

# International perspectives on earth systems policy

Ania Grobicki

Published online: 24 February 2015  
© AESS 2015

**Abstract** 2015 could potentially be a watershed year for international cooperation on planetary management. Three major international policy processes will be culminating in 2015, dealing with climate change, disaster risk reduction, development and sustainability. The emerging scientific evidence links the loss of ice, snow, and glaciers with the changing climate, with extreme climate events and water-related disasters such as storms, floods, and drought, and with the sustainability of freshwater resources. Multi-stakeholder initiatives such as the proposed Ice Circle are needed to support evidence-based policies at international level, and to take action on the impacts of global environmental change.

2015 could potentially be a watershed year for international cooperation on planetary management. I firmly believe that we need to take a holistic, earth systems approach to thinking about our joint future on planet earth, and that all countries need to talk, negotiate, and cooperate to achieve this. There are three key events taking place in 2015 that could help make next year a turning point, rather than a tipping point.

First, there will be the climate negotiations at the next Conference of the Parties (COP21) in Paris, where we can finally expect to see binding agreements on reducing carbon emissions, and substantial pledges to be made to the Green Climate Fund to support both mitigation and adaptation efforts. The US government's recent agreement with the Chinese government will go a long way to restoring some confidence in the

international negotiations, that movement can occur, and that some successes can be achieved, as at COP20 in Lima.

Second, September 2015 will see all UN countries committing to the Sustainable Development Goals (SDGs) which are a follow-up to the partially successful implementation of the Millennium Development Goals (MDGs). The MDG target on water supply and sanitation will not be met by 2015. The main differences between the SDGs and the MDGs are that the SDG process involves all countries, not only the developing nations, as the objectives are universal; and while the MDGs addressed only development issues, the SDGs have a double focus : eradication of poverty worldwide by 2030, coupled with a strong emphasis on sustainability. At present, there are 17 goals proposed, with 169 targets from which countries can pick and choose to create a dashboard that is relevant to their most urgent challenges. The Global Water Partnership has organized national stakeholder consultations on the SDGs in 22 countries in 2013, and in 31 countries in 2014, advocating for a global water goal. For the first time, water supply and sanitation have been linked with broader issues namely integrated water resources management, water quality issues, and even transboundary cooperation. The last point has been a breakthrough in the international negotiating process, as certain countries have up to now resisted any mention of the need for transboundary cooperation on water resources. Within the SDGs, there is also a goal on climate, and most relevant to the recent discussion at “the Public-Private Sector Forum : A Dialogue Between Researchers and End-Users of Scientific Knowledge”, there is a goal on partnerships, emphasizing the need for public-private sector and civil society partnerships in order to implement the agenda of the SDGs.

There are at present no targets within the SDGs related to ice and snow; however, there may still be time enough to get these inserted into the agenda. It would be important to work with countries most affected by glacier melting to have this

---

Presented at the Public-Private Sector Forum, Washington DC, 13 November 2014.

---

A. Grobicki (✉)  
Global Water Partnership, Stockholm, Sweden  
e-mail: ania.grobicki@icloud.com

aspect recognized. And there is no consistency with regard to disasters in the Post-2015 Agenda across the various goals.

However, this brings me to the third and possibly the most important international policy opportunity in 2015, which is the 3rd World Conference on Disaster Risk Reduction in Sendai, Japan, in March 2015. My hope is that the Sendai conference will send powerful policy messages and will produce a new and robust global framework for reducing disaster risks, especially for the increasing number of climate-related extreme events such as storms, floods and droughts. At present, water-related disasters are not adequately dealt with in the SDG agenda. The Global Water Partnership, UN Water and the International Strategy for Disaster Reduction (ISDR) have developed a policy brief on water-related disasters for the Sendai 2015 conference. This will be a conference made up not only of government negotiators but also civil society organizations, business and many stakeholder groups. It will be an opportunity to connect the dots between extreme climate events and climate change, for instance as we heard so eloquently from Jennifer Francis of Rutgers University at the “International Workshop on Communicating the Science and Impacts of Fundamental Earth System Change: A Focus on Ice-Snow Water”, linking the latest meteorological science on the disappearance of Arctic Sea ice with extreme events such as the floods in Pakistan and the heat wave and wild fires in Russia in 2010—and with the recurring polar vortex.

From the side of the water community, we need to learn a lot more about the crucial and changing role of the cryosphere—ice, snow, and glaciers—in the global water cycle. Approximately 70 % of global freshwater resources are presently locked up as snow and ice, although of course much of this is located at the poles and is inaccessible for direct use. However there are up to two billion people living downstream from the world’s major mountain chains, indirectly depending upon glaciers, ice and snow for their freshwater. More earth systems science, knowledge, and policy concepts are urgently needed to help find solutions to the emerging linked challenges of the loss of ice and snow, and related freshwater scarcity, droughts, and water-related disasters.

We need policy champions to take these ideas and linkages forward—to ensure that climate-smart and evidence-based policy-making takes root at an international level as well as at regional, national, and local levels. The Global Water Partnership was created to support this kind of cross-scale policy learning. The global debate and international negotiations must be informed by countries, and national learning in turn to be informed by experiences at the local level (as well as vice

versa). In this way, organizations such as the Global Water Partnership support collective action from the bottom up, to influence international policies. And this is the reason a number of organizations including GWP are supporting the formation of the Ice Circle as a new multi-stakeholder forum—to fill the gap on advocacy and policy development specifically in relation to issues of ice and snow.

The Ice Circle is a global collaborative platform encompassing and supporting a multidisciplinary response to the state and impact of changing snow, ice, and water regimes on the global hydrological cycles, including oceans. It aims to enable enhanced international cooperation, integration, and information sharing between policy makers, water users, community actors, and scholars. The concept of the Ice Circle is found here: <http://www.voxnaturae.org/#!/the-ice-circle-upsetning/cngx>

The Ice Circle can become a policy champion, as well as advocating worldwide for more funding for vital research on issues of ice, snow, and water, and ensuring that the climate linkages and impacts such as the links between the loss of Arctic sea ice, extreme climate events, and disaster damages are well understood. We are currently facing what I call the “Arctic Paradox”: the loss of Arctic sea ice is enabling new development and increasing oil production in the Arctic region, which in turn adds to the carbon loading of the atmosphere and further loss of ice, snow, and glaciers not only in the Arctic region but also worldwide. Arctic communities are currently participating in and contributing to causing the dramatic changes in their own traditional way of life.

Since the USA is taking on the presidency of the intergovernmental Arctic Council in 2015, it could be opportune to link the Ice Circle to the Arctic Council. The Ice Circle would offer the Arctic Council’s working groups and programmes a platform through which to collaborate with ice-related initiatives and interests outside of the Arctic region. This would enable the sharing of knowledge and best practices on how to respond to the challenge between Arctic and non-Arctic communities. A letter forwarding the concept of the Ice Circle to the Arctic Council is found here: [http://www.eucc.net/en/climate\\_change/Letter-to-Arctic-Council-re-Ice-Circle-December13-2013.pdf](http://www.eucc.net/en/climate_change/Letter-to-Arctic-Council-re-Ice-Circle-December13-2013.pdf)

Finally, an excellent driver for this type of advocacy would be for the United Nations to declare a future International Year of Ice and Snow. This idea needs a champion country to take on the challenge and put forward such a resolution in the UN General Assembly. Could the USA take this forward? And could Iceland support such a resolution? The international community is ready to support it.