



environmental investigation agency

# TOWARDS EXTINCTION

## THE EXPLOITATION OF SMALL CETACEANS IN JAPAN

More than four hundred thousand dolphins, porpoises and small whales have been killed in Japanese waters in the last 20 years.

The Government of Japan still allows 22,000 small cetaceans to be legally killed each year in unregulated hunts around the coast of Japan. Some of the populations hunted are rare or endangered, others are threatened or in decline from overhunting. As one species declines, catch effort is switched to another species.

There is no government enforcement of kill quotas for these small cetacean hunts, either by Japan's federal Fisheries Agency or by the regional prefecture governments. There are no restrictions on killing methods used in the hunts.

Dolphins, porpoises and small whales have no legal protection under Japanese law to prevent them being hunted even to extinction or killed in the most indiscriminate and brutal manner.

The Bern Convention on the Conservation of European Wildlife and Natural Habitats, to which at least 34 states are Party, prohibits the use of 'all indiscriminate means of capture and killing and the use of means capable of causing local disappearance of, or serious disturbance to populations of a species.' The United States, Australia and New Zealand have all enacted

similar legislation providing for the conservation and protection of small cetaceans.

The continued unsustainable exploitation of small cetacean populations off Japan is contrary to the repeated recommendations of the International Whaling Commission (IWC) and its Scientific Committee. It also contradicts the Government of Japan's frequently stated claim that it pursues a policy of 'sustainable utilisation of marine resources.'

Members of the Japanese public and press are generally unaware that such hunts occur in Japan and are often shocked to discover that such large numbers of small cetaceans are killed.

There is a flourishing large-scale fraudulent trade in small cetacean products, which are sold as whale meat thereby vastly inflating their value. The Government of Japan has never acted to counter this widespread fraudulent trade nor has it enacted meaningful enforcement of catch limits or other supposed controls on the commercial hunting of dolphins, porpoises and small whales around its coasts.

Allan Thornton  
Environmental Investigation Agency, Chairman  
June 2000

## A History of Unsustainable Exploitation

Although small cetaceans have been caught in Japanese waters for centuries in localised subsistence hunts, catches began to expand in number and area as boats became motorised during the early 20<sup>th</sup> century. In recent decades, increased hunting efficiency has resulted from faster boats with larger engines, radios and mobile phones.

With virtually no government control on the hunts of dolphins, porpoises and small whales, the increased efficiency and hunting effort resulted in extensive over-catching, causing the numbers of several species or populations to plummet.

The post-war commercialisation of the trade in meat and other products from dolphins and porpoises followed an identical pattern to that documented in commercial whaling.

Just as whalers switched their activities to fin, humpback and then sperm whales after hunting blue whales to commercial extinction, so has the exploitation of small cetaceans in Japan's waters resulted in a domino effect, overhunting one species after another.

Historically, striped dolphins were heavily exploited in Japanese waters. In 1959, 21,000 striped dolphins were caught in a single region, Shizuoka. Over the next twenty years, the population plummeted and the hunt for striped dolphin in Shizuoka almost completely collapsed. Catches in Wakayama also suffered drastic declines, from 11,000 in 1980 to less than 1,000 in 1990.<sup>1</sup> As a result Dall's porpoise meat began to be shipped south to satisfy the demand for striped dolphin meat. In recent years, Dall's porpoises have consequently become the most heavily exploited small cetacean species around Japan.<sup>2</sup>

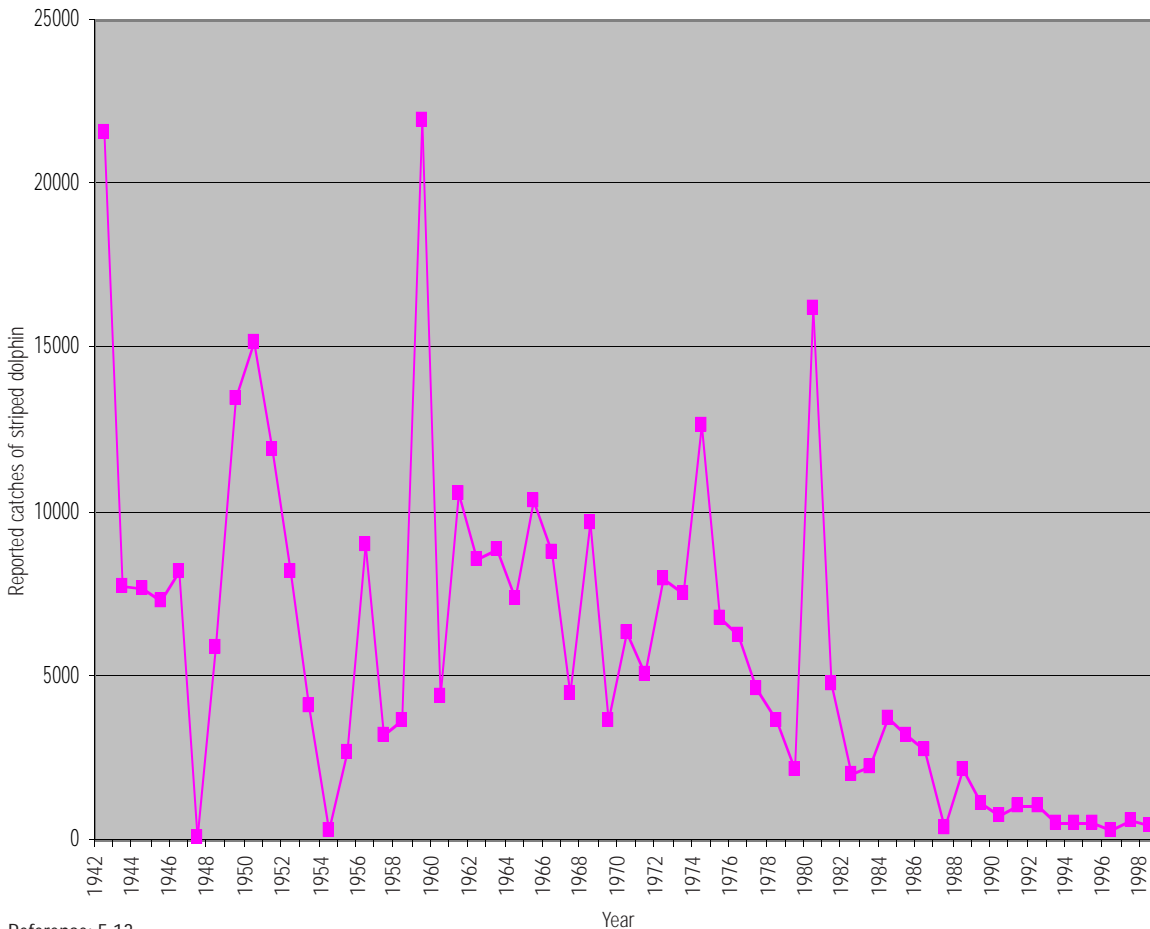
Japan's big whaling companies turned their attention to small cetaceans in the mid 1980s after their access to great whales was severely restricted by international hunting bans. As they began trading in porpoise meat, catches shot up from around 10,000 in 1985 to over 40,000 in 1988.<sup>3</sup> The 1989 IWC Scientific Committee report noted: 'There is evidence that the porpoise meat is being substituted for whale meat in commerce because of the decrease in access to large whales.'<sup>4</sup>

The Dall's porpoise populations have borne the brunt of this onslaught with over 250,000 killed between 1986 and 1998.<sup>5</sup>

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1998**



## Long-term Decline in Striped Dolphin Catches



*Striped dolphin populations in Japan have virtually collapsed from overhunting*

Reference: 5,13

### International Concern

In 1990, amid mounting worldwide concern, the IWC passed an historic resolution on Japan's direct take of Dall's porpoises. The resolution requested the Japanese Government 'to reduce the takes to at least the levels before 1986, and that even further reductions be considered when new stock assessments are completed.'<sup>6</sup>

The Japanese government responded by formally opposing the IWC's legal authority to manage small cetaceans. Independent legal opinions confirmed, however, that the IWC did have management jurisdiction over all species of cetaceans. These were matched by expert legal opinions produced by, among others, the US and UK Governments, all of which were rejected by Japan. The Japanese Government has never offered any legal opinion to justify their objections. It claims to favour regional agreements to conserve small cetaceans, but has never entered into discussions to negotiate such an agreement.

In 1992 further IWC resolutions on small cetaceans were passed, including a call for Japan to suspend all striped dolphin catches.<sup>7</sup>

Reacting to worldwide publicity and condemnation of its massive commercial hunt of Dall's porpoises, Japan finally began to reduce its catch of Dall's porpoises in the early 1990's. The catch dropped from 21,802 in 1990, to 17,634 in 1991 and to 11,403 in 1992. The 1992 catch was the lowest since 1986. However in 1993 the catch rose again to 14,318 and continued to increase almost every year, reaching 18,540 in 1997.<sup>5</sup>

Under pressure, the Japanese Fisheries Agency also began to set catch limits for small cetaceans. At first these limits specified only the number of 'dolphins' and were based on previous catches.<sup>8</sup> It was not until 1993 that national catch limits were set for each individual species. However, the basis of these quotas is uncertain, as scientific information on species population status is sorely lacking. In addition, enforcement of catch limits is virtually non-existent, nationally or regionally.

## Small Cetacean Catches in Japanese Waters

Catches of small cetaceans around Japan are conducted in one of three categories. This report focuses on species caught in the first two:

### 1. Drive hunts

Drive hunts are conducted by a number of high speed boats that spot a school of dolphins or small whales at sea. The boats form a semi-circle and herd the animals to a harbour or port. Once in the port, the dolphins are surrounded by nets, which are gradually pulled tighter, trapping the animals into an increasingly confined space. The dolphins are then caught with a hook, have a rope tied around their flukes and are then lifted by a



winch onto the quay or onto a truck. They are then driven to a nearby warehouse to be slaughtered.

In recent years, drive hunts have been carried out at Futo on the Izu Peninsula in Shizuoka Prefecture and at Taiji in Wakayama Prefecture, both south of Tokyo.<sup>1</sup>

Species caught in such hunts are striped, bottlenose, pantropical spotted and Risso's dolphins, short-finned pilot whales and false killer whales.<sup>5</sup>

### 2. Hand harpoon hunts

Catcher boats, often working in groups of three or four, search out dolphins, porpoises or small whales at sea and chase them down as in a conventional large whale hunt. As the animals become exhausted by the chase the harpooner spears them with a long hand held harpoon, thrown from a bowsprit extending from the bow of the vessel.

Species caught in hand harpoon hunts include striped, pantropical spotted, bottlenose and Risso's dolphins and Dall's porpoises. Short-finned pilot whales and false killer whales are also hunted using crossbows in Okinawa.<sup>5</sup>



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### 3. Small type coastal whaling

Boats used in these hunts are similar to large commercial whale hunting vessels though smaller, weighing less than 48 tons. Small type whaling operations now hunt Baird's beaked whales, short-finned pilot whales and Risso's dolphins at sea using a bow mounted harpoon gun. The catcher boats operate from Abashiri in north-east Hokkaido, and Ayukawa, Taiji and Wadaura on the Pacific coast of Japan.<sup>9</sup>



Map of Japan

## History of Drive Hunts

### Shizuoka Prefecture

In the late 14<sup>th</sup> century at least 52 villages operated dolphin drive hunts but most ceased operation before the government placed such hunts under the prefectural licensing system in 1982.<sup>1</sup>

Historical catches off the Izu coast were mainly of striped dolphins but also included bottlenose dolphins and southern form short-finned pilot whales.

During and after World War II, the number of hunters taking part in drive hunts on the Izu peninsula in Shizuoka Prefecture expanded, as did the catch of animals, with operations in 5 towns.<sup>10, 11, 12</sup>

With the introduction of motorboats in the 1920s and increases in maximum speed from 13 knots in the 1960s to 40 knots in the 1980s, the Izu drive hunts experienced a significant increase in efficiency over time.<sup>11</sup> A decline in the numbers of striped dolphins soon became evident.

New driving teams were banned in 1951 and in 1959 drive hunts were restricted to the period between September and March. By the late 1960s, only two towns in Shizuoka –

Kawana and Futo – continued to hunt, by forming a joint operation using four high speed boats.<sup>10, 11</sup>

Kawana had its final drive in 1983 and Futo is now the only town still operating regular dolphin drives on the Izu coast, using just one high speed hunting boat. Even though the species they are hunting have suffered significant declines in numbers, the hunters have maintained the hunt by paying other fishing vessels to report sightings of dolphins.<sup>11</sup>

In 1993 when species-specific catch limits for Shizuoka were set, most of the quota was for pantropical spotted dolphins – a species not traditionally hunted. Altogether annual catches of 600 dolphins are allowed, comprising 455 spotted dolphins, 75 bottlenose and 70 striped dolphins.<sup>13</sup>

### Wakayama Prefecture

Fishermen in Wakayama learned the drive hunt method from Izu fishermen, and in 1969 began driving short-finned pilot whales off the coast of Taiji using 8 boats. The hunt expanded to catch striped dolphins in 1973 and a further drive team with 7 boats started operating in 1979. When a vessel licensing system was introduced in 1982, the two teams merged to

use all 15 boats.<sup>1</sup> As in Shizuoka, when the striped dolphin catch plummeted in the 1980s, the Taiji hunters expanded to catch other species, including bottlenose dolphins, spotted dolphins and false killer whales.<sup>5</sup>

In 1982 Wakayama Prefecture limited the hunt season and introduced voluntary catch limits of 500 short-finned pilot whales and 5,000 'other' delphinids (ocean dolphins). The number of vessels decreased to 14 in the 1984/85 season,<sup>1</sup> and in 1986 the 5,000 quota for dolphin catches became obligatory. In 1991, the quota was reduced to 2,900 dolphins, within which a limit of 1,000 striped dolphins and 300 short-finned pilot whales was specified.<sup>13</sup>

By 1993, species-specific quotas were introduced to restrict annual catches to 450 striped dolphins, 400 spotted dolphins, 890 bottlenose dolphins, 300 Risso's dolphins, 300 short-finned pilot whales and 40 false killer whales. The season now operates from October to February, with an extension for short-finned pilot whales until April.<sup>13</sup>

The efficiency of the hunt remained high even as

striped dolphins declined and the hunt transferred its catching effort to species not formerly exploited.

Until 1984, only half of the boats in the drive team were used to search for dolphin schools, but by 1990 the full fleet was being used, which significantly increased daily searching effort and thus the efficiency of the hunt.<sup>1</sup> From 1988 the drive teams also paid fishermen for information on dolphin sightings, when small-type whaling boats returned to Taiji to compete with the drive hunters to catch short-finned pilot whales and Risso's dolphins.<sup>13</sup>

## Hand Harpoon Hunts

Hand harpoon hunts are currently carried out in the prefectures of Hokkaido, Miyagi and Iwate in the north and Wakayama, Chiba and Okinawa in the south.<sup>5</sup> Around 18,500 dolphins, porpoises and small whales are caught in such hunts each year. Licensing systems for vessels catching dolphins or porpoises in hand harpoon hunts were only introduced in 1989.<sup>13</sup>

A thriving hand harpoon fishery existed in Wakayama Prefecture in the 1960s, with fishermen from Taiji annually catching between a few hundred and 2,000 striped dolphins. When the Taiji drive hunt boats expanded their operations in 1973, the hand harpoon hunt became unprofitable and only 15 vessels were licensed in 1989.<sup>13</sup>

In 1991 more than a hundred boats began hunting dolphins with hand harpoons off the coast of Wakayama, all of them eventually obtaining licences. Currently 147 vessels in Wakayama are registered for the hand harpoon hunt, the majority from Taiji and Katsuura, although none hunt dolphins exclusively. The hunting season is legally open from February to August with a kill quota of 520 dolphins comprised of 100 striped dolphins, 100 bottlenose

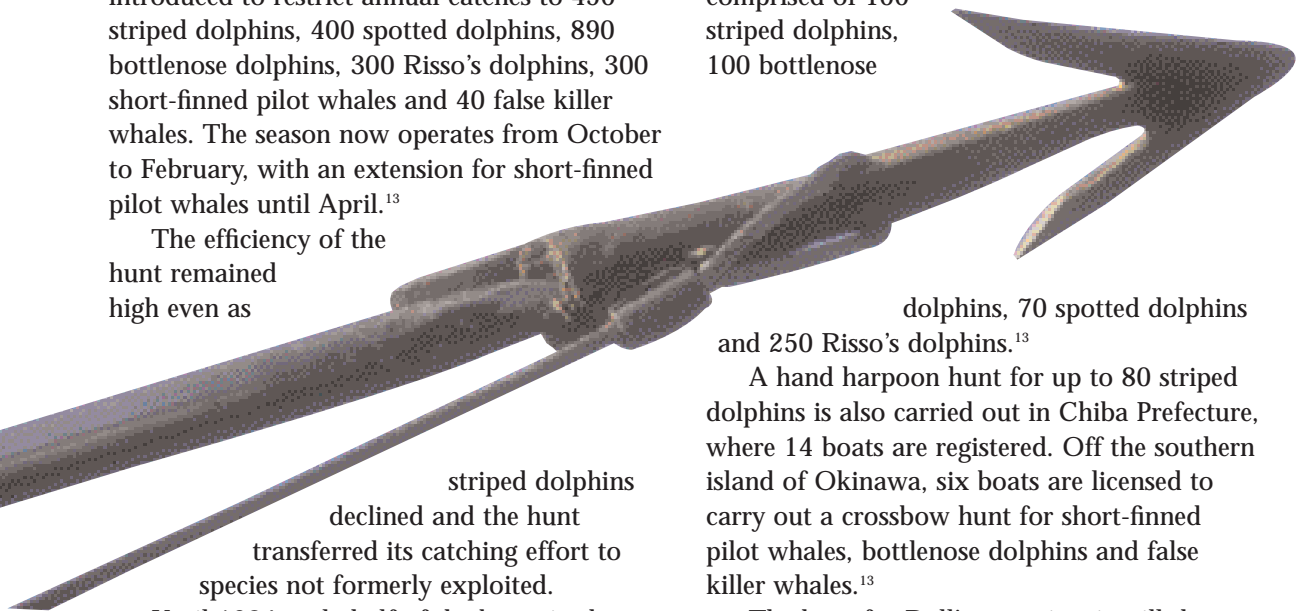
dolphins, 70 spotted dolphins and 250 Risso's dolphins.<sup>13</sup>

A hand harpoon hunt for up to 80 striped dolphins is also carried out in Chiba Prefecture, where 14 boats are registered. Off the southern island of Okinawa, six boats are licensed to carry out a crossbow hunt for short-finned pilot whales, bottlenose dolphins and false killer whales.<sup>13</sup>

The hunt for Dall's porpoises is still the largest hand harpoon hunt in Japan, taking place in the Sea of Japan during May and June, Okhotsk Sea from August to October and off the coast of Iwate from November to April.<sup>14</sup>

In 1998, 213 boats in Iwate had permits for the Dall's porpoise hand harpoon hunt.<sup>15</sup> A further 17 boats are registered to hunt Dall's porpoises in Hokkaido, ten in Aomori and at least one in Miyagi.

With a national quota of 17,700 Dall's porpoises, this is the largest direct kill of cetaceans in the world.





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## Monitoring and Enforcement

Over 400 boats are authorised by the Government of Japan or the regional prefecture governments to hunt dolphins, porpoises and small whales around the coast of Japan.<sup>13,15,16</sup> There is no monitoring of the activities of any of these boats, even though under and misreporting of catches has been widespread as has the violation of the closed hunting seasons.

There is not a single enforcement officer in all of Japan, either in the federal Fisheries Agency or in the prefecture governments, charged to enforce catch limits of small cetaceans or compliance with closure of hunting seasons.

The administration of catch quotas is delegated to the regional prefectures, which in turn allow the local fishery cooperatives to voluntarily report the number of dolphins or porpoises killed and reported landed by the hunters. Prefectures only check the catch records kept by the cooperatives and do not physically inspect or monitor the numbers of dolphins or porpoises caught or landed.<sup>5</sup>

With no independent government regulatory control, the landing, transport and distribution of small cetaceans and small cetacean products is completely unsupervised. The current system of self-regulation in Japan's small cetacean hunts is therefore wide open to abuse.

Other than catch limits, the only 'regulations' in existence are the licensing of boats participating in such hunts by the prefectural authorities and limits on the hunting seasons. In reality, there is no control over capacity in the drive and hand harpoon hunts. More than 150 vessels in Chiba and Wakayama Prefectures hold a license to hand harpoon a maximum of 600 dolphins.<sup>13</sup>

Seasonal restrictions are also ineffective either in limiting catches or in providing effective conservation measures. Dall's porpoises are hunted throughout the year, with the exception of the month of July, supposedly to protect them during their breeding season. The intensively exploited population in the Sea of Japan actually breeds during May and June when the hunt takes place,<sup>17</sup> as confirmed by the large number of lactating females in the catch. Females with calves are specifically targeted by hunters in the area as they are easier to catch.<sup>18</sup>

***Over 400 boats are authorised to hunt dolphins, porpoises and small whales***



Live dolphins transported to slaughterhouse



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***There is no monitoring of small cetacean landings by prefecture or national agencies***

## **Abuse of Voluntary Controls**

In a letter to Japanese conservation groups in 1997 the Fisheries Agency reported that Shizuoka Prefecture has a monitoring and survey vessel, and that public officials from bodies such as the Fisheries Research Institute should be present at dolphin drive hunts. The Fisheries Agency ‘assumed’ that these requirements were properly observed by the prefecture.<sup>19</sup>

Shizuoka Prefecture expressed a different view and claimed they did not have to be present during dolphin catches. To be present, they explained, would mean they did not trust the fishing cooperatives.<sup>19</sup> Although prefectural staff have been known to occasionally watch drive hunts,<sup>20</sup> they are clearly not obliged to do so, nor can such observations be interpreted as active enforcement or monitoring.

Hand harpoon hunts are similarly unregulated. More than 150 vessels in Chiba and Wakayama are licensed for hand harpoon hunting, despite having a relatively low catch quota. None of the boats exclusively hunt dolphins, and as carcasses are butchered at sea, without examination by scientists or inspectors there is vast potential for misreporting the



numbers and species caught.<sup>13</sup>

In Iwate Prefecture, the Dall's porpoise hunt typically continues for up to ten days after the hunt has been officially closed by the authorities.<sup>21</sup>

In March 1999, EIA staff witnessed the landing of over 700 Dall's porpoises in just three weeks but did not see any evidence of monitoring by regional or national governmental representatives at the ports where porpoises were landed. Prefectural authorities in Iwate limit their activities to checking the fishing cooperative's records once a week, but never actually count the number of carcasses landed. With over 200 boats licensed to hunt porpoises off Iwate and 6 designated ports where carcasses can be landed, the potential for abuse is high.<sup>15</sup>

The Hokkaido hunt for Dall's porpoises provides further extensive opportunities to under report catches, as hunters butcher the porpoises on the boat and land them as meat at any one of ten designated ports on the island.<sup>16</sup> Hunters in Hokkaido reportedly sell porpoise meat directly to wholesalers, avoiding registration of their catch.<sup>21</sup>

Most of the Hokkaido catch is actually caught by Iwate fishermen, who transport the

## Drive Hunt for Rare Orcas, Taiji, February 1997

In 1991, the Fisheries Agency issued a 'guidance' notification to prohibit orca capture because of their rarity in Japanese coastal waters. However the notification included provisions to capture orcas for scientific research and in January 1992 the Agency authorised the capture of a maximum of five orcas for this purpose.<sup>24</sup>

In 1997, ten orcas were driven into Taiji in Wakayama Prefecture. Of these, five were sold to three aquariums, and five were released. It was only after the drive hunt had taken place that the Fisheries Agency confirmed that the quota was still in place. This was confirmed within two hours, clearly without reviewing the now five year-old permit or the potential impact of the take on a population of unknown status.<sup>24, 25</sup>

Experts believe the orcas were not resident, but were part of a small transient group that happened to migrate close to the coast of Wakayama. As orcas occur in very small numbers, live in tight family groups and have very low birth rates, the impact of even a few removals from populations is greatly magnified. Eliminating five out of a family group of ten could have an adverse impact on the survival of these whales around Japan. Despite the apparent requirement for 'scientific research', no attempt was made to track the released individuals. By June 1997, two of the five captive orcas had died.<sup>24, 25</sup>



porpoise meat by truck to Iwate. The fishermen themselves provide the catch statistics to the Hokkaido authorities via the Iwate Hand Harpoon Association.<sup>22</sup>

Massive under reporting of thousands of Dall's porpoises occurred in the late 1980s off Hokkaido. In 1987, the official catch reported was 25,600 but was later revised to 37,200 animals.<sup>2</sup>

The Government of Japan is extremely evasive regarding small cetacean catches to avoid criticism of the many abuses. The Fisheries

Agency only reports catch quotas at the national level to the IWC. EIA investigators were told by authorities in Iwate, Miyagi and Shizuoka that they were strictly instructed by the Fisheries Agency not to publicise regional catches or catch limits.<sup>23</sup>

A quota violation during a drive hunt in Futo illustrates the reason for this secretive policy. In 1996 at least five false killer whales were landed and killed in one drive hunt despite there being no catch quota for this species. After incontrovertible video evidence of the kill was presented to the Fisheries Agency, Shizuoka Prefecture admitted the catches but decided the catch of the false killer whales would form part of the Wakayama Prefecture quota.<sup>19</sup> Such a policy directly encourages fishing cooperatives to ignore quotas, in the knowledge that regional catch limits are viewed as extremely flexible by the Fisheries Agency.

## Futo Quota Violation, October 1996

On 17<sup>th</sup> October 1996, more than 200 bottlenose dolphins and around 50 false killer whales were driven into Futo port, Shizuoka. The number of bottlenose dolphins exceeded the quota by at least three times, and the prefecture had no quota allowance for false killer whales. The dolphins were restrained with nets until October 21<sup>st</sup> when staff from Japanese aquariums live caught 26 bottlenose dolphins and six false killer whales. Fishermen then proceeded to slaughter the remaining animals.

Protests from a coalition of Japanese conservation groups ensued, and on 23<sup>rd</sup> October, after a number of bottlenose dolphins and false killer whales had been killed, the remaining bottlenose dolphins were released. A week later the six false killer whales were secretly returned to the sea by the aquariums. The damaging effects of the drive hunt and captivity on the animals were not taken into consideration, and no attempt was made to track the animals in the wild.<sup>19</sup>

The Futo Fishing Cooperative initially reported to Shizuoka Prefecture that they had only taken two false killer whales that were 'either dead or weakened'. The prefectural authorities initially refused to believe claims by observers that more than two had been taken. After incontrovertible video evidence of the killing of at least five living and struggling false killer whales was presented to the Fisheries Agency, the authorities admitted the catches.<sup>19</sup>

Rather than assessing penalties, the Fisheries Agency reported that the five false killer whales caught without a quota would be considered as part of the Wakayama Prefecture quota. It was also reported that 69 bottlenose dolphins were killed, including the 26 captured live. As the allowable catch for the prefecture was 75 bottlenose dolphins, and a number were released, it seems extremely unlikely that only 69 were killed. The fisheries cooperative and the prefectural authorities had already demonstrated that their catch figures could not be trusted.<sup>19</sup>

Two months later, information leaked out that further violations had occurred. A fishing cooperative member reported that 22 false killer whales had actually been captured during the hunt, and sold for 6.6 million yen.<sup>26</sup>

## Lack of Legal Provisions

With no monitoring by local, prefecture or national agencies, small cetacean hunts in Japan have continually broken even the superficial and inadequate rules placed upon them. As the regulations are not legal controls and there are no penalties for breaking them, hunters are able to exceed catch quotas or violate closed seasons without fear of suffering penalties.

Japanese environmentalists have noted that 'the catch quotas were supposed to have been important legal controls that are meant, from a worldwide perspective, to prevent the overhunting of dolphins, porpoises and other small cetaceans, and arrest the decline of these species. But the present quotas are not legal controls and have no punitive provisions, so that fishermen may violate them without breaking any laws, and without punishment. Although the system appears to control catches, it actually works to guarantee the attainment of a catch quota within that fiscal year.'<sup>19</sup>

'It is possible to interpret the setting of catch quotas as a desperate attempt by the government to make it look to other countries as though Japan is controlling cetacean catches. In future it will be necessary to change the catch quota into a rational system for legal control, instead of a diplomatic smoke and mirrors contrivance by the government.'<sup>19</sup>

In the last four years, Japanese environmentalists have observed several drive hunts in southern Japan. Two of these likely violated existing regulations, but no penalties were issued against those involved.

## Case Study One

### Bottlenose Dolphin Drive Hunt in Futo, October, 1999

On 13<sup>th</sup> October 1999, around 175 bottlenose dolphins were driven into Futo Harbour. The following day, six of the dolphins were caught for aquariums and 69 were brutally killed.

The capture process was filmed by several TV crews and the shocking footage was obtained by the Environmental Investigation Agency.

The capture began on the morning of the 14<sup>th</sup> October. Most of the dolphins were encircled by nets, which confined them to a small inner part of the port. Others were encircled in a net just outside the port. A large boat (SO2-4712) moved backwards and forwards in the harbour while the fishermen hit metal poles attached to the boats to frighten the dolphins and to drive a group of them into a smaller and smaller area.

Fishermen on a larger boat (SO3-17144) lifted the nets surrounding the dolphins pushing them closer to the quay. Eventually a small group of dolphins was trapped between the two boats and the quayside.

Before the killing began, some dolphins were selected for live capture by aquarium staff. Around 14 men with masks and snorkels entered the water and forced the selected dolphins into individual cradles. A crane on the quayside hoisted each cradle and dolphin out of the water and placed it in a nearby truck. Two dolphins died during this carelessly conducted process.

Once the live capture was over, fishermen



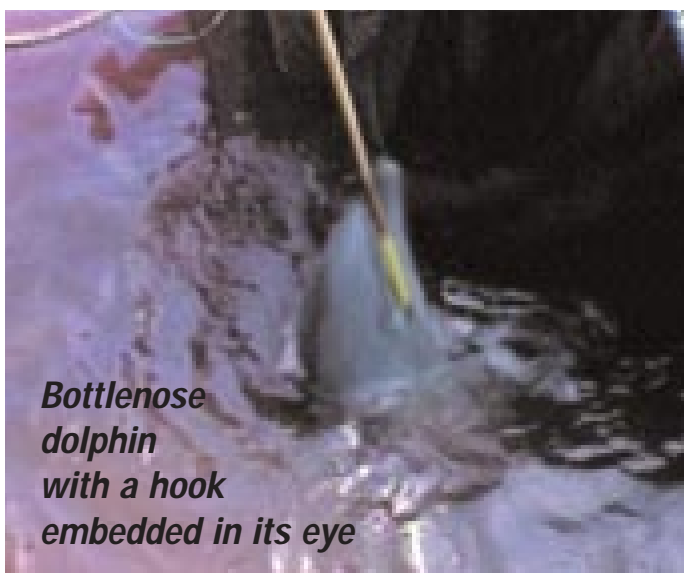
began capturing the remaining dolphins for slaughter. Working from the deck of the drive boat, men lassooed dolphins by their tail flukes and attached the rope to a winch line to haul the animals, fluke first, out of the water. The dolphins, still live and struggling, were either lowered onto the concrete quay or into a small truck.

In several incidents, attempts were made to drown groups of restrained dolphins by preventing them from raising their heads above the water, causing the animals to struggle violently.

Other dolphins were caught with a sharp hook attached to a pole and dragged towards the boats. The hook was embedded in any part of the body, including the region of the blowhole and the eye.

Numerous dolphins appeared to suffer a variety of cuts and injuries. Although no killing took place in the water, the extensive injuries

***Above:  
around 175  
bottlenose  
dolphins  
were driven  
into Futo  
Harbour***



***Bottlenose  
dolphin  
with a hook  
embedded in its eye***



***Injured bottlenose  
dolphin***



*Dolphin being dragged to the slaughterhouse*



***Live and struggling dolphins' beaks and heads scraping on the concrete ground***

suffered by the dolphins resulted in the water turning red from the blood of the animals. At least one dolphin died in the enclosure before being captured by the fishermen.

The dolphins were lifted in pairs from the water by a crane with the ropes tied around their flukes. Film of the event shows that in one incident lasting over 78 seconds two dolphins were hauled from the water. The dolphins struggled as they were suspended in the air, and rocked back and forth violently when they were dropped into the truck, causing further serious lacerations to their flukes.

Two dolphins were left for at least 30 seconds with their beaks and heads scraping on the concrete ground, before being loaded into the back of a truck

The killing method was brutal and unprofessional. The hunters appeared to have no knowledge of or interest in dispatching the animals quickly. The killings were extremely crude and prolonged. Broad and narrow bladed knives around 15cm long were used to cut the animals under the jaw round to a point just forward of the flipper.



*Dolphin bleeding profusely after having its throat cut*

Although it appeared that one major blood vessel was severed, resulting in profuse bleeding, the main arteries supplying blood to the brain, which lie in the spinal column, seemed to have been left intact, thereby delaying unconsciousness and death.<sup>27</sup> Cutting the throat in this manner in a sheep or human would induce loss of consciousness in less than 10 seconds, but in a cetacean it is likely to take several minutes.<sup>28</sup>

The dolphins appeared to exhibit enormous distress and pain. The length of time they remained conscious is unknown as the cameraman did not film the entire process until the animals appeared to be dead.

No attempt was made to induce rapid loss of consciousness and death. Film of the dolphins shows them struggling violently as they were cut. One dolphin, with its head partially severed, was seen to turn itself onto



*Struggling dolphin may remain conscious for several minutes*



***This dolphin turned onto its stomach and vomited***

its stomach and vomit. Another dolphin was dragged behind a truck by its fluke as it bled profusely from its severed throat.

The treatment of the dolphins defies all accepted standards for inducing loss of consciousness and death to minimise pain and distress to the animals. Those involved in the capture, removal and slaughter of the dolphins clearly had no training in effective and humane slaughter techniques, or any concern for the welfare of the dolphins.

Sixty nine dolphins were reported killed at this hunt, although rumours circulated that several other dolphins had been secretly killed during the night. The rest of the captured dolphins were eventually released.



***Killing methods are brutal and unprofessional***



*In October 1999 during the hunt at Futo Harbour, at least one dolphin died in the enclosure*

## The Hidden Cost of Drive Hunts

Japanese drive hunters regularly chase and drive a larger number of dolphins than they intend to kill. The larger animals are killed and smaller ones are released. However, not only are the juvenile dolphins likely to die in the enclosure while the larger members are being killed, but their chances of survival after eventually being released are low. If juveniles die in the enclosure 'naturally' they are apparently discarded and not considered as part of the catch. As a result, significant under reporting of actual dolphin deaths may occur.<sup>13</sup>

In October 1999, EIA investigators filmed a drive hunt of around 100 dolphins in Taiji bay. After an hour of continual harassment by 13 drive boats the dolphins were released and driven out of the bay. The Taiji Fisheries Cooperative told EIA that the hunters had mistaken a pod of rough-toothed dolphins for pantropical spotted dolphins. As there is no quota for rough-toothed dolphins, the hunters had released the dolphins.<sup>29</sup>

The full impact of drive hunts on the individuals that are not eventually killed is not known and not considered in any reporting or assessment of catch limits by the prefectural authorities. Scientific studies demonstrate that the stress suffered by dolphins in drive hunts may compromise their survival after release.<sup>30</sup> The impact of drive hunts is therefore much greater than that reflected by reported catch levels alone.

Twenty six bottlenose dolphins were captured for aquariums in a drive in October

1996 in Futo. Within one month three died.<sup>19</sup>

Striped dolphins are particularly susceptible to stress, and are notoriously difficult to keep in captivity. Attempts by aquariums to keep striped dolphins alive after transporting them from drives have all failed.<sup>13</sup> Eleven striped dolphins obtained from drive hunts in Taiji for radio tracking experiments all died in pens within 15 days of the drive, despite the attendance of aquarium personnel. Subsequent post-mortem revealed symptoms of stress, but it was not possible to determine if irreversible physiological changes had begun during the drive.<sup>31</sup>

The continued local demand for striped dolphins encourages hunters to pursue and drive large numbers of dolphins, select the largest individuals and release a certain proportion after the capture process has ended. In early 1991, approximately 2,000 striped dolphins were driven into the bay of Taiji, only 600 were killed, the rest released.<sup>32</sup>

Striped dolphin populations in Japan are probably the most endangered of all the small cetacean populations, having suffered a significant population crash after very high catch levels in the 1970s and 80s. Appeals to halt all catches of striped dolphin have been ignored, and with many thousands of individuals being driven and then released, it is likely that human induced mortalities are higher than previously thought. Accordingly, the status of the endangered striped dolphin population may be even more perilous than previously recognised.

## Case Study Two

### The Dall's Porpoise Hand Harpoon Hunt – the Largest Cetacean Kill in the World

'The Commission REQUESTS the Japanese Government to consider the advice from the Scientific Committee as a matter of urgency, and as soon as possible to reduce the takes to at least the levels before 1986, and that even further reductions be considered when planned new stock assessments are completed.'

1990 Resolution of the International Whaling Commission on the Japanese Directed Take of Dall's Porpoise.

***The hand harpoon hunt for Dall's porpoises continues to be the world's largest direct kill of cetaceans, with up to 18,000 killed each year in Japanese waters***

More than 250,000 Dall's porpoises have been killed by Japanese hunters between 1986 and 1998. The hand harpoon hunt for Dall's porpoises continues to be the world's largest direct kill of cetaceans, with up to 18,000 killed each year in Japanese waters.<sup>5</sup>

Concerns about the sustainability of the Dall's porpoise hunt have been raised continually for two decades. The level of hunting and its effect on the two porpoise populations in Japanese waters have been the subject of a litany of statements of concern and recommendations by the Scientific Committee of the IWC.

These recommendations culminated in an IWC resolution in 1990 – the first ever on a dolphin or porpoise species – calling on Japan to reduce its annual catch to previous levels of around 10,000.<sup>7</sup>

The resolution followed a dramatic increase in the number of porpoises killed,

from around 10,000 in 1985 to over 40,000 in 1988. In 1989 over 29,000 were killed and in 1990 almost 22,000 were reported landed.<sup>5</sup>

When the catch dropped to 11,403 porpoises in 1992, the lowest level since 1985, it seemed that the Japanese government was at last taking international scientific opinion into consideration. But the following year it rose by 26%, and has increased almost every year since, making a mockery of the 1990 statement by the Embassy of Japan in Washington DC that: 'The Government of Japan will execute sincerely the content of the resolution on Dall's porpoise from this year's IWC.'<sup>33</sup>

### The IWC Acts on EIA Information

New information released by EIA in 1999 revealed a high proportion of mature and lactating females in catches from the Sea of Japan and Okhotsk Sea. EIA's report 'Senseless Slaughter' showed a hunt out of control, with hunters off Hokkaido purposefully chasing down females with newborn calves – the easiest way to ensure a catch from a declining population.

In May 1999 at the 51<sup>st</sup> meeting of the IWC, the Scientific Committee reviewed a paper on the Dall's porpoise hunt, which detailed the high proportion of mature and lactating females in the Sea of Japan and the change in hunt methodology.<sup>18</sup> The Scientific Committee noted that population abundance estimates used to justify Japan's high catch level of Dall's porpoises were out of date. Japanese government scientists confirmed that new surveys were planned for that year. The Scientific Committee agreed that the status of the stocks exploited in the Japanese hunt should be reviewed in the near future.<sup>34</sup>

The Scientific Committee re-iterated its concern for the Dall's porpoise, a concern that was confirmed by the Commission in a resolution passed by an overwhelming majority of member countries. The Commission directed the Scientific Committee to review the status of the Dall's porpoise in 2001 and recommended that the Government of Japan reduce the quota.<sup>35</sup>

### The Hokkaido Hunt

EIA investigations in Hokkaido during May and October of 1999 have revealed further shortfalls in the regulation of the Dall's porpoise hunt. *Dalli*-type porpoises are hunted off Hokkaido during May and June in the Sea of Japan, and from August to October in the Okhotsk Sea.<sup>14</sup> The total catch limit for this







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part of the hunt is 9,000 Dall's porpoises, and the population is severely threatened from overhunting. In recent years, hunters have reported a decline in the number of porpoises.<sup>18</sup>

Some of the Iwate boats that participate in the Hokkaido hunt have installed bigger engines in recent years, enabling them to chase the dwindling numbers of Dall's porpoises at higher speeds.<sup>21</sup>

In 1997, 81.1% of the females were mature, and of these 65.7% were lactating females. In 1998, mature females comprised 56% of the female catch and 30.6% of these were lactating females.<sup>18</sup>

Hunting of Dall's porpoises is not traditional in Hokkaido and local hunters operate on a smaller scale than those from Iwate, with 17 boats registered for hunting based in Chi-Hase, Mombetsu, Abashiri, Kiritappu and Tokachai. Another 40 boats from Iwate are also allowed to hunt in Hokkaido and can land their catches at any of ten designated ports.<sup>16</sup>

Fishermen hunting off Hokkaido generally butcher the porpoises on the boats, throwing the bones and head overboard. According to a local hunter in Abashiri, the rest, including skin and internal organs, is usually sold.<sup>36</sup> EIA investigators discovered a Hokkaido registered catcher boat in Chi-Hase with 12 carcasses on board, and were surprised to find that a

relatively small amount of the meat had been taken from each carcass. This shocking waste only adds to the hunting pressure on the Hokkaido porpoise population.

EIA investigators spoke to the local fisheries cooperatives in Abashiri and Shari, which confirmed that porpoise meat is sent to Iwate. EIA witnessed the unloading of porpoise meat onto a truck at Abashiri port on 11<sup>th</sup> October 1999. When investigators started to film the unloading, the fishermen abruptly finished loading the truck and left the port at high speed, clearly not wishing to be followed to their destination.

The potential for unreported or under reported catches from Hokkaido is vast, given the large number of ports where hunters are allowed to unload catches, and given that hunters often unload catches as meat rather than whole carcasses. In essence it falls to each hunter to report the catch to the Hokkaido authorities, either on an individual basis or via the Hand Harpoon Association in the case of Iwate hunters. There is no monitoring or enforcement in Hokkaido to ensure that catches are not sold outside the cooperative system. With catches unloaded as meat there is no opportunity for officials to count carcasses, or for scientists to obtain biological data necessary to predict the effects of the hunt on the porpoise population.

*above left:  
Harpooner  
scans the  
horizon for  
Dall's  
porpoises*

*above right:  
EIA  
investigators  
uncover  
Dall's  
porpoises in  
Hokkaido*

***In 1992 the IWC Scientific Committee strongly recommended an interim halt on all direct catches of striped dolphins***

## **Status Review of Species Exploited in Drive Hunts**

A review of available information on exploited small cetacean species makes a mockery of the Japanese Government's claim to support a policy of sustainable utilisation of marine resources.

The Government of Japan has displayed a reckless disregard for the conservation of these species based on available scientific information.

In 1992, the Scientific Committee of the IWC attempted to review the status of dolphin species taken in Japanese drive fisheries. New population estimates were provided, based on sightings surveys carried out by Japanese government scientists between 1983 and 1991, but the data was inadequate to conduct a meaningful review.<sup>37</sup>

Stock boundaries for all six species were selected on the basis of striped dolphin distribution, with no evidence to suggest that they actually represented true stock boundaries. This uncertainty was reflected in the extremely large confidence intervals for most of the estimates. In addition, an upward bias associated with the attraction of cetaceans to survey vessels was not taken into account.<sup>38</sup>

With little biological data to go on and no clear abundance estimates of the exploited stocks, the Scientific Committee was only able to assess the status of the striped dolphin, as concern for this species dated back several decades with a wealth of biological and catch information confirming a catastrophic decline in the coastal populations. The Scientific Committee did note recent declines in the catches of short-finned pilot whales and spotted dolphin. At the same time catches of other more recently exploited species such as Risso's dolphin and bottlenose dolphin had increased, leading the Scientific Committee to express concern that low catches of one species in the drive hunts resulted in a switching of effort to other species.<sup>37</sup>

The Scientific Committee recommended that catch limits should be set by species and based on adequate scientific information. It also called for research to be conducted to provide reliable estimates of abundance and to determine stock structure and boundaries. In the following year, the Government of Japan set catch limits by species, although the basis for the limits was and still is unclear. No reliable population estimates exist for most of the exploited species and their stock structure is still not determined.

## **Striped Dolphin, *Stenella coeruleoalba***

Status: Highly endangered, some populations may be locally 'extinct'

Striped dolphins have been heavily and indiscriminately exploited in Japanese coastal waters since World War II. After monitoring a dramatic 30-year decline in catches, the IWC Scientific Committee reported that the coastal population of striped dolphins had been so heavily exploited that catches had declined to less than 10% of those in the early 1960s, without any corresponding fall in the hunting effort and while demand for dolphin meat remained high in the area. In 1992 and again in 1993, the Scientific Committee strongly urged Japan to halt the killing until a proper population assessment could be made.<sup>39</sup>

### **Distribution and Abundance**

Striped dolphins are relatively common in the western Pacific Ocean, but are not found in the Sea of Japan, East China Sea and waters around the Ryukyu Islands.<sup>13</sup> Sightings surveys carried out during the summer months established three concentrations in the western North Pacific – a northern offshore concentration, an inshore concentration and a southern offshore concentration. The inshore concentration, estimated at 19,631 animals from sightings surveys in the late 80s,<sup>38</sup> appears to separate into two portions. The southern portion may be exploited in the Taiji hunt, while the northern portion is likely exploited by the Futo hunt. Scientists have speculated the hunt in Taiji may have originally targeted at least two coastal populations, one of which could also have been taken by the Izu hunt. This would explain why the Izu hunt declined so drastically, but Taiji was still able to make large catches before it too declined. The stock structure today remains unresolved. Scientists have concluded that 'some of the coastal population 'units' involved in the Japanese coastal fisheries may have been hunted to extremely low levels or even local 'extinction'; thus the composition of the population(s) in the fishing grounds may have changed.'<sup>13</sup>

### **Catch History**

Records show that in the late 19<sup>th</sup> century 20 villages were operating opportunistic drive hunts almost exclusively for striped dolphins. The post war period saw an expansion in drive hunts, mainly off the Izu coast, with catches in Shizuoka Prefecture alone exceeding 21,000 in

## National and regional catch quotas for small cetacean hunts

	National	Iwate	Hokkaido	Miyagi	Aomori	Wakayama		Shizuoka	Chiba	Okinawa	Small-type whaling
						Drive	Hand harpoon				
<i>dalli</i> -type Dall's porpoise	9,000	7,200	1,600	20	280						
<i>truei</i> -type Dall's porpoise	8,700	8,300			20						
Striped dolphin	725					450	100	70	80		
Spotted dolphin	950					400	70	455			
Bottlenose dolphin	1,100					890	100	75		10	
Risso's dolphin	1,300					300	250				20
Short-finned pilot whale	450					300				100	50
False killer whale	50					40				10	

Reference: 13, 23

1959.<sup>1</sup> Soon after this, the catches in Shizuoka suffered a marked decline, dropping from around 10,000 in the early 1960s to less than 1,000 in the early 1980s. During this period the hunt was operated at two villages, Kawana and Futo, using the same number of searching vessels but with increasing speed over the period.<sup>1, 11</sup>

Taiji fishermen began landing large numbers of striped dolphin in the 1970s, the largest annual catch exceeding 11,000 in 1980. Over the next decade catches decreased to below 1,000 in 1990, despite an almost doubling in daily searching effort by the drive team during this period.<sup>1</sup>

Since 1993, the national quota for striped dolphins has been 725, with catch limits divided between the drive hunts in Wakayama and Shizuoka, and hand-harpoon hunts in Wakayama and Chiba. Catches in recent years have averaged around 500. The hand harpoon hunts rarely reach their allowable catch levels. The last drive hunt for striped dolphin in Shizuoka occurred in 1991,

with just 32 animals captured.<sup>5</sup>

Most of the catch limit (450 animals) is allocated to the drive hunt in Taiji. Local demand for striped dolphin in Wakayama continues to be high, encouraging drive hunters to make every possible effort to catch their entire allowance and to catch the largest animals possible. Japanese scientists reporting to the IWC Scientific Committee confirmed in 1991 that catch limits were achieved by releasing a certain proportion of schools driven into a bay. Earlier that year approximately 2,000 striped dolphins had been driven into the bay of Taiji. Six hundred were killed and the rest were released.<sup>32</sup>

In the 1996/97 hunt season, Wakayama Prefecture reported 472 dolphins killed in the drive hunt, 22 dolphins more than the catch limit allows. The following season, the drive hunt in that area reported exactly 450 dolphins killed.<sup>36</sup> It is therefore safe to assume that many more striped dolphins were involved in drive hunts and later released. Given the poor survival rate of striped dolphins in captivity

## Direct catches of small cetaceans by drive and hand-harpoon hunts

Year	Dall's porpoise	Striped dolphin	Spotted dolphin	Bottlenose dolphin	Risso's dolphin	Short-finned pilot whales	False killer whales	Total Catches
1963	9040	8840	0	29	59	287	0	18255
1964	9440	7362	0	50	73	464	0	17389
1965	9180	10338	0	23	58	167	0	19766
1966	7980	8793	0	14	36	52	0	16875
1967	5150	4483	0	28	83	248	0	9992
1968	6020	9650	0	66	37	247	0	16020
1969	7020	3629	435	31	33	652	0	11800
1970	8060	6345	2711	34	21	116	0	17287
1971	5210	5032	37	63	26	300	0	10668
1972	5190	7935	674	65	62	260	0	14186
1973	7230	7526	1162	92	20	205	0	16235
1974	6470	12682	0	144	15	212	0	19523
1975	7350	6755	1298	103	7	512	0	16025
1976	9899	6228	0	108	0	420	0	16655
1977	9358	4582	757	18	0	550	0	15265
1978	8426	3672	4184	30	0	402	123	16837
1979	6872	2193	427	615	934	90	339	11470
1980	6718	16237	1440	3480	0	685	356	28916
1981	9803	4783	169	317	10	546	7	15635
1982	12833	2004	3799	831	4	310	1	19782
1983	12776	2219	2945	741	200	378	290	19549
1984	9764	3737	743	462	0	512	60	15278
1985	10378	4217	863	473	0	639	43	16613
1986	16515	2770	891	238	0	347	4	20765
1987	25600	389	1815	1810	6	386	33	30039
1988	40367	2227	1879	812	124	471	70	45950
1989	29048	1225	129	390	14	202	30	31038
1990	21802	749	11	1298	93	157	81	24191
1991	17634	1017	153	405	393	312	54	19968
1992	11403	1045	636	172	121	312	97	13786
1993	14318	544	565	215	505	293	20	16460
1994	15947	545	449	362	312	170	0	17785
1995	12396	539	105	963	405	189	49	14646
1996	16100	303	67	314	372	434	40	17630
1997	18540	602	23	352	228	297	43	20085
1998	11385	449	460	266	445	194	48	13247
	441222	161646	28827	15414	4696	12018	1788	665611

and their susceptibility to stress during drive hunts,<sup>13</sup> it is likely that the true mortality levels from the hunt are much higher than catch data would suggest.

**Status**

In 1992, the IWC Scientific Committee reviewed the status of the striped dolphin in Japan. Evidence of a catastrophic decline in numbers was overwhelming: a long-term decline in total catches without a corresponding decline in effort; changes in reproductive parameters such as a decline in the average age of maturation in females (from 9.7 to 7.2 years) and a decrease in the average calving interval (from 4.0 to 2.8 years). In addition fishermen involved in the hunts had themselves noticed a decline in the number of striped dolphins.<sup>1, 37, 40</sup>

The Scientific Committee strongly advised that there should be an ‘interim halt in all direct catches of striped dolphins’ until a proper assessment had been made, including sufficient information on stock identity and distribution for a reliable estimate of abundance to be obtained.<sup>41</sup>

The following year Japan’s Fisheries Agency set the national quota of striped dolphin at 725, ignoring the advice of the IWC Scientific Committee to set zero quotas. No full assessment of abundance or stock structure was forthcoming, and in 1996 the IWC passed a resolution urging Japan to take ‘appropriate

action’ to follow the recommendations of the Scientific Committee.<sup>42</sup> The following season (1996/97) the striped dolphin catch in Wakayama numbered 472, actually exceeding that prefecture’s quota by 22 animals.<sup>36</sup>

In 1997, the IWC Scientific Committee again reviewed striped dolphins in the coastal waters of Japan, and again expressed concern regarding the status of the exploited dolphins in the coastal waters of Japan, particularly in the Izu area, which had not managed to catch any striped dolphins since 1991.<sup>30</sup>

The striped dolphin is gravely threatened by the continued drive and hand harpoon hunts in Wakayama, Shizuoka and Chiba. Nothing less than a complete suspension of the hunts will ensure the long-term survival of other coastal striped dolphin populations.

**Pantropical Spotted Dolphin,  
*Stenella attenuata***

Status : Unknown, probably Depleted

**Distribution and Abundance**

Pantropical spotted dolphins inhabit tropical waters around the world.<sup>43</sup> In the Eastern Tropical Pacific, where the majority of the work has been carried out owing to the tuna fisheries conflict, studies indicate different geographic ‘forms’ of this species, including a coastal form.<sup>44, 45</sup> There is no information on stock distribution in Japanese waters, but it is



*Spotted dolphin*

**The last two drive hunts in Futo were carried out in co-operation with Shimoda Kaichu Aquarium, Aburatsubo Marine Park and Izu Mito Sea Paradise**

likely that analogous coastal and offshore populations exist.<sup>38</sup>

The distribution of the spotted dolphin in both Japanese offshore and coastal waters is influenced by the warm Kuroshio current.<sup>46</sup> Sightings surveys in the western Pacific have estimated a total population of 438,064 with a putative inshore population numbering 15,900 individuals.<sup>38</sup>

### Catch History

The drive hunt for pantropical spotted dolphins started in 1959, likely prompted by the decline in the number of striped dolphins.<sup>40, 46</sup> Spotted dolphins were also driven or 'assisted in stranding' in the Goto Islands, East China Sea between 1965 and 1982.<sup>1</sup> The highest catches on record are from the Izu area, reaching more than 4,000 in 1978, 3,500 in 1982 and 2,789 the following year. Catches have declined since then and Futo fishermen have only landed 95 spotted dolphins since 1989, despite a catch limit of 455 since 1993 and no specific catch limits prior to this.<sup>1, 5</sup>

Catches in Taiji peaked in 1988 when they took 1,646 spotted dolphins in drive hunts. The drive hunt continues to land up to the catch limit of 400 in most years, although no spotted dolphins were driven in 1996 and 1997. Taiji fishermen have also taken spotted dolphins in hand harpoon hunts since 1989, with a quota of 70 in place since 1993.<sup>1, 5, 13</sup>

### Status

Very little is known about the stock structure of spotted dolphins in Japan and therefore the impact of the very high catches in the 1980s

cannot be determined with any certainty. However catches of spotted dolphin have declined in the last two decades, principally due to an almost complete halt in catches from the Izu area since 1989. In 1992 the Scientific Committee of the IWC concluded that there had been a decline in catch per unit effort for spotted dolphin.<sup>5, 37</sup>

The Red List of Japanese Mammals classifies the spotted dolphin populations as status unknown for those inhabiting Japanese waters.<sup>47</sup> It is likely that the high catches in the 1980s have depleted one or more coastal populations of spotted dolphins.

## Bottlenose Dolphin, *Tursiops truncatus*

Status : Threatened

### Distribution and Abundance

Bottlenose dolphins exploit a variety of habitats and are an opportunistic and flexible species.<sup>48</sup> School sizes in Japanese waters range from 1 animal to 500 and they commonly associate with other species, in particular false killer whales.<sup>38, 40</sup> Two morphological forms of bottlenose dolphins occur along the coast of southern Japan – a relatively common unspotted form found in all Japanese waters and a smaller spotted form found along the coast of the Ryukyu Islands.<sup>49</sup>

The total estimated abundance of bottlenose dolphins in Japanese waters is 168,791, with an inshore concentration of 36,791. Sightings surveys and tagging experiments have shown the existence of offshore and coastal stocks of the unspotted form.<sup>38</sup>

### Catch History

Catches of this species before 1979 were typically less than 100 each year, but have increased during the 1980s owing to the drive fishery at Taiji. Apart from a very high catch in 1980 of 3,120 bottlenose dolphins during the Iki Island fisheries conflict, the highest catch recorded was 1,670 dolphins in 1987. Since 1993, a quota of 890 bottlenose dolphins has been in place for the Taiji drive hunt, however catches have only approached this figure in 1995 when 804 individuals were landed. Fishermen in Wakayama also hand harpoon up to 100 bottlenose dolphins and the Futo drive hunt has taken bottlenose dolphins on three occasions since 1990.<sup>5, 19</sup> The village of Nago in Okinawa undertook its last drive hunt for bottlenose dolphins in 1989, however a crossbow hunt continues, taking up to 20 each year.<sup>1</sup>



Recent drive hunts for bottlenose dolphins in Futo have been driven by the demand for live bottlenose dolphins for aquariums. The last two drive hunts in Futo were carried out in co-operation with Shimoda Kaichu Aquarium, Aburatsubo Marine Park and Izu Mito Sea Paradise.<sup>24, 36</sup>

### Status

In 1992 the IWC Scientific Committee were unable to assess the status of the bottlenose dolphin stocks in Japan due to lack of information.<sup>37</sup> In 1997 however populations of bottlenose dolphins migrating into Japanese waters were classified as threatened in the Red List of Japanese Mammals.<sup>47</sup> The demand for bottlenose dolphins as live performing animals in aquaria poses an additional threat to this species, as several hundred bottlenose dolphins are driven primarily to select just a few specimens for live capture. The rest are slaughtered for meat, and those over quota should be released. The live capture significantly extends the duration of the drive hunt, and many animals are injured in the process and may therefore not survive once released.

## Risso's Dolphin, *Grampus griseus*

Status : Unknown

### Distribution and Abundance

Risso's dolphins are found throughout temperate and tropical waters, preferring continental slope waters with a wide range of surface water temperatures. They often associate with Dall's porpoises, short-finned pilot whales and white-sided dolphins. Around Japan, Risso's dolphins are found in the Pacific Ocean, East China Sea and Sea of Japan. Scientists have estimated an inshore population of Risso's numbering around 31,000, however it is not known how many individuals comprise the exploited stocks.<sup>38</sup>

### Catch History

Total annual catches of Risso's were low during the 1960s and 70s, although an unusually high catch of 934 dolphins was recorded in 1979 owing to hunts in Nagasaki and Wakayama.<sup>50</sup> Since catch limits have been in place, annual catches have ranged from 228 to 505, split between the drive and the hand-harpoon hunts in Wakayama.<sup>5</sup>

The national catch limit for Risso's dolphins is 1,300 individuals, however it is unclear how this large quota is divided among prefectures that hunt dolphins. According to



*Risso's dolphin*



*Short-finned pilot whales*

information gleaned from prefectural authorities, only fishermen in Wakayama hunt Risso's, with a total catch limit of 570 individuals divided between the drive hunt, hand harpoon hunt and small-type whaling.<sup>13, 23</sup>

### Status

The IWC Scientific Committee were unable to determine the status of Risso's dolphins in 1992, due to insufficient information.<sup>37</sup> The Red List of Japanese Mammals lists the populations off Japan as status unknown.<sup>47</sup> While catches are relatively low compared to some other species, the historical tendency has been to switch hunting effort from one species to another when catches have declined in the preferred species. The current kill quota would allow a sudden increase in the catch of Risso's dolphins to more than 4% of the estimated inshore concentration, which may well constitute more than one genetically isolated stock.

### Short-finned Pilot Whale, *Globicephala macrorhynchus*

Status : Rare

### Distribution and Abundance

Short-finned pilot whales occur pan-tropically and in warm temperate waters of the eastern and western North Pacific.<sup>45</sup> In the western part of the Pacific there are two recognised forms, the northern form and southern form. The southern form is exploited by drive and hand harpoon hunts in Wakayama and Okinawa. The abundance for the entire range has been estimated at 53,608, with an inshore concentration of 14,012. It is not known how far offshore the coastal individuals usually migrate, thus the size of the exploited stock or stocks is not known.<sup>38</sup>

Short-finned pilot whales live in cohesive schools of around 15-50 animals which function as breeding units comprising all age groups of both sexes. The species has a long life span (up to 62 years in females) however fertility of females decreases rapidly with increasing age and the estimated annual pregnancy rate is one of the lowest in toothed whales, around 12.8%.<sup>51</sup> The gross annual reproductive rate has been estimated at 5.8%, assuming stable population structure.<sup>52</sup>



### Catch History

Southern form short-finned pilot whales were exploited in hand harpoon hunts in Taiji as early as the 17<sup>th</sup> century. Small-type whaling operations took a large number of pilot whales during the post-war period, however most operations began to target minke whales and Baird's beaked whales. Only one boat catching pilot whales remained in Taiji, relying on the local demand for dolphin meat. In 1980 the boat left Taiji to avoid competition with drive hunters, but the operation was revived in 1988, and since 1989 a catch limit of 50 southern form short-finned pilot whales has been set, shared between two boats in Wakayama and Chiba.<sup>1</sup>

A cross-bow hunt in Okinawa catches up to 100 short-finned pilot whales each year, however the main hunting pressure on southern form short-finned pilot whales is due to the Taiji drive hunt. The number of animals taken has fluctuated considerably, with high catches in 1969, 1980 and 1985, low catches in 1966 and 1979 and an average annual catch of around 330 animals.<sup>1, 5</sup>

### Status

The IWC Scientific Committee reviewed the southern stock of short-finned pilot whales in 1986, and recommended that exploitation should not be intensified because of the low gross productivity of the species. Hunting effort subsequently increased however with the re-introduction of small-type whaling in 1988, and in 1991 the Scientific Committee repeated its recommendation.<sup>53</sup> In 1992 the Scientific Committee concluded that the lack of information on stock structure and abundance made it impossible to determine the status of the southern form of short-finned pilot whales.<sup>37</sup> More recent studies of catch statistics from Taiji have found a significant decline during the period 1979 to 1994, which could not be explained by hunt regulations, since the quota has only once been reached since autonomous catch limits were set in 1982.<sup>54</sup>

The two populations of short-finned pilot whales off the Pacific coast of Japan are considered rare in the Red List of Japanese Mammals.<sup>47</sup> This raises significant concerns, given the exceptionally low fecundity of the species, the lack of knowledge regarding the size of the exploited stocks, and the decline in catches between 1979 and 1994.



*Short-finned pilot whales*

## False Killer Whale, *Pseudorca crassidens*

Status : Threatened

### Distribution and Abundance

False killer whales are found in all tropical and warm temperate seas and have been sighted in the East China Sea, Sea of Japan and Pacific Ocean.<sup>38, 55</sup> Sightings surveys from 1983 to 1991 estimated 16,668 individuals in a wide area of the western North Pacific. A separate inshore population is thought to exist numbering around 2,000 individuals.<sup>38</sup>

Males of this species live up to 58 years and females to 63 years, with a 7 year interval between births which increases with age.<sup>56</sup> Females of this species are known to have a significant post-reproductive lifetime.<sup>57</sup> Studies in the East China Sea have estimated the gross annual reproductive rate at 6.7% therefore the net reproductive rate in the exploited populations is probably very low.<sup>1</sup>

### Catch History

Catches of false killer whales were high in 1979, 1980 and 1983, due to drive hunts in Nagasaki associated with fishery conflicts. The national catch limit since 1993 has been 50 animals, ten allocated to the Nago crossbow hunt and 40 to the drive hunt off Taiji. Recent

catches have closely approached the catch limit, except for 1994 when no false killer whales were reported taken.<sup>5</sup> In the 1997/98 and 1998/99 seasons, the Taiji drive hunt landed exactly 40 animals.<sup>58</sup> It is therefore likely that more than 40 false killer whales were actually driven and those over quota subsequently released.

### Status

In 1992 the IWC Scientific Committee was unable to determine the status of false killer whales owing to the lack of information on stock identity.<sup>37</sup> In 1997 false killer whales off Japan were classified as threatened in the Red list of Japanese Mammals.<sup>47</sup>

Studies by Japanese scientists have estimated a maximum sustainable yield of 1.6% for false killer whales.<sup>59</sup> The current catch limit is nearly 2.5% of the estimated population, and the abundance estimate itself is out of date. Catches of this species before 1993 were as high as 123 in 1978 – more than 6% of the population.

Japanese scientists from the National Research Institute of Far Seas Fisheries have noted that: 'management of this species requires great caution, because of the small population size, low reproductive rate and large body size which may attract new operations'.<sup>1</sup>

**The entrance to Taiji Bay, where the drive hunt landed exactly 40 false killer whales in the 1997/98 and 1998/99 seasons**



### Conclusions and Recommendations

In the last two decades more than four hundred thousand dolphins, porpoises and small whales have been driven or harpooned to death in Japanese waters.

There is absolutely no scientific evidence that any of these hunts are sustainable. Information on population structure and abundance of all the exploited species is almost completely lacking. Where data does exist it shows populations in decline or on the verge of collapse.

If the hunts are not stopped now, they will systematically wipe out Japan's coastal populations of small cetaceans.

The brutal reality of dolphin drive hunts is kept hidden from the Japanese public. The mass slaughter of small cetaceans feeds a fraudulent trade, keeping the market for whale meat alive while there is a moratorium on commercial hunting of large whales.

For more than a decade, EIA investigations have documented the complete lack of monitoring of small cetacean hunts in Japan. The regulations that do exist are wholly inadequate, are not law, and are not enforced.

The International Whaling Commission has urged the Japanese Government on several occasions to drastically reduce the catch levels of these hunts, but their appeals have fallen on deaf ears.

The Environmental Investigation Agency opposes the commercial hunting of any small (or large) cetacean species, as these catches are unsustainable and threaten the existence of entire populations of dolphins, porpoises and small whales. The hunts are also extremely inhumane and are not compatible with accepted international agreements which outlaw indiscriminate and destructive killing methods for cetaceans.



*in October 1999 sixty nine bottlenose dolphins were brutally slaughtered in a drive hunt at Futo*

### EIA calls on the Japanese government to:

- immediately halt the commercial hunting of dolphins, porpoises and small whales;
- carry out comprehensive studies on the distribution and abundance of coastal populations of dolphins, porpoises and small whales that have been exploited in commercial hunts;
- establish a national enforcement unit to implement a national prohibition on commercial hunting of small cetaceans.
- EIA urges the International Whaling Commission to direct the Scientific Committee to review the status of all small cetacean species that are currently subject to commercial exploitation in Japanese waters through its small cetaceans sub-committee.

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