SIDS, Oceans and Climate Change

The role that ocean play in the regulating regional and global weather is universally recognized as established science. Climate Change is exacerbating this natural cycle accentuating rainfall, droughts, flooding, melting of glaciers and the polar regions that would result in sea-level rise. The effect that climate change will have on the ocean will greatly impact SIDS. As recognized in the SAMOA Pathway, SIDS are particularly vulnerable to global climate change. Climate change and sea-level rise continue to pose a significant risk to small island developing States and their efforts to achieve sustainable development. For some SIDS climate change represents the gravest threat to their survival and viability[1].

SIDS climate is influenced by large ocean-atmosphere interactions such as trade winds, El Niño, monsoons and tropical cyclones. With populations, agricultural lands and infrastructures tending to be concentrated in the coastal zone, any rise in sealevel will have significant and profound effects on settlements, living conditions and island economies. These climate characteristics, combined with their particular socioeconomic situations make SIDS, among which are 9 LDCs, some of the most vulnerable countries in the world to climate change. In addition, the fact that SIDS have a combined population of around 65 million people contributing to less than 1percent of global GHG emissions, means that they will suffer disproportionately from the damaging impacts of climate change[2] and that some may become uninhabitable.

[1] SAMOA Pathway, para. 31
[2] UNFCCC, 2007

Sea level rise coupled with extreme weather events induced by climate change poses one of the most immediate threats to SIDS. In particular, the majority of communities, infrastructure and economic activities are located in low-lying coastal areas. For lowlying atoll SIDS with a majority of land area within 5m above sea level and those with a majority of population living within 5m above sea level, the dangers and challenges of rising seas are significant. According to UNEP (2008), approximately 70 percent of the Caribbean population lives in coastal areas. In the tropical Western Pacific where a large number of SIDS communities exist, rates of sea level rise of up to four times the global average (approximately 12 mm per year) have been reported between 1993 and 2009[3]. In addition, as populations grow, and coupled with climate change impacts, relocation to higher ground or beyond national borders will be a major challenge. Owing to higher projections of sea level rise in AR5, it is clear that many – particularly low lying atoll nations – face an existential threat.

Due to their relative remoteness and size, many SIDS have a relatively narrow resource base to drive their industrial development. A few key industries including fisheries, tourism and agriculture help in contributing a significant share to national GDP. The adverse impact of climate change make SIDS' already open and exposed economies even more vulnerable.

Many SIDS are in fact large ocean States. Their vast ocean spaces comprise a significant portion of the world's ocean – on average 28 times more than their actual land space. For example, the Republic of Kiribati has the 13th largest exclusive economic zone on Earth.

[3] IPCC, 2014

Typically, oceans, more specifically the oceanic and coastal fishing industry, represent an important source of nutrition and revenue for SIDS populations.

In the Pacific SIDS, the fishing industry contributes up to 10 percent of total GDP. Of the total 2.4 million tonnes of tuna caught in the Western Pacific Ocean, 58 percent had been caught in the waters of Pacific SIDS, generating a total of USD 2.8 billion in revenues[4] .

In the CARICOM countries alone, more than 64,000 people are directly employed in small-scale fisheries and aquaculture, with another approximately 200,000 people working indirectly in fishing related activities including: processing, retail, boat construction and net repair. The main fish producing countries in the Caribbean were Guyana (31 percent of total production), Suriname (21 percent), the Bahamas (11 percent) and Trinidad and Tobago (7 percent)[5] .

The impact of climate change could fundamentally alter the fishing industry in SIDS. Marine species are gradually moving away from the equator into cooler waters, and, as a result, species from warmer waters are replacing those traditionally caught in many fisheries worldwide. These shifts could have negative effects including loss of traditional fisheries, decreased in profits and jobs, conflicts over new fisheries that emerge because of distribution shifts, food security concerns and a large decrease in catch in the tropics[6] .

The other adverse impact associated with climate change and global warming is sea level rise could have implications that may affect the rights and obligations of State Parties,

[4] FAO, 2014
[5] FAO, 2014
[6] Cheung, Watson & Pauly, 2013, Nature, Signature of ocean warming in global fisheries catch

including SIDS, to UNCLOS, especially in relation to the breadth of the territorial sea, the contiguous zone and the EEZ. Obviously such an effect will be felt by those affected in varying degrees. Low lying countries including SIDS and their atolls are the most vulnerable to such a scenario. The loss of territorial integrity may pose potential legal and conceptual dilemmas that may need addressing in the future, but for SIDS in particular, the loss of already limited terrestrial territory would force stringent adaptation measures to be taken including possible abandonment of some their islands and homes which consequently would adversely impact on their culture and way of life.