**CONCEPT NOTE**

**Launch of the Cryosphere Pavilion**

**December 3, 15:00**

 **Room 2, IFEMA, Madrid**

 **I. Background**

COP25 will focus its agenda on initiatives that promote more ambitious climate action, both in mitigation and adaptation. COP25 represents a key juncture as countries move towards their first revisions of Nationally Determined Contributions (NDCs) since the signing of the Paris Agreement.

The Chilean government has identified Antarctica and the Cryosphere as one of the priority issues on the COP25 agenda. Cryosphere science makes clear that later timing of emissions reductions, and temperature “overshoot” scenarios can trigger global changes and feedbacks that may be rapid and – more seriously -- to some degree irreversible. The challenge is that while we may trigger these events in the next decade through too-slow NDCs, the final global impacts will not be fully seen in our lifetimes. Youth activism has however given this multi-generational thinking new credence; when actions today lock in sea-level rise, water scarcity and other catastrophic impacts for many future generations.

Chile, due to its geographic position, long experience in Antarctic research and science, and the wide presence of mid-latitude Andean glaciers; is in a privileged position to promote this agenda and lead a process to increase visibility and awareness on the impacts of climate change in the Cryosphere; now together with Spain as COP-25 host.

The priority given to this matter is part of an effort by the COP25 Presidency to establish an operational and practical link between science, and the political decision-making process on climate action and multilateral negotiations. It builds on the well-timed release of the IPCC Special Report on 1.5 Degrees (SR1.5), and Special Report on Oceans and Cryosphere (SROCC) as opportunities for more progressive countries to raise issues of not just “ambition,” but “urgency;” using these reports as a firm scientific base.

The process aims to generate both greater political level and public support for climate action plans consistent with a 1.5 Cº goal, incorporated into 2020 NDCs specifically to prevent Cryosphere collapse and feedbacks.

 **II. Overall Objective of the Cryosphere Pavilion**

One of the most important initiatives of the COP25 Presidency on this agenda is organize and install a Cryosphere Pavilion at the COP25 venue. It is the first time that a COP houses a pavilion dedicated exclusively to the Cryosphere. The Pavilion will provide a space for permanent exhibits, expert conferences and ministerial events with the participation of national and foreign officials.

In particular, the Cryosphere Pavilion will raise knowledge and awareness of the strong difference between 1.5 Cº and 2 Cº in terms of Cryosphere impacts on the rest of the globe; and motivate more ambitious and urgent emission reductions due to greater understanding of this physical reality: the simple melting point between ice, and water.

The permanent exhibition and activities at the Cryosphere Pavilion will provide more visibility to the scientific evidence about the effects of climate change in the Antarctic, Arctic and high-alpine mountains. Its ultimate goal is to influence political decisions on climate action by raising awareness of this agenda during COP-25, and spreading this knowledge to the general public, through events organized around specific Focus Days:

* **Mountains (Dec. 3 and 11): Glaciers and Snowpack**

*Mid-latitude glaciers will suffer near-total loss over the long-term at 2°*C*, but preserve greater basis for water and other ecosystem services from snow and ice at 1.5* Cº*.*

* **Polar Oceans (Dec. 9): Acidification, Warming and Freshening**

*Polar oceans already are seeing fisheries and shell impacts today, because cold water acidifies more quickly, with increasing risk of polar ecosystem collapse in the Arctic and Southern Oceans at higher CO2 and warming levels.*

* **Ice Sheets (Dec. 4 and 10): Mass Loss and Sea-level Rise**

*At sustained 2*°C, *as shown by Earth’s past, collapse of both Greenland and the WAIS eventually becomes inevitable and in the case of the WAIS, may be unexpectedly rapid, with sea levels in Earth’s past reaching 20-25 m between 2-3°C.*

* **Permafrost (Dec. 5): Its Own NDC**

*Permafrost emissions as both CO2 and methane are rising, but will approach the size of a mid-level emitter (Canada) at 1.5°C and a large emitter (China/U.S.) by 3°C and above, which must be offset by greater cuts from human emissions.*

* **Sea Ice (Dec. 6): Global Feedbacks**

*Ice-free summers may rarely occur at around 1.5* Cº*; but by 2* Cº*, the ice-free period may last several months every summer, leading the entire Arctic (including Greenland and permafrost) to warm more rapidly; with accelerating global impacts.*

The Cryosphere Pavilion has five permanent exhibitions focusing on these key globally-impactful dynamics in this key gradient between 1°C, 1.5°C and 2°C and above:

* Polar ice sheets
* Polar oceans
* Mountain glaciers and snow
* Sea ice
* Permafrost

It also includes an exhibit underscoring the SR1.5 messages that these Cryosphere developments are not inevitable, and that 1.5° pathways remain physically, technically, and economically feasible with sufficient and early action.

The COP25 Presidency is the main organizer of the Cryosphere Pavilion in collaboration with the International Cryosphere Climate Initiative (ICCI) coordinating Pavilion activities and exhibits. In addition to Chile, a diverse and wide-ranging group of governments, academic institutions and civil society are supporting the Pavilion and organizing events there throughout COP-25, including: the Nordic Council of Ministers, France, Switzerland, Instituto Antartico Chileno (INACH), ICIMOD, Pew Charitable Trust/The Ocean Foundation, Bolin Centre/Stockholm University, the Arctic Council, Plymouth National Laboratories, National Geographic Society, Universidad Austral de Chile, Scientific Committee for Antarctic Research (SCAR), Woods Hole Research Center, University of Exeter, University of Massachusetts-Amherst, WWF-Arctic, University of Madrid, University of Granada, Student on Ice, University of Edinburgh, Colorado State University, ETH-Zurich and many others.

The Cryosphere Pavilion also includes a cadre of Early Career Scientists in various cryosphere disciplines, volunteering throughout the COP to answer questions about the Permanent Exhibit and cryosphere research in general.

 **III. COP25 Presidency Event Agenda**

15:00-15:15 Opening Remarks

 - H.S.H. Prince Albert II Monaco (tbc)

 - Andrés Couve, Minister of Science of Chile

 - Peter Eriksson, Minister for International Development Cooperation, Sweden

15:15-15:30 IPCC SROCC and SR1.5: Where Cryosphere and Ambition Meet

 - Ko Barrett, IPCC Vice-Chair

15:30-15:40 Five Cryosphere Dynamics and the 1.5° Goal

 - Pam Pearson, Director, ICCI

15:40 -16:00 Antarctica Past, Present and Future: Sea-level Rise Impacts - Jerónimo López-Martínez, President Spanish SCAR Committee

 - Marcelo Leppe, Director INACH, Chile

16:00 -16:20 Cryosphere and Needed Ambition: The Policy Response

 - Ambassador Brigitte Collet, France

 - Veronika Veits, Director Oceans and Fisheries,

 DG-Maritime, European Commission

 - Bill Hare, CEO, Climate Analytics

 - Nick Bridge, Special Representative for Climate Change, UK(tbc)

16:30 - 17:30 Ribbon-cutting and Reception (MOVE to Cryosphere Pavilion, Hall 8)