

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. The shapes are primarily triangles and polygons, creating a dynamic, layered effect. The central text is set against a white background that is partially framed by these green shapes.

IMPLEMENTATION OF FRAMEWORK FOR DEVELOPMENT OF ENVIRONMENT STATISTICS (FDES)

THE CASE OF BOTSWANA

STRUCTURE OF PRESENTATION

- ▶ Experience using FDES
- ▶ Environment Statistics production in Botswana
- ▶ Environment Statistics and Sustainable Development Goals (SDGs)
- ▶ Environment Statistics and SEEA
- ▶ Example of statistical tables
- ▶ Challenges in implementing FDES
- ▶ Conclusion

EXPERIENCE WITH FDES 2013

- Prior to implementing the revised FDES 2013 Botswana was using the 1984 FDES
 - 1984 FDES was not easy to follow, and it also leaned more towards DPSIR model which assumes a causal relationship
- During implementation Statistics Botswana found that FDES 2013 is easy to follow and use:
 - It structures environment statistics into Components, Sub-components, Topics and Statistics
- FDES 2013 also sets the scope of coverage of environment statistics
 - It comprises the Basic Set which includes everything possible, and the Core Set which is the bare minimum that a country can compile
 - These Sets help us to identify gaps in data coverage

ENVIRONMENT STATISTICS PRODUCTION IN BOTSWANA

- ▶ Through FDES Botswana has produced the following reports:
 - Environment Statistics Report 2012 covering Climate, Land, Population, Water, Wildlife, Forestry and Agriculture
 - Human Settlements Statistics Report 2013 covering population, access to water, sanitation and energy, waste collection & disposal, housing conditions, natural disasters and environmental health. It was the first time that such a report was done in Botswana, an effort that was made through the help of FDES
 - Statistics Botswana is currently working on producing wildlife, climate and water statistics reports
 - FDES helped to identify waste management as a gap in data coverage. Waste management statistics from local authorities are currently being compiled

ENVIRONMENT STATISTICS & SDGs

- ▶ The country will use FDES to be able to meet data needs for the coming SDGs as follows:
 - Goals 6, 7 and 11 on availability and sustainable management of water and sanitation, access to affordable, reliable and modern energy, and making cities and human settlements inclusive, safe, resilient and sustainable are well covered by human settlements statistics.
 - Goal 12 on sustainable and consumption patterns is addressed through statistics on natural resources, pollution and waste management while Goal 13 on combating climate change and its impacts is partly addressed through climate change statistics. It should however be noted that currently Botswana does not have sufficient information to meet data needs of these two Goals. Effort is being made in data collection and analysis to enable the country to provide such data in the future.
 - Goal 15 on Sustainable use of terrestrial ecosystems, forests, combating desertification, land degradation and biodiversity conservation is partly covered by the wildlife and forestry statistics.

example: the statistics give species population and population of the species by status category which help monitor biodiversity conservation.

- However more work needs to be done to be able to produce all the indicators that will be needed to address the SDGs

ENVIRONMENT STATISTICS & SEEA

- ▶ Botswana is one of the countries involved in Wealth Accounting and the Valuation of Ecosystem Services programme focusing on water, minerals, energy and ecosystems (tourism)
- ▶ Wherever possible FDES uses SEEA definitions and classifications making it possible to meet data requirements for SEEA
- ▶ The country readily provides such data but to a limited extent as some data are not appropriately categorized e.g. water and energy use are not classified according to ISIC which is a requirement by FDES and SEEA.
- ▶ Effort is being made by relevant stakeholders to overcome this
- ▶ An example of statistics presented in the Human Settlements Report is shown below
 - Data on the Table is sourced from National Population Censuses, Statistics Botswana

Proportion of Households by Principal Energy Source for Cooking (%)

Fuel for cooking	2001 Total	2001 Urban	2001 Rural	2011 Total	2011 Urban	2011 Rural
Electricity	4.86	7.6	1.08	17.79	23.56	7.12
Petrol	-	-	-	0.06	0.07	0.06
Diesel	-	-	-	0.09	0.08	0.10
Solar	0.19	0.28	0.08	0.08	0.09	0.06
LPG gas	40.59	57.65	17.01	37.89	50.81	14.0
Bio gas	0.57	0.66	0.44	0.92	1.17	0.45
Wood	45.72	22.83	77.34	41.19	21.81	77.03
Paraffin	7.53	10.47	3.47	1.67	2.10	0.85
Cow dung	0.11	0.02	0.23	0.07	0.04	0.14
Coal	0.12	0.12	0.11	0.04	0.04	0.03
Crop waste	0.08	0.10	0.06	0.02	0.02	0.01
Charcoal	-	-	-	0.13	0.16	0.08
Other	0.11	0.12	0.09	0.05	0.05	0.06
Not stated	0.12	0.14	0.1	-	-	-
Households	404,706	234,757	169,949	550,945	357,542	193,376

CHALLENGES IN IMPLEMENTING FDES

- ▶ Methodological manual is still being developed to guide compilation and analysis of environment statistics, this also means definitions are not yet standardized. This poses a challenge on how to go about compiling some of the statistics e.g., fuel-wood consumption
- ▶ Lack of benchmarking opportunities regionally and internationally e.g. Human Settlements Reports based on the FDES were particularly hard to find, more especially for the environmental health sub-component

CONCLUSION

- ▶ Revised FDES is very useful in producing environment statistics because it organizes the statistics into an easy to follow structure
- ▶ Production of environment statistics enables countries to meet national and international data needs
- ▶ Development of a methodological manual is a welcome initiative as countries especially those at early stages of development of environment statistics need to be capacitated to produce some of the statistics
- ▶ It is encouraged for countries to establish inter-agency platforms to improve data compilation and produce quality statistics as recommended in the FDES