SEABIRDS

THREE threatened seabird species (Short-tailed Albatross, Chinese Crested-tern and Japanese Murrelet) breed only in the Asia region, two breed in eastern Asia and in the U.S.A. (Black-footed Albatross and Red-legged Kittiwake), and two are non-breeding visitors to the Asian region from Christmas Island (Australia) (Abbott's Booby and Christmas Island Frigatebird). These threatened seabirds are mainly concentrated in north-east Asia, particularly on islands in Japan.

	Threatened species			
	CR	EN	VU	Total
●	1	—	2	3
○	—	—	2	2
✈	2	—	—	2
Total	3	—	4	7

Key: ● = breeds only in this region.
○ = also breeds in other region(s).
✈ = non-breeding visitor.

■ **Countries and territories** **Russia** (Chukotka; Koryakia; Kamchatka; Khabarovsk; Primorye; Sakhalin); **Japan** (Hokkaido; Honshu; Izu Islands; Ogasawara Islands; Iwo Islands; Shikoku; Kyushu; Nansei Shoto; Daito Islands; Senkaku Islands); **South Korea**; **China** (*Mainland:* Liaoning; Hebei; Shandong; Jiangsu; Fujian; Guangdong; *Hong Kong*; *Taiwan*); **India** (Andaman Islands); **Sri Lanka**; **Thailand**; **Philippines**; **Malaysia** (Peninsular Malaysia; Sabah; Sarawak); **Singapore**; **Brunei**; **Indonesia** (Kalimantan; Sumatra; Java and Bali; Nusa Tenggara; Maluku).

Japanese Murrelet is virtually confined to Japan, where it is affected by disturbance and predation at its nesting colonies, and pollution and mortality in fishing nets while at sea.
PHOTO: KOJI ONO

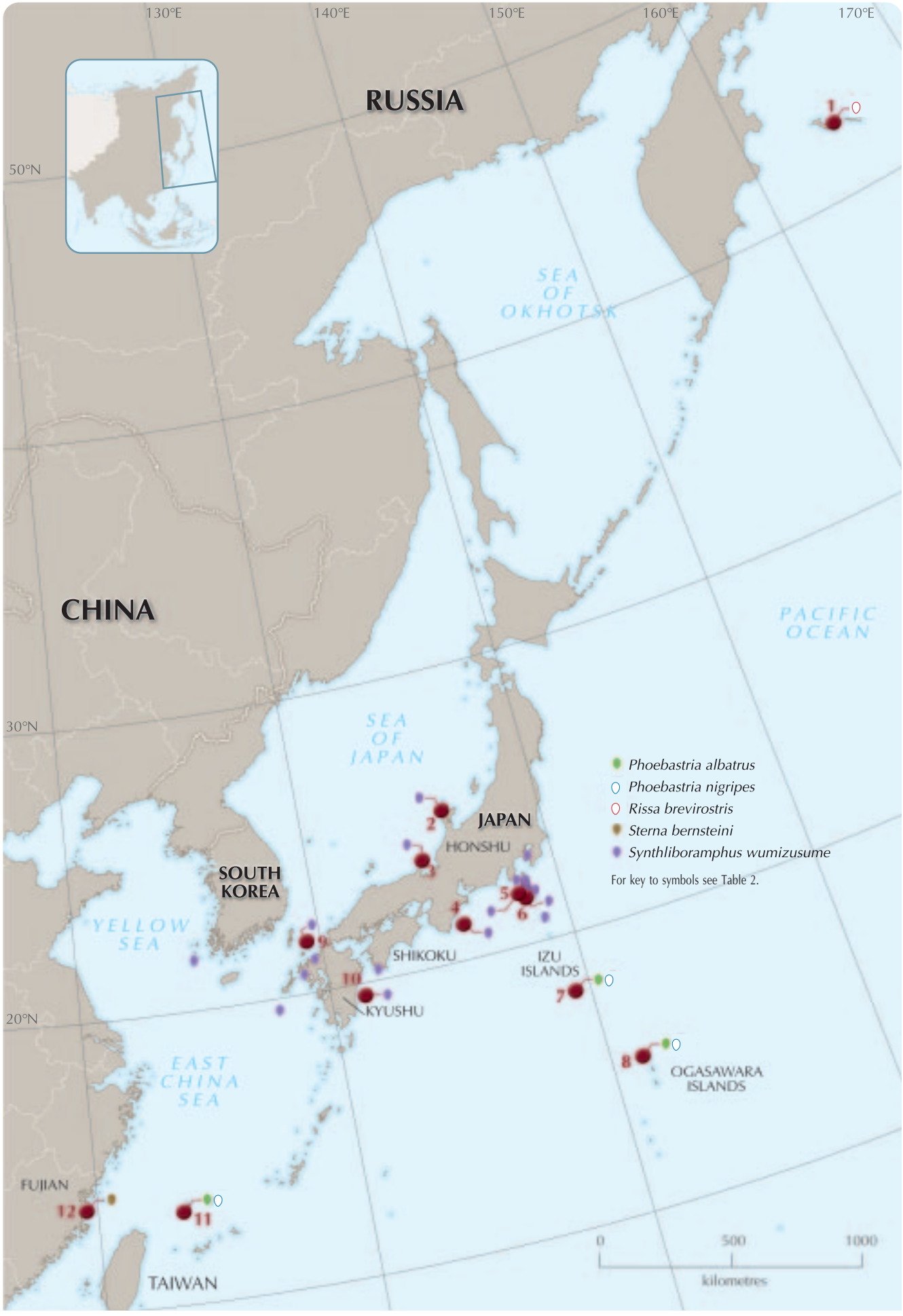
130°E
140°E
150°E
160°E
170°E
50°N
30°N
20°N
RUSSIA
CHINA
SEA OF OKHOTSK
PACIFIC OCEAN
SEA OF JAPAN
JAPAN
HONSHU
SOUTH KOREA
YELLOW SEA
SHIKOKU
KYUSHU
IZU ISLANDS
OGASAWARA ISLANDS
EAST CHINA SEA
FUJIAN
TAIWAN
1
2
3
4
5
6
7
8
9
10
11
12
Phoebastria albatrus
Phoebastria nigripes
Rissa brevirostris
Sterna bernsteini
Synthliboramphus wumizusume
For key to symbols see Table 2.
0
500
1000
kilometres

Table 1. Outstanding Important Bird Areas for seabirds.

	IBA name	Status	Territory/Island group	Notes
1	**Commander islands**	—	Kamchatka	Breeding colonies of Red-legged Kittiwake
2	**Nanatsu-jima island**	PA	Honshu	Important breeding colony of Japanese Murrelet
3	**Kutsu-jima island**	—	Honshu	Important breeding colony of Japanese Murrelet
4	**Kiinaga-shima islands**	—	Honshu	Important breeding colony of Japanese Murrelet on Mimiana-jima
5	**Kozu-jima islands**	—	Izu islands	Important breeding colony of Japanese Murrelet on Tadanae-jima
6	**Mitake-jima islands**	—	Izu islands	Important breeding colony of Japanese Murrelet on Onohara-jima
7	**Tori-shima island**	PA	Izu islands	Breeding colonies of Short-tailed Albatross and Black-footed Albatross
8	**Muko-jima**	—	Ogasawara islands	Breeding colony of Black-footed Albatross, with a recent breeding record of Short-tailed Albatross on nearby Yome-jima
9	**Okino-shima island**	PA	Kyushu	Important breeding colony of Japanese Murrelet
10	**Biro-jima island**	—	Kyushu	The largest known breeding colony of Japanese Murrelet
11	**Senkaku islands**	—	Senkaku islands	Breeding colonies of Short-tailed Albatross and Black-footed Albatross
12	**Mazu (Matzu) Dao islands**	PA	Mazu (Matzu) Dao islands	The only know Chinese Crested-tern breeding colony

Note that more IBAs in this region will be included in the *Important Bird Areas in Asia*, due to be published in early 2004.

Key *Status*: PA = IBA is a protected area; (PA) = IBA partially protected; — = unprotected.

Table 2. Threatened Asian seabirds.

Species			Distribution
Short-tailed Albatross *Phoebastria albatrus*	●	VU	Currently known to nest on three islands in southern Japan; non-breeding birds disperse widely in the northern Pacific Ocean
Black-footed Albatross *Phoebastria nigripes*	○	VU	Nests on the Hawaiian Islands (U.S.A.) and on three islands in Japan; non-breeding birds disperse widely in the northern Pacific Ocean
Abbott's Booby *Papasula abbotti*	✈	CR	Breeds on Christmas Island (Australia); non-breeding birds disperse in the Indian and Pacific Oceans (including Indonesia)
Christmas Island Frigatebird *Fregata andrewsi*	✈	CR	Breeds on Christmas Island (Australia); regular non-breeding visitor to Indonesia, Malaysia and Thailand, with records from China, India, Sri Lanka, Singapore and Brunei
Red-legged Kittiwake *Rissa brevirostris*	○	VU	Breeds on the Commander Islands (Russia), and on the Pribilof, Bogoslof and Buldir islands (U.S.A.)
Chinese Crested-tern *Sterna bernsteini*	●	CR	Breeds on islets off eastern China; recent non-breeding records from Taiwan, and old records from Thailand, the Philippines, East Malaysia and Indonesia
Japanese Murrelet *Synthliboramphus wumizusume*	●	VU	Breeds on islands off central and southern Japan and southern South Korea, with records from the Russian Far East (where it may breed) and Taiwan

The Data Deficient Matsudaira's Storm-petrel *Oceanodroma matsudairae* breeds on the Iwo islands in southern Japan, and non-breeding birds disperse west into the Indian Ocean.

● = breeds only in this region; ○ = also breeds in other region(s); ✈ = non-breeding visitor. Colour denotes species as indicated on map.

OUTSTANDING IBAs FOR THREATENED BIRDS (see Table 1)

Twelve IBAs have been selected, covering the most important known colonies of the five threatened seabirds which breed in the region.

CURRENT STATUS OF HABITATS AND THREATENED SPECIES

Short-tailed Albatross was formerly abundant, but declined dramatically in the late nineteenth and early twentieth centuries because of unsustainable exploitation, primarily for feathers to make quilts. The species was assumed to be extinct until its rediscovery on Tori-shima in the 1950s; it has subsequently slowly increased in numbers (to c.1,200 individuals), and has started to nest on two other islands. Rapid declines in Black-footed Albatross have recently been noted, caused until 1992 by high mortality from interactions with squid fishing gear and driftnets in the north Pacific, and currently by longline fisheries. Red-legged Kittiwake has also suffered a recent population

Chinese Crested-tern was feared extinct until the discovery of a tiny breeding colony on islands off the coast of eastern China in summer 2000.

PHOTO: CHANG SHOU-HUA

decline, possibly caused by overfishing of its food supply. Japanese Murrelet is a scarce species (estimated at <10,000 individuals) that is thought to be declining for a variety of reasons (see below). Chinese Crested-tern is an exceptionally poorly known bird, historically recorded from a handful of sites in eastern China (where it was assumed to breed) and South-East Asia, feared extinct until four nesting pairs were located in a tern colony on a small island off the coast of Fujian in summer 2000. Abbott's Booby and Christmas Island Frigatebird are both facing rapid decline because of major problems on their breeding grounds on Christmas Island (outside the Asian region in Australia: see BirdLife International 2000).

Short-tailed Albatross was formerly abundant, but declined to near extinction because of exploitation for its feathers.

PHOTO: TAKAO BABA

CONSERVATION ISSUES AND STRATEGIC SOLUTIONS (summarised in Table 3)

Habitat loss and degradation

LOSS OF BREEDING GROUNDS

The breeding colony of Short-tailed Albatross on Tori-shima has been affected by soil erosion, probably caused by trampling by the albatrosses themselves, but this was addressed in the 1980s by the transplantation of native vegetation into the nesting colony in order to stabilise the substrate and even the nest structures. There is a constant danger that the nesting grounds of this species and Black-footed Albatross could be destroyed by volcanic eruptions on Tori-shima, so sound lures and decoys have been successfully used to attract birds to nest at other locations on the island. The management of the colonies on Tori-shima should be continued and, if feasible, comparable measures should be taken in the Senkaku islands (although this is difficult because they are the subject of territorial claims involving Japan, mainland China and Taiwan), and at any newly discovered nesting colonies.

DISTURBANCE AND INCREASED PREDATION

Sport fishing off isolated offshore reefs and islets has become very popular in Japan, and direct disturbance and damage to habitats by this activity is believed to be causing declines in Japanese Murrelet at several nesting colonies. The fishermen discard small (dead) fish and use others as lures, thereby attracting Large-billed Crows *Corvus macrorhynchos* and Black-tailed Gulls *Larus crassirostris* from the nearby main islands; predation by the crows (usually of eggs) and gulls (usually of chicks) is putting immense pressure on the murrelets. For example, on Biro-jima island predation by crows was estimated to account for 40% of breeding failure in 1994. Education boards have been constructed near Biro-jima and leaflets produced to inform fishermen about the status of Japanese Murrelet and the importance of this breeding colony. Similar initiatives should be developed at other major colonies, to inform fishermen that this species is

Table 3. Conservation issues and strategic solutions for Asian seabirds.

Conservation issues	Strategic solutions
Habitat loss and degradation	
■ LOSS OF BREEDING GROUNDS ■ DISTURBANCE AND INCREASED PREDATION ■ POLLUTION	➤ Continue management of the albatross colonies on Tori-shima, and consider similar measures at other nesting sites ➤ Encourage sports fishermen in Japan to minimise disturbance and the use of dead fish as lures near Japanese Murrelet colonies ➤ Restrict human access to some islands with breeding Japanese Murrelets ➤ Inform relevant authorities about key areas for threatened seabirds, to reduce the risk of oil spillage in these areas
Protected areas coverage and management	
■ GAPS IN PROTECTED AREAS SYSTEM	➤ Establish new protected areas to improve coverage of threatened seabird colonies, notably at the outstanding IBAs listed in Table 1
Exploitation of birds	
■ HUNTING	➤ Prevent hunting and disturbance at the Chinese Crested-tern colony on the Mazu (Matzu) Dao islands
Gaps in knowledge	
■ INADEQUATE DATA ON THREATENED SEABIRDS	➤ Investigate the conservation needs of Short-tailed Albatross in the Senkaku islands, and locate and protect any new colonies ➤ Monitor Red-legged Kittiwake numbers on the Commander islands, and investigate the possible link between its decline and commercial fishing ➤ Survey islands off eastern China for nesting Chinese Crested-terns ➤ Search for nesting Japanese Murrelets in south-east Russia, and monitor its colonies in Japan
Other conservation issues	
■ MORTALITY CAUSED BY FISHERIES ■ INTRODUCED PREDATORS	➤ Promote best-practice measures to mitigate seabird by-catch in all longline fisheries ➤ Encourage Japan, South Korea and China to develop and implement National Plans of Action to reduce seabird bycatch by longline fisheries, and join the Agreement on the Conservation of Albatrosses and Petrels ➤ Introduce regulations and measures to reduce by-catch of Japanese Murrelets in drift-nets ➤ Evaluate the feasibility of rat elimination at important Japanese Murrelet colonies

virtually endemic to Japan (and that its conservation is therefore a national responsibility), and that disturbance of murrelets and the practice of using lures should be reduced or stopped near colonies. It may prove necessary to introduce restrictions on human access to some islands with breeding murrelets. New controls on dumping garbage should be introduced on the Izu islands to reduce the population of Large-billed Crow, although more direct methods of control may also be necessary (see F02).

POLLUTION

Oil spillage at sea is a potential cause of mortality in the seabirds of this region; three Japanese Murrelet were among the 1,315 seabirds recorded killed when a Russian tanker was wrecked in the Sea of Japan in 1997, and an incubating Short-tailed Albatross has been seen with oil on its breast. The possibility of oil exploration around the Senkaku islands (a nesting ground for Short-tailed and Black-footed Albatross) has been discussed in the past. Floating debris, such as fishing-lines, pieces of polystyrene and plastic bags, could be a significant cause of mortality in the surface-feeding Short-tailed and Black-footed Albatross, and has appeared in the food delivered to nestlings and been regurgitated by young. Negotiations are needed with appropriate authorities to inform them of the vulnerability of seabirds to oil spills, the location of islands with nesting colonies, and areas of sea which support wintering concentrations of threatened seabirds. They should be encouraged to adjust oil tanker shipping lanes and oil exploration activities to avoid these areas if possible, and to take measures to minimise the risk of oil spillage near these sensitive areas. Awareness campaigns are required in North-East Asia and globally, aimed at reducing the dumping of rubbish at sea.

Protected areas coverage and management

GAPS IN PROTECTED AREAS SYSTEM

Some of the most important sites for threatened seabirds are officially protected, including the Short-tailed and Black-footed Albatross colonies on Tori-shima, the breeding grounds of Chinese Crested-tern on the Mazu (Matzu) Dao islands (which are geographically part of Fujian province, but are under the administration of Taipei), and several Japanese Murrelet colonies. New protected areas should be established at some of the outstanding IBAs and at other threatened seabird colonies.

The risk of oil spillage needs to be minimised in areas of sea with large wintering concentrations of Japanese Murrelet and other threatened seabirds.

PHOTO: KOJI ONO

Exploitation of birds

HUNTING

Seabirds have long been exploited in China, for example Roseate Terns *Sterna dougallii* have been taken for food, and this type of hunting (and the association disturbance at nesting colonies) could be one of the reasons for the apparent decline in Chinese Crested-tern. Indeed, the main threat to the newly discovered colony on the Mazu (Matzu) Dao islands is from fishermen from mainland China visiting the nesting islets to collect seashells or birds' eggs. This site and any other colonies of the species need to managed to prevent hunting and disturbance by fishermen or other visitors (e.g. photographers).

Sports fishermen often visit the small islands used by nesting Japanese Murrelet.

PHOTO: KOJI ONO

Gaps in knowledge

INADEQUATE DATA ON THREATENED SEABIRDS

If possible, research should be conducted on the status and conservation needs of Short-tailed Albatross at the breeding colony in the Senkaku islands. As the population of this species recovers, it is likely that new colonies will be established, and efforts should be made to locate and protect them; there is a strong possibility that it will return to the islands where it nested in the past, where conditions must be potentially suitable, and searches should be conducted in the appropriate season. The population of Red-legged Kittiwake should be monitored on the Commander islands, together with studies of commercial fisheries in this part of Russia, to investigate whether declines in its numbers could be related to a reduction in food supply caused by unsustainable fishing. If this is found to be the case, measures for more sustainable commercial fishing will need to be developed and promoted.

Surveys are needed in eastern China to try to locate more nesting colonies of Chinese Crested-tern, with immediate conservation measures to safeguard any sites found. The most obvious targets for surveys are the islets off Shandong where the largest series of specimens of the species was collected in the 1930s, but there must be many other potentially suitable islets for nesting off the coast of China between Shandong (and Liaoning) and Fujian; surveys could be conducted for this species together with several other birds that nest on offshore islets, notably Chinese Egret *Egretta eulophotes* and Black-faced Spoonbill *Platalea minor* (see W06). Structured interviews with fishermen in coastal ports could help locate offshore islands and remote coastal localities with breeding colonies of terns and other birds. A record of a juvenile Japanese Murrelet in Peter the Great Bay suggests that the species may nest in this part of Russia, and surveys are required at potential nesting areas, as a forerunner to the development and implementation of appropriate conservation measures.

East Asian fishing fleets use longline fishing techniques in the southern oceans, and their adoption of measures to reduce the bycatch of seabirds is a high global priority.

PHOTO: GRAHAM ROBERTSON/AUSTRALIAN ANTARCTIC DIVISION

Surveys and monitoring are also required for the species in Japan, to improve understanding of its distribution, movements and numbers, and of the impacts of the numerous threats that it faces.

Other conservation issues

MORTALITY CAUSED BY FISHERIES

Small numbers of Short-tailed Albatross are known to have been killed by longline fishing hooks and fishing-nets, and Black-footed Albatross is currently being badly affected by longline fisheries for tuna, billfish and groundfish, with several thousand birds being killed per year by US-based fisheries alone. Ongoing satellite tracking studies of Black-footed Albatross to assess temporal and spatial overlap with longline fisheries should be continued, with best-practice mitigating measures adopted in all longline fisheries within the species's range. It is important to note that the fishing fleets based in Japan, South Korea and China use longline fishing techniques in the southern oceans, and interact with many threatened seabirds in that region; the adoption of best-practice mitigating measures by these fleets is therefore a high priority for the global conservation of seabirds. It has been proposed that these countries should develop and implement National Plans of Action (NPOAs) to reduce the bycatch of seabirds in longline fishing operations, and join the Agreement on the Conservation of Albatrosses and Petrels (ACAP).

Large numbers of Japanese Murrelet were estimated to have been incidentally caught and killed in drift-nets during the 1990s, possibly involving 10% or more of the total breeding population of the species. Japan, South Korea and Taiwan agreed to a United Nations Resolution to cease large-scale drift-net fisheries in international waters of the North Pacific by the end of 1992, which should have reduced the by-catch of Japanese Murrelet, although drift-nets and coastal gill-nets within the 320-km Exclusive Economic Zone of Japan have probably continued to kill the species in much of its breeding and wintering ranges. Several methods have been devised for reducing (by c.60-70%) by-catch of seabirds (especially alcids) in gill-net fisheries, with little or no reduction in fish catch, including using opaque nylon, 'pingers' that emit sound, fishing during the day rather than at night, and avoiding areas of obvious high bird concentrations. Statutory regulations need to be developed, in consultation with commercial fishery organisations, to reduce by-catch of this species (and other seabirds) using these measures, particularly in areas known to have important concentrations of Japanese Murrelet.

INTRODUCED PREDATORS

The introduced black rat *Rattus rattus* is a potential predator of seabirds, and carcasses of Japanese Murrelet are frequently found at colonies, suggesting that the predation of adult birds by rats is a widespread problem. For example, the remains of 145 Japanese Murrelet were found on Koya-jima island in 1987, apparently killed by rats (probably brought there accidentally during visits for sports fishing), and the estimated total mortality was 414 birds; few breeding murrelets are currently found there, at what was once a very large colony. Black rats are widespread on Tori-shima, including on the nesting slope used by the albatrosses, and it was feared that they might prey on eggs or hatched young, but there is now evidence that predation by rats is not as serious a problem as was feared. The feasibility of eliminating rats from the more important Japanese Murrelet colonies should be investigated.