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WILDFIRE 2011
The 5th International Wildland Fire Conference

GOFC-GOLD Fire and UNISDR Regional Wildland Fire Networks Meeting

9 May 2011

Conclusions and Recommendations

Rationale

The 5th International Wildland Fire Conference 2011 in South Africa provided the unique opportunity for GOFC-GOLD Fire regional network members from around the globe to jointly meet and discuss fire related EOS themes for fire management, policy decision-making and global change research. The two sessions of the full day side event together with the UNISDR Regional Wildland Fire Networks brought together the fire science and practitioner community to foster future cooperation and advance dialogue in order to (i) highlight good practice examples, (ii) identify knowledge gaps and needs of both communities (iii) join forces and mutually support each other's networks. In the afternoon plenary discussion the following GOFC-GOLD Fire recommendations were made:

Recommendations

Capacity Building in the use of fire satellite products

1. Product documentation that incorporates the needs of fire managers; need for case studies and practical examples illustrating how to use of satellite products and data for fire management. Explanation of the proper use of Quality Assessment labels.
2. Development of a comprehensive and standardised University fire information curriculum modules and support its dissemination and adoption in developing countries

Product/Data access (internet access and awareness issues)

1. Standard products by agencies should be distributed in a variety of formats recognizing the needs of the different user communities (e.g. science community and fire management community).
2. Standard agency products should be validated, and product accuracy information should be comprehensible to non-scientists e.g., fire managers. Use accuracy metrics relevant to the different communities (e.g. atmospheric modelers vs. fire managers)
3. Access to raw satellite data (preprocessed reflectances) are needed to derive regionally specific fire products, which are encouraged if validated.

Strengthen involvement of regional networks in validation and quality assessment (leading to product refinement/reprocessing) of satellite fire products

1. Validation of existing products as well as "next generation" fire products e.g. fire danger indices, fire characterization (ground vs. surface fire; fuel type and condition; fire intensity and severity)

Fire Early Warning Systems

1. Through collaboration between the UNISDR Regional Wildland Fire Networks and the GOFC-GOLD Fire Regional Networks, calibrate Fire Weather Index System parameters for different global regions using EO data:

    a. Develop Ignition Potential (or fire start) indicator using correlation between hot spot frequency and Fine Fuel Moisture Code (FFMC), and possibly other fine fuel moisture indicators;
    b. Develop general 'Fire Danger' indicator by analyzing area burned data with long-term drying (Drought Code, Buildup Index) and fire behaviour (Initial Spread Index, Fire Weather Index) indicators;

2. Through the UNISDR Regional Wildland Fire Networks, support regional to local implementation of the Fire Early Warning System and Community Based Fire Management by facilitating:

    a. the development of locally (or regionally) derived fire management decision-aids/guidelines based on the calibrated indices of the Fire Early Warning System;
    b. local capacity building through technology transfer and training in operating a Fire Early Warning System at the regional to local levels;

Global fire assessment endorsed by network community; need for a constantly updated long term satellite fire record which is consistent, validated and endorsed by the community

1. Support national reporting of area burned and emissions
2. Assessment of global fire regimes (seasonality, duration etc)

To assist GOFC regions in quantifying emissions from burn area by defining protocols or standards to use based on the regional biomes

1. Guide on how to quantify the additional variables needed to compute emissions from burn area such as fuel consumption and fuel density
2. Integrate, publicize, and make available existing ancillary data sets and current scientific knowledge for emission inventories, including ground- and satellite-based land cover and land use data sets, fuels mapping and models, fire weather models/indices, combustion completeness, vegetation health/dryness, emission factors, etc.