



Global Challenge

LIVING IN A 450 PARTS PER MILLION WORLD: ANTICIPATING THE SOCIAL IMPACT

*Global Challenge, FCJ Centre, Ave. Winston Churchill 211, B-1180 Brussels:
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WORKSHOP OUTCOMES

At this workshop, Luis Murago of Oxfam International explained the nature of the problem that climate change represents in human terms **today**, through the eyes of an organization which has to deal with its effects around the world. Already, some 250 million people are affected by related food and water insecurity, disease, pressure on access to land by destruction of soil and turning land over to biofuels, storm damage, displacement, forced migration, and conflict.

Looking to the **future**, Dr Stephan Singer of World Wildlife Fund and a participant in the Intergovernmental Panel on Climate Change (IPCC) introduced the science relied on by the IPCC for its prognosis. The reference to a 450 parts per million atmosphere in the workshop's title comes from its report and corresponds to CO₂ together with other gases equivalent in their greenhouse effect. Earth's atmosphere will reach 450 ppm by or in the early 2030s. When it does, our planet's atmosphere will be locked into a 2 degree increase by the 2050s. This is due to factors that will then be irreversible, especially because of physical limits on the oceans' ability to absorb carbon and release heat. Up to that level of increase in temperature, we will see a worsening of harmful effects we are already witnessing today - such as loss of alpine glaciers, decreasing water availability, increasing drought in many regions, heightened wildfire risks, heavier flood and storm damage and associated health and property impacts.

If we allow global warming to **exceed a 2 degrees increase, the effects will not merely be harmful, but dramatic**. There will be waves of climate refugees, producing new slums and socially dependent groups, as the most sensitive regions - beyond Europe - are hit worst and sanitation, health and other vital systems experience extreme pressure or break down. There will also be serious agricultural dislocation, as the climate pattern of a dry Sahara and a moist southern Europe reverses itself. This type of change has not occurred in over 5,000 years - the entire period from Ancient Egypt to the age of space stations. It will lead to massive loss of forest and soils that have up to now acted as carbon sinks and bread baskets. At the same time, severe pressure will be put on protein sources in diet, with the destruction of the coral reefs that are major breeding grounds for many fish species we depend upon. The loss of the reefs will also remove a natural barrier to storm damage in many coastal areas.

From then on, things would start to get worse still, as warming rises by 3 and then 4 degrees. Extinction of more than 40% of all species. Economic losses of some 5% of

global GDP. Sea level rises of around 2 metres, affecting up to 50% of the world's population. Water scarcities and disrupted food production. Then there is the potential for unforeseen or unforeseeable knock-on effects. As noted in the Stern Report, a 7-metre sea level rise could occur. So could release of substantial oceanic methane.

These unacceptable prospects are ones every citizen on our planet must be made aware of.

Some action is, as we know, being taken by governments. But it is also being taken by groups that will be affected. Julie Teng of European Youth Forum pointed out that today's young people will face the consequences most profoundly, because the effects of climate change will intensify the older they become. There is hence a recognition that they need to become central actors in securing sustainable development. European Youth Forum is therefore attempting to bring the question of climate change into youth's awareness by stressing the positive benefits of action. The Forum stages a number of projects in this sense, trying to make each fun while focusing on solutions. AGE, Oxfam and other organizations are also engaging in their own awareness campaigns. These and similar groups should be at the forefront because **the socially disadvantaged, the young, the old are most at risk.**

But much more needs to be done. This was the central discussion in the Workshop. In reaching conclusions, the Workshop therefore aimed to provide a potential way forward, not in terms of abstract science but in practical terms both citizens and policymakers can easily understand:

- The **target level** for global warming is a maximum 2 degrees increase, with a 0% net CO2 equivalent level of emissions due to human activities by 2050.
- The **critical date** for climate change discussion is the year **2020**. This is the time window for **stabilization measures**. Action taken before then can contain global warming at the target level.
- The **carbon budget** the planet needs to manage by technological means and through changes in behaviour to stabilize global warming is **1000 gigatonnes of CO2 equivalent**. This carbon budget includes all sources of greenhouse gases.
- The **price tag** for stabilization measures is **€500 billion (\$800bn) per year for twenty years**. This sum is a little under 1.5% of world GDP in 2007. It must be seen as an **investment** in maintaining a secure economy, society and world. Global warming by 3 or 4 degrees will be vastly more expensive and painful.
- The **investors** need to be both the developed and the developing world, contributing roughly 50-50 each. It must be remembered that money invested is money spent on goods and services. A **new economic sector** will develop.
- The **action needed to achieve stabilization** must revolve around **participation**. This will develop best through structured and effective exchange among interest groups, citizens and policymakers in each locality, nation and region. The aim of such exchange must be to have decisive impact in the political and industrial circles in which changes must occur. The first step is an analysis of political opportunities to advance this goal in those circles.

The consensus was that Global Challenge can act as a neutral, informal platform for such analysis and facilitate fruitful dialogue on addressing climate change among policymakers, industry and civil society groups. Global Challenge will thus continue with this theme, focusing on political opportunities where interventions can usefully be made and exploring a systematic policy response to the challenge of climate change.