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Note No: 039/PMDESA/09

The Permanent Mission of Palau to the United Nations presents its compliments to the Secretariat of the United Nations and has the honor to refer to the latter's note DESA-09/1183.

The Permanent Mission of Palau associates itself with the PSIDS Climate Change Report submitted on 20 July 2009. Furthermore, the Permanent Mission of Palau has the honor to submit the following additional information for the report of the Secretary-General mandated under General Assembly Resolution A/63/281 entitled "Climate Change and its possible security implications".

- Palau's economy faces fiscal uncertainties; particularly with the anticipated sharp reduction in US Compact grant assistance after 2009, which would significantly affect government expenditure, domestic consumption, economic activity, and livelihood resilience of the marginally poor. A recovery in tourism may mitigate and reverse some of these binding constraints. However, given Palau's heavily environment-dependent tourism service sector and its increasing vulnerability to more intense and frequent climate shocks and environmental degradation such as sea-level rise and acidity impacts on coral reefs, this is cause for serious concern.
- The *Climate Change Adaptation Project for the Pacific* warns that more severe conditions can be expected in the future. Palau temperatures are projected to increase 0.49 to 1.13 ° degrees C (0.88 to 2.03° degrees F) in the coming 40 years; For precipitation projections, during summer more rainfall is projected, while an increase in daily rainfall intensity, causing more frequent heavier rainfall events, is also likely; For sea-level rise, monthly sea level data exhibits a trend of -6.27 mm/year from 1926 to 1939 and +0.84 mm/year for the 35 year span of 1969 to 2003 for Malakal. The IPCC (IPCC AR4, 2007) estimates that global average long-term sea-level rise over the last hundred years was about 2 mm/yr. Although Palau lies south and outside of the tropical cyclone belt, ENSO events precipitated extreme climate events (eg. 1997/1998) caused serious climatic impacts such as: dramatic coral reef bleaching events; extreme sea level variation and tidal variability; loss of critical habitat and species (mass die-back in jellyfish lake); coastal erosion and saltwater intrusion in taro patches and water; and drought and resulting shortage of potable water & substantial agricultural losses (50%).
- The primary source of Palau's fresh water is from precipitation-dependent surface water in the Ngerikiil watershed, located on the southeast shore of Airai State on the island of Babeldaob. It supplies four million gallons of water per day to Airai State and the City of Koror, therefore supplying 75% of the country's population. However, intense drought and storms are causing watershed land degradation and sedimentation problems. Climate and human-induced habitat loss, and increases in freshwater demand – in particular from tourism – will place additional stress on these limited water resources. As well, disconcerting unusual high tides (not reached during the last 50 years) and saltwater intrusion, are affecting some watersheds and taro patches.
- Watersheds will be seriously affected by global warming, particularly because of anticipated increases in 'seasonal' and un-seasonal drought. At the peak of the 1997/1998 El Niño, Palau had the lowest rainfall on record for more than 100 years, water supplies were depleted, and fires burned out of control on many islands.

- Palauans rely on mangroves for food, medicine, building materials, and firewood. Mangroves also act as a filter for sediment to keep the reefs and fish stocks healthy, and as a natural buffer against strong winds and waves, preventing the coastlines from eroding. As a result of mangrove degradation, saltwater intrusion into ground water, rivers, bays, and estuaries is on the increase, and coastal infrastructure is increasingly at risk.
- Little irrigation is carried out in Palau and the agricultural sector is heavily dependent on regular rainfall for crop production. This is especially so for the rain-dependent Taro plant. Taro is an essential part of Palau's food base and plays a unique role in its culture. Taro is used as a major component of food exchange in all traditional customs. Palau has at least 70 varieties of taro of which many are resistant to specific pests and diseases. The 1997/98 El Nino caused complete destruction of taro patches in several islands and along the western coast of Babeldaob, and agricultural production decreased by over 50 per cent. The States of Angaur and Peleliu, as well as much of the western coast of Babeldaob lost 75-100% of its taro crops. This loss may have been caused by saltwater intrusion and prolonged drought stemming from sea-level rise associated with climate change and climate variability. It is important that these varieties are safeguarded from sea level rise, drought and land degradation. The *National Action Plan on Climate Change* places significant priority on taro resilience and food security.
- Soon after the 1997/98 El Nino event, tropical storm Utor caused an additional several million dollars worth of damage. Since Utor, Palau has experienced a number of less intense storms that have caused further small-scale economic and environmental damage. Maintenance of existing infrastructure stock is a constraint to Palau's economic development and public sector financial management. With the accumulative climate stressors of sea-level-rise, variable tidal regimes, and unseasonal droughts and floods, coastal infrastructure (especially tourism) is at greater risk.
- Palau's marine resources ecosystems have the highest diversity of reef fish species within Micronesia. During the 1997-1998 El Niño event, Palau experienced massive coral bleaching and mortality. Six years after the event, the reefs in Palau had still not fully recovered. The 1997-1998 bleaching event in Palau was widespread and variable among different sites. Approximately one-third of Palau's corals died, with coral mortality as high as 90% in some areas. It devastated Acroporid corals, which suffered the highest mortality compared to other coral species. The dive tourism industry is therefore very vulnerable as a result of coral reef decay. Corals that were found in estuaries closer to shore survived better than corals farther from shore. Coral reefs serve as reliable breeding grounds for inshore and near shore demersals, a prime food source for several migratory pelagics. There is some evidence within the Pacific Region suggesting that climate change may be precipitating a pole ward migration of pelagic fish species from marine temperature rise. Demersal nurseries are also being adversely affected by increased sedimentation from poorly planned development, and climate-induced flooding in riverine estuaries and mangroves.

The Permanent Mission of Palau avails itself of this opportunity to renew to the Secretariat of the United Nations the assurances of its highest consideration.

New York, 11 August 2009

The Secretariat of the United Nations

