

International Workshop on SDG monitoring

Virtually, January 12-13, 2022

Experience on Development of CamStat, CAMBODIA's National SDG Reporting Platform



The screenshot shows the homepage of the CamStat National Indicator Reporting Platform. At the top, there is a logo featuring a traditional Cambodian temple gopuram and the text "ពិច្ចាស្ថាល់តិត្យិតិ" (National Indicator Reporting Platform) in Khmer and English. Below the logo is a search bar with the placeholder "Search, visualise and share data...". Underneath the search bar are two buttons: "Topic" and "Reference area". A grid of categories follows, organized into three columns: Agriculture, Demography, Economy; Education, Employment, Environment; Gender, Governance, Health and Nutrition; and Infrastructure, SDG indicators, Tourism. In the bottom right corner of the grid, there is a watermark that says "Activate Windows".

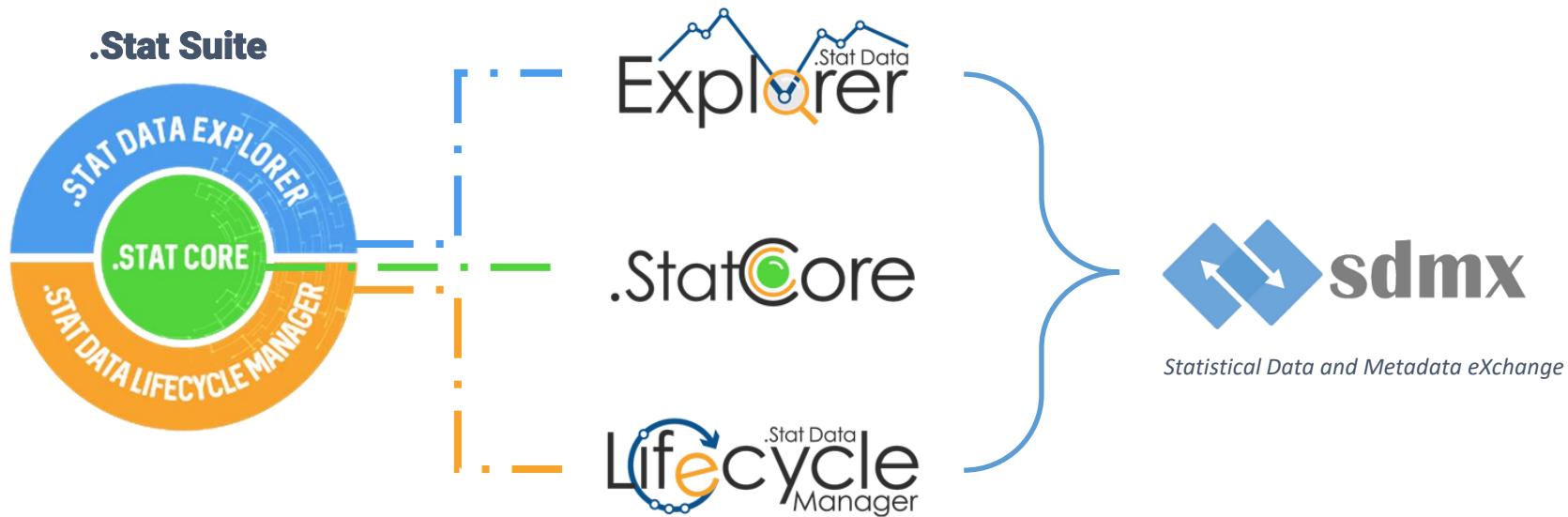
Agriculture	Demography	Economy
Education	Employment	Environment
Gender	Governance	Health and Nutrition
Infrastructure	SDG indicators	Tourism

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Presentation Outline

- 1. The Implementation Experience**
- 2. The Key Outputs**
- 3. Lesson Learnt**
- 4. Current Update & Maintenance Exercise**
- 5. Next Step**

Stat Suite and SDMX/CAMSTAT



- Data modeling and SDMX Information Model,
- .Stat Data Explorer and DLM
- .Stat hosted at the UN Global Platform (UNGP) cloud environment

Migrating into CamStat Production



Pilot Exercise (2018-2019)

Flash Back to The Pilot Missions of OECD, UNICEF,
PARIS21 and UNSD

Mar 2018

- Structured SDG DSD,
- Structured Education Data
- Uploaded data to .Stat Suite



Oct 2018

- . Structured Demography Data & uploaded data to .Stat Suite.
- . Built skills in SDMX standards and tools good practices

Dec 2018

- . Structured Agriculture data and upload to .Stat Suite
- . Deepened skills in data standards and tools good practices

May 2019

Full migration of CamInfo data, including NSDP and CSDG/SDG data.

Tool Used

- DSD Constructor
 - Create Concept Scheme
 - Create Code list
- Mapping Assistant
 - Mapping all data of CamInfo database
- SDMX Converter
 - Create data flow



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Key Outputs

- 898 indicators and about 170,000 data observations uploaded to CamStat using the .Stat Data Lifecycle Manager (DLM)
- CamStat running in the cloud and publicly available (<http://camstat.nis.gov.kh/#/>)
- Number of NIS Subject Matter staff/team trained on data standards and tools, .Stat DLM
- Training workshop on data sharing protocol and CamStat reporting platform, such as the fundamentals of data modeling, SDMX Information Model
- CamStat running on UNGP using AWS cloud services
- Data exchange has been established for SDG indicators with the SDG Global Platform

API query

- API query can be automatically generated base on SDMX standard

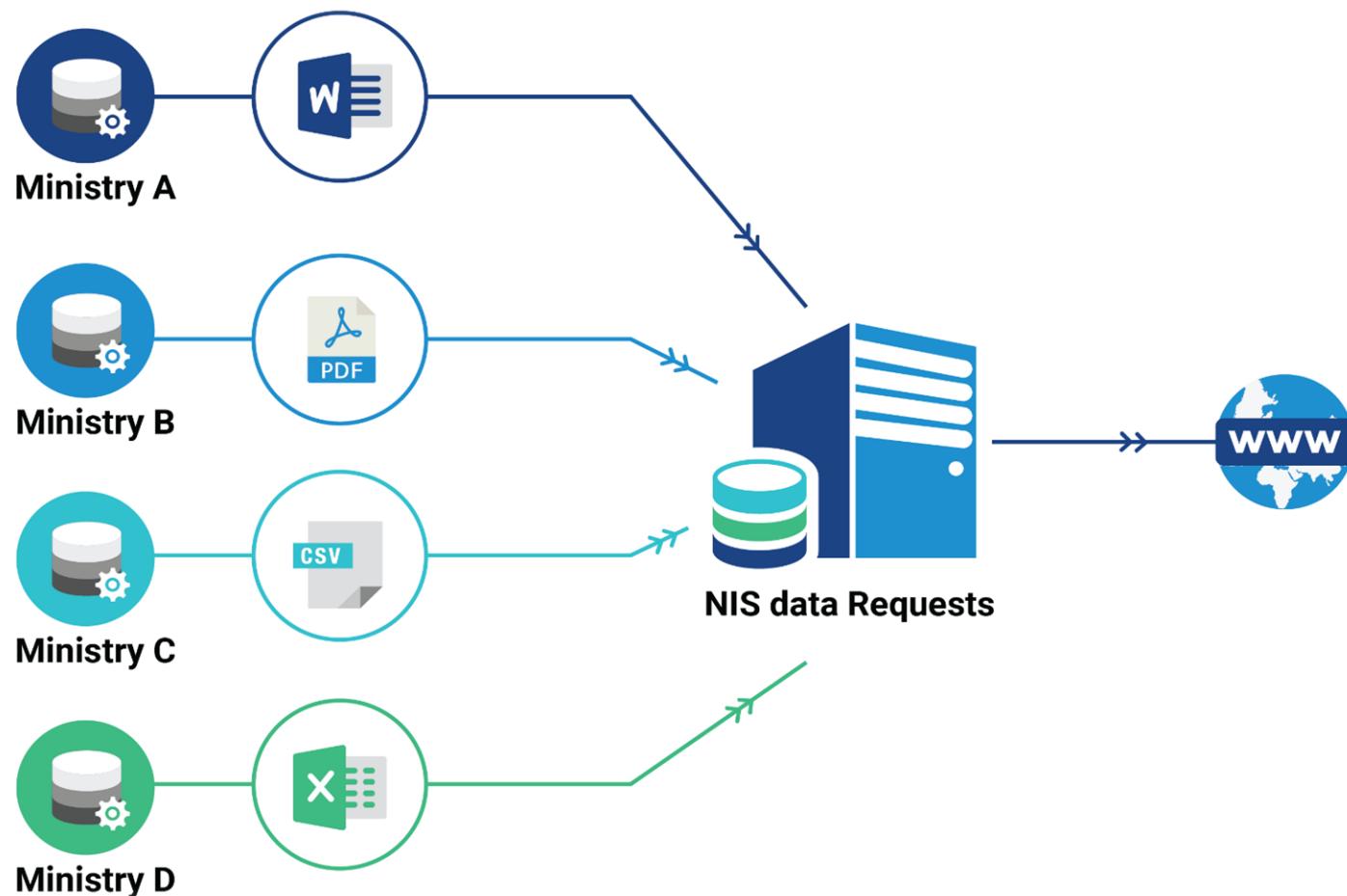
The screenshot shows the National Indicator Reporting Platform interface. At the top, there's a header with the National Institute of Statistics logo, a search bar, and links for accessibility support, log in, and language selection (English). Below the header, a green banner displays the platform's name: "NATIONAL INDICATOR REPORTING PLATFORM". On the left, a sidebar titled "Filters" lists various data selection criteria: "Used filters" (SDG Series: 6.1.1 Proportion of population using an improved drinking water source), "Time period" (Start: 2008, End: 2019), and other dropdowns for "Clear all filters", "Time Period" (12 / 41), "SDG Series" (1 / 145), "Reference area" (0 / 34), "Sex" (0 / 3), "Age" (0 / 27), "Degree of urbanisation" (0 / 4), "Income or wealth quantile" (0 / 8), and "Education level" (0 / 7). The main content area features a "Developer API query builder" section with two code snippets: "Data query" and "Structure query". The "Data query" code is: `https://nsiws-stable-camstat-live.officialstatistics.org/rest/data/KH_NIS,DF_SDG_KH,1.2/A..SH_H2O_SAFE.....?startPeriod=2008&endPeriod=2019&dimensionAtObservation>AllDimensions`. The "Structure query" code is: `https://nsiws-stable-camstat-live.officialstatistics.org/rest/dataflow/KH_NIS/DF_SDG_KH/1.2?references=all&detail=referencepartial`. Both snippets have a "Copy code" button. Below these, a note states: "The query filter is generated according to the current data selection. To change the data selection, use the filters on the left." At the bottom, a section titled "National SDG Indicators" provides details for the selected SDG Series: "6.1.1 Proportion of population using an improved drinking water source" and "Reference area: Cambodia". It includes a table showing data from 2008 to 2017 for "Degree of urbanisation", "Income or wealth quantile", and "Education level". The table has columns for "Time period" (2008-2017) and "Unit of Measure" (Percent). The "Degree of urbanisation" table shows values like 55, 48.7, 48.2, 50.5, 50.7, 54.2, 54.5, 59.2, 61.1, 64.8. The "Income or wealth quantile" table shows a breakdown: Total (55, 48.7, 48.2, 50.5, 50.7, 54.2, 54.5, 59.2, 61.1, 64.8) and Urban (82.3, 78.2, 79, 81.3, 81.5, 83.1, 80.7, 84.2, 88.8, 87.7). The "Education level" table shows values like 82.3, 78.2, 79, 81.3, 81.5, 83.1, 80.7, 84.2, 88.8, 87.7.

SDMX standard

```
<!-- NSI Web Service v7.13.2.0 -->
<message:Structure xmlns:message="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/message" xmlns:structure="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/structure"
  xmlns:common="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/common">
  <message:Header>
    <message:ID>IDREF42591</message:ID>
    <message:Test>false</message:Test>
    <message:Prepared>2021-01-20T12:38:22.7506325+00:00</message:Prepared>
    <message:Sender id="Unknown"/>
    <message:Receiver id="Unknown"/>
  </message:Header>
  <message:Structures>
    <structure>Dataflows>
      <structure>Dataflow id="DF_SDG_KH" agencyID="KH_NIS" version="1.2" isFinal="false">
        <common:Annotations>
          <common:Annotation>
            <common:AnnotationType>NonProductionDataflow</common:AnnotationType>
            <common:AnnotationText xml:lang="en">true</common:AnnotationText>
          </common:Annotation>
          <common:Annotation>
            <common:AnnotationTitle>TIME_PERIOD</common:AnnotationTitle>
            <common:AnnotationType>LAYOUT_COLUMN</common:AnnotationType>
          </common:Annotation>
          <common:Annotation>
            <common:AnnotationTitle>FREQ,REPORTING_TYPE,OBS_STATUS=A,UNIT_MULT=0</common:AnnotationTitle>
            <common:AnnotationType>NOT_DISPLAYED</common:AnnotationType>
          </common:Annotation>
          <common:Annotation>
            <common:AnnotationTitle>REF_AREA,SEX,AGE,URBANISATION</common:AnnotationTitle>
            <common:AnnotationType>LAYOUT_ROW</common:AnnotationType>
          </common:Annotation>
        </common:Annotations>
        <common>Name xml:lang="en">National SDG Indicators</common>Name>
        <structure:Structure>
          <Ref id="SDG" version="1.2" agencyID="KH_NIS" package="datastructure" class="DataStructure"/>
        </structure:Structure>
      </structure>Dataflow>
    </structure>Dataflows>
    <structure:CategorySchemes>
      <structure:CategoryScheme id="CAM_CAT" agencyID="KH_NIS" version="1.0" isFinal="true" isPartial="true">
        <common>Name xml:lang="en">Topic</common>Name>
        <common>Name xml:lang="km">ប្រព័ន្ធបច្ចេកទេស</common>Name>
        <structure:Category id="SDG">
          <common>Name xml:lang="en">SDG indicators</common>Name>
```

- ✓ Much effort required on SDMX artefact maintenance and versioning
- ✓ Expert knowledge of SDMX required with current interface and tools to model, map and upload data structures and dataset
- ✓ Different requirements for dissemination vs reporting when using global Data Structure Definitions (DSDs)
 - **Code descriptions**
 - **Unused dimensions**
 - **National extensions**
- ✓ NIS will need further technical assistance to use and maintain CAMSTAT

Current general situation for reporting (LMs/LAs)



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Current Updating & Maintenance Exercise



Updating timeseries data from LMs,
Survey and census report



Prepare indicators template for
respective line ministry to be updated.



CamStat data have been reviewed (codelist dimension, customization) adapt to new feature of .StatSuite

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Current Updating & Maintaining Exercise

1. Prepare mapping file with inclusive parameter sheet
2. Using DSD Matrix Generator
 - *To add/edit the required code list*
 - *Or To upgrade the version (DSD, CL, DF...)*
3. SDMX converter
 - *Using the generated DSD*
 - *Using the mapped file*
4. Upload into DLM



Generate SDMX Artefacts

1	Generate? 0=no, 1=yes	Action	Prerequisites	Parameters for SDMX-ML Generation
2	1	Generate Dataflows	Fill the Dataflows and DSD-Concept Matrix worksheets to create the Dataflow/DSD relationships	Output folder C:\temp
3	1	Generate Categorisations	Fill the category columns on the Dataflows worksheet for attaching the Dataflow to a Category	Create separate files? 0
4	0	Generate Codelists	Fill the CL_worksheets for all required codelists, following the CL_template	Filename prefix SDG_NEW
5	0	Generate Concept Scheme	Fill the Concept Scheme worksheet	XML app for opening file C:\Program Files\Oxygen XML Editor 16\oxygen16.1.exe
6	0	Generate DSDs	Fill the DSDs worksheet	Dataflow for Dataset stub AEG_SDGS@SDG
7	1	Generate Constraints	Fill the Constraints worksheet	
8	0	Generate Dataset stub	Same as Generate Dataflows. Choose a Dataflow in the Parameters	
9				
10				

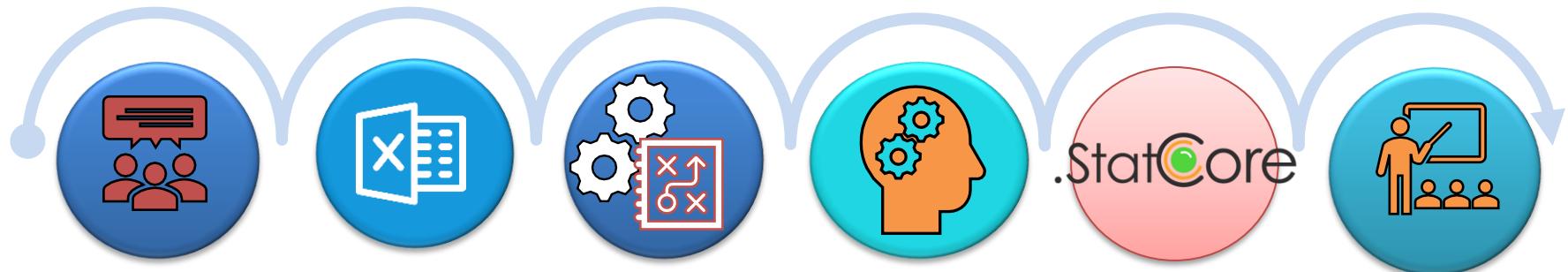
Other actions: How to use, Generate SDMX & Actions, Concept Scheme, DSDs, Dataflows, DSD-Concept Matrix, ConstraintsSummary, CL_FREQ, CL_OBS_STA, ...

CamStat's Migration to UN Global Platform

- In 2020, CamStat was migrated from temporary hosting to the UN Global Platform with assistance from UNSD, OECD, UNESCAP, and UNICEF
 - it provided a home for CamStat in a robust cloud environment,
 - the technical aspects of the .Stat installation and maintenance is addressed by the UNGP community.
- CamStat now running on UNGP using AWS cloud services
- Working with FAO to disseminate Agricultural Survey on CamStat.
- Future integration with Open SDG front-end through CamStat API (SDMX).

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Next steps



CAMSTAT new version launching

Requested new data for updating time series data in CAMSTAT

Adapt flows throughout NSS to regularly update CAMSTAT (e.g. SDMX standard)

Need for continued technical support/capacity building (1-2 years), for example adopt/implement MOU/data sharing tools to automate data reporting/exchanging

Continued technical support for .Stat on UNGP Cloud

Provide training on using Data Explorer to the NIS subject matter team and line ministries/other agencies to ensure sustainability over the long term

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Thank you!

