**United Nations Development Programme (UNDP):**

The United Nations Development Programme (UNDP) is the UN’s global development network, advocating for change and connecting countries to knowledge, experience and resources. It works in more than 170 countries and territories, supporting States in the advancement of shared solutions focused on its three main areas of work: sustainable development, democratic governance and peace building and climate and disaster resilience. In all these activities, the UNDP encourages the protection of human rights and the empowerment of women, minorities and the poorest and most vulnerable, with the objective to achieve the eradication of poverty, and the reduction of inequalities and exclusion. This topic mainly focuses on to a joint effort to stop the dangers of climate change. As a introduction, this guide will first show what dangers might exist and then offer some specific ideas that might be lead to a good debate in the forum as well as proffer some possible solutions.

**Poor Governance and Climate Change: Looking to the Future**

Many Least Developed Countries(LDC) and Developing Countries, are highly vulnerable to climate change-related impacts because of its fragile socio-economic development and inadequate adaptive capacity. The potential impact of climate change on the development of developing countries is expected to make the current sustainability challenges further complicated. Rural livelihoods are expected to decline due to decreasing water access and agriculture productivity, severe natural disasters including for instance floods and associated asset destruction. Many countries have only very limited capacities including weak governance structures while experiencing tremendous development challenges compounded by potential climate change associated impacts.

Climate change is increasingly becoming a permanent agenda item at many policy-making forums. Such prominence is evidence of the perceived impact of climate change on the shaping and influencing of the development trajectory and balance of power in the global political economy. Climate change is distinct from natural climate variability since it results from human activities that alter the composition of the earth’s atmosphere. Climate change is associated with natural changes, such as the spread of the Sahara because of desertification, reduced precipitation, devastating droughts, a rise in temperature, more intense storms and frequent flash floods, the melting of the snowcaps of Mount Kenya and Kilimanjaro, a rising sea level and significant changes to the pattern of daily lives. In the Sahel region, desertification is causing clashes between herders and farmers because the availability of cultivated land is being reduced. Climate-related effects of this nature are already resulting in violent conflicts in northern Nigeria, Sudan and Kenya. Africa, with its history of ethnic, natural resource and interstate conflicts, is seen as being particularly vulnerable to this new climate-induced security threat.3 Despite being the continent least responsible for the emission of global greenhouse gases, one of the principal contributors to climate change, it will suffer the consequences of a changing climate most severely.

Today, it is widely agreed by the scientific community that climate change is already a reality. The Intergovernmental Panel on Climate Change (IPCC) has concluded that human activities are altering our climate system and will continue to do so. Over the past century, surface temperatures have increased and associated impacts on physical and biological systems are increasingly being observed. Science tells us that climate change will bring about gradual changes, such as sea level rise, and shifts of climatic zones due to increased temperatures and changes in precipitation patterns. Also, climate change is very likely to increase the frequency and magnitude of extreme weather events such as droughts, floods, and storms. While there is uncertainty in the projections with regard to the exact magnitude, rate, and regional patterns of climate change, its consequences will change the fate of many generations to come and particularly impact on the poor if no appropriate measures are taken.

The impacts of climate change, and the vulnerability of poor communities to climate change, vary greatly, but generally, climate change is superimposed on existing vulnerabilities. Climate change will further reduce access to drinking water, negatively affect the health of poor people, and will pose a real threat to food security in many countries in Africa, Asia, and Latin America. In some areas where livelihood choices are limited, decreasing crop yields threaten famines, or where loss of landmass in coastal areas is anticipated, migration might be the only solution. The macroeconomic costs of the impacts of climate change are highly uncertain, but very likely have the potential to threaten development in many countries.

**Intergovernmental Panel on Climate Change (IPCC):**

The IPCC is an intergovernmental institution. Its task is to summarize and assess existing scientific knowledge on human-induced climate change and its impacts, as well as options for mitigation and adaptation. It was set up in 1988 by the UN World Meteorological Organization (WMO) and the UN Environment Programme (UNEP). Its secretariat is located in Geneva, Switzerland. Its activities are funded by WMO, UNEP, and by direct contributions from governments.

The IPCC also includes a „Task Force on National Greenhouse Gas Inventories“. In the judgment of most observers, the work on the Assessment Reports proceeds largely according to scientific criteria of due diligence. However, the synthesis work and summaries for policy-makers are also exposed to political influence because the Panel, which is composed of government delegates from all member countries, ultimately decides on their adoption. Hence the wording in the summary for policy-makers (but not the content of the detailed reports by the working groups) is subject to some political negotiation. However, governments have thus far hesitated to modify, for political purposes, the main conclusions drawn from scientific assessment.

**FCCC and Kyoto Protocol:**

The United Nations Framework Convention on Climate Change (FCCC) was formally adopted at the Rio, or Earth Summit in 1992 (UN Conference on Environment and Development, UNCED). Its aim is the

*“stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.”*

**Geophysical Aspects:**

In contrast to the weather, which is highly variable both spatially and temporally, the global climate is much more stable. It can be regarded as the Earthʼs average weather and/or its variability over longer periods of time (typically at least decades). Whereas the weather can be experienced directly by humans, the climate is a scientific (essentially statistical) construct. For instance, while temperatures can easily vary by 20°C in a particular location within a single day, the average global temperature does not vary by more than 1-5 °C within time-spans of thousands of years. Changes in the Earthʼs climate took place also in pre-modern times (before the industrial revolution). Such changes occurred due to non-human factors, e.g. changes in heat output of the sun and volcanic activity. However, starting in 1896 scientists have produced a mounting stream of evidence demonstrating that so called greenhouse gases (GHG) emitted by human activities are influencing the Earthʼs climate as well. Several gases in the atmosphere, most notably water vapor and carbon dioxide (CO2), are instrumental in trapping some of the sunʼs energy to which the Earth is exposed. This greenhouse effect is essential for life on Earth. Without this heat trapping the Earth would be more than 30°C colder. Yet, human activity, in particular the combustion of fossil fuels (coal, oil, gas) and land-use changes, have led to a large increase in concentrations of GHGs in the atmosphere. Atmospheric concentrations of the two most important GHGs emitted by human activity, CO2 (carbon dioxide) and CH4 (methane), were far higher in the year 2005 than the natural range of these gases in the past 650.000 years. CO2 has increased from a pre-industrial (i.e. prior to about 1750) level of 280ppm to 379ppm in 2005, and CH4 from 715 to 1774ppm (IPCC 2007).

**Effects on economic growth:**

Estimates of future effects on economic growth under different climate scenarios are based on so called integrated assessment models that explore national, regional, and global cost implications. The findings from these models vary enormously. Having reviewed many such studies, the IPCC (2007) for instance concludes: Global mean losses could be 1-5% of GDP for 4 degrees of warming, but regional losses could be substantially higher.

• Doing nothing; would result in an average annual loss of 5-20% of global GDP now and forever due to a 50% chance of exceeding a 5°C temperature increase by 2100 (relative to pre-industrial levels)

• Moving to a 550ppm trajectory would result in costs of 1% of global GDP in 2050, with a 50% change of exceeding a 3°C temperature rise;

• Moving to a 450ppm trajectory would cost about 3% of GDP in 2050 and would offer a 50% change of remaining below a 2°Ctemperature increase

**Governance barriers and climate change:**

Several barriers of various types (i.e. technical, economic, financial and institutional) across various levels i.e. national policymaking, and local and implementation levels have been as constrains for implementation climate change adaptation which includes following:

* Weak institutional structures
* Lack of access to climate information
* Uncertainties in regional, local climate change scenarios, and socio-economic scenarios;
* Low awareness for policy-and decision makers regarding climate change;
* Inadequate institutional, technical and financial capacity to develop, modify, or interpret existing models and methodologies, lack of financial sources to implement the adaptation measures;
* Poverty and livelihood vulnerability including lack of access to proper infrastructure, and services such as water, sanitation, education, roads, health, and finance.
* Limited capacity to formulate and plan climate change issues.
* Limited Climate Change related Research.
* Inadequate capacity to plan and adapt against the negative impact of climate change.
* Lack of funding for implementing climate change Programs

**Guiding Questions:**

* How does climate change affect your country?
* Does your government have any programs that address the effects of climate change?
* Has your country signed or ratified the Kyoto Protocol? Does it participate in any of the Kyoto Protocol mechanisms?
* Did your government participate in Rio+20? Did your government make any statements about climate change?
* How can the capacity of developing countries most affected by natural disasters be built?
* How can UNEP contribute to a more coherent implementation of the UN’s natural disaster frameworks?
* Does the international community strike a balance between prevention of natural disasters and mitigation of its immediate consequences, or is more focus on the former or latter required?
* To what extent are the richer, developed nations responsible for financing and/or assisting adaptation efforts of developing nations?
* Does the Paris Agreement leave any salient issues regarding natural disasters unaddressed?
* How can we improve developing countries in taking care of the environment?
* How to encourage developed countries to finally switch their focus to climate change?