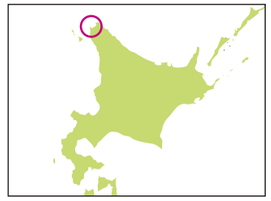
Sarobetsu



Designation:
Rishiri-Rebun-Sarobetsu National Park
Location:
Toyotomi and Horonobe Towns, Teshio-gun, Hokkaido
Year Initiated: 2002

Kami-sarobetsu Nature Restoration Committee (as of September 2009)

The Committee pursues restoration of wetlands in harmony with agriculture in Toyotomi Town, where the Sarobetsu Mire lies next to farmlands.
Date Established: 19 Jan. 2005
Number of members: 54
Date issued the Overall Plan: 2 Feb. 2006
Date issued Implementation Plans:
- 13 Jul. 2006 (Buffer zone and retention pond projects, sponsored by Agriculture Sections, HRDB, and others)
- 2 Jul. 2009 (Kami-sarobetsu Project, by MOE)

Goal

Raised bogs	Restore the historical wetland vegetation and area at the time of the national park designation (1974)
Penke-numa Pond	Prevent further sedimentation to keep the present conditions
Abandoned mined peatlands	Rehabilitate or create wetland vegetation by filling open water in old pits
Dune forests and lake	Reduce the lowering of water table to preserve the existing ecosystems

Sarobetsu Mire, originally a lagoon (Old Sarobetsu Lake) bounded by coastal sand dunes and Soya Hills, was formed by peat accumulation and the inflow of Old Teshio River and its tributaries. The Mire now develops the largest lowland raised bog in Japan. It is a unique ecosystem with various features: the expansive bog of Sphagnum moss and wild cranberry (*Vaccinium oxycoccus*); habitat for a species symbolizing the zoogeographic boundary between Sakhalin and Hokkaido, the viviparous lizard (*Lacerta vivipara*); staging sites for migratory birds; and breeding habitat for the Japanese crane.

As surrounding landuse changes, however, the Mire is gradually drying out with low water tables and ground subsidence, which has diminished the bog vegetation and caused the invasion of dwarf bamboo (*Sasa sp.*) and reed (*Phragmites australis*). Meanwhile, agricultural lands on marginal peatlands have greatly reduced their productivity because of flooding and excessive soil moisture. Restoration efforts are underway to address wetland loss and degradation while making a balance with agricultural activities.

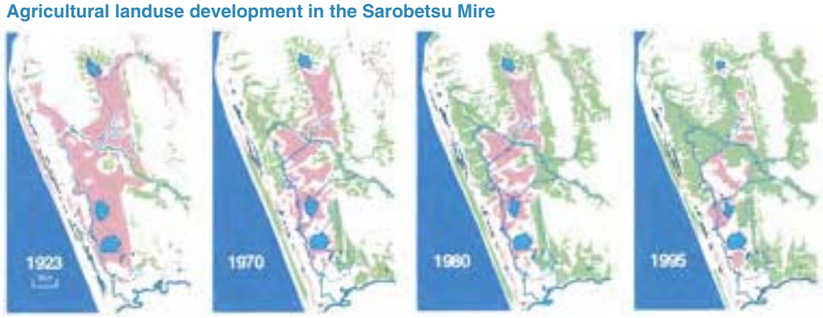
Bean goose (*Anser fabalis*)

Wild cranberry

Viviparous lizard

Japanese hyacinth (*Heloniopsis orientalis*)

Agricultural landuse development in the Sarobetsu Mire



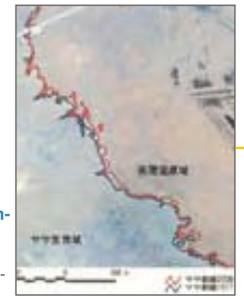
Related Web Sites
Sarobetsu Nature Restoration Project: http://sarobetsu.env.gr.jp/
Kami-sarobetsu Nature Restoration Committee: http://www.town.toyotomi.hokkaido.jp/web/PD_Cont.nsf/0/29CF809869F4D4D249256F88002F608D?OpenDocument

Approaches

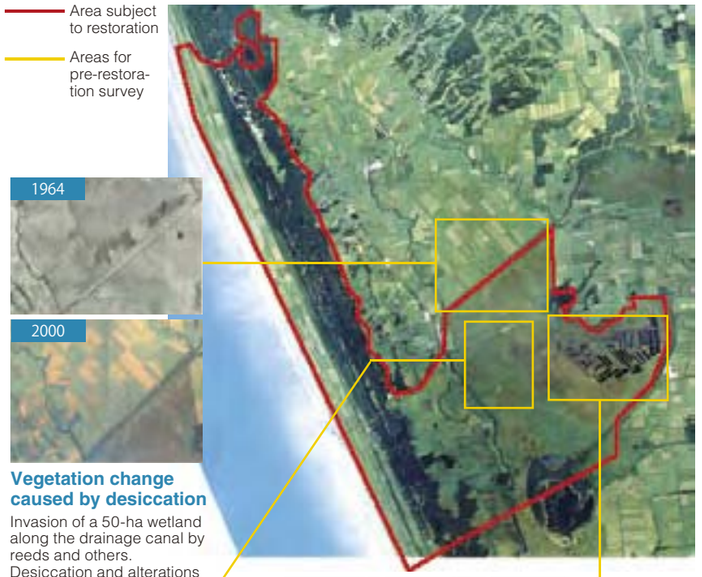
- Reduce the lowering of groundwater table →①
- Rehabilitate abandoned mined peatlands →②
- Install buffers along farmlands →③

Because farmlands and wetlands are strongly interrelated primarily through groundwater flow, restoration efforts should address sediment inflows to the wetlands while ensuring proper drainage in the farmlands. Increasing and stabilizing wetland water tables are also needed to prevent further wetland desiccation. A vegetation recovery test is underway by damming existing drainage ditches to raise wetland water tables.

Buffer installation at the boundary of farmlands is also in progress primarily by HRDB.



Expansion of dwarf-bamboo fields into the Mire
The expansion occurred by 20 to 50 m along the boundary for a 23-years period.



Vegetation change caused by desiccation
Invasion of a 50-ha wetland along the drainage canal by reeds and others. Desiccation and alterations of bog vegetation

Wetland degradation by peat mining
150ha wetlands were lost.

① Reducing water-table declines by damming drainage ditches

A wetland was sealed by dike construction along existing ditches to reduce water drainage, in order to prevent further desiccation. Groundwater tables and vegetation are being monitored.

Immediately after damming, at the outflow of Ochiai-numa Pond (the dike is 10.5-m long and 1.1-m high above the ditch bottom).

Two days later after damming. A large amount of overflow was generated by snowmelt flow.

② Rehabilitating wetland vegetation in abandoned mined peatlands

Natural re-vegetation has been observed in old mined peatlands, exhibiting a near raised-bog appearance with sphagnum moss cover that has developed over time. However, many of the other mined areas retain large open water and poor vegetation. Specific methods for rehabilitating or creating historical vegetation are being developed.

Sundew (*Drosera anglica*) growing on a floating peat

An abandoned mined peatland

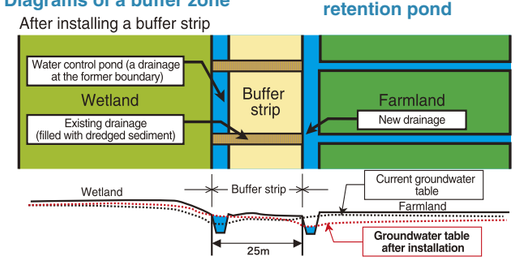
A close look of the mined peatland

③ Installing buffer zones along farmlands (by HRDB and others)

To prevent further wetland desiccation, buffer strips will be installed in the adjacent agricultural lands where might contribute to the declines of wetland water table. Soil erosion from the farmlands to streams will be ameliorated by properly managing retention ponds, which will be installed in the diked drainage ditches.

A graphic of sediment retention pond

Diagrams of a buffer zone



Project by HRDB, Town of Toyotomi, and Sarobetsu Farmers Association