklia and along the Imnati peat Bog.

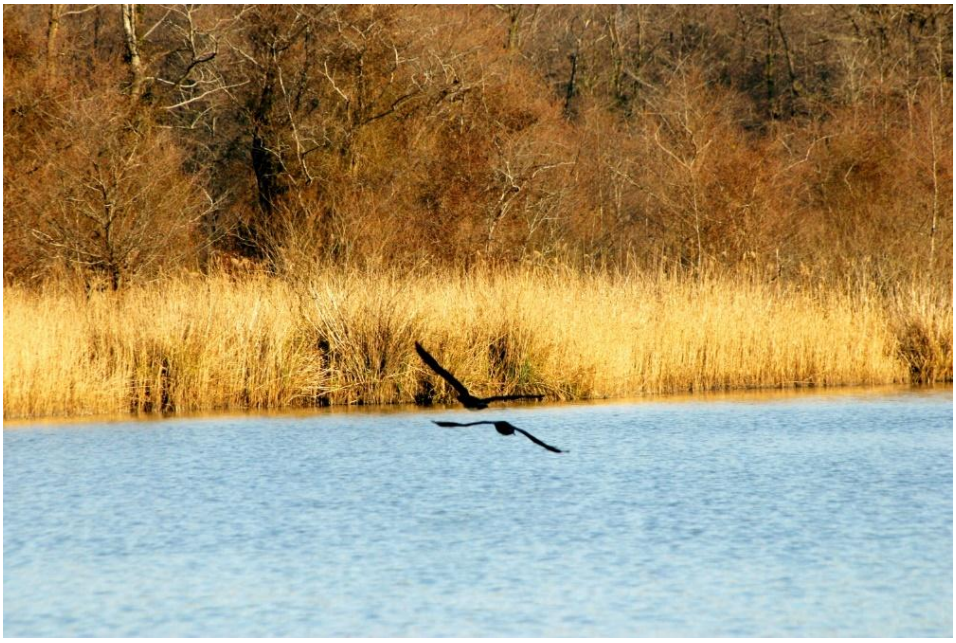
Coastal sandy dunes. Floristic complex is non-typical Psamophytes (inhabited on the sand) of Kolkhety Black Sea Coastal dune plants such as: Sea Urchin (*Eryngium maritimum*), Euphorbia (*Euphorbia peplis*), Limus (*Lymus racemosus subsp. Subulosus*), Amophila (*Ammophila arenaria*).

Natural Lakes, There are several lakes on the territory of kolkhety National Park: Paliastomi, two lakes on Imnati bog – Imnati lake and Usakhelo lake, Partotskali on Nabada, Among them the biggest is Paliastomi. It freezes partly rarely. In 2008 it froze completely.

Paliastomi lake and Caucasus mountains. Photo I.Matchutadze

Paliastomi Lake and its nearness to the sea is important habitat for the swimming and migratory birds. According to the data of local population, expeditions and bird watching, on Paliastomi and it's nearby territory rest, hatch and habit 77 kinds of birds.

In Paliastomi habituated about 40 kinds of fish but their number decreased dramatically because of anthropological impacts. In the past Paliastomi was Freshwater lake. The reason of it was the river Kaparchina, which fed the lake from the north-west side and flew parallel from the west and protected the lake from the flowing salty sea water. Today Kaparchina is the source of pollution because of wastewaters and household wastes found in it.



Paliastomi lake. Photo – I. Matchutadze

Over the years sphagnum Imnati peat bog and surrounding forest were natural filter for Paliastomi. They hold excess quantity of water and natural regime of water drainage was going on. That's why Paliastomi lake was protected from the impact of harmful biological and chemical substances. Due to surrounding forests and ability of filtration of peat bogs Paliastomi lake was fed by clean water. In the past century forest and peat bogs lost their filtration ability, because of forest cutting and peat extracting. That's why rivers and Paliastomi itself got biologically and chemically polluted water.

High humidity valleys. There are high humidity valleys at the age of forests and sphagnum bogs where dominate rushes (*Juncus acutus*), reed (Phragmites communis), Cattal (*Typha angustifolia*), yellow flag (*Iris pseudocorus)*, branched bur-reed (*Sparganium neglectum*).

Living Sphangam mire, where process of accumulation of peat is still going on today. On the Sphagnum peat bogs grow eight species of global red list Virginia Fen Rose (*Kosteletzkya pentacarpos*) Royal fern (*Osmunda regalis*), Chinese spiranthes (*Spiranthes sinensis (amoena*), White beak sedge (*Rhynchispora alba)*), Swamp sawgrass (Cladium mariscus) Bogbean (*Menyanthes trifoliata*), Helleborine (*Epipactis palustris*), Rice vampireweed (*Rhamphicarpa medwedewii*). From the invasive species on the sphagnum peats are fixed the following species: Water pennywort (*Hydrocotyle vulgaris),* Goatweed (*Hypericum mutilum),* Knotweed (*Polygonum thunbergii).*

On the Kolkheti National Park we should distinguish two types of peat bogs:

- "Dome-shaped" (bog)-ombrotrophic type of peat feeding only on rain waters. Water freely leaks in the peats to all directions and bog has prominent dome shape. Such types of peats are Imnati, Grigoleti, Ispani 2 and Ispani 1 peats. It should be taken into the consideration that hydrological factor is the most important for the peat bog and water is decisive component, because only constantly high level of water creates the ability of peat accumulation.
- "Fen" type –minerotrophic type of peat bog, which is fed by underground waters enriched by minerals. It does not create the dome. Such peat bogs are: Churia, Nabada, Anaklia.

Ecosystem Services

Special, worldwide value have percolation "dome-shaped" type of peat bogs on the territory of National Park, which establish particular ecosystem services. In this case, it should be noted.

Stocking up services – feed for man and animals, fresh water, forest, building materials, genetic resources and use in medicine.

Regulatory services –climate regulation, hydrological regime regulation, prevention of natural threats (such as flooding) water purifying and managements of wastes, crushing of plants, pests and diseases.

Services of keeping habitats and viability of species.

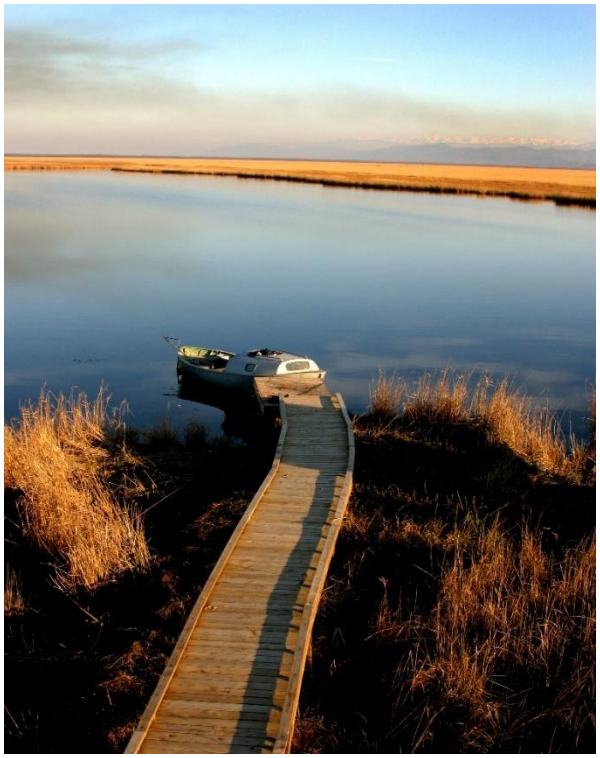
Due to unique ability of accumulating of carbon into peat, peat bogs present carbon one and have special role in mitigation of climate change.

Economical Value. Peat bogs of conservation is economically effective for decreasing of greenhouse gas emission. Peat conservation and restoration in natural way will decrease the emission of carbondioxide from 4 up to 15.5 Ton on a hectare in a year. It will affect the global climate change.

Percolation "Dome-shaped" type peat bogs existing on the territory of Kolkheti National Park.

- **Imnati peat bog.** Bog borders Paliastomi at the east 5 km. away from city Poti. It was formed on the former sea laguna and is the largest sphagnum peat bog in Kolkheti. Its area is 5000 hectare which presents 11% of Georgia peat bogs. Imnati peat bog is the strict protection zone of Kolkheti National Park. It consists of two domes, which are separated from each other. On Imnati peat bog dominate the following species of Sphagnum: *Sphagnum austinii, Sphagnum magellanicum, Sphagnum papillosum, Sphagnum rubellum.* On Kolkhi lowland Imnati peat bog is the extreme north spot of spreading *Rhododendrom penticum*. Imnati peat bog has become so particular because of domination *Cladium mariscus* and acidic environment characteristic for peat bog.

Domination of northern True Sedges and its big size support evaporation on one hand, and on the other hand, in drought period there does not happen waste of water. Otherwise decay of peat pores and destroying the flexibility of bogs would take place.



Touristic infrastructure – small Paliastomi and Imnati. Photo – I. Matchutadze

- **Phichori peat bog.** Phichori peat bog is located to the north of Imnati bog, on the right of the river Phichora. Only on this peat bog grows kolkhi endem (*Solidago tur fosa*).
- **Grigoleti Peat bog**. Grigoleti peat bog is located on Guria side of Kolkheti National Park. Those floral compound by which is characterized Grigoleti peat bog, indicates that. If all kinds of anthropological factors stop on the peat bog, Kolkheti will become the native land of world's third percolation type of peat bog. Grigoleti peat bog presents so called rudimental percolation type of peat bog percolation type of peat bog. Grigoleti peat bog presents so called rudimental percolation type of peat bog.

Grigoleti. Photo – I. Matchutadze

- **Kobuleti Ispani 2 and Ispani 1 peat bogs**. Kobuleti protected territories were created to save unique wetland ecosystems recognized by Ramsar Convection as waterfowl habitat. Peat bogs distinguished by waterfowl and by biodiversity of plants are located in Adjara autonomous Republic and occupies the north-east part of the Kolkheti Lowland. Kobuleti protected territories occupies Ispani 1 and Ispani 2 sphagnum peat bogs. Kobuleti State National Park and reserve are part of the Kolkheti National Park.

  Life sphagnum percolation type of peat bog- **Ispani 2** – in the porous peat bog, created by almost unrotting plants peat is percolation or impenetrable. Water leaks smoothly in the whole bog, to all direction. When it rains new massive of water lay on peat and old ones flew out, it works like soaked cloud. In the peat bog water is on the same level due to frequent and heavy rains. It has no connection with underground water. Dome making sphagnum species are distinguished, all over the world, by highest rate of growth (32sm. In a year), consequently peat accumulation process is also highest in the world and it is 44 mm. in a year. Ispani2 – wetland is definitely distinctive,

  because, on one hand on its vegetative cover, there are boreal (tundra and taiga) flora elements (*Sphagnum imbricatum, S. palustre, S. auriculatum; Drosera rotundifolia, Rhynhospora alba, Carex*

lasiocarpa and etc.) and on the other hand, such elements of Kolkheti flora as: *Rhododendron ponticum, R. luteu.* The reason why Ispani-2 wetland vegetative cover is in natural condition up today is that it is unreachable.

Kobuleti protected areas. Photo – I Matchutadze

Ispani-2 wetland avoid being used as peat quarry. Peat extracting and melioration works for drainage took place on Ispani-1 and Ispani-3 wetland territories.

Percolation sphagnum peat bog – "Ispani"-1 is partly degraded because of draining canals, which were built over the years. Today after stopping anthropological impacts the peat bog is returning to its original conditions. In Kobuleti reserve all species of flora, which are presented in Kobuleti National Park, except three species, they are: Caucasian endemic species *hynchospora caucasica)*, species of global Red list *Rhamphicarpa medwedewii* and *cladium mariscus*.

Freshwater pond. Photo – I.Matchutadze

Fen shaped type of minerotrophic peat bog feeding-underground waters.

- **Churia peat bog.** Churia peat bog is located to the north of City of Poti 10 km away to the north of Kulevi terminal and on the left bank of the river Khobistskali. Churia peat bog is minerotrophic sphagnum peat bog, where grow hummocks created by northern True Sedges (*Molinia litoralis*), Lasic True Sedges (*Carex lasiocarpa*). Here, near hummocks grow Swamp Helleborine (*Epipadis palustris*), Chaghandri (*Veronica becca-bunga*), Lycopus (*Lycopus europaeus*) and invasive Hydrocotyle (*Hydrocotyle vulgaris*). In the central part of peat is developed mesotrophic plant community and dome created by partitioned sphagnum (*Sphagnum papillosum*). There on the dome grow Water Clover (*Menyanthes trifoliata*), insect eaters round-leafed Drozera (*Drosera rotundifolia*) and northern True Sedges (*Molinia litoralis*).
- **Anaklia peat bog.** Anaklia minerotpophical peat bog is located to the north of Churia peat bog. At the mouth of river Churia. On the peat bog dominated hummocks created by True Sedges (*Carex rostrata*) In the habitat of high humidity peat boy along the Anaklia bog grow only global res list species of flora Virginia Fen Rose (*Kosteletzkya pentacarpos*).
- **Nabada Peat Bog.** Peat Bog is located to the south of Kulevi. Here grows Swamp Helleborine (*Epipaclis palustris*).

On kolkheti territory wetland massive of Pichora –Paliastomi, Kobuleti, Chaladidi-Poti are distinguished by the greatest water resources. Pichora-Paliastomi (1365 mln. m3), Kobuleti (103 mln.m3), Chaladidi-Poti (93.6 mln.m3).

Pelicans on the Churia coast

Besides abovementioned wetlands in Kolkheti are marked the following wetlands.

Table 1. Wetlands of Kolkheti lowland

1	wetland	location	Area km2
1	Eristskhali	Between seacoast and dune	15.0
2	Phichora-Kvishona	Between rivers Isareti and Gagida	13.2
3	Torsi	Sea lowland	9.0
4	Eristskali	Between the river Okumi and Gagida	119.0
5	Nakargala	The part of Enguri mouth	21
6	Chaladidi	Between the river Rioni and Khobi	144
7	Qveshenati	On the both banks of the river Kveshenati	1.0
8	Morchkhili	Banks of river Morchkhili	1.0
9	Chvitangele	Banks of the river Chvitangele	1.4
10	Laituri	Basin of river Shara	1.2
11	Natanebi-supsa	Between the rivers of Natanebi and Supsa	15.0

Threats of danger affecting on wetland habitat and degraded on biodiversity of species.

1. Incorrect exploitation of Kolkheti lowland forests;

2. Melioration works, deepening and widening draining canals and absence of hydrological buffer zones around them;

3. Degraded drain and melioration canals of USSR period, which have become the source of pollution.

4. Multiplication of invasive plants on the secondary meadows on the places created after defoforests. There are over 400 kinds of invasive species on Kolkhety lowland from which 90% is Eastern Asian. On this side aggressive invasive species (Amorphous and Gledichia) are especially dangerous. In recent years Canadian Goldsmith created the monopoly. By dominating of invasive species (Amorphous and Gledichia) is distinguished Katsoburi reserve.

5. Multiplication of entemo and phyto pests caused by climate change and fungal diseases.

6. Carrying out incorrectly planned infrastructural projects.
7. Unregulated grazing, which threatens biodiversity because of the absence of grazing management.
8. Fires on sphagnum peat bogs, from late autumn, till early spring (before beginning of vegetation) set by hunters and by carelessness of population;
9. Poaching and hunting are special threat for bird migration;
10. Salting and eutrophication of Paliastomi, because of negative impacts of anthropological factors existing in its basin.
11. There exist other potential threats from time to time spread requirements for giving permission of extracting peat from surrounding territories of Kolkhety National Park and even from it bounds. The subject of interest has become the central part of Imnati: unique peat bog. Cultivating this peat bog for the aim of extracting will destroy not only this second percolation peat bog in the world, but will cause the change of ecological characteristics of high humidity territories, located on the Paliastomi Lake basin. Because of this indicated territories won't be able to satisfy the criteria, defined by Ramsar convention, on base of which there were given the status of wetland territories of international importance. It will create the precedent of violation of obligations defined by Ramsar Convention.
12. Pollution caused by leaking of oil products or emergency oil spilling. In this case there does not happen absorption of oil from peat and it spread all over the wetland. Peat impregnates with heavy fractions of oil and into the deeper layers reach more toxic, water diluted, aromatic carbon-hydrate and oil-related gas combustion products strengthen anthropogenic pollution results;
13. Potential threat is building of planned landfill in Tsetskhlauri.
14. Absence of plan of management of wastes and pollution by household wastes.

Pollution of wetlands.

It should be noticed, that there is very little scientific reliable literature connected with wetland pollution and pollution sources. Generally, water pollution means discharging substances of human activities, into waterbodies in such concentration, that their neutralization by natural way becomes impossible and negative impacts on water ecosystems and human health take place.

The reason of pollution of rivers, lakes, wetlands and other water objects may be wastewaters flowing from enterprises, from agricultural lands or communities' wastewaters after rain unfaulty sewage systems and so on.

According to our materials, majority of wetlands in Enguri basin, have strong on average anthropological impacts and accordingly they have high and average level degradation.

In Rioni Basin we meet wetlands subject to weak, strong or average impacts, which are characterized by little, average and high level of degradation.

From the whole territories of wetlands only units are untouched and most of them are drained, mowed and are used for different purposes. Often on the place of drained wetland secondary wetlanding take place - process of soil rotting.

Coastal zone of the river Churia. Photo – I. Matchutadze

One of the considerable example of pollution is spilling of oil in large quantities from Zugdidi-Kulevi freight train in secondary wetlands, located on Kolkheti municipal territory.

The example of pollution from Kulevi terminal in the marine incident in Kulevi port, in 2011 when in the result of flooding of the rivers Khobi and Tsivi while leading gas on the ship, was damaged infrastructure of wharf and terminal. Emission of existing propylene gas in pipes took place.

Considerably was damaged relevant infrastructure of liquid gas transferring Estacada and leading equipment of LTD " Black Sea" terminal, located near "Kulevi-2" wharf.

Accident in Kulevi port

Sources of pollution and pollutants of wetlands on Kolkheti territory protected by Ramsar Convention.

Table 2. Sources of pollution and pollutants which occur in Kolkheti lowland wetlands by sediments of rivers (rivers Roni, Supsa, Choloki, Adjaristckali and so on).

	Wetland	location	area	Sources of pollution	Kinds of wastes
1	Pichora - Paliastomi	On the both bank of river Pichora	191.0 km2	1.Spontaneous and official landfill among them Poti municipality landfill;	1.Solid household-wastes;
2	Imnati	Boarding of Paliastomi lake 5 km away of the city of Poti.	19.903 ha	2.Poti tisi;	2.Wastes, got as a result of roducing, using and transporting of oil products.
3	Grigoleti	Part of Japan-Grigoleti	117.0 km2	3. Poti port;	3. Technichal wastes
4	Churia	On the left bank of the river Khobistkali, 10km away to the north of Poti	13 713 ha	4.Fish processing enterprises	4. building wastes
5	Anaklia	Between the mouth of the river Rioni and Churia		5.Kulevi oil-terminal	5. Wastes of pesticides and fertilizers used in agriculture.
6	Nabada	Between the mouth of the rivers Rioni and Khobistkali	10 697 ha	6.Poti concrete enterprise	6. medical wastes
7	Ispani 1 And 2	Basins of river Choloki and Ochkhamuri	19.0 km2	7.Farms, 8.PowerStation;	7. Wastes left (got) from the fish processing enterprises

				9.Savage systems;	8. Other organic or non-organic among them dangerous wastes.
				11.Citrus factories;	
				12. So called “smekalovki” chanal polluted by household wastes and sewage system	
				13. Ochkhamuri community	
				sewage system and so on.	

In west Georgia, as on the whole territory of the country, the main resource of pollution of water is municipality sewage waters. Almost all existing cleaning structures here are out of order and they don’t function.

The most part of sewage waters don’t flow into the sewage disposal at all and they flow directly into the rivers, where from they occur into the Kolkheti lowland wetlands.

From the industrial section on the surface water quality influence especially strongly the following: processing the mineral resources, oil processing, food industry. Other sources of pollution are: landfills illegal location of wastes and agricultural activities.

Water and soil pollutants may be divided into as physical, chemical and biological pollutants. Most of them are dangerous for environment and human health.

Scheme types of pollutants

Below is given incomplete list of those objects where occurs pollution of west Georgia rivers and accordingly wetlands.

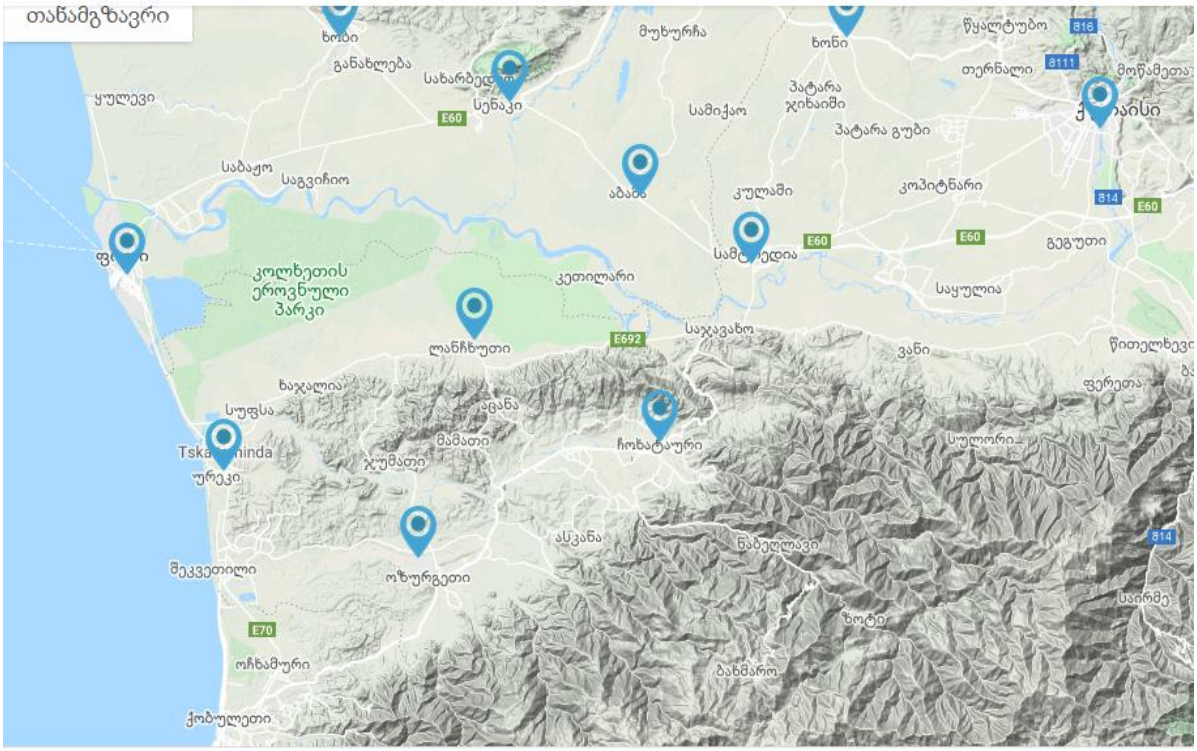
Branch of industry	Polluting components that predominant
Oil extracting and refining securing	Oil products, synthetic surfactants, phenols, ammonium salts, sulfates.
Forest industry. Cellulose and paper industry	Sulfates, organic compounds, lignin, resinous and fatly compounds, nitrogen.
Machine-building industry. Metal-working industry, metallurgy.	Heavy metals, weighted particles fluorides, cyanides, ammonium nitrogen, oil products, phenol, resins.
Chemical industry	Phenol, oil products, serine, aromatic hydrocarbon, inorganic compounds.
Mining extraction and processing industry, the coal industry.	Inorganic compounds phenols weighted particles.
Light textile and food industry.	Synthetic surfactants, oil products organic paints, other organic compounds.

Table 3. Kolkheti territory pollutants according to industrial fields

Active and Closed official landfills on Kolkhety territory

Priority pollutants of water ecosystems according to branches of industry. Pollutants originated by different branches of industry developed in west Georgia, occur in soil, underground waters, rivers, seas, lakes, and in rain water. In the result of this big part of Kolkheti territories wetlands affect anthropogenic impact. Industrial wastes and pollutant substances are different for different branches.

The most part of official municipal landfill today in Georgia do not have the system of collecting and purifying waters leaking from the landfill, it does not have waterproof base either, which would protect the underground waters from pollution. Part of the landfill are located on the river banks or waterway gorges, which creates the risk of pollution of surface and underground waters. On the landfills spontaneously takes place low-temperature, open combustion of wastes, which causes emission of harmful pollutants, furans and dioxides in the atmosphere.



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Poti municipal Landfill.

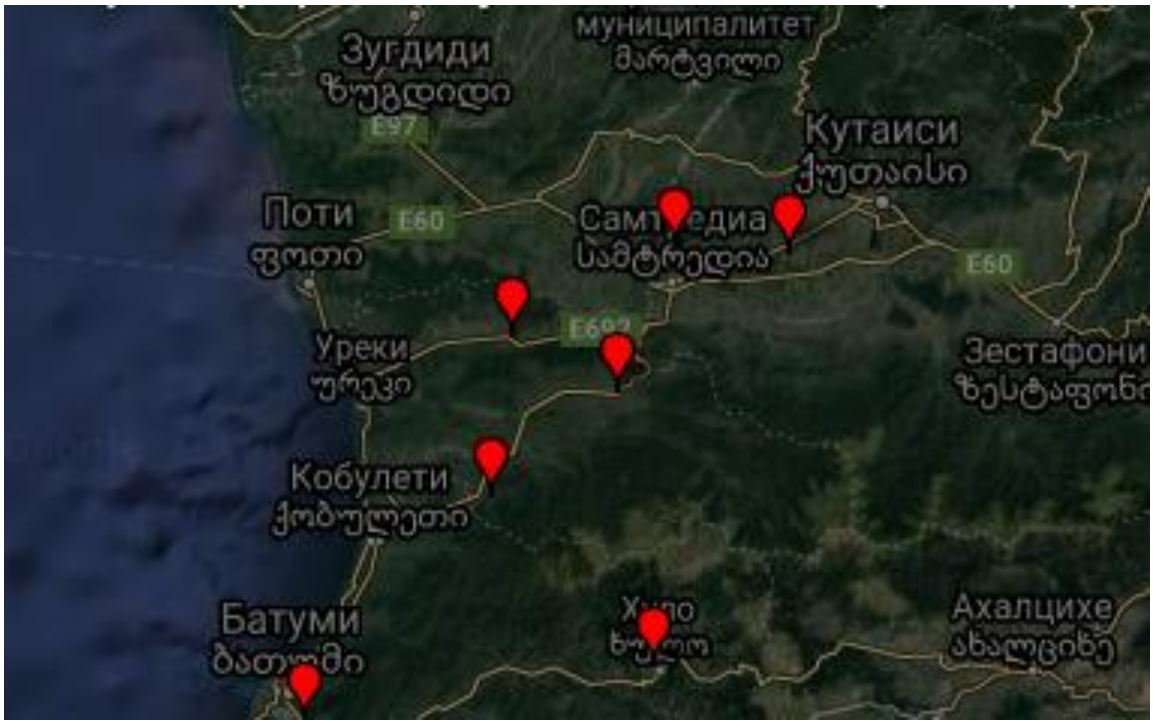
Territory of polygon occupies 55185 square meters. Every day from Poti and its surrounding villages 100 m3 wastes come to the landfill. Poti landfill has been functioning since 1960 which was transferred for operating to Ltd "Georgia company of the management of solid wastes" in June in 2014. Landfill territory is located at the estuary of the river Rioni, which at the time of excess atmospheric precipitation overflow its banks rapidly and creates the danger of flooding to the part of the polygon.

Batumi Municipal Landfill

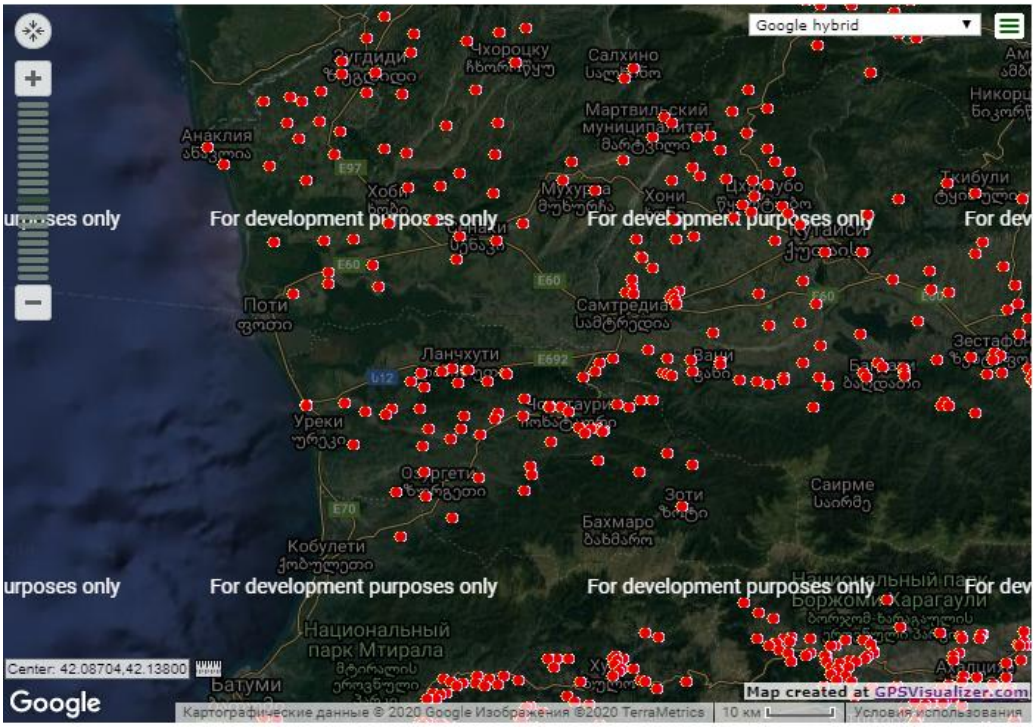
It is located 5 km away from Batumi at the bank of the river Choloki, 15 km away from the Sea confluence. Because of proximity to the landfill the river and the sea are polluted by surface wastewaters. Area of Landfill is 19 hectares.

Difficult situation is in Kobuleti too, where the wastes are thrown into the swamp territory and it presents the series source of pollution. In Khulo and Shuakhevi municipalities, landfills are directly disposal into the gorges of the river Ajaristskali.

Map of the inventory of hazardous (Chlorine-containing) wastes



Spontaneous landfills in Kolkheti territory



Poti Free Industrial Zone (Poti tizi)

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Common borders. Common solutions.

CROSS BORDER COOPERATION

Since 2010 Poti free industrial zone has been operating at full capacity, they carry out different industrial and logistical activities, they produce such products of heavy and light industry as chemical works, steal processing and so on. Functioning period: 99 years. Location – territory of former extensive developing zone of C of Poti Area-304,6 hectares.

Poti Seaport

The First port of Georgia on the Black sea, Poti port is one of the main notes for TRACECA and transitive corridor which connects Europe, Caucasus and Central Asia countries in short way. It is situated in the north-west part of C. of Poti, on the area of 49 hectare, in the delta of the river Rioni. All Kinds of loads and liquid products are transferred from here.

Kulevi oil terminal

It is located on Kolkheti lowland at the mouth of the river Khobistskali, in the Khobi Municipality. In The village of Kulevi, between the rivers - Civa and Khobi. Occupies area of 650 997 m3. Terminal is located very near the Kolkhi National Park, in the auxiliary zone of National Park, on the wetland territory of international importance, at the unique wetlands, which are protected by Ramsar Convention. Territory which was assigned belonged to the railway, leading to terminal, presented the territory of Kolkheti National Park.

Kulevi oil terminal

Kulevi port is one of the deepest port on the Black Sea. Territory of terminal is distinguished by technogenic loaded. For over the years, here oil, oil products, naphtha, crude oil, kerosene and other products, methanol have been got by railway transport, stored into the reservoirs and loaded into the marine transport by means of Kulevi port.

In the process of expanding oil product storage facilities and functioning may happen emergency spilling, creation of dangerous and non-dangerous wastes, emission of harmful substances in the atmosphere, pollution of soil and water by oil products. Important impact is expected on the soil, underground waters, atmosphere and (also is expected) impact caused by noise.

Fish Processing enterprises

In Poti function four enterprises of fish and sea food processing; LTD “iceberg”, LTD “MBM”, LTD “Sea Products” and LTD “Geofish Company”.

The four company at the same time possess the fishing licenses expire date of which were continued up to September 2026, by Georgian government Decree of April 22, 2016.

Transportation Fish from the ships to the enterprises in by cars. During the transformation fish bloody water spills, which besides spreading the smell, pollutes environment.

During the production process steam is emitted in the air and water and wastes, used during fish processing fall in the river Rioni and Kaparchina. Eventually polluted water and wastes fall into the Back Sea and Danger threats not only above mentioned rivers, but also to the sea coast and Kolkheti protected territories ecosystems as well.

In the enterprises the following kinds of violations were revealed:

- Pollution of environment by animal wastes;
- Pollution of the sea by the wastes of fish bloody water and fat.
- The fact of river pollution by waste substances (through channel) often fish processing

The Amount of fines imposed on the enterprises ranges from 100 to 1000 lari. Such amount of fines can't carry out preventive function of ensuring ecological safety and protection of environment.

LTD "Adjara Textile"

For building the enterprise the company was given the needed territory area of land of 4 hectare, by the National Agency of State Property in nominal price.

LTD "Heidelbergcement" Poti concrete enterprise, C of Poti, Larnaka lane (Nabada Side)

In the point of environmental pollution, it creates the following risks: risk of spreading the harmful substances and dust in the air, spreading noise, visual-landscape change, risk of pollution of soil and underground waters, creation of liquid and solid wastes.

Poti enterprise base.

In 2016 November company "Giargim" purchased one more asphalt-concrete producing plant, namely in Khobi municipal administration, in the village of Patara Poti. Production of plant is 100-120 tone of asphalt in an hour. Indicated plant is intended for the supply of asphalt-concrete for Poti (also for other regions of western Georgia), road-building and infrastructural projects.

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