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AGENDA ITEM 9

Enhancing forest-related data to achieve the SDGs – achievements and challenges

Forestry Department
FAO

SUMMARY

The paper presents global flagship initiatives of FAO's Forestry Department that aim at enhancing forest-related data and enabling countries to make evidence-based decisions. It provides an overview on the integration of forests in the sustainable development goals (SDGs) and presents main initiatives, including the Forest Resource Assessment (FRA), the Mountain Green Cover Index, the Forest Products Yearbook and the Global Core Set of forest-related indicators. Furthermore it presents initiatives to improve the availability and quality of forest-related data at country level.

The paper concludes that the SDG process provides a unique opportunity and useful framework to harmonize forest-related reporting processes at all levels. FAO made substantial progress to improve i) monitoring and reporting tools and ii) accessibility of key information related to forests in cooperation with a multitude of stakeholders, including members of the Collaborative Partnership on Forests (CPF). Various capacity building initiatives have been carried out by FAO and partners to enhance countries' capacities to collect and analyse forest-related data for evidence-based decision making

I. INTRODUCTION

Forests are among the world's most productive land-based ecosystems and essential to life on earth and sustainable development. They cover 31 percent of the globe's land area and provide essential goods and services, including timber, fibre, fuel, food, fodder and medicine. According to FAO's Forest Resources Assessment (FRA) 2015[1], forests cover 313,000 K ha in West and Central Africa, 274,886 K ha in East and Southern Africa and 36,217 K ha in North Africa.

Forests conserve soil and water; prevent land degradation and desertification; reduce the risk of floods, landslides and avalanches, droughts, dust and sand storms, and other disasters; they support sustainable agriculture and are crucial to climate change mitigation and adaptation and conserving the world's biological diversity.

Taking into account the multifunctionality of forest ecosystems and their interaction with other sectors and biomes, accurate monitoring of the status of forest ecosystems, forest and landscape restoration and sustainable forest managements (SFM) remains challenging. The sustainable development goals (SDGs) provide an opportunity for enhanced forest-related monitoring and new tools are available to enable decision-makers for evidence-based decision making to promote SFM.

II. DEVELOPMENT OF THE TOPIC

Forestry and SDG indicators

In September 2015, the Member States of the United Nations adopted a new global framework for sustainable development, the 2030 Agenda for Sustainable Development. The 2030 Agenda is universal, inclusive and comprehensive, with perspectives and responsibilities reflecting the priorities and needs of all countries outlined in 17 SDGs and 169 targets, which are to be achieved by 2030. Forest related targets expressed under SDG target 15 "Life for Land", taking into account the strong interlinkages with other SDGs.

The 2018 edition of FAO's State of the World's Forests (SOFO)[2] presented new information to help recognize these interlinkages and enhance the understanding of how policies on forests and trees go beyond SDG 15 to contribute to achieving many other goals and targets of the 2030 Agenda. SOFO 2018 underlines the contribution that forests and trees can make towards achieving 28 SDG targets and concludes that "forests and trees make vital contributions both to people and the planet, bolstering livelihoods, providing clean air and water, conserving biodiversity and responding to climate change".

Out of the 12 targets under SDG 15, FAO is the custodian agency for three indicators that are directly forest related:

1. SDG indicator 15.1.1 "Forest area as a proportion of total land area";
2. SDG indicator 15.2.1 "Progress towards Sustainable Forest Management", including five sub-indicators, i.e. i) "Forest area net change rate"; ii) "Above ground biomass stock in forest"; iii) "Proportion of forest area located in legally established protected areas"; iv) "Proportion of forest area under long-term forest management plans"; and v) "Forest area under independently verified forest management certification schemes"; and
3. SDG indicator 15.4.2 "Mountain Green Cover Index".

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[1] http://www.fao.org/forest-resources-assessment/past-assessments/fra-2015/en/
[2] http://www.fao.org/state-of-forests/en/

The data for these indicators are reported to UN Statistical Division on annual basis.

Forest Resource Assessment as main mechanism to compile forest data from countries, including SDG 15.1 and 15.2

Information related to SDGs 15.1 and 15.2 is mainly collected through FAO's Forest Resource Assessment (FRA), which is monitoring the status of the world's forests at five to ten year intervals since 1946. The first report on global forest resources was published in 1948 and the recent assessments have been produced every five years in an attempt to provide a consistent approach to describing the world's forests and how they are changing.

FAO's FRA is based on official national data reported to the FRA process by officially nominated National Correspondents that currently cover 180 countries and territories, including 54 African countries and territories. The reports submitted by countries are reviewed by the FRA Secretariat as well as external expert and published together with regional and global analysis conducted by FAO.

The ongoing assessment, FRA 2020, was launched in early 2018 and its results will be published in mid-2020 and presented at the 25th session of FAO's Committee on Forestry (COFO). During the preparation of the assessment, the reporting content was reviewed and streamlined, a new on-line reporting and review platform developed and the capacity development programme strengthened. Capacity development needs identified as relevant for African countries includes, the lack of updated and quality data on many forest related variables, weak technical capacity to use and access remote sensing technology[3], the need to build long-term institutional capacity in forest monitoring, the poor coordination between national institutions and ministries involved in forest-related reporting. Two workshops focused on FRA 2020 reporting and three on remote sensing were organized in Africa since 2017. These capacity building activities will continue throughout 2020 and 2021, also in Africa (three national and three regional FRA capacity development workshops on remote sensing are currently planned), with the intention to improve the quality, consistency and transparency of the FRA Country Reports and especially the data related to SDG indicators 15.1.1 and 15.2.1, which will be reported annually starting from 2020.

Mountain Green Cover Index – SDG 15.4.2

The Mountain Green Cover Index is designed to measure changes of the green vegetation in mountain areas according to the six vegetation classes defined by the Intergovernmental Panel on Climate Change (IPCC) (Forest land, Cropland, Grassland/shrubs, Wetlands, Settlements) and in line with official UN classification of mountains in six elevation classes (Kapos classes). It builds on the recognition of a positive correlation between green coverage of mountain areas and their state of health and capacity to fulfil their ecosystem roles. In particular, the Mountain Green Cover Index can provide information on the agriculture, forest and woody cover. Its reduction will be generally linked to land degradation, forest exploitation, timber extraction, fuel-wood collection and fire. Its increase will be due to vegetation growth, possibly linked to reforestation or afforestation programmes. In the highest elevation classes an increase in the green cover could be linked to the retreat of glaciers and reduction of the cryosphere and therefore has to be considered as a negative element.

FAO Collect Earth and the 2015 global map of mountains produced by FAO/Mountain Partnership Secretariat are the data sources for the index. Each country is responsible to validate its national data and two trainings have already been organised to support National Statistics Offices (NSO) to fully understand the applied

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[3] Including remote sensing tools provided by FAO such as Collect Earth, OpenForis and SEPAL.

methodology and support the validation.[4] The first reporting period will be in 2020 and the new data collection process will be conducted between the end of 2019 and the first months of 2020.

Forest Products Statistics, compiling information relevant for a range of SDG targets

Although not explicitly part of the SDG indicators, forest products contribute critically to economic growth and well-being in many countries. Forest products, if sourced from sustainably managed forests, also provide a sound basis for bio- and circular economies as envisaged in SDG 12 to ensure sustainable consumption and production patters and SDG 8 to promote inclusive and sustainable economic growth, employment and decent work for all.

Data collection on forest products plays a central role to monitor a wide range of forest-related SDG goals of the SDGs as well as other international forest-related commitments. Statistical data on forest products are presented annually by the Forest Products Yearbook. FAO's statistical work programme related to forest products received formal approval from the Third Session of the FAO Conference at Geneva in 1947 and since then, FAO has been compiling and reporting statistics annually on production, trade and consumption of forest products. These statistics on basic wood and paper products are provided by countries through National Correspondents, available online via the FAO Yearbook of Forest Products[5] and FAOSTAT-Forestry database[6].

Since the last AFCAS meeting in November 2017, substantial progress has been made regarding i) collection and dissemination; ii) improvements of international statistical classifications and standards; and iii) strengthening of national capacities:

- *Collection and dissemination:*

  – Annual data on forest products for the period 2016-2018 was released in FAOSTAT and Forest Products Yearbook, as well as survey results on installed pulp and paper production capacities and recovered paper consumption in 2017.
  – Global data series on production, trade and consumption of Oriented Strand Board (OSB) were unveiled in FAOSTAT and Yearbook (from 1995 onwards).
  – Data series on recycled post-consumer wood collection, trade and consumption started from 2017. These statistics will be unveiled in FAOSTAT in December 2019. Data on post-consumer wood, along with recovered paper (already in FAOSTAT) are highly relevant for SDG 12 "Ensure sustainable consumption and production patterns" in order to monitor indicator 12.5.1 "National recycling rate, tons of material recycled".

- *Improving international statistical classifications and standards:*

  – FAO, in collaboration with the International Tropical Timber Organization (ITTO), United Nations Economic Commission for Europe (UNECE) and the Statistical Office of the European Union (Eurostat) proposed amendments for wood and non-wood forest product (NWFP) codes in the Harmonized System (HS) through their proposal to the World Customs Organization (WCO) for the HS 2022 revision. WCO's HS Committee examined the proposal and provisionally accepted most. The final HS2022 structure will be announced by WCO in early 2020.

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[4] See http://www.fao.org/sustainable-development-goals/indicators/1542/en/ for further information.
[5] http://www.fao.org/forestry/statistics/80570/en/
[6] http://www.fao.org/forestry/statistics/84922/en/

- FAO contributed to the review of Classification of Individual Consumption According to Purpose (COICOP) 2018. FAO-proposed separate codes for wood fuel and charcoal, which were accepted and included in the new version of COICOP.

- *Strengthening national statistical capacities:*

  - In 2018, FAO, with technical and financial support of the Global Strategy to Improve Rural and Agricultural Statistics, completed and published two guidelines: i) *Guidelines on data collection for national statistics on forest products*[7] and ii) *Guidelines for the Incorporation of a Woodfuel Supplementary Module into Existing Household Surveys in Developing Countries*[8] (see below)*;*
  - In collaboration with ITTO, a national capacity building workshop on forest products statistics was organized in Viet Nam in April 2019;
  - For 2020, two sub-regional capacity development workshops are planned for Eastern and South Europe as well as West and Central Africa. The workshops aim to support member countries to develop and enhance their capacity in forest products statistical systems.

Global Strategy to Improve Rural and Agricultural Statistics guidelines

Under the framework of The Global Strategy to Improve Rural and Agricultural Statistics, established to enhance the capacity of developing countries to provide reliable statistical, FAO produced two sets of guidelines:

- *Guidelines on data collection for national statistics on forest products:* The Guidelines serve as an instrument to assist countries in the identification of data gaps in national forest products statistics and provide them with operationally feasible options to produce and disseminate national forest products statistics. They provide a single set of Guidelines for all stakeholders producing forestry products statistics in the country and facilitating official reporting and analysis in the forestry data sector. The Guidelines provide a framework for the improvement and availability of comparable forest products data by identifying key indicators related to forestry activities and provide recommendations to better capture these indicators that countries report to international organizations and contribute to the monitoring of the related SDGs.

- *Guidelines for the Incorporation of a Woodfuel Supplementary Module into Existing Household Surveys in Developing Countries.* Woodfuel[9] plays a critical role in the economic and social wellbeing of people around the world. Approximately 2.4 billion people use woodfuel as their primary energy source for cooking, predominantly in developing countries. In Africa, the roundwood share of energy use reaches 90 percent, while the global share is estimated at about 50%. Despite the economic, social and environmental importance of woodfuel, many developing countries lack reliable data with which to estimate the patterns and trends of woodfuel consumption and production, and the labour associated with it. As a result, insufficient attention is often given to wood energy in national policies and to problems in assessing its impact on health and the environment.

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[7] http://gsars.org/wp-content/uploads/2018/12/GS-NFP-GUIDELINES-EN-06.pdf. These guidelines will be republished as an FAO publication soon.

[8] http://gsars.org/wp-content/uploads/2018/10/GS-WOODFUEL-GUIDELINES-EN-10.pdf. These guidelines will be republished as an FAO publication soon.

[9] According to the Unified Bio-Energy Terminology (UBET), woodfuel is a subcategory of biofuels, which in turn constitute a subcategory of renewable energy sources, as per SDG target 7.2.1 "Renewable energy share in the total final energy consumption"

These Guidelines provide a tool to incorporate the Woodfuel Supplementary Module (WSM) in existing national household surveys. Besides the two field testing, one in Lesotho and one in Ecuador, Nigeria implemented the module in some provinces and Ethiopia is also working through the same direction to include the module in their next round of national household surveys in 2021.

Global Core Set of 21 Forest Indicators to complement forest-specific SDG indicators

In 2015, the Collaborative Partnership on Forests (CPF[10]) initiated work to explore possibilities to develop a relatively compact but comprehensive Global Core Set (GCS) of forest-related indicators that would help streamline reporting and monitoring and reduce reporting burden of countries, including those related to SDGs and the Rio Conventions (i.e. United Nations Framework Convention on Climate Change (UNFCCC), , Convention on Biological Diversity (CBD), and the United Nations Convention to Combat Desertification (UNCCD)). It includes 21 equally important qualitative and quantitative indicators, structured according to the seven thematic elements of SFM[11]. The first draft set of the indicators was presented in an Organization-Led Initiative (OLI) of the CPF in Rome in November 2016. The draft set was further developed and refined in the context of the preparation of the Global FRA2020, which constitutes the main data collection mechanism for the GCS, and finalized in December 2017.

In its 24th session held in July 2018, COFO acknowledged the progress made on the GCS and invited the United Nations Forum on Forests (UNFF) and the governing bodies of member organizations of the CPF to consider the use of Tier 1 and Tier 2 indicators in their reporting processes. Furthermore, COFO requested FAO to support the capacity development for relevant country stakeholders to collect and analyse data for the GCS, continue working with the CPF and its member organizations on further development of the "Tier 2", "Tier 3" and "candidate" indicators of the GCS, and continue to report on progress on the GCS, including at the UNFF. In December 2018, the GCS was endorsed by the FAO Council.

Efforts to further develop the GCS was taken in the context of a workshop on reporting on Global Forest Goals (GFG) and targets of the UN Strategic Plan for Forests 2017-2030 in November 2018, organized by the UNFF Secretariat.

An Expert Workshop in October 2019 is to strengthen the global core set of forest indicators that are classified as Tier 3 and Tier 2 and develop recommendations to make full use of the set, particularly by further improving methodology and data availability of selected indicators. At the time of writing the Agenda Item 9 background paper results were not yet available.

Further initiatives to enhance countries' capacities to collect and analyse forest-related data for evidence-based decision making relevant to agriculture, food security and nutrition, and livelihoods

Forestry under the 50x2030 initiative

The 50x2030 Initiative to Close the Agricultural Data Gap aims to empower and support fifty low and lower-middle income countries (L/LMICs) to build strong national data systems that produce and use high quality, timely agricultural survey data. In many L/LMICs, limitations in the scope, quality, and frequency of agricultural data severely constrain the effective planning, financing, and implementation of agricultural

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[10] http://www.cpfweb.org/en/
[11] Extent of forest resources, Forest biological diversity, Forest health and vitality, Productive functions of forest resources, Protective functions of forest resources, Socio-economic functions of forest resources, Legal, policy and institutional framework

development policies. The gap in agricultural data in these contexts may lead to sub-optimal policy design which, in the context of agriculture, may result in increased hunger and poverty. The Initiative mainly addresses SDG 2 "Zero Hunger" and contributes significantly to SDG 17.18, which aims to "enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data…".

The 50x2030 Initiative supports two survey programmes: the Agricultural Survey Program (Agricultural Programme) and the Integrated Agricultural and Rural Survey Program (Integrated Programme). The Agricultural Survey Programme aims to provide fully representative data on agriculture from both household and non-household (commercial) farms over a 10-year cycle by a modular survey system: an annual core survey tool focuses on agricultural holding roster, crop production and livestock production and a set of rotating modules cover topics such as costs and agricultural income; labour and productivity; gender decision-making in agriculture; production practices and environmental aspects of farming.

The Integrated Programme follows the same logic as the Agricultural Programme but integrates the agricultural tools with a household survey tool and broadens the target population to incorporate samples of rural non-agricultural households into the system every three years and allows countries to better understand i) drivers and dynamics of rural development, structural transformation and its linkages with agriculture as well as ii) linkages between agricultural productivity and income with aspects of welfare and livelihoods, including educational outcomes and non-agricultural income.

Forestry is covered in the Initiative under the yearly CORE-AG Questionnaire at the household level as well as under the Agricultural Income, Labour, and Productivity Questionnaire (ILP-AG) that are planned to be conducted once every three years.

The Initiative presents a good opportunity to collect data on a wide range of forest products used or sold at household level. Forestry data generated from 50 countries linked to food security, poverty alleviation and livelihoods at household level, will be useful to guide national and international policy decisions on forests and trees on a much stronger footing. In addition, as the 50x2030 Initiative will build country capacities, enabling countries to build a more robust information system including on forests and trees to better guide future policy decision making in national and international forest financing.

Methods for collecting statistical data on NWFPs as important contribution to SDG 2.3.1 and 2.3.2

NWFPs are defined as per FRA 2015 as being "goods derived from forests that are tangible and physical objects of biological origin other than wood." Examples of NWFP include products used as food (edible nuts, mushrooms, fruits, herbs, spices and condiments, aromatic plants, game), fibres (used in construction, furniture, clothing or utensils), resins, gums, and plant and animal products used for medicinal, cosmetic or cultural purposes.

Several million households world-wide, and in particular in Africa, depend heavily on NWFP for subsistence and/or income. In many countries the cash and non-cash contributions of NWFP are estimated to reach 15-20% of the household income, particularly of smallholders; some 80 percent of the population of the developing world use NWFP for health and nutritional needs. Therefore, the use of NWFP should be fully integrated in national policies and is directly relevant for SDG indicators 2.3.1 (Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size) and 2.3.2 (Average income of small-scale food producers, by sex and indigenous status).

Major challenges to data collection on NWFPs are: 1) the vast differences in terminology and definitions make it difficult to assess trends. 2) Data is incomplete as in most cases NWFP use and trade are confined to the informal sector. 3) Where and when data is available, it is often partial and incomparable across countries and over time; 4) unclear boundary between NWFPs and products from agriculture or horticulture. As a result, NWFPs are poorly represented in international statistics, which results in the underestimation of their contribution to food and nutrition security as well as their economic contribution.

Despite these challenges, FAO is making steady progress to improve data availability and thereby allow a more precise estimate of where and to whom these products play a key role in food and nutrition security. Many NWFP are significant in terms of international trade, including honey, gum arabic, rattan, bamboo, cork, nuts, mushrooms, resins, essential oils, and plant and animal parts for pharmaceutical products. A recent FAO publication[12] synthesizes the availability of data in terms of both production and international trade. The report is FAO's attempt to start bridging the data gap by analyzing NWFPs in the framework of international classification systems, which are a set of reference classifications internationally agreed upon and adopted by the vast majority of countries. By providing standardized definitions, descriptions and categories, international classifications ensure data accuracy and enable comparability across countries. They have been designed to be used as they are or adapted to national requirements or sectors. Within the report suggestions are made to improve data collection on NWFPs, with supporting evidence for further discussions and revisions of international classification systems.

In order to strengthen countries' capacities to collect and analyse forest products' data for evidence-based decision-making, FAO is working through the developing guidelines to support national data collection for NWFPs that incorporate the particular challenges of this topic.

National socioeconomic surveys in forestry

To address the need for systematic data collection on socio-economic contribution of forest, FAO, the Center for International Forestry Research (CIFOR), the International Forestry Resources and Institutions (IFRI) Network and the World Bank's Living Standards Measurement Study (LSMS) and Programme on Forests (PROFOR) partners have developed a sourcebook on the design of forestry modules, which can be implemented as stand-alone surveys or appended to existing multi-topic household surveys at national level.[13]

The modules are designed to assist national statistical offices and forestry administration agencies to collect nationally representative data on the benefits forests and other environmental resources provide to households and communities and the modules cover 15 forest-specific themes and can be implemented as stand-alone surveys or integrated into larger multi-topic household surveys.[14]

Beyond the work in Turkey and Liberia, in which the forestry modules are currently being implemented, the partners (FAO, CIFOR, IFRI and the World Bank's PROFOR and LSMS teams) are promoting the integration of the forestry modules within the context of ongoing activities. These include FAO-led National Forest Monitoring and Assessment projects, LSMS-type household surveys, national agricultural censuses and social safeguard assessments in REDD+ strategies (supported by the Forest Investment Program and Forest Carbon Partnership Facility).

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[12] Sorrenti, S. 2017. Non-wood forest products in international statistical systems. Non-wood Forest Products Series no. 22. Rome, FAO.

[13] http://www.fao.org/3/a-i6206e.pdf

[14] Editable module templates, ready for country-level adaptation, are available online at http://www.fao.org/forestry/forestry-modules/en/.

III. CONCLUSIONS AND RECOMMENDATIONS

The SDG process provides a unique opportunity and useful framework to harmonize forest-related reporting processes at all levels. FAO made substantial progress to improve i) monitoring and reporting tools and ii) accessibility of key information related to forests in cooperation with a multitude of stakeholders, including members of the CPF. Various capacity building initiatives have been carried out by FAO and its partners to enhance countries' capacities to collect and analyse forest-related data for evidence-based decision making.

However, to ensure long-term sustainability of forest-related reporting and planning, additional efforts will be required to

- Strengthen cooperation at country level between national forest-related correspondents/focal points and NSOs;
- Further enhance integration of forest and tree aspects in agricultural statistics data collection mechanisms, including through strengthening links between agriculture-related statistics offices and forest-related statistics offices
- Further align the reporting requirements of the various forest and land-related processes;
- Enhance cooperation among international organizations to make available (disaggregated) data sets for further data processing and use in various reporting processes;
- Continue to collect, analyse and disseminate forest-related data on the GCS of Forest Indicators through initiatives such as the FRA and the Forest Products Yearbook;
- Make best use of the 50x2030 Initiative to ensure data on forests and trees (including agroforestry) is adequately captured;
- Improve availability of data on forest products that are produced and traded informally, including woodfuel and NWFPs;
- Improve socio-economic data of forest use, including contributions of forests and trees to employment and income, food security and nutrition as well as development.
- Improve comparability of data across countries by promoting the development and application of guidelines for forestry-related data collection.

FAO will continue its cross-departmental efforts in cooperation with its Regional and country offices in the upcoming biennium 2020/21 to enhance and make available forest-related data in order to enable Member countries to take evidence- based decisions to achieve the SDGs.

IV. Questions and invitations to AFCAS members

AFCAS members are requested to express their views and recommendations to FAO on the following:

- How to better integrate aspects related to forests and trees (including agroforestry) more adequately in agriculture statistics work, given their underestimated role and contribution to climate change, biodiversity, land degradation neutrality, income and employment. What are most effective ways to do that?

- How to strengthen cooperation at country level between national forest-related correspondents/focal points, agricultural statistics offices and National Statistics Offices to sustain data availability on forest- and tree related data and their systematic integration into national statistics and SDGs?