Monitoring Fire with Remote Sensing August 2015
 Image: Construction

 Monitoring for Environment and Security in Africa

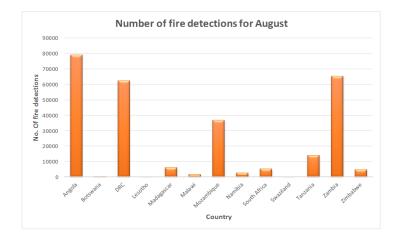


Figure 1: Monthly number of detections of fires

MESA SADC-THEMA Fire bulletin



SUMMARY

⇒ Fewer active wildfire detections are observed over most parts of the SADC region except over Angola, Democratic Republic of Congo, and Zambia (Figure 1 and 2).

Fire density map—August



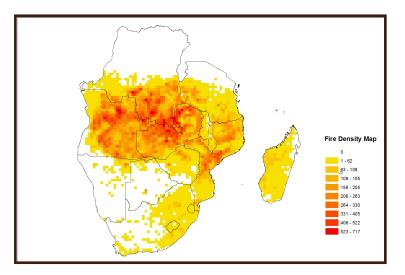


Figure 2: Active fires detected per 50x50 km grid for August based on MODIS





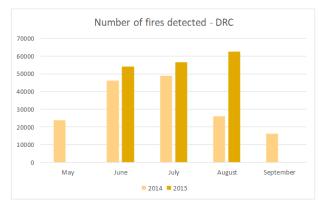


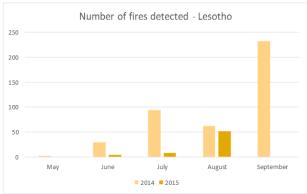


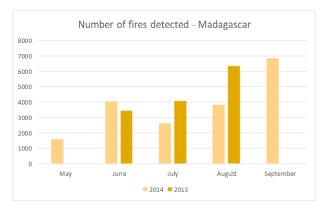


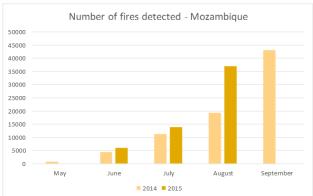
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Active fires detected per country

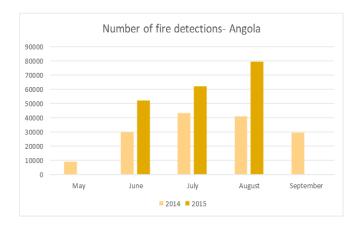


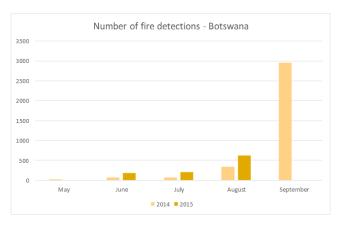


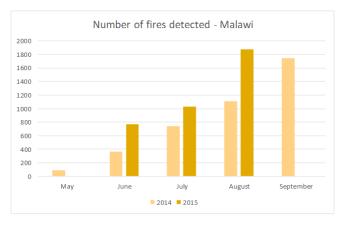




The burning bush fires detected by MODIS satellite for the month of August show a slight increase in observed active fires for most countries over the SADC region as compared to the same month of the previous year (2014) The Figure (3) below show the comparison of active fires for August 2015 detected in each participating member state as compared to the past year's.











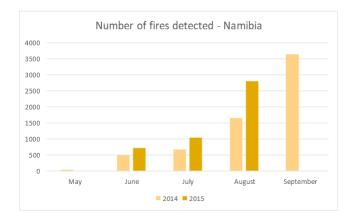


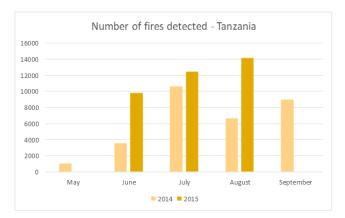


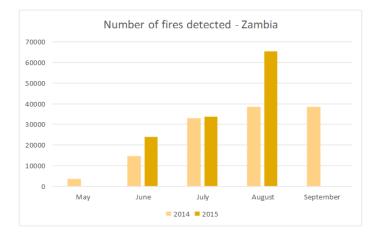


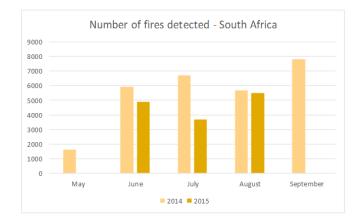
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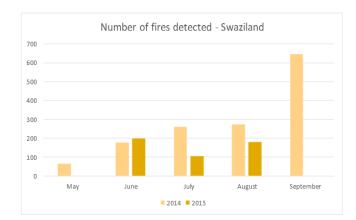
Active fires detected per country











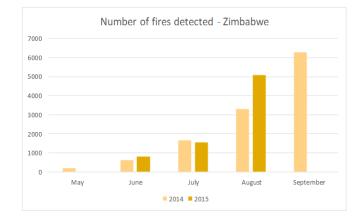


Figure 3: Active fires detected by the MODIS satellite in August 2015 as compared to August 2014



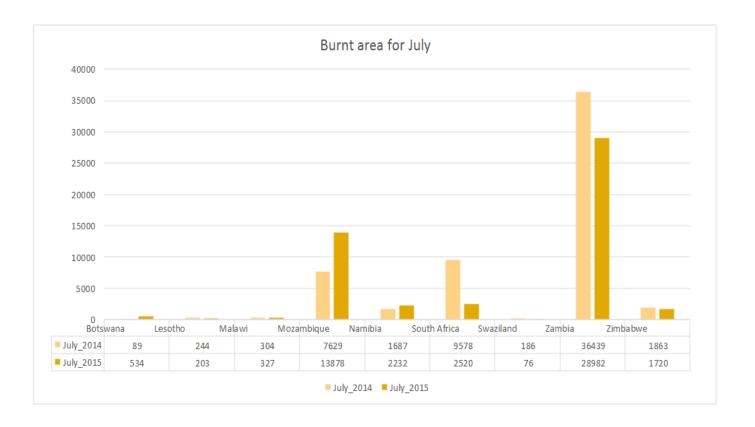








Total area burnt by fires per country



The graph above provides total burnt areas (square Kms) that were burned during the month of July 2015 as compared to July of the previous year (2014). This year most parts of the region indicate a decline in burned area except for Mozambique and Zambia. This iperiod is approaching the peak fire season and hence the increase in areas burned.

Figure 4: Burnt area for July (NB: There is a one month delay in the delivery of the burnt area product, the burnt area section presents the area burnt the previous month)













Monitoring for Environment and Security in Africa

MESA PROGRAMME

The **MESA** program addresses the need for improved environmental monitoring towards sustainable management of natural resources in Africa. Five Regional Thematic Actions (THEMA), one per Regional Economic Community (REC), are being established by the Regional Implementation Centres (RICs) to develop appropriate information services, in order to address the already prioritized decision needs of the RECs in the fields of (i) water resources management (CEMAC); (ii) crop and rangeland management (ECOWAS); (iii) agricultural and environmental resources management (SADC); (iv) mitigation of land degradation (including forest exploitation) and conservation of natural habitats (IGAD) and; (v) marine and coastal management (IOC).

The **MESA SADC-THEMA** is developing four information services namely Agriculture, Drought, Flood and Wildfire in order to address the already prioritized decision needs for SADC region. The Agricultural Service will monitor the state of the crops and rangeland. The Drought Service will monitor drought during the whole year and deliver a decadal "Drought map" and a "Drought Outlook" in support of both agriculture and environmental issues. The Floods Service will provide a flood risk indication and a flash flood forecast (before the floods), flood modeling (during the event of floods) and flood damage assessments (after the floods). The Wildfire Service will provide a daily fire risk indication (before the fire), continuous active fire maps (in real time during the fire season, refreshed every 15 minutes) and monthly burnt area assessments (after the fire). A common "Long Range forecast" service will complement the three (3) core services and provide them a seasonal forecast outlook. The SADC-Thema is implemented under the leadership of Botswana Department of Meteorological Services (BDMS) and SADC Climate Service Centre. The program is implemented under the coordination of the African Union Commission with the support of the European Union.

Acknowledgements

The bulletin is the result of cooperation between MESA SADC-THEMA (represented by the BDMS and CSIR), the SADC-FANR. This bulletin is exclusively based on the analysis of remote sensing imagery and of derived environmental indicators. Despite its intrinsic limitations, remote sensing is a cost effective approach allowing a quick monitoring of the environmental situation in an area. The data is received in near real time from the EUMETCast system (courtesy of EUMETSAT), that routinely distributes Earth Observation data by satellites broadcasting.

Contacts

For further information, please visit: MESA Programme: http://mesa.

MESA Programme: <u>http://mesa.au.int</u> MESA-SADC THEMA: <u>http://www.mesasadc.org/</u>

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