

## Annual Report – ICCI 2014

### Background and Summary

The climate agreement planned for Paris in December 2015 will set government commitments through 2030: a timeframe that cryosphere scientists believe may spell the difference between catastrophic impacts from polar and mountain regions, and more manageable changes to which humans and ecosystems can adapt. Because of its historic importance, ICCI put most of its policy resources in 2014 towards this “cryosphere imperative”: to make the Paris Agreement the most ambitious possible. With its roots in discussions among cryosphere scientists at ICCI’s COP-19 Day of the Cryosphere, this new initiative – ***Cryosphere 2015*** -- is now a robust partnership between leading scientists and respected climate negotiators. It worked quietly yet effectively throughout 2014 at climate negotiations in Bonn and Lima, at the September Climate Summit, with a coalition of U.S. NGOs, and with the European Parliament to encourage these needed and much higher commitment levels. ICCI aims to intensify this work as the final negotiations take place throughout 2015, alongside work in the Arctic Council to bring climate issues to the fore during the U.S. chairmanship.

At the same time, ICCI continued to develop on-the-ground projects to demonstrate reductions in black carbon and other short-lived climate pollutants. These hold special promise for slowing the rate of climate change in all cryosphere regions. In 2014, ICCI intensified its work with farmers in Russia to find alternatives to open agricultural burning, beginning new work in the province of Tula near Moscow to allow national authorities to visit demonstration projects, and laying the groundwork for expansion to Ukraine. ICCI also expanded its work on reducing black carbon from open field and forest burning to the Andes and Himalayan regions, and developed a new Nordic Council project on black carbon from woodstoves. On the methane front, ICCI continued its long going efforts to create new funds to support methane abatement projects, one by the World Bank and a second aimed at smaller development projects under the Nordic Environment Finance Corporation.

### Policy Programs

Key cryosphere researchers from the IPCC’s Fifth Assessment participated in the ICCI-organized Day of the Cryosphere in November 2013 to release *On Thin Ice*, a survey of cryosphere climate change and near-term mitigation produced by ICCI with the support of Flora and the World Bank. Meeting in Warsaw at COP-19, these leading IPCC scientists expressed alarm at the lack of understanding of the scope and immediacy of the threats they had outlined in the latest IPCC Fifth Assessment; and expressed a strong desire to speak more directly and bluntly to the policy world.

Cryosphere 2015 was the result. Its steering committee includes a number of former climate ambassadors, IPCC AR5 cryosphere and climate scientists and leaders of

pan-Himalayan and pan-Andean organizations. Meeting in Stockholm in early May 2014, this steering group identified five key global and immediate threats from cryosphere climate change. These five threats comprise: irreversible sea-level rise related to Antarctic and Greenland instability; loss of water resources due to land glacier melt; accelerated warming from Arctic permafrost and seabed hydrate collapse; fisheries loss from polar ocean acidification; and accelerated warming from loss of reflective Arctic sea ice. It began planning a series of international and regionally-specific Chatham House rules meetings outlining these threats, emphasizing the urgency of the needed international response.

The first such briefing took place at the June 2014 UNFCCC climate negotiations in Bonn, focused on findings of irreversible Antarctic melting released only a few weeks earlier, with two of the lead authors quickly recruited to take part and over 50 climate negotiators attending. A public press briefing in connection with the event drew extensive media coverage. Because of threats to weaken the proposed European Union's commitment to 40% reductions in CO<sub>2</sub> by 2030 in the Paris Agreement, ICCI next organized a seminar in Brussels for European Parliamentarians in conjunction with hearings by the Parliament's Environment Committee, just a few weeks prior to the European Council meeting that would finalize EU targets. In the hearing immediately following, several MEP's specifically cited the presentations by ICCI's scientists in arguing for the 40% goal, which European leaders later adopted, setting the bar for the rest of the world.

ICCI held a multi-region side event at the COP-20 climate negotiations in Lima, Peru, drawing a large audience and including a panel discussion by scientists and political leaders from the Arctic, Himalayas and Andes, with lively discussion with the audience and an eloquent call by a Finnish MP to set aside differences in the face of the clear crisis emerging in the cryosphere. ICCI additionally participated in a side event organized by the host Peruvian government, and a public event (in Spanish and English) at the Mountain Pavilion. Finally, ICCI's Executive Director was personally invited to participate in the UN Climate Summit in New York, working with the UNFCCC Executive Secretary and a few other key organizations to spur leaders to pledge greater and more concrete levels of ambition, especially to set their economies on clear tracks towards "zero net" carbon emissions by 2050.

Simultaneously, Cryosphere 2015 is developing informational material accessible both to busy policy makers, and the general public. It is in contact with a number of leading non-profit organizations, including 350.org, the UN Foundation, World Wildlife Fund and Center for American Progress, who will use these materials in their own international and domestic public campaigns leading to Paris. While continuing to lend its expertise to develop an Arctic Council Black Carbon agreement, ICCI participated in a joint effort with domestic U.S. NGOs to make climate the number-one focus of the upcoming U.S. Arctic Council chairmanship. It co-drafted a number of publicly released papers, and leads a task force aimed at spreading this focus to other Council members

such as Norway and Sweden. With additional funding, Cryosphere 2015 hopes next to hold a seminar with members of the Senate Climate Task Force and offer additional scientist briefings in Washington early next year.

With the Cryosphere 2015 steering group, ICCI also preliminarily plans seminars in China, Canada and Australia – all key players in the lead-up to Paris – plus cryosphere updates at all 2015 formal negotiations (Geneva, Bonn) as Paris nears. ICCI additionally spearheads an effort by researchers at Duke University and Lund University in Sweden to support new modeling that optimizes long-term (CO<sub>2</sub>) and near-term (short-lived climate pollutant) approaches in cryosphere regions, with results in time for Paris.

Using the decades of negotiating experience at its disposal, the project further is drafting new provisions for the 2015 Agreement allowing ongoing strengthening of commitments as the scale of the cryosphere threat, and level of necessary response becomes even more clear after the actual Agreement is signed. Such flexibility is key to meeting the demands of the “cryosphere imperative,” especially as regards the stability of Antarctica and Arctic methane deposits.

ICCI additionally continued its work together with ICIMOD, representatives of the Arctic Council and the Icelandic presidency to create a Himalayan Council aimed at greater environmental cooperation in that region; and with NGOs and governments in the Antarctic Treaty system to bring climate concerns more explicitly into that body’s work.

## **Projects**

In addition to its policy work, ICCI continued to develop new projects that demonstrate reductions in black carbon, methane and other short-lived climate pollutants, an important corollary to greenhouse gas reductions that hold special promise for mitigation of climate change in all cryosphere regions. As a result, ICCI has expanded its work in Russia, on reducing black carbon from open field and forest burning to the Andes and Himalayan regions – the first time this issue has been examined anywhere on the globe outside the European Arctic – and has created a new website that provides fires mapping and other materials, at [www.openburningcryosphere.org](http://www.openburningcryosphere.org). It will organize the first-ever conferences in these regions on the issue in Lima and Kathmandu, respectively in February 2015 with the support of the UN Environment Programme (UNEP), and hopes to expand its existing European open burning work to Ukraine.

ICCI also developed a follow-up project to its successful 2013-4 work in Nordic countries to decrease black carbon emissions from Nordic woodstoves, focused on inclusion of black carbon in Eco-labeling standards for woodstoves.; and to continue efforts to create new funds to support methane abatement projects. One such fund, by the World Bank aims to become operational this year (see [www.pilotauctionfacility.org](http://www.pilotauctionfacility.org)).

A second, aimed at smaller methane development projects in least-developed nations is under active consideration by the Nordic Environment Finance Corporation (NEFCO).

#### **Reducing Open Agricultural Burning in Russia:**

Partners: Bellona-Russia, Swedish Agricultural Institute of Technology, with ICCI-Europe (Stockholm) lead. Project supported demonstration and education on alternative, no-burn sustainable farming methods in four Russian oblasts (St. Petersburg, Krasnodar, Tula and Rostov), including farmer education “field days”, support for ambassador farms to demonstrate no-burn methods and exchange study tours between working Swedish and Russian farmers.

2015: Project activities will continue through first quarter 2015 under a small new grant from the Nordic Environment Finance Corporation (NEFCO), with application pending to expand project activities to Ukraine later in 2015.

#### **Reducing Open Burning in the Eastern Himalayas and Andes:**

Partners: UNEP/Climate and Clean Air Coalition, Molina Center for Energy and the Environment (MCE2), ICIMOD (Kathmandu, Nepal), CONDESAN and ANA (Lima, Peru) and other local community-based organizations.

Phase 1 of this project (2014) involved mapping of open burning patterns in these two important cryosphere regions, and development of regional networks interested in addressing this major threat to food security, health and climate.

2015: Regional conferences on burning and alternative methods will take place in February in Lima, Peru and Kathmandu, Nepal; followed by regional groundtruthing visits, and design of at least two demonstration projects in each region.

#### **Woodburning in Nordic Countries: Nordic Council of Ministers.**

Partners: Nordic Council of Ministers Friends of the Earth-Norway, several local municipalities in Sweden and Finland, national stove testing laboratories in Sweden, Norway and Denmark.

ICCI-Europe lead on public information activities on “best burning techniques” and study of government means to stimulate or regulate reductions in use of wood stoves, a major source of black carbon impacting the Arctic from Nordic countries. ICCI (Global) led work to develop a standard way to test black carbon emissions from wood stoves together with U.S. experts (Dr. Tami Bond in particular).

2015: Continued work focusing on measuring black carbon emissions from woodstoves and incorporating standards in the Nordic-Ecolabel program (Svanen); coordination of this work with the cookstoves community, including the Global Alliance for Clean Cooking.

#### **Final Note**

Minimizing high-risk cryosphere changes demands much higher levels of ambition for greenhouse gas and other emission reductions than anything yet contemplated. Absent such ambition, and especially if current emission levels continue,

avoiding rapid deterioration of snow and ice regions and associated global climate destabilization may become close to impossible. ICCI's main mission now is to make this choice, and the needed path forward as clear as possible, from the very local level in regions such as the Andes, Himalayas and sub-Arctic, to the global policy arena.