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COMMITTEE ON FORESTRY

WORKING GROUP ON DRYLAND FORESTS AND AGROSILVOPASTORAL SYSTEMS

Inaugural Session

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FIRST GLOBAL DRYLANDS ASSESSMENT OF TREES, FORESTS AND LAND USE IN DRYLANDS

I. INTRODUCTION

1. At its 22nd session in 2014, the FAO Committee on Forestry (COFO) called for greater action on, and investment in, the assessment, monitoring, sustainable management and restoration of drylands. It requested FAO to undertake a global assessment of the extent and status of dryland forests, rangelands and agrosilvopastoral systems, with a view to better prioritizing and targeting the investments needed for dryland restoration and management.

2. Pursuant to this request, FAO produced the Global Drylands Assessment based on stratified systematic sampling and visual interpretation of publicly available satellite images in on-line repositories, such as Google Earth Engine and Bing Maps. The assessment focused solely on drylands at the global and regional levels. No country level estimates were produced.

3. The assessment was conducted as a series of regionally focused training and data-collection workshops, organized in collaboration with universities, research institutes, governments and non-governmental organizations worldwide. The preliminary findings of this assessment were launched in 2016 (http://www.fao.org/3/a-i5905e.pdf). Subsequently FAO has reviewed the data and is finalising the report "*Trees, Forests and Land Use in Drylands: First Global Assessment*", which is expected to be launched in December 2019.

II. METHODOLOGY AND SOME MAIN FINDINGS

4. The survey was conducted using FAO Open Foris software tools. For each sample plot, data on different characteristics were collected and recorded for which satellite images were available using Collect Earth software. The variables were selected to characterize land cover, land use, and other significant land dynamics such as desertification and greening along with biophysical indicators. In

addition, land-use data were collected for the year 2000, the first year for which consistent global coverage of satellite data is available, in order to detect land change uses over time.

5. According to the assessment and following the Global Forest Resources Assessment (FRA) categories[1], forests cover 1.09 billion hectares or 18 percent of the 6.1 billion hectares of drylands. Other wooded land represents 10 percent.

6. More than half of the dryland forests (52 percent; 570 million hectares) are in the dry sub-humid zone, mostly in the northeast of southern Africa and the western (pre-Andean) inland of South America. At the other extreme, the hyper-arid zone contains only a tiny proportion (0.2 percent) of the total forest area in drylands, mostly in the northwest of South America and the Horn of Africa.

7. However, when comparing the results with the aggregated data reported to FRA 2015, some inconsistencies were found in Southern Africa, Oceania and Northern and Central America and the Caribbean:

i) in Southern Africa, forest area and other wooded land area are much higher in the drylands study compared to what is reported for FRA 2015 for all lands;
ii) for the Oceania region, the area of forest from the drylands assessment is higher than what is reported to FRA 2015 for all lands. In addition, the other wooded land area is substantially smaller in the drylands study that what is reported for FRA 2015 for all lands;
iii) in Northern and Central America and the Caribbean, the area of other wooded land is substantially higher in the drylands assessment than what is reported for FRA 2015 for all lands.

8. Those inconsistencies are mainly due to confusion between forest and other wooded land and the difficulties to discriminate between different drylands vegetation types on satellite imagery as well as to the lack of reliable and complete national data for some countries reporting to FRA, in particular for other wooded land area.

9. Recognizing the difference in the methodology and tools used to collect data on dryland forests, FAO has initiated the consultations with experts in countries and other stakeholders in order to share these inconsistencies and seek advice on the way forward in terms of improving data collection on dryland forests.

III. POINTS FOR CONSIDERATION BY THE WORKING GROUP

10. The Working Group may

- Request FAO to share more details on the inconsistencies described above and invite its Members to provide feedback to FAO;
- Recommend actions by member states to improve current monitoring and assessment capacities and data in the drylands, including the use of satellite image processing tools and methods for dryland monitoring and assessments, and building capacity at country level; and
- Facilitate the use of the results of the assessment at country level, once it is launched, to help address the challenges to combat desertification in member states.

[1] http://www.fao.org/3/ap862e/ap862e00.pdf