Subject: Greening the Islands Foundation's written input for SIDS4

The 4th International Conference on Small Island Developing States aims at charting SIDS course toward resilient prosperity originating an intergovernmentally agreed political outcome document. **This input document provides recommendations for explicitly including the transition to fully renewable energy systems as a key priority for small islands**.

Within small islands' structural constraints and climate change vulnerability lies the **unprecedented opportunity of leading the transition to 100% renewables**. By harnessing rich natural resources and exploiting innovative technologies, they can build a pathway to sustainable development, resilience, and energy security.

Renewable energy is not only concerning the energy sector, but broadly, it is paramount for sustainable development, economic revitalization, circularity, and nexus. Renewables catalyse unmatched job creation, reduction of energy costs, economic diversification, and empowerment of local value chains.

Our studies on two islands (Curacao and Rodrigues) indicate that they can achieve more than 80% of renewable electricity penetration by 2030 in most ambitious scenarios, net of constraints such as land usage and environmental protected areas. The 100% can be obtained by 2035 adding off-shore wind and ocean energy technologies. Energy storage is critical to shut down diesel generators completely.

Within a 100% renewable power mix, solar and wind complement each other to ensure power generation under different conditions. Solar PV (mainly ground-mounted but also rooftop) can reach a share of more than 50% of the electricity produced as early as 2030 and be complemented by on-shore wind, which offers an effective solution to spatial constraints. In cases off-shore wind represents a viable option (considering both bottom-fixed and floating technologies), wind power can make up to 70% of the mix with the remaining 30% covered by solar PV.

To guarantee continuity of supply and maximum exploitation of variable renewables, energy storage systems (particularly battery systems, but evolution of technologies and markets could open new avenues) represent a crucial enabler. Preliminary scenarios highlight that relevant surplus of renewable electricity can empower synergies with other sectors, such as for water desalination and green hydrogen production.

On these two islands, transitioning to fully renewable systems would unlock investment potential of hundreds of millions of euros. The resulting power generation cost is estimated to be sensibly lower than current levels, benefiting local populations and providing returns for private investments that contribute to financing the capital expenditure.

However, despite the promising potential, progress is slowed by long-term PPAs and cost compensation systems with traditional energy service providers, lack of appropriate policies promoting innovative technologies, complex authorisation processes, and limited access to finance, including high cost of debt and inadequate financing mechanisms.

Developed nations must fulfil their climate finance pledges, and mechanisms for loss and damage must address the devastating consequences islands already face. **To upscale small islands' adaptation efforts, international resources should be directed at financing the initial capital expenditure required to deploy renewables according to their roadmaps.**

For effective de-risking of island investments and accelerated transformation, guarantee mechanisms and multistakeholder cooperation, with active involvement of the local and international private sector at the decision-making tables, are crucial. Partnerships between governments, local businesses, international investors, development banks, and civil society can drive much-needed capital and technological innovation into a robust market for renewables while making transitions sustainable.

Small islands' potential to contribute to the global target to triple renewable energy capacity should not be underestimated. Their limited land area restrains large-scale projects on SIDS, requiring

innovative solutions like floating solar and wind. SIDS' Exclusive Economic Zones are on average about 28 times larger than their landmass. It is therefore important that they are supported to exploit vast off-shore renewable potential.

SIDS are uniquely placed to showcase the technical and economic viability of 100% renewable energy systems and ensure their sustainability, originating replicable and scalable models that can guide global change.

Greening the Islands Foundation recommends this Conference recognise the pivotal role of renewable energy in the sustainable development of small islands and support greater ambition, beyond their limited size, **prioritising with clear and sound language the transition to fully renewable energy systems as a vital action for islands over the next decisive decade**. This will send a clear signal to the world, driving at the same time greater support and ambition from other nations.