

## **Statement by Scientific and Technological Communities**

Thank you Mr Chairperson.

I am speaking as Chair of the Joint Scientific Committee of the World Climate Research Programme.

We are glad to hear of the recognition by the panel that climate change is a "here and now" issue and not just an issue for the future.

The scientific evidence and understanding makes it clear there are two major challenges society must confront urgently.

The first of these is the urgent need to mitigate to prevent the most severe impacts of climate change. Stabilisation of greenhouse gas concentration requires future greenhouse gas emissions to be only a fraction of today's levels. We are approaching a number of thresholds which are likely to be considered dangerous. For example, we are dangerously close to reaching the threshold, or tipping point, where ongoing and essentially complete and irreversible melting of the Greenland ice sheet is inevitable. While this may take centuries it will eventually lead to a sea level rise, especially when combined with ongoing ocean thermal expansion and contributions from the West Antarctic Ice Sheet, which will be measured in metres. We must act soon if we are to avoid this and other potential calamities.

There are many options available for reducing greenhouse gas emissions. It is not a matter of which of these options is most effective. Given the magnitude and urgency of the task we will need to employ all options.

The second major challenge is how to adapt to ongoing climate change. Even if we do manage to reduce emissions significantly, there will be ongoing climate change. The impacts of climate change are already being felt and they will extend centuries into the future. Society needs to understand and predict climate change at the global, regional and local level if it is to effectively adapt to climate change. We have a reasonable understanding of climate change at the global level but there is an ongoing challenge to provide better understanding and predictions at the regional level to inform and underpin sound adaptation policies. Society must plan for a changing climate, institute policies that minimise the impacts of climate change, avoid disasters and exploit opportunities.

We strongly agree with Sir Gordon Conway that partnerships are essential to meeting both of these challenges. These partnerships must include the scientific community, including the World Climate Research Programme and other global environmental change programmes, governments, business and the broader public community.

thank you Mr Chairperson.