



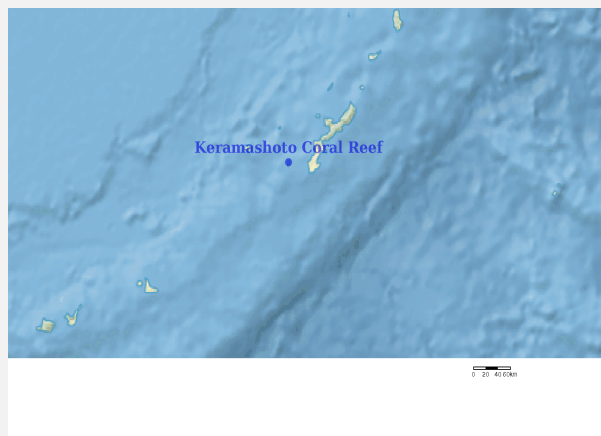
# Ramsar Information Sheet

Published on 29 May 2015

Update version, previously published on 8 November 2005

## Japan

### Keramashoto Coral Reef



Designation date: 8 November 2005

Ramsar ID: 1546

Coordinates: 26°12'19"N 127°21'17"E

Official area (ha): 8 290,00

Number of zones: 10

## Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

## 1 - Summary

*Summary (This field is limited to 2500 characters)*

Keramashoto Islands consist of a little more than 30 small islands. The surrounding area is one of the most beautiful marine waters in Japan. Keramashoto Coral Reef was included in the List of Wetlands of International Importance in 2005 with an area of 353 ha: 120 ha along the west coast of the Tokashiki Island, and 233 ha water area between Zamami Island and Aka Island. With this RIS, the area of Keramashoto Coral Reef is increased to 8,290 ha.

In Keramashoto Coral Reef, 362 species of vertebrates and 2,090 species of invertebrates including reef-building corals are observed. Tabular, branching, horn-shaped, mound, and sheet reef-building corals are densely distributed in the water. 248 species, 59 genera, 14 families of reef-building corals are found, which accounts for about 62% of all reef-building corals species recorded in Japan. Colourful fishes such as Pomacentridae (anemone fish), Chaetodontidae (angel fish) and Labridae (cunner tribe), which are typically found in coral reefs, inhabit here. In addition, many sea turtles such as the globally endangered Green Turtle (*Chelonia mydas*) migrate to Keramashoto Coral Reef every summer for breeding.

## 2 - Data & location

### 2.1 - Formal data

#### 2.1.1 - Name and address of the compiler of this RIS

Name

Institution/agency

Postal address *(This field is limited to 254 characters)*

E-mail

Phone

Fax

#### 2.1.2 - Period of collection of data and information used to compile the RIS

From year

To year

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

#### 2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary Yes  No

(Update) The boundary has been extended

(Update) B. Changes to Site area the area has increased

(Update) The Site area has increased because of a boundary extension

## 2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS? Yes (actual)

(Update) Are the changes Positive  Negative  Positive & Negative

(Update) No information available

(Update) Changes consequent upon site boundary increase alone (e.g., the inclusion of different wetland types in the site)?

(Update) Please describe any changes to the ecological character of the Ramsar Site, including in the application of the Criteria, since the previous RIS for the site. *(This field is limited to characters)*

Criteria 2 and 8 were added mainly because of the site boundary extension.

(Update) Is the change in ecological character negative, human-induced AND a significant change (above the limit of acceptable change) Yes

## 2.2 - Site location

### 2.2.1 - Defining the Site boundaries

b) Digital map/image

<10 file(s) uploaded>

Boundaries description (optional) *(This field is limited to 2500 characters)*

The boundary is the same as that of the Marine Park Area within Keramashoto National Park that covers coral reefs surrounding the islands (beaches on the islands are not included in the territory of the Marine Park Area within Keramashoto National Park).

### 2.2.2 - General location

a) In which large administrative region does the site lie?

Tokashiki village and Zamami village (Keramashoto Islands), Okinawa Prefecture, Kyushu/Okinawa Region. Keramashoto Coral Reef is located in the surrounding ocean area of Keramashoto Islands, 20-40 km west of Naha City on the mainland of Okinawa.

b) What is the nearest town or population centre?

### 2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes  No

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes  No

### 2.2.4 - Area of the Site

Official area, in hectares (ha):

Area, in hectares (ha) as calculated from GIS boundaries

### 2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Udvardy's Biogeographical Provinces	2.41.13 Ryukyu Islands

## 3 - Why is the Site important?

### 3.1 - Ramsar Criteria and their justification

**Criterion 1: Representative, rare or unique natural or near-natural wetland types**

Hydrological services provided *(This field is limited to 3000 characters)*

Reef-building corals protect coastlines from storm waves and contribute to coastline stabilization.

Other reasons *(This field is limited to 3000 characters)*

In Keramashoto Coral Reef, the fringing reefs are specifically well-developed. 248 species, 59 genera, 14 families of reef-building corals, which accounts for about 62% of total reef-building corals species observed in Japan, are distributed in Keramashoto Coral Reef. It is a representative and important coral reef in the Ryukyu Islands biogeographic region.

**Criterion 2 : Rare species and threatened ecological communities**

**Criterion 3 : Biological diversity**

Justification *(This field is limited to 3000 characters)*

362 species of vertebrates and 2,090 species of invertebrates including reef-building corals are observed in Keramashoto Coral Reef. Tabular, branching, horn-shaped, mound, and sheet reef-building corals are densely distributed in the water. 248 species, 59 genera, 14 families of reef-building corals are found, which accounts for about 62% of all reef-building corals species recorded in Japan. About 360 species of colourful fishes such as Pomacentridae (anemone fish), Chaetodontidae (angel fish) and Labridae (cunner tribe), which are typically found in coral reefs, inhabit here. In addition, many sea turtles such as the globally endangered Green Turtle (*Chelonia mydas*) migrate to Keramashoto Coral Reef every summer for breeding.

**Criterion 8 : Fish spawning grounds, etc.**











Justification *(This field is limited to 3000 characters)*

Keramashoto Coral Reef functions as larva nursery for colourful fishes typical in coral reefs such as Pomacentridae (anemone fish), Chaetodontidae (angel fish) and Labridae (cunner tribe). Moreover, it is an important food source, spawning ground and/or larva nursery for many fish species including Muraenidae (moray), Congridae (conger eel), Serranidae (grouper), Lutjanidae (snapper), Scaridae (parrot fish), Gobiidae (goby).

## 3.2 - Plant species whose presence relates to the international importance of the site

<no data available>

### 3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA / REPTILIA	<i>Caretta caretta</i> 	Loggerhead Turtle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				EN 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	International endangered species, the Law for the Conservation of Endangered Species of Wild Fauna and Flora, the Government of Japan, 2002. EN, National Red List.	
CHORDATA / REPTILIA	<i>Chelonia mydas</i> 	Green Turtle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				EN 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	International endangered species, the Law for the Conservation of Endangered Species of Wild Fauna and Flora, the Government of Japan, 2002. VU, National Red List.	
CHORDATA / REPTILIA	<i>Eretmochelys imbricata</i> 	Hawksbill Turtle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				CR 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	International endangered species, the Law for the Conservation of Endangered Species of Wild Fauna and Flora, the Government of Japan, 2002. EN, National Red List.	
CHORDATA / ELASMOBRANCHII	<i>Manta birostris</i> 	Giant Manta Ray	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA / MAMMALIA	<i>Physeter macrocephalus</i> 	Sperm Whale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input type="checkbox"/>	<input type="checkbox"/>		

(This field is limited to 2500 characters)

### 3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>



## 4 - What is the Site like? (Ecological character description)

### 4.1 - Ecological character

*(This field is limited to 2500 characters)*

Keramashoto Coral Reef is located in the area that is heavily affected by the Japan Current, Kuroshio, which is one of the major warm currents transporting warm water from the south. The growth of coral reefs is facilitated by the Japan Current's oligotrophic state that keeps plankton population small and water transparency high.

Keramashoto Coral Reef is extremely rich in biodiversity. There are 248 species, 59 genera of reef-building coral, out of a total of about 400 species found in Japan. Along the western coast of Tokashiki Island, branching and tabular coral (Acropora) species are dominant.

360 species of fishes, 1,640 species of invertebrates and 220 species of seaweeds are observed in Keramashoto Coral Reef. This site functions as larva nursery for colourful fishes typical in coral reefs such as Pomacentridae (anemone fish), Chaetodontidae (angel fish) and Labridae (cunner tribe).

The seawater temperature around Keramashoto Coral Reef becomes lowest between February and March, but the average seawater temperature of these months does not fall below 20 degrees Celsius. The seawater temperature becomes highest, 27.1-29.6 degrees Celsius, between July and August. The weather is warm throughout the year, and typhoons strike during summer and fall. The annual precipitation is about 2,100 mm. The annual mean air temperature is 21.0 degrees Celsius. Monthly average temperatures range from a low of 15.0 to a high of 26.6 degrees Celsius.

The geology of the coastal area of Keramashoto Islands is mainly phyllite and sandstone in Paleozoic and Mesozoic Era. As to the geomorphology of the area, fringing reef is well-developed around the islands with ria coast.

### 4.2 - What wetland type(s) are in the site?

Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
C: Coral reefs		1	8290	Representative

## 4.3 - Biological components

### 4.3.1 - Plant species

<no data available>

### 4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/ACTINOPTERYGII	Chaetodon trifascialis	Right-angled butterfly-fish				NT, IUCN Red List
CHORDATA/MAMMALIA	Megaptera novaeangliae	Humpback Whale				LC, IUCN Red List
CHORDATA/REPTILIA	Pseudolaticauda semifasciata					NT, IUCN Red List. VU, National Red List
CHORDATA/AVES	Sterna dougallii	Roseate Tern				LC, IUCN Red List. VU, National Red List

## 4.4 - Physical components

### 4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Cfa: Humid subtropical (Mild with no dry season, hot summer)

#### 4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

Not in river basin

Coastal

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.  
*(This field is limited to 1000 characters)*

#### 4.4.3 - Soil

(Update) Changes at RIS update No change  Increase  Decrease  Unknown

(Update) Changes at RIS update No change  Increase  Decrease  Unknown

No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes  No

#### 4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Marine water	<input checked="" type="checkbox"/>	No change

Water destination

Presence?	Changes at RIS update
Marine	No change

Stability of water regime

Presence?	Changes at RIS update
Water levels largely stable	No change

4.4.5 - Sediment regime

- (Update) Changes at RIS update No change  Increase  Decrease  Unknown
- (Update) Changes at RIS update No change  Increase  Decrease  Unknown
- (Update) Changes at RIS update No change  Increase  Decrease  Unknown
- (Update) Changes at RIS update No change  Increase  Decrease  Unknown

4.4.6 - Water pH

- (Update) Changes at RIS update No change  Increase  Decrease  Unknown
- (Update) Changes at RIS update No change  Increase  Decrease  Unknown
- (Update) Changes at RIS update No change  Increase  Decrease  Unknown

Unknown

4.4.7 - Water salinity

Euhaline/Eusaline (30-40 g/l)

4.4.8 - Dissolved or suspended nutrients in water

Oligotrophic

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar  ii) significantly different

## 4.5 - Ecosystem services

### 4.5.1 - Ecosystem services/benefits

#### Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	High
Genetic materials	Ornamental species (live and dead)	Medium

#### Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Hazard reduction	Coastal shoreline and river bank stabilization and storm protection	Medium

#### Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Water sports and activities	Medium
Recreation and tourism	Picnics, outings, touring	Medium
Recreation and tourism	Nature observation and nature-based tourism	High
Spiritual and inspirational	Spiritual and religious values	Medium
Spiritual and inspirational	Aesthetic and sense of place values	Medium
Scientific and educational	Educational activities and opportunities	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Medium
Scientific and educational	Long-term monitoring site	Medium
Scientific and educational	Major scientific study site	Medium

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	High

Within the site: 180000

Outside the site: 180000

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes  No  Unknown

#### 4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland

Description if applicable (This field is limited to 2500 characters)

Togashiki Village and Zamami Village developed a Grand Design for the Promotion of Ecotourism in Kerama region in accordance with the Act on the Promotion of Ecotourism in order to conserve coral reefs in the surrounding ocean area of Keramashoto Islands and to promote sustainable resource use.

#### 4.6 - Ecological processes

<no data available>

## 5 - How is the Site managed? (Conservation and management)

### 5.1 - Land tenure and responsibilities (Managers)

#### 5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
Other public ownership	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Provide further information on the land tenure / ownership regime (optional): *(This field is limited to 1000 characters)*

Public water

#### 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: *(This field is limited to 1000 characters)*

Naha Nature Conservation Office, Kyushu Regional Environmental Office, Ministry of the Environment

Provide the name and title of the person or people with responsibility for the wetland:

Mr. Akihiro Ueda, Director

Postal address: *(This field is limited to 254 characters)*

Okinawa Tuukansha Building 4F,  
Yamashita-cho, 5-21, Naha City, Okinawa Prefecture 900-0027 Japan?

E-mail address: NCO-NAHA@env.go.jp

### 5.2 - Ecological character threats and responses (Management)

#### 5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character



## Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Recreational and tourism activities	Medium impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

## Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Problematic native species	Medium impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

## Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified	Medium impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Please describe any other threats (optional): *(This field is limited to 2500 characters)*

Outbreak of Crown-of-thorns Starfish (*Acanthaster planci*) occurred around 2001. Since then, no outbreak has occurred up to the present. The ecological mechanism of the outbreak remains unidentified. It could potentially occur again in the future.

Mass coral bleaching occurred in 1998, but such mass bleaching does not occur currently. The ecological mechanism of the bleaching remains unknown. Mass bleaching could potentially occur again in the future.

Coral is occasionally damaged by divers when they drop anchors and/or when their fins kick coral.

## 5.2.2 - Legal conservation status

## National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Marine Park Area of National Park	MarineParkAreawithinKeramashotoNationa		whole

## Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Other non-statutory designation	The surrounding coastal area of Keramashoto	<a href="http://www.sizenken.biodic.go.jp/wetland/470/470.html">http://www.sizenken.biodic.go.jp/wetland/470/470.html</a>	partly

### 5.2.3 - IUCN protected areas categories (2008)

II National Park: protected area managed mainly for ecosystem protection and recreation

### 5.2.4 - Key conservation measures

#### Legal protection

Measures	Status
Legal protection	Implemented

#### Habitat

Measures	Status
Habitat manipulation/enhancement	Implemented

#### Human Activities

Measures	Status
Regulation/management of recreational activities	Implemented
Communication, education, and participation and awareness activities	Implemented

Other: *(This field is limited to 2500 characters)*

Coral transplantation aiming to restore corals damaged by Crown-of-thorns Starfish (*Acanthaster planci*).

### 5.2.5 - Management planning

Is there a site-specific management plan for the site? In preparation

Has a management effectiveness assessment been undertaken for the site? Yes  No

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes  No

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site: *(This field is limited to 1000 characters)*

There is a plan to establish a visitor center in Aka Island to raise awareness of the importance of the conservation and restoration of coral reefs.

Observation of coral reefs' spawning for elementary school students spawning has been held every year on Aka Island. Besides, an experience gaining program for junior high school students on planting juvenile corals has been held every year since 2014 on Tokashiki Island. The total number of students reached through these two events is estimated about 300.

### 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Yes, there is a plan

### 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Animal species (please specify)	Implemented

*(This field is limited to 2500 characters)*

Animal Species: Crown-of-thorns Starfish (*Acanthaster planci*), Drupes (*Drupellas*)

## 6 - Additional material

### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

*(This field is limited to 2500 characters)*

Okinawa Prefecture, 2011, Report of the information improvement project on coral reef resources;  
Ministry of the Environment, the Government of Japan, 2014, Park Plan of Keramashoto National Park;  
Ministry of the Environment, the Government of Japan, 2014, Red Data Book 2014 - Threatened Wildlife of Japan;  
Ministry of the Environment, the Government of Japan, 2002, 500 Important Wetlands in Japan;  
Ministry of the Environment, the Government of Japan and Japanese Coral Reef Society, 2004, Coral Reefs of Japan;  
Togashiki Village and Zamami Village, 2012, Grand Design for the Promotion of Ecotourism in Kerama region.

#### 6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

<1 file(s) uploaded>

#### 6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

RIS for Site no. 1546, Keramashoto Coral Reef, Japan



1. Overview of Furuzamami beach in Zamami Island ( *Ministry of the Environment, Japan, 25-07-2014* )



2. Overview west coast of Aka Island ( *Ministry of the Environment, Japan, 15-04-2014* )



3. Overview north coast of Geruma Island ( *Ministry of the Environment, Japan, 22-08-2014* )



4. Overview of Aharen beach in Tokashiki Island ( *Ministry of the Environment, Japan, 09-09-2014* )



5. Coral reef in Zamami Island ( *Ministry of the Environment, Japan, 19-07-2013* )



6. Green turtle in Zamami Island ( *Ministry of the Environment, Japan, 19-07-2013* )



7. Coral reef in Tokashiki island ( *Ministry of the Environment, Japan, 07-12-2013* )



8. Threadfin red bass in Zamami Island ( *Ministry of the Environment, Japan, 08-09-2012* )

## 6.1.4 - Designation letter and related data

Designation letter

<no file available>

Date of Designation 2005-11-08