

# Information Sheet on Ramsar Wetlands (RIS) – 2006-2008 version

Available for download from [http://www.ramsar.org/ris/key\\_ris\\_index.htm](http://www.ramsar.org/ris/key_ris_index.htm).

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

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**1. Name and address of the compiler of this form:**

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07	02	1997
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Designation date

8	9	4			
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Site Reference Number

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**2. Date this sheet was completed/updated:**

20 June, 2007

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**3. Country:**

Georgia

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**4. Name of the Ramsar site:**

Ispani Mire

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**5. Designation of new Ramsar site or update of existing site:**

This RIS is for (tick one box only):

- a) Designation of a new Ramsar site ; or  
b) Updated information on an existing Ramsar site

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**6. For RIS updates only, changes to the site since its designation or earlier update:**

a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

If the site boundary has changed:

- i) the boundary has been delineated more accurately ; or  
ii) the boundary has been extended ; or  
iii) the boundary has been restricted\*\*

and/or

If the site area has changed:

- i) the area has been measured more accurately ; or  
ii) the area has been extended ; or  
iii) the area has been reduced\*\*

\*\* Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

**b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:**

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**7. Map of site:**

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) a hard copy (required for inclusion of site in the Ramsar List): ;
- ii) an electronic format (e.g. a JPEG or ArcView image) ;
- iii) a GIS file providing geo-referenced site boundary vectors and attribute tables

**b) Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The boundary is the same as of the existing Kobuleti protected areas and their national protection status: Kobuleti State Nature Reserve and Kobuleti Managed Reserve.

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**8. Geographical coordinates** (latitude/longitude, in degrees and minutes):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

Kobuleti State Nature Reserve - 41°52'18" N, 41°49' 30" E

Kobuleti Managed Reserve - 41°52'15" N, 41°49'43" E

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**9. General location:**

Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town.

West Georgia, Kolkheti Lowland, Ajara Autonomous Republic, Kobuleti district, eastern of the town Kobuleti

**10. Elevation:** (in metres: average and/or maximum & minimum)

The elevation of the Ramsar site is between 1.5 to 6.5 m above sea level.

The height of the easternmost part of the territory's surface is some 6 m above sea level, while the height of its western part ranges between 2.1-2.5 m above sea level.

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**11. Area:** (in hectares)

770 ha.

Kobuleti State Nature Reserve – 331,25 ha

Kobuleti Managed Reserve – 438,75 ha

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**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

The landscape in the Ramsar site is divided into two parts. Its northern part is occupied by Ispani II. In the southwest part the Ispani I is located. Ispani II is impassable and only its margin areas was used for cattle grazing and wood cutting. Due to that this peat land preserved in a nearly pristine stage. In the

Ispani I peat land peat extraction and drainage works took place since the 1930s. Despite its degradation autonomous regeneration with former peatland vegetation like *Sphagnum* species partly occurs.

The Ispani I and Ispani II peat land complex represents a valuable site of landscape heritage. Almost half of its area is occupied by Ispani II percolation bog preserved in its almost original state. It should be mentioned that Ispani II (and also Imnati mire in Central Kolkheti Ramsar Site as recent studies show) is the first discovered and only mire found so far, which is characterized/classified as a percolation bog within the classification system of hydrogenetic mire types. In percolation mires, the water level hardly drops and the peat remains weakly decomposed, with large pores, and elastic. As the related high hydraulic conductivity leads to a substantial water flow through the whole peat body, percolation mires are only found in places where water supply is not only very evenly distributed over the year, but also quite large. Normally these requirements are only met under conditions of groundwater feeding. In Kolkheti lowland ombrogenous (solely fed by rain) percolation mires occur because: 1) the climate is very wet and the precipitation surplus is very evenly distributed over the year, 2) the bog has a convex shape, 3) there are no clear hummocks and hollows, because surface patterning depends on lateral water flow, 4) the vegetation is acid and possibly more nutrient demanding than in 'normal' bogs, because of rheotrophy effects, 5) the peat is hardly decomposed over a large depth. Extremely high mire oscillation with a maximum rise up to 25 cm can occur.

The ombrogenous mires are characterized by uniformity in their surface patterns. This uniformity and lack of diversity at the single landscape level is of importance when looking at wider scale, since Ispani (together with Imnati mire) mire can be regarded as reference point for global peat land diversity. The combination of percolation and ombrogenous (rain fed) types and resulting uniform character of Kolkheti mires constitute the extreme reference case of mire diversity in comparison with polygon patterning mires of the northern hemisphere regions. The uniformity of Ispani II 'explains' the worldwide diversity of peat lands and mire formations, and thus contributes into global diversity of mire landscapes.

The Ispani I and Ispani II peat land complex is important with its floristic composition too. The peat lands vegetation assembles with high percentages of cover of peat moss (*Sphagnum*) species and low density of vascular plant species. The existence of boreal (tundra and taiga) flora elements like *Drosera rotundifolia*, *Sphagnum imbricatum* which is rather unusual phenomenon for subtropical latitudes, as well as Colchic flora elements like *Rhododendron ponticum*, *R. luteum* is another feature of the uniqueness of that peat lands.

### 13. Ramsar Criteria:

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9

### 14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

**Criterion 1:** Ispani II mire is one of the two percolation bogs which are discovered world wide (another one is Imnati, which also occurs in the Kolkheti lowland).

#### Criterion 2:

Vegetative cover of the Ispani I and Ispani II peat land complex contains plant communities of relict (e.g. *Carex lasiocarpa*, *Molinia litoralis*), northern Palaearctic species (e.g. *Drosera rotundifolia*, *Sphagnum imbricatum*, *S. palustre*, *S. papillosum*, *S. rubellum*, *S. auriculatum*) in the Black Sea region ; Kolkheti elements (e.g. *Rhododendron luteum*, *Rhododendron ponticum*, *Rhynchospora caucasica* *Vaccinium arctostaphyllum*) as well as species like *Frangula alnus*, *Rubus spec.* or *Alnus barbata* at the margin of the peat lands.

For the animal species: *Lutra lutra* (species of Georgian Red List), *Haliaeetus albicilla* and *Egretta alba* (Annex I, EU Bird Directive)

**Criterion 3:**

The site supports populations of plants/animals important for maintaining the biological diversity of this particular biogeographic region. Ispani II and Ispani I (partly) are dominated by *Sphagnum papillosum*, *S. imbricatum*, and *S. palustre* and also Alder forest and Juncetum habitats. The vegetation further compiles amazingly few species, including *Molinia litoralis*, *Rhynchospora alba*, *R. caucasica*, *Rhododendron ponticum*, *R. luteum*, *Vaccinium arctostaphylos*, *Drosera rotundifolia*. This monotony makes Ispani II to a paradigm example of low internal diversity that contributes substantially to global ecosystem biodiversity.

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**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Caucasus, Kolkheti, (colchis), South Kolkheti Lowland;

Black Sea biogeographic European region of Europe.  
*Waterbird Population Estimates, Wetlands International, 2002*  
*Europe's environment: the third assessment, 2003*

**b) biogeographic regionalisation scheme** (include reference citation):

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**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

The recent peat land system of Ispani I and II originated by the terrestrialisation of a former lake. The age of the deepest lake deposits are estimated as at  $4605 \pm 39$  years BP. A minerotrophic water influenced fen period started at  $1773 \pm 34$  years BP and peat layers of 1 m with remnants of *Molinia* and partly peat mosses accumulated. The bog phase began  $1021 \pm 33$  BP. That upper layer is formed by up to 6 m peat moss peat. It is a dome-shaped Sphagnum mire only fed by precipitation. The hardly decomposed and highly permeable peat over its whole depth allows the water to percolate through the whole peat body. It has a smooth surface with Sphagnum dominated vegetation.

From a geo-morphological point of view, the area of the site comprises the north-eastern part of the Kobuleti coastal plain.

The warm humid climate is characterized by continuous high precipitation ( $2500 \text{ mm a}^{-1}$ ), high air humidity (80%) with high mean annual temperature ( $14.1^\circ\text{C}$ ) and hardly any frost.

Rivers Togoni and Shavi-Ghele run across the Kobuleti Protected Areas. Both rivers take their rise on the hilly strip. They are characterized by the low discharges because of the small size of their river basins.

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**17. Physical features of the catchments area:**

Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

From a geo-morphological point of view, the Ispani mires comprise the northeastern part of the Kobuleti coastal plain. In its turn, the Kobuleti coastal plain is located in the south-westernmost part of the Kolkheti Lowlands.

Ispani mire is bordered in the East by a hilly strip of the north-eastern slope of the Chakvi ridge, in the North by the flat alluvial plain of Natanebi that slightly slopes towards the Black Sea, in the South by parts of the peat land Ispani 1, and in the West by a strip of sand-pebble dunes stretched along the coast. The width of the latter is about 200-300 m, and the height 4-6 m above sea level. The town of Kobuleti is developed on the surface of the coastal dunes.

Kobuleti coastal plain has a humid sea subtropical climate. The mean annual temperature is about + 14°C, the mean temperature in August being 22 –23,5°C, and the mean temperature in January varying within +6° and + 6,5°C. The total annual precipitation is 2500 mm with the maximal occurring in autumn and winter. Westerly winds predominate within the year. Easterly winds predominate in cold seasons. The mean annual wind velocity is 2.6 m/sec. The relative humidity is rather high and reaches values of 74-83%.

The Kobuleti coastal plain consists mainly of hydromorphous and alluvial soils due to abundant rainfall and the relief of the plain. Within the Ramsar-site itself, mainly peat-boggy and silt-boggy soils are found, whereas the areas along the northern and eastern borders areas mainly composed of podsollic and alluvial-boggy soils. The strip of coastal sandy-pebble dunes with its comparatively high permeability have more favorable conditions for drainage of surface water and show a rich variety of alluvial-sandy, sandy-clay and partly meadow podsollic turf soils. Red soil predominates in the hilly strip adjoining the Ispani mires.

### 18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Regarded to the high amount of precipitation and the huge amount of water transported by the rivers from the Minor Caucasian mountain ridges the peat land areas buffer the settlement Kobuleti partly against flooding.

The peat land Ispani 2 has a very high capacity of oscillation. During high precipitation events the peat land oscillates about 25 cm. That slows down the water flow to the settlement and has a positive effect against flooding of the settlement.

### 19. Wetland Types

#### a) Presence:

Circle or underline the applicable codes for the wetland types of the Ramsar “Classification System for Wetland Type” present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

**Marine/coastal:** A • B • C • D • E • F • G • H • I • J • K • Zk(a)

**Inland:** L • M • N • O • P • Q • R • Sp • Ss • Tp • Ts • U • Va •  
Vt • W • Xf • Xp • Y • Zg • Zk(b)

**Human-made:** 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

#### b) Dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

U, Ts, W, 9, Xf, 7

### 20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The main habitats are:

- Sphagnetum

Sphagnum dominated with vascular plant species: Species like *Sphagnum papillosum*, *S. palustre*, *S. imbricatum*, *S. rubellum*, *Molinia litoralis*, *Frangula alnus*, *Rhododendron luteum*, *Rhododendron ponticum*, *Osmunda regalis*, *Vaccinium arctostaphylos*, *Drosera rotundifolia*, *Rhynchospora alba*, *Rhynchospora caucasica* occur.

- Alder forest (*Alnus barbata*):

associated with *Frangula alnus*, *Rubus spec.*, *Pteridium aquilinum*.

- Juncetum:

with *Juncus effusus*, *Hypericum mutilum*, *Polygonum thunbergii*, *Bidens tripartita*

Main vegetation types are Sphagnetum, dispersed Sphagnetum, heavily degraded wet alder-tree forests, secondary vegetation types: secondary meadow-shrubbery and artificial forests.

The existence of boreal (tundra and taiga) flora elements like *Drosera rotundifolia*, *Sphagnum imbricatum* which is rather unusual phenomenon for subtropical latitudes, as well as Colchic flora elements like *Rhododendron ponticum*, *R. luteum* is another feature of the uniqueness of that peat lands.

The Ispani I and Ispani II peatland complex is also important for migration birds.

## 21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.

The Kolkheti mires display diverse vegetation with many endemic species and relicts from the glacial period. Ispani II and Ispani I (partly) are dominated by *Sphagnum papillosum*, *S. imbricatum*, and *S. palustre*. The vegetation further compiles amazingly few species, including *Molinia litoralis*, *Rhynchospora alba*, *R. caucasica*, *Rhododendron ponticum*, *R. luteum*, *Vaccinium arctostaphylos*, *Drosera rotundifolia*. This monotony makes Ispani II to a paradigm example of low internal diversity that contributes substantially to global ecosystem biodiversity.

Among the major peat accumulating species *Sphagnum* deserves special attention. Kolkheti is the only subtropical area in the world with *Sphagnum* dominated ombrotrophic mires. *Sphagnum imbricatum* is a main peat forming species in Ispani 2. Communities with *Molinia litoralis* dominates. Relatively small areas are covered by *Carex lasiocarpa*. Small areas are populated with shrubs such as *Rhododendron luteum*, *Rhododendron ponticum*, *Frangula alnus*, *Alnus barbata*, etc. Scrubs with peat mosses are developed on limited areas and on convex surfaces.

During the last Glacial Maximum, Kolkheti constituted an important refuge for the flora of Europe. Because of this, the Ispani currently harbour – next to Tertiary relict species like *Rhododendron ponticum* – many (sub) Mediterranean, temperate, and boreal relict species. Of special interest is the widespread occurrence of boreal mire flora elements in Kolkheti like *Drosera rotundifolia*, *Menyanthes trifoliata*, *Rhynchospora alba*, *Carex lasiocarpa*. Some of the mire species are endemic species of Georgia and Caucasus: *Rhynchospora caucasica*, *Ranunculus medvedii*

Along the rivers Togoni and Shavi gele remnants of alder (*Alnus barbata*) forest are still found. Frequent associates of alder are *Pterocarya pterocarpa*, *Carpinus caucasica* (on dry places), *Quercus imeretina*, *Frangula alnus*, *Crataegus microphylla*, *Viburnum opulus*, etc, which are overgrown with natural lianas such as *Smilax excelsa*, *Vitis sylvestris*, *Hedera colchica*, etc.

## 22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.

Despite a small size of the area and the near vicinity of an urbanized zone, The Ispani I and Ispani II peat land complex and its adjacent areas still provide a habitats to: *Lutra lutra* (species of Georgian Red List), *Canis aureus*, *Felis silvestris*, *Myocastor coypus*, *Meles meles*, *Erinaceus concolor*, *Rattus norvegicus*, *Rattus rattus*, *Sorex volnuchini*, *Mus musculus*, *Myotis blythii*, *Pipistrellus pipistrellus*.

The Ispani I and Ispani II peatland and the adjacent areas serve as a good refuge for the birds: *Circus cyaneus*, *Egretta garzetta*, *Merops apiaster*, *Lymnocyptes minimus*, *falco vespertinus*, *Grus grus*, *Egretta alba*, *Haliaeetus albicilla*.

Area is not rich with herpetofauna, which is presented mainly by: *Emys orbicularis*, *Elaphe longissima*, *Lacerta agilis* and *Lacerta media*, *Natrix tessellata* and *Natrix natrix*. From amfibiebiens are found *Triturus vulgaris*, *Triturus cristatus*, *Rana ridibunda*, *Hyla arborea*, *Bufo viridis* and *Bufo verucosissima*. Various habitats support rather large amount of invertebrates. The following species of fish are represented: *Siluris glanis*, *Leuciscus cephalus*, *Cyprinus carpio*.

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### 23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

The Ispani mires retain important archaeological monuments. During excavations in Ispani mire settlements from the eneoliths early Bronze Age dating back to 4-3 century BC were found under the peat layers. Here 5-6 thousands years ago man settled down. In the mid of the 3rd millennium BC, climatic warming and rising sea levels created favourable conditions for the development of mires. The invasion of the water forced the people to abandon the area and the basis was laid for the formation of the contemporary Ispani mires. During the 1964 excavation of the drainage canal, a settlement was discovered in Ispani I under 2.0-2.5 m of peat. This settlement is a monument of the ancient agriculture in Koklheti. Constructions from two different periods were found: the remains of log construction and settlements on piles. The excavations revealed ceramics, grinders, bronze weapons and their moulding forms, small clay statuettes, chestnut and acorn shells, etc. The peat lands perform many ancient traditional functions. Traditionally the population uses wing-nut, beech, alder and box as construction material. It is widely used for carpentry and furniture manufacturing. Since the early Bronze Age cattle breeding is widely developed.

“Namcheduri”, a site of ancient settlement of the Middle Bronze Age (some 3500-4500 years ago), in the northwest part of the KSNR & KMR, at a distance of 2 km, and “Pichvnari” of Antique Age are worth mentioning. The latter was established in II B.C. and existed until I A.D. The population of “Pichvnari” was engaged in agriculture, fishing, and melting metal from magnetic sands. Traces of this habitation were found during archaeological excavations and can still be seen up to present days. The archaeological findings of “Namchaduri” and “Pichvnari” are exhibited in the Ajara state museum.

There are a few interesting architectural monuments in the areas adjacent to the KSNR & KMR. The most noteworthy among them are the church of St. Nino in the village of Midvale; the ruins of the Elias fortress in the village of Archive; Mamuka’s fortress near the village of Alambara; the ruins of Petra’s fortress at the Tsikhisdziri. The arched bridges over the Kintrishi river are also of great interest.

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box  and describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:

- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

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**24. Land tenure/ownership:**

a) Within the Ramsar site:

State owned property

b) In the surrounding area:

State owned property

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**25. Current land (including water) use:**

a) Within the Ramsar site:

The area encompassed by the Ispani mires is not inhabited by man and it is not used for economic purposes by the population of the adjacent territories. Only its peripheral parts are used, mainly for cattle grazing.

b) In the surroundings/catchments:

The areas to the east and north of the Ispani mires are mainly used to grow corn (maize), vegetables and to a lesser extent as grassland for mowing. Subtropical agriculture is a traditional sector of economy for the Kobuleti district. Some 60% of all cultivated lands are used for perennials. Citrus cultivation, which has already been one of the leading agricultural sectors in the Kobuleti district since the second half of XX century, is still the major source of income for the local population. In recent years, nuts and walnuts production has become very profitable.

Cattle's breeding for dairy and meat production is a secondary sector of agriculture in Kobuleti district.

Due to the favorable natural features of Kobuleti district, one of the major sources of income for the local population is the tourism sector, which is intensively developing.

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**26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:**

a) Within the Ramsar site:

Due to its relatively small size, the Ispani I and Ispani II peat land complex is vulnerable for human impacts.

Drainage construction built in the past are still adversely affecting on the hydrology of the area.

One of the threats is grazing. Cows are mainly grazing in the peripheral zones, but also in the margins of the peat land Ispani 2 and within the peat land Ispani 1 of the Kobuleti protected areas and the number of cows is low. Compression of the peat due to grazing cows changes the permeability and hence the groundwater flows. Grazing removes the cover of the peat surface that is then exposed and can easily be eroded by wind and water.

Sometimes fires occur in forested areas, but there are localized immediately.



b) In the surrounding area:

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**27. Conservation measures taken:**

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ; Ib ; II ; III ; IV ; V ; VI

c) Does an officially approved management plan exist; and is it being implemented?:

The Kobuleti State Nature Reserve and Kobuleti Managed Reserve have been established on the protected areas in 1999. Management Plan (for five years) for the Kobuleti Protected areas was approved by decree of the Minister of environment Protection and Natural Resources in 2006. Management Plan was elaborated within the Georgia Intergrated Coastal Management Project (GICMP) supported by WB/GEF.

Under the project:

- Demarcation of boundaries of Kobuleti Protected areas was finalized.
- Biodiversity monitoring programme was developed;
- Administrations Kobuleti Protected areas have been properly equipped;
- Interpretation Demonstration Project was developed;
- Infrastructure has been planned.
- Ispani mires (hydrology, vegetation, anthropogenic impact (grazing, fire), peat stratigraphy) were studied in detail by scientists from the Greifswald University Institute of Botany.
- Mire School in Kobuleti (May, 2005) has been conducted.
- The administrative center of protected areas has been built and has been already functioning

d) Describe any other current management practices:

**28. Conservation measures proposed but not yet implemented:**

e.g. management plan in preparation; official proposal as a legally protected area, etc.

Deleted: ¶  
¶  
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Monitoring of Biodiversity, Water regulation (water level fluctuation), anthropogenic impact, control of invasive species;

Restoration of forest ecosystems;

Development of the mire restoration project.

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**29. Current scientific research and facilities:**

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

From the Botanical Institute of the Greifswald University, NGO "Tchaobi", Kobuleti Protected Areas, Batumi Botanical garden the following research tasks do exist:

- analyses of the vegetation of the Ispani 2 and Ispani 1 peat lands
  - analyses of the different degradation and succession stages of the peat lands
  - evaluation of the perspectives of *Sphagnum* farming at the buffer zones
  - vegetation history of the region by a peat core taken from the Ispani 2 peat land
  - Invasive plant species of the Ispani mires
  - Main habitats and it suitable flora of Ispani I peat lands
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**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

Printing materials have been issued:

Booklet "Main plant species of Kokheti wetlands habitats", NGO "Chaobi", GICMP, 2002,

Booklet "Information on the values and functions of Kolkheti mires", NGO "Chaobi", WI, 2002.

Two flyers: "Ispani II", "Unique Ispani mire" and two video films "Unique Ispani Mire" and "Ispani Protected Areas and eco-tourism" were produced.

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**31. Current recreation and tourism:**

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

Currently the Kobuleti protected areas have insignificant amount of visitors; but due to the location near the seaside resort-zone, they have important potential for tourism. Approved management plan on protected areas includes eco-tourism developing programme for realization of this potential and to prepare the site for active tourism. The implementation of this programme has been already started:

- The works have been started to build the tourist trail with warning signs, wooden bars at dangerous sections, bridges and sightseeing platforms
- Seven information boards have been designed: three - near the entrance of the protected areas and four - on the beach

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**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc.

Ministry of Environment Protection and Natural Resources of Georgia

6 Gulua str. 0114 Tbilisi, Georgia

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**33. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Mr. Revaz Moistsarapashili, Director of Administration of the Kobuleti State Nature Reserve, Managed Reserve and Multiple Use Area  
4 Leselidze str. 6200, Kobuleti, Georgia

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**34. Bibliographical references:**

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Management Plan Kobuleti State Nature Reserve and Management Reserve.

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