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20th March 2013



Secretariat
Independent Review of the Port of Gladstone
Department of Sustainability, Environment, Water, Population and Communities
GPO Box 787
Canberra ACT 2601

Dear Sir/Madam,

RE: Submission to the Independent Review of the Port of Gladstone.

BirdLife Capricornia thanks you for the opportunity to comment on the above review and would like to make the following submission regarding the impact of development in the Port of Gladstone on avifauna.

Yours sincerely

A handwritten signature in black ink that reads "Allan Briggs".

Allan Briggs
Secretary

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1. Capricorn Yellow Chat

The Capricorn yellow chat is currently listed as 'Critically Endangered' under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and as 'Endangered' under the Queensland *Nature Conservation Act 1992* (NCA).

Scientific name: *Epthianura crocea macgregori*

The Capricorn Yellow Chat *macgregori* is a sub-species of the Yellow Chat. Geographical isolation has resulted in small differences in plumage and size from that of the main population which is found in western central and far northern Australia. However, recent DNA samples may show that the Capricorn Yellow Chat has been isolated long enough for it to evolve into a distinct species.

Distribution: Coastal marine plains from St Lawrence to Curtis Island.

Habitat: Sedges and grasses on marine plains near channels and basins.

Population: The total population of this species is estimated at “fewer than 250 mature individuals” Houston (2008).

Specific habitat locations of concern: Marine plains east of the Bruce Highway extending in a line from Ambrose to Bajool and to the coast. There is also a population on Curtis Island that is of concern. Known nesting locations are along Twelve Mile Creek near Raglan which runs across the marine plains towards Port Alma and in roadside gutters along Port Alma Road. However, the Capricorn Yellow Chat ranges across the whole of the marine plain in search of food.

Habitat critical to the survival of the species: On current knowledge, habitat critical to the survival of the Capricorn yellow chat is wetlands and associated grasslands on seasonally inundated marine plains. These wetlands have shallow braided channels and depressions with a mosaic of dense sedge-beds (*Cyperus alopecuroides* or *Schoenoplectus litoralis*), grasslands (marine couch *Sporobolus virginicus*, para grass *Brachiaria mutica* and/or water couch *Paspalum distichum*), tall samphire (particularly *Halosarcia pergranulata*) and areas of mud and/or shallow water (Houston et al. 2004a, Jaensch et al. 2004a, Houston et al. unpub. data).

Concerns: The Capricorn Yellow Chat has very specific habitat requirements and infrastructure development such as a rail spur from the main line to Balaclava Island will not only damage the fragile habitat but interfere with hydrological flows and bisect their habitat with a raised rail line. Other impacts are the gas pipelines that will cross over the marine plains to Curtis Island.

The Recovery Plan for the Capricorn Yellow Chat (2008) cites the following threat.

“Interfere with surface flows upon which productivity of these marine plain wetlands are dependent. As an example, any upstream land-use that reduces surface in-flows and/or sheet overland flows may reduce breeding and affect the long-term survival of the species. Both dams and ponded pasture banks may contribute to this problem. Ponded pasture banks are used extensively by pastoralists in this region to establish wetlands for ponded pasture grasses in order to increase production capacity of the land.” pp 12.

Obviously the banks created for a railway line will have the same impact as ponded pasture banks and the result may affect the long term survival of the species. This is an example where short term gains will have long term impacts that in this case may lead to the extinction of a species.

Offsets: The use of offsets for this species is unlikely to be a viable option since the population is so small and uses such specific habitat that the birds are unlikely to move to an offset location. Retaining the existing habitat where the Capricorn Yellow Chat feeds, roosts and breeds is the only way to ensure their survival into the future.

Relevance to the review Terms of Reference

The review terms of reference (c) states;

Environmental concerns in the Port of Gladstone, including the environmental performance of consented developments and operations and the impacts of other contributory factors, such as natural causes, catchment runoff, established industrial operations, urban expansion and floodplain changes;

The environmental impacts of infrastructure development in the Port of Gladstone on the population of Capricorn Yellow Chats in the marine plains has the potential to severely deplete populations of this species and serious consideration should be given to directing any infrastructure development away from any affected habitat.

2. Threatened species and ecological communities

Avifauna

The Beach Stone-curlew (*Esacus neglectus*) is listed as 'vulnerable' under the *Nature Conservation Act 1992* (Qld). The Beach Stone-curlew occurs on open, undisturbed beaches, islands, reefs, and estuarine intertidal sand and mudflats, preferring beaches with estuaries or mangroves nearby. BirdLife Capricornia advises that several pairs of Beach Stone-curlew are present in and around the Port of Gladstone.

Listed migratory species

Migratory shorebirds

Australia is signatory to the JAMBA (Japan), CAMBA (China) and ROKAMBA (Korea) bilateral agreements to protect shorebirds.

All agreements require the parties to protect migratory birds by:

- limiting the circumstances under which migratory birds are taken or traded;
- protecting and conserving important habitats;
- exchanging information; and
- building cooperative relationships.

Shorebirds are found on intertidal mudflats and sandflats, often with beds of seagrass, on sheltered coasts, especially estuaries, mangrove swamps, bays, harbours and lagoons.

BirdLife Australia Capricornia advises that the following migratory shorebirds are known to visit the Port of Gladstone on their annual migration, to and from the breeding grounds in the Northern hemisphere, to feeding and roosting areas in Eastern Australia.

Gallinago hardwickii - Latham's Snipe
Numenius madagascariensis - Eastern Curlew
Numenius phaeopus - Whimbrel
Arenaria interpres - Ruddy Turnstone
Heteroscelus brevipes - Grey-tailed Tattler

The presence of three species, (Eastern Curlew, Whimbrel and Grey-tailed Tattler) is also noted in the Queensland Environmental Protection Agency Wildlife Online database.

Migratory shorebird species use the beaches and estuaries of the Port of Gladstone and in particular the intertidal mudflats and sandflats surrounding the mangrove communities. There is high risk of degradation to this area due to nutrient runoff during and after development. More importantly however, migratory shorebirds are very sensitive to disturbance from human activities, such as large numbers of people being involved in infrastructure development. Excessive use of the area would have a serious impact on its viability for visiting shorebirds.

Relevance to the review Terms of Reference

The review terms of reference (c) states;

Environmental concerns in the Port of Gladstone, including the environmental performance of consented developments and operations and the impacts of other contributory factors, such as natural causes, catchment runoff, established industrial operations, urban expansion and floodplain changes;

Infrastructure development in the Port of Gladstone is destroying large areas of intertidal mudflats, mangroves and beach habitats that are being used by migratory and resident shorebirds. Development should not be permitted in such areas as the net result is a further decline in shorebird populations.

3. Climate change and its effects on seabirds

For seabirds using the Great Barrier Reef, a key vulnerability is to climate change and predicted increases in SST and changes in major seasonal-scale weather patterns that influence circulation and upwelling, such as the ENSO. Chambers et al (2012 and 2011) have demonstrated the deleterious effects of climate change on seabirds and of course climate change is well known to have a positive correlation with CO² emissions.

Relevance to the review Terms of Reference

The review terms of reference (c) states;

Environmental concerns in the Port of Gladstone, including the environmental performance of consented developments and operations and the impacts of other contributory factors, such as natural causes, catchment runoff, established industrial operations, urban expansion and floodplain changes;

The largest portion of development in the Port of Gladstone is related to coal and LNG exports. Both of these resource commodities are huge contributors to CO² emissions which in turn will impact on global warming and consequently on seabirds. The whole ecosystem of the planet is interconnected, change one variable and it will have an avalanche impact on the whole. We would request that you give serious consideration to the massive contribution to CO² emissions by coal and LNG and look at ways in which this can be mitigated.

Concluding comments

As an environmental group with specific interest in birds, and the ecosystems that they inhabit, we have a responsibility to put forward the case for the protection of areas of high conservation value as well as to oppose any action that will have detrimental effects on these environments. However, we are mindful that there needs to be a balance between responsible development that provides community benefits and environmental concerns. We believe that development in the Port of Gladstone poses significant and unacceptable environmental threats to birds and the habitats they use.

- Infrastructure development in the Port of Gladstone that will affect the marine plain habitat of the Capricorn Yellow Chat

We oppose any infrastructure development in the marine plains within and adjacent to the Port of Gladstone on environmental grounds and require that any such development is routed or placed in locations that will not impact on the marine plains habitat that is critical for the survival of the Capricorn Yellow Chat.

- Infrastructure development in the Port of Gladstone is destroying essential habitat for migratory and resident shorebirds such development should not be permitted in those habitat areas as the net result is a further decline in shorebird populations.
- Coal and LNG exports are a major cause of CO² emissions which affects global warming and impacts on seabirds in particular. We would request that ways of mitigating CO² emissions are looked at since we do not believe that Australia can obviate their responsibilities on this issue just because these resource commodities are being exported to another country.

References:

Chambers L.E., Dann, P., Devney, C.A., Dunlop, N. and Woehler, E.J. 2012. Seabirds. In Marine Climate Change Impacts and Adaptation Report Card for Australia 2012 (Eds. E.S. Poloczanska, A.J. Hobday and A.J. Richardson) <<http://www.oceanclimatechange.org.au>>. ISBN: 978-0-643-10928-5

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