

Project for the natural symbiotic community development - Noda City, Chiba Prefecture

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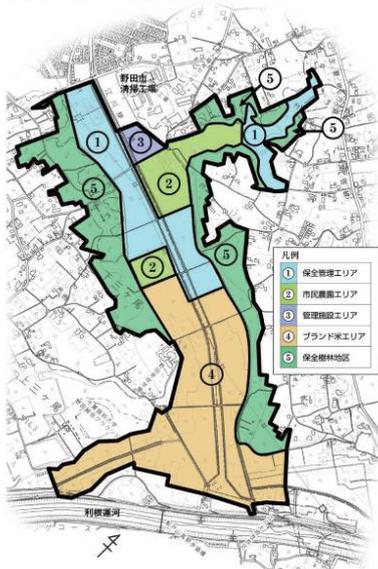


Noda City is located in the middle of the Kanto region within 30 kilometers of Tokyo. The Egawa Region of southeast Noda is composed of 25 hectares (ha) of the satoyama hillside forest and the water-rich paddy-growing valley environment of 65 ha in the southern Kanto Region are rare.

Most of the rice paddies in the Egawa Region had been abandoned. A plan to develop this area as residential land surfaced in 1993, and real estate developers bought up about half the land. In reaction to these plans, a movement sprung up to protect it as a rare example of a large-scale water-rich paddy-growing valley environment located close to the metropolis and inhabited by many precious species of plants and animals. In the end, plans shifted from development to preservation, and project for the natural symbiotic community development is being carried out in the entire 90 ha. the water-rich paddy-growing valley environment and the satoyama environment has been preservation and restoration. In farmlands bought back from developers, weeds are being managed, fields restored to agriculture, and hillside forests preserved.



江川地区ビオトープ整備計画図



The figure shows land use zoning. (1), (2) and (4) are rice paddy areas; (5) are forest preservation areas, most of which are on private land.

To preservation these areas, the “Noda City’s Bylaw the Preservation of Forest Areas for the Protection of Precious Wild Animal and Plant Species” was adopted. Out of the 25 ha of hillside forest in the 90 ha Egawa Region, the 17 ha that are not occupied by homes, fields or roads are regulated under this bylaw. To make up for a requirement to notify authorities of plans to cut down trees, etc. in the entire area, landowners are provided grant-in-aid equivalent to the amount of property taxes and those who parties to the agreement also are provided a part of the maintenance cost. The most important characteristic is a system in which owners wishing to transfer the deeds on their properties must not only notify the City government, but also enter consultations on the option of purchase by the City.

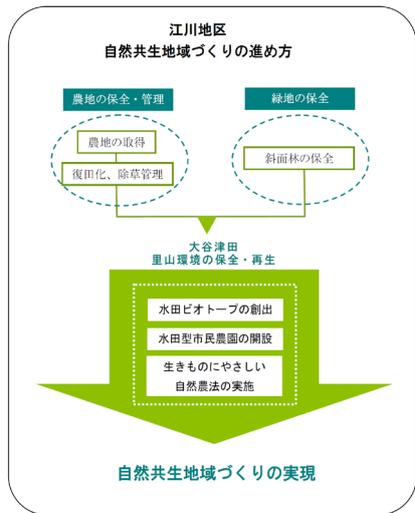
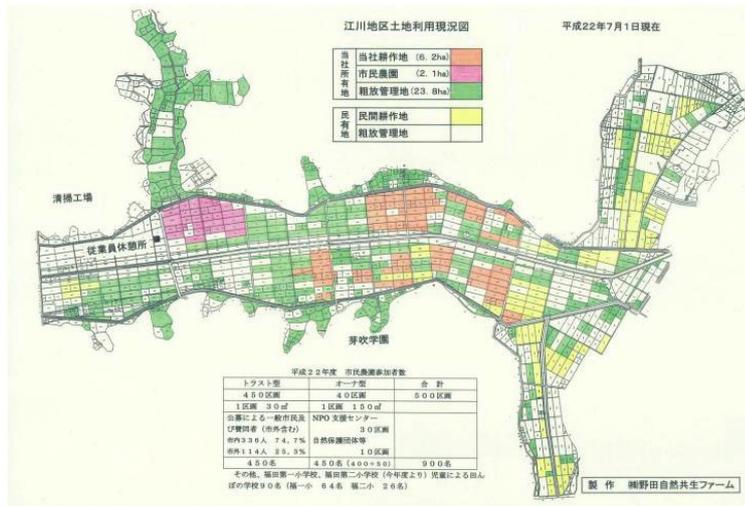
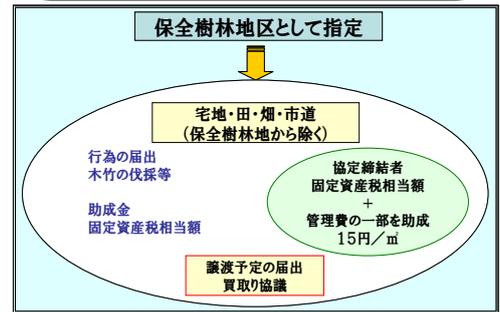
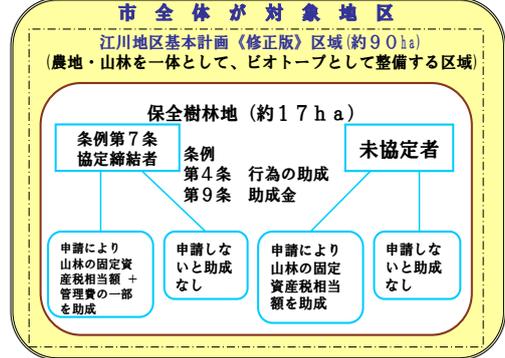
Basic Plan for Measures to Conserve
the Natural Environment (Revised version)
-Fundamental principles-

- (1) Precious Wild Animal and Plant Species and superior “satoyama” environments are to be protected
- (2) Project for the natural symbiotic community development will be pursued.
- (3) The area will be conserved so as to serve as a natural, cultural and historical heritage site.

A public/private enterprise “Noda Natural Symbiotic Farm” was set up and it acquired farmlands bought back by private individuals. It operates as a “local resident gardens ” and as many as 1000 people participate in the rice harvest.



野田市貴重な野生動植物の保護のための
樹林地の保全に関する条例及び施行規則



In addition, rice paddies are being cultivated and restored so as to avoid negative impacts on the natural environment. Stakeholders gather regularly to plan management; farmers report on restoration, rice cultivation, biotope development, etc., and seek opinions from the standpoint of nature conservation to avoid harm to wildlife habitation. Not only is the use of pesticides and chemical fertilizers avoided as far as possible, other measures are taken to benefit wildlife. For example, a pond was dug for Japanese Brown Frogs (*Rana japonica*) to lay eggs, and a bamboo hunting perch was erected for Gray-faced Buzzard-eagles (*Butastur indicus*).



Only 5 years have passed since rice paddy restoration was begun, but the natural environment is steadily coming back. Japanese fireflies (*Luciola lateralis*) returned the year after restoration and 10,515 egg clusters of the Japanese Brown Frog were counted. During rice-planting, a deafening chorus of Schlegel's Green Tree Frogs (*Rhacophorus schlegelii*) can be heard, while numbers of Daruma Pond Frogs (*Rana porosa*) are steadily increasing and a great many Oriental Weather Loaches (*Misgurnus anguillicaudatus*) are present. Many species of butterflies and dragonflies are found, and the presence of abundant prey has allowed the Goshawk (*Accipiter gentilis*) and Gray-faced Buzzard-eagle (*Butastur indicus*) to breed in Egawa; other raptors also find prey there. Many unusual plant species are also found, including *Monochoria kosakowii*, *Penthorum chinense* (NT) and the Golden Orchid (*Cephalathera falcata*).



By simply pursuing agriculture that respects the natural environment - that is, agriculture as it used to be practiced - and preserving hillside forest, a great many wild creatures that had been barely hanging on have been brought back. The biological diversity that had been fast disappearing has now indisputably returned to Egawa Region. Our experience here is clear evidence that it is not too late.



Landscape of rice paddies in Egawa Region

Egawa Background

Meiji Period (1868–1912) Sangao-Marsh converted to rice paddies

Postwar Era Rice cultivation suspended, area of abandoned fields expands

1993 Residential development planned, real estate developers purchase land

Protest movement favoring nature conservation starts

2002 Economic bubble bursts, private developers withdraw, put land back up for sale

Concerns arise about illegal landfill and/or land going to waste

2004 Basic Plan for Measures to Conserve the Natural Environment

2005 Breeding of Goshawk and Gray-faced Buzzard-eagle confirmed

2006 Basic Plan for Measures to Conserve the Natural Environment revised (Direction shifts away from development towards conservation)

Project for the natural symbiotic community development implemented in Egawa Region

In fiscal 2012 Noda City started implementing a project to create an environment that can support White Storks (*Ciconia ciconia*) artificially bred and released into the wild. To enhance Egawa's rice paddy biological diversity even further, construction of fishway between rice paddies and natural reedbed water purification programs have been initiated. Places for White Stork reintroduction are being prepared.



Keeping Paddy Fields Filled with water in winter



Water purification by reedbeds



Fishway

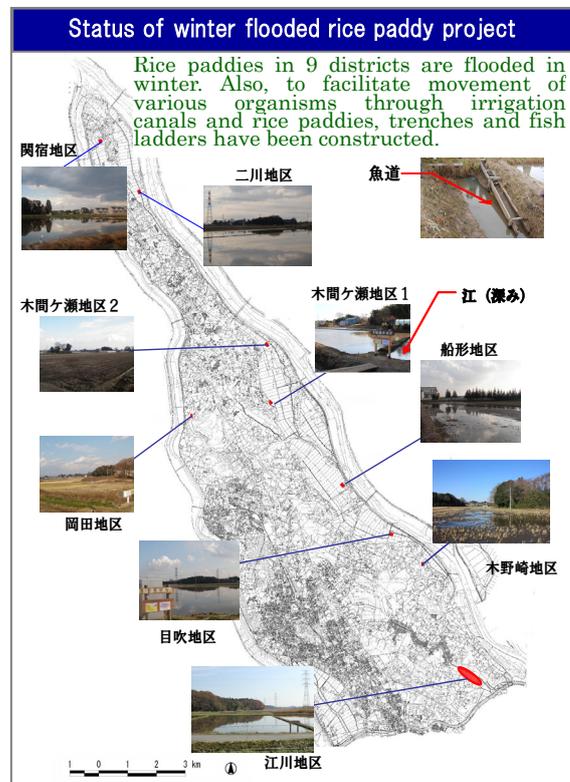
Efforts have begun in other districts of Noda City to enhance rice paddy biodiversity. Starting last year (2011), a project to use black vinegar in place of agricultural chemicals is being carried out in fully a third of Noda City's rice paddies – about 335 ha.

Wildlife is indisputably returning to our rice paddies. One problem has been that rice paddies are normally drained during winter. In 8 other districts of the city, model areas where rice paddies remain flooded in winter have been set up where sufficient water supplies are available, in rice paddies from 0.3 ha to 0.5 ha in extent.

Nature restoration efforts initiated in Egawa Region are now spreading throughout Noda City, and the wildlife is without a doubt coming back.

Project for the suitable natural symbiotic community development
for both people and White Storks

Noda City feels it must take the lead in restoring Kanto's biodiversity by fostering cooperation among municipalities for a region-wide project to restore White Storks to the wild, and will launch a breeding project in fiscal 2012. Without such leadership our descendants may never see White Storks or Japanese Crested Ibis flying overhead. Starting with the Egawa projects and White Stork breeding, we hope to foster regional nature restoration: As the understanding and enthusiasm of citizens and other sectors increase, we hope they will be ready to take on a region-wide White Stork re-introduction project based on citizen participation. Restoration projects are in fact proliferating, with projects under way in the Watarase watershed with Oyama City leading, in the Arakawa watershed with Kounosu City and Kitamoto City leading, as well as at Lake Kasumigaura and in the Boso Peninsula. We feel that nature restoration will soon spread throughout the whole Kanto region.



Efforts of Keeping Paddy Fields Filled with water in winter

There are nine Keeping Paddy Fields Filled with water in winter

Also, to facilitate movement of various organisms through irrigation canals and rice paddies, trenches and fishway have been constructed.

