



Photo by Junichi Sugishita, OWS (NPO)
Laysan Albatross and Litter on Midway Atoll

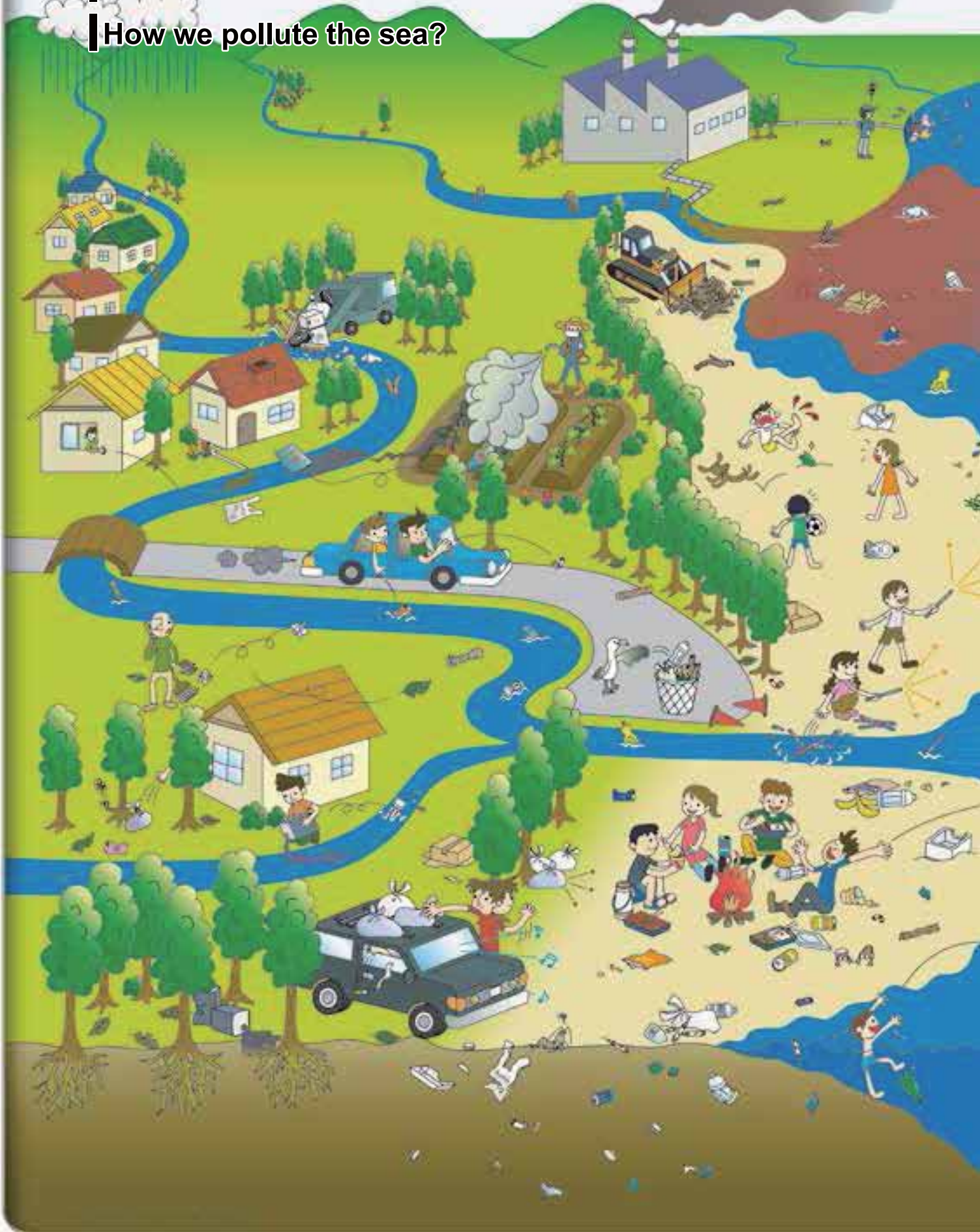
SUMMARY 2008

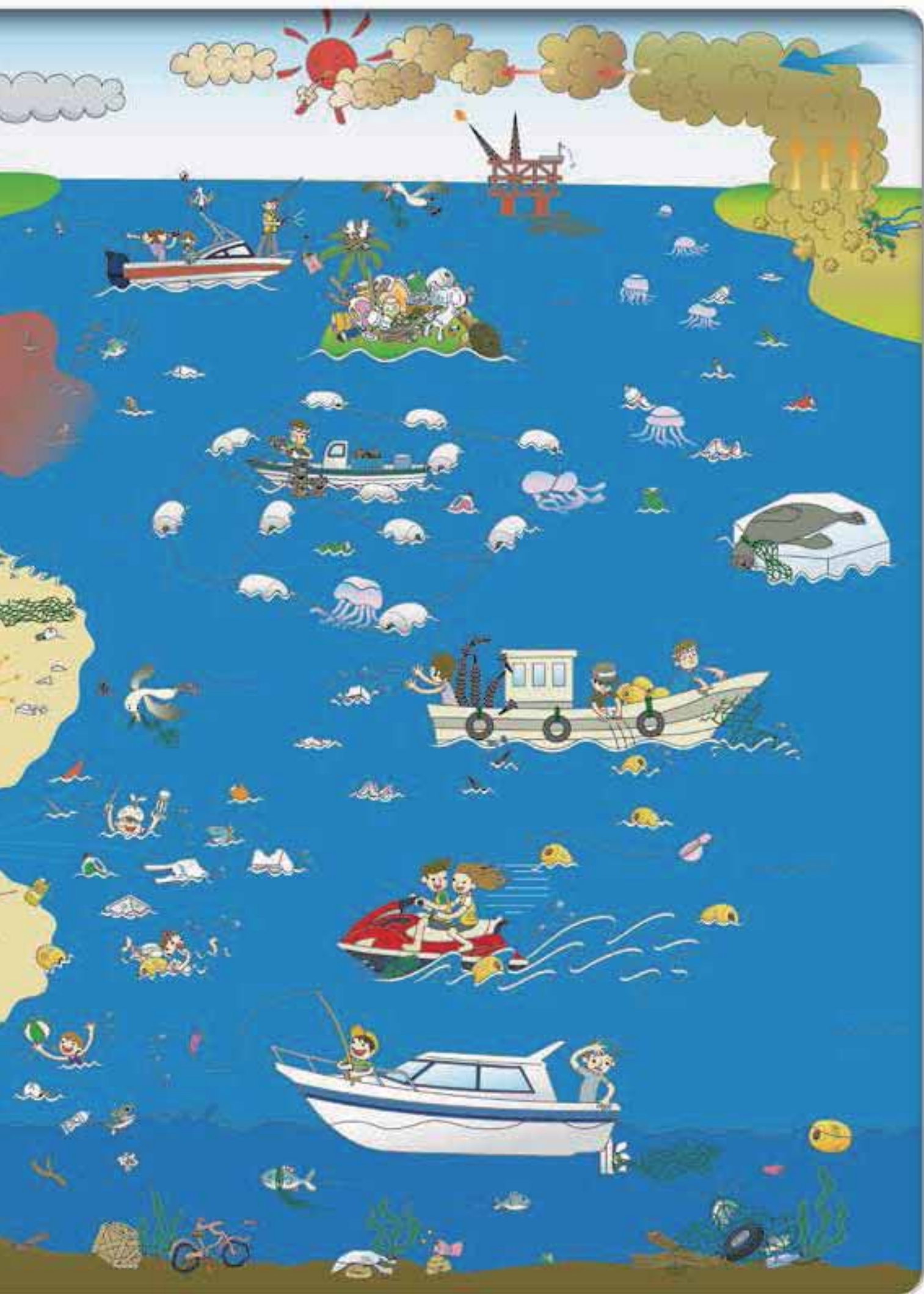
Report of Survey of Marine Litter on Beaches



海を汚している行動はどれですか？

How we pollute the sea?





1. Survey of Marine Litter on Beaches

Goals of the Survey of Marine Litter

The Northwest Pacific region is an enclosed sea surrounded by countries such as Japan, Korea, and Russia. With its historic, economic, and cultural significance, it is a truly valuable shared resource for the coastal communities of all of these countries, whether for fishing or just recreation. However, in recent years, the Northwest Pacific region has become polluted with marine litter, washing up on beaches or drifting in the ocean, which has had negative effects on the region's ecological systems.

The Survey of Marine Litter on Beaches along the Northwest Pacific Region by the Northwest Pacific Region Environmental Cooperation Center (NPEC) is a cooperative joint effort undertaken to understand the extent of coastal pollution caused by litter washing ashore.

Originally, the survey was undertaken with the assistance of 10 local governments within Japan in 1996. That number has since grown to include the participation of more local government within Japan, as well as others in China, Korea, and Russia, covering the Northwest Pacific region. In 2008, a total of 31 local governments, 24 from Japan, 3 from Russia, 2 from Korea, and 2 from China, participated in the survey, covering 78 beaches. The survey was carried out with the international cooperation of local municipalities, NGOs, and NPOs.

The number of local governments involved, the number of beaches covered, and the number of participants are shown in figure 4-1. Among the 4 countries, an environmental monitoring project like this is uncommon, and the results of the survey are so evaluated domestically and internationally that they are cited by international organization.

NPEC is encouraging regional populations, through survey participants, to stop littering and to protect the marine environment by sharing awareness. NPEC is also working to contribute to environmental conservation in the Northwest Pacific Region by performing surveys of marine litter in association with the United Nations Environmental Programme (UNEP), the Northwest Pacific Action Plan Regional Coordinating Unit (NOWPAP RCU), national governments, and local municipalities.

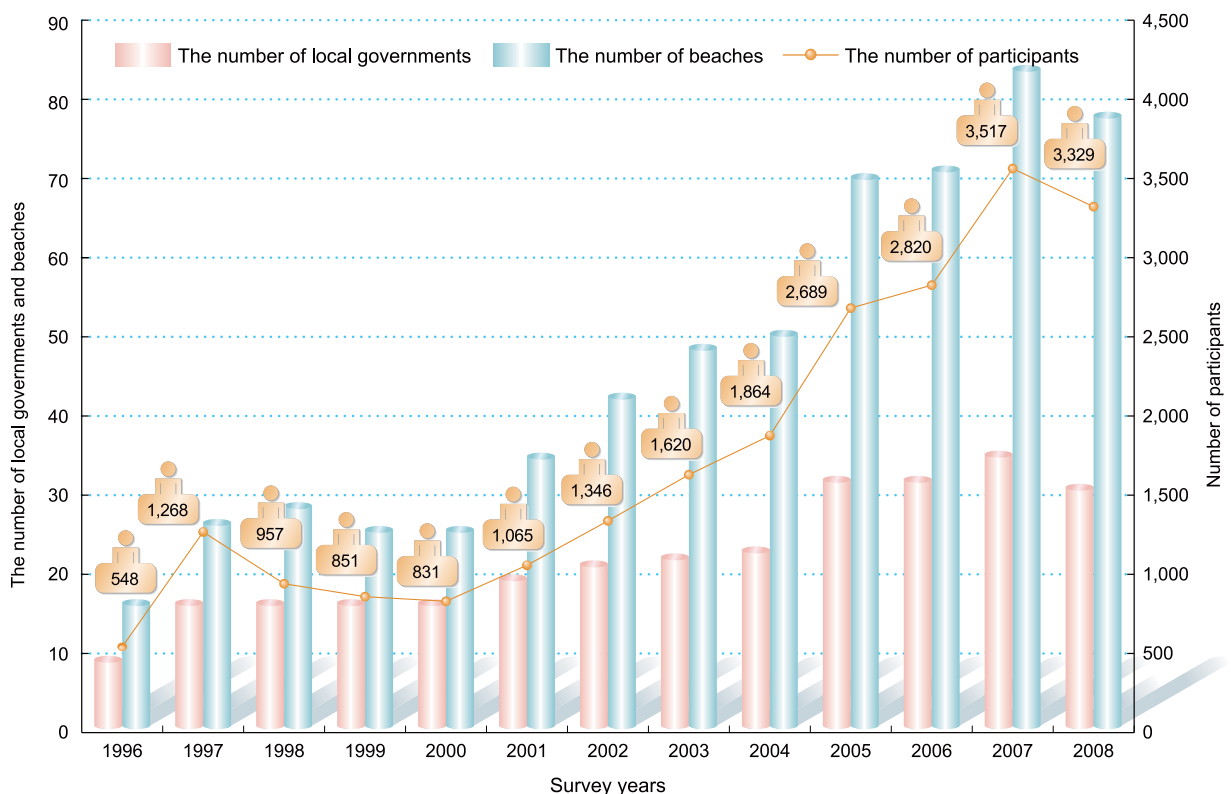


Figure 4-1. Change in numbers of local governments, beaches, and participants

Summary of Survey of Marine Litter on Beaches 2008

1) Survey period

The survey was conducted from April of 2008 to March of 2009.

2) Survey participants

The survey was performed in each prefecture and town with the cooperation of local governments, NGOs/NPOs and Junior Eco-Clubs. For the survey 2008, a total of 3,329 people across 31 local governments assisted in the survey, covering 78 beaches.

(For name of participant groups, please see the reference materials on Page 12.)

3) Surveyed beaches

The survey covered a total of 78 beaches across Japan, China, Korea, and Russia (See Figure 5-1). Additionally, the survey of buried litter was done across 12 beaches with the assistance of 10 local governments across Japan and Russia.

4) Survey method (For details on survey methods, please see the reference materials on Page 12.)

[Survey of marine litter on beaches]

Set 10-meter squared blocks, and collect all of the marine litter found within each block. After collection, categorize the items by the eight types (plastic, glass/ceramics, etc.), then record the number of pieces and weight of each item.

[Survey of buried litter]

Set a 40-by-40 cm frame on the beach, and place a set amount of sand (40×40×5 cm) from inside the frame into a bucket. Afterward, put seawater in the bucket and stir it, and pour the matter floating on the surface of the water, such as plastic granules, into a net. Divide these up by size, and record both the number of pieces their weight.

Survey Results

[Survey of Marine Litter on Beaches]

In 2008, a total of 60,360 m² of beach were surveyed, and a total of 133,759 pieces of marine litter were collected with a total weight of 1,430,740.6g.

[Survey of Buried Litter]

In 2008, a total of 5.6 m² of beach were surveyed, and a total of 14,602 buried litter was collected with a total weight of 86.4g.



Figure 5-1. Surveyed beaches, 2008

1. Survey of Marine Litter on Beaches

Survey Results 2008

1) Quantity and Weight of Marine Litter

The average amount of marine litter per 100 m² was 273 pieces. Of this, plastic was the most prevalent at an average of 196 pieces (or 72% of the total). The next most common type was styrene foam, averaging 48 pieces (18%).

The average weight of marine litter per 100 m² was 3,649g. Of this, plastic litter was the most prevalent at 2,331g (or 64% of the total). The next most prevalent type by weight was other artificial objects, averaging 485g (13%).

By far the most significant types of marine litter found on beaches were light objects such as plastic and styrene foam, as well as easily fragmented objects such as plastic and other artificial objects.

Additionally, looking at average amounts of marine litter per 100 m² broken down by area, Area A had the largest amount at 676 pieces, followed by Area D at 488. Areas E to I had the smallest amounts.

Overall, looking at the breakdown by area, Japan's coast showed a trend in reduced marine litter northwardly.

Further, if we break down our results by country, Japan's beaches show a marked trend toward both a greater average quantity and weight of marine litter. Further examination of the cause of this will be necessary, taking into account the effects of litter drifting from one country to another, as well as differences in coastal management systems.

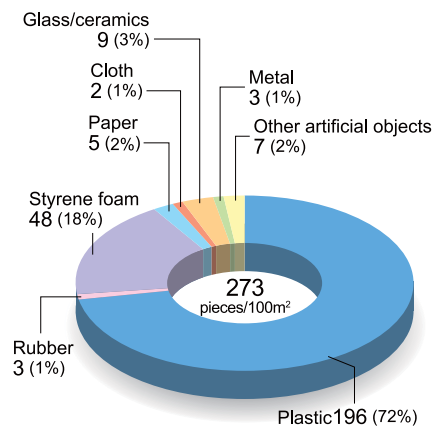


Figure 6-1. Average number of marine litter per 100 m² (2008)

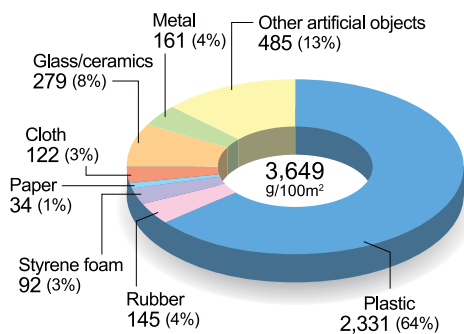


Figure 6-2. Average weight of marine litter per 100 m² (2008)

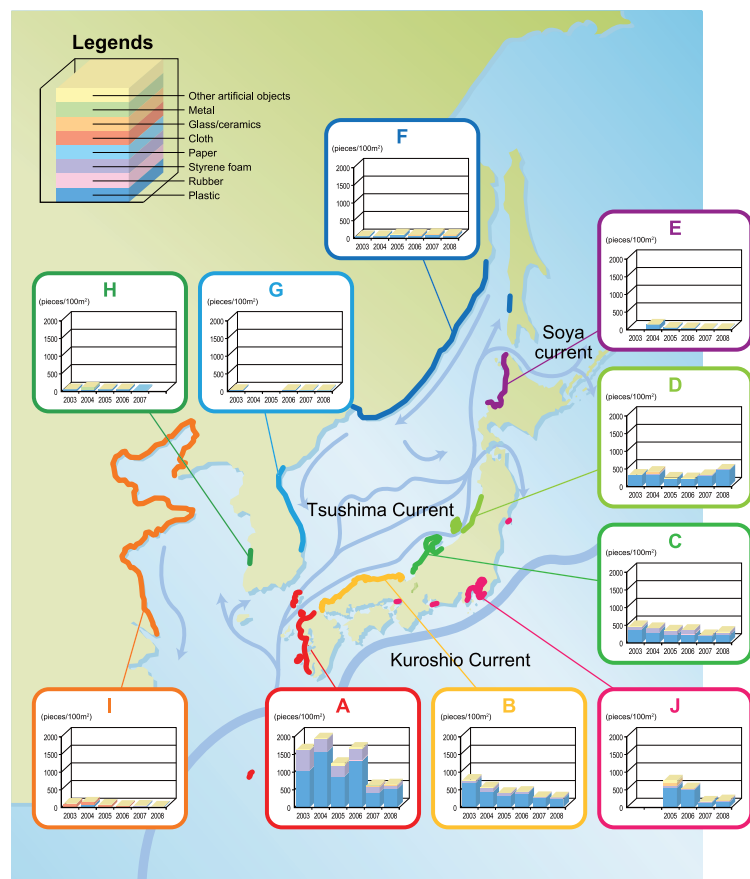


Figure 6-3. Change in the number of marine litter per 100 m² by area

2) Survey of Buried Litter

As shown in figure 7-1, the survey of buried litter resulted in 14,602 pieces collected. Of these, styrene foam was by far the most prevalent at 13,042 pieces (89% of the total), followed by products and fragments thereof at 1,215 pieces (8%). The results showed that items like styrene foam and plastic manufactured goods, which fragment easily, were very common.

Combining these results with the results of the survey of marine litter, we can see that litter that consistently washes up, like styrene foam, will break into pieces over time, and oceanic and weather conditions bury these litter, where they accumulate without being decomposed spontaneously.

Further, looking at the relationship between litter on beaches and buried litter, beaches with a lot of litter also tended to have a lot of buried litter, and we found beaches where buried litter was at least as common, if not more so, than litter on beaches. (Figure 7-2).

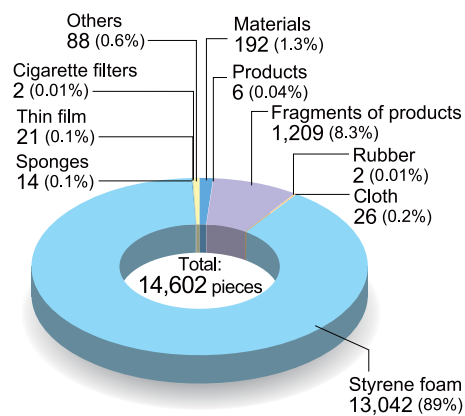


Figure 7-1. Breakdown by type of buried litter

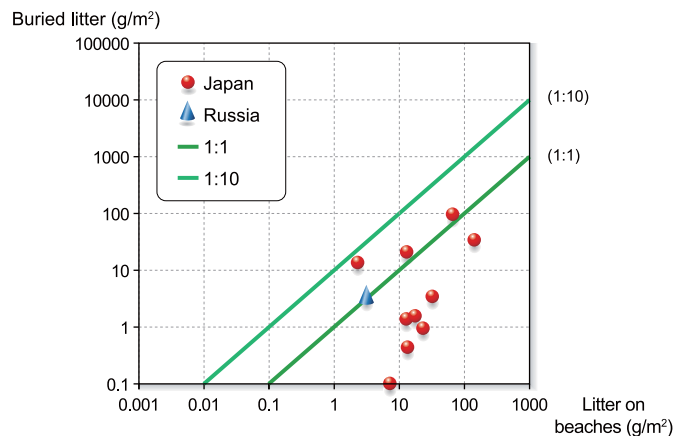


Figure 7-2. Relationship between litter on beaches and buried litter

Conclusion

With the exception of some outlying islands, an overall trend was visible along Japan's coast showing a reduction in marine litter from the Northwest Pacific Region northwardly, and this marine litter was primarily local, everyday items that came downstream via rivers or litter from people on the beach.

Much of marine litter washed up on the beaches consisted of plastic goods, which are light, don't biodegrade, and can drift very long distances. We believe that a great deal of litter consisting of plastic goods washed up on beaches that were not covered by our survey, as well. Additionally, we believe that there is a large amount of litter consisting of plastic goods still floating in the ocean, as well as a lot that has sunken to the ocean floor. The bulk of this marine litter will remain where it is unless people remove it, and its effect is not limited to just its immediate surroundings: tiny fragments of plastic, for example, can be mistaken by birds or sea animals for food, and can become mixed in with aquatic resources. The toll that marine litter takes cuts across cultural, environmental, economic, safety, and health concerns.

In order to solve this problem of marine litter, the first step is simply "Do not litter." It is vital that we all do our parts to live eco-friendly lifestyles that we can put into practice for the sake of our future.

2. On reducing marine litter

What we can do

Start with what each of us can do!

Your efforts can contribute to a worldwide change!



Each and every one of us can think of Marine Litter Actions!

Many different types of litter wash up on the beaches.

Marine litter isn't just bad for the scenery — it's bad for everything that lives there, and is becoming a problem on a global scale.

This problem has a number of human causes, especially everyday trash flowing downstream from rivers or mountains to the ocean, where it washes up on beaches.

Since we use the ocean in our lives, it's important for us all not to litter, and to take the first step you can to protect the ocean.

Marine Litter Actions

<The Thoughts of the People>

We have only one ocean, spreading from you.

Our own sea is connected to the rest of the world.

Anything littered at your feet will soon be making its way to anywhere around the world.

Our first step is to change what we do, then spread that change worldwide.

<Citizen Action>

Don't litter : Let a society be free of littering.

Keep clean : Keep rivers, coasts, and local areas clean.

Think well : Join in cleaning, surveying and studying activities about marine litter and think well what you can do to solve the marine litter problem.

Do you know the 3Rs?

The 3Rs stands for **Reduce**, **Reuse**, and **Recycle**.

- **Reduce** — Try to reduce the amount of waste that comes from things you've finished using.
- **Reuse** — After you've used something up, try to use it again to keep it from becoming waste.
- **Recycle** — If you can't reuse something after you're done with it, try to recycle it so it can be reused as a resource.

By following the 3Rs, you can reduce the amount of waste you produce, help limit the harm to the environment that comes from incinerating trash or putting it in landfills, and help build a recycling-oriented society that continues to reuse our limited resources.

3. Reference Materials

Spreading Awareness about the Marine Litter Problem

The marine litter problem is one that is solved not just through research and discussion of the current state of affairs, but through practical measures.

However, awareness about the problem on the part of ordinary individuals is still at an insufficient level. Our aim is to increase people's understanding of the marine litter problem as the global issue. By spreading awareness, we hope that people take the first steps toward the problem in their own towns, and that the movement will spread in various localities.

Forum on the Marine Litter

The forum was held to help deepen understanding of marine litter prevention through presentations of case studies and efforts by organizations and talks on how to solve the issue, in order to inform individuals of what practical steps they can take to help.



Presentation by Citizen Groups



Lecture by an Expert

Exhibition of Marine Litter Art Works

As one of events in the Environment Month, an exhibition of marine litter arts works was held in association with the Himi Seaside Botanical Garden and Faculty of Art and Design, University of Toyama, in order to draw the interest of individuals to the marine environment and the problem of marine litter.



Establishing Promotion of Marine Litter Disposal (Japan)

To conserve our beautiful beaches as well as the environment, and because of the terrible effects of marine litter on these, Japan enacted the Law to Conserve Beautiful and Abundant Nature by Conserving the Environment of the Beautiful Beaches by Promoting Litter Disposal (the Law for the Promotion of Marine Litter Disposal) on July 15, 2009, in order to promote general countermeasures against marine litter.

Points of the Law

Basic Ideas of Countermeasures to Marine Litter

1. Conserve and improve general beach environments
2. Make responsibility clearer and promote smooth disposal of marine litter
3. Effectively control the cause(s) of marine litter
4. Conserve the marine environment
5. Assign independent roles as appropriate and secure cooperation
6. Promote international cooperation

Participant Obligations

- National government: Develop and enforce general measures, and develop basic policies
- Regional public bodies: Develop and enforce local measures, and develop plans to promote countermeasures
- Employers and citizen: Work to control marine litter at its source in business activities and cooperate with taking countermeasures into account as well

Basic Marine Litter Countermeasures

Smooth Disposal of Marine Litter

1. Necessary measures for coastal management
2. Necessary requests to coastal management from local public bodies
3. Appropriate diplomatic measures by country

Countermeasures for Marine Litter at its Source (Countries and Local Public Bodies)

1. Investigate the state and cause of marine litter
2. Prevent littering
3. Provide advice and guidance on proper land management

Other Measures to Promote Disposal of Marine Litter

1. Close cooperation with private groups (country and local public bodies)
2. Promote environmental education on the topic of the problem of marine litter (country and local public bodies)
3. Spread awareness of disposal of marine litter (country and local public bodies)
4. Promote the development of technology and research (country)
5. Financial disincentives (governments)

3. Reference Materials

Survey Method

For the Survey of Marine Litter on Beaches, the goal was not to simply understand the current state of marine litter on the beach; in order to speculate as to the origins of the trash, it was categorized by type, then subcategorized by function and original use.

1) Survey of Marine Litter on Beaches

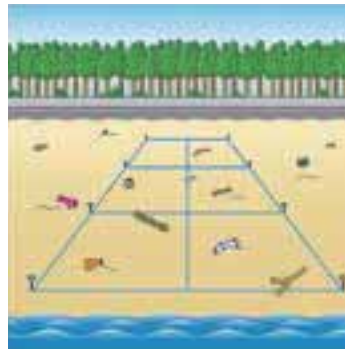
1. Preliminary survey

Conduct basic surveys in advance with regard to intended use of the beach, surrounding conditions, the recent clean-up activities, etc.

2. Setting up the survey blocks and subsequent operations

- As a general rule, select survey areas so as to be able to roughly comprehend the state of marine litter on the entire area of the target beach, and set continuous 100 m² blocks inland from the water's edge (hereafter referred to as "survey blocks").
- Survey blocks should, as a general rule, be 3 in 1 row, however, if it is not possible to allow 3 blocks in 1 row due to insufficient depth of the beach, set multiple rows.
- Plant a stake on each corner of the survey blocks and stretch nylon cord or something similar between each pair of stakes in order to define the survey blocks.
- Collect the litter (artificial objects) from the blocks and classify it for each survey block into the following eight major categories, count their number, measure their weight, and separate the foreign litter from domestic one judging by printed texts or other evidences.

* Survey methods are based on the guidelines of Japan Environmental Action Network.



① Set up the survey blocks.



② Pick up and collect litter.



③ Sort the litter.

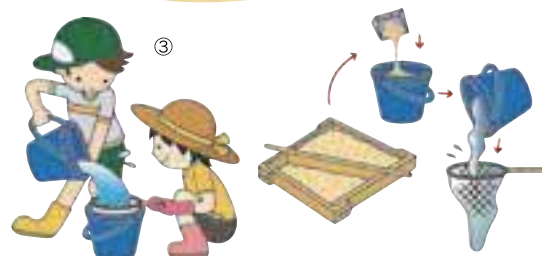
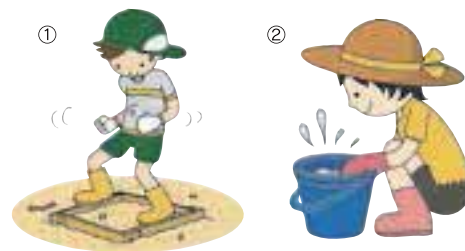


④ Count and weigh the litter, and fill in the table.

2) Survey of Buried Litter

- Survey locations are to be on the outsides of the marine litter survey areas, in three locations: one where litter is readily visible, one where it is not readily visible, and one in between.
- Three locations are tested at each surveyed beach.
- Place a 40 cm² frame on the beach. After removing the litter from the surface of the sand within the frame, place a set amount of sand from inside the frame into a bucket. Put seawater in the bucket and stir it. Afterward, pour the matter floating on the surface of the water, such as plastic granules, into a net.

- | | |
|--------------------------|-----------------------|
| 1. Plastic resin pellets | 8. Plastic sheets |
| 2. Plastic products | 9. Tarballs |
| 3. Plastic debris | 10. Paint flakes |
| 4. rubber objects | 11. Cigarette filters |
| 5. Fabric/cloth | 12. Other |
| 6. Styrene foam | 13. Unknown |
| 7. Sponges | |



Marine Litter Gathering Procedure

Beaches surveyed in 2008

Area	No.	Location	Surveyed beaches	Number of pieces collected per 100 m ²	Weight of pieces collected per 100 m ²	Participating organizations
A	1	Okinawa Prefecture	Ohama Beach	1055.7	327	Surfrider Foundation Japan
	2	Kagoshima Prefecture	Fukiagehama Nigata Beach	761.5	36	Kagoshima University, Faculty of Fisheries, Environmental Information Science Course, Sailing Information Laboratory
	3		Iso Beach	235.7	347	Kagoshima Women's College
	4		Yoshihama Beach	15981.0	765	Iki City Environmental Sanitation Division; Iki Health Center, Association of Environmental Problems in Ikinoshima
	5	Nagasaki Prefecture	Esumi Beach	28171.5	1080	Association of Environmental Problems in Ikinoshima
	6		Komodahama Beach	10548.0	490	Tsushima City Waste Management Division; Tsushima Health Center; Kaneda Elementary School
	7		Olaura Beach	2492.3	95	Tsushima City Waste Management Division
	8		Koshitaka Beach	68225.3	3515	Tsushima City Waste Management Division; JAPAN NUS Co., Ltd.
	9		Ukinoura Marine Park	132.9	22	NPO Nagasaki Beach Service; Surfrider Foundation Japan
	10	Saga Prefecture	Ouganohama Beach	1506.7	560	Prefectural Government; Karatsu City; Karatsu City Minato Junior High School
	11	Fukuoka Prefecture	Oguchi Beach	2649.7	201	Prefecture's Waste Management Division; Iroman Health and Welfare Office; Shima Town City Planning Division; Shima Town Sakurano Elementary School, Volunteers
12	Yamaguchi Prefecture	Tsunoshima Ohama Beach	4163.3	319	Shimonoseki City Environmental Policy Division; Takibe Elementary School	
13		Ayaraki Beach	5591.0	306	Shimonoseki City Environmental Policy Division; Shimonoseki Central Technical High School; Kawanaka Nishi Elementary School	
14		Niinohama Beach	6208.3	555	Prefecture's Waste Management & Recycling Promotion Division; Nagato City; Nagato Health and Welfare Center; Nagato City Hioki Junior High School	
15		Ohama Beach	8476.6	439	Prefecture's Waste Management & Recycling Promotion Division; Nagato City Consumer and Environmental Protection Division; Nagato Health and Welfare Center; Nagato City Hishikai Junior High School	
16	Shimane Prefecture	Kitaura Beach	7103.5	84	Matsue City Environment Preservation Division; Matsue City Mihonoseki Office; Mihonoseki Tourist Association	
17	Tottori Prefecture	Uradome Beach	249.3	212	Prefecture's Recycling Society Promotion Division; Tobu Life Environment Office; Iwami-cho Town Citizens Affairs Division; Iwami Shizen o Aisuru Kai	
18		Higashisonohama Beach (Hojo Sand Dune)	804.6	606	Tottori University	
19		Anedomari Beach (Hamamura Sand Dune)	1845.5	436	Tottori University	
20		Yumigahama Beach	1129.9	231	Prefecture's Recycling Society Promotion Division; Seibu Life Environment Office; Yonago City Environment Division; Sakaminato General Technical high school	
21	Hyoogo Prefecture	Hamasaka Kenmin Sun Beach	113.3	97	Prefecture's Environment Division; Hamasaka Kita Elementary School; Hamasaka-machi Kurashi no Kai	
22	Kyoto Prefecture	Kotohikihama Beach	292.3	69	Prefectural Government; Prefectural Amino High School	
23		Taikohama Beach	83.7	92	Higashiyama High School Geoscience Club	
24	Fukui Prefecture	Hamaji Beach	185.5	13	Prefecture's Environmental Policy Division; Fukui City Waste Management Division; Mikuni Sea Cadet Club	
25		Diamond Beach	1424.0	196	Nihonkai Environmental Service Inc.	
26	Ishikawa Prefecture	Chirihama Beach	2624.1	125	Prefecture's Waste Management Division; Hakui City; Hakui City Regional Association; Hakui School Board; National noto Youth Friendship Center; JAPAN NUS Co., Ltd.; Clean Beach Ishikawa; Kanazawa Seiryu University Ikeda Laboratory	
27		Shibagaki Beach	2051.6	52	Surfrider Foundation Japan	
28		Oshima Beach	3218.6	140	Nihonkai Environmental Service Inc.; NPEC	
29		Shibutahama Beach	4986.4	191	Najimi Elementary School; Wajima City Environmental Management Division	
30		Shirasaki Beach	7034.3	202	Wajima City Environmental Management Division; Machino Elementary School; Machino Junior High School	
31		Shimao/Matsudae Beach	6123.5	1689	Prefecture's Environment Division; Himi City Environment Division; Kubo Elementary School; Nihonkai Environmental Service Inc.; Himi Seaside Botanical Garden	
32	Toyama Prefecture	Matsudae Beach	266.2	631	Prefecture's Environment Division; Takaoka City; Ota Elementary School; Ota Senior Citizens' Club; NPEC; Nihonkai Environmental Service Inc.; NOWPAP RCU; Toyama Prefectural University	
33		Ebie Beach	475.5	184	Tomei Elementary School; NPEC; Nihonkai Environmental Service Inc.; Imizu City	
34		Iwasehama Beach	1276.0	292	Prefecture's Environment Division; Toyama City; Iwase Elementary School; University of Toyama; Soroptimist International of Toyama; Kinlaro Club; NPEC; Nihonkai Environmental Service Inc.	
35	Miyazaki-Sakai Beach	112.0	48	Prefecture's Environment Division; Asahi Town Citizens & Children Division; Samisato Elementary School; NPEC; Nihonkai Environmental Service Inc.		
36	Niigata Prefecture	Yotsugoyahama Beach	170.5	41	Prefecture's Waste Management Division; Prefecture's Environmental Planning Division; Prefecture's Institute of Public Health and Environmental Sciences; Niigata City Crisis Management and Disaster Prevention Division	
37		Arahama Gyoko Beach	1870.9	237	Nihonkai Environmental Service Inc.; NPEC	
38	Yamagata Prefecture	Hamanaka Asari Beach	5160.6	233	Prefecture's Environment Division; Sakata Coast Guard; Sakata City Environmental Sanitation Division; Sakata City Hamanaka Elementary School	
39	Aomori Prefecture	Dekishima Beach	1106.7	51	Prefecture's Environment Policy Division; Tsugaru City Environmental Sanitation Division	
40		Fukkoshi Beach	41900.0	1877	Prefecture's Environment Policy Division; Yokohama Town Citizens Assistance Division; Environmental Management Office	
41	Hokkaido	Ishikarhama Beach	152.8	12	Prefecture's Environment Enhancement Division; Prefecture's Ecological Life Division Ishikawa Office	
42		Sakanoshita Beach	762.3	22	Prefecture's Ecological Life Division Soya Office	
43		Nozuka Beach	282.0	14	Prefecture's Ecological Life Division Shirubeshi Office	
44		Hamaatsuma Beach	1043.4	46	Surfrider Foundation Japan	
45	F	Toki Bay	1690.0	71	Public School No. 2; Far Eastern State University of Humanities; Pacific National University; Botschinsky National Nature Reserve	
46		Khabarovsk Krai	Andreya Bay	72.6	1	Botschinsky National Nature Reserve
47		Obmanyana Bay	1398.0	61	Public School No. 2; Far Eastern State University of Humanities; Pacific National University; Botschinsky National Nature Reserve	
48		Primorsky Krai	Emal Inlet of Ussuri Bay	329.3	142	Primorsky Krai Environment Preservation Department; "OKEAH", the All-Russian Children's Center
49			Pogranichnaya Bay of Popov Island	801.8	142	Primorsky Krai Environment Preservation Department; Eco Club of Popov Island Junior High School No. 29
50		Sakhalin Oblast	Varna Beach of Nakhodka Bay	1600.4	193	Nakhodka District Natural Utilization Division
51	Cape Lopatin		7395.0	64	Eco Club "Boomerang"; Sakhalin Oblast Natural Resources and Environment Preservation Committee	
52	G	Hajodae Beach	76.0	25	Environmental Cleaning Association (Located in Chuncheon City, Gangwon Province)	
53		Gyeongpo Beach	94.8	65	Environmental Cleaning Association (Located in Chuncheon City, Gangwon Province); Gyeongpo Youngsang Association	
54		Mangsang Beach	116.3	94	Environmental Cleaning Association (Located in Chuncheon City, Gangwon Province)	
55		North Gyeongsang Province	Goraebul Beach	19.0	17	North Gyeongsang Province; Kling Yeongdeok Promotion Association
56	North Gyeongsang Province	Dogu Beach	353.0	71	Blue Pohang 21 Promotion Circle	
57		Malu Beach	31.1	14	North Gyeongsang Province; Namu Circle	
58	I	Dongshan Beach	39.6	25	Qinhuangdao Junior High School No. 12; Qinhuangdao Environmental Conservation Promotion Center	
59		Laolongtuo Beach	24.8	21	Qinhuangdao Nanyuan Junior High School; Qinhuangdao Environmental Conservation Promotion Center	
60		Laohushi Beach	59.3	35	Beidaihe Junior High School No. 2; Qinhuangdao Environmental Conservation Promotion Center	
61		Hebei Province	Beidaihe Biluota Beach	25.3	20	Beidaihe Junior High School No. 2; Qinhuangdao Environmental Conservation Promotion Center
62		Gold Coast Beach	38.7	33	Beidaihe Junior High School No. 4; Qinhuangdao Environmental Conservation Promotion Center	
63		West Beach	19.3	29	Beidaihe Junior High School No. 4; Qinhuangdao Environmental Conservation Promotion Center	
64	Chiangsu Province	Lvsizhen Ding Beach	3339.7	73	Qidong City Lvsizhen Hecheng Junior High School; Nantong City Association for Friendship Foreign Countries; Qidong City Foreign Affairs Office	
65	Okayama Prefecture	Kamashima Beach	1634.6	612	The Foundation for Environmental Rehabilitation and Redevelopment of Mizushima	
66	Wakayama Prefecture	Isonoura Beach	275.3	41	Surfrider Foundation Japan	
67	Hyogo Prefecture	Koshienhama Beach	238.7	296	NPO Kaihin no Shizen Kankyo o Mamoru Kai	
68		Koshienhama (Okino-Umetatechi Beach)	527.0	385	NPO Kaihin no Shizen Kankyo o Mamoru Kai	
69	Aichi Prefecture	Akabane Beach	736.8	279	Akabane-juku	
70	Kanagawa Prefecture	Ohama Beach	1277.9	283	NPO "Ocean Family" (Ocean Family Beach Clean Club)	
71		Yuigahama Beach	1030.9	166	Surfrider Foundation Japan	
72		Tsujiro Beach	272.3	140	Surfrider Foundation Japan	
73		Tokyo	Kasai Marine Park	2726.9	252	NPO Edogawa Eco Center; Kasai Higashinagisa Choriu Entomo no Kai; NPO Arakawa Clena Aid Forum; Nakadote ni Shizen o Modosu Shimin no Kai; Kabashi Wild Bird Club
74	Chiba Prefecture	Tokai Futo Park	5015.4	226	East Asia Environmental Information Express Messenger	
75		Sakuda Beach	1719.4	11	Surfrider Foundation Japan	
76	Chiba Prefecture	Oami Shirotsato Beach	389.2	41	NPO Japan Professional Rescue Organization	
77		Nakazato Beach	660.8	35	NPO Japan Professional Rescue Organization	
78	Miyagi Prefecture	Arahama Beach	578.5	117	Clean-Up Gamo; The General Insurance Association of Japan; Sendai Bay Sounding Sand Bureau	

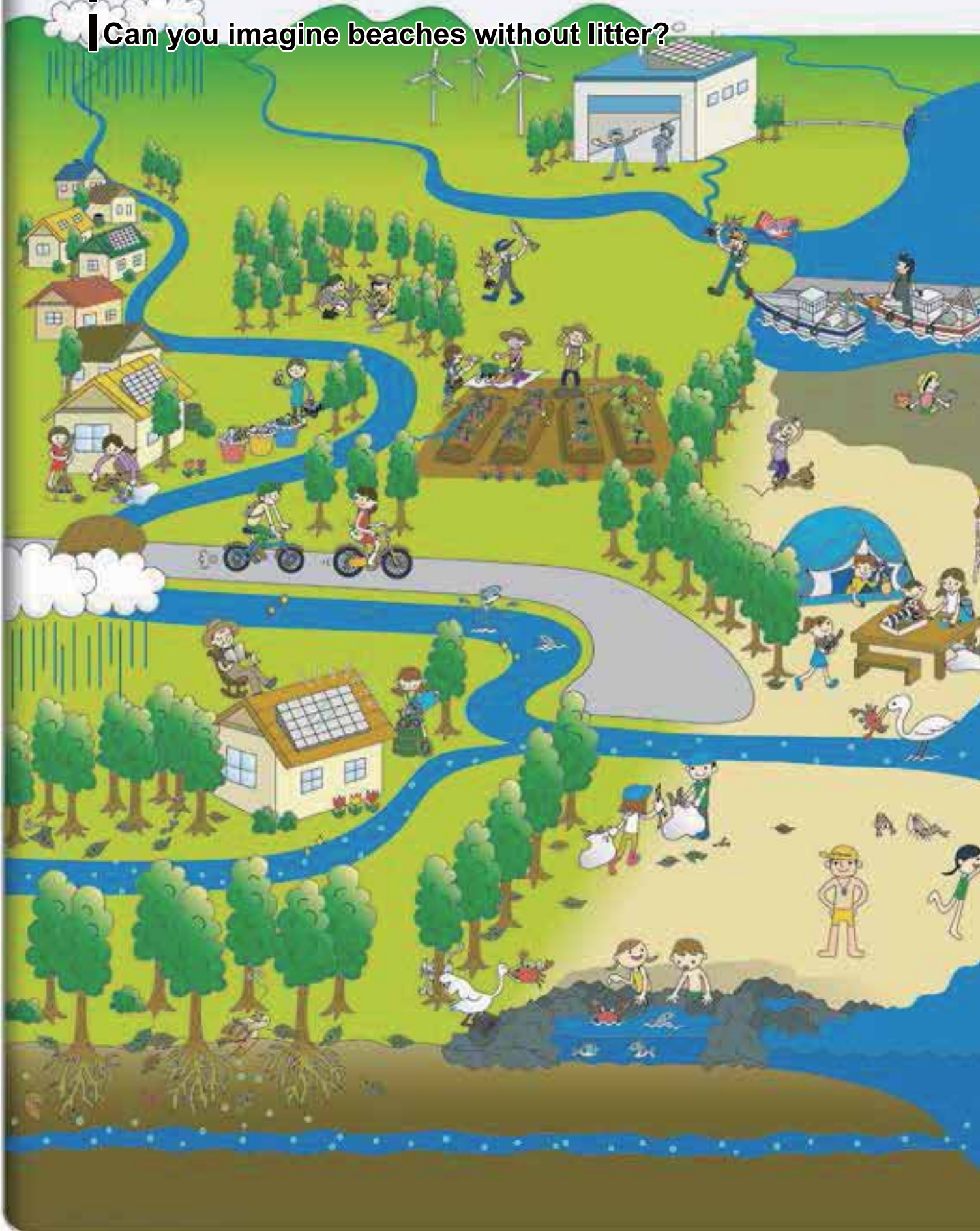
Total: 4 countries, 31 local governments, 78 beaches

Average 3,649.4 273 186 participating organizations, 3,329 participants

*For areas, please consult Figure 6-3.

海洋ごみがない海岸はどんなところ？

Can you imagine beaches without litter?







Miyazaki/Sakai beach (Jade beach) in Asahi, Toyama Prefecture



財団法人 環日本海環境協力センター
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