

## Heard and McDonald Islands solar powered centre pivot

Where are Heard Island and McDonald Islands located?

The islands are a territory (Territory of Heard Island and McDonald Islands) of Australiaadministered from Hobart by the Australian Antarctic Division of the Australian Department of Climate Change, Energy, the Environment and Water.

## Who manages the Heard & McDonald Islands?

The islands are administered under the Heard and McDonald Islands Act of 1953 and the Environment Protection and Management Ordinance of 1987 by the Antarctic Division of the national Department of Tourism, Arts & Environment(formerly the Department of the Arts, Sport, the Environment, Tourism & Territories, DASETT).

What is the significance of Heard Island & McDonald Islands?

Heard Island and the McDonald Islands, with the Kerguelen Islands, are exposed parts of the Kerguelen Plateau, possibly the largest submarine plateau on earth, and provide geochemical and isotopic insights inro the formation of oceanic plateaux, mantle plume development and the separation of Australia, India and Africa from Antarctica.

What's happening on Heard Island & McDonald Islands?

Landing stores, Atlas Cove, Heard Island with Rogers Head in background Photo: Alan Campbell-Drury Due to the extreme isolation of Heard Island and McDonald Islands (HIMI), together with the persistently severe weather and sea conditions, human activities in the region have been, and remain, limited.

Are heard and McDonald Islands volcanoes?

Heard and the McDonald Islands are young oceanic-island volcanoeswhich,together with the Kerguelen Islands 466 km to the northwest,are the only subaerial expressions of the dominantly volcanic and relatively shallow northern part of the submarine Kerguelen Plateau which has a geological history extending over 115 Ma (Davies et al. 1989).

What is the difference between heard and McDonald Islands?

The geological histories of Heard and the Kerguelen Islands extend over the last 50 Ma while the McDonald Islands are very young, perhaps having formed within the last 100 000 years.

The fine-scale circulation around the Heard and McDonald Islands and through the Fawn Trough, Kerguelen Plateau, is described using data from three high-resolution CTD sections, Argo floats and satellite maps of chlorophyll a, sea surface temperature (SST) and absolute sea surface height (SSH).

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Elephant seal, fur seal, and penguin, particularly king penguin, were exploited on Heard Island and to a lesser extent on the McDonald Islands, and the sealers" sites and artefacts on Heard Island are the best preserved in the region.

OverviewHistoryGeographyWildlifeAdministration and economySee alsoFurther readingExternal linksThe Territory of Heard Island and McDonald Islands (HIMI; ISO 3166 region code: HMD, HM, 334; ) is an Australian external territory comprising a volcanic group of mostly barren Antarctic islands, about two-thirds of the way from Madagascar to Antarctica. The group's overall land area is 372 km (144 sq mi) and it has 101.9 km (63 mi) of coastline. Discovered in the mid-19th century, t...

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Heard Island and McDonald Islands contain Australia's only two active volcanoes. The summit of one, Mawson Peak, is higher than any mountain in all other Australian states, territories or claimed territories, except Dome Argus, Mount McClintock and Mount Menzies in the Australian Antarctic Territory.

The Heard & McDonald Islands site in Australia was inscribed on the World Heritage List in 1997. As the only volcanically active sub-Antarctic islands, Heard and McDonald provide the ...

Power is supplied by small diesel generators, solar cells and wind generators. Wastes are stored for return to Australia, incinerated (where combustible and non-toxic) or, in the case of human wastes and washing water, disposed of ...

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only volcanically active sub-Antarctic islands, Heard and McDonald provide the opportunity to observe ongoing geomorphic processes and glacial dynamics.

Volcanic activity has occurred on Heard Island since the mid-1980s, and activity on McDonald Islands occurred during the 1990s. The activity on the McDonald Islands group resulted in the island doubling in size and increasing in elevation by about 100 m (Australian Government 2016).

This article contains an evaluation of grid connected (behind the meter) solar PV technology for center pivot irrigation. Addition of solar is rarely a replacement for the electric grid, rather a supplement reducing electrical purchases and selling some electricity to the grid.

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