

Biodiversity Center of Japan

Data Collection, Management and Provision Concerning Biodiversity Information and Protected Areas



**Ryo Mabuchi
Biodiversity Center of Japan**

生物多様性国家戦略 2012-2020
—豊かな自然共生社会の実現に向けたロードマップ—

平成 24 年 9 月 28 日

Biodiversity Center of Japan

Collecting data

National Survey on the Natural Environment

Monitoring Sites 1000

Disseminating information

On the Internet

National Survey on the Natural Environment

First nationwide survey on the natural environment

Launched in 1973

Targets:

plants

animals

land

topography and geology

lakes

marshes

rivers

Coastal areas

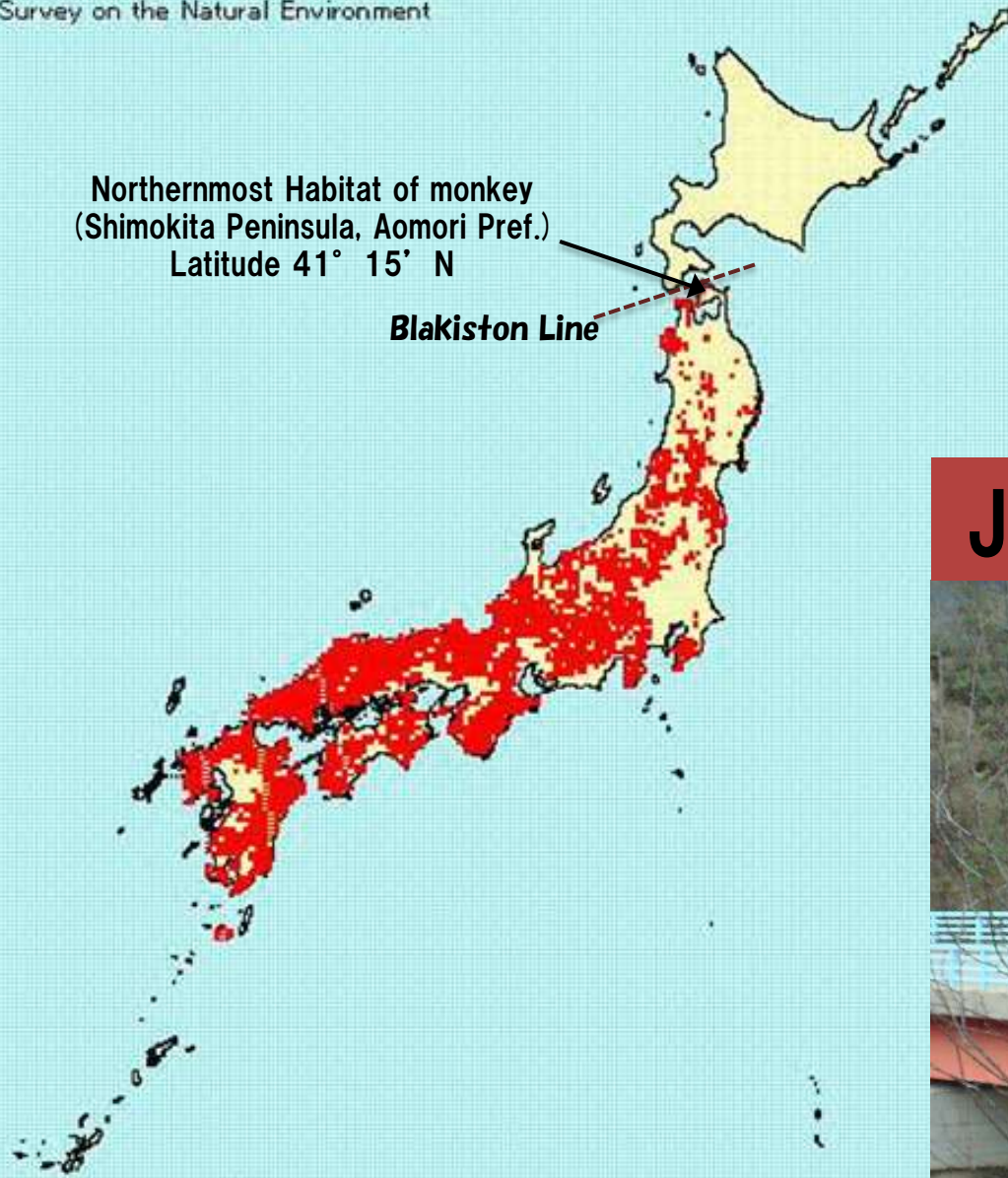
etc.

Distribution of Animals

2nd National Survey on the Natural Environment

Northernmost Habitat of monkey
(Shimokita Peninsula, Aomori Pref.)
Latitude $41^{\circ} 15' N$

Blakiston Line



Mesh size 5 km

Japanese Macaque



574026

仙台西南部 South West Sendai

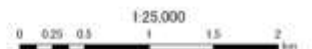


vegetation map legend

植生図 凡例

凡例色 植生図凡例番号 統一凡例番号 統一凡例名

- 2.130202 モミイヌナギス群集
- 5.141101 アオハダ-モミ群集
- 8.160800 カヤク群集 (IV)
- 7.170200 ハシノキ群集 (IV)
- 8.180100 ヤナギ高木群集 (IV)
- 9.180200 ヤナギ低木群集 (IV)
- 1.220700 アカシ-イタドリ群集 (IV)
- 11.221200 オニグルミ群集 (V)
- 12.221300 ケヤキ二次林
- 13.230100 アカマツ群集 (V)
- 14.250200 ススキ群集 (V)
- 15.260300 狭葉雑草群集 (V)
- 17.270500 ウラジロガシ群集
- 18.271201 ヤブコウジュ-スタジイ群集
- 19.280101 シキモ-モミ群集
- 21.410101 クリ-コナラ群集
- 22.430801 アズマネザサ群集
- 23.440200 クズ群集
- 24.470800 コシクサ
- 25.470901 サルコシ群集
- 26.470902 オギ群集
- 27.470903 エムシロクサ
- 30.540100 スギ-ヒノキ-サワラ群集
- 33.540902 ニシアシア群集
- 34.541000 その他雑草林
- 35.541101 モミ群集
- 36.560000 竹林
- n.560100 ゴルフ場・空地
- a.580200 牧草地
- a.570100 時帯・空地雑草群集
- a.570101 無葉雑草群集
- a.570200 雑草園
- a.570300 雑草群集
- b.570400 水田雑草群集
- a.570500 放棄水田雑草群集
- n.580100 市街地
- 5.000101 緑の多い住宅地
- 1.580300 工場地帯
- m.590400 造成地
- n.580600 開放水域
- v.580700 自然裸地



Monitoring Sites 1000

Conducted on approximately one thousand sites

Monitor various types of ecosystems

target ecosystems:

alpine zones

forests/grasslands

satoyama

lakes

mires/marshes

coastal areas

coral reefs

small islets

Regional experts, NPOs and volunteers play an important role

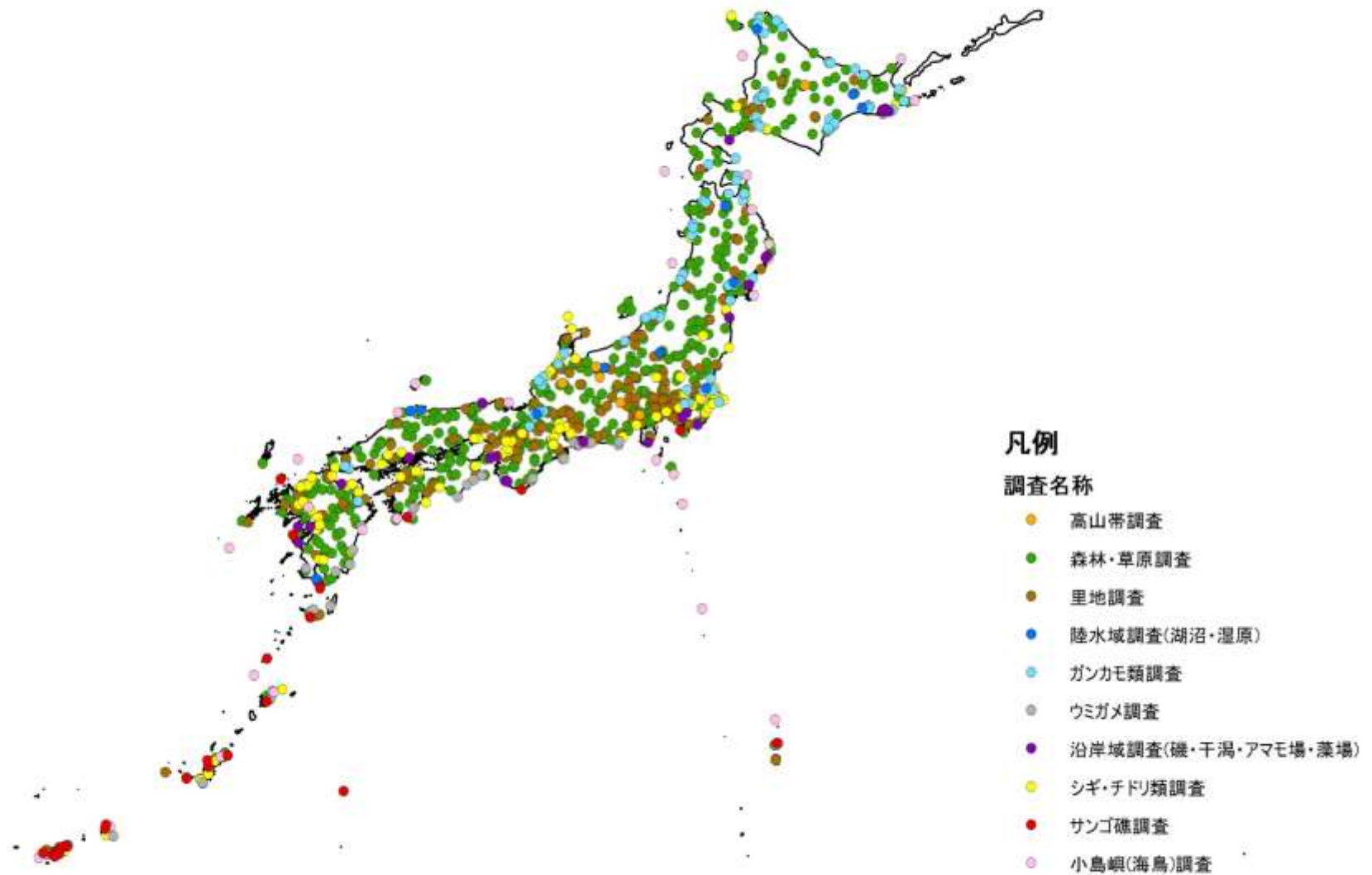
promotes:

restoration

countermeasures against alien or invasive species

evaluating areas to understand changes in ecosystems

Monitoring Sites



Ecosystems and Indicators

Ecosystem		Main investigating items	sites no.	investigator	
Terrestrial	Alpine zones		vegetation, flowering phenology, alpine butterflies, etc.	5	Scientist
	Forests and grasslands	Core	growth of tree, litter, ground wandering beetles, etc.	20	Scientist
		Sub-core	growth of tree, terrestrial birds	28	Scientist
		Terrestrial Birds	terrestrial birds	422	Citizen
	Satoyama	Core	flora, water environment, Indicator animals, etc.	18	Citizen
		Satellite	select from indicators shown in upper.	175	Citizen
Inland water	Lakes, mires and marshes		vegetation, plankton, etc.	11	Scientist
		Geese and ducks	Anatidae, etc.	80	Citizen
Marine shore	Sandy shores	Sea Turtles	sea turtle egg-laying, etc.	41	Citizen
	Rocky shores		benthos, etc.	6	Scientist
	Tidal flats		benthos, etc.	8	Scientist
		Shorebirds	shorebirds, etc.	140	Citizen
	Seagrass beds		Seagrass vegetation, etc.	6	Scientist
	Algal beds		Algae vegetation, etc.	6	Scientist
	Coral reefs		coral coverage, crown-of-thorns starfish, bleaching, substratum turbidity, etc.	24	Scientist
Small islets	Seabirds	vegetation, Seabirds, etc.	30	Scientist	
total			1020		

bird banding survey

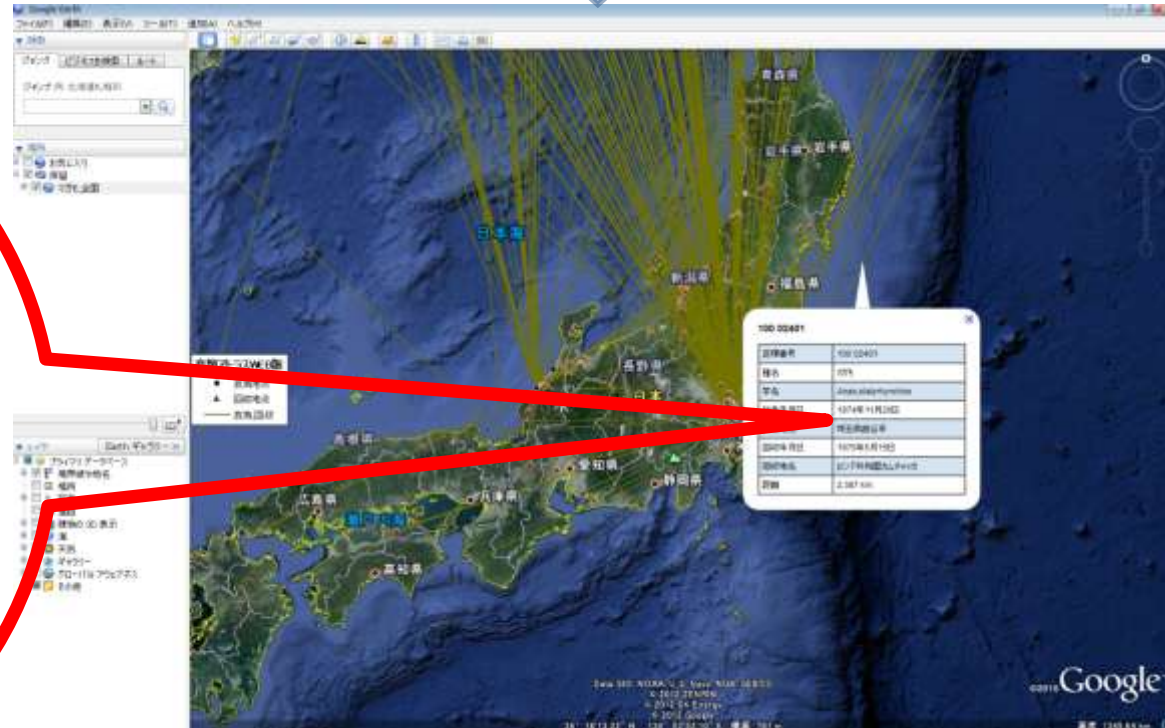


leg bands

Results of bird banding surveys

The Web-GIS Atlas of Japanese Migratory Birds is available on the website:

<http://www.biodic.go.jp/birdRinging/top.html>

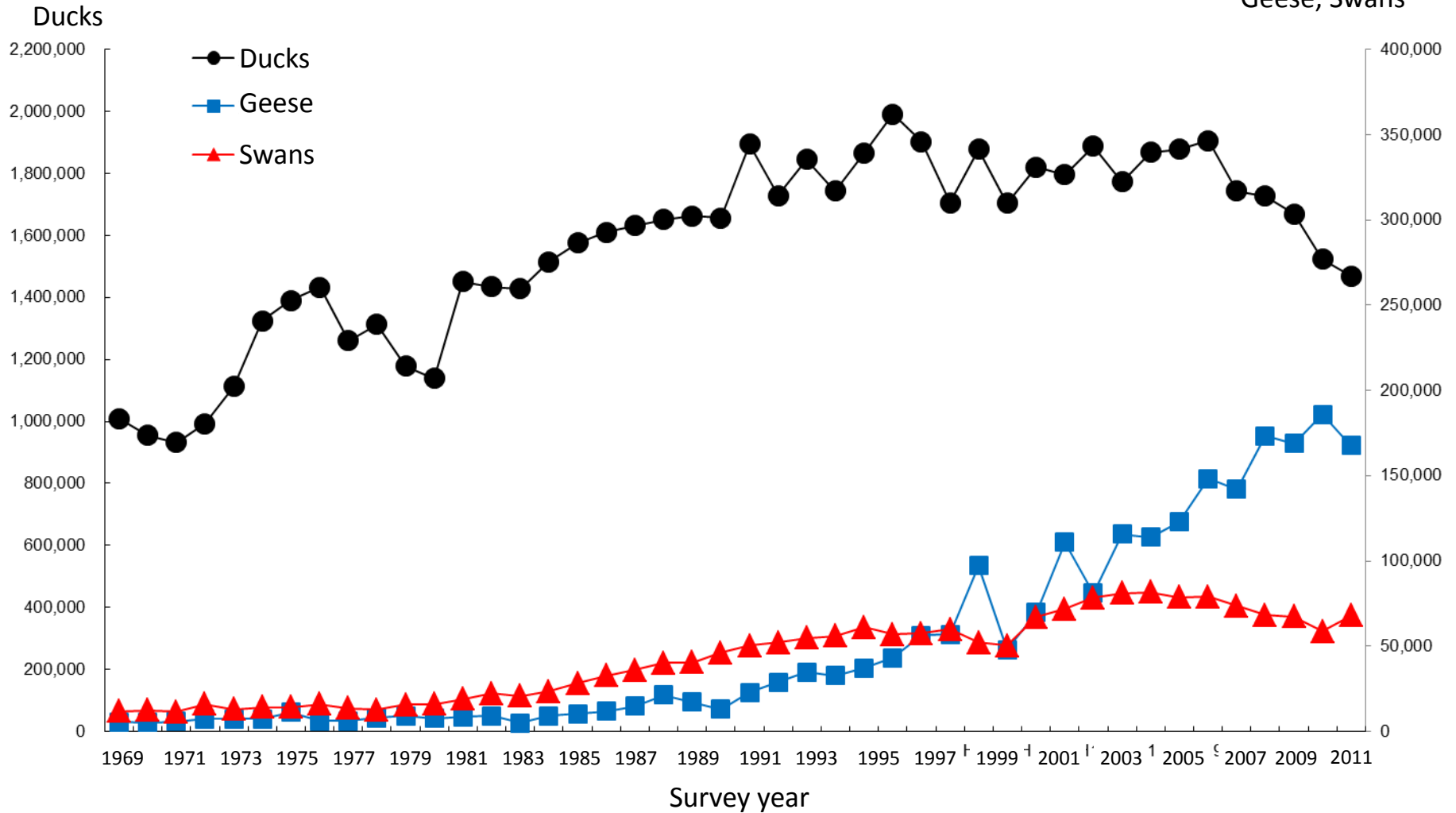


Leg band number	02B 33536
Species	Bush warbler
Academic name	<i>Cettia diphone</i>
Date when the bird was set free	Nov. 20, 1988
Place where the bird was set free	Kyoto City, Kyoto Prefecture
Date when the bird was recaptured	Apr. 15, 1989
Place where the bird was recaptured	Niigata City, Niigata Prefecture
Distance	428 km

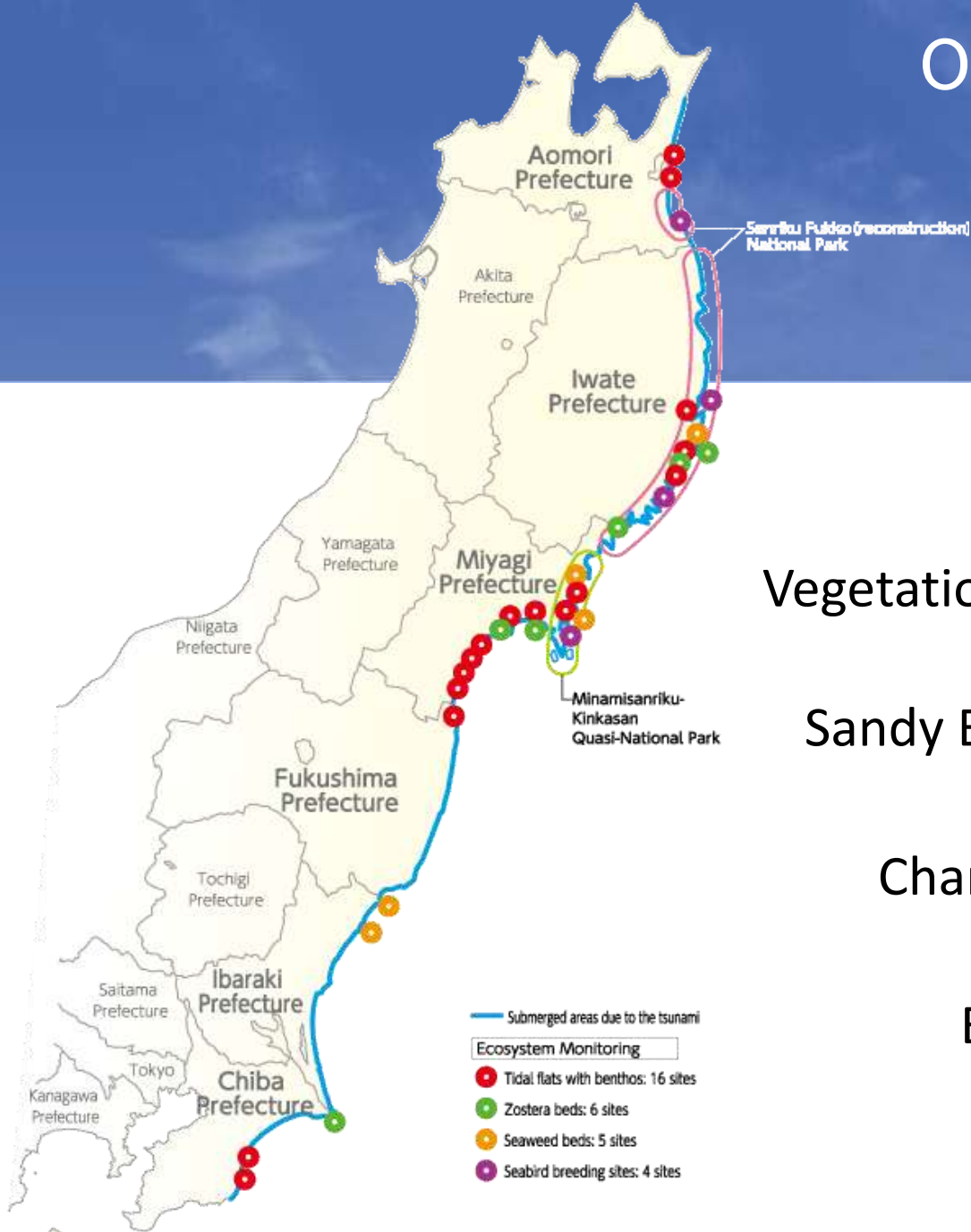
records of migratory birds

Results of habitat surveys on Antidae family

Population observed (number of birds)



Overview of the survey



Vegetation Change

Sandy Beach Change

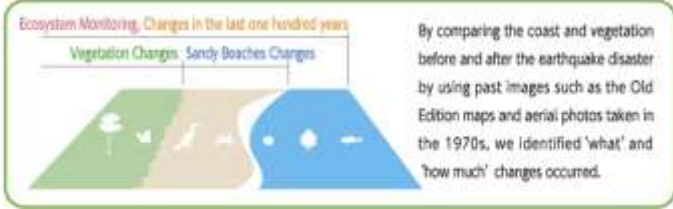
Change in the last Hundred Years

Ecosystem Monitoring

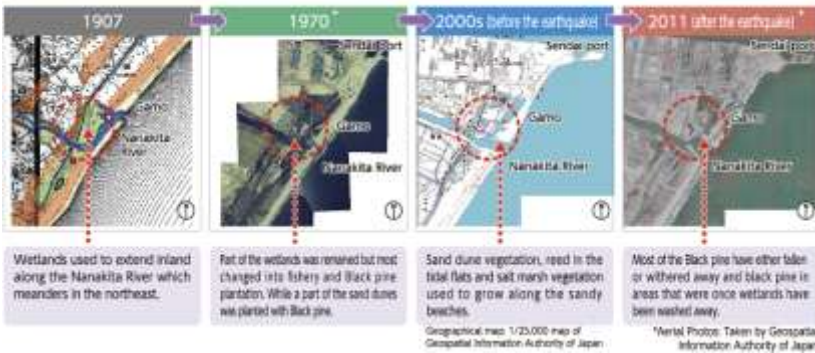
Changes in Gamo, Sendai City



In Gamo, Sendai City, Miyagi Prefecture, there is a lagoon consisting of a mixture of fresh and sea water which extends inland towards to the sand dunes. At low tides, a mud flat appears as an extension of the surrounding wetlands where many plants and animals live and breed. However, that aspect has changed vastly due to the strong impact of the tsunami.



Changes in the last hundred years



Changes in the invertebrate habitats before & after the earthquake



Not seen before the earthquake, they have only recently appeared in the sand brought in by the tsunami.

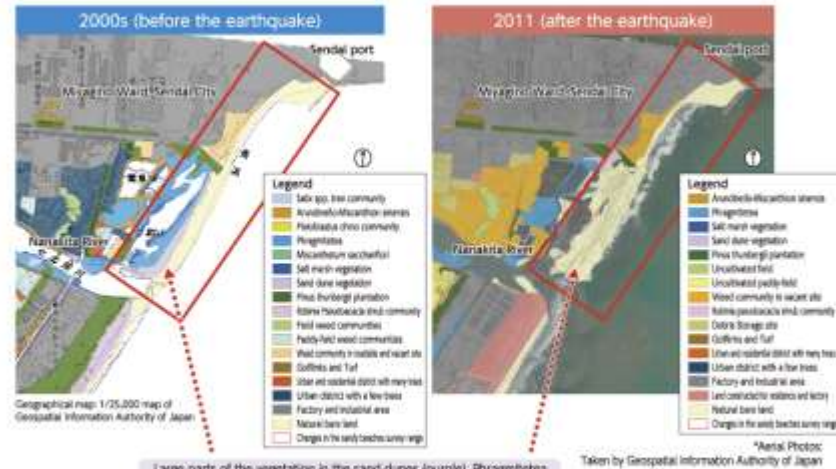


The bivalves known as *Nuttallia ovata* and *Pandanus pilosus* were seen before the earthquake. After the earthquake, a significant number of them remained.



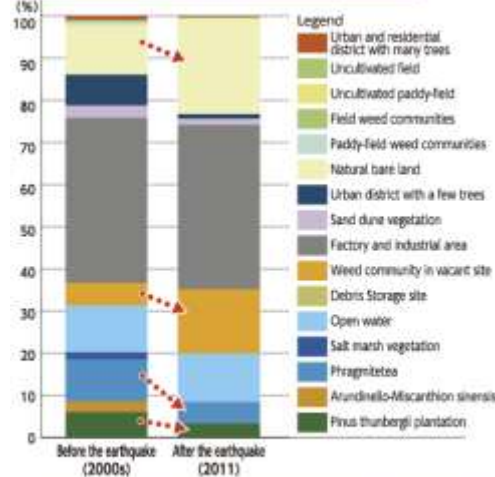
Several species of Gammarus which were not seen before the earthquake disaster were observed and their population was also increased.

Vegetation Changes before and after the earthquake



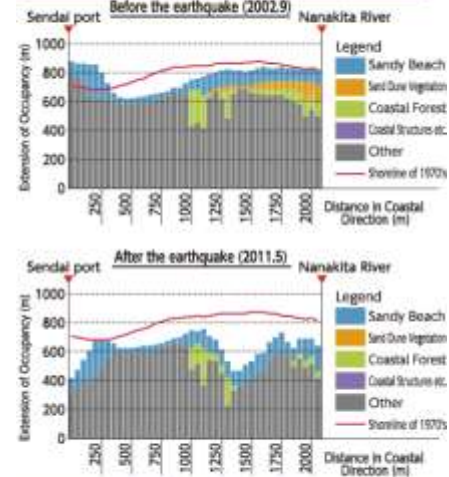
Large parts of the vegetation in the sand dunes (purple), Phragmites in the tidal flats (light blue) and Salt marsh vegetation (blue) growing along the sandy beaches were washed away.

Vegetation Changes area before & after the earthquake



From the changes in the areas shown within the red frames in the diagram above, it can be seen that Reed (Phragmites) (blue) and Black pine (Pinus thunbergii) vegetation (green) have decreased while natural bare land (light yellow) and weed community in vacant site (orange) have increased.

Sandy Beach Changes before & after the earthquake



The shoreline has receded a maximum of 200 meters inland within the range shown in the red frames in the diagram above. The sandy beaches have vastly changed their shapes and most of the coastal forests have been washed away.

Japanese Crested Ibis



生物多様性
Biodiversity

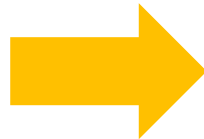
specimen

insects



report

J-IBIS



Dissemination

第6回自然環境保全基礎調査

種の多様性調査

哺乳類分布調査報告書

*The National Survey on the Natural Environment
Report of the distributional survey of Japanese animals
(Mammals)*

平成16(2004)年3月

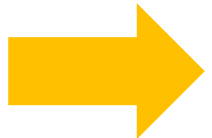
環境省自然環境局
生物多様性センター

Biodiversity Center of Japan

J-IBIS

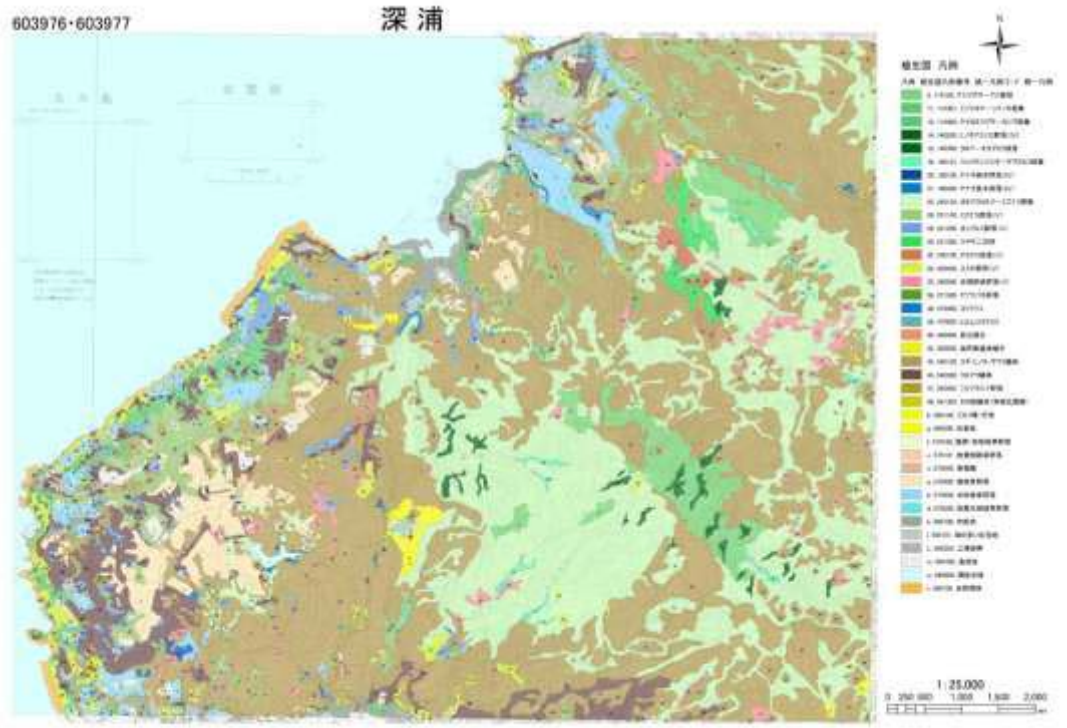


website



Dissemination

Vegetation map



J-IBIS

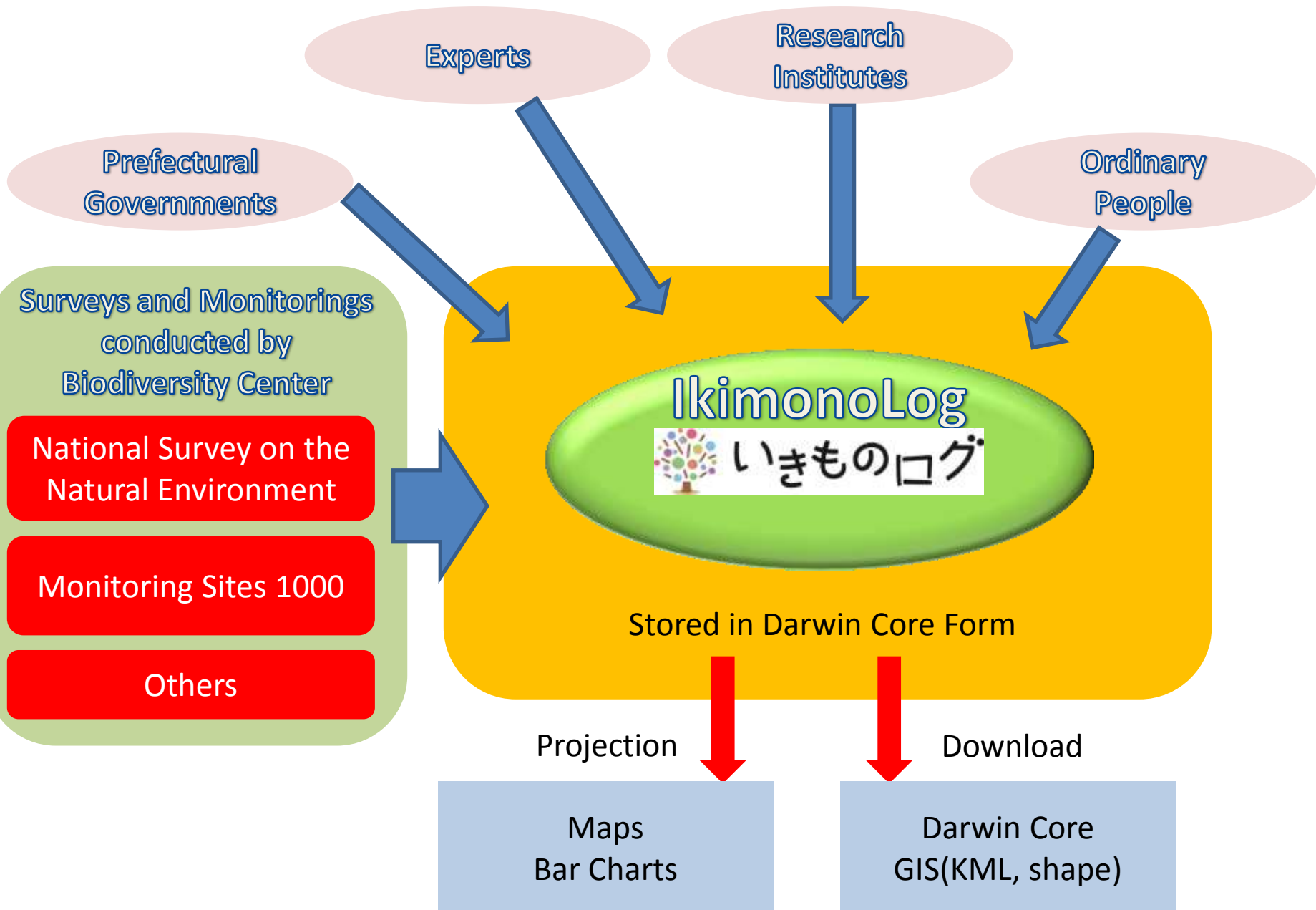


Dissemination

GIS data



IkimonoLog



見つけよう！調べよう！つながろう！

生物情報 収集・提供システム

いきもののログ



今、人気の生きもの



モズ 豊ちっぴとさん

報告者ランキング

個人	個人	個人	個人
10	森本太郎さん	1234	件
01	bioticさん	6789	件
03	山田花子さん	123	件



しおかぜ
自然環境調査に
参加しよう！

アンケート

いきログアプリ

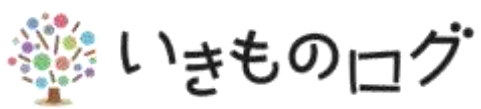
コンテンツ

<p>生物情報を検索する</p>	<p>生物情報を報告する</p>	<p>生物情報を学習する</p>	<p>みんなの調査に参加する</p>
<p>団体で活動する</p>	<p>巨樹・巨木林調査を見る</p>	<p>富士山周辺情報を見る</p>	<p>環境省の調査を見る</p>

最近の報告 全 3,463,148 件 (2013年10月15日現在)

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Thank you