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Guidance Note 6

Digital technologies and education in Small Island Developing States (SIDS)

From the Report: Education for the most marginalised post-COVID-19: Guidance for governments on the use of digital technologies in education
ACT THREE (OF THREE): GUIDANCE NOTES

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Guidance Note: Digital technologies and education in Small Island Developing States (SIDS)¹

Context

Small Island Developing States (SIDS) have increasingly been recognised globally as having very distinct challenges, both socially and economically. COVID-19 has especially highlighted their vulnerability to extreme events and isolation. Whilst they have readily been able to impose strict quarantine measures, their economic systems have been severely impacted, both through loss of exports and a collapse in tourism. They are also becoming increasingly vulnerable to extreme weather events, and so the provision of resilient infrastructure (digital connectivity, electricity, and school buildings) must be a very high priority. Moreover, especially in the Pacific, the extensively dispersed character of many island groups makes the creation of any systematic and holistic intervention much more problematic than in continental countries. Furthermore, the small size of most of their populations, means that there are often significant human capacity challenges in government administrations.

Despite these challenges, digital technologies when used appropriately can bring very significant benefits to education systems in SIDS, especially for the most marginalised and isolated. If resilient electricity (see separate [Guidance Note on electricity](#)) and connectivity are made available, the potential of digital technologies to provide learning resources in local languages alongside international content any-time and any-where can be leveraged to ensure that everyone can receive a basic education during crisis situations of all kinds (see [Guidance Note on content and local context](#)). It is also essential to take note of expected sea-level changes in identifying the optimal locations for service provision and the technologies that should be used. It is also important that challenges of rain fade and other forms of signal disturbance are overcome through the appropriate choice of spectrum. Spectrum management is thus particularly important, and each jurisdiction should establish spectrum policies with a clear roadmap on which frequencies will be acquired and used in both the short-term as well as the longer-term. It may well, for example, be that the lower frequency C-band deployments which are generally immune to poor weather conditions will remain preferable to the higher frequency Ku-band and Ka-band deployments that are becoming more popular elsewhere in the world.

Given the low populations of many SIDS, there is much to be said for encouraging regional initiatives that can negotiate competitive tenders with mobile operators and other technology providers, and also share collective experiences between the governments of other SIDS. Such initiatives, though, must not be at the expense of challenging national identities and cultures; getting the balance right between the international, regional and the national is not always easy. Nevertheless, governments of SIDS do need to work together over such issues as regional internet exchange points (IXPs), and also the implementation of effective multi-sector partnerships (see separate

¹ Lead authors Emma Kruse Vaai, Cris Seecheran, Mohamed Shareef, Javier Rua, and Tim Unwin.

Guidance Note) that can help ensure appropriate technical understanding within their government departments and education systems.

The introduction of digital technologies within the education systems of SIDS must also show respect for their cultural traditions and values, as with the Samoan concept of Measina, which is difficult to translate directly, but captures the essence of the sacred, why we are who we are, and our cultural values and traditions. Although sciences, technology and mathematics are valuable in their own right, they also need to be used to support these important cultural and traditional elements as well as traditional arts, rather than simply supplanting them with a new technologically-determined and individualistic materialism. Digital technologies can be very valuable in helping island states to prepare well and craft sustainable solutions to overcome future pandemics and crises, but island people themselves must be an integral part of the preparation, crafting and implementation of such initiatives.

Guidance

Relevant guidance for governments of Small Island Developing States (SIDS), which should be read in conjunction with the themes mentioned in the main Report, as well as other guidance notes includes:

1. It is especially important for governments of SIDS to establish **comprehensive medium-term planning and implementation practices to ensure that resilient infrastructures** (electricity, connectivity, and places for education) are constructed to withstand extreme weather events and sea-level change.
2. **Digital learning systems should not focus exclusively on technical education, but should also respect the traditionally diverse cultures and languages of island peoples.** Digital technology must be sensitive to cultural significance and meaning.
3. **Regulators in SIDS need to take particular care to establish systems that are technologically agnostic** so that different technological solutions can be used to provide optimal solutions in their diverse contexts.
4. **It is especially important for learning content to be made available in local languages and in ways that are appropriate to the diversity of island cultures.**
5. **SIDS governments should participate actively in regional initiatives to share good practices with respect to the appropriate use of digital technologies for learning.** Bilateral and multilateral donors should also help strengthen such institutions.

Examples

Examples of the use of digital technologies for education in SIDS:

- Asian Development Banks (2018) *ICT for better education in the pacific*, Metro-Manila: Asian Development Bank, <https://think-asia.org/bitstream/handle/11540/8529/ict-education-pacific.pdf?sequence=1>.
- Commonwealth of Learning, Virtual University for Small States of the Commonwealth, <https://vussc.col.org>.
- UNESCO Bangkok, ICT in Education, <https://bangkok.unesco.org/theme/ict-education>.

Links to regional initiatives among SIDS

- Asia Pacific Network Information Centre (APNIC) <https://www.apnic.net/>.
- Asia-Pacific Satellite Communications Council (APSCC) <https://apscc.or.kr/about/>.
- Caribbean Telecommunications Union (CTU) <https://www.ctu.int/>.
- Eastern Caribbean Telecommunications Regulatory Authority (ECTEL) <https://www.ectel.int>.
- Pacific Islands Telecommunications Association (PITA) <http://www.pita.org.fj>.
- Pacific Telecommunications Council (PTC) <https://www.ptc.org/>.

Suggested further reading

- Hogeveen, B. (2020) *ICT for development in the Pacific Islands*, Barton: ASPI International Cyber Policy Centre, https://s3-ap-southeast-2.amazonaws.com/ad-aspi/2020-02/ICT%20for%20development%20in%20the%20Pacific%20islands.pdf?x_oS.r8OVVfTlxgNHI58k_VL45KC83H.
- ITU (2008) *Handbook: Radiowave propagation information for designing terrestrial point-to point links*, Geneva: ITU, https://www.itu.int/dms_pub/itu-r/opb/hdb/R-HDB-54-2009-OAS-PDF-E.pdf.
- Peters-Richardson, J. (2016) *ICTs and OERs Antigua and Barbuda's journey*, <http://oasis.col.org/bitstream/handle/11599/2509/PDF?sequence=4&isAllowed=y>.
- UN General Assembly, High-Level Dialogue on Samoa Pathway (2019) *World leaders endorse political declaration to help Small Island Developing States cope with climate change, during general assembly review of Samoa pathway, GA/1219727 SEPTEMBER 2019*, <http://www.un.org/press/en/2019/ga12197.doc.htm>.
- UN Sustainable Development Goals Knowledge Platform, <https://sustainabledevelopment.un.org/topics/sids>.
- UNESCO SIDS Platform, *Capacity development and education for sustainable development*, <http://www.unesco.org/new/en/natural-sciences/priority-areas/sids/sids-conferences/mauritius-conference-2005/themes/education-capacity-building/>.



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