

ASIA / PACIFIC

**AMAMI-OSHIMA ISLAND, TOKUNOSHIMA ISLAND,
NORTHERN PART OF OKINAWA ISLAND, AND IRIOMOTE
ISLAND**

JAPAN



Akatsuchiyama Viewpoint in Amamigunto National Park on Amami-Oshima Island © IUCN / Ulrika Åberg

WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION**AMAMI-OSHIMA ISLAND, TOKUNOSHIMA ISLAND, NORTHERN PART OF OKINAWA ISLAND, AND IRIOMOTE ISLAND (JAPAN) – ID N° 1574**

IUCN RECOMMENDATION TO WORLD HERITAGE COMMITTEE: To inscribe the property under natural criterion (x).

Key paragraphs of Operational Guidelines:

Paragraph 77: Nominated property meets World Heritage criteria.

Paragraph 78: Nominated property meets integrity, protection and management requirements.

Background note: This nomination was first submitted in 2017. IUCN recommended to defer the nomination as the nominated property did not meet the integrity requirements of the *Operational Guidelines*. Protection and management requirements were met; however, protection and management, including buffer zones, would need to be reconsidered as part of the revisions required to the nomination. The nomination was withdrawn at the request of the State Party (Decision 42 COM 8B.8) with a new nomination submitted in 2019.

1. DOCUMENTATION

a) Date nomination received by IUCN: Original nomination received in February 2017. New nomination received in February 2019.

b) Additional information officially requested from and provided by the State Party: Following the IUCN field mission, the State Party submitted additional information on the nominated property, including details on boundaries, existing and planned infrastructure, and measures against invasive species. Following the IUCN World Heritage Panel a progress report was sent to the State Party on 27 December 2019. This letter advised on the status of the evaluation process and sought responses and clarifications on timber extraction, river restoration, potential buffer zone extensions, tourism management and climate change. The State Party submitted additional information on 26 February 2020.

c) Additional literature consulted: Various sources, including: Itô, Y., Miyagi, K. and Ota, H. (2000). Imminent extinction crisis among the endemic species of the forests of Yanbaru, Okinawa, Japan. *Oryx* 34(4): 305-316; Jemali, N.J.N.B., Shiba, M., and Zawawi, A.A. (2015). Strategic forest management options for small-scale timber harvesting on Okinawa Island, Japan. *Small-scale forestry*, 14(3): 351-362; Motokawa, M. (2000). Biogeography of Living Mammals in the Ryukyu Islands. *Tropics* 10(1): 63-71; Natori, Y., Kohri, M., Hayama, S., and De Silva, N. (2012). Key Biodiversity Areas identification in Japan Hotspot. *Journal of Threatened Taxa*, 4(8): 2797-2805; Ota, H. (1998). Geographic patterns of endemism and speciation in amphibians and reptiles of the Ryukyu Archipelago, Japan, with special reference to their paleogeographical implications. *Researches on Population Ecology*, 40(2): 189-204; Ota, H. (2000). The Current geographic faunal pattern of reptiles and amphibians of the Ryukyu Archipelago and adjacent regions. *Tropics* 10(1): 51-62; Ozaki, K., Yamamoto,

Y., Yamagishi, S. (2010). Genetic diversity and phylogeny of the endangered Okinawa Rail, *Gallirallus okinawae*. *Genes and Genetic Systems*, 85: 55-63; Saitoh, T., Kaji, K., Izawa, M., and Yamada, F. (2015). Conservation and management of terrestrial mammals in Japan: its organizational system and practices. *Therya*, 6(1): 139-153; Somiya, K. (2015). Conservation of landscape and culture in southwestern islands of Japan. *Journal of Ecology and Environment*, 38(2): 229-239; Song, D. and Kuwahara, S. (2016). Ecotourism and world natural heritage: Its influence on islands in Japan. *Journal of Marine and Island Cultures*, 5(1): 36-46; Sugimura, K., Sato, S., Yamada, F., et al. (2000). Distribution and abundance of the Amami rabbit *Pentalagus furnessi* in the Amami and Tokuno Islands, Japan. *Oryx*. 34: 198-206; Suzuki, M., Inoue, E., Ito, K., and Fujita, S. (2017). Assessment of the Impact of Wildlife Tourism on Animals: A Case Study of Amami-Oshima Island. *Future Collaboration on Island Studies between Pattimura University and Kagoshima University*, p.45; Watanabe, S., Nakanishi, N., and Izawa, M. (2005). Seasonal abundance in the floor-dwelling frog fauna on Iriomote Island of the Ryukyu Archipelago, Japan. *Journal of Tropical Ecology*, 21(1): 85-91; WWF Japan (2009). Nansei Islands Biological Diversity Evaluation Project Report, Tokyo: WWF Japan; Yamada, F. (2008). A Review of the Biology and Conservation of the Amami Rabbit (*Pentalagus furnessi*). In: Alves, P.C., Ferrand, N., Hackländer, K. (eds) *Lagomorph Biology*. Springer, Berlin, Heidelberg.

d) Consultations: 5 desk reviews received, in addition to 10 desk reviews of the 2017 nomination. The field evaluation mission met with a wide range of stakeholders including senior officials from the Ministry of Environment (and rangers for each island), the Forestry Agency (national and district), the Japanese Wildlife Research Center; all 12 mayors of the municipalities in the nominated area and senior members of Kagoshima and Okinawa Prefectures; senior managers of the airline operating in the region;

various representatives of ecotourism and non-profit organisations; and a brief meeting with the US military Director of Environmental Affairs on Okinawa.

e) Field Visit: Ulrika Åberg and Wendy Strahm, 5-12 October 2019

f) Date of IUCN approval of this report: May 2020

2. SUMMARY OF NATURAL VALUES

The nominated property “Amami-Oshima Island, Tokunoshima Island, the northern part of Okinawa Island, and Iriomote Island” encompasses 42,698 ha of subtropical rainforests on four islands on a chain located in the southwest of Japan. The serial nominated property includes five entirely terrestrial component parts on four islands, which stretch over 700 km from the northeast to the southwest. This island arc lies on the boundary of the East China Sea and Philippine Sea, and consists of more than 900 islands (about 70 inhabited). The highest point in the nominated property is Mount Yuwandake on Amami-Oshima Island with an elevation of 694 m.a.s.l.

District	Nominated component parts	Area (ha)	Buffer zones (ha) as in nomination	Buffer zones (ha) as amended in suppl. information
Kagoshima	Amami-Oshima Island	11,640	14,505	14,663
	Tokunoshima Island (a)	1,724	1,813	1,813
	Tokunoshima Island (b)	791	999	999
Okinawa	Northern part of Okinawa Island	7,721	3,398	3,398
	Iriomote Island	20,822	3,594	3,594
TOTAL		42,698	24,309	24,467

Table 1. Component parts constituting the nominated property, Amami-Oshima Island, Tokunoshima Island, Northern part of Okinawa Island, and Iriomote Island

The coastal areas of the islands are for the most part highly modified, but relatively large tracts of subtropical rainforest remain in the mountains and hills. These forests are not pristine, having been historically heavily exploited, but following protection measures the forests have recovered rapidly and are in good condition. Since the forests are essential watersheds for the populated islands (Okinawa has 1.4 million people living mostly in the south, Amami-Oshima 73,000, Tokunoshima 12,000 and Iriomote 2,300), there are also a number of dams and modified rivers occurring within the component parts.

However, the nominated property is entirely uninhabited by humans, as is almost the entire buffer zone. High biodiversity values, with a very high percentage of endemic species, have for the most part been conserved. The habitats of the nominated property support many globally threatened species and each component part has its own characteristic

endemic species. The islands show a marked biogeographic stratification from north to south, and fall into an important biogeographic transition zone between the Palearctic and Indo-Malayan realms, where subtropical, tropical and temperate species mix. The nominated area lies within two Udvardy biogeographical provinces. Amami-Oshima Island, Tokunoshima Island and Okinawa Island are located in the Palearctic Realm and within Udvardy's Ryukyu Islands Biogeographic Province (RIBP), Iriomote Island lies in the Indo-Malayan Realm and within Udvardy's Taiwan Biogeographic Province (TBP).

While this nominated property covers only a small land area of Japan, it supports an exceptionally large proportion of the country's flora and fauna. Most importantly, it hosts a high proportion of endemic species, including plants, mammals, birds, reptiles, amphibians, inland water fish and decapod crustaceans. These include for instance the Amami Rabbit (*Pentalagus furnessi* - EN) and the Ryukyu Long-haired Rat (*Diplothrix legata* - EN)] that represent ancient lineages and have no living relatives anywhere in the world. Five mammal species, three bird species, and three amphibian species in the nominated property have been identified globally as Evolutionarily Distinct and Globally Endangered (EDGE) species. There are also a number of different endemic species confined to each respective island that are not found elsewhere in the nominated property. The serial site also overlaps with three Key Biodiversity Areas and two Alliance for Zero Extinction sites.

The major changes compared to the original nomination include, firstly, that new nomination no longer proposes inscription under criterion (ix) and focuses on criterion (x) only, in line with IUCN's recommendation of 2018. Secondly, the new nomination includes a merge and combination of 24 small and scattered component parts into five larger component parts, as well as the integration of a part of the Northern Training Area, a military area returned to Japan from the USA, into the Okinawa Island component part. More details on the original nomination can be found in the IUCN World Heritage Evaluations 2018 (WHC/18/42.COM/INF.8B2).

With the revised boundaries, the nomination intends to improve connectivity to more effectively represent and protect above-mentioned natural values.

3. COMPARISONS WITH OTHER AREAS

In its 2018 evaluation, IUCN considered that the nominated property is seeking to protect values clearly of outstanding importance within the Japan biodiversity hotspot. The Committee's attention is drawn to that previous comparative analysis, which is not repeated here for brevity, and remains relevant to the revised nominated property.

The comparative analysis in the new nomination dossier compares the nominated property to the other four natural World Heritage properties in Japan as well as 11 properties in other countries for regional and

global comparison. In the national comparison, the nominated property records more species than the other properties in most taxa (insects, amphibians, reptiles, and birds). It is second only to the Yakushima property in vascular plants and in terrestrial mammals it is second only to the Shiretoko property (which is in a very different ecosystem).

In addition to plants, the nomination highlighted seven groups of animals with high biodiversity values, which included mammals, birds, reptiles, amphibians, inland water fish, insects and inland water decapod crustaceans. However, the comparative analysis only focused on EDGE species (Evolutionarily Distinct and Globally Endangered, i.e. mammals, birds, reptiles and amphibians), excluding aquatic species. A more comprehensive analysis would have been useful to understand the importance of freshwater biodiversity in comparison with other places, as highlighted by the nomination, and relevant to understand integrity issues concerning aquatic species in the nominated property.

IUCN recalls that in collaboration with UN Environment Programme World Conservation Monitoring Centre, supplementary comparative analysis was undertaken in 2017. The reconfigured nominated property overlaps at more than 95% with two protected areas listed amongst the top 1% most irreplaceable in the world for the conservation of mammals, birds and amphibians: Iriomote Island overlaps with Iriomote National Park, while the northern part of Okinawa Island overlaps with Kinsakubaru. It should however be noted that recently designated national parks, which could overlap with the nominated property, are not yet integrated in the World Database on Protected Areas (WDPA) and therefore could not be included in the irreplaceability analysis.

The nominated property is found in the Nansei Shoto Archipelago Forests terrestrial Global 200 priority ecoregion, which is represented by only one site on the World Heritage List: Yakushima, in Japan, inscribed under criteria (vii) and (ix). Yakushima is located in the North of the archipelago and belongs to a different Udvardy's biogeographical province (Japanese Evergreen Forest). The nominated property is also part of an Endemic Bird Area (EBA), Nansei Shoto, already represented by one site on the World Heritage List, also Yakushima. This EBA comprises all islands lying between Kyushu and Taiwan.

The UN Environment WCMC analysis compared species numbers in the nominated property with natural World Heritage sites both in the same terrestrial hotspot and tropical or subtropical islands of similar size. The nominated property includes more documented species of plants and birds than any of the compared World Heritage properties, and higher for all except two in mammal and fish species. The insect biodiversity of the nominated property is also notable, with a total of 6,148 species inhabiting the four islands, mostly Coleoptera (beetles) and Lepidoptera (butterflies and moths) that account for half of the number of insect species.

In summary, and noting also the evaluation of the

previous nomination, IUCN considers that comparisons strongly support the justification for inscription in relation to criterion (x).

4. INTEGRITY, PROTECTION AND MANAGEMENT

4.1. Protection

Most of the nominated property is situated in the most strictly protected zones (Class I and Special Protection Zone) of three National Parks (IUCN Category II or higher), with smaller areas in "Preservation Zones" and "Forest Ecosystem Reserves", still under Class I protection. A few small areas occur in Class II protection zones, but the State Party states that the landowners have agreed for these areas to also have Class I protection. Therefore, the nominated property receives the highest national protection in the Japanese protected area system.

The buffer zones are also legally protected and in very good condition. In many places, it is impossible to distinguish between the nominated core area and the buffer zone, and some buffer zones could probably have been included in the nominated property. However, the State Party has been very careful about only including the most highly protected areas in the core area.

Almost all of the component parts of the nominated property on Okinawa, Tokunoshima and Iriomote are public lands owned and managed by a public body (national or local government), with only 4% under private or unknown ownership. Amami-Oshima Island currently includes more private land (33%) although it is stated that there is an ongoing process of gradual transition to public ownership. For the buffer zone, in total 49% is public land with the remainder under private ownership. While the areas under private ownership mostly belong to forestry companies, owners are reportedly in agreement with the constraints of the forestry management system imposed by the National Park (see section 4.5).

IUCN considers that the protection status of the nominated property meets the requirements of the Operational Guidelines.

4.2 Boundaries

Boundary and design issues identified in the 2017 nomination were thoroughly reviewed in the first evaluation, and subsequent to the first evaluation these have been reviewed by the State Party, who also received input from the original field evaluators..

That process of advice following the original nomination recommended that land returned to Japan from the United States' Northern Training Area on Okinawa be included in the nomination. More than half of the Northern Training Area, now called the Jungle Warfare Training Center (JWTC), was returned to Japan in December 2016, with 2,793 ha incorporated into the nominated property. However, there is an

anomaly in the configuration of the Okinawa component part of the nominated property, with a long strip of the JWTC protruding into the nominated property, but not included in it.

It was further recommended that the previous 24 component parts of the nomination be reduced in number and consolidated to improve connectivity. This has been achieved through the integration of some of the original buffer zone areas into the nominated property, the removal of smaller, isolated component parts that could not be connected, and the addition of some less strongly protected areas to improve the configuration of the buffer zone (in compliance with *Operational Guidelines* on buffer zones). Additional private land on Amami-Oshima was purchased to improve connectivity.

In supplementary information, the State Party confirmed the extension of the buffer zone on Amami-Oshima Island by 158 ha to include (a) the Yakugachi River mouth and mangrove forest and (b) Katoku River and the neighboring beach areas. The latter extension was agreed with the respective municipalities and local communities on the condition that an already approved seawall would proceed to construction on Katoku Beach in order to protect a settlement. The State Party also confirmed that Katoku River, the last free-flowing river within the Amami-Oshima Island component part, will not be subject to any new constructions of river structures in the future. The State Party noted that the seawall would be distant enough to avoid negative impacts on the river. Environmental monitoring will be continued after the construction works have finished with the possibility of improvement plans in case of unexpected negative impacts.

Overall, IUCN considers that the boundaries of the five component parts have been carefully selected to ensure that they capture the key values and that the entire nominated property has high levels of protection. Connectivity has been greatly improved with boundary changes modified from the 2017 nomination. There remain some compromises, but the result represents an effective solution to protect the OUV of the nominated property.

IUCN considers that the boundaries of the nominated property meet the requirements of the *Operational Guidelines*.

4.3 Management

There is a comprehensive Management Plan for the nominated property, as well as for the buffer zones and surrounding conservation areas. IUCN considers that the nominated property has an adequate management plan, but notes the large number of action plans yet to be implemented, given the relatively recent designation of the protected areas. The extent and resources for comprehensive monitoring, especially of endemic and endangered species, habitat quality and invasive alien species, has been highlighted as an issue, with the State Party providing supplementary information showing how they plan to

monitor the nominated property. A “Master Plan of the Amami Island Group Sustainable Tourism” has been implemented for Amami-Oshima and Tokunoshima since 2016, while the “Sustainable Tourism Master Plan of the Northern Part of Okinawa Island” and the “Visitor Control Master Plan for Sustainability of Iriomote Island” were only completed in February 2020, with several regulations and measures to control visitor numbers still to be realised.

While the Ministry of the Environment (MOE) is responsible for the management of the National Parks, a Regional Liaison Committee, bringing together the different administrations responsible for management (MOE, Forestry Agency, Agency for Cultural Affairs, Kagoshima and Okinawa Prefectures, and 12 municipalities) has been established to coordinate their work. Under this Regional Liaison Committee, meetings with local stakeholders have been set up, and regional action plans formulated to effectively carry out conservation and management of the nominated property. There is also an advisory Scientific Committee contributing to management decisions.

The information provided on finance referred to the National Park system and Forestry Agency as a whole, rather than giving specific budgets for each of the component parts in the nomination. However, as the nominated property is part of the National Park and Forest Reserve system, funding appears to be assured, with the prefectures and municipalities also providing funding.

IUCN considers that the management of the nominated property meets the requirements of the *Operational Guidelines*.

4.4 Community

There are no people living within the boundaries, and only two villages within the buffer zones, on Amami-Oshima. IUCN received a number of letters stating that public consultation and consent had not been adequate, particularly on Iriomote Island, and there still seem to be a number of residents on Iriomote opposed to inscription. The management authority on the other hand listed the number of public consultations and contends that public consultation and information have been adequate. IUCN notes that some stakeholder concerns relate to wider matters than World Heritage listing. Based on the inputs from two field missions, and the exchanges with the State Party, IUCN considers that there is acceptable evidence of community support for the nomination, noting that there will be a continued need for the State Party to engage with and support local communities, and to listen to and respond on any issues that are raised.

4.5 Threats

The management of the nominated property is contending with many invasive alien species as well as feral cats and several measures have been put in

place to address the issue. The Indian Mongoose (*Herpestes edwardsi*), introduced during the 20th century, has nearly been eradicated from Amami-Oshima, but is still posing a major threat to endemic and threatened species on Okinawa. Cane Toads (*Rhinella marina*) have been eradicated from Iriomote, but there is danger of reintroduction from the neighboring island of Ishigaki. There are action plans and local community efforts to control several invasive plant species, including “Mile-a-minute” (*Mikania micrantha*) and “Creeping Daisy” (*Sphagneticola trilobata*) present in the nominated property.

Illegal collection of plants and animals, including orchids and ginger, reptiles, amphibians and beetles, is an issue of great concern. An action plan including municipal night patrols and closure of roads to traffic at night has been put in place. However, there is an urgent need for increased and stricter conservation measures to be taken, especially with regard to the collection of freshwater turtles and other species.

Species such as the Amami Rabbit, Iriomote Cat, Okinawa Rail and various snakes are frequently killed on the roads that cross the nominated property. Nine Iriomote Cats were killed in traffic accidents in 2018, out of an estimated population of only 100 cats. While there are numerous warning signs, speed bumps, speed limits of 30 km/h and underpasses, there are still a large number of threatened species being killed. With increased tourism and vehicles in the protected areas, the risk of roadkill is anticipated to increase.

Tourism in the region has been increasing, with more than seven million visitors in 2013, increasing to more than 10 million in 2017. On Iriomote alone, the least-developed island, there is an average of 352,000 visitors per year, a ratio of more than 150 tourists per inhabitant. While on Iriomote most of the tourists visit the nominated area, it is more difficult to identify the percentage of people visiting the respective nominated areas on the other islands. In addition to roadkill, threats caused by tourism include the increased likelihood of introducing and spreading invasive alien species and poaching threatened wildlife. In the supplementary information, the State Party provided newly completed tourism master plans for Iriomote Island and the Northern part of Okinawa Island, in addition to the master plan for the Amami Island Group provided in the nomination file.

The State Party has confirmed in supplementary information that no forestry operations are allowed within the nominated property, and logging in the buffer zone is limited to two-hectare plots, and not adjacent to past sites still regenerating. While forestry and soil run-off could still pose a threat to the OUV, at this point in time, the risks of significant impact appears to be minor as long as intervention levels are not increased or implemented closer to the nominated property. IUCN is concerned that some of the forestry techniques in the buffer zone appear to be clear felling, and considers that there is a need to limit further the forestry operations in the buffer zone over time.

The State Party has made assurances that no new

infrastructure is intended to be built in addition to the existing facilities already present in the nominated property. There is an on-going court case about the construction of a sea wall in Katoku beach on Amami-Oshima, which, following the boundary changes confirmed in the supplementary information, is now included in the buffer zone (see section 4.2). In general, the rivers on the islands have been subject to significant modification for water use and flood protection, negatively impacting several endemic and threatened species dependent on natural freshwater processes and habitats. However, the State Party reports nature-oriented river management and measures are nowadays pursued to reduce hard engineering river structure impacts on inland water species.

Overall, IUCN notes with concern the number of threats that have the potential to affect the OUV of the nominated property, but acknowledges the State Party's commitment and actions to address them. The effectiveness of the measures will need to be assessed carefully and regularly, informing adaptive management and additional action, where necessary.

In conclusion, IUCN considers that the integrity, protection and management of the nominated property meet the requirements of the *Operational Guidelines*.

5. ADDITIONAL COMMENTS

5.1 Consideration in relation to serial properties

a) What is the justification for the serial approach?

For criterion (x), there is no one large block of subtropical rainforest which contains a sufficiently high percentage of the biodiversity values of the archipelago to demonstrate its OUV. Therefore, the proposal to present five large and mostly intact areas of subtropical rainforest on four islands in the geological chain, which include some 90% of the endemic and threatened species of the Central and Southern Islands of the archipelago, is justified.

b) Are the separate component parts of the nominated property functionally linked in relation to the requirements of the *Operational Guidelines*?

Despite the distance between the islands, they are linked by having the same geological history and very similar subtropical forest habitat and associated flora and fauna. The component parts share the same general evolutionary and ecological processes which together support most of the relevant endemic and threatened terrestrial biodiversity.

c) Is there an effective overall management framework for all the component parts of the nominated property?

The MOE is responsible for the management of the National Parks. Further, a Regional Liaison Committee, bringing together the different administrations responsible for management has been established to coordinate their work. However, it is noted that more engagement between the two prefectures (Kagoshima Prefecture to the north, and

Okinawa Prefecture to the south) would be desirable.

6. APPLICATION OF CRITERIA

Amami-Oshima Island, Tokunoshima Island, Northern part of Okinawa Island, and Iriomote Island (Japan) has been nominated under natural criterion (x).

Criterion (x): Biodiversity and threatened species

The nominated property contains natural habitats of outstanding importance for in situ conservation of the unique and diverse biodiversity of the central and southern part of the archipelago in which the nominated property is located. The five component parts constituting the nominated property are located in one of the 200 ecoregions considered most crucial to the conservation of global biodiversity. The subtropical rainforests of the nominated property are the largest remaining in the region and harbour a very rich flora and fauna, boasting at least 1,819 vascular plants, 21 terrestrial mammals, 394 birds, 267 inland water fish, 36 terrestrial reptiles and 21 amphibians. These include approximately 57% of the terrestrial vertebrates of the biodiversity hotspot of Japan, including 44% of species endemic to Japan as well as 36% of Japan's globally threatened vertebrates.

Among species listed on IUCN Red List of Threatened Species are the Amami Rabbit, only found on Amami-Oshima and Tokunoshima Islands and the only species in its genus, with no close relatives anywhere in the world, and the flightless Okinawa Rail, endemic to the Northern part of Okinawa Island. Spiny rats form an endemic genus consisting of three species endemic to each of the three respective islands, and the Iriomote Cat, which only inhabits Iriomote.

Speciation and endemism are high for many taxa. For example, 188 species of vascular plants and 1,607 insect species are endemic within the four islands of the nominated property. Rates of endemism among terrestrial mammals (62%), terrestrial reptiles (64%), amphibians (86%), and inland water crabs (100%) are also high. Twenty species are identified as Evolutionarily Distinct and Globally Endangered (EDGE) species, including the Okinawa Spiny Rat, Ryukyu Black-Breasted Leaf Turtle, and Kuroiwa's Ground Gecko.

IUCN considers that the nominated property meets this criterion.

7. RECOMMENDATIONS

IUCN recommends that the World Heritage Committee adopts the following draft decision:

The World Heritage Committee,

1. Having examined Documents WHC/21/44.COM/8B and WHC/21/44.COM/INF.8B2;

2. Inscribes **Amami-Oshima Island, Tokunoshima**

Island, Northern part of Okinawa Island, and Iriomote Island (Japan) on the World Heritage List under criterion (x);

3. Adopts the following Statement of Outstanding Universal Value:

Brief synthesis

Amami-Oshima Island, Tokunoshima Island, the northern part of Okinawa Island, and Iriomote Island is a terrestrial serial property covering 42,698 ha comprised of five component parts on four different islands (with Tokunoshima Island having two component parts). Influenced by the Kuroshio Current and a subtropical high-pressure system, the property has a warm and humid subtropical climate and is covered mainly with evergreen broadleaved subtropical rainforests.

The formation of the Okinawa Trough in late Miocene resulted in the separation of a chain from the Eurasian Continent, forming an archipelago of small islands. Terrestrial species became isolated on these small islands and evolved to form unique and rich biota. The islands included in the property support many examples of endemic species of terrestrial vertebrate groups and plants that were not able to cross between these islands or adjoining landmasses.

Thus, the property is of high global value for the protection of many endemic and globally threatened species, and contains the most important and significant remaining natural habitats for in-situ conservation of the unique and rich biodiversity of the central and southern part of the archipelago.

Criteria

Criterion (x)

The property contains natural habitats of outstanding importance for in-situ conservation of the unique and diverse biodiversity of the central and southern part of the archipelago in which the property is located. The five component parts constituting the property are located in one of the 200 ecoregions considered most crucial to the conservation of global biodiversity. The subtropical rainforests of the property are the largest remaining in the region and harbour a very rich flora and fauna, boasting at least 1,819 vascular plants, 21 terrestrial mammals, 394 birds, 267 inland water fish, 36 terrestrial reptiles and 21 amphibians. These include approximately 57% of the terrestrial vertebrates of the biodiversity hotspot of Japan, including 44% of species endemic to Japan as well as 36% of Japan's globally threatened vertebrates.

Among species listed on IUCN Red List of Threatened Species are the Amami Rabbit, only found on Amami-Oshima and Tokunoshima Islands and the only species in its genus, with no close relatives anywhere in the world, and the flightless Okinawa Rail, endemic to the Northern part of Okinawa Island. Spiny rats form an endemic genus consisting of three species endemic to each of the respective three islands, and the Iriomote Cat, which only inhabits Iriomote Island.

Speciation and endemism are high for many taxa. For example, 188 species of vascular plants and 1,607 insect species are endemic within the four islands of the property. Rates of endemism among terrestrial mammals (62%), terrestrial reptiles (64%), amphibians (86%), and inland water crabs (100%) are also high. Twenty species are identified as Evolutionarily Distinct and Globally Endangered (EDGE) species, including the Okinawa Spiny Rat, Ryukyu Black-Breasted Leaf Turtle, and Kuroiwa's Ground Gecko.

Integrity

The property is the best representation of the archipelago in which it is located and contains the richest biota in Japan, one of the world's biodiversity hotspots. The boundaries of the five component parts have been carefully selected to ensure that the entire property is strictly protected and that they capture the key values and demonstrate a generally high degree of connectivity, wherever it is possible to achieve this. It will be crucial to ensure that buffer zones are actively managed to support the attributes of the property's OUV and that activities such as logging do not create adverse impacts.

The four islands that host the property consist of mountains and hills with intact and contiguous subtropical rainforests that secure particularly stable habitats for approximately 90% of native species, endemic species and globally threatened species of the central and southern part of the archipelago. There are important naturally functioning freshwater systems, but with some natural values that have been impacted by hard, engineered infrastructure and which could be restored to a more natural function.

The five component parts of the property have intact subtropical forests and other habitats, including many areas of substantial size. These are selected to include the most important current and potential distributional areas of endemic species and threatened species, and are key attributes expressing the Outstanding Universal Value of this property.

Protection and management requirements

The property is under the strictest protection in the Japanese system of nature conservation areas, and its component parts are designated as Special Protection Zones or Class I Special Zones managed by the Ministry of the Environment and/or Preservation Zones of Forest Ecosystem Reserves managed by the Forestry Agency. In addition, the property is designated as a National Wildlife Protection Area and Natural Monument Protection Area. The property thus receives adequate management resources and appropriate long-term protection. Some of the endemic species and/or threatened species of the property, such as the Amami Rabbit, three species of the Spiny Rat, Okinawa Rail and Iriomote Cat, have been designated and legally protected as National Endangered Species and/or National Natural Monuments.

The four islands of the property are inhabited, with residential areas and industrial activities located close to the habitats for endemic and threatened species.

Buffer zones are included adjacent to the property, mainly in the Class II Special Zone of a national park and/or the Conservation and Utilization Zone of a Forest Ecosystem Reserve. In addition, Surrounding Conservation Areas encompassing the property and the buffer zones are designated under the Comprehensive Management Plan.

Administrations at all levels, i.e. the Ministry of the Environment, the Forestry Agency, the Agency for Cultural Affairs, Kagoshima and Okinawa Prefectures, and 12 municipalities, have established a Regional Liaison Committee to facilitate and coordinate management of multilayered protected areas and the protection of designated species. They manage the property according to a Comprehensive Management Plan, which covers conservation measures not only in the property but also in the buffer zones and surrounding conservation areas.

Key threats to the property include potential impacts from tourism, posing significant threats to wildlife in some areas, including Iriomote Island. Further threats include impacts from invasive alien species such as the small Indian Mongoose and cats, wildlife roadkill and the illegal collection of wild rare and threatened species. In order to address these threats, the risks to the property are prevented or mitigated by various measures implemented through collaboration among related administrative agencies, private organizations and local communities. In recent years, the tourism industry has increased and sustainable levels of tourism need to be fully assessed and continuously monitored. Invasive alien species and roadkill, especially the potentially critical impact of traffic on endangered species including the Iriomote Cat, need to be kept at an absolute minimum and strictly monitored, and illegal collection of wild rare and threatened species prevented. There is the need to develop a comprehensive river restoration strategy in order to transition wherever possible from hard infrastructure to employ nature-based techniques and rehabilitation approaches. Activities in the buffer zones, including very limited traditional timber extraction that takes place, also require continued vigilance and to be strictly limited and monitored.

4. Commends the State Party for its commitment towards the conservation of this property and for its efforts in revising its original nomination (42 COM 8B.8) to address questions of integrity.

5. Requests the State Party to take immediate steps to improve the protection and management of the property, including by:

- a) Capping or reducing levels of tourist visitation from current levels, especially on Iriomote Island, until a critical evaluation of tourism carrying capacity and impacts can be conducted and integrated into a revised tourism management plan,
- b) Urgently reviewing the effectiveness and strengthening if necessary the traffic management measures designed to reduce road fatalities of endangered species

- (including but not limited to Amami Rabbit, Iriomote Cat, and Okinawa Rail);
- c) Developing a comprehensive river restoration strategy in order to transition wherever possible from hard, engineered infrastructure to employ nature-based techniques and rehabilitation approaches such as replenishment, vegetation, and the formation of different habitat types;
 - d) Capping or reducing logging operations in the buffer zones from current levels, both in

number and combined size of individual harvesting areas, and ensuring that any logging remains strictly limited to the buffer zones;

6. Also requests the State Party to report on progress and the results of these actions to the World Heritage Centre, for review by IUCN, by **1 December 2022**.

Map 1: Nominated property and buffer zone

