

## Arao-higata

Geographical Coordinates: 32°58'N, 130°25'E / Altitude: 0m / Area: 754ha / Major Type of Wetland: Tidal flat / Designation: Special Protection Area of National Wildlife Protection Area / Municipalities Involved: Arao City, Kumamoto Prefecture / Ramsar Designation: July 2012 / Ramsar Criteria: 1, 2, 6



Arao-higata in the dusk

### General Overview:

The tidal flat on the eastern coast of the middle part of the Sea of Ariake is one of the largest single tidal flats in Japan with a maximum width of 3.2km, a maximum length of 9.1km and an area of 1656ha. Arao-higata is a part of this tidal flat and as it has no major river inflow, the sediments and shells carried by the tide accumulate on the sea bottom forming sand banks near the low tide line at the same time. The tidal flats in the Sea of Ariake is a rich habitat with various forms of life such as lugworms(Polychaeta), shellfish, small crustaceans and a number of migratory birds. It has long been used as a ground for laver cultivation and clam fishing. In July every year, "A Day for Fishing Japanese Mud Shrimp" is held by Arao City with the participation of more than 600 people who enjoy the taste of the catch from the tidal flat.

### The Sea of Ariake:

The Sea of Ariake is an inland sea stretching approximately 100km toward the inland area surrounded by the 4 prefectures of Kumamoto, Fukuoka, Saga and Nagasaki. As it is a highly enclosed sea with the biggest tidal range in Japan and many river inflows that carry a large amount of sediments, a huge expanse of shallow tidal flats have developed in many places in the eastern and innermost part of the sea, making up 40% of the total area of tidal flats in Japan. It is an extremely important habitat considering the shrinking tidal flat area in the world.

The sediments from the river contains

large amount of organic matter. When the tidal flats emerge and submerge repeatedly, the sediment is agitated violently and flung upward to mix with the sea water. The sea water rich in organic matter supports sea weeds and innumerable planktons that become the food source for the benthos such as Polychaeta and bivalves, which eventually become the food for shorebirds. The rich biodiversity of the tidal flat is sustained in this way. Moreover, the water purification function of benthos contributes to conserve a beautiful sea with an abundance of life.

### A Major Stopover Site for Migratory Birds:

Arao-higata is a stopover and wintering habitat for a number of shorebirds from autumn to spring. A number of shorebirds such as Kentish Plover, Grey-tailed Tattler, Black-bellied Plover, Red-necked Stint, Terek Sandpiper and Lesser Sand Plover stop over in autumn, and the birds such as Dunlin and Kentish Plover spend winter here while the birds found here in spring includes Bar-tailed Godwit, Black-bellied Plover and Grey-tailed Tattler. During the survey of "Monitoring site 1000, Survey on Shorebirds" conducted by the Ministry of the Environment in spring 2008, 6521 birds were counted to score the second highest population in the country.

In addition to this, Arao-higata is an important wintering habitat for a number of vulnerable migratory birds such as Black-faced Spoonbill, cited as "critically endangered" in the Red List of the Ministry of the Environment, along with Common Shelduck, cited as "endangered", and

## Tidal Flat



Chinese Black-headed Gull



A flock of sandpipers

the Chinese Black-headed Gull cited as "vulnerable".

### Conservation Efforts for the Tidal Flat:

Although the laver aquaculture and clam fishing are still active today, the output is decreasing because of the outbreak of red tide caused by water quality degradation, the exhaustion of resources and other factors. In order to recover the fishing ground, the local fishing cooperative is conducting restoration work including tidal flat cultivation and sand scattering.

Meanwhile, the people of the coastal community of Arao City are engaged in activities to protect the nature of the Sea of Ariake. They created "The Art Museum at the Sea" on the coastal embankments in order to raise public awareness for the natural environment. They also organize regular beach cleanings and bird watching meetings in collaboration with the Kumamoto branch of the Wild Bird Society of Japan. In addition to this, the governments of the 4 prefectures around the Sea of Ariake conduct simultaneous beach cleaning every August.

### Contact Information:

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