International Cryosphere Climate Initiative
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TECHNICAL MEETING ANNOUNCEMENT: OPEN BURNING IN THE CLRTAP REGION: RESOLVING ISSUES OF DEFINITION/REPORTING, IMPACTS MODELLING AND MITIGATION IMPACTS

Thursday October 24

Diefenbaker Building, 111 Sussex Drive, Ottawa, Canada

Open burning – defined as intentionally set fires in the agricultural sector, including agroforestry – remains a widespread practice throughout the CLRTAP region, as well as globally, with air quality, climate and, not least, soil fertility impacts that are projected to grow in a warmer climate subject to more frequent extreme weather conditions. Effective measures to address open burning exist, but more widespread adoption, including climate and development financing remain hindered by basic issues around: 1) definition, 2) modeling of impacts, and 3) available mitigation options and their impacts.

In cooperation with TFTEI and TFRN, this workshop aims to address and to the extent possible, resolve these basic framing issues within the CLRTAP community and region, in order to lead to appropriate measures and approaches (BAT and BAP) under the Gothenburg Protocol, as well as by policy makers and the academic community. The workshop will comprise three related sessions:

I. Monitoring and Definition of Open Burning in the CLRTAP Region:

The most restrictive emissions estimates count as "agricultural burning" only fires in fields planted in the four major grains; not including other field crops; nor orchards or other agroforestry, pastures, small-scale agriculture, clearing of fallow lands, slash-and-burn, palm oil or managed timber forests. Yet all of these comprise "agricultural" open burning, with various negative impacts and also (in most cases) have available no-burn alternatives. Emissions estimates also rarely if ever include wildfires that spread from these set fires: yet addressing the underlying fire source is key to appropriate and effective mitigation also of wildfires. This session will explore these issues, attempt to come up with improved definitions for use in the CLRTAP context and also identify the best available monitoring practices given the advent of VIIRS satellite technology in 2015.

II. Modeling of Air Quality and Climate Impacts

Estimates of air quality and climate impacts are hampered by the seasonal/occasional nature of open burning, yet increasing evidence points to a significant health impact even for single-event fires, especially in summer and in nearby urban areas; in conjunction with the high temperature events that often accompany wildfires spread from agricultural fires (such as Moscow City estimates of 10,000 additional deaths in July-August 2010). On regional Arctic climate impacts from black and organic carbon, modeling studies differ widely in their estimates, at least in some cases due to attributing different forcing to both atmospheric and deposited BC/OC over highly-reflective cryosphere. In addition, open burning is a source of CO2 and methane emissions not only from burned biomass, but the actual soil; and nitrogen emissions from additional needed fertilizer due to soil nutrient loss. Fertilizer application often occurs nearly contemporaneously to the set fires, contributing to smoke/smog events. This session aims to identify best models capturing BC/OC impacts in the Arctic, as well as means to capture other air quality, climate and water impacts from burned soils, including management practices.

III. Mitigation Measures (Technological and Practices) and Their Impacts

Some options for mitigation carry the potential for higher yields, less fertilizer use and therefore greater farmer profits; as well as negative GHG emissions due to fixing of carbon in the soil. This session will outline some of these options, their additional benefits for human health and climate as currently understood, and methods to characterize these more precisely for future cost-benefit analysis by governments and the climate finance sector.

The agenda for this meeting will be circulated by early September; suggestions for additional contributions are most welcome. Registration will take place in conjunction with the TFTEI meeting; those attending only the Open Burning Workshop should so indicate on the registration form. *Some travel support may be available*. Kindly note that those requiring visas to Canada should register by **July 15** if possible, or in any case, as soon as possible, to allow 8-10 weeks for this process.

Questions/follow-up: Pam Pearson, ICCI, pam@iccinet.org or Dr. Jessica McCarty, Miami University, mccartjl@miamioh.edu.