2016

STRATEGIC DEVELOPMENT OF SUBNATIONAL STATISTICS

PARIS21 ENGAGEMENT STRATEGY

There is an increasing demand for disaggregated data to ensure no one is left behind. In response, subnational components of national strategies for the development of statistics (NSDS) should be rationalised and streamlined. This paper proposes strategic options that could be explored with a view of enhancing the NSDS process.

PARIS21

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ABBREVIATIONS

BoFED	Regional Bureaus of Finance and Economic Development
BPS	Badan Pusat Statistik
CBM	Community-based monitoring
CGDAM	Geographical Codes of the Administrative Division of Mozambique
CRVS	Civil Registration and Vital Statistics
CTU	Classification of territorial units
IAPR	Inter-area Peer Reviews
IDEuy	Spatial Data Infrastructure of Uruguay
IMIS	Infrastructure Management Information System
INE	Insituto Nacional de Estadistica
LADOCC	Local Area Development Objectives Compliance Committee
LASA	Local area statistical agencies
LASDS,	Local area strategies for the development of statistics
LASS	Local area statistical system
LDC	Less developed country
MoFED	Federal Ministry of finance and development
NC	National Central
NPISH	Non-profit institutions serving households
NSDS	National strategy for the development of statistics
NSO	National Statistics Office
NSS	National Statistical System
NUTS	Nomenclature of Territorial Units for Statistics
PPP	Public-Private Partnership
RC	Regional Central
RS	Regional Sectoral
SDGs	Sustainable Development Goals
SIDS	Small Island Developing States
SNSS	Subnational statistical system
SSS	Subnational statistical systems
SUBDSM	Subnational dependency structure matrix
SUBGAP	Subnational statistics availability/gap matrix
SUBIND	Matrix of subnational statistical indicators
SUBMOD	Subnational Matrix of Operation Details
SUBSDS	Subnational Statistics Development Strategy
UCLG	UN-Habitat and United Cities and Local Governments
UN-HABITAT	United Nations Human Settlements Programme

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1. EXECUTIVE SUMMARY

Local development is being increasingly recognised as a major dimension in a country's economic and social policies. Efforts have been made over nearly a decade to strengthen statistical systems at national and sectoral levels through the design and implementation of national strategies for the development of statistics (NSDS), and ensure that they are effectively aligned with all major development endeavours. These efforts must be scaled up to further rise to the challenge of the Sustainable Development Goals (SDGs) which will require more integrated and quality datasets related to subnational entities.

Contributing to this, PARIS21 officially launched in 2014 updated guidelines for the development of NSDSs in which the subnational dimension will be enhanced to strengthen the local capacity in the production and use of statistical information. Hence this discussion paper is based on a literature review and four case studies in consultation with the respective national statistics offices of Ethiopia, Indonesia, Mozambique and Uruguay.

Demand for subnational data

The paper discusses the demand for subnational data and suggests subnational qualifiers to describe the varying degrees of complexity, stratification and differentiation of subnational areas. Related data must be disaggregated by gender, ethnicity, age and any other relevant dimension. Any system related to statistics pertaining to either level below national level will be referred to as subnational statistical system (SNSS) or local area statistical system (LASS). As such it will comprise all producers and users of subnational statistics irrespective of whether they belong to or reside in the relevant local areas. However, these statistical stakeholders may belong to a geographical or administrative unit that is outside the local area concerned, thus making the description and analysis of subnational statistical systems a very challenging and complex exercise that requires a classification of local territories to be used.

Classifications of territorial units (CTUs) are used either horizontally, looking or comparing across units pertaining to the same level, or vertically. In the latter case, analysis can be made from top-down (in a process of data disaggregation), or from bottom-up (consolidation or aggregation).

In most cases, subnational data is said to be obtained through disaggregation processes. This is mainly justified by the fact that, as is widely recognised in the literature, national statistical systems have been largely developed to meet national and international needs for aggregated data derived from one-off surveys. Averages and other consolidated indicators derived from such surveys are of national relevance as many of these indicators do not necessarily answer questions raised, explicitly or implicitly by local policymakers and development stakeholders. On one hand, these indicators are too aggregated and sparse data such that they do not shed light on the understanding of sub-national economic and social dynamics. On another hand, they are not linked to the activities of local institutions at large. This calls for a new statistical paradigm whereby processes of defining, producing and analysing subnational statistics will follow a ripple effect movement. It all must start from a citizen at the centre and ripple out to outer circles: the local city/village, the local area, the province, the entire country, the sub-region, region or continent and then to the whole world. Indeed, people want to know how local health or education services compare to those in neighbouring cities or provinces or even across borders.

Therefore, while improving standard surveys required at national level, focus should be directed at strengthening local data in order to better the widening range of purposes for which such data are

needed. Where local governments exist, data requirements are justified by the role of such governments in promoting and ensuring community development in every respect.

Relevant policies include planning, implementation and monitoring of development and administrative activities, as well as the provision and delivery of facilities and services to local populations. The duties and responsibilities of local governments also relate to effectively using the assets of the local area under their purview, and ensuring that they can be used in a sustainable and lasting fashion for the increasing well-being of the community at large. This broad based mission requires specific statistics to be produced at a pace that is consistent with their onward usage cycle, i.e. the cycles of local government activities, as well as the cycle of national government activities that relate to subnational matters.

Subnational data needs are not restricted to local governments. While local and central governments may not necessarily have identical needs, they both possess similar development and policy responsibilities as well as subnational data needs.

On the supply side

Not all countries require a sub-national statistical system due to either size or administrative arrangements. However, subnational statistical systems exist in any country where subnational functions are performed by local government units in the context of decentralisation or other systems of division of administrative and/or political work. A subnational statistical system is deemed institutionally established when there are one or more agencies in the local area whose official or de facto mission is at least to collect data on all or part of the economic or social aspects of the local area, in compliance with generally accepted statistical rules. In the absence of such agencies, the subnational statistical system will be considered as implicit or passive.

By and large, statistical acts provide for local area data to be collected or retrieved by the relevant local area statistical agency or the regional statistics office whose statistical jurisdiction includes the said local area. However, this is implemented in differing ways that do not seem to be guided by a comprehensive statistical strategy for the local area. This lack of a common pattern is a major challenge that adds to other challenges including:

(i) Community-based monitoring systems and other local agencies collecting data do not necessarily benefit from technical guidance and capacity building from national statistics offices.

(ii) Subnational data sets do not always meet desirable quality requirements.

(iii) In some countries, such as Indonesia and Kenya, subnational statistical activities are concurrently implemented on the one hand by the Central Statistics Offices and/or its local branches and on the other hand by local government units.

(iv) The subnational statistical system, whether it is formally defined or not, is not systematically co-ordinated.

(v) In some countries, subnational statistical agencies representing line ministries do not mandatorily report to the Central Statistics Offices and/or its local branches.

(vi) Not all methodologies used in the subnational statistical system are defined or recommended by the Central Statistics Offices and/or its local branches.

(vii) User-producer dialogue for subnational statistics is not established in all the countries.

Improving Subnational Data

In view of the above, we have identified five basic principles that would apply in the efforts of strengthening any subnational statistical system however complex it may be. They would complement and reinforce the guiding principles of NSDS. These are: jurisdictional delineation, legal recognition, two-way subsidiarity, statistical participation, and local relevance. These principles will be borne in mind while contributing to the development of an integrated strategy for the development of subnational statistics. The strategy will be prepared in the same way as the NSDS, as an integral part of it, however some characteristics of subnational systems warrant special attention as underlined in this paper.

Recommendations

Twelve recommendations have been formulated of which the first six are considered priority ones. However, as a starting point, there is a need to prepare a methodological document on the classification of territorial units (CTU). (Recommendation 1) will be proposed to the United Nations Statistics Division and Division for Sustainable Development to develop and promote regional and sub-regional CTUs. (Recommendation 2) The UN Statistics Division should lead the process of developing a manual on subnational statistics. (Recommendation 3) An expert city-group should be established under United Nations Statistical Commission (UNSC) arrangements. (Recommendation 4) The customisation and implementation of classification of territorial units in the countries will require involvement of countries with support from Regional Economic Communities and PARIS21.

(Recommendation 5) Regional United Nations Economic Commissions, UNDP and PARIS21 should prepare a manual on the development of subnational strategies for the development of statistics (SUBSDS) where PARIS21 will spearhead the process. (Recommendation 6) The development of subnational strategies for the development of statistics should be a continuous process embedded in the NSDS development processes at country level.

The next six recommendations will require broader partnership arrangements. (Recommendation 7) The United Nations Statistics Division, Johns Hopkins University Center for Civil Society Studies and PARIS21 are being recommended to prepare a manual on the development of non-profit institutions serving households (NPISH)-related subnational statistics which will further leverage the existing Handbook on NPISH in the system of national accounts (SNA). (Recommendation 8) United Cities and Local Governments, and PARIS21 are being recommended to develop guidelines on local statistical participation to be subsequently used in the SUBSDS design process. (Recommendation 9) National statistical offices are being recommended to continuously capacitate local level statistical personnel on data anonymisation as this is also critical at subnational level.

(Recommendation 10) Multilateral Development Banks such as the World Bank, the Asian Development Bank, the African Development Bank, etc., other donors and sub-regional

development banks are being recommended to join forces and resources to develop a framework for subnational statistics on development projects. (Recommendation 11) The above institutions are being recommended to commit to sharing their operational data on development projects with national statistics offices. (Recommendation 12) Regional Economic Communities, countries and PARIS21 are being recommended to ensure that piloting matrices on subnational statistical systems is implemented.

2. INTRODUCTION

Local development is increasingly being recognised as a major dimension in a country's socio-economic development agenda. This is even more critical in developing countries where the attainment of development objectives essentially rests on specific programmes and projects designed and implemented at regional, provincial, district or even village level. These are countries where, on average, around 60% of the population lives in rural areas, with Burundi, Uganda and Sri Lanka standing out at 89%, 85% and 82% respectively. For development to be effective, it has to happen both nationally and locally, in response to specifically identified demands and needs. Underlying processes leverage both national and local advantages and require resources to be optimally estimated and used, with a view to ensuring that Sustainable Development Goals (SDGs) and other development goals are met. The need for relevant national, subnational and disaggregated data is thus underlined and should be met by effectively mainstreamed statistical systems.

Efforts have been made over nearly a decade to strengthen statistical systems at national and sectoral levels through the design and implementation of national strategies for the development of statistics (NSDS), and ensure that they are effectively aligned with all major development endeavours. These efforts must be scaled up to further rise up to the challenge of the Sustainable Development Goals (SDGs) which will require more integrated and quality datasets related to subnational entities.

Sustainable Development Goal 17.18
By 2020, enhance capacity building support to developing countries, including for LDCs and SIDS, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts.

Contributing to this effort, in 2014 PARIS21 officially launched updated guidelines for the development of NSDSs in which the subnational dimension is being enhanced to strengthen the local capacity in the production and use of statistical information. In this respect, PARIS21 wishes to better understand the status of subnational statistical systems across the globe, increase general knowledge on relevant issues, raise awareness about the need for action at local, national and international levels and suggest strategic options that can be included in the NSDS guidelines, hence this strategy paper.

In addition to literature review, the methodology used to determine these strategic options included the analysis of four case studies in consultation with the respective national statistics offices of Ethiopia, Indonesia, Mozambique and Uruguay. Apart from the Executive Summary, the paper is structured in 5 sections. Section one is the introduction, Section two is a reminder of the demand for subnational data, and is followed by a description of the supply side (section 3) and a discussion of possible steps for improving subnational data (section 4). Section 5 concludes by suggesting that subnational statistics must be promoted along a bottom-up approach of data production. The same section makes recommendations requiring specific actions at international and national levels.

3. THE DEMAND FOR SUBNATIONAL DATA

3.1 Subnational qualifiers

3.1.1 Recognising sub-populations

Not all countries require a sub-national statistical system due to either size or administrative arrangements. The importance of subnational statistics rests on the existence of subpopulations within a country. A subpopulation is of interest in this paper if it is a portion or part of a national population that lives in the same identifiable geographical and/or administrative subdivision of national territory. They share common and distinguishing characteristics related to the local area where they live. These are the geographical, economic, social, administrative, and environmental circumstances of their local area.

Throughout this paper, the adjective 'local' will refer to any sub-national area of a country's geographical structure, or any of its government constituencies that is below the national level. Such area can be rural or urban, municipal, district, provincial or regional. It is noted throughout the paper that there are varying degrees of complexity, stratification and differentiation of subnational areas, and that related data must be disaggregated by gender, ethnicity, age and any other relevant dimension.

The paper does not discuss the notion of decentralisation or devolution. Any administrative or geographical unit that is below national level will be considered local irrespective of its governance system.

3.1.2 Stratification of regional units

Subnational functions are performed by local government units in the context of decentralisation or other systems of division of administrative and/or political work. These functions cover the entire spectrum of government activities, ranging from general public services to social protection, including defence, health and education. As such, local government is an administrative body for a small geographic area, such as a village, district, city, town, county, zone, region, province or state. A local government will typically only have control over their specific geographical and administrative area.

In this paper, local government will refer to a government unit or agency in a smaller geographic area than the entire nation. Depending on the political, geographical or administrative division of the country, there can be several layers or levels of local government, with one level reporting to the higher level above it. Any system relating to statistics that is situated below the national level will be referred to as subnational statistical system (SNSS) or local area statistical system (LASS). As such, it will comprise all producers and users of subnational statistics irrespective of whether they belong to or reside in the relevant local areas.

To assess the existence and characteristics of such systems in countries where statistical roles and responsibilities do not rest exclusively with the National Statistics Office (NSO), it is essential to start off with a thorough description of the hierarchical structure of local administrations in the country. In most cases, the structure of small administrations is based on a functional principle, whereas big administrations have more complicated structures. The purpose of the description is to identify the levels at which the implementation of functions of a local government department requires data on local population and systems to be collected or retrieved. A large portion of these datasets may be

generated as administrative records and other categories of critical information. Such records may routinely or periodically be converted into data by the local department concerned or another local government in the same geographic area, a higher level on the hierarchical administrative ladder or even at national level. For example, in Ethiopia, Indonesia, Mozambique and Uruguay, subnational statistics will relate to either of the units (regions or areas) of the administrative stratification of the country (see table 1 below). It's worth underlining that while statistics relate to a particular geographical unit, the producers or users thereof may belong to any geographical unit or combination of units. This makes the description and analysis of subnational statistical systems a very challenging and complex exercise that requires a classification of local territories to be used.

Table 1: Examples of Administrative Stratification

	Ethiopia	Indonesia	Mozambique	Uruguay
Level 1	Federal level	Central Government level	National level	National level
Level 2	9 Regions 2 Cities	35 Provinces	11 Provinces	19 Departments
Level 3	95 Zones	500 Regencies and cities	23 Cities	112 Municipalities
Level 4	737 Woredas		148 Districts	
Level 5	15100 Kebele		417Administrative post	
Level 6			1134 Localities	

3.1.3 Classification of regional territories

A useful descriptive, analytical and comparative tool

A classification of subnational levels is the most effective tool to describe a country's geographical and administrative division in a structured and consistent manner. A good example is provided by Eurostat's harmonised system of defining subnational entities known as "Nomenclature of Territorial Units for Statistics (NUTS)".

NUTS was developed in the early 70's as a single, uniform and harmonised system to break down territorial units in the European Union. The purpose is to facilitate statistical comparisons across regions below country level. NUTS serves various political, economic, social, regulatory and statistical purposes. It guides statistical activities of data collection and analysis, as well as development and harmonisation of statistical efforts in Europe.

NUTS is also used for the purposes of mainstreaming statistical development in the economic, social and political agenda of European countries at both national and E.U. level. In this respect, it helps anchor statistics with policy needs.

The existence of such classification makes it easier to identify subnational areas and assess the availability of subnational statistics, as to whether:

- they cover all territorial units of same level in a country

- they are limited to a particular level in a country's administrative stratification
- there are redundancies
- there are inconsistencies
- there are inequalities in the coverage and treatment of territorial units

When a territorial classification is harmonised across countries in the same country group, it also helps enhance inter-country comparisons and sheds greater light on disparities or similarities between regions belonging to different countries. This is particularly critical in the context of regional integration.

A classification of territorial units is the indispensable backbone of any subnational statistics system.

The existence of such a classification also serves the purpose of developing and maintaining databases on subnational characteristics and trends that prove very useful in analysing all kinds of pressures (e.g., demographic, environmental, security, economic, food supply, inflation, trade, smuggling, etc.) exerted by a region on another (neighbouring or trade partner) region across the border or even within the same country. Such is the case for EUROSTAT countries where NUTS is implemented, and for the OECD which classifies regions in each OECD member country by using a regional typology to ensure that subnational data in databases and comparative studies are comparable across countries.

As such, a classification of territorial units is the indispensable backbone of any system of subnational statistics. However, many countries/regions outside Eurostat and OECD groups of countries have not developed classifications of counties, provinces or regions. Two of the four countries specifically referenced in this paper can be cited as examples where a classification of territorial units was developed or is being developed.

Uruguay's initiative

Territorial units of the geographical structure of Uruguay are codified in a structured way. The Insituto Nacional de Estadistica (INE) created a geocode or unique code identifying each geographic unit. The boundaries of geographic units are drawn mainly along natural and artificial lines deemed permanent or easily identifiable on the ground.

The geocode identifies geographic areas defined for statistical purposes. It is a composite code, formed by sequences of digits representing each of the four levels of the geographical disaggregation initially established for the 1963 census fieldwork.

A more recent project is also worth mentioning. The Spatial Data Infrastructure of Uruguay (IDEuy), an initiative by the Executive Branch, was recently created with the purpose of establishing a set of standards and metadata about classifications of territorial units and addresses. The aim is that the standards defined by IDEuy will become the only method used in the country for the identification and classification of geographical units. The INE is actively involved in this initiative, contributing its expertise to it.

Mozambique's classification

Mozambique's Instituto Nacional de Estatística (INE) developed the Geographical Codes of the Administrative Division of Mozambique (CGDAM), in the context of the 2007 Population and Housing

Census. As the governing body of the National Statistical System, the INE organises seminars with the various sectors and institutions that are involved in the national statistical system in order to promote the use of the classification across the country.

3.2 Ripple effect

Classifications of territorial units are used either horizontally, looking or comparing across units pertaining to the same level, or vertically. In the latter case, analysis can be made from top-down (in a process of data disaggregation), or from bottom-up (consolidation or aggregation).

It calls for a new statistical paradigm whereby processes of defining, producing and analysing subnational statistics will follow a ripple effect movement.

In most cases, subnational data is said to be obtained through disaggregation processes. This is mainly justified by the fact that, as is widely recognised in the literature, national statistical systems have been largely developed to meet national and international needs for aggregated data derived from one-off surveys. Averages and other consolidated indicators derived from such surveys are of national relevance; as such many of these indicators do not necessarily answer questions raised, explicitly or implicitly by local policymakers and development stakeholders. These are in part too aggregated and sparse data that do not shed light on the understanding of sub-national economic and social dynamics and in part not linked to the activities of local institutions at large. These purposes require subnational statistics to be seen as a quantitative mirror to be used by any citizen to look at themselves in relation to the economic and social environment around them. It calls for a new statistical paradigm whereby processes of defining, producing and analysing subnational statistics will follow a ripple effect movement. It all must start from a citizen as the centre and move in ripples to outer circles: the local city/village, the local area, the province, the entire country, the sub-region, region or continent and then to the whole world. Indeed, people want to know how health or education services locally delivered to them compare to the ones in the neighbouring city or province or even across the border.

Therefore, while improving standard surveys required at national level, focus should be more and more directed to strengthening local data:

- from administrative sources and other institutions whose primary role is not statistical production but who collect some data for their own operations, e.g., local community organisations and NGOs
- by conducting specific surveys at the lowest geographical level possible, and aggregating them up to higher levels if necessary

3.3 Local development objectives

3.3.1 A wide range of purposes

Subnational statistics are needed by national governments and local governments to meet a wide range of purposes. Where local governments exist, data requirements are justified by the role of such governments in promoting and ensuring community development in every respect.

Relevant policies include planning, implementation and monitoring of development and

administrative activities, as well as the provision and delivery of facilities and services to local populations. The duties and responsibilities of local governments also relate to effectively using the assets of the local area under their purview, and ensuring that they can be used in a sustainable and lasting fashion for the increasing well-being of the community at large. This broad based mission requires specific statistics to be produced at a pace that is consistent with their onward usage cycle, i.e. the cycles of local government activities, as well as the cycle of national government activities that relate to subnational matters.

Subnational data needs are not restricted to local governments. While local and central governments may not necessarily have identical needs, they both possess similar development and policy responsibilities as well as subnational data needs.

In reviewing the various roles of local governments as well as subnational development activities where local data is critically needed, Box 1 highlights a set of principles that were adopted by the Indonesian Association of Municipalities.

3.3.2 Administrative and regulatory functions

Box 1: Ten principles for supporting strong local governance

1. Participation – encourage all citizens to exercise their right to be involved in decision-making of direct or indirect public interest
2. Rule of law – realise fair and impartial law enforcement, honouring basic human rights and social values
3. Transparency – building mutual trust between government and communities
4. Equality – provide equal opportunities for all people to improve their welfare
5. Responsiveness – increase the sensitivity of government administrators to public aspirations
6. Vision – develop a clear vision and strategy, in participation with communities, to ensure shared ownership and responsibility for the development process
7. Accountability – increase accountability of decision-makers in order to promote decisions in the public interest
8. Supervision – increase supervision of operations by involving general public and private sectors
9. Efficiency and effectiveness – guarantee effective service delivery through optimal and responsible use of resources
10. Professionalism – enhance the capacity and moral stance of administrators to ensure easy, fast and affordable service delivery.

Source: UNDP, 2007, Supporting Capacities for Integrated Local Development - Practice Note

National and local governments perform their respective administrative functions through modalities that vary across countries. Their legal administrative and regulatory obligations include matters related to education, health, general administration, security, safety, social protection, civil registration, and environment. In many countries, relevant statistics are collected and processed by local governments directly. Where community-based monitoring (CBM) systems are established, these statistics support public oversight of services rendered by local governments.

Where there is a local branch to represent the national statistical office, statistics collected are meant to feed into national indicators. Partnerships between local branches and local government units should be established in such a way as to answer all major needs of local governments. The decentralised system of civil registration and vital statistics in the Philippines is one example worth showcasing, where: (i) civil registration takes place at local government level and data thereof are transmitted to the relevant provincial office of the national statistics office for onward processing at national level; and (ii) vital statistics are collected at provincial level and

consolidated at national level.

3.3.3 Local planning

The development of local areas relating to transport infrastructures and services, dwelling services, water and sanitation and other local growth objectives require comprehensive statistics to be in compliance with quality standards and feed into modelling equations that will generate quantified options. The formulation of mid- and long-term plans will be based on such options.

Some of these statistics require expertise and resources that are only available at a higher regional level or even at national level. Such is the case for projected population growth in the local area.

3.3.4 Infrastructure development

National and/or local government will be encouraged/advised to develop and maintain an Infrastructure Management Information System (IMIS). The IMIS has a wide range of potential uses. Some of the most important ones can be listed as follows:

- Help national government, donors, investors, PPP (Public-Private Partnerships) participants, and other funding agencies to co-ordinate their support more effectively to infrastructure development in a given local area
- Provide information for each possible scenario to decide the site and the size of a targeted infrastructure to be constructed. The IMIS will therefore provide information relating to: financial, economic, environmental, sociological, geographical, geological, accessibility, technical, political, etc. that needs to be taken into consideration.
- Identify opportunities for the provision and delivery of local services of water and sanitation, electricity, and ICT
- Maintain a geographical map of population characteristics and infrastructure sites for existing and planned structures
- Serve as a communication tool between local development stakeholders

3.3.5 Meeting the Sustainable Development Goals

As the Sustainable Development Goals (SDGs) have been adopted, the scope of work and interest on relevant indicators is widening. In developing countries, this calls for an ever-increasing need for effective co-ordination within the National Statistical System (NSS), both horizontally among line ministries and other data sources at central level, and vertically between the NSO and statistics departments in line ministries on the one hand and regional producers of statistics on the other hand. Co-ordination and hence synergies are essential to meeting the challenges of producing subnational data against the following criteria:

- promoting a bottom-up instead of a top-down approach
- achieving clarity and even-handedness
- focusing on outcomes
- capturing equality of opportunities for development
- providing for empowerment in an enabling environment
- supporting effective and increased participation by local people in aspects that affect their everyday life
- highlighting intermediate results and outcomes to better monitor progress
- promoting shared commitment to collective development

- fostering measurability
- informing accountability and transparency
- ensuring consistency between quantitative indicators and quality assessments, especially in measuring people's well-being, rather than measuring economic production
- ensuring sustainability
- addressing human rights, peace and security

3.3.6 Inclusive growth

A local area-related framework of inclusive growth indicators will be required to support inclusive growth policies in local areas. Inclusive growth includes economic growth and employment opportunities, social inclusion and protection, good governance, peace and security.

Wherever relevant administrative, social, and economic services are delivered by local government units, data will be collected and processed to generate indicators on:

- poverty (monetary and nonmonetary)
- economic growth and employment
- basic infrastructure facilities, utilities and services
- education services
- access to health services
- gender equality
- social safety
- peace and security
- local governance

3.3.7 Business development

A local area will showcase its economic advantages and opportunities to attract business and help with integration into the area. Also, services on local promotion and regular availability of information on economic opportunities, circumstances, development and trends will be provided to help local businesses analyse the market and competitive environment.

3.3.8 Statistics on Development Projects

The System of National Accounts (SNA) is a coherent, consistent and integrated framework for the compilation, consolidation and aggregation of macroeconomic indicators needed for economic analysis, decision-taking and policy-making. The accounts and related tables reflect the relative health of an economy. Source data for National Accounts are basically obtained from institutional units that report on their operations pertaining to goods and services as well as financial and fixed assets. However, for subnational economies that are significantly developed through development projects and programmes, an additional data source is worth considering.

Indeed, development projects are implemented in regions or local areas by national /local governments, international and regional development organisations. These projects are usually guided through a process designed to measure their impact. "Impact Evaluations" are becoming standard practice for projects. These projects are designed, implemented and monitored through a project cycle that needs to be informed by a mirroring statistical cycle. The objective is to ensure that the key data required at each stage in the project cycle are provided to project stakeholders to increase the efficiency of their analysis. The statistical cycle within the project cycle will provide macro- and meso-data and metadata required to describe the environment (local area, country at

large or a larger region) in which a project is implemented, set a baseline and provide an estimate of the impact of the project in that environment. It will be presented as a "Result-Based Statistical Framework" equivalent to the "Result-Based Logical Framework."

3.3.9 Monitoring development activities

The role of local government encompasses public policy design, formulation and implementation of economic programmes and projects, environmental protection, transport management, the delivery of basic services in urban and rural areas. This requires a systematic and timely delivery of local statistics which will be used by national and local governments to have a better understanding of local circumstances and trends in economy, infrastructure services and environmental and social protection.

Without a sound understanding of such realities, local government and other development stakeholders will not be able to make the most of existing opportunities, strengths and resources. Additionally, they will not be able to provide quality advice, information and services to various population groups and development actors in a given local area to ensure that appropriate outcomes are achieved. As part of their advisory responsibility, policy-makers wish to be kept abreast of the needs of the different segments of society and to forecast future needs. Specific policies, programmes and projects that will be developed and implemented to meet those needs will be monitored and evaluated to assess their relevance and efficacy.

Quality and detailed statistics should be made available for the smallest areas possible to gauge the degree and variability of success against a set benchmark as well as progress made over time.

3.3.10 Community participation

Inclusive growth is a key dimension of the democratic process. It entails the participation of all segments of society in major development aspects and the timely availability of quality information on envisioned and adopted decisions, achievements and future plans. Local communities will be able to actively contribute to the decision-making process.

3.3.11 Local areas in fragile or post-conflict states

For fragile or post-conflict states as well as areas bordering states in conflict or recovering from conflict, a minimum set of core statistics must be defined and collected. This may include and is not limited to data on:

- Proportion of population below poverty line
- Under-5 child mortality
- HIV prevalence rate of women aged 15-24
- Proportion of births attended by skilled health personnel
- Ratio of girls to boys in primary and secondary education
- Primary school completion rate
- Proportion of population with sustainable access to an improved water source
- Fixed lines and mobile telephone per 1,000 inhabitants
- Access of rural population to an all-season road
- Household electrification rate
- Displaced populations and refugees

- Market information on prices

3.3.12 Comparative advantages

A local area may need comparative statistics to assess disparities between different population groups or different zones within the area and decide on the most appropriate corrective measures. To ensure that such statistics are truly comparable, the same methodologies and classifications must be used, preferably by the same statistical unit, regardless of whether the unit is located inside or outside of the area. This centralisation of statistical comparison will also achieve economies of scale.

Likewise, a local government (or central government) may wish to gauge how a particular area compares with neighbouring areas or similar areas in in the country. Such comparisons are critical to measure the performances of local governments or to assess discrepancies in the efficacy and effectiveness of policies implemented by central government or a regional government across several local areas.

3.3.13 In summary

As indicated above, local statistics are needed for measuring development results and informing on a wide spectrum of political, administrative, economic and social issues. Local statistics for a local area are being or should be used within and/or outside the area in ways that have different patterns and degrees of complexity.

Many of the relevant statistical needs are met centrally by the national statistics office, or regionally by a regional statistics branch or further down, locally. Regarding the latter, internal processes exist, some of which are yet to be effectively coordinated, especially in developing countries. Other statistical needs cannot be met from existing data sources. A thorough assessment of statistical opportunities will be required with a view of meeting a wide range of objectives:

- engage with stakeholders
- empower local communities and populations
- provide a statistical framework to inform collective participation in local decision-making
- assess a situation and define a vision and mandate
- promote local economic development
- improve the response of local and central governments to local crises
- formulate mid- and long-term plans
- support fragile or post-conflict areas
- formulate policies and strategies
- design local development policies and programmes
- fight poverty and reduce intra- and inter-area inequalities
- improve the delivery of basic services, such as education, health and infrastructure-based services
- attract and secure business development
- budget, manage and implement
- increase transparency in expenditure management
- ensure that expenditures better benefit marginalised segments of the population
- monitor and evaluate
- inform project cycle and streamline the processes of monitoring and evaluating local programmes and projects
- leverage local opportunities

4. THE SUPPLY SIDE

4.1 Who are the providers of subnational data?

4.1.1 Statistical systems and units

Before discussing the above question, it is necessary to reemphasise that the national statistical system as a whole as well as local area statistical systems operate under the main national and subnational statistical units.

National Statistical System: The national statistical system (NSS) consists of various stakeholders who supply and produce/use data, including national institutes that provide training courses and undertake analytical research. The NSS also includes its co-ordinating statistical bodies. These many players consist of government and other public institutions, enterprises, civil society organisations and other non-profit organisations, and the general public.

Local Area Statistical System: The local area statistical system (LASS), if and where sub-national statistical systems exist, consists of data suppliers and producers as well as users and co-ordinators of the system.
Data suppliers and producers are primarily from the local area. However, the National Statistics Office (NSO) as well as statistics departments in line ministries that produce, aggregate and/or disaggregate subnational data related to their specific sectors should also be considered as belonging to the many relevant LASSs.
Users of local data are not limited to the relevant geographical area; therefore the group of stakeholders can be defined in a narrow sense by restricting it to data users, training and research institutions, business, civil society organisations and other non-profit organisations, and the general public that belongs to the local area concerned. In a broader sense, it is important to recognise the producers and users from outside the local area.

National Statistics Office: The acronym "NSO" will be used throughout the paper to refer to the National Statistics Office. It is the reference and central supplier, producer and disseminator of all national and subnational statistics. Where subnational statistics cannot be obtained from direct enquiries and administrative records, the NSO will estimate them by disaggregating the relevant national data/indicators.

Sectoral Statistics (Statistics Department): The phrase "Sectoral Statistics" or acronym "SS" will be used to refer to the statistical department in a particular line ministry. It is the reference and central supplier, producer and disseminator of national and subnational statistics related to the sector. When subnational statistics cannot be obtained from direct enquiries and administrative records, the SS may estimate them by disaggregating the relevant national data/indicators.

Regional Statistics Office (Regional/Provincial Statistics Unit): The phrase "Regional Statistics Office" or acronym "RSO" will be used to refer to the decentralised unit of the NSO that is in charge of statistical activities in a local area. Its role may range from collecting/retrieving and transmitting raw data related to the local area to the NSO for onward processing and dissemination of derived indicators to users in the local area and beyond.

Regional Sectoral Statistics Unit: The phrase "Regional Sectoral Statistics" or acronym "RSS" will refer to the decentralised unit of a sectoral ministry that is in charge of statistical activities in a local

area. Its role may range from collecting/retrieving and transmitting raw sectoral data related to the local area to the mother statistical department in the line ministry for onward processing and dissemination of derived indicators to users in the local area and beyond.

4.1.2 Structures of subnational statistical systems

Subnational statistical systems (SSS) or LASSs exist in any country where subnational functions are performed by local government units in the context of decentralisation or other systems of division of administrative and/or political work. A subnational statistical system is deemed institutionally established when there are one or more agencies in the local area whose official or de facto mission is to collect data on all or part of the economic or social aspects of the local area, in compliance with generally accepted statistical rules. In the absence of such agencies, the subnational statistical system will be considered as implicit or passive.

Institutionalised LASSs will be easier to identify and obtain information from when the national statistical office is centralised.

The institutional decentralisation of the National Statistical System can be discussed from the producer perspective, as whether the NSO has branches - referred to as regional statistics office (RSO) in the regions, or whether national sectoral statistics offices (SS) have branches - referred to as regional sectoral statistics offices (RSS) in the regions.

The hierarchical and synergetic relationships between regional branches (RSOs and RSSs) on the one hand and national departments (NSOs and SSs) are illustrated in figures 1-6 below.

Figure 1: Vertical: NSO-SS-RSS

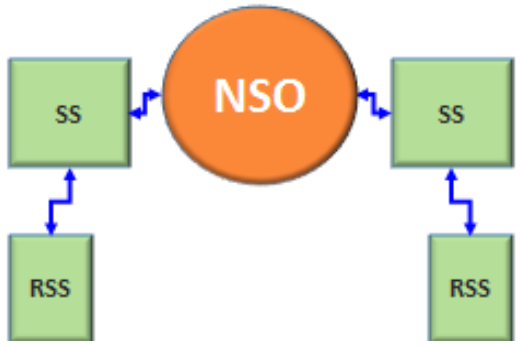


Figure 2: Vertical: RSO-NSO-SS

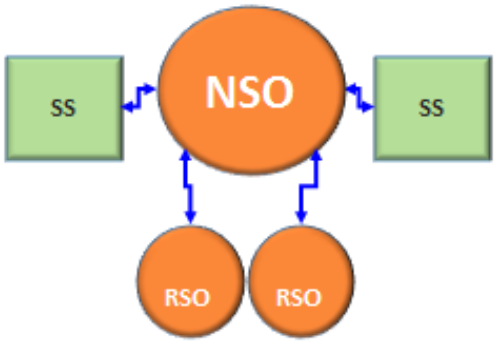


Figure 3: Vertical: SS-NSO-RSS-SS

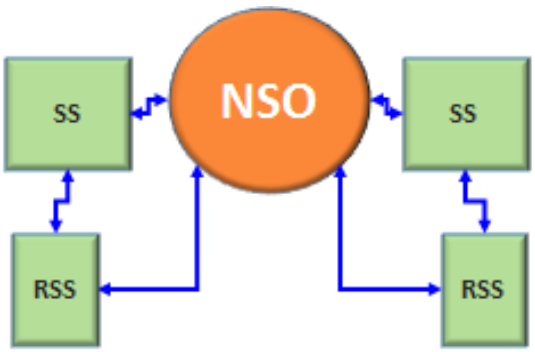


Figure 4: Vertical: RSS-SS-NSO-RSO

In figure 1, RSSs (Regional Sectoral Statistics Offices) report to their respective SS (national sectoral statistics offices) and the NSO has no regional branch. Such is the case in Uruguay where all research projects are performed centrally by INE although it has fieldworkers residing in each Department. Some ministries and public agencies have offices inside the country. Most of these offices are responsible for collecting and maintaining administrative data which are sent (often electronically directly to the central database) at the headquarters in Montevideo for the collection, processing and analysis for statistical purposes. Statistical projects based on censuses and sample surveys are generally co-ordinated and carried out from the headquarters in the capital city.

Figure 2 illustrates systems prevailing in countries like Congo-Brazzaville and Central African Republic where RSOs (Regional Statistics Offices) report to the NSO and sectoral statistical activities are not systemically devolved down to local branches in local areas.

In figure 3, RSSs report to both NSO and their respective SS (national sectoral statistics office). It is a good illustration of Mozambique's subnational system. Indeed, the INE organic statutes provide for the creation of statistical branches wherever necessary at subnational level in the national territory. Likewise, line ministries have sectoral representations at the provincial and district levels for collection of sectoral data at subnational level.

In figure 4, RSOs report to the NSO, and RSSs report primarily to their respective SS. This applies to Niger and more so to Ethiopia where the CSA has 25 statistical branch offices that implement the work programme. These branches are responsible for co-ordinating the data collection activities in rural and urban areas. There are also regional sectoral statistics offices (RSSs) in the regions that supply data to their respective national sector ministry, but as per the constitution, the regional agencies are accountable to Regional Governments. Therefore to some degree, figure 6 below also applies to Ethiopia. In The Philippines, the NSO has subsidiaries in the regions, provinces and municipalities. Likewise, other central departments have subnational offices at the same levels. Each local office gathers data at the subnational level and forwards them to the relevant central office for consolidation. Local offices also serve as outlets for dissemination.

Regarding the Indonesian subnational statistical systems, as reported in Rusman Heriawan, 2006, "to implement its programmes in the regions and to serve statistical needs of provincial and regency/city administrations, BPS is assisted by its representative office located in every province and regency/city, called BPS-Statistics Province and BPS[1]-Statistics Regency/City." Also, line ministries like the Ministry of Agriculture have subnational agencies that report statistics through a very well structured hierarchical system that involves local governments.

Figure 5: Horizontal

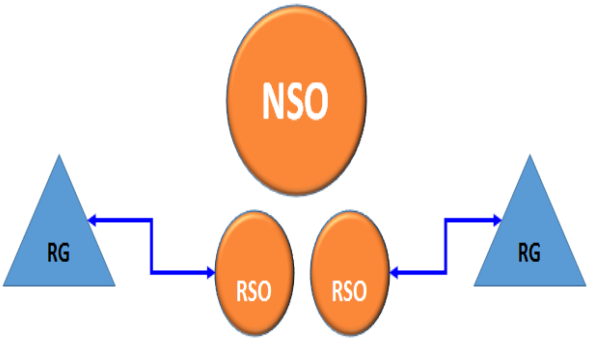
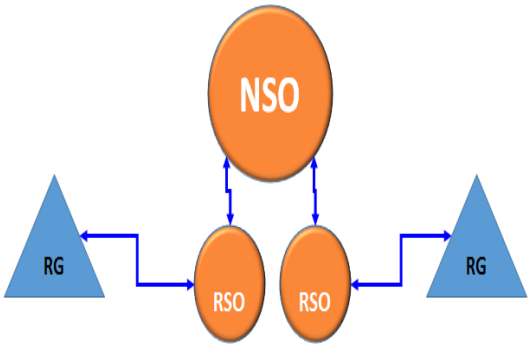


Figure 6: Triangular



In figure 5, RSOs report to Regional Governments primarily, as is the case in Germany. In The Philippines too the subnational system is decentralised, with statistical operations and activities undertaken by relevant government units. The Philippines' Constitution provides for "greater autonomy to the local governments in running their affairs". Subnational statistics are produced in accordance with this devolution of powers and functions from the national government to the local governments.

More generally, this pattern is found in all countries in the world where the processes of collecting and reporting education, health and civil registration and vital statistics mirror consistently the decentralisation/devolution of the delivery of relevant services. For instance, in Ghana, the birth and death registry is stratified from bottom up and comprises about 500 registries, 216 district registries and 10 regional registries, with the central office in Accra headed by the Registrar.

In Figure 6, RSOs report partly to the NSO and partly to Regional Governments. As noted above, to some extent, Ethiopia's case pertains to this category.

Either institutional arrangement implies certain co-ordination issues. Whether the system is efficient and effective highly depends on each country's specific circumstances: the size of the country, the political system, legislation, statistical act, government structure, geographical features, etc.

Basically, there are three types of institutional arrangement forms: vertical (Figures 1-4), horizontal (Figure 5) or triangular (Figure 6). In each case, there can be several hierarchical layers of subnational statistical agencies: e.g. the district level, and above it, the department level, and further up, the provincial level.

The vertical system is one in which regional statistical offices are exclusively controlled by and report to the national statistical office. In this case, the role of subnational statistics offices is essentially or exclusively data collection or retrieval as demanded by the NSO, according to the NSO's programme of work and technical methodologies. Such a system is easier to coordinate, but it is no guarantee for greater policy relevance in the work conducted at subnational level.

In developed countries like France and Canada, vertically controlled regional offices are responsible for data collection and other tasks such as the dissemination of statistics to local constituencies. In Australia, the regional offices are specialised in different areas of national interest. For instance, the Melbourne region is in charge of service statistics for the entire country.

In the horizontal system, a regional statistics office reports to regional government. Such is the case in federal systems of Government like in Germany, Switzerland and Nigeria. In Germany, "cooperation between the Federal Statistical Office and the statistical offices of the state Governments is based largely on a complex system of agreements about data collection, statistical standards and other issues.[2]"

The triangular system is a combination of vertical and horizontal systems where: (i) on some aspects regional offices report to NSO while reporting on other matters to regional government; or (ii) some layers of subnational agencies will report to NSO whereas other layers report to regional

[2] Handbook of Statistical Organization, Third Edition: The Operation and Organization of a Statistical Agency

government. In Spain, regional statistical offices in autonomous regions report to regional government, but provincial statistical offices in the same autonomous regions report to NSO.

In reality there are more complexities than that. These are better illustrated by a tree that discriminates systems depending on budgetary and/or administrative control; sectoral/thematic relationship; strategic decision; methodological authority and coordination; scope of statistical work; output delivery; and quality control. A thorough analysis of each LASS is required to disentangle those complexities and identify the appropriate institutional links that must be activated or strengthened or amended to improve the functioning and efficiency of the LASS.

4.2 Primary responsibility for collecting and retrieving local data

By and large, Statistics Acts, provide for local area data to be collected or retrieved by the relevant local area statistical agency or the regional statistics office whose statistical jurisdiction includes the said local area. However, this is implemented in differing ways that do not seem to be guided by a comprehensive statistical strategy for the local area. This lack of common pattern is illustrated by the differing situations below that range from subnational statistical systems not being structured or institutionalised to the existence of autonomous systems.

Ethiopia

Woredas are responsible for preparing and implementing their developmental plans without seeking authorisation from higher levels. Besides, the Federal Ministry of Finance and Development (MoFED) and its counter parts the Regional Bureaus of Finance and Economic Development (BoFED) have substantial inter and intra contacts with data providers (regional sector bureaus) and federal ministries, agencies and authorities along with CSA and other coordinating agencies. There is an e-government network linking the woredas with the regional government offices and federal government headquarters.

Indonesia

Prior to 2001, during the period of centralised governance, the standard arrangement was for each level of government to compile data for the next lower layer. Thus, the central government compiled and published data for provinces, while the provinces compiled and published data for the regencies and cities, and the later compiled and published data for the districts. At present, however, such an arrangement no longer appears suitable for Indonesia. Inasmuch as the critical level below the central government is now the regency and city, a clear need has appeared for a central database of indicators for regencies and cities.

Although a vision of such a database has emerged in the context of decentralisation, progress towards it has been painfully slow. In the Nineties, the UNDP published a Human Development Index by regency and city based only on four indicators, all from BPS household surveys. Today, some 20 years later, BPS can provide a database consisting of 25 indicators (from household surveys) for 2013, for monitoring the realisation of the MDGs at the regency-city level. Although thousands of other indicators exist in the form of sectoral data, many of the indicators are compiled in an uneven and even tardy way, so that it is not yet possible to compile the data promptly for such a database. The line agencies have large data collection operations but have not yet managed to disseminate their data in a timely and disciplined way at the regency-city level. For these reasons, household surveys provide the source for all 25 indicators used by the MDGs Secretariat for monitoring MDG achievement at the regency and city levels and for nearly three-quarters of the 47 indicators used at

the provincial level.

Mozambique

Subnational data covers major user needs that are already identified and relates to new demands, in response to policy requirements. There is a gradual improvement in capacity development and use of local statistics, though the overall situation is quite challenging given the disparities between districts in terms of infrastructure, human resources and materials.

A lot of work remains to be done especially in the institutional mechanisms to transfer statistical processes from central to lower levels, and to resolve or avert conflicts between agencies producing subnational statistical information.

Uruguay

Apart from cases (such as for vital statistics) where exclusive responsibilities rests with specific institutions, in Uruguay, subnational data can be produced by multiple institutions. There are no mechanisms or procedures to resolve conflicts or potential conflicts arising from such duplications of work.

Most statistics generated by subnational statistical agencies are derived from administrative data. They are submitted to the relevant headquarters for onward consolidation and processing.

Statistical operations of national nature and scope are managed by the NSO or the statistics department of a line ministry. These include censuses and sample surveys. They are not conducted at subnational level; however, the results thereof are disaggregated down to regional levels if the sample design permits.

Philippines

In The Philippines, the subnational statistical system includes all statistical institutions at the subnational level and their personnel as well as all subnational statistical programmes. Local institutions include a regional statistical coordination committee, the local statistics office, all the departments, offices and agencies – irrespective of whether they report to regional, local or national governments - that are involved in statistical activities at subnational level. Regional units of the National Statistical Coordination Board (NSCB) are in charge of coordination at the subnational level.

Autonomous statistical services at subnational level

Some subnational statistical systems are organised as autonomous entities. Indeed, there are countries that are organised as federations of states or have autonomous regions or territories. These lower level governments might be granted some degree of political and/or administrative autonomy that justifies their statistical autonomy.

Nigeria, China, UK, Netherlands, and France have such autonomous subnational statistical organisations whose mandate is primarily to respond to local needs for statistics and complement the production of national statistical data.

Community based data collection systems

In spite of the current absence of strategic framework to develop subnational statistical systems, it seems natural to suggest that such systems should be organised through wide partnerships involving all major stakeholders who will recognise and promote community-based data collection systems or community-based monitoring systems.

In the latter systems, truly empowered local communities are the main drivers of data collection and management processes to track changes and local impacts of policies, programmes, projects, public services and other measures implemented in their region, city or village.

Examples of such community-based data management systems exist in differing ways and organisational structures in many countries: Benin, Burkina Faso, Bangladesh, Cambodia, Guinea, India, Mali, Nepal, Pakistan, the Philippines, Senegal, Sri Lanka, and Vietnam. They facilitate inclusive decision-making on critical development and administrative issues at local level. In India, the Indian Journal of Community Medicine considers community-based monitoring (CBM) as "key to success of National Health Programs". In Sub-Sahara African countries such as Benin, Guinea and Mali that implement the Bamako Initiative[3], CBM has strengthened the power of local communities in the management of health services for the poor.

The community-based monitoring systems are designed to ensure that properly defined data are collected by the communities and used them while being shared with other local or national entities. The advantages of such systems include low-cost, data relevance, knowledge of the situation on the ground, ease of triangulation and validation, timeliness, and sustainability.

Main challenges identified

It is noted that national statistics offices are not systematically involved in the interaction between CBMs and local government units. This challenge adds to other challenges identified above and which can be summarised as follows:

- CBMs and other local agencies collecting data do not necessarily benefit from technical guidance and capacity building from national statistics offices;
- Subnational data sets do not always meet desirable quality requirements;
- In some countries, such as Indonesia and Kenya, subnational statistical activities are concurrently implemented on the one hand by the Central Statistics Offices and/or its local branches, and on the other hand by local government units;
- The subnational statistical system, whether it is formally defined or not, is not systematically coordinated;
- In some countries, subnational statistical agencies representing line ministries do not mandatorily report to the National Statistics Offices and/or its local branches;
- Not all methodologies used in the subnational statistical system are defined or recommended by the National Statistics Office and/or its local branches;
- User-producer dialogue for subnational statistics is not established in all the countries;
- There is no common pattern of subnational statistical systems.

3 The Bamako Initiative was adopted by "African health ministers in 1987 in Bamako, Mali, to implement strategies designed to increase the availability of essential drugs and other healthcare services for Sub-Saharan Africans." - Wikipedia

5. IMPROVING SUBNATIONAL DATA

5.1 Basic principles

In view of the above, we have identified five basic principles that would apply in the efforts of strengthening any subnational statistical system however complex it may be. They would complement and reinforce the guiding principles of NSDS. These are: jurisdictional delineation, legal recognition, two-way subsidiarity, statistical participation, and local relevance.

5.1.1 Jurisdictional delineation

There are three major dimensions in the identification of subnational statistical systems: (i) geography- which local area statistics refer to; (ii) data- which local statistics are needed and produced and; (iii) institutions- who are the producers, users, and disseminators of data and the coordinators of relevant activities?

The geographical dimension implies a geographical stratification of national economy using a classification of administrative or geographical territories. Two decisions will be considered: (i) firstly, at which levels will subnational statistics be disaggregated, collected and disseminated; (ii) secondly, where are or will subnational statistics offices be established and what is their jurisdiction. The boundaries of each jurisdiction will be indicated clearly, in terms of which territorial units make up the jurisdiction for a particular statistics office.

The data dimension requires: (i) subnational data be assessed at national level in the context of the regular NSDS process; (ii) a complementary process be conducted by subnational statistics offices to identify needs that are exclusively of local nature.

A local area statistical system will be delineated in both narrow and broader senses. In the narrow sense, it includes local stakeholders only, whereas, in the broader sense that better reflects reality on the ground, it also includes national and sectoral producers of subnational data as well as users from outside the local area.

5.1.2 Legal recognition

The legal recognition of subnational statistics is needed to ensure that subnational statistics are produced within clearly defined frameworks. It entails acknowledging existing local area statistical agencies (LASA) as the primary compilers and custodians of subnational statistics, and underlining their role in mainstreaming local statistics in local and national development objectives. Where such LASAs don't exist, the statistical act will either provide for their creation or clearly state how responsibilities of producing subnational data and co-ordinating activities thereof are shared among existing national and sectoral agencies.

The national statistics act will determine the manner in which local area statistical agencies are established. Regardless of the existence of LASAs, it will determine the role and scope of the responsibilities, duties and functions, as well as the reporting obligations of central and sectoral statistics offices with respect to subnational statistics. It will also include an inventory of statutory and administrative frameworks under which all LASAs across the country operate.

5.1.3 Two-way subsidiarity

The subsidiarity principle suggests that if sufficient and appropriate resources (time, budget, expertise, equipment, etc.) are available, a local government may conduct all or part of required statistical operations on their own. Given the trade-off between data quality and the level of top-down disaggregation, decentralisation of statistical activities to the local level wherever possible should be preferred to estimating or disaggregating indicators from a top-down approach. However, there are activities that are best conducted by a central statistics office, either the NSO itself or a sectoral statistics office, e.g. population censuses, national accounts, etc.

5.1.4 Statistical participation

As noted above, statistical decentralisation will better support democratisation, good governance, citizen engagement and participation through inclusiveness and empowerment of citizens. Local participation is particularly justified when human resources are limited. It entails recognising the roles of various groups of local society in collecting and producing data, whether formally or not. It suggests some kind of Public-Private Partnership for local area statistics, where non-governmental organisations, community-based organisations, the private sector and other interested stakeholders will be associated with some aspects of data production essentially through their daily transactions.

Such partnership will ensure that the voice of the weakest and the poorest is heard and the characteristics of the various segments of society, including identifiable ethnic and minority groups, and gender categories are better reflected in the statistics.

Particular attention will be paid to the youth in these efforts of promoting statistics as a democratic tool, an objective instrument of social dialogue and a common language in the economic participatory decision-making process.

As such, statistical participation is a broader way of achieving serviceability and accessibility, and providing statistical experts from local areas with all strategic information they need to effectively contribute to designing statistical strategy at national level.

5.1.5 Local relevance

As noted earlier, local policies include planning, implementation and monitoring of development and administrative activities, as well as the provision and delivery of facilities and services to local populations. To ensure that such local development objectives are met, the local relevance of subnational statistical activities should be thoroughly reviewed by the appropriate national or regional bodies as is the case in the Philippines. The role of these bodies includes ensuring and assessing the availability and quality of subnational data with respect to meeting local development objectives.

5.2 Subnational Statistics Development Strategy

The above principles will be borne in mind while contributing to the development of an integrated strategy for the development of subnational statistics. The strategy will be prepared in the same way as the NSDS, as an integral part of it, however some characteristics of subnational systems warrant special attention.

5.2.1 Scope of a Subnational Statistics Development Strategy

Whether it is initiated at national, regional or local level, the Subnational Statistics Development Strategy (SUBSDS) can only be national, consolidated and concluded at national level, and as such, included as a component into the NSDS, for 10 major reasons related to: (i) legal framework; (ii) administrative authority; (iii) budgetary and infrastructure constraints; (iv) mainstreaming; (v) needs assessment; (vi) methodological development; (vii) survey requirements; (viii) inter-regional consistency and comparability; (ix) scope of priorities; and (x) sharing of best-practices.

i. Legal framework – In most countries, the law bestows all powers for the production of national data to the NSO or delegates parts thereof to statistics departments in line ministries. Powers delegated to regional statistics offices are generally limited to statistics that have no national bearings or implications.

ii. Administrative authority – A local government may not have the required authority to co-ordinate statistical activities conducted by local administrative units that report directly to their headquarters at national level. Some key activities taking place in the local area may be decided and/or implemented by government units that do not report to local government or are not even established in the local area. Such is the case for population censuses, household expenditure surveys, etc.

iii. Budgetary and infrastructure constraints – Complex activities require budgetary means and material infrastructure that may not be fully available at local level. Material infrastructure includes computers, transport equipment and other specialised equipment required for price surveys, agricultural surveys, etc.

iv. Mainstreaming – Considering local statistics development as being largely influenced and guided by national statistical development itself, subnational statistics must be mainstreamed as a cross-cutting sector in the development process. A subnational statistical component should be included in the development plans at subnational and national level in a co-ordinated manner.

v. Needs assessment - The formulation of development agenda at subnational and national levels requires priority data needs to be identified concurrently at both levels. These are both national data that will require disaggregating and subnational data that is directly compiled.

vi. Methodological development – Local governments may be constrained by the following limitations:

- Local governments or statistical agencies may not possess the required statistical expertise in the relevant statistical fields to develop sound methodologies.
- They may not master/harness all required statistical infrastructure.
- The statistical act may provide for methodological design and development to be exclusively managed by the NSO or under NSO co-ordination.
- Local governments or statistical agencies may not be able to identify or hire suitable experts from outside the local area or the country to help them develop methodologies.
- The staff of local governments or statistical agencies may not be kept abreast of major developments of international standards and norms.

vii. Survey requirements – In implementing locally driven surveys, local statistical agencies may be constrained by the methodological issues above. This is particularly obvious for large benchmark operations such as population census, agriculture census, household expenditure surveys, etc.

viii. Inter-regional consistency and comparability – For subnational data to be consistent and comparable over space, especially between same level local areas, methodologies used must be identical or at least harmonised. Some statistical operations even need to be conducted simultaneously across regions or at least in the same time frame. This is the case for surveys on migrations and epidemics. Some other operations require centralised validation and processing to ensure quality, comparability, aggregation and consolidation.

ix. Scope of priorities – National priorities related to a local area and locally defined ones may not be identical, however they intersect largely. Both need to be taken into account in designing a SUBSDS.

x. Sharing of best-practices – Sharing and leveraging best practices within a country requires inter-regional co-operation that is more easily developed between neighbouring regions, but may prove difficult between remote regions. Only a central agency with a bird's-eye view of the strengths, weaknesses, opportunities and threats that exist nationwide can identify best practices to be shared between regions.

5.2.2 Needs assessment

Identifying users of subnational statistics

There are four (4) main categories of users who use subnational statistics:

- The regular users identified in the National Statistical System
- Local users interested in local area statistics
  - local government of the area; locally established NPISH and communities; local education establishments; business enterprises in the local; local public at large
  - same users as above, but established in neighbouring areas
  - same users as above, but in neighbouring countries or regions across the border if the local area is on a country's border
- International organisations interested in community development and the development of local governments, such as UN-Habitat and United Cities and Local Governments (UCLG)
- Regional economic communities whose mandates include cross-border trade and migration, regional integration, environment, regional peace and security, health epidemics, etc.

Categories of needs

In addition to the needs identified in the NSDS, special needs of local areas must be identified with a view to covering all development and management objectives pertaining to the following categories:

- Administrative and regulatory functions
- Local planning

- Infrastructure development
- Meeting Sustainable Development Goals
- Inclusive growth
- Business development
- Project statistics
- Monitoring development activities
- Community participation
- Local areas in fragile or post-conflict states
- Policies in favour of minority groups
- Comparative advantages

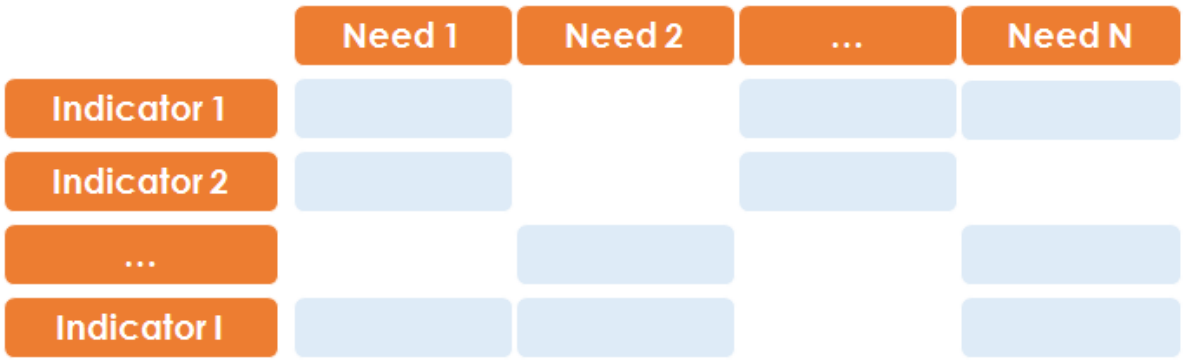
While identifying those needs, a distinction will be established between needs of local interest and those of national relevance. The latter includes needs that are common to all or several regions/local areas, as well as needs that concern only one region or local area but are deemed of national interest such as needs related to national security, immigration, refugees, environment, public infrastructure, education, health, etc.

5.2.3 Translating needs into subnational statistical activities

Subnational indicators to be generated

For each need or category of needs, a list of indicators and metadata will be prepared. As a particular need requires several indicators and one indicator may serve several needs, a matrix of subnational statistical indicators (SUBIND) will be created. At this stage the feasibility of generating the indicators through top-down disaggregation or direct collection and processing at local level will not be discussed. This issue will be addressed under the next two steps.

Figure 7: SUBIND



Identifying data gaps

The SUBIND can be presented as a subnational statistics availability/gap matrix (SUBGAP) that indicates which indicators will be generated among those selected from the SUBIND. For each indicator, the matrix will show whether it can be obtained through top-down disaggregation or directly, if it is available on a regular basis at a particular spatial or subnational level, and where it can be obtained from. If data are not available, an agency will need to collect them at the appropriate frequency. The matrix may also highlight the needs of subgroups existing in the local area. The matrix may be customised to include additional details.

Data gaps will be filled by disaggregating national indicators, improving administrative records, leveraging privately owned records or conducting appropriate data collection.

Data disaggregation will be done in accordance with international recommendations, standards and norms. The adaptation to national circumstances rests with the appropriate central department, either within a line ministry or in the NSO. As far as possible, nationally customised standards must recognise and take account of local area specific situations and needs.

Administrative records should be enhanced. As part of the process of developing and implementing a SUBSDS, a review of administrative records and privately owned records of public data and information should be conducted. The review will include an inventory of existing records at national, regional and local/community level, a quality assessment, confidentiality requirement verification, the identification of gaps, and necessary recommendations.

Figure 8: SUBGAP

	Availability Yes/No	Subnational Level	Existing Data Sources	Required Operations	Frequency	Responsible Agency
Indicator 1	Yes	Regional	Regional accounts	Disaggregation		Region 1 Stats. Office
Indicator 2	No	District		Labour survey	5 years	LASA
...						
Indicator I	No	Regional		Price survey	Monthly	Region 2 Stats Office

Statistical dependencies

In determining the framework for the production of subnational statistics, there is a need to recognise the differing strengths and weaknesses of the various statistical agencies across the country in terms of staffing, expertise and statistical and technical infrastructures. Existing resources will be optimally used in implementing the different steps of the operations identified in the SUBGAP. Each operation will be split into steps, phases or modules against which the required expertise will be assessed in the most optimal way. For example, for a particular survey to be conducted in a particular local area, the methodology can be designed at the NSO central level; field data collection can be carried out by the local area statistical agency; survey supervision can be performed at a higher level by a regional statistics office; validation and processing can take place in a different region; etc. This division of work will be captured in a Subnational Matrix of Operation Details (SUBMOD). If a particular indicator cannot possibly be estimated or disaggregated or if the underlying data cannot be collected, this will be noted in the matrix.

Figure 9: SUBMOD

	Methodological & Sample design	Field data collection	Validation	Processing	Reporting
Operation 1	NSO	LASA	Regional office	NSO	Region 1 Stats. Office
Operation 2	Ministry of Education	LASA	LASA	NSO	NSO
...					
Operation P	Central Bank	Regional office	LASA	Central Bank	Central Bank

In reality there are more complexities than suggested in this simplified SUBMOD. As noted under "3.1.2 Structures of subnational statistical systems" all dependencies that bind producers of subnational statistics with governments or private institutions that have some degree of control over them (budgetary and/or administrative; sectoral/thematic; strategic decision; methodological authority and co-ordination; scope of statistical work; output delivery; and quality control; etc.) should be thoroughly analysed. Mutual dependencies between those producers should also be highlighted. This will help identify institutional or technical links that must be activated, strengthened or amended to improve the functioning and efficiency of subnational data producers.

Dependencies will be reviewed through dependency structure matrices as illustrated in the below simplified subnational dependency structure matrix (figure 10).

Figure 10: SUBDSM

	Institutional control				Technical synergy					
					Local Area Statistics Agencies			National, Central, Sectoral Statistics Agencies		
	Inst.1	Inst.2	Inst…	Inst.Y	LASA 1	LASA …	LASA L	Prod. 1	Prod …	Prod. p
LASA 1	C	C	C	C		D	D	D	D	D
…	C	C	C	C	D		D	D	D	D
LASA L	C	C	C	C	D	D		D	D	D

LASA = Local Area Statistical Agency; Inst. = Institution that exercises control; Prod. = Producers of statistics at national/central/ sectoral level; C = Description of the type of control that is exercised; D = Description of type of dependency or synergy between producers of statistics.

All the above information calls for the establishment of sound co-ordination mechanisms and effective sharing of best practices. For example, inter-area peer reviews should be conceptualised and carried out on a regular basis. It also suggests that staff must be properly skilled and trained so that synergies can be developed horizontally between local areas and vertically between local areas and higher level agencies in regions or at national level.

5.2.4 Building capacity

The service conditions of statistical employees should include at least one locally deployed professional statistician who will strive to understand local economic and social circumstances, in order to contribute to local development debate and translate all resulting information into statistical requirements. Adequate training opportunities, remuneration and career prospects should be provided to local statistical employees in order to enable LASAs to reach a high quality performance in the delivery of subnational statistical services.

5.2.5 Providing adequate resources

These include legal framework; statistical infrastructure; human resources; physical resources; quality assurance framework; and reporting mechanisms.

The emerging increase in the subnational statistical functions to be discharged at various levels should be accompanied by measures that build relevant statistical capacity to exercise necessary functions. This includes ensuring that other spheres of local, regional and national government provide support to LASAs in the development of their technical capacities. Relevant partnerships arrangements will be developed as part of the NSDS design and implementation processes. In this respect, the NSO will play a major role in ensuring that national, regional and local responsibilities are differentiated in the NSDS, in order to clarify the respective roles and responsibilities and to guarantee access to the resources necessary for local areas to carry out their respective statistical functions. Indeed, all knowledge, methodological and expert resources available at central/national level should be optimally made available to relevant local agencies whenever such resources are required to implement local area statistical activities.

LASA's financial resources should commensurate with their tasks and responsibilities and ensure sustainable delivery of good quality statistics. As far as possible, budgetary allocations to LASAs from regional or national statistics offices or governments should respect priorities as set forth in the NSDS or its SUBSDS components.

Another possible source of funding for subnational statistical activities relates to development projects that are implemented in local areas. The NSO should study and discuss the possibility of earmarking a small fraction of the total budget of each development project or programme being implemented in the local area with the appropriate government authorities. The earmarked allocations will be used to generate statistics covering the whole spectrum of government and community activities.

5.3 Co-ordination Mechanisms

The National Statistics Office (NSO) should lead the co-ordination process of developing and/or strengthening the subnational statistics system. The NSO has a number of advantages to co-ordinate this process as it remains an influential and trusted local institution with constant contacts with many national Ministries trickled down to local levels. The NSO also better understands the local politics and governance of data users in addition to having a practice of respecting confidentiality based on their legal mandate. Working with a number of communities through censuses and surveys, the NSO already has a better understanding of on-going activities at the community level that can be integrated into the LASS and subsequent national and international data needs.

6. CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Subnational functions performed by local government units cover the entire spectrum of government activities, ranging from general public services to social protection, including defence, health and education. However, it has been noted that data needed to inform policies and support economic, social and other activities are generally obtained through disaggregation processes. This is mainly justified by the fact that, as is widely recognised in the literature, national statistical systems have been largely developed to meet national and international needs for aggregated data derived from one-off sample surveys that generate averages and other consolidated indicators of national relevance.

However, many of these indicators do not necessarily answer questions raised, explicitly or implicitly by local policymakers and development stakeholders or indeed various subgroups including on-going community activities. These data are, on one hand, too aggregated and sparse and do not shed light on the understanding of sub-national economic and social dynamics. On the other hand, they are not linked to the activities of local institutions at large. The latter requires statistics to be seen as a quantitative mirror to be used by any citizen to look at himself/herself in relation to the economic and social environment around him/her. It calls for a new statistical paradigm that will allow a ripple effect approach in defining, producing, reading and using data. The use of records from ongoing activities at local or community level forms an important part of strengthening subnational statistical system and will cover most of the subgroups at that level.

To contribute to the emergence of this paradigm and thus better meet the increasing demand for development data, the subnational component of national strategies for the development of statistics should be rationalised and streamlined under the co-ordination of the National Statistics Office.

6.2 Recommendations

The following recommendations are being submitted accordingly. They may be considered by various countries, regional and international organisations, donors and other statistical stakeholders in the order of implementation indicated below.

6.2.1 Priority recommendations:

United Nations Statistics Division and Division for Sustainable Development

1. Prepare a methodological document on the development of classification of territorial units (CTU)
2. Encourage and assist regional and sub-regional economic communities to develop common CTUs to be customised and implemented by their member countries

Regional Economic Communities, National Statistics Offices and PARIS21

3. Develop CTUs to be customised and implemented in countries

United Nations Statistics Division and Division for Sustainable Development

4. Develop a manual on subnational statistics that will, inter alia:
    - Set the conceptual and methodological framework for the production and delivery of subnational statistics

- Serve as a compendium of methodological prescriptions and recommendations included in statistical manuals and handbooks
- Address the issue of subnational disaggregation
- List subnational indicators to be generated at the subnational level that will respond to international demands such as the SDGs
- Address the challenge of inter-local area consistency and comparison of subnational data, both within a country and across neighbouring countries
- Propose streamlined processes for the production of subnational statistics in fragile or post-conflict states

UN Regional Economic Commissions, UNDP, PARIS21 and Regional Economic Communities

5. Prepare a manual on the development of a country's integrated subnational statistics development strategy that will also include advice to local governments on the development of strictly local strategies for the development of local statistics
6. Ensure that the above manual proposes/recommends: (i) approaches to enhance and rationalise the alignment of data collection/retrieval with administrative recording systems/methods; (ii) partnership/collaboration between all producers of subnational data

6.2.2 Other recommendations:

United Nations Statistics Division, and Academic or Research Centres

7. Develop a methodological document on the development of subnational statistics related to Non Profit Institutions Serving Households (NPISH) that operate essentially at the subnational level

United Cities and Local Governments and PARIS21

8. Work with local communities that keep records as on-going processes to integrate them into local statistics systems

National Statistics Offices

9. Capacitate local level statistical personnel on data anonymisation processes to ensure confidentiality of data at such local level area

Multilateral Development Banks, Other Donors and Sub-Regional Development Banks

10. Create and lead an international expert group for the development of a conceptual and methodological framework for project statistics, with special emphasis on their subnational dimensions and implications
11. Share operational data on development projects and programmes with relevant NSOs in beneficiary countries

Regional Economic Communities, National Statistics Offices and PARIS21

12. Have the proposed matrices (subnational statistics availability/gap matrix –SUBGAP; matrix of subnational statistical indicators – SUBIND; subnational matrix of operation details –SUBMOD; and subnational dependency structure matrix - SUBDSM) tested in selected pilot countries.

6.2.3 Tentative Action Plan

The above recommendations can be implemented after a preparatory stage (see Figure 11 below – Time Table) to be conducted by the UN Division for Sustainable Development (DSD) and PARIS21, in terms of: (0a) building partnerships around the recommendations, under the overall framework of SDG implementation; (0b) estimating required resources with willing partners and agreeing on a tentative timetable. Five to seven months may be necessary for this initial phase.

Six priority projects are recommended. The preparation of a methodological document on the development of CTUs (Recommendation 1) will be proposed to UNSD and DSD. It will require five months of implementation. The two UN divisions will also promote the development of regional and sub-regional CTUs (Recommendation 2) and lead the process of developing a manual on subnational statistics (Recommendation 4) for which an expert city-group may need to be established under United Nations Statistical Commission (UNSC) arrangements. In regard to the 3rd recommendation - CTUs customisation and implemented in countries - it will require the involvement of countries with support from Regional Economic Communities and PARIS21.

The other two priority recommendations will be submitted to Regional United Nations Economic Commissions, UNDP and PARIS21. They will prepare a manual on SUBSDS development (Recommendation 5) – with PARIS21 spearheading this initiative –and promote the development of SUBSDS (Recommendation 6) as a continuous process to be embedded in NSDS development processes at country level.

The other six recommendations will require broader partnership arrangements. Recommendation 7 - Preparation of manual on the development of NPISH-related subnational statistics – will be suggested to United Nations Statistics Division, Academic and Research Institutions and PARIS21 who will leverage the existing Handbook on NPISH in the SNA. United Cities and Local Governments, and PARIS21 will develop guidelines on local statistical participation (Recommendation 8) to be subsequently used in the SUBSDS design process. The 9th recommendation will be implemented on a continuous or need basis by national statistics offices in terms of capacitating local level statistical personnel on data anonymisation.

Multilateral Development Banks such as the World Bank, the Asian Development Bank, the African Development Bank, etc., the other donors as well as sub-regional development banks will join forces and resources to develop a framework for subnational statistics on development projects (Recommendation 10) and commit to sharing their operational data on development projects with national statistics offices (Recommendation 11).

Regional Economic Communities, countries and PARIS21 will ensure that the 12th recommendation related to piloting matrices on subnational statistical systems is implemented.

Data from subnational statistics systems needs to be used to strengthen community participation, transparency and local level development and feed into the national and international data system on an ongoing process.

Figure 11-Time Table

Activities	Institutions	M -6	M -5	M -4	M -3	M -2	M -1	M 0	M 01	M 02	M 03	M 04	M 05	M 06	M 07	M 08	M 09	M 10	M 11	M 12	M 13	M 14	M 15	M 16	M 17	M 18	M 19	M 20	M 21	M 22	M 23	M 24	M 25	M 26	M 27	M 28	M 29	M 30
A. Preparatory Stage																																						
0a Build partnerships around below activities under the SDG Implementation	DSD/P21																																					
0b Estimate required resources with willing partners	DSD/P21																																					
B. Priority Actions																																						
1. Prepare methodological document on the development of CTUs	UNSD/DSD																																					
2. Promote the development of regional and sub-regional CTUs	UNSD/DSD																																					
3. Develop CTUs to be customised and implemented by the countries	REC/NSO/P21																																					
4. Develop manual on subnational statistics	UNSD/DSD																																					
5. Preparation of a manual on SUBSDS development	RUNEC/UNDP/P21																																					
6. Promote the development of SUBSDS	RUNEC/UNDP/P21																																					
C. Other Actions																																						
7. Preparation of manual on the development of NPISH-related subnational statistics.	UNSD/JHUCCSD/P21																																					
8. Development of guidelines on local statistical participation	UCLG/P21																																					
9. Capacitate local level statistical personnel on data anonymisation	NSO																																					
10. Development of framework for subnational statistics on projects	MDB/Donors/SRDB																																					
11. Share operational data on development projects	MDB/Donors/SRDB																																					
12. Pilot matrices on subnational statistical systems	REC/NSO/P21																																					

DSD/P21	Division for Sustainable Development and PARIS21
UNSD/DSD	United Nations Statistics Division and Division for Sustainable Development
RUNEC/UNDP/P21	Regional United Nations Economic Commissions, UNDP and PARIS21
UNSD/JHUCCSD/P21	United Nations Statistics Division , Johns Hopkins University Center for Civil Society Studies and PARIS21
UCLG/P21	United Cities and Local Governments and PARIS21
NSO	National Statistics Offices
MDB/Donors/SRDB	Multilateral Development Banks, Other Donors and Sub-Regional Development Banks
REC/NSO/P21	Regional Economic Communities, National Statistics Offices and PARIS21

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