

# Overview of the Monitoring Sites 1000

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# Points of the Slides

1. The purpose and business structure of the Monitoring Sites 1000
2. An introduction of all fields of the Monitoring Sites 1000, and example survey results
3. Future prospects, etc.

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# Ecosystems

- Supply source of various ecosystem services, our foundation for living.
- In addition to the laws of nature, anthropogenic influences are also a factor for change.

- Understanding the state of an ecosystem and detecting change (in particular signs of deterioration) at an early stage.
- Recording of scientific data relating to ecosystem changes to aid nature conservation measures and academic research.



Often neglected, but extremely important!

# The Purpose of the Monitoring Sites 1000



モニタリングサイト1000  
Since 2003

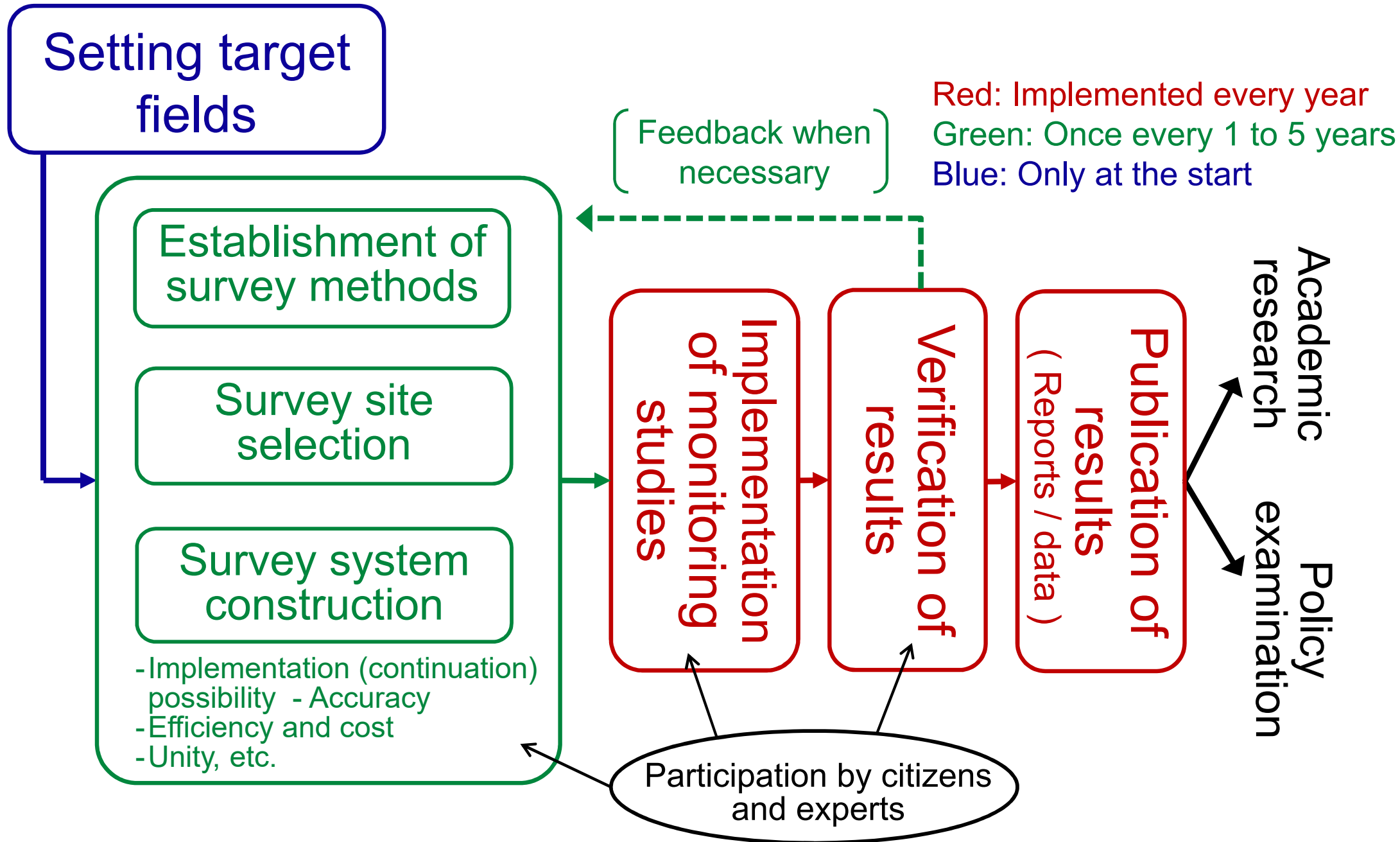
Official name:

"Regional Monitoring Promotion Project for Important Ecosystems"

A project which aims to conduct long-term, quantitative monitoring of Japan's basic ecosystems, and publish obtained results in order to assist academic research and develop appropriate nature conservation measures.

★ Long-term surveys of approximately 1000 sites throughout Japan over a period of 100 years (planned)

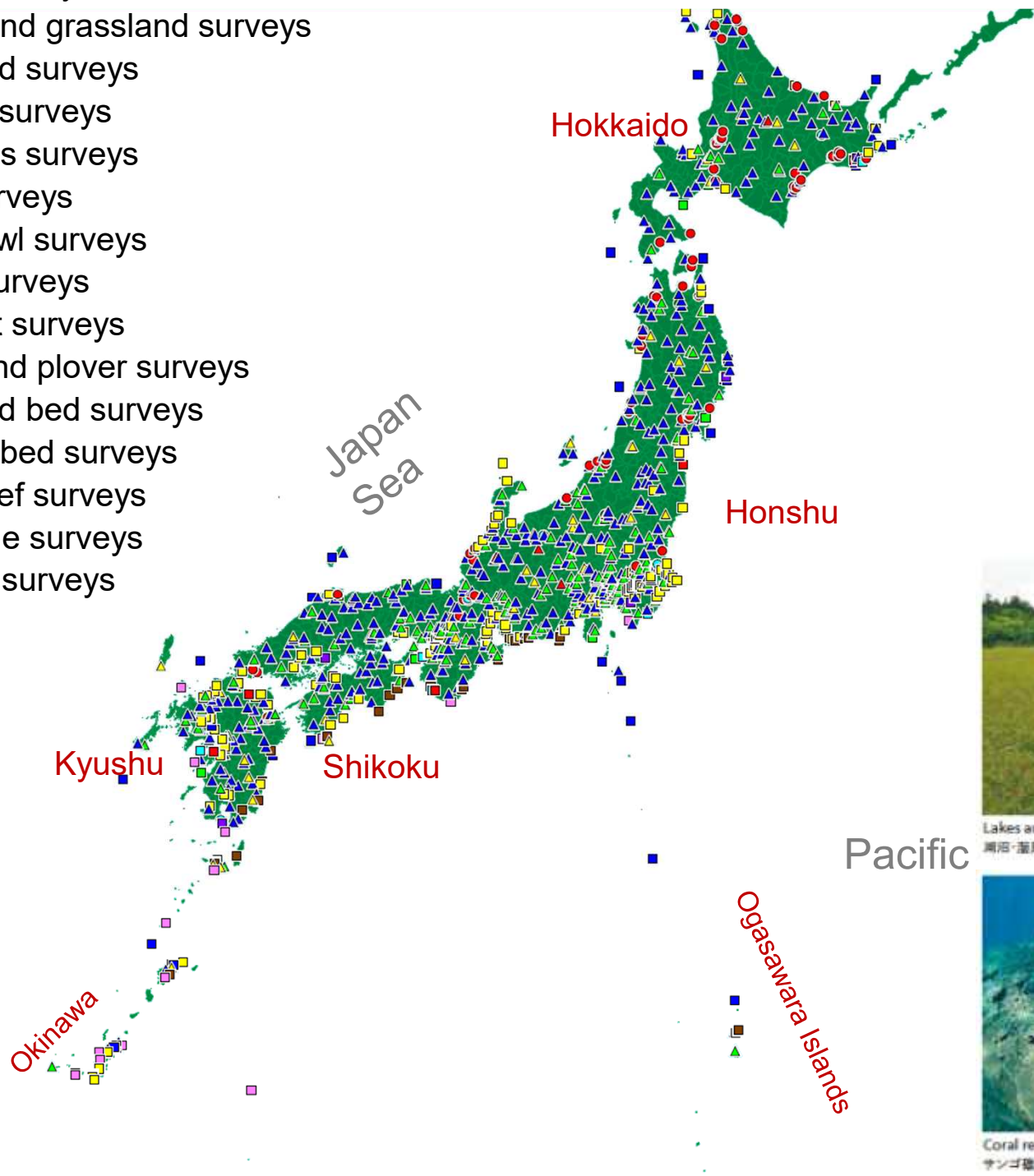
# Flow of Operations



# Survey Field, Contents, and Number of Sites

Ecosystem		Survey Site	Major Survey Items	Sites	Field Surveyors	Surveyors	
Land	Alpine		Seven surveys consisting of (1) Physical environment, (2) Vegetation, (3) Pinus pumila annual branch growth, (4) Flowering phenology, (5) Butterflies, (6) Ground wandering beetles, (7) Bumblebees	5	Researchers	50	
	Forest/ Grasslands	Core	(1) Every tree survey, (2) Litter, (3) Ground wandering beetles	20	Researchers	330	
		Quasi-core	(1) Every tree survey, (2) Litter, (3) Ground wandering beetles	28	Researchers		
		Land birds	(1) Land bird population survey	419	Citizen scientists	400	
	Satochi	Core site	Nine surveys consisting of (1) Flora, (2) Medium and large mammals, (3) Birds, (4) Butterflies, (5) Water environment, (6) Harvest mice, (7) Frogs, (8) Fireflies, (9) Vegetation map	18	Citizen scientists	2,505	
		General site	At least one survey from the nine core site surveys	219	Citizen scientists		
Land water	Lakes and wetlands		Wetlands: (1) Vegetation, (2) Physical environment and flowering phenology Lakes: (1) Animal and plant plankton, (2) Lake vegetation, (3) Lake benthos, etc.	25	Researchers	69	
		Waterfowl	(1) Population survey, (2) Swan growth rate, (3) Weather and surrounding environment	81	Citizen scientists	137	
Ocean	Coast	Sandy beaches	Sea turtles	(1) Number of landings/spawnings, (2) Sand temperature, (3) Changes to coast, (4) Understand feed damage	36	Citizen scientists	150
		Shores		(1) Benthic organisms, (2) Temperature	6	Researchers	50
		Tidal flats		(1) Benthic organisms, (2) Subsoil particle analysis, (3) Granularity loss on ignition	10	Researchers	115
			Shorebirds	(1) Population survey	144	Citizen scientists	673
		Zostera beds		(1) Seaweed survey, (2) Benthic organisms	6	Researchers	38
		Seaweed beds		(1) Seaweed survey	6	Researchers	49
	Coral reefs		(1) Coverage survey, (2) Physical environment, (3) Acanthaster population, etc.	24	Researchers	66	
	Small islands	Seabird sites	(1) Population survey, (2) Breeding survey	30	Researchers	87	
<b>Total</b>				<b>1,077</b> <sub>sites</sub>		<b>4,719</b> <sub>people</sub>	

- Land
  - ▲ Alpine surveys
  - ▲ Forest and grassland surveys
  - ▲ Land bird surveys
  - ▲ Satochi surveys
- Land water
  - Wetlands surveys
  - Lake surveys
  - Waterfowl surveys
- Coast (Ocean)
  - Shore surveys
  - Tidal flat surveys
  - Snipe and plover surveys
  - Seaweed bed surveys
  - Zostera bed surveys
  - Coral reef surveys
  - Sea turtle surveys
  - Seabird surveys



Forests and grasslands site  
森林・草原サイト



Lakes and marshes site  
湖沼・湿原サイト



Coral reefs site  
サンゴ礁サイト



Alpine zones  
高山帯サイト



Seabird site  
海鳥サイト

Pacific

Ogasawara Islands



# Ensuring Survey Accuracy (Unified Techniques)

- Although long-term survey data from multiple locations is useful, data comparison is difficult if there are varying survey methods depending on location or time.

→ **Establishment of a common national "Survey Manual" that is consistently followed.**

In general, changes to this manual are not allowed except for minor changes when necessary.

