



# AMIGA



SDG-Indicator Working Group  
SDG-IWG

**SDG-INDICATOR WORKING GROUP ARUBA**

FEASIBILITY STUDY 2018 WITH

**ARUBAN MODEL FOR INDICATOR GENERATION  
ASSESSMENT**



AMIGA



pa nos  
*Dushi Tera!*

SDG-Indicator Working Group  
SDG-IWG





“A robust follow-up and review **mechanism** for the implementation of the 2030 Agenda for Sustainable Development requires a solid framework of **indicators** and **statistical data** to **monitor** progress, inform **policy** and ensure accountability of all stakeholders.”

– *United Nations*





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# Executive summary

The SDG-Indicator Working Group (SDG-IWG), as a working body within the National SDG Institutional Framework of Aruba, with the main purpose of leading and coordinating the monitoring and evaluation of the SDGs and of supporting the establishment of the National Statistical System in Aruba, is responsible for addressing the relevant issues regarding the data needed in order to produce the SDG indicators.

To fulfill this responsibility, the SDG-IWG executed a feasibility study to address the bottlenecks and needs for the production of each Global SDG indicator in Aruba. In the process of the feasibility study, a model was created using inspirations from primarily United Nations' (UN) tools and methodologies: the Aruban Model for Indicator Generation Assessment, AMIGA. AMIGA provides a detailed mapping of: indicator applicability, indicator availability according to UN methodology and requirements, the feasibility of production of SDG indicators within a short period of time (2-3 years), the available data sources, the experienced bottlenecks in availability of resources, the needs related to the bottlenecks, an overview of the necessary financial investments, and a calculation of the statistical capacity to produce SDG indicators.

Pillar Planet, being a domain in development with regards to the availability of data and the necessary measurement instruments, has the most challenges. Pillar People and Prosperity are the most developed domains as there is already a tradition of collecting data in these domains. Pillar Partnership is a pillar with a different character, as it has primarily indicators for which compilation of the data is done by external agencies using external sources. The assessment of Pillar Peace remains a challenge due to the lack of available standardized data and also due to the unavailability of the necessary specialized human resources.

Overall, the current availability of SDG indicators and the feasibility of producing SDG indicators in the short term, depict a relatively positive scenario. However, the legislative aspect and the necessary institutional arrangements, pose the greatest challenge for the production of SDG indicators in Aruba.

By working in close collaboration with stakeholders in a structured manner, where roles, responsibilities and processes are clearly described and the undertaken efforts are evaluated, Aruba will be able to use its financial and human resources more efficiently.



## About us

The SDG-Indicator Working Group was installed by ministerial decree in January 2017 and is a working body within the National SDG Institutional Framework. The SDG-Indicator Working Group is a collaboration between different Governmental Departments and the National Statistical Office (NSO), with the main purpose of monitoring and evaluation of the SDGs and of supporting the National Statistical System in the integration of SDG indicators in policy making and the production of high quality data for national data users.

Unity is strength. The members of the SDG-IWG has put their maximum effort in the execution of this feasibility study. An enormous gratitude goes to all the SDG-IWG team members who keep showing their commitment to the SDG Framework and our common goal. A special gratitude goes to Wilbert (Gino) Marchena (Department of Social Affairs), Jean Marc Rosenstand (Department of Education), Gisela de Veer (Department of Public Health), Desirée Helder (Central Bureau of Statistics), Yvonne Lee-Perez (Department of Labor and Research), Jason Lejuez (Department of Labor and Research), Angelo Willems (Department of Economic Affairs, Industry and Commerce), Marcelino (Gino) Kock (Department of Economic Affairs, Industry and Commerce), Herry Koolman (Central Bureau of Statistics), Yahaira Geerman (Department of Nature and Environment), Naviel Lue (Department of Nature and Environment), Gisbert Boekhoudt (Department of Nature and Environment), Melanie Kelly (Aruba Tourism Authority), Clariëne Croes (Department of Public Health/Vice-Chair SDG-IWG) and Mari-Lou Lejuez-Figaroa (Central Bureau of Statistics/Chair SDG-IWG). A special thanks goes also to all the people working in the departments represented in the SDG-IWG who also contribute in making the work of the SDG-IWG possible.





# 1. Introduction

The SDG-IWG, as a working body within the National SDG Institutional Framework of Aruba, is responsible for leading and coordinating the process of monitoring and evaluation of the SDGs, SDG indicators' production, and addressing the relevant issues regarding the data needed to produce the SDG indicators in order to measure progress towards the targets of the SDG 2030 agenda.

The Aruba SDG Baseline Measurement 2018 was executed, using the latest available data within a timeframe of approximately four months. For the baseline measurement, 30.7% of the Global SDG indicators were produced (excluding Tier III indicators and indicators that are not applicable to the Aruban situation). After the execution of the SDG baseline measurement, the SDG-IWG embarked on the process of executing a feasibility study. The purpose of the feasibility study was to assess the needs and requirements for the production of all the Global SDG indicators, both the Global SDG indicators which could not be produced for the baseline measurement, and Global SDG indicators which could be produced for the baseline measurement, but which may not have met all the United Nations' prescribed SDG methodology requirements. As Aruba is in the process of implementing the SDG

Framework across all borders, different working bodies and actors need information to assist decision-making. The selection of SDG indicators that are relevant for Aruba and the indicators that need to be localized, will require information on the feasibility of generating the indicators. The purpose of this feasibility study is to provide this information.

For the execution of the feasibility study, a customized model was developed using primarily UN tools and adapted to the needs of the Aruban context. The Aruban Model for Indicator Generation Assessment, AMIGA, was developed and provides a detailed overview of indicator availability according to the UN prescribed methodology, the feasibility of producing SDG indicators in a short time period of 2-3 years, dependency on funding and technical assistance, bottlenecks and needs. The model also offers a calculation formula for assessing the Statistical Capacity of Aruba to produce the SDG indicators.

The overview and insights provided by the feasibility study will not only be used by the SDG-IWG, but can also serve as a valuable source of information for other working bodies, such as the Expert Working Groups (EXWGs), in the process of selecting the SDG indicators relevant for National policy. The



concrete set of policy targets with their corresponding indicator will be monitored and evaluated with a Monitoring and Evaluation Framework, which is yet to be developed.

The SDG-IWG underwent a collaborative process consisting of different stages for the execution of the feasibility study. The result of this process is presented in this report. In the following chapters, the applied methodology will be described, the results of AMIGA will be presented, together with the calculation of the statistical capacity, conclusions and next steps.



## 2. Methodology

In the process of defining the scope of the feasibility study, it was clear that the study would have different components in order to assess the feasibility of the production of the indicators more thoroughly. During the High Level Political Forum on Pillar Planet that was held in July 2018, the United Nations Development Programme (UNDP) was interested in the bottlenecks that Aruba is facing for indicator generation. Therefore, the framework to be developed would not only address the feasibility and needs for SDG indicator production, but also the bottlenecks.

### 2.1 Exploration phase

In the third week of August 2018, the SDG-IWG began with the exploration of different frameworks to serve as an inspiration for the development of the feasibility study framework. During four consecutive weeks, SDG-IWG members explored several frameworks more in depth, and presented these to the group.

The following frameworks were explored:

- The Tanahashi Model for Bottleneck assessment
- United Nations Economic Commission for Europe (UNECE) Conference of European Statisticians (CES) self-assessment questionnaire on SDG indicator availability
- United Nations Statistics Division (UNSD) Statistical Capacity Assessment Methodology

#### SDG-IWG Pillar Planet Model for Needs Assessment

During the process of indicator exploration in 2017, which continued in 2018, the SDG-IWG Pillar Planet used part of the ECLAC questionnaire on indicator availability mentioned above. For the purpose of addressing the challenges and needs for Pillar Planet related indicators, the SDG-IWG Pillar Planet members, on their own initiative, developed a needs assessment framework.

#### ECLAC self-assessment questionnaire on SDG indicator availability

The ECLAC questionnaire assesses the availability and feasibility of indicator production, provides an overview of indicator related information on data sources and disaggregation levels, and on the challenges



for producing SDG indicators which are not yet produced and could not be produced using existing data sources.

#### Tanahashi model for Bottleneck assessment

The Tanahashi model for Bottleneck assessment differentiates four areas of determinants. These are: supply, enabling environment, demand and quality.

#### UNECE Conference of European Statisticians self-assessment questionnaire on indicator availability

The UNECE Conference of European Statisticians questionnaire is very similar to the ECLAC questionnaire but has some additional concepts and provides more depth and detail. The questionnaire assesses the availability of SDG indicators or proxies, and the feasibility of producing the SDG indicator or proxy within a specified period of time. It also provides an overview of indicator data sources, disaggregation levels and challenges for indicator production. It has a special component assessing whether the indicator is relevant for national policy.

#### UNSD Statistical Capacity Assessment Methodology

The primary purpose of the UNSD Statistical Capacity Assessment tool is assessing the Statistical Capacity for producing SDG indicators by using a specific calculation

method.

It contains guidelines on assessing the legal framework and the institutional arrangements, the data sources, the methodology for assessing current availability and feasibility of the indicators, additional resource requirements, and the dependency on external assistance in terms of funding or specialized technical/methodological assistance. In addition, it provides a standardized scoring system for measuring the statistical capacity, and it describes the calculation module developed in order to assess the overall statistical capacity to compile the global SDG indicators and to monitor individual goals. For the purpose of this calculation, the indicator availability and feasibility of production is strictly assessed. Only full compliance with the UN methodology with complete disaggregation is allowed.

Having compared all the frameworks explored, several similarities and differences were identified. The next step was to align the similarities and select the concepts that added value to the feasibility study framework.

## **2.2 Development phase**

After having explored the different frameworks, the development phase started.



The similarities of the different frameworks were clustered and the concepts that added value to the feasibility study framework were selected. Although there were several similarities among the frameworks, each framework had its own specific added value.

Because Aruba has been reporting to ECLAC according to the ECLAC questionnaire on indicator availability, it was decided to maintain the ECLAC classification for comparison purposes. The framework of UNSD has some similarities with the ECLAC framework, but because in addition it offered a calculation of Statistical Capacity, it was incorporated in the framework for the feasibility study. Furthermore, as Aruba will be embarking on a collaboration with the Open SDG Data Hub with UNSD, and there is interest for the UNSD framework to be tested and the experiences and lessons learned to be reported, the UNSD framework was incorporated into the feasibility study framework. Valuable concepts of the UNECE CES were also incorporated in the framework.

AMIGA was constructed in Excel with a dropdown structure, and in some cases, automated and conditioned functions were incorporated. This was done to facilitate the work and standardize the answer possibilities in order to decrease the chances of human error. The model has a guide in which the definitions of the different categories are described.

After the development of AMIGA, the model was presented to the SDG-IWG Pillar representatives of the Central Bureau of Statistics and the National SDG commission Aruba for feedback.

### **Aruban Model for Indicator Generation Assessment (AMIGA)**

In a period of three weeks, with a combination of desk research activities and SDG-IWG meetings, the framework for the feasibility assessment was developed. It became a model which provides a more detailed mapping of indicator availability according to UN prescribed methodology and allows for distinction between full methodology match indicators and proxy indicators. The model assesses the feasibility of producing a full methodology match indicator in a short period of time (2-3 years), the dependency of the current statistical capacity on external assistance (both financially and technically/methodologically), and the dependency on additional resources and technical/methodological assistance. It also gives an overview of the data sources, periodicity of data collection, available time series, institution in charge, projected institutions involved, international agencies to which the indicator is reported and levels of disaggregation required and its availability.



Another section of the model assesses the needs for indicator generation in terms of financial resources, specialized human resources, specialized technical resources and non-specialized human and/or material resources. The availability of legislation for the collection of specific indicator data is also incorporated. For specific non-statistical indicators for which the country has to state whether a policy/legislation/institutional arrangement is in place or not, the model gives an overview of whether this is in place, and whether this is needed. The last section of the model gives an overview of the current financial needs for the upcoming budgetary allocations. Indications are provided as to whether the financial needs are incidental, structural or whether investments are to be made. The specific actions can also be indicated. The different sections are further elaborated on below.

### AMIGA section 0

Section 0 is the introductory part of AMIGA. For this section the updated Tier classification list of May 2018, available on the website of UNSTATS, was used. The following variables were added to the Tier classification table: Pillar, Goal, Classification of Baseline Measurement indicator availability (ECLAC), indicator applicability (UNSD), type of indicator (UNECE CES) and status of assessment (UNSD).

In the category “indicator observation”, the indicators were categorized according to the availability of agreed upon methodology and subsequently the applicability of the indicators for which agreed upon methodology was available. The indicator applicability could be categorized as one of the following four categories: “applicable 1”, “applicable 2”, “not applicable 1” and “not applicable 2”. For the definition of these categories, see box 1.

“Applicable 1” indicators are indicators for which the data needed for its compilation is to be collected by the national statistical system in Aruba from national sources, and/or estimates/modelled data are to be produced by the responsible members of the national statistical system (different governmental departments). “Applicable 2” indicators are indicators for which an external (international, supranational, regional, etc.) agency is responsible for the final stage of the indicator’s compilation, but the input data has to be produced by the national statistical system in Aruba and is nationally owned. “Not applicable 1” indicators are indicators for which the necessary data will be compiled by an external agency and the input data does not originate from the national statistical system of Aruba. “Not applicable 2” indicators are indicators which measure a phenomenon that is not-existent in the country.



In the category “type of indicator”, the indicators are categorized according to being an indicator which is used for the evaluation of one target (single purpose) or for the evaluation of multiple targets (multiple-purpose). The multiple-purpose indicators are also called repeating/duplicate indicators.

The category “status of assessment” assesses whether an indicator is assessed or is pending assessment. In most cases an indicator is fully assessed across all the sections of AMIGA or is fully pending assessment. In some cases an indicator which was assessed can still be pending assessment on one or more specific categories within sections of AMIGA.

### AMIGA section I

Section I of the AMIGA is the assessment of indicator availability and feasibility. The indicator availability is assessed using the methodologies of ECLAC, UNECE CES and UNSD. The aspect of dependency on external assistance (UNSD) is also assessed in this section.

#### *Indicator availability and feasibility*

For the assessment of the indicator availability and feasibility, mainly the ECLAC methodology and the UNSD methodology were used and some specific concepts from UNECE CES methodology were added.

The difference between the ECLAC and UNSD methodologies lies in the level of detail of the assessment. The ECLAC methodology is broad and assesses the availability of the indicator, the possibility of producing the indicator using existing data sources or whether data is partly available or not available as yet for the production of the indicators. The UNSD methodology is more specific as it assesses the availability and feasibility of production of the indicator according to the metadata and the required disaggregation within a specified timeframe. For the purposes of AMIGA, the categorization of indicator availability of ECLAC (A, B, C1 and C2) was broadened using four concepts of the UNECE CES methodology, namely, 1. Indicators being produced according to metadata methodology with all levels of disaggregation, 2. Indicators being produced according to metadata methodology but for which not all levels of disaggregation are available, 3. Indicators being produced according to metadata methodology but where not all data components are available and 4. Proxy indicators.

The ECLAC categorization “A” for indicator availability was specified using the four above mentioned UNECE CES components: A1



corresponds to the number 1 component of UNECE CES mentioned above, A2 corresponds to the merging of components 2 and 3 of UNECE CES and A3 corresponds to the component 4 of UNECE CES.

The assessment of indicator availability and feasibility according to the UNSD methodology, distinguishes between “Currently available” indicators (CA), “Easily Feasible” indicators (EF), “Feasible with strong effort” indicators (FSE) and “Not feasible even with strong effort” indicators (NFSE). The UNSD methodology uses approximately 3-5 years as timeframe to assess the feasibility of the indicator production by making the necessary efforts. However, for the purpose of this feasibility study, a timeframe of 2-3 years was used for the assessment of feasibility of indicator production. The reason for choosing this criteria was twofold: because it is the criteria used by UNECE CES as short/medium term and also because several (sometimes annual) data points should be obtained for each indicator before 2030 to ensure the analytical value of the compiled data in order measure the progress on the SDG goals and targets.

#### *Dependency on external assistance and additional resources*

The UNSD methodology assesses the dependency of the country’s current statistical capacity on external assistance (funding and

technical/methodological), and the dependency on additional external financial resources and technical/methodological external assistance. This category is more applicable for developing countries receiving external assistance. Aruba with a relatively high GDP per capita, does not formally fall into the category of countries applicable to receive such assistance.

Some minor adaptations were made in the category “dependency of the current statistical capacity on external assistance”. This category was divided into “dependence of the current statistical capacity on external funding” and on “external technical/methodological assistance”. Because Aruba does not formally receive external funding, the category “dependence on additional external resources” and “additional external technical/methodological assistance” was adapted. The category “additional resources” was broadened and became “dependence on additional resources” being it domestic or international.

In the scoring of the level of dependence (low, moderate, high), some adaptations were made to reflect the cases in which there was no dependence. The scoring “no” was added.

Because there was no criteria set for scoring low, moderate or high dependence, a binary



classification (yes/no) was adopted for the analysis in order to increase reliability.

### AMIGA section II

The indicators classified as A1, A2, A3 or B in section I, were assessed further in section II of AMIGA. These were the indicators that are being produced or could be produced using existing data sources. Indicators C1 and C2 are excluded from this section. Section II is a combination of ECLAC and UNECE CES. This section is quite similar for ECLAC and UNECE CES, with some minor differences. This section assesses the name of the statistical event, the type of statistical event/data sources, the periodicity of data collection, the geographic coverage, the periodicity/frequency of the statistical results dissemination, the website link or reference to publication, the institution in charge, the type of institution in charge, whether the indicator is already being transmitted to international organizations, (if yes) to which international organizations, the observation unit of the indicator, the time series of data availability and disaggregation levels (geo-graphical area, sex, age, income, migration status, disability and a category “other disaggregation levels”). The disaggregation levels ethnicity and race were not included in the feasibility study because there is no

approach on how to address these disaggregation levels in Aruba. The population of Aruba consists of people from different countries and backgrounds and the definition of an Aruban is not unambiguous. The disaggregation levels ethnicity and race appear in AMIGA, as for now, with the assessment of being a phenomena not applicable in Aruba. Discussions and consensus is needed on the approach to be taken for these disaggregation levels.

The levels of disaggregation were assessed according to the disaggregation: “being available”, “not available” or “not applicable”. An extra dimension of required/not required (according to the UN methodology) was added; this resulted in the following categories: “required and available”, “required and not available”, “not required and available” and “not required”. In the execution phase, some confusions arose when having to decide whether the disaggregation was not required or not applicable.

The UNSD methodology has three categories to assess the data sources: statistical sources (surveys and censuses), administrative sources and mixed sources. This categorization was slightly adapted for the purpose of AMIGA. The approach used in the UNSD methodology categorizes the indicator



data source in terms of the most prevailing data source for the production of the indicator. When it is not clear what the prevailing data source is, according to the UNSD methodology, the category mixed sources must be applied. For the purpose of clarity about the category data sources, the aspect of prevailing data source was not applied in AMIGA. In the category “mixed sources” there is no distinction made in the prevailing data source. This category is chosen if there are different data sources used. For instance administrative and survey data. An extra category was added to assess the data source, namely “other”, for instance for parity indices indicators and when a statement is made and not a calculation.

The SDG-IWG added some categories to section II. Namely, the “required frequency of indicator reporting according to metadata requirements”, the “projected stakeholders for the production of the indicator”. The last category is derived from SDG-IWG Pillar Planet Needs Assessment. The category “month” was added to the category “time series of data availability”. However, during the execution phase, the category “month” seemed not to be useful.

### AMIGA section III

Section III of AMIGA is derived from the ECLAC and UNECE CES methodology which assesses the reason why indicators are not being produced. For the purpose of the feasibility study, this section was adapted in order to assess for all the indicators the situation of the availability of resources, eventual needs, the availability of necessary legislation, whether the enabling policy/institutional arrangement/legislation are in place for the “yes-no” indicators, and if “no”, if these are considered necessary.

The categories “financial”, “technical” and “human resources” were broadened and their contents specified. A category for “non-specialized human and/or material resources” was added. In the scoring system three levels of scoring was used. The situation could be plus, plus-minus or minus. Each scoring of the resource assessment had subsequently a conditioned needs assessment. The specialized human resources could be assessed as the specialized human resources being adequate/available, available but in need for training or not available. The specialized technical resources assesses whether the necessary specialized technical resources, such as IT hardware and/or software and other specialized technical



resources, are “available”, are “available but need minor adaptations” or are “not available”. The non-specialized human and/or material resources refer to for instance interviewers for surveys, cars, etc.

After the bottlenecks in the resources were assessed, the needs for the financial resources, specialized human resources, specialized technical resources, and non-specialized human and/or material resources were assessed. Initially, the needs were conditioned upon the previous assessment of the above mentioned resources.

If the financial resources were adequate, then automatically there would be no needs. If the financial situation was inadequate meaning that there was insufficient budget to produce the indicator, the conditioned response options in terms of needs were transfer of funds, engaging in partnership or to transfer and engage in partnership. If there was no budget, the conditioned answer options were to make use of local funds/incorporate into next budget plan or to look for international funds.

In the execution phase a representative of the Department of Finance advised to use another category for the financial needs. It was recommended to use instead the categories: “no needs”, “incidental increment”,

“structural increment” or “investments”. In addition to that, the actions to be taken were described in an open text section.

For the other resources (specialized human, specialized technical, non-specialized human and/or material), the needs were conditioned on whether these are fully adequate/available, not fully adequate/available or inadequate/not available. This is further elaborated on in the following section.

If the specialized human resources were available, there were automatically no needs; if the specialized human resources were available but needed training regarding certain methodologies, the need was training for the specialized human resources; if the specialized human resources were not available, the need depended on the complexity of the methodology for indicator calculation and the required frequency for production of the indicator. If the indicator has to be produced with a relatively high frequency and the metadata methodology is complex, the need would be to hire additional personnel with the necessary knowledge or hire additional personnel and provide training. If the frequency for the production of the indicator is relatively low and the metadata methodology is complex, the need would be to outsource this.



When the specialized technical resources were available, there were automatically no needs. When the specialized technical resources were available, but minor adaptations were needed, this would automatically mean that the minor adaptations needed to be addressed. When the necessary specialized technical resources were not available, the need options would be “IT software”, “IT hardware”, “IT software and IT hardware” or “other specialized technical resources”.

Conditions were also provided for the category “non-specialized human and/or material resources”. When the non-specialized human and/or material resources were available and when the resources were available but minor adaptations needed to be addressed, the conditioned answers were respectively “no needs” and “address minor issues”. In cases where the necessary non-specialized human and /or material resources were not available, the possible needs were “non-specialized human resources”, “non-specialized material resources” or “non-specialized human and material resources”.

#### AMIGA section IV

Initially, the aim was to produce a detailed overview of the financial needs in Aruban florins to produce the SDG indicators. In that

case, this information could have been used for decision-making in the selection of indicators for the National Indicator Framework. After consulting with the Department of Finance it was decided that in this phase, as the indicators are not yet selected, the SDG-IWG will only give an indication of the financial needs for indicator generation in terms of (structural) increments or investments. When a National Indicator Framework for Aruba is developed, further specifications on the financial needs will be provided for the selected indicators.

As mentioned above, the categories: “no needs”, “incidental increment”, “structural increment” or “investments” were created to reflect the financial needs, in addition to description of the actions to be taken.

### 2.3 Calculation Statistical Capacity

The UNSD model emphasizes that compilation of the SDG indicators is a task for the whole national statistical system and that its successful accomplishment requires a strong legal framework and the existence of effective institutional arrangements to ensure proper coordination of statistical activities.

The assessment of the legal framework has to start with the Statistics Law and, followed, to the extent possible, with a review of other legal documents regulating collection of data



relevant for the SDG indicators. Most developing countries develop a multi-year strategic plan for the development of statistics. Many of them use PARIS21 guidelines on the National Strategies for the Development of Statistics (NSDS) and it is assumed that it will continue to be a tool for planning improvements in the statistical capacity of many developing countries. Although, according to the GDP of Aruba, Aruba does not fall in the category of developing country, the NSDS provides numerous benefits for the statistical capacity.

The institutional arrangements, based on the legal framework or developed in addition to it, should enable the compilation of the SDG indicators in the most effective way possible. An effective institutional arrangement should have the following characteristics: the collective responsibilities of the members of the National Statistical System (NSS) covers all stages of the statistical process relevant to the set of SDG indicators, an unambiguous definition of the rights and responsibilities of all involved agencies, the working arrangements between agencies are properly laid out in a Memorandum of Understanding (MoU) on SDG monitoring or similar document, informal agreements between responsible units of involved agencies are promoted and maintained, a single body with a clear mandate is designated to coordinate

various aspects of the SDG indicator compilation as a single source of official data and a point for any inquiries, and, lastly, the main user groups are included in the institutional arrangements and actively participate in setting the monitoring framework and in the evaluation of its implementation.

If all applicable indicators are assessed, both current and potential statistical capacity can be calculated. The relative measures of the current and potential statistical capacity can be calculated as (i) the percent of the sum of the currently available and easily feasible indicators of the total applicable indicators and (ii) the percent of the indicators feasible with a strong effort of the total applicable indicators, respectively.

The current and potential statistical capacity, together with the existing institutional arrangements, can be used for an overall assessment of the statistical capacity to compile the SDG indicators in the short/medium term in terms of three levels - Low, Medium and High - or in the terms of transitional stages as Low/Medium, Medium/High etc.

As a general guideline, if (a) current statistical capacity is more than 30% of the applicable indicators, (b) the sum of current and potential statistical capacity is significantly more than



50% and (c) the progress in strengthening the institutional arrangements and development of the implementation plan of the national version of the SDG indicator framework is clearly being made (interagency meetings held, decisions are documented, draft implementation plan exists etc.), then the overall statistical capacity to compile the SDG indicators in the short/medium term can be assessed as being at the Medium level.

If these criteria are not satisfied then the statistical capacity can be judged to be at the Low level or in transition to Medium (Low/Medium). If the criteria described in (i) above are exceeded, then the overall statistical capacity can be assessed as transitional from Medium to High (Medium/High). The High level of the statistical capacity to compile the SDG indicators might be assigned if (a) current statistical capacity is more than 75% of the applicable indicators, (b) sum of current and potential statistical capacity is close to 100% and (c) the necessary institutional arrangements are in place and the implementation plan to measure and monitor the progress towards SDGs is adopted.

## 2.4 Execution phase

The execution phase of the feasibility study started mid-October 2018. The aim was that the feasibility study with AMIGA would be

carried out in the SDG-IWG Pillars and that a new work approach would be followed: High Intensity Work Sessions (HIWS). The SDG-IWG Pillars would work on AMIGA for a full workday in order to make the necessary progress.

For the purpose of familiarization with AMIGA, a HIWS was held where the whole SDG-IWG team worked together on AMIGA, where questions and answers could be addressed immediately for the whole team. A total of three HIWS were held. The SDG-IWG members were together in the same room and were organized according to the SDG Pillars. For each SDG Pillar a laptop and beamer was used for the necessary technical support. In addition to the three HIWS, some additional work had to be done individually by some group members in order to finalize the assessment as planned.

The objective was to conduct the feasibility study and deliver the report in 2018. A balance had to be found between delivering a product in order to provide the information in a reasonable timeframe and continuing to look for necessary information on indicators for which information was still missing. It was decided that if not all the indicators could be assessed in the available timeframe, the SDG-IWG would deliver the gross indicators which could be assessed knowing that the remaining indicators which could not be



assessed, for reasons beyond one's control, would not influence the results drastically. These indicators would be categorized as "pending assessment". When these are assessed, the results will be updated.



## 3. Results

The assessment of the feasibility to generate SDG indicators, executed with AMIGA, provided different insights. AMIGA, being a hybrid model, incorporated assessment components of different methodologies, adapted in some cases to the local circumstances and needs.

The results will be presented in the sequence of the AMIGA table. Although numerous analyses are possible using AMIGA, we focused on the main components and categories of AMIGA. In order to guarantee the reliability of the analyses, analyses of small number of cases are not presented. The results are presented on the aggregated level of all the SDG indicators, and where possible, disaggregated by Pillar. In cases where, within an assessed indicator, there are not applicable categories, or cases where, within an assessed indicator, some categories are pending to be assessed, these cases are excluded from the analyses. Due to rounding cases of small discrepancies may exist when adding up percentages.

### 3.1 Results AMIGA

The Global SDG indicator framework consists of 232 unique indicators and indicators that repeat under different goals and targets. Latter are the multi-purpose indicators.

Overall, the current total count of single indicators is 244. In the analyses, the indicators were treated as single indicators. This means that the 244 single indicators were the basis for the analyses.

The results of the four components of AMIGA are presented: 1. Indicator observation, 2. Indicator availability and feasibility, 3. Specifics of the indicator and 4. Assessment of the resources and corresponding needs for the production of the SDG indicators.

Using the results of the UNSD methodology, a calculation was made of the Statistical Capacity of Aruba to produce the SDG indicators.

#### Indicator applicability and status of assessment

According to the categorization of indicator applicability of the UNSD methodology, of the 244 single indicators, 52.0% is applicable for Aruba. For definitions, see box 1 and 2. For the Pillars People, Prosperity and Peace, more than 50% of the indicators are applicable. Of all the indicators, 13.9% is not applicable. “Not applicable 1” indicators are SDG Global indicators for which the necessary data will be compiled by an



external agency and for which the input data does not originate from the national statistical system of Aruba. In total, 8.2% of global indicators were categorized as “not applicable 1”. “Not applicable 2” indicators are the indicators that measure a phenomenon that is not existent in the country. In total, 5.7% of the indicators were categorized as “not applicable 2”. Of the 244 single indicators, 26.2% are Tier III indicators. For these indicators there is not an agreed upon methodology as yet. See figure 1.

**Box 2: Indicator applicability**

**Applicable 1 (AP1):** The data needed for the compilation of the indicator is to be collected by the national statistical system of the country from national sources and/or estimates/modelled data are to be produced by the responsible members of the national statistical system.

**Applicable 2 (AP2):** An external agency is responsible for the final stage of the indicator's compilation, but the input data has to be produced by the national statistical system and will be nationally owned.

**Not applicable 1 (NA1):** Indicators compiled by an external agency. Input data not originating from the national statistical systems (or from members thereof) . The input data are, rather, collected from other sources.

**Not applicable 2 (NA2):** An indicator is treated as NA 2, if the phenomenon, which the indicator refers to, does not exist in the country.

**Box 1. Tier classification**

**Tier I:** Indicator is conceptually clear, has an internationally established methodology and standards are available, and data are regularly produced by countries for at least 50 per cent of countries and of the population in every region where the indicator is relevant.

**Tier II:** Indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries.

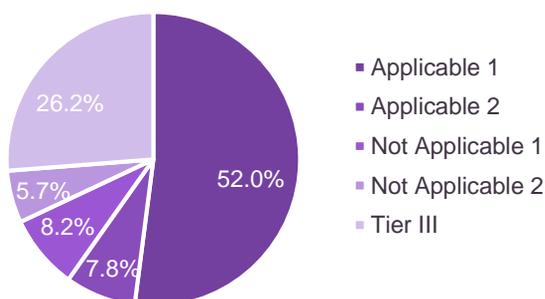
**Tier III:** No internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested.

Across most of the pillars, the proportion of Tier III indicators varies between a quarter and a third of the indicators. With the exception of Pillar People, where 15.2% are Tier III. See table 1.

Table 1. Indicator applicability by Pillar

	AP1	AP2	NA1	NA2	Tier III	Total
People	67.1%	6.3%	5.1%	6.3%	15.2%	100%
Prosperity	59.0%	1.6%	6.6%	4.9%	27.9%	100%
Planet	37.5%	12.5%	5.4%	7.1%	37.5%	100%
Peace	56.5%	8.7%	0.0%	4.3%	30.4%	100%
Partnership	16.0%	16.0%	36.0%	4.0%	28.0%	100%
All indicators	52.0%	7.8%	8.2%	5.7%	26.2%	100%

Figure 1. Distribution of indicator applicability



The purpose of the feasibility study was to assess all 146 applicable indicators. Not all the indicators could be assessed.



A categorization was made for the status of assessment of the applicable indicators. Of all the applicable indicators 77.4% were assessed and 22.6% are pending assessment. See figure 2.

Pillar Peace is the pillar with the highest percentage of indicators pending assessment (80.0%). This was due to a lack of specialized human resources in statistics, and due to time constraints. Furthermore, data on the indicators of Pillar Peace are either not standardized or not available. For Pillar Planet, a total of 57.1% indicators were assessed, and 42.9% is pending assessment because it was not possible to get the input needed from theme specialists in the given timeframe. See table 2.

Figure 2. Distribution of assessed indicators

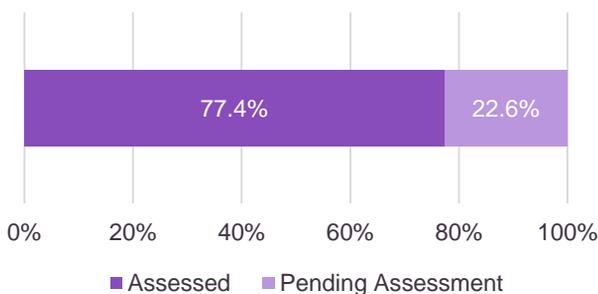


Table 2. Assessed indicators by Pillar

	Assessed	Pending Assessment	Total
People	91.4%	8.6%	100%
Prosperity	97.3%	2.7%	100%
Planet	57.1%	42.9%	100%
Peace	20.0%	80.0%	100%
Partnership	62.5%	37.5%	100%
All applicable indicators	77.4%	22.6%	100%

Because of the relatively small number of applicable indicators assessed for Pillar Peace (n=3) and Partnership (n=5), the remaining analyses were conducted on the aggregated level of all SDG indicators, and only the distribution by Pillars People, Prosperity and Planet, will be presented.

### Indicator availability and feasibility

According to the ECLAC methodology, 45.1% of applicable and assessed indicators were categorized as being produced, the sum of the different “A’s”. For definitions, see box 3. The distribution of “A’s” within the total classification using ECLAC’s methodology, is respectively, 21.2% A1, 16.8% A2, and 7.1% A3. This means that 38.1% of the applicable and assessed indicators are produced according to the prescribed UN SDG methodology, albeit not all indicators are produced with the required disaggregation levels or with all the data components being present.

For 15.9% of the applicable and assessed indicators, the necessary data is available and these existing data sources could be used for the production of the indicators. For 38.9% of the applicable and assessed indicators the indicator could not be produced using existing data sources. In total, 14.2% of indicators were categorized as C1, which



means that complementary data is needed to produce the indicator. In total 24.8% of indicators were categorized as C2, which means that there is no data available to produce the indicator. Pillar People is the pillar showing the highest percentage of available indicators and available data sources to produce the indicators. See figure 3 and table 3.

Table 3. Availability indicator according to the ECLAC methodology by three Pillars

	A1	A2	A3	B	C1	C2	Total
People	24.5%	18.9%	11.3%	15.1%	7.5%	22.6%	100%
Prosperity	16.7%	11.1%	2.8%	19.4%	27.8%	22.2%	100%
Planet	18.8%	18.8%	6.3%	6.3%	12.5%	37.5%	100%

When only the group of “A’s” is included in the analysis, nearly half (47.1%) of the applicable and assessed indicators are compliant with the metadata methodology and the disaggregation requirements (A1). The percentage of indicators that comply with the methodological requirements, but not with all levels of disaggregation and/or data components (A2), is 37.3%. In 15.7% of the “A” indicators a proxy indicator (A3) is used. See figure 4.

**Box 3. Indicator availability ECLAC and UNECE:**

**A1:** The exact SDG indicator is produced according to the UN prescribed methodology with all levels of required disaggregation published or available in databases of the members of the National Statistical System.

**A2:** The SDG indicator is produced according to the UN prescribed methodology, however not all levels of disaggregation are available or one or more data component are not available.

**A3:** Proxy indicator. Proxy indicators are indicators measuring a similar concept using a different methodology.

**B:** The indicator is not produced but could be produced using existing data sources

**C1:** Some data is available but further refinement and complementary information is required to produce the indicator

**C2:** Data are not available to produce the indicator

Figure 4. Distribution of classification A indicators

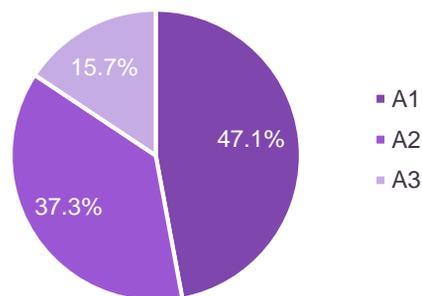
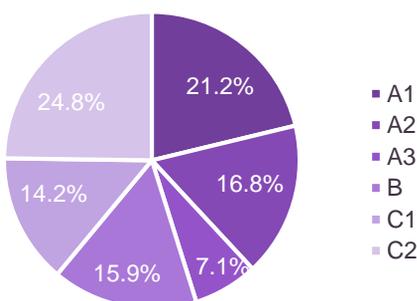


Figure 3. Distribution of indicator availability according to the ECLAC methodology



The assessment method of UNSD presents the following results. For definitions, see box 4.



**Box 4. Indicator availability and feasibility  
UNSD**

*The UNSD methodology assesses the availability and feasibility of the SDG indicators with full compliance of the UN methodology and feasibility of production within 2-3 years.*

**Currently available (CA):** Published indicators or indicators in databases of members of the national statistical system, according to prescribed UN methodology. All data disaggregation levels mentioned in its description are available. "All levels of required disaggregation" is defined as those proposed in the metadata and those relevant according to the Aruban situation.

**Easily Feasible (EF):** Indicators for which compilation is possible within the existing resources (or minor increase in resources) on the basis of current data sources by recompilation of already available data within short/medium period of time (2-3 years)

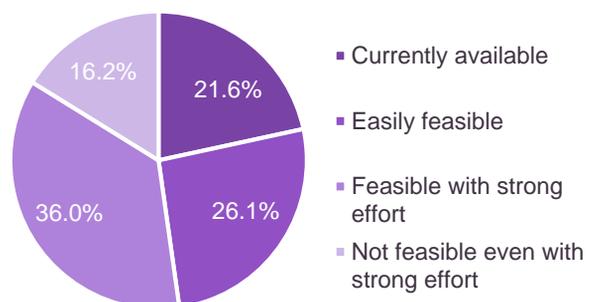
**Feasible with strong effort (FSE):** Indicators for which not all required levels of disaggregation are available and which compilation is possible only if additional resources are made available and needed additional (external) assistance is provided and can be used within short/medium term (2-3 years)

**Not feasible even with strong effort (NFSE):** Indicators which cannot be compiled within the short/medium term (2-3 years) even with strong effort; only some partial relevant data might be compiled. This category also includes the indicators that might be, hypothetically, produced with strong effort but are not a priority for the country and, therefore, their compilation is not likely in the short/medium term (2-3 years).

Of the applicable and assessed indicators, 21.6% is currently available (excluding 2 indicators which were assessed according to the ECLAC methodology, but were not assessed according to the UNSD methodology). This means that 21.6% of the applicable and assessed indicators are

produced according to the prescribed UN methodology with the required levels of disaggregation. This matches the ECLAC methodology using UNECE CES concept A1 (including the 2 indicators pending UNSD assessment, A1 is 21.2% and UNSD currently available (CA) is also 21.2%). Excluding the 2 "pending assessment" indicators, a percentage of 26.1% of the applicable and assessed indicators is easily feasible (EF), 36.0% is feasible with strong effort (FSE) and 16.2% is not feasible even with a strong effort (NFSE). Indicators, which are possible to produce with a strong effort, but are not relevant for the country, are also included in this category. See figure 5.

Figure 5. Distribution of indicator availability and feasibility according to the UNSD methodology



The current availability and feasibility percentages vary per pillar. See table 4.



It is important to note that these percentages refer to the feasibility in the short term. It may be the case that these indicators could be produced within a timeframe of more than 2-3 years.

Table 4. Availability and feasibility of indicators according to the UNSD methodology by three Pillars

	CA	EF	FSE	NFSE	Total
People	25.0%	15.4%	40.4%	19.2%	100%
Prosperity	16.7%	41.7%	25.0%	16.7%	100%
Planet	18.8%	25.0%	50.0%	6.3%	100%

When cross tabulating the group of A's and the current availability of indicators and feasibility of production of the indicators at short term, there is a relatively small number of A2 (n=1) and A3 (n=2) indicators categorized as not feasible even with strong effort (because complying the indicators with all the metadata disaggregation requirements, is not relevant or not a priority in Aruba).

### Dependency of current statistical capacity on external assistance

Indicators classified as C2 (n=28), are automatically excluded from the analysis of dependency of the current statistical capacity on external assistance given that there is no current statistical capacity for C2 indicators. Indicators that are pending assessment for the dependency on external assistance are also excluded from the analysis. With the exception of Pillar Planet, there is a relatively low to quasi-non dependency on external

funding and/or external technical and methodological assistance, for the maintenance of the current statistical capacity for the production of the SDG indicators. It is important to mention that the number of Pillar Planet indicators assessed for this category is 10. See table 5.

Table 5. Dependency of current statistical capacity on external assistance

SDG Pillars	Financial			Technological/ methodological		
	Yes	No	n	Yes	No	n
People	2.4%	97.6%	41	4.9%	95.1%	41
Prosperity	3.6%	96.4%	28	7.1%	92.9%	28
Planet	50.0%	50.0%	10	60.0%	40.0%	10
Peace	0.0%	100.0%	2	0.0%	100.0%	2
Partnership	0.0%	100.0%	2	0.0%	100.0%	2
Total	8.4%	91.6%	83	12.0%	88.0%	83

### Dependency on external assistance and additional resources

Of all the applicable and assessed indicators (n=108), 63.9% are dependent on additional financial resources (domestic or international). See figure 6. The compilation of Pillar Planet indicators is 100% dependent on additional resources. Where Pillars People and Prosperity indicators are concerned, 54.9% and 58.3% of the applicable and assessed indicators, is dependent on additional resources. See table 6.



Overall, 37.4% (n=107) of the applicable and assessed indicators are dependent on additional external technical/methodological assistance for their compilation. See figure 7. A percentage of 62.5% of the Pillar Planet indicators are dependent on additional external technical/methodological assistance. Pillar People and Prosperity show somewhat similar figures with 33.3% and 37.1% of their corresponding indicators being dependent on additional external technological/methodological assistance. See table 7.

Figure 7. Dependency on additional external technological/methodological assistance

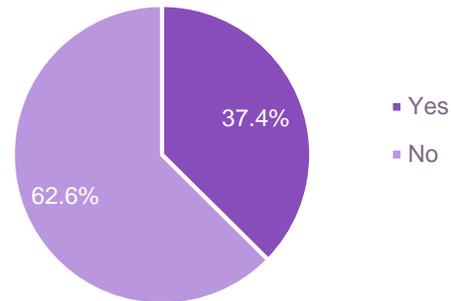


Table 7. Dependency on additional external technical/methodological assistance by three Pillars

	Yes	No	n
People	33.3%	66.7%	51
Prosperity	37.1%	62.9%	35
Planet	62.5%	37.5%	16

Figure 6. Dependency on additional resources

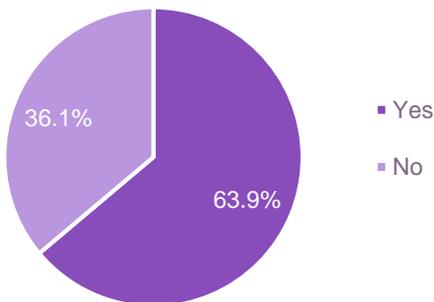


Table 6. Dependency on additional resources by three Pillars

	Yes	No	n
People	54.9%	45.1%	51
Prosperity	58.3%	41.7%	36
Planet	100.0%	0.0%	16

### Data sources

In the analysis of data sources (n=67), the C1 (n=16) and C2 (n=28) indicators were automatically excluded from the analysis, because these indicators are not being produced. In addition, 2 indicators are pending assessment on this category. Overall, administrative sources are primarily used to produce the indicators, namely 53.7%, followed by statistical sources (surveys and censuses) 32.8%, mixed sources, 6.0% and other sources, 7.5%. See figure 8. For Pillar Planet it is the opposite. Namely, 50.0% of data sources are statistical data sources and 37.5% are administrative data sources. See table 8.



Figure 8. Distribution of data sources for production of SDG indicators

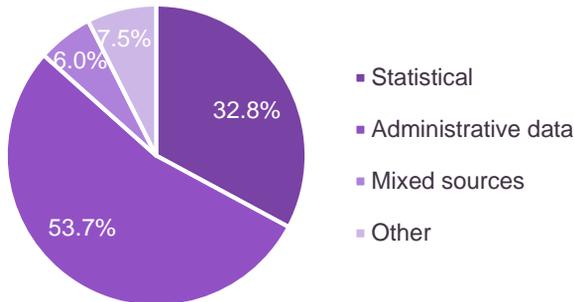


Table 8. Data sources for production of SDG indicators by three Pillars

	Statistical	Administrative data	Mixed sources	Other	Total
People	24.3%	59.5%	2.7%	13.5%	100%
Prosperity	38.9%	50.0%	11.1%	0.0%	100%
Planet	50.0%	37.5%	12.5%	0.0%	100%

## Resources

### Financial resources

The financial resources for the production of all the applicable and assessed indicators (n=108) (2 indicators were pending assessment on this category and the assessment of 1 indicator was not applicable for this category), were adequate for 35.2% of indicators, inadequate for 30.6% of indicators and for 34.3% there was no budget. See figure 9. The results for Pillar People and Prosperity are quite similar. For all the Pillar Planet indicators the financial resources are either inadequate or not present. See table 9.

Figure 9. Assessment of financial resources

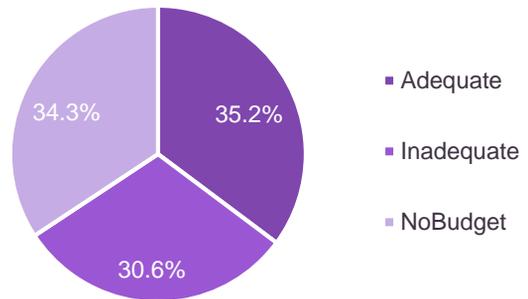


Table 9. Assessment of financial resources by three Pillars

	Adequate	Inadequate	No budget	Total
People	41.2%	27.5%	31.4%	100%
Prosperity	41.7%	27.8%	30.6%	100%
Planet	0.0%	56.3%	43.8%	100%

### Specialized human resources

Specialized human resources (n=107) were assessed as being “adequate/available” (available and trained), “available but in need for training” or “not available”. In 64.5% of the applicable and assessed indicators, the needed specialized human resources were available for the production of the indicator, in 14.0% of the cases the specialized human resources were available but needed training, and in 21.5% of the cases the needed specialized human resources were not available. See figure 10. Pillar People and Prosperity had the highest percentage of adequate specialized human resources, respectively 70.6% and 65.7%. On the other hand, Pillar Planet has the lowest percentage



of adequate specialized human resources, namely 37.5%, and in 37.5% of cases specialized human resources were not available. Although Pillar People and Prosperity have the highest percentage of adequate human resources, these pillars also are in need of specialized human resources, as for 21.6% (People) and 14.1% (Prosperity) of applicable and assessed indicators the needed specialized human resources are not available. See table 10.

Figure 10. Assessment of specialized human resources

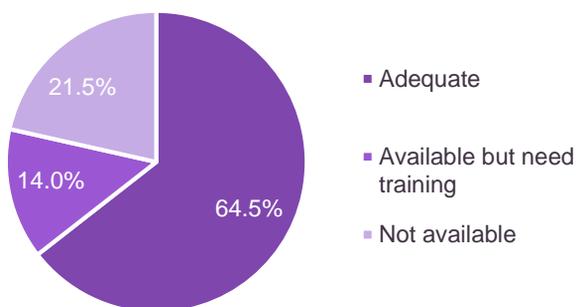


Table 10. Assessment of specialized human resources by three Pillars

	Adequate	Available but need training	Not available	Total
People	70.6%	7.8%	21.6%	100%
Prosperity	65.7%	20.0%	14.3%	100%
Planet	37.5%	25.0%	37.5%	100%

### Specialized technical resources

For 61.1% of the applicable and assessed indicators (n=107), the necessary specialized technical resources for the production of the indicators is available, for 8.4% of the applicable and assessed indicators, the specialized technical resources are available but minor adaptations need to be addressed, and for 27.1% of the applicable and assessed indicators the necessary specialized technical resources are not available. See figure 11. Again, there is a striking difference between the available specialized technical resources for the production of Pillar Planet indicators versus indicators of Pillars People and Prosperity. See table 11.

Figure 11. Assessment of specialized technical resources

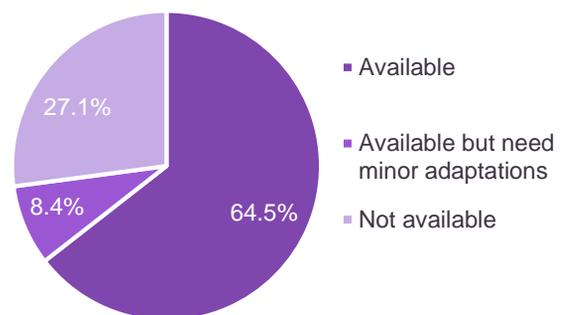


Table 11. Assessment of specialized technical resources by three Pillars

	Available	Available but need minor adaptations	Not available	Total
People	68.6%	7.8%	23.5%	100%
Prosperity	74.3%	8.6%	17.1%	100%
Planet	18.8%	12.5%	68.8%	100%



*Non-specialized human and/or material resources*

Of all the applicable and assessed indicators on this category (n=99), for 45.5%, the non-specialized human and/or material resources were available, in 33.3% of the cases these were available but minor issues need to be addressed, and in 21.2% of cases, non-specialized human and or material resources were not available. See figure 12. For the majority of applicable and assessed indicators belonging to Pillars People and Prosperity, the non-specialized human and/or technical resources are available, or available but minor issues need to be addressed. However, for 29.4% of Pillar Prosperity indicators, there are no non-specialized human and/or technical resources available. As for Pillar Planet indicators, either there are no available non-specialized human and/or technical resources available or minor issues need to be addressed herein. See table 12. However, it is important to note that for this analyses, Pillar Planet had a relatively small number of indicators assessed, namely 9.

Table 12. Assessment of non-specialized human and/or material resources by three Pillars

	Available	Available but minor issues need to be addressed	Not available	Total
People	54.9%	33.3%	11.8%	100%
Prosperity	44.1%	26.5%	29.4%	100%
Planet	0.0%	44.4%	55.6%	100%

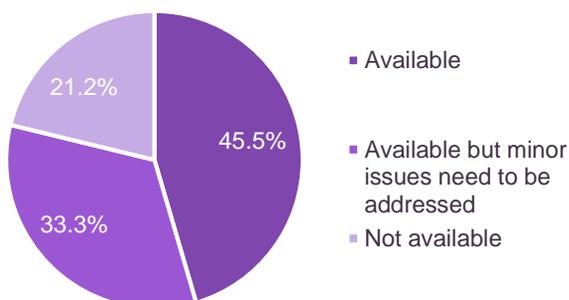
*Needs*

After the bottlenecks, in terms of resources, were assessed, the needs were assessed. With the exception of the financial needs, which were adapted during the process, the needs for specialized human resources, specialized technical resources and non-specialized technical and/or material resources, are conditioned upon the assessment of the availability and adequacy of resources.

*Needs for financial resources*

Where the financial needs were concerned, in 37.0% of the applicable and assessed indicators, the situation was adequate and there were no needs (excluding an indicator for which the financial needs is pending assessment), an incidental increment in financial resources was needed for 30.6% of the indicators, a structural increment was needed for 17.6% of the indicators and an

Figure 12. Assessment of non-specialized human and/or material resources





investment was needed for 14,8% of the indicators. It is important to mention that in some cases both increments and investments were needed. For the purpose of this analysis, when more than one financial need was mentioned, the financial need representing more structural increments or investments was used. See figure 13. Pillars People and Prosperity, the Pillars with the highest percentage of adequate financial resources, each show different financial needs. For Pillar People, 25.0% of the applicable and assessed indicators needed an incidental increment, 17.3% a structural increment, and 15.4% an investment. For Pillar Prosperity, 42.9% of the applicable and assessed indicators needed an incidental increment, 5.7% a structural increment, and 5.7% an investment. For 50.0% of the Pillar Planet applicable and assessed indicators, there was a financial need of structural increments and for 37.5% there was need of investments. This is in line with the fact that Pillar Planet is a domain in development. See table 13.

Table 13. Assessment of financial needs by three Pillars

	No needs	Incidental increment	Structural increment	Investment	Total
People	42.3%	25.0%	17.3%	15.4%	100%
Prosperity	45.7%	42.9%	5.7%	5.7%	100%
Planet	0.0%	12.5%	50.0%	37.5%	100%

*Needs for specialized human resources*

For the category specialized human resources, 64.5% of the applicable and assessed indicators had no needs for specialized human resources, because the specialized human resources were available, 14.0% needed training, 17.8% needed additional personnel with knowledge or additional personnel to be trained and 3.7% needed the specialized human resources to be outsourced. See figure 14 and table 14. This means that for the category “specialized human resources not available” (n=23), 82.6% needed additional personnel with knowledge or for this additional personnel to be trained and 17.4% needed outsourcing.

Figure 13. Assessment of financial needs for SDG indicator production

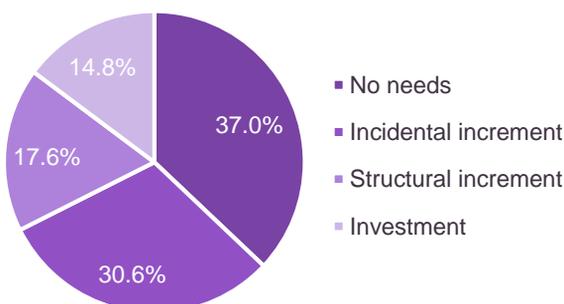


Figure 14. Assessment of needs for specialized human resources for SDG indicator production

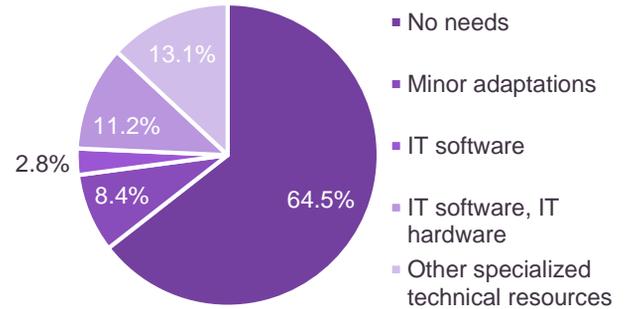




Table 14. Assessment of needs for specialized human resources by three Pillars

	No needs	Training	Additional personnel with knowledge/to be trained	Outsource	Total
People	70.6%	7.8%	19.6%	2.0%	100%
Prosperity	65.7%	20.0%	11.4%	2.9%	100%
Planet	37.5%	25.0%	25.0%	12.5%	100%

Figure 15. Assessment of needs for specialized technical resources



*Needs for specialized technical resources*

The assessment of the needs in terms of specialized technical resources, showed that 64.5% of the applicable and assessed indicators had no need of additional specialized technical resources, 8.4% needed minor adaptations to available specialized technical resources, 2.8% needed IT software, 11.2% needed IT software and IT hardware, and 13.1% needed other specialized technical resources. (see figure 15 and table 15). When the category “specialized technical resources not available” was analyzed separately (n=29), 10.3% needed IT software, 41.4% needed IT software and IT hardware, and 48.3% needed other specialized technical resources.

Table 15. Assessment of needs for specialized technical resources by three Pillars

	No needs	Minor adaptations	IT software	IT software, IT hardware	Other specialized technical resources	Total
People	68.6%	7.8%	5.9%	11.8%	5.9%	100%
Prosperity	74.3%	8.6%	0.0%	8.6%	8.6%	100%
Planet	18.8%	12.5%	0.0%	18.8%	50.0%	100%

*Needs for non-specialized human and/or material resources*

In 45.5% of the applicable and assessed indicators there were no needs given the availability of non-specialized human and /or material resources, 33.3% needed minor issues to be addressed regarding available non-specialized human and /or material



resources, 3.0% needed non-specialized human resources, 1.0% needed non-specialized material resources, and 17.2% needed both non-specialized human and material resources (see figure 16 and table 16). Taking only the category of “non-specialized human and /or material resources not available” into account (n=21), 14.3% needed non-specialized human resources, 4.8% needed non-specialized material resources, and 81.0% needed non-specialized human and material resources.

Figure 16. Assessment of needs for non-specialized human and/or material resources

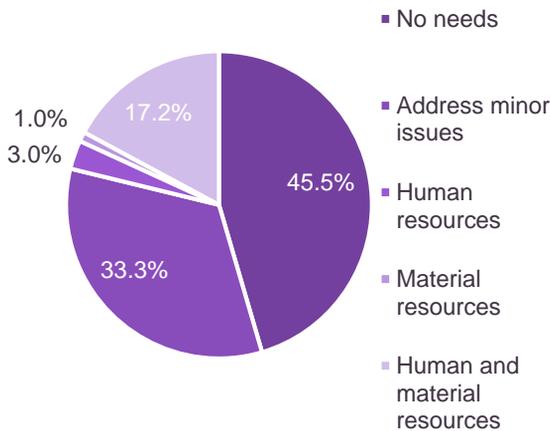


Table 16. Assessment of needs for non-specialized human and/or material resources by three Pillars

	No needs	Address minor issues	Human resources	Material resources	Human and material resources	Total
People	54.9%	33.3%	3.9%	0.0%	7.8%	100%
Prosperity	44.1%	26.5%	2.9%	0.0%	26.5%	100%
Planet	0.0%	44.4%	0.0%	11.1%	44.4%	100%

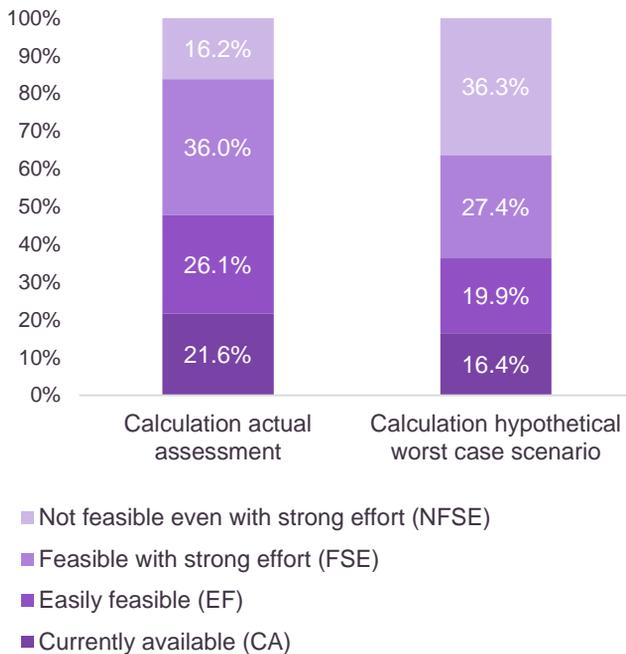
## 4.2 Results Calculation statistical capacity

Using the assessments conducted with the UNSD methodology at the level of individual indicators, it was possible to define and calculate measures of Aruba’s statistical capacity to produce the global SDG indicators.

Since not all 146 applicable indicators were assessed, the current and the potential statistical capacity were calculated based on the indicators which were assessed for the UNSD classification (n=111). When excluding the indicators which were pending assessment for UNSD classification (n=35), the current and potential statistical capacity was 47.7% and 83.8%, respectively. Taking into consideration that not all the applicable indicators were assessed, a “worst case scenario” was created in which, hypothetically, all the pending assessment indicators for UNSD classification (n=35) were categorized as “not feasible even with strong effort”. This resulted in a corresponding current statistical capacity of 36.3% and a potential statistical capacity of 63.7%. Thus, in both cases, the thresholds of 30% (for current statistical capacity) and 50% (for potential current statistical capacity) required for a Medium level of statistical capacity to compile the SDG indicators in the short/medium term, were exceeded. See figure 17.



Figure 17. Distribution of indicator availability and feasibility for calculation of Statistical Capacity by scenarios



However, as mentioned in the description of the methodology used for calculating the statistical capacity, the legal framework, the level of progress in strengthening the institutional arrangements, and the development of the implementation plan of the national SDG indicator framework, are also taken into account and assessed in order to define the level of statistical capacity. These do not fully meet the necessary requirements.

If progress is being made in the sense that interagency meetings are being held, decisions are being documented and draft

implementation plans exist, the statistical capacity can be assessed as being at the Medium level. Nevertheless, this is not yet the case. Effective institutional arrangements regulating and ensuring proper coordination of statistical activities are not yet in place. Aruba has a Statistical Act, but this needs to be reviewed and updated. Aruba does not have a multi-year strategic plan for the development of statistics. A National Strategic Plan (NSP) which also assists the implementation of the SDGs in Aruba is currently being developed. Data necessary to monitor progress on the specific goals and targets of the plan, including responsible agencies, will be included. It is expected that the NSP will be finalized by the first quarter of 2019; this will also stimulate more proper coordination of statistical activities. Furthermore, Aruba is working towards strengthening its institutional arrangements enabling better cooperation and coordination of data flows in order to monitor progression on the SDG goals and targets.

Based on the above mentioned, it can be concluded that Aruba can be regarded as being in a transitional stage from Low to Medium (Low/Medium) statistical capacity to compile the SDG indicators at short/medium term.



## 4. Conclusion and next steps

The whole process of the feasibility study, from exploration of frameworks to the reporting of the results, was very informative. As SDG-IWG, we learned different things about the structure of the Global SDG framework and we expanded and deepened our knowledge about different aspects related to the SDG indicators. From methodological requirements to the actual capacity for producing the indicators, the feasibility study provides interesting insights in the challenges and opportunities for the production of the SDG indicators in Aruba.

We are very grateful for the commitment showed by the SDG-IWG to the SDG framework and the dedication showed during the High Intensity Work Sessions (HIWS). HIWS is a good strategy to propel progress on tasks. In addition, it is important to mention that partnerships with the organizations involved in the SDGs process is key to receive the necessary information regarding the SDG framework and process.

In this last chapter concluding remarks will be presented about the feasibility study, the challenges encountered, the lessons learned and the next steps to be taken.

### 4.1 Feasibility of producing SDG indicators

An extensive framework was developed for this feasibility study. Different methodological aspects were incorporated into AMIGA in order to have a more detailed mapping of indicator availability according to UN metadata requirements. This has provided interesting insights into the feasibility of production of SDG indicators in Aruba.

Awaiting the final update of the Global SDG indicator framework in 2020, where an agreed upon methodology for all indicators will be finalized and where there will no longer be Tier III indicators, the current availability of indicators and the feasibility to produce indicators in the short term, gives an indication that we already have a substantial amount of data that we can use. According to the ECLAC methodology, 61.1% of the applicable and assessed indicators are being produced or could be produced using existing data sources. According to UNSD which has a more strict methodology requiring all levels of disaggregation and short term production of indicators within 2-3 years, the total of the currently available indicators and the easily feasible indicators is 47.7%.



When the indicators to be monitored in Aruba are selected, with the specific levels of disaggregation, a plan can be made to produce these indicators in short term and medium term, and the percentage of available indicators and feasible indicators can increase.

From the results of the feasibility study, it can be concluded that the feasibility of producing the SDG indicators varies per Pillar and is highly dependent upon budget allocations for maintaining the current statistical capacity, and investments in specialized human and technical resources for the collection of data. There is a need for allocating additional budget to existing budget for the production of the indicators. In some cases there is no budget allocated. It is necessary to allocate the necessary budget in order to be able to execute the necessary surveys and the upcoming Census 2020. Administrative data is the largest data source for the production of the indicators overall. It is important that resources are invested in the maintenance of administrative data sources and that through collaboration the utmost use can be extracted from these sources. The availability of specialized human resources varies. For Pillars People and Prosperity the percentage of available specialized human resources and available specialized human resources with need of additional training, is the highest.

Pillar Planet has the highest percentage of not available specialized human resources. The same is the case for specialized technical resources and non-specialized human and/or material resources.

The current statistical capacity of Aruba, has a low to quasi-non dependency on external assistance both in terms of funding and technical/methodological assistance. The low/non dependency of Aruba's current statistical capacity on external funding is primarily related to the relatively high GDP of Aruba. However, across all Pillars, there is some need of additional external technical/methodological assistance. Pillar Planet is the pillar with most need of additional external technical/methodological assistance for the production of the indicators.

Pillar People and Prosperity, having a tradition of producing certain sectorial indicators, are the Pillars which are already producing SDG indicators and were it is more feasible to extend the production of the necessary indicators. On the other hand, the Pillar with the main challenges is Pillar Planet. Collection of data in the area of Planet is relatively new, hence across the majority of the assessment dimensions, the production of Pillar Planet indicators is more challenging.



Another challenge is Pillar Peace in terms of lack of available standardization of data and the need for a statistical representative for this pillar. This is needed in order to be able to provide an overview on the feasibility of producing Pillar Peace indicators.

Close collaboration is key for optimal use of available human and financial resources. This can be in terms of the development of survey questionnaires, the selection of sample sizes, close collaboration in data collection using existing administrative sources, development of new registration systems/administrative sources, and cross-ministerial collaboration on resources.

The UNSD methodology also provides a methodology for the assessment of the statistical capacity of Aruba, which, in turn, provides insights in the challenges and opportunities of the current statistical capacity. When only the available applicable indicators are taken into account, the statistical component of the statistical capacity is assessed as relatively positive. This awaiting the assessment of the pending assessment indicators, mainly Pillar Peace indicators. The availability of a National Development Plan is also in progress. However, because the calculation of the Statistical Capacity is also dependent on the Statistical Legislation and the institutional arrangements, which are not up to date, the

statistical capacity is diminished. For the sustainability of indicator production in general and SDG indicators specifically, it is imperative that, in collaboration, a plan is created on the approach to be taken in order to tackle the update of the statistical legislation, other related legislation, and the structuring and formalization of the institutional arrangements.

#### **4.2 Challenges encountered**

Because of the need for clarity about the international data flows regarding the Global SDG indicators, information that may shed more light on the data flow is highly appreciated. This information is in turn used for the local situation. However, because of lack of uniformity in assessment methods and the information presented in these, sometimes, the information presented may result not to be applicable to a specific country. Collaboration with UN representatives is necessary for clarifications.

Confusion is sometimes caused by inconsistencies between the table on updated Tier classification and the available metadata in the metadata repository. The table on updated Tier III classification available on the website of the UNSTATS is not always synchronized with the metadata repository.



Sometimes indicators which are no longer Tier III, for which metadata is available in the metadata repository, are not updated in the Tier list and vice versa. The metadata for indicators that are classified as being Tier I or Tier II (for which agreed upon methodology is supposed to be available), is not available in the metadata repository.

Another challenge encountered was the continuity in the presence of all the SDG-IWG members during the process of exploration and development of the framework for the feasibility study. Because of this, not all SDG-IWG members underwent the full process of exploring frameworks for the feasibility study and developing the framework and, hence were not as familiarized with AMIGA. In these cases, familiarization with AMIGA took place during the process of execution of the feasibility study.

Furthermore, some concepts were difficult to operationalize in the established timeframe. This was especially the case for the availability of the necessary legislation for data collection and the assessment of the 'yes-no' indicators assessing whether the enabling legislation/policy/institutional arrangement was in place. Because of the challenges of operationalization in the given timeframe, these concepts were not specific enough leaving room for interpretation.

The necessary legislation for data collection could have been interpreted as an overall mandate to collect data or it may refer to a specific situation between departments. Therefore, these categories were not included in the analyses.

In the period of execution of the feasibility study, the continuity in availability of the statisticians representing the different Pillars in the SDG-IWG also posed a challenge.

Moreover, for several indicators, the SDG-IWG is highly dependent on input from other partners and stakeholders. Although we received cooperation from some stakeholders, lack of participation/input from other stakeholders led to the inability to conduct the feasibility assessment for these indicators in the proposed timeframe. For the time being, these indicators are categorized as pending assessment.

Another main challenge encountered throughout this feasibility study was related to the content of the metadata for the different indicators. Even though the metadata gives a clear understanding of the definition, calculation method, data sources, etc., other concepts were less clear. On several occasions, the required levels of disaggregation was ambiguous, leaving room for interpretation when classifying a specific



indicator as an A1 or A2 in terms of indicator availability. Also, for several indicators, the required periodicity of data collection was not clear, making the assessment of indicator feasibility more difficult.

Although the assessment using the ECLAC and the UNSD methodology gives an overview of the cases in which there is a match between the required disaggregation and the available disaggregation, the section on scoring whether the disaggregation levels are available was a challenge, mainly because of the confusion in distinguishing between not required and not applicable disaggregation levels.

Despite the challenges encountered, lessons were learned, and the necessary adaptations were made to reflect the needs of the local situation in Aruba.

### 4.3 Next steps

Aruba will be progressing soon to the stage of developing a National Indicator Framework, where a selection will be made of the policy relevant Global SDG indicators, (SDG) regional indicators and localized indicators. For the development of a National Indicator Framework, close and structural collaboration with policy makers is necessary to receive their input on the relevant indicators to be monitored for national policy and the corresponding necessary disaggregation levels. The input received from policy makers in terms of their data needs can be incorporated in, for example, surveys.

The feasibility study executed with AMIGA provides an overview of the feasibility of production of each SDG indicator. As different indicators may have the same data source, clustering of the necessary data sources will provide more information about the necessary human and financial resources for the production of SDG indicators. When the National Indicator Framework is developed, this clustering of data sources and the needed human and financial resources will take place.

The different levels of indicator sets will have to be distinguished and aligned. Namely, national, regional, global and thematic. There may be differences between these levels, but



there is above all overlap. The overlap is inherent, as national indicators will form the basis of other levels of indicators.

By means of AMIGA the needs for generating the SDG indicators were assessed. Once the National Indicator Framework of Aruba is developed and staged plans are made regarding the generation of relevant indicators, these indicators can be added to AMIGA and assessed. As AMIGA is a hybrid model developed to address the needs of Aruba while maintaining the necessary international comparability, it can be adapted to include future needs. As Aruba will soon be embarking in the process of Capacity Building for the SDG Framework, the insights provided by AMIGA can be used in this process, mainly in the phase A, where a Gap Analysis will be conducted.

An important prerequisite for the work that has to be conducted, is commitment and close and structural collaboration between all the partners involved, within a framework where the roles, responsibilities and processes are unambiguously described, and where the progress of such collaboration is continuously monitored and evaluated.



# Annex I – Concepts and definitions

## Classification ECLAC used for Aruba SDG Baseline Measurement 2018

**A:** The indicator is being produced

**B:** The indicator is not produced but could be produced using existing data sources

**C1:** The indicator is not being produced and could not be generated from existing data sources. Some data is available but further refinement and complementary information is required to produce the indicator

**C2:** The indicator is not being produced and could not be generated from existing data sources. Data are not available to produce the indicator

**NA:** Not applicable for Aruba

### Tier classification

**Tier I:** Indicator is conceptually clear, has an internationally established methodology and standards are available, and data are regularly produced by countries for at least 50 per cent of countries and of the population in every region where the indicator is relevant.

**Tier II:** Indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries.

**Tier III:** No internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested.

### Indicator applicability

**Applicable 1 (AP1):** The data needed for the compilation of the indicator is to be collected by the national statistical system of the country from national sources and/or estimates/modelled data are to be produced by the responsible members of the national statistical system

**Applicable 2 (AP2):** An external agency is responsible for the final stage of the indicator's compilation, but the input data has to be produced by the national statistical system and will be nationally owned

**Not applicable 1 (NA1):** Indicators compiled by an external agency. Input data not originating from the national statistical systems (or from members thereof) . The input data are, rather, collected from other sources

**Not applicable 2 (NA2):** An indicator is treated as NA 2, if the phenomenon, which the indicator refers to, does not exist in the country

### Type of indicator

**Single-purpose indicator:** Single-purpose indicators are used only for the measurement of a single target.

**Multi-purpose indicator:** Multi-purpose indicators are used multiple times (under different goals) for the measurement of progress in more than one target.

### Indicator availability and feasibility UNSD

*The UNSD methodology assesses the availability and feasibility of the SDG indicators with full compliance of the UN methodology and feasibility of production within 2-3 years.*

**Currently available (CA):** Published indicators or indicators in databases of members of the national statistical system, according to prescribed UN methodology. All data disaggregation levels mentioned in its description are available. "All levels of required disaggregation" is defined as those proposed in the metadata and those relevant according to the Aruban situation.



# Annex I – Concepts and definitions

**Easily Feasible (EF):** Indicators for which compilation is possible within the existing resources (or minor increase resources) on the basis of current data sources by recompilation of already available data within short/medium period of time (2-3 years)

**Feasible with strong effort (FSE):** Indicators for which not all required levels of disaggregation are available and for which compilation is possible only if additional resources are made available and needed additional (external) assistance is provided and can be used within short/medium term (2-3 years)

**Not feasible even with strong effort (NFSE):** Indicators which cannot be compiled within the short/medium term (2-3 years) even with strong effort; only some partial relevant data might be compiled. This category also includes the indicators that might be, hypothetically, produced with strong effort but are not a priority for the country and, therefore, their compilation is not likely in the short/medium term (2-3 years).

## Indicator availability ECLAC and UNECE (A's):

**A1:** The exact SDG indicator is produced according to the UN prescribed methodology with all levels of required disaggregation published or available in databases of the members of the National Statistical System.

**A2:** The SDG indicator is produced according to the UN prescribed methodology, however not all levels of disaggregation are available or one or more data component are not available.

**A3:** Proxy indicator. Proxy indicators are indicators measuring a similar concept using a different methodology.

**B:** The indicator is not produced but could be produced using existing data sources

**C1:** Some data is available but further refinement and complementary information is required to produce the indicator

**C2:** Data are not available to produce the indicator

## Dependency on resources availability and external assistance

**Dependency of current statistical capacity on external funding:** Dependency of current statistical capacity on external financial assistance to maintain the currently used data sources and statistical infrastructure

**Dependency of current statistical capacity on external technological/methodological assistance:** Dependency of current statistical capacity on technical/methodological external assistance to maintain the currently used data sources and statistical infrastructure

**Dependency on additional resource requirements:** Domestic/international financial resources are needed in addition to currently committed financial resources in order to compile the indicator.

**Dependency on additional external technical/methodological assistance:** External technological/methodological assistance is needed in order to compile the indicator.

## Specifics of indicator

**Name of statistical event:** Name of the statistical operation/process of data collection used for indicator generation.

**Type of statistical event:** Type of data source used for indicator generation.

**Periodicity of data collection:** Frequency of data collection.

**Required frequency:** Required frequency for data collection as prescribed in the UN metadata methodology.



# Annex I – Concepts and definitions

**Periodicity/Frequency of the statistical results dissemination:** The periodicity/frequency of the dissemination of the statistical results

**Institution in charge:** Institution in charge at the national level

**Observation unit:** Those entities on which information is received and statistics are compiled. During the collection of data, this is the unit for which data is recorded.

## Assessment of resources

**Financial resources:** Necessary budget allocated for 2019

**Specialized human resources:** Availability of necessary personnel with specific knowledge/expertise for indicator generation

**Specialized technical resources:** Availability of necessary specific information technology (IT), or other specialized technical resources necessary for in the process of indicator generation

**Non-specialized human and/or material resources:** Availability of necessary human and/or material resources without specialized knowledge or expertise.

## Legislation and enabling policy/arrangement/legislation

**Necessary Legislation in place for data collection:** Necessary legislation being in place for the collection of the necessary data for the calculation of the indicator.

**Enabling Policy/Arrangement/Legislation in place:** Only applicable to the indicators where the country needs to assess whether the specific policy/arrangement/legislation asked for in the indicator is in place (Yes/No indicators).



## Annex II - Categories

<b>Indicator Applicability</b>	Applicable 1 (AP1) Applicable 2 (AP2) Not applicable 1 (NA1) Not applicable 2 (NA2)
<b>Type of indicator</b>	Single purpose Multi-purpose
<b>Indicator availability ECLAC</b>	A1 A2 A3 B C1 C2
<b>Indicator availability and feasibility UNSD</b>	Currently available (CA) Easily feasible (EF) Feasible with strong effort (FSE) Not feasible even with strong effort (NFSE)
<b>Dependency of Current Statistical Capacity on External assistance</b>	No Low Moderate High
<b>Additional Financial Resource Requirements</b>	No Low Moderate High
<b>Additional External Technical/Methodological Assistance</b>	No Low Moderate High
<b>Name of the statistical event</b>	(open text)
<b>Type of statistical event/ Data sources</b>	Census Survey Administrative data Mixed sources Other
<b>Periodicity of data collection</b>	Annual Biannually Quarterly Monthly Ad-hoc Mixed Other
<b>Geographic coverage</b>	National Urban Rural
<b>Required frequency</b>	Annually Monthly Bi-Monthly Every 2 years Every 3 years Every 5 years Every 10 years Other



## Annex II - Categories

<b>Periodicity/Frequency of the statistical results dissemination</b>	Annually Monthly Bi-Monthly Every 2 years Every 3 years Every 5 years Every 10 years Other
<b>Website link or reference of publication (if any)</b>	(open text)
<b>Institution in charge</b>	(open text)
<b>Type of institution</b>	GO NGO Private
<b>Is this indicator already transmitted to international organizations?</b>	Yes No
<b>Observation unit</b>	Person Household Company SqKm (squared kilometers) Ministries Products AFL/\$ Other
<b>Categories Disaggregation</b>	Required & Available (RA) Required-Not Available (RNA) Not Required-Available (NRA) Not Required (NR) Disaggregation Not Applicable (DNA)
<b>Financial resources</b>	Adequate Inadequate No Budget
<b>Specialized human resources</b>	Adequate Human Resources Available But Need Training Human Resources Not Available
<b>Specialized technical resources</b>	Available Available But Needs Minor Adaptations Not Available
<b>Non-specialized human and/or material resources</b>	Available Available but minor issues need to be addressed Not available
<b>Necessary Legislation in place for data collection</b>	Yes No
<b>Enabling Policy/Arrangement/Legislation in place</b>	Yes No



AMIGA



**SDG-Indicator Working Group**  
**SDG-IWG**



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