Small Island Developing States (SIDS) are a group of developing countries that face unique development challenges which stem from factors such as relative isolation or remoteness, small market size, narrow resource and export base, susceptibility to external economic shocks, vulnerability to environmental threats and effects of climate change, and exposure to intense and frequent disasters brought about by natural events. These SIDS are located in the Caribbean, the Pacific and the Atlantic, Indian Ocean, Mediterranean and South China Sea (AIMS).

(The so-called AIMS region is less homogeneous than the two other and does not benefit from the support of a specific regional institution).

The United Nations Department of Economic and Social Affairs (UNDESA) currently recognises 51 small island developing states and territories in the monitoring of SIDS sustainable development.

(SIDS include 38 countries that are recognised members of the United Nations and 13 non-UN members or Associate Members of regional commissions).

Characteristics of SIDS national statistical systems

SIDS national statistical systems (NSS) vary considerably in terms of size and budget levels and the profile of national statistical offices (NSO) differs from one island to another. The smallest NSOs in terms of number of staff are found in SIDS. For instance, in Pacific (i.e., Kiribati, Northern Marianas, Marshall Islands, Nauru, Niue, Tuvalu and Palau) and in Caribbean (i.e., Montserrat and Anguilla), the number of staff range between 1 and 10. Meanwhile there are few SIDS with staff over 300 staff (i.e., Jamaica, Trinidad and Tobago). In 2013, NSO’s annual budget in Jamaica amounts to USD 6.7 million compared with USD 430,000 in Tonga or Vanuatu. Many NSOs are part of larger Ministries and have little autonomy and often lacks the mandate to coordinate the entire statistical system.

SIDS NSS face specific constraints linked to their vulnerability and it is often reflected in their NSOs. It is not surprising that the most vulnerable NSOs are found in the smallest and less affluent countries. Thus, there may be a need to differentiate among SIDS NSS. Taking into account two variables, population under 120,000 and GNI per capita under USD 4,000, 31 countries and territories may be considered as facing strong NSS constraints for their NSS. 24 countries and territories because of its small size (American Samoa, Anguilla, Antigua and Barbuda, Aruba, British Virgin Islands, Cook Islands, Dominica, Federated State of Micronesia, Grenada, Kiribati, Marshall Islands, Montserrat, Nauru, Niue, Commonwealth of Northern Marianas, Palau, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and Grenadines, Seychelles, Tonga, Tuvalu, and US Virgin Islands). Nine (9) countries due to low GNI per capita (Comoros, FSM, Guinea-Bissau, Haiti, Kiribati, Papua New Guinea, Sao Tome and Principe, Solomon Islands, Vanuatu,), 7 of which are categorised as LDCs or with low intermediary income.

The role of low GNI per capita may be illustrated by Comoros’ NSO. With only 18 NSO staff compared with 30 in Tonga, GNI per capita in Comoros is at USD 1,505 and USD 5,316 for Tonga. Population (2013 data) is significantly higher in Comoros with about 735,000 while only 103,300 for Tonga. Other variables such as political commitment may also play a role.
to explain the gap between the two NSOs. If extreme smallness in terms of population criterion is taken into account, Marshall Islands, Nauru and Palau are very specific, with NSO staff of only 5 (Marshall Islands and Nauru) and 4 (Palau). These 12 countries (LDCs and smallest NSOs in terms of NSO size) would then qualify for priority action as far as NSSs are concerned.

While many NSS share the same constraints and challenges, a number of distinct characteristics are made much more acute in SIDS:

1. Human Resource
   • Inadequate or often lack of highly competent professionals with relevant experience to undertake statistical tasks. In SIDS, there is limited capability of statistics professionals to perform specialised tasks which results in increased reliance on very few qualified staff members and in overburdening the staff that delays the delivery of important data.
   • Need for continuous training and re-training to shore up the knowledge base because a relatively small number of people are responsible for dealing with diverse sets of statistical functions (e.g., consumer price indices, sample survey design, and compilation of environmental statistics).
   • Heavy reliance on external (and externally funded) technical expertise.
   • High personnel turnover and a large number of temporary personnel. Low pay level is a concern for skilled staff and a major cause of high turnover. Field staff employed for data collection are often first timers with limited statistical skills or experience.

2. Geographic and Demographic Characteristics
   • Relatively larger samples required in relation to smaller populations size to obtain valid results in statistical surveys and higher per capita cost of data acquisition.
   • Large and dispersed territory but relatively small population or with unevenly and sparsely distributed population often give rise to huge non-sampling error.
   • Lack of anonymity of statistical units in the population requiring specialised treatment of aggregated data and public use samples.
   • Issues of diversity between populations or sub-populations leading to higher cost of implementation of harmonised standards, classification and coding systems.
   • In the smallest SIDS, the “respondent fatigue” results in increasing non-response to surveys.

3. Information Technology (IT)
   • Requires a smaller amount of software customisation due to the relatively narrower level of diversity of data elements.
   • Easier adoption of standardised coding and classification systems across statistical units, when there is commitment.
   • Slow response of central IT services to statistical requirements for hardware and software support, which leads to generalised software recommendations not to specialised one.
   • Lack of statistical data confidentiality from other data-producing agencies of government.
   • Small and less affluent SIDS have weak information and communication infrastructure along with limited qualified staff and a high turnover. They often lack the resources to update on a regular basis equipment, systems and software. Upgrading often takes place when a survey is financed or co-financed by donors.

4. Regional support for statistics
• High level of reliance on strong regional centres for technical and statistical support resulting in high cost of travelling in the region, particularly true in the Pacific Islands and in Caribbean countries.

5. **Fragility**
• Need for proper backup in situations when national systems fail, political and security conditions deteriorate, data is lost or unavailable, and/or when personnel are unavailable or have been replaced or transferred.

6. **Confidentiality**
• Strict adherence to confidentiality principles must be observed because of the relative ease with which a specific entity’s records of data may be identified even when aggregation rules are employed to ensure non-disclosure.
• Resistance from other government agencies to provide public administrative data to the statistical agency/NSO which results in non-reporting of some critical events.
• Inadequacy and/or often lack of strict data dissemination policies.

7. **Other issues**
• Inadequate, outdated, or absence of statistical legislation that serves as framework for a coordinated and harmonized NSS.
• Weak or lack of strong leadership in the NSOs leads to insufficient guidance on how the national system should be managed. It results in poor coordination and coherence of the NSSs.
• Non-existent national statistical councils or similar statistical bodies with wide representation that would steer statistical development.
• Lack of statistical culture and NSO knowledge.

**Challenges facing SIDS statistical systems**

• **SIDS NSS do not have enough financial resources to meet the expenditures required by a standard statistical system.** The cost of a standard survey (i.e., household income and expenditure survey or HIES) is often out of reach of the smallest and poorest SIDS NSS budget.

• **NSOs require highly specialized staff in statistics and demography, which may not be currently available in SIDS.** Narrow skills base is a feature that prevails in the smallest islands, and it is reinforced by high rates of outmigration.

• **International data requirements are often too demanding for SIDS’ statistical capacity.** The monitoring of the Millennium Development Goals (MDGs) required a lot of indicators which is often not available in SIDS. Reporting on MDG indicators was poor in many SIDS due to lack of data. It is expected that with the adoption of the Sustainable Development Goals, difficulties will further arise as more demanding set of goals, targets and indicators are expected to be monitored and reported.

• **Results-based management is not widely adopted in many SIDS.** Evidence-based decision-making and development policy formulation is not a common practice. Decision makers rarely rely on data to make decisions, and because this is traditionally the practice, there is no compelling national need to provide appropriate, timely and reliable data.
• **Low statistical capacity and poor image of the NSO hinders its leadership and coordinative role in the NSS.** This result in lack of coordination and coherence of data within the statistical system and absence of data sharing arrangement among agencies collecting data. For instance, data needed to monitor and measure environmental dimensions of vulnerability may be difficult to collect and analyse. Statistics on natural resources, climate change, contamination, disasters and risks require access to sophisticated information systems and specialists.

• **Users play a very limited role in SIDS.** Demand for data from users is still weak in SIDS. This is apparent in weak political governance that favours the limited use of data and will not stimulate the promotion of a strong statistical system.

**Role of regional bodies in the development of SIDS statistical systems**

Building and strengthening SIDS NSS would need considerable support from the international community on a long-term basis, specifically in the areas of human resource capacity building; institution building; technical assistance on frameworks, methodologies, standards, and tools; and investment in information systems and IT-related needs, among others. Regional bodies therefore play an important role in leveraging long-term support for statistical development in SIDS.

A regional approach to statistical development not only ensures effective statistical systems that contributes to national and regional decision-making but also fosters stronger cooperation and integration across the region stimulating economic growth, sustainable development, good governance, and mutual security.

Regional bodies with statistical cooperation as part of their mandates provide much needed support to SIDS statistical systems, such as:

- **Augment statistical human resource of SIDS.** Regional bodies often have a pool of statistical experts and professionals from the organization itself or from different NSOs in the region that could be dispatched to temporarily fill the human resource gap in one country or to carry out specific statistical activity on a short-term basis. It could mobilize statistical experts to provide assistance to countries in need as well as assist in identifying and developing Centres of Excellence in the region for the various areas of statistics, where countries could utilize when necessary.

- **Provide training and technical assistance to SIDS.** Regional bodies could provide a common training session for several number of SIDS to minimise the training costs. Customised training session specific to country needs can also be facilitated by regional bodies particularly in the adoption of statistical standards, use of new software and statistical tools, and data dissemination, among others.

- **ICT Infrastructure support.** Resources to upgrade much needed ICT infrastructure (e.g., computers, databases, software) to support statistical work in NSS is beyond the means of a number of SIDS. Regional bodies provide support in terms of identification and provision of adapted equipment for use by NSS. In some cases, regional data processing facility is established using pooled resources from country contributions to aid NSS in data processing, analysis and storage of...
statistical information.

For example, the Pacific Community (SPC), the Secretariat of the Caribbean Community and Common Market or CARICOM, and the Organisation of the Eastern Caribbean States (OECS) have dedicated statistics unit and/or programme that are actively involved in the development of regional statistics, providing much-needed support to their SIDS members.

**Recommended strategies for SIDS Statistical Development**

Statistics is considered as an important enabling mechanism in achieving sustainable development goals of SIDS. Its role in development planning is clearly mentioned in the SIDS Accelerated Modalities of Action (SAMOA) Pathway, the outcome document of the 3rd International Conference on SIDS, which highlights “data collection and statistical analysis is required to enable SIDS to effectively plan, follow-up on, evaluate implementation of, and track successes in attaining the international agreed development goals”.

Increased demand for data is inevitable and statistical systems in SIDS would need to balance national, regional and international data demands and reporting requirements. There are some recommendations that could fast-track and sustain statistical development in SIDS in support of national development.

**Advocacy and political commitment.**

Promoting statistics in support of governance and national development processes should be considered high priority in SIDS. The use of statistics in policy and decision-making must be the central theme of any advocacy effort to encourage high level support and thereby improvethrust on official statistics in SIDS. Advocacy program should target the highest positions in government so that awareness of the role of statistics would lead to political commitment in the reform and funding of the NSS. To effectively build and strengthen SIDS NSS, statistics literacy especially of the private sector, civil society, and media should likewise be improved.

Statistics advocacy is an integral part of the NSDS process – at the beginning, middle, and end stages. At the early stage of the NSDS process, advocacy must be made to high level government officials, ideally at the Prime Minister level with the inclusion of key ministries such as on planning and finance. Mid-stage, advocacy may target other data producing agencies, data users from government, private sector, and non-government organizations and this can be done through data user-producer dialogues and consultations. At the later stage, the dissemination of the NSDS and advocacy to enjoin support for its implementation is an important undertaking.

Regional level advocacy and political commitment also serve as a positive factor for encouraging countries to develop their NSDS as in the case in CARICOM where the region’s Action Plan for Statistics endorsed by the CARICOM Heads of Government Conference reinforces the call for the Caribbean Heads of States to support the development of NSDS and RSDS.

**Lower the costs of collecting, processing and disseminating data.**

The cost associated to build a “standard” statistical system is out of reach for most SIDS. Efforts should be made to reduce the costs of statistics. There are two ways this may be achieved:
• **Use of administrative data as alternative sources.** In most SIDS, administrative data from line ministries such as health, education, vital statistics, and agriculture are poorly used in development planning and policy formulation. When quality of administrative data is assured, these could be good alternative sources of information and could partly substitute for costly survey data. It would also reduce respondent burden in countries with very small population. However, considerable improvement should be made to ensure that administrative data are fit for use. Close relations and coordination between line ministries and NSOs and an integration process of all data producers in the NSS should also be established. Memorandums of understanding should be established with key official data producers so that the NSOs have access on a permanent basis to administrative data bases.

• **Adapt instruments used in data collection, processing and dissemination for SIDS purpose.** Methodological researches to define less costly and more convenient approaches for surveys in SIDS are valuable. Multi-purpose surveys and adapted questionnaires following internationally approved standards and classifications for instance, are now adopted by few Pacific SIDS and have resulted in substantial reductions in survey costs. An optimal use of ICT for data collection, processing and dissemination can contribute to reducing costs. Partnerships with universities and research agencies are recommended in order to identify and test appropriate and adapted statistical instruments taking into account the constraints linked to small populations and inadequate budgets. As far as training is concerned, an optimal use of ICT would favour the development of remote training to make the process more continuous, with the support of Regional Institutions.

Adapt international requirements to SIDS context.

Requirements for monitoring international goals such as the Sustainable Development Goals (SDGs) must be adapted to the requirements and needs of SIDS taking into consideration their development priorities and reporting capacities. The adaptation process could be driven at the regional level, with regional institutions providing support to SIDS and in close coordination with the NSS. It is recommended that SIDS specify their monitoring and reporting process taking into account their national development priorities and statistical capacities of their NSS while aligning with the SDGs and the SAMOA Pathway.

Development and implementation of SIDS-specific tools to assess and monitor their vulnerability.

SIDS vulnerability has economic, social and environmental dimensions thus specific information system designed for collecting data that would measure impacts of vulnerability must be put in place. For instance, to monitor environmental vulnerability, a statistical system to collect data on environment and natural resources which many SIDS currently do not have, would need to be set-up, including systems to collect data to inform disaster risk management, climate change adaptation, waste management, and sustainable energy use. To measure economic vulnerability would require information on SIDS concerns such as on tourism, exports and imports of goods and services, money and banking, migration, remittances, among others. Statistical frameworks must also be in place to help SIDS monitor poverty, labour, health, education, food security, nutrition, gender, and culture-related concerns.

Strengthen regional institutions with mandate on statistics cooperation.

A number of SIDS, specifically the most vulnerable and challenged ones would need
continuous statistical support to complement the capacities of their NSS. Due to their relative small size and isolation, external support from regional and international institutions is inevitable. The regional statistical cooperation model in both Pacific and Caribbean proved to be effective in facilitating statistical development in SIDS. Pooling of resources (i.e., financial, human, technical, infrastructure) at the regional level will help compensate for the limitations of statistical systems in SIDS.

The role of regional institutions with strong statistical cooperation mandate such as that of SPC, CARICOM and OECS is important to sustain support to the most vulnerable SIDS. It is thus necessary for these institutions to have adequate funding to continue providing support to SIDS in need. It would entail a strong commitment of both member states and development partners to continue contributions to finance statistical work of the regional institutions. A concrete action plan for regional statistical cooperation and development that is aligned with SIDS development priorities is a good funding instrument where it would reflect the statistical needs of member states with regular monitoring and assessment of outcomes and emerging concerns. Part of strengthening regional institution’s role in statistical cooperation would also involve continuous upgrading of staff skills of technical assistance providers especially on statistical frameworks, methodologies and standards that are useful for SIDS and expansion of pool of regional experts to provide support to SIDS NSS on-demand.

Recommendations for preparing NSDS in SIDS

Presently, only a small number of SIDS have an NSDS in place that serves as framework for their statistical development which aligns with their national development plan. The design and effective implementation of an NSDS adapted to SIDS specificities should be one of the priorities of the SIDS development policies, particularly in the context of Agenda 2030.

The Pacific and Caribbean regions have long recognised that NSDS is crucial to ensuring a strategic statistical development in SIDS is achieved. While SIDS statistical systems vary in their characteristics and capacities, the NSDS remains an effective framework for balancing priorities and demands for statistics with due consideration of the size, vulnerabilities, and specific issues they face in support of national development plans and policies.

- **Strengthen governance of the NSS:**
  The credibility of a statistical system is linked to the quality of statistical products and services it produces; capacity to provide the data needed by users and confidence of data users’ in the statistics produced. A good statistical system is characterised by independence, transparency and integrity, often reflected in its statistical legislation. To ensure SIDS has a good statistical system, it should have in place a well-functioning governance system for the NSS. In this respect, outdated statistical legislations must be reviewed and updated which would serve as legal basis for improving and enhancing governance of the NSS. The Caribbean region recognises this need and has proposed a harmonised and common approach to updating national statistical legislations through CARICOM Statistics Model Bill.

- **Adopt a programming approach in statistical planning:**
  An annual action plan of statistical activities involving all data producers and in consultation with users should be prepared and costed for the medium term (3 to 5 years). This is an important component of the NSDS.

- **Promote the dissemination of data:**
  The NSDS advocates for better data dissemination and open access to data and statistics in a regular and timely manner. Programs in the NSDS should include ways
of improving availability and accessibility of data to users, including metadata and microdata. The use of ICT enables extensive data dissemination that is easily accessible to users. Dissemination policy should also be in place for NSS.

- **Dialogue with data users:**
  The NSDS process involves wide consultation with data users and stakeholders to ensure that the NSS would respond to data users’ needs. This consultative process is often overlooked when formulating statistical plans. It is necessary to identify key data users that would contribute meaningfully to discussions on data gaps, data quality, availability, and in setting statistical priorities.

- **Promote capacity building:**
  Many SIDS lack the capacity to produce and disseminate data needed by users. The NSDS approach will provide a diagnostic of the existing capacities, and identify the gaps to be addressed and how this could be done strategically. A capacity building programme could then be defined. In the case of SIDS, the implementation of the programme should be coordinated and supported at the regional level, to ensure specific solutions may be identified such as common tools and pooling of resources. One key issue is the sustainability of the capacity building process. The Cape Town Global Action Plan for Sustainable Development Data specifically identifies as one strategy the mobilization of resources and coordination of efforts for statistical capacity building.

### Updates on the NSDS process in SIDS

The following recommendations for updating the NSDS process in small national statistical systems in SIDS or elsewhere are based on experiences in developing strategic statistical plans in a number of SIDS, particularly in Pacific. The experiences are further complemented by several studies, reviews of and forum on the SIDS statistical systems conducted by PARIS21 since 2014. It is understood that what may work well in larger national statistical systems in terms of NSDS preparation, and later on, in its design and implementation, may not proceed as well in smaller national statistical systems. This is largely due to challenges with respect to institutional and political impediments and human resources and capacity constraints.

- **Institutional and political impediments.** The absence of a “statistical culture”, particularly in small national statistical systems (as is the case in most SIDS) and the lack of historical use of evidence-based decision-making, is not conducive to the development of statistics as a worthy development objective in its own right.

- **Human resources and capacity constraints.** The absence of technical and statistical capacity across various sectors does not allow the use of local expertise for comprehensive cross-sectoral assessment of data availability, quality, use and prevailing un-met needs. This is essential for developing a NSDS roadmap and the subsequent NSDS design proper.

Acknowledging this reality requires some modification to the standard NSDS approach in assisting smaller national statistical systems to successfully engage in and benefit from the NSDS process. While still comprising all the main elements of the NSDS process, the key difference is recognising the critical role played by the NSS assessment which should inform and guide both advocacy and generate political and professional commitment and the immediate formulation of NSDS. The following stages are deemed important for developing NSDS in small NSSs:

**Stage 1: Start the NSDS process with an assessment of the country’s NSS (facilitated by an external consultant/expert)**

This stage comprises three separate in-country activities: a 2-day NSDS introduction/planning meeting to launch the NSDS process, followed by NSS institutional and sectoral assessment through one-on-one consultations with key stakeholders, a final debrief on preliminary NSS assessment findings and an outline of next NSDS steps.

**Stage 2: Formulation of NSDS**
Should government decide to proceed with the development of its NSDS, Stage 2 will comprise two distinct activities such as development of the NSDS roadmap by the NSDS consultant to ensure compliance with NSDS guidelines recommendation and international best practices and conduct of the NSDS strategic planning workshop.

There are other important aspects to consider in the NSDS process in small NSSs:

1. Greater political advocacy and more formal government commitment to the NSDS process. While the NSDS process and guidelines are strong on advocacy, experience over the past eight years clearly shows that more is required to win over senior officials and get political traction and support. In the place of a short NSDS launching workshop with senior officials and resident diplomats, focusing largely on process generalities, it would be more effective to make a strong, strategic sales pitch, outlining the positives and what the country will miss out on in not having an NSDS.

2. Establish stronger links between NSDS and national development strategies, including country commitments to international development agendas (e.g. SDGs, the SAMOA Pathway). Explicit references to the importance of establishing stronger linkages between the NSDS and (i) countries’ own current national development strategies or plans, and (ii) their political commitment and obligations to regional or international development agendas, and associated regular monitoring requirements should be made. This would entail an amendment to the current NSS assessment process as part of the NSDS preparatory activities, and require countries to undertake a stocktake of currently available indicators related to M&E frameworks associated with these plans. This would be part of their NSDS preparatory work responsibilities and contribution to be reflected in a MOU, as attention to the collection of associated data and statistics ought to feature as one of the NSDS’ core strategic priorities. If resources permit, a deployment of the PARIS21 Advanced Data Planning Tool (ADAPT) may be considered to undertake mapping of available indicators vis-à-vis national, regional and global development plans/goals.

3. Focus on the importance of greater regional statistical integration. Given the small size of their national statistical systems, there also ought to be greater strategic focus in SIDS’ NSDS development on regional statistical integration, ensuring that countries’ NSDS are linked to Regional Strategies for the Development of Statistics (RSDS). Without denying countries’ sovereign rights to develop their own NSDS that address first and foremost national statistical development priorities, this process ought to proceed in recognising regional statistical priorities that have been agreed upon by member countries of regional organisations such as CARICOM and the Pacific Community. The commitment to the development of those regional strategies and associated priority action plans should also be recognised.

4. Make use of common NSDS templates. Recognising limited staff capacity in smaller SIDS national statistical systems, both in terms of absolute numbers and their technical capacity and work-loads, it is imperative to minimize the burden associated with preparatory NSDS work and subsequent NSDS formulation. It is recommended to streamline the NSDS process by using common templates, based on best-practice examples from successful SIDS NSDS, but adapted to each country’s context and needs, and ensuring that the process remains highly consultative and participatory.

5. Risk analysis: NSDS design and implementation. An important component of any plan, be it a long-term national development policy, or a medium-term strategic action plan such as the NSDS, is a risk assessment that identifies both known and possible risks and challenges that, if left unattended, might derail implementation of planned endeavours. Such analysis needs to focus on all core elements of the NSDS itself such as its overall vision, mission, core organisational values and strategic objectives. Risk assessment is equally relevant at the design stage of the NSDS.

For detailed guidelines on updating the NSDS process in SIDS and small NSSs, please refer to the PARIS21 publication NSDS Guidelines for SIDS

Resources:

- **NSDS Guidelines for SIDS**