[1] "\r\n\r\n\t\r\n\r\n\r\n \r\n \r\n \r\n Limnodromus semipalmatus\r\n — Asian Dowitcher\r\n \r\n \r\n \r\n \r\n Glossary\r\n \r\n\r\n\r\n\r\n\r\n\r\n \r\n SPRAT\r\n Profile\r\n \r\n\r\nFor information to assist regulatory considerations, refer to Policy Statements and Guidelines, the Conservation Advice, the Listing Advice and/or the Recovery Plan. \r\n\r\n\r\n\r\n \r\n EPBC Legal Status and Documents\r\n \r\n \r\n Top\r\n \r\n\r\n\r\nEPBC Act Listing Status\r\n \r\n\t\r\n\t\t\t\r\n\t\t\t Listed marine\r\n\t\t\t \r\n\t\t\t \r\n\t\t\t \r\n\t\t\t\r\n\t\t\t\t\r\n\t\t\t Listed migratory - \r\n\t\t\t \r\n\t\t\t\tEPBC Act, \r\n\t\t\t \r\n\t\t\t\tBonn, \r\n\t\t\t \r\n\t\t\t\tCAMBA, \r\n\t\t\t \r\n\t\t\t\tJAMBA, \r\n\t\t\t \r\n\t\t\t\tROKAMBA\r\n\t\t\t \r\n\t\t\t\r\n\t\t\t\r\n\t\t\t\r\n\t\t\t\r\n\t\t\t\r\n\t\t\t\r\n\t\t\t\r\n\t\t\t\tUnder threatened listing assessment, due 30-Oct-2022.\r\n \r\n\t\t Approved Conservation Advice\r\n\t\t\r\n\t\t\r\n\t\t \r\n\t\t\tThere is no approved Conservation Advice for this species\r\n\t\t \t \r\n\t\t\r\n \r\n\t\t Listing Advice\r\n\t\t\r\n\t\t\r\n\t\t\t\r\n\t\t\t\r\n\t\t\tThere is no Listing Advice for this species\r\n\t\t\t\r\n\t\t\r\n\t\t\r\n \r\n\t\t Adopted/Made Recovery Plans\r\n\t\t\r\n\t\t\r\n\t\t \r\n\t\t\tThere is no adopted or made Recovery Plan for this species\r\n \r\n\t\t\r\n \r\n\t\t Adopted/Made Threat Abatement Plans\r\n\t\t\r\n\t\t\r\n\t\t\t\r\n\t\t\tNo Threat Abatement Plan has been identified as being relevant for this species\r\n\t\t\t \r\n\t\t\t\r\n \r\n\t\t Wildlife Conservation Plans\r\n\t\t\r\n\t\t\r\n\t\t\t \r\n\t\t\t \r\n\t\t\tCommonwealth of Australia (2015). Wildlife Conservation Plan for Migratory Shorebirds. Canberra, ACT: Department of the Environment. Available from: http://www.environment.gov.au/biodiversity/publications/wildlife-conservation-plan-migratory-shorebirds-2016. In effect under the EPBC Act from 15-Jan-2016.\r\n\t\t\t \r\n\t\t\t \t\t\r\n\t\t\r\n \r\n\t \r\n\t\tOther Commonwealth Documents\r\n\t \r\n\t \r\n\t\tTop\r\n\t \r\n\t\r\n\r\n\t\r\n\t\r\n\t Other EPBC Act Plans\r\n\t\t\r\n\t\t\r\n\t\t \r\n\t\t \r\n\t\t \r\n\t\t\tEPBC Act Policy Statement 3.21 - Industry Guidelines for avoiding, assessing and mitigating impacts on EBBC Act listed migratory shorebird species (Department of the Environment, 2015) [Admin Guideline].\r\n\t\t\t \r\n\t\t\t \r\n\t\t\r\n \r\n\t Policy Statements and Guidelines\r\n\t\r\n\t\r\n\t \r\n\t \r\n\t National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds (Department of the Environment and Energy, 2020) [Admin Guideline].\r\n\t \r\n\t \r\n\t Shorebirds - A Vulnerability Assessment for the Great Barrier Reef (Great Barrier Reef Marine Park Authority (GBRMPA), 2011) [Admin Guideline].\r\n\t \r\n\t \r\n\t\r\n \r\n\t Information Sheets\r\n\t\r\n\t\r\n\t \r\n\t \r\n\t Migratory Shorebirds of the East Asian - Australasian Flyway: Population estimates and internationally important sites (Bamford M., D. Watkins, W. Bancroft, G. Tischler & J. Wahl, 2008) [Information Sheet].\r\n\t \r\n\t \r\n\t Revision of the East Asian-Australasian Flyway Population Estimates for 37 listed Migratory Shorebird Species (Hansen, B.D., R.A. Fuller, D. Watkins, D.I. Rogers, R.S. Clemens, M. Newman, E.J. Woehler & D.R. Weller, 2016) In effect under the EPBC Act from 29-May-2017. [Information Sheet].\r\n\t \r\n\t \r\n\t\r\n \r\n\t Federal Register of Legislative Instruments\r\n\t\r\n\t\r\n\t\t\r\n\t\t\tMarine:Declaration under section 248 of the Environment Protection and Biodiversity Conservation Act 1999 - List of Marine Species (Commonwealth of Australia, 2000c) [Legislative Instrument]Migratory:List of Migratory Species (13/07/2000) (Commonwealth of Australia, 2000b) [Legislative Instrument]Wildlife Conservation Plan:Wildlife Conservation Plan for Migratory Shorebirds (Commonwealth of Australia, 2006r) [Legislative Instrument]Wildlife Conservation Plan:Environment Protection and Biodiversity Conservation Act 1999 - Section 285 - Instrument revoking and making a wildlife conservation plan (Commonwealth of Australia, 2016) [Legislative Instrument]\r\n \r\n\t State Government Documents and Websites\r\n\t\r\n\t\r\n\t NT:Threatened Species of the Northern Territory - Asian Dowitcher, Limnodromus semipalmatus (Ward, S., 2012f) [Information Sheet].\r\n State Listing Status\r\n\t \r\n\t NT:\r\n\t\t\t\r\n\t\t\t\t\r\n\t\t\tListed as Vulnerable\r\n\t\t\t\t (Territory Parks and Wildlife Conservation Act 2000 (Northern Territory): 2012 list)\r\n\t\t\t\t\r\n\t\t\t\t \r\n\t\t\t \r\n\t\t\t \r\n Non-statutory Listing Status\r\n\t \r\n\t IUCN:\r\n\t\t\t\r\n\t\t\t\t\r\n\t\t\tListed as Near Threatened\r\n\t\t\t\t (Global Status: IUCN Red List of Threatened Species: 2020.2 list)\r\n\t\t\t\t\r\n\t\t\t\t\r\n\t\t\t\t\r\n\t\t\t\t NGO:\r\n\t\t\t\t\r\n\t\t\t\t\t\r\n\t\t\tListed as Near Threatened\r\n\t\t\t\t (The Action Plan for Australian Birds 2010 - non-threatened)\r\n\t\t\t\t\r\n\t\t\t\t\r\n\t\t\t\t\r\n\t\t\t\t \r\n \r\n \r\n Naming\r\n \r\n \r\n Top\r\n \r\n\r\n\r\n\r\nScientific name\r\n \r\n Limnodromus semipalmatus [843]\r\n \r\n Family\r\n \r\n Scolopacidae:Charadriiformes:Aves:Chordata:Animalia\r\n \r\n \r\n Species author\r\n (Blyth,1848)\r\n \r\n Infraspecies author\r\n \r\n Reference\r\n \r\n \r\n \r\n Distribution Map\r\n \r\n \r\n Top\r\n \r\n\r\n\r\n\r\nDistribution map\r\n \r\n \r\n\r\n\t\tThe distribution shown is generalised from the Departments Species of National Environmental Significance dataset. This is an indicative distribution map of the present distribution of the species based on best available knowledge. Some species information is withheld in line with sensitive species polices. See map

caveat for more information.\r\n\r\n \r\n \r\n \r\n \r\n Illustrations\r\n \r\n \r\n Top\r\n \r\n\r\n\r\n\r\n\r\n\r\nIllustrations\r\n \r\n Google Images\r\n \r\n \r\n Other Links, Including Superseded Commonwealth Documents\r\n \r\n \r\n \r\n Top\r\n \r\n \r\n \r\n \r\n Australian Government Department of the Environment and Heritage (AGDEH) (2006f). Wildlife Conservation Plan for Migratory Shorebirds. Canberra, ACT: Department of the Environment and Heritage. Available from: http://www.environment.gov.au/biodiversity/migratory/publications/shorebird-plan.html. In effect under the EPBC Act from 25-Feb-2006. Ceased to be in effect under the EPBC Act from 15-Jan-2016.\r\n \r\n Commonwealth of Australia (2000b). List of Migratory Species (13/07/2000). F2007B00750. Canberra: Federal Register of Legislative Instruments. Available from: http://www.comlaw.gov.au/Details/F2007B00750.\r\n \r\n Commonwealth of Australia (2000c). 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Draft background paper to EPBC Act policy statement 3.21. Canberra, DEWHA. Available from: http://www.environment.gov.au/epbc/publications/migratory-shorebirds.html.\r\n \r\n Garnett, S., J. Szabo & G. Dutson (2011). The Action Plan for Australian Birds 2010. CSIRO Publishing. Available from: http://birdsindanger.net/taxatable.\r\n \r\n \r\n\r\n\r\n\t\r\n\r\n\r\n \r\n Newsletters\r\n \r\n \r\n Top\r\n \r\n\r\n\r\n\r\n\r\n\r\nEPBC Act email updates can be received via the Communities for Communities newsletter and the EPBC Act newsletter.\r\n\r\n\r\n\r\n\r\n\r\n \r\n Caveat\r\n \r\n \r\n Top\r\n \r\n\r\n\r\n\r\nThis database is designed to provide statutory, biological and ecological\r\ninformation on species and ecological communities, migratory species, marine\r\nspecies, and species and species products subject to international trade and\r\ncommercial use protected under the Environment Protection and Biodiversity\r\nConservation Act 1999 (the EPBC\r\nAct). It has been compiled from a range of sources including\r\nlisting advice, recovery plans, published literature and individual experts.\r\nWhile reasonable efforts have been made to ensure the accuracy of the\r\ninformation, no guarantee is given, nor responsibility taken, by the\r\nCommonwealth for its accuracy, currency or completeness. The Commonwealth\r\ndoes not accept any responsibility for any loss or damage that may be\r\noccasioned directly or indirectly through the use of, or reliance on, the\r\ninformation contained in this database. The information contained in this\r\ndatabase does not necessarily represent the views of the Commonwealth. This\r\ndatabase is not intended to be a complete source of information on the\r\nmatters it deals with. Individuals and organisations should consider all the\r\navailable information, including that available from other sources, in\r\ndeciding whether there is a need to make a referral or apply for a permit or\r\nexemption under the EPBC\r\nAct.\r\n\r\n\r\nCitation: Department of the Environment\r\n(2022).\r\nLimnodromus semipalmatus in Species Profile and Threats Database,\r\nDepartment of the Environment,\r\nCanberra.\r\nAvailable from:\r\nhttps://www.environment.gov.au/sprat.\r\nAccessed Tue, 18 Jan 2022 21:15:56 +1100.\r\n\r\n\r\n\r\n\r\n\r\nWhere available the sections below provide a biological profile for the species. Biological profiles vary in age and content across species, some are no longer being updated and are retained as archival content. These profiles are still displayed as they contain valuable information for many species. The Profile Update section below indicates when the biological profile was last updated for some species. For information to assist regulatory considerations, please refer to Conservation Advice, the Recovery Plan, Policy Statements and Guidelines.\r\n\r\n\r\n\r\n \r\n \r\n \r\n Taxonomy\r\n \r\n \r\n Top\r\n \r\n \r\n \r\n Scientific name: Limnodromus semipalmatusCommon name: Asian DowitcherOther names: Asiatic Dowitcher, Snipe-billed Godwit, Asiatic Snipelike Godwit\n\r\n \r\n \r\n \r\n \r\n \r\n Description\r\n \r\n \r\n Top\r\n \r\n \r\n \r\n The Asian Dowitcher is a large wader and member of the Limnodrominae family. The species has a length of 33\u009636 cm and a wingspan of 59 cm. Males weigh 180 g while females weigh 190 g. The species is distinctive, combining elements of both snipes and godwits. It is characterised by a long neck, long dark legs and a diagnostic long dark straight, snipe-line bill. It is slightly larger and bulkier than the Greenshank, Tringa nebularia and smaller and slimmer than the male Bar-tailed Godwit, L. semipalmatus. There is a

marked seasonal variation in plumages and juveniles are distinct from adults (Higgins & Davies 1996).\n\r\n \r\n \r\n \r\n \r\n Australian Distribution\r\n \r\n \r\n Top\r\n \r\n \r\n \r\n The Asian Dowitcher was first recorded in Australia in 1972 and is a regular visitor to the north-west between Port Hedland and Broome. Elsewhere they are sporadic and rare. In Queensland they have been recorded at Cairns, Yeppoon, Lytton, Thorneside, Morton Bay and Clontarf. The species has also been recorded in NSW at Shoalhaven, Kooragang Island and Stockton. In Victoria the species is known from around the Port Phillip Bay region, Werribee, Swan Island, Queenscliff and Mud Island. There are no records for Tasmania and South Australia. In the Northern Territory the Asian Dowitcher is found in Darwin and Arnhem Land. In Western Australia the species has been recorded at Albany, Lake McLarty, Lake McLeod, north-east Pilbara and the south-west Kimberley division. It has also been recorded at the Port Hedland Saltworks, Roebuck Bay, Ashmore Reed and Eighty Mile Beach (Higgins & Davies 1996).\n\r\n \r\n \r\n \r\n \r\n Global Distribution\r\n \r\n \r\n Top\r\n \r\n \r\n \r\n The Asian Dowitcher breeds in isolated colonies in central and eastern Siberia, Mongolia and north-east China. In Russia it is found between Omsk and Tara, around the Barnaul district and the south and south-eastern shores of Lake Baikal and the Chita district. In north-west Mongolia the species is found around Lake Orok-nor. In north-east China the species is found near Qigihar in Heilongjiang. The main non-breeding areas are believed to be the east and south-east coasts of Sumatra. Some are known to winter in peninsular Thailand and Malaysia. Vagrants are also known to occur at the Bay of Bengal, Borneo, New Guinea, New Zealand, Philippines and Japan. The Asian Dowitcher is a passage migrant in Hong Kong and Indochina (Higgins & Davies 1996).\nThe distribution of the Asian Dowitcher in terms of population numbers is given in the table below (Bamford et al. 2008):\nCountry\nEstimateIndonesia\n20 000 Thailand \n600 Australia \n500 China \n500 Malaysia \n500 Papua New Guinea \n500 Philippines \n300 India \n150 other countries\n230TOTALS:\n23 280\n\r\n \r\n \r\n \r\n Population Information\r\n \r\n \r\n Top\r\n \r\n \r\n \r\n An estimated 14 000 Asian Dowitchers occupy the East Asian-Australasian Flyway (Hansen et al. 2016). During the non-breeding season approximately 80% of the Flyway population occurs in Indonesia (Bamford et al. 2008). The Asian Dowitcher occurs in many smaller populations. Thirteen important sites have been identified internationally. An important site is calculated using the 1% criterion (i.e. a site is considered important if it is occupied by more then 1% of the bird's total population): Site\r\nCountry\r\nMax Count\r\nBanyuasin Delta\r\nIndonesia\r\n13 000\r\nBagan Percut - Sungai Ular\r\nIndonesia\r\n2002\r\nDongsha Islands\r\nChina\r\n1320\r\nNorth Bo Hai Wan\r\nChina\r\n1153\r\nShi Jiu Tuo/Daqing He\r\nChina\r\n1100\r\nNorth-west Bo Hai Wan\r\nChina\r\n966\r\nYancheng National Nature Reserve\r\nChina\r\n945\r\nUjung Pangkah\r\nIndonesia\r\n930\r\nDaursky Nature Reserve\r\nRussia\r\n800\r\nInner Gulf of Thailand\r\nThailand\r\n600\r\nPulau Bruit\r\nMalaysia\r\n470\r\nRoebuck Bay\r\nAustralia\r\n414\r\nMai Po Marshes\r\nChina\r\n340\r\n \r\n\r\n \r\n \r\n \r\n Habitat\r\n \r\n \r\n Top\r\n \r\n \r\n \r\n The Asian Dowitcher occurs in sheltered coastal Environments, such as embayments, coastal lagoons, estuaries and tidal creeks. They are known to frequent shallow water and exposed mudflats or sandflats. In Australia the Port Hedland Saltworks provides crucial habitat for the species. The species is commonly found in the round ponds and channels of saltworks and sewage farms. It is also found at near-coastal swamps and lakes (Higgins & Davies 1996).\n\r\n \r\n \r\n \r\n \r\n Feeding\r\n \r\n \r\n Top\r\n \r\n \r\n \r\n There is only limited information on the diet of the Asian Dowitcher in Australia. It is known to eat polychaete worms and larvae, also insect larvae and molluscs. The species feeds on inter-tidal mudflats, this habitat is often vulnerable to pollution (e.g. oilspill, urban waste) and reclamation, especially in highly populated parts of range in Asia (Higgins & Davies 1996).\n\r\n \r\n \r\n \r\n \r\n Movement Patterns\r\n \r\n \r\n Top\r\n \r\n \r\n \r\n Departure from breeding grounds:\nThe Asian Dowitcher breeds in Siberia, Mongolia and north-east China, moving south for the boreal winter to the non-breeding areas on the Asian coast (from the Persian Gulf to the Malay Peninsula). They depart the breeding grounds in late July\u0096August, however some birds have remained until early September. Small numbers have been reported migrating through coastal and near-coastal China with counts indicating movement through eastern China from August\u0096October. The species is not recorded in Korea and is irregular in small numbers to Japan during migration. The species has been recorded in Taiwan and peak passage occurs through Hong Kong in late August. The species is known to occur in Burma and passes through Thailand from August to late-October with large numbers being recorded in Sumatra from October. Smaller numbers are reported in Malaysia and the Philippines from August\u0096October. The species is irregularly recorded in Borneo in large numbers from August\u0096October. The species is not recorded in Wallacea or Bali, but has been recorded from Timor. The Asian Dowitcher is vagrant in Papua New Guinea and has also been found in Arabia and Kenya. The

species arrives in Australia from August (Higgins & Davies 1996).Arrival at non-breeding areas:\nThe south-east coast of Sumatra and northern Java are probably the main staging and non-breeding areas for the species. Only a few arrive in Australia, with no known movements within Australia. They are occasionally recorded in the Northern Territory, rarely in Western Australia or along the south-west coast. They have been recorded along the east coast from mid-September, however they are rare in eastern Australia (Higgins & Davies 1996).Return to breeding grounds:\nThe Asian Dowitcher leaves north-west Australia in the third week of April. They have been recorded in Borneo in March, with large numbers reported in Sumatra in March\u0096April. From Sumatra the birds split into two groups. A small number move up the west coast of the Malaysian Peninsula, while the remainder pass through the inner Gulf of Thailand during the first half of April. Small numbers pass the Red Delta, Vietnam, in March-April. They leave Olango Island, Philippines, between late-March and mid-April. Peak passage through Hong Kong occurs during the second half of April. The species has been reported at Shanghai from March\u0096April. They have also been collected at Shillong, India, in late April and near Turkstan, Russia, during April. This suggests a central route through Asia during the return to breeding grounds (Higgins & Davies 1996).\n\r\n \r\n \r\n \r\n \r\n Threats\r\n \r\n \r\n Top\r\n \r\n \r\n \r\n Global Threats\nThere are a number of threats that affect migratory shorebirds in the Flyway. The greatest threat is indirect and direct habitat loss (Melville 1997). Staging areas used during migration through eastern Asia are being lost and degraded by activities which are reclaiming the mudflats for development or developing them for aquaculture (Barter 2002, 2005c; Ge et al. 2007; Round 2006). This is especially evident in the Yellow Sea, where at least 40% of intertidal areas have been reclaimed. This process is continuing at a rapid rate and may accelerate in the near future (Barter 2002, 2005c). For example, in South Korea, the Mangyeung and Dongjin River estuaries each supported 5% of the combined estimated Flyway populations (and are the most important sites for this species on both northern and southern migration) but they are currently being reclaimed as part of the Saemangeum Reclamation Project (Barter 2002, 2005c). The 33 km sea-wall across these two estuaries was completed in April 2006, resulting in significant change in the 40 100 ha area (Barter 2005c).\nReclamation is also a threat in other areas of the Flyway, such as in Malaysia (Wei et al. 2006). In addition, water regulation and diversion infrastructure in the major tributaries have resulted in the reduction of water and sediment flows (Barter 2002; Barter et al. 1998).\nMigratory shorebirds are also adversely affected by pollution, both on passage and in non-breeding areas (Harding et al. 2007; Melville 1997; Round 2006; Wei et al. 2006). Disturbance from human activities, including recreation, shellfish harvesting, fishing and aquaculture is likely to increase significantly in the future (Barter et al. 2005; Davidson & Rothwell 1993).\nIt is predicted that the rate of decrease in the intertidal area in the Yellow Sea will accelerate (Barter 2002). In addition, intensive oil exploration and extraction, and reduction in river flows due to upstream water diversion, are other potentially significant threats in parts of China where this species is present in internationally significant numbers (Barter 2005c; Barter et al. 1998).\nGlobal warming and associated changes in sea level are likely to have a long-term impact on the breeding, staging and non-breeding grounds of migratory waders (Harding et al. 2007).\nHunting is still a very serious problem for waders in China, and this species is sometimes caught (Ming et al. 1998).\nAustralia\nWithin Australia, there are a number of threats common to most migratory shorebirds, including the Asian Dowitcher. Habitat loss\nThe loss of important habitat reduces the availability of foraging and roosting sites. This affects the ability of the birds to build up the energy stores required for successful migration and breeding. Some sites are important all year round for juveniles who may stay in Australia throughout the breeding season until they reach maturity. A variety of activities may cause habitat loss. These include direct losses through land clearing, inundation, infilling or draining. Indirect loss may occur due to changes in water quality, hydrology or structural changes near roosting sites (DEWHA 2009aj).Habitat degradation\nAs most migratory shorebirds have specialized feeding techniques, they are particularly susceptible to slight changes in prey sources and foraging environments. Activities that cause habitat degradation include (but are not restricted to): (1) loss of marine or estuarine vegetation, which is likely to alter the dynamic equilibrium of sediment banks and mudflats; (2) invasion of intertidal mudflats by weeds such as cord grass; (3) water pollution; (4) changes to the hydrological regime and (5) exposure of acid sulphate soils, hence changing the chemical balance at the site (DEWHA 2009aj).Disturbance\nDisturbance can result from residential and recreational activities including; fishing, power boating, four wheel driving, walking dogs, noise and night lighting. While some disturbances may have only a low impact it is important to consider the combined effect of disturbances with other threats. Roosting and foraging birds are sensitive to discrete, unpredictable disturbances such as loud noises (i.e. construction sites) and approaching objects (i.e. boats). Sustained disturbances can prevent shorebirds from using parts of the habitat (DEWHA 2009aj). Direct mortality\nDirect mortality is a result of human activities around the migration pathways of shorebirds and at roosting and foraging sites. Examples

include the construction of wind farms in migration or movement pathways, bird strike due to aircraft, hunting, chemical and oil spills (DEWHA 2009aj).\n\r\n \r\n \r\n \r\n \r\n Threat Abatement and Recovery\r\n \r\n \r\n Top\r\n \r\n \r\n \r\n Governments and conservation groups have undertaken a wide range of activities relating to migratory shorebird conservation (AGDEH 2005c) both in Australia and in cooperation with other countries associated with the Flyway.\nAustraliaThe Wildlife Conservation Plan for Migratory Shorebirds (AGDEH 2006f) outlines national activities to support the Flyway shorebird conservation initiatives and provides a strategic framework to ensure these activities and future research and management actions are integrated and remain focused on the long-term survival of migratory shorebird populations and their habitats.\nSince 1996\u009697, the Australian Government has invested approximately $5 000 000 of Natural Heritage Trust (NHT) funding in projects contributing to migratory shorebird conservation (DEWHA 2007e). This funding has been distributed across a range of important projects, including the implementation of a nationally coordinated monitoring programme that will produce robust, long-term population data able to support the conservation and effective management of shorebirds and their habitat, migration studies using colour bands and leg flags, and development of a shorebird conservation toolkit to assist users to develop and implement shorebird conservation projects.\nBirds Australia is currently co-ordinating the Shorebirds 2020 project, which aims to monitor shorebird populations at important sites throughout Australia. Birdlife International is identifying sites and regions which are important to various species of birds, including shorebirds, and the processes that are affecting them. The aim of these activities is to inform decisions on the management of shorebird habitat. It may be possible to rehabilitate some degraded wetlands or to create artificial wader feeding or roosting sites to replace those destroyed by development, such as by creating artificial sandflats and sand islands from dredge spoil and by building breakwaters (Dening 2005; Straw 1992a, 1999).\nThe Significant impact guidelines for 36 migratory shorebirds Draft EPBC Act Policy Statement 3.21 (DEWHA 2009aj) provides guidelines for determining the impacts of proposed actions on migratory shorebirds. The policy statement also provides mitigation strategies to reduce the level and extent of those impacts. The policy aims to promote ecologically sustainable development that allows for the continued ecological function of important habitat for migratory shorebirds (DEWHA 2009aj).\nInternational\nAustralia has played an important role in building international cooperation to conserve migratory birds. In addition to being party to international agreements on migratory species, Australia is also a member of the Partnership for the Conservation of Migratory Waterbirds and the Sustainable Use of their Habitats in the East Asian-Australasian Flyway (Flyway Partnership), which was launched in Bogor, Indonesia on 6 November 2006. Prior to this agreement, Australia was party to the Asia-Pacific Migratory Waterbird Conservation Strategy and the Action Plan for the Conservation of Migratory Shorebirds in the East Asian-Australasian Flyway and the East Asian-Australasian Shorebird Site Network.\nThe East Asian-Australasian Flyway Site Network, which is part of the broader Flyway Partnership, promotes the identification and protection of key sites for migratory shorebirds. Australia has 17 sites in the network (Partnership EAAF 2008):Kakadu National Park, Northern Territory (1 375 940 ha)Parry Lagoons, Western Australia (36 111 ha)Thomsons Lake, Western Australia (213 ha)Moreton Bay, Queensland (113 314 ha)Hunter Estuary, NSW (2916 ha)Corner Inlet, Victoria (51 500 ha)The Coorong, Lake Alexandrina & Lake Albert, South Australia (140 500 ha)Orielton Lagoon, Tasmania (2920 ha)Logan Lagoon, Tasmania (2320 ha)Western Port, Victoria (59 297 ha)Port Phillip Bay (Western Shoreline) and Bellarine Peninsula, Victoria (16 540 ha)Shallow Inlet Marine and Coastal Park, VictoriaDiscovery Bay Coastal Park, VictoriaBowling Green Bay, QueenslandShoalwater Bay, QueenslandGreat Sandy Strait, QueenslandCurrawinya National Park, Queensland\r\n \r\n\r\n\r\n\r\n \r\n \r\n Species Profile References\r\n \r\n \r\n Top\r\n \r\n \r\n \r\n \r\n Australian Government Department of the Environment and Heritage (AGDEH) (2005c). 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