

# Kushiro Wetland



**Designation:**  
Kushiro-shitsugen National Park  
**Location:**  
Kushiro City; Kushiro Town;  
Shibecha; and Tsurui, Hokkaido  
**Year Initiated:** 2001

**Kushiro Wetland Nature Restoration Committee (as of March 2009)**

The Committee develops action plans and local projects to restore the Kushiro Wetland being drying out due to sediment input and other human disturbances.

Date Established: 15 Nov. 2003

Members: 121

Date Issued the Overall Plan: 31 Mar. 2005

Dates Issued Implementation Plans:

- 31 Jan. 2006 (Setsuri-Hororo and Minami-shibecha Projects sponsored by Hokkaido Regional Development Bureau (HRDB) and others)
- 28 Feb. 2006 (Takkobu Project, by MOE)
- 1 Aug. 2006 (Kayanuma Old River Channel Restoration Project, by River Sections, HRDB, and others)
- 1 Aug. 2006 (Kuchoro River Project, by River Sections, HRDB, and others)
- 6 Sep. 2007 (Raibetsu Project, by HOKKAIDOU Regional Forest Office)

**Goal** Restore the wetland environment before 1980 (Year of the Ramsar listing)



The Kushiro Wetland, over 19,000 ha, is the largest wetland in Japan, and partly (5,012 ha) became a national monument in 1967 and a Japan's first Ramsar site in 1980. In 1987 the larger area including adjacent upland (27,000 ha) was designated as the 28th, a newest national park. The expansive wetland catchment supports diverse, important wildlife, including native populations of the Japanese crane (*Grus japonensis*), Siberian salamander (*Salamandrella keyserlingii*), and Sakhalin taimen (*Hucho perryi*), as well as provides water storage, filtering function, flood control, and aesthetic and recreational opportunities.

As recent economic activities spread into the watershed, however, the wetland area was greatly reduced. Desiccation is also pro-

gressive with a rapid vegetation change from reed-sedge community to alder forest due to increasing sediment and nutrient inputs. For the last 50 years the wetland was lost by over 20 % of its original area (25,000 ha). Serious wetland loss and deterioration entailed the urgent need to restore the wetland and surroundings. Therefore, a committee of various groups, from local citizens, NGOs, experts, to the municipal governments and National Government, was established and is pursuing restoration of the Kushiro Wetland.

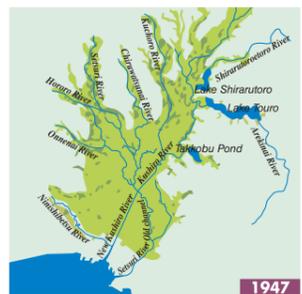


Japanese crane

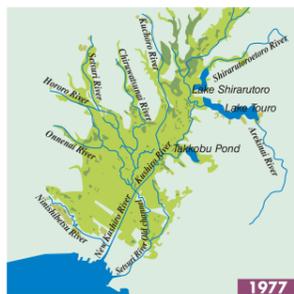


Marsh Jacob's ladder (*Polemonium caeruleum* subsp. *laxiflorum* f. *paludosum*)

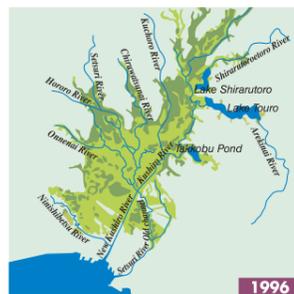
## Changes in the wetland area



1947



Source: Ministry of Land, Infrastructure and Transport



1996



Geographic area covered by the Kushiro Wetland Restoration Project

## Approaches

- ▶ Improve the watershed water storage capacity and erosion control function by preserving or restoring upland forests →①
- ▶ Restore historical wetlands from abandoned lands at the fringes of the Wetland →②

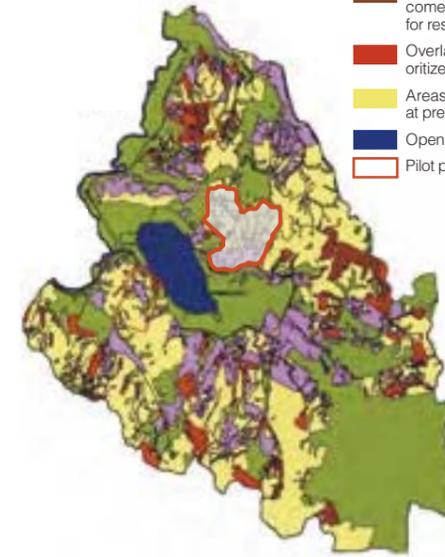
The Kushiro Wetland Restoration Committee defined the project boundary as the Kushiro River Catchment, a 250,000-ha area across five cities and towns. The committee then selected the areas of Hirosato, Takkobu, Touro-kayanuma, Kuchoro-hororo, and Onnenai-hokuto for pilot projects based on the amount of degradation to be addressed for mire conservation and whether they can serve as a restoration symbol. MOE is in a stage of implementation for Takkobu and design preparation for Hirosato and Onnenai-hokuto.



Locations of five pilot projects

## ① Takkobu Native Forest Restoration

Bare ground, bamboo-grass fields and non-native forest are prominent in the hills of Takkobu area, where soil erosion and runoff and lake sedimentation are the issues. In February 2006, native forest restoration was planned for a 148-ha upland containing 99-ha non-native forest of larch (*Larix kaempferi*) adjacent to the north side of Takkobu-numa Pond. This plan consists of the following three actions: 1) effectively remove the factors limiting seedling recruitment and growth of deciduous trees (e.g., bamboo grass cover, deer grazing), 2) minimize soil erosion along forest roads, and 3) develop and implement an experience-based environmental education program.



Classification of the Takkobu area for restoration

1. Relatively healthy native vegetation - prioritized for preservation, 1,667ha
2. Non-native forest that possibly impacts wetland ecosystems - prioritized for restoration, 582ha
3. Poor vegetation that may become erosion sites - prioritized for restoration, 86ha
- Overlap of above 2 and 3 - prioritized for restoration, 234ha
- Areas of low restoration priority at present, 1,477ha
- Open water, 159ha
- Pilot project site, 148ha

### Sediment erosion control



Apply erosion control construction to erosion prone sites.

### Native forest restoration



Examining effective methods for removing factors inhibiting deciduous seedlings establishment in monocultural forests.



Collecting seeds by a seed trap.



An experimental forest restoration site in Takkobu. Plots for ground preparation treatment and control.

## ② Hirosato Wetland Restoration

Many of historical wetlands were lost in Hirosato by agricultural development, which now remain as abandoned farmlands and expanding alder forests. To recover wetland conditions before development, groundwater table and vegetation recovery after soil excavation are being monitored in a test area.

### The experimental excavation site in the abandoned farmland



After excavating surface soil to raise the ground water table, wetland responses including changes in reed, sedge and other wetland vegetation are examined.

### The experimental site for alder tree removal



This experiment investigates the effectiveness of cutting trunks and shoots in controlling the forest expansion and effects of alder control on the sphagnum moss community.