

Background Information for the Declaration on Climate Justice

A focus on climate Justice links human rights, climate change and economic development to achieve a human-centered approach, safeguarding the rights of the most vulnerable and ensure a just transition for all involved in the pathway to a low carbon economy.

Poor people will face the greatest impacts

The people who have done least to cause climate change are disproportionately impacted by its effects. This is the injustice of climate change. According to the World Bank's report, *Turn Down the Heat*, "the distribution of impacts is likely to be inherently unequal and tilted against many of the world's poorest regions, which have the least economic, institutional, scientific, and technical capacity to cope and adapt."¹

Analysis of the effects of changing temperatures on economies in poor countries has shown that a 1°C rise in regional temperature in a given year reduces economic growth in that year by about 1.3 percent.²

About 2.5 billion people globally depend on agriculture for their livelihoods.³ A number of climate-related factors affect food security, including increased conflicts over scarce resources and increased migration and displacement.⁴ Temperature rises beyond 2°C are predicted to increase the number of people at risk to poverty and hunger, leaving an additional 600 million facing acute malnutrition by 2080.⁵

Of the 49 National Adaptation Programmes of Action (NAPAs) developed to date by the Least Developed Countries, indicating each country's highest priority adaptation challenges, 78% identify food security as a priority area of intervention.⁶

There is a global limit to the safe level of emissions and a majority of fossil reserves must remain in the ground

The International Energy Agency (IEA) estimates that global GHG emissions between 2000 and 2050 cannot exceed 1025 gigatonnes of carbon dioxide equivalent based on its most optimistic estimate for a 50% probability of keeping temperature increase less than 2°C above pre-industrial levels.⁷ Carbon Tracker found that for an 80% probability of staying below 2°C, the budget is only 900 gigatonnes.⁸ By way of comparison, in 2010 the world emitted 31 gigatonnes of carbon from energy use.⁹

Today's total carbon reserves, if combusted, are equal to 2860 gigatonnes of carbon dioxide equivalent. Absent currently unavailable methods to sequester carbon, much of these reserves must be kept in the ground in order to avoid catastrophic warming. According to analysis by the International Energy Agency, this means that two-thirds of known reserves cannot be used if we want to stay within the 2°C goal.

¹ World Bank, *Turn Down the Heat: Why a 4°C Warmer World must be Avoided*, (Washington: World Bank, 2012). P xiii

² Dell, Melissa, Benjamin F. Jones, and Benjamin Olken. "Temperature Shocks and Economic Growth: Evidence from the Last Half Century." *Unpublished Paper*. (2009) as cited in World Bank 2012.

³ FAO *Statistical Yearbook 2013*. Rome. 2013.

⁴ Beddington, John. 2011. *The Future of Food and Farming: Challenges and Choices for Global Sustainability*. London: Gov't Office for Science.

⁵ United Nations Development Programme. 2007. "Fighting Climate Change: Human Solidarity in a Divided World." Human Development Report 2007/2008. New York: UNDP.

⁶ UNFCCC Secretariat, "National Adaptation Programmes of Action: Index of NAPA Projects by Sector," May 2013.

⁷ Meinshausen, Malte, Nicolai Meinshausen, William Hare, Sarah CB Raper, Katja Frieler, Reto Knutti, David J. Frame, and Myles R. Allen.

"Greenhouse-gas emission targets for limiting global warming to 2 C." *Nature* 458, no. 7242 (2009): 1158-1162.

⁸ Carbon Tracker & The Grantham Research Institute, LSE. *Unburnable Carbon 2013: Wasted Capital and Stranded Assets*. CT/LSE, 2013.

⁹ World Resources Institute, CAIT 2.0, accessed September 18, 2013 at www.cait2.wri.org.

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Combusting the known reserves would put the world on the path to a temperature increase greater than 6°C.¹⁰

Carbon Tracker further updated this number by adjusting the 2000-2050 budget to include the 400 gigatonnes that has already been emitted in 2000-2012, which makes the remaining 2013-2050 budget only 625 gigatonnes. With this smaller budget, nearly 80 percent of reserves cannot be used if we want to stay within our goal.¹¹

Climate justice seeks actions that create incentives for growth and jobs

Low-carbon development is generally relatively labor intensive and hence can provide net positive benefits for employment, though gaps in data on this issue remain.¹²

Renewable energy and energy-efficient investments employ much larger numbers of workers than fossil fuel production and transmission; recycling and retrofitting are also labor intensive.¹³ A review of 21 country studies shows a shift in labor demand induced by environmental policies: across industries, away from polluting and toward more modern sectors; and within industries, toward greener activities, driven by profitability; and toward totally new occupations.¹⁴

The Chinese government estimates that energy efficiency and environmental protection will generate more than 10 million jobs over the next 5–10 years.¹⁵ Globally, within the power generation industry, solar PV power production and wind power generate on average more jobs (0.87 and 0.17 jobs respectively per gigawatt hour of power production) than fossil-fuel based generation (0.11 jobs per gigawatt hour of power production).¹⁶

A model in the Stern Review on the economics of climate change shows that damages due to climate change can be reduced 5-20 percent of GDP annually through actions to address climate change that require only approximately 1-3 percent of GDP over 2-3 decades.¹⁷

Policy certainty can provide the right kind of signals to investors

Technology responds quickly to price and policy shifts: patent applications for renewable energy and energy efficiency technologies rise as environmental awareness and regulations increase.¹⁸

Growth in the German renewable energy sector is attributed to its feed-in tariff, which provides certainty of long-term support to projects.¹⁹ The German Renewable Energy Sources Act of 2000 has created almost

¹⁰International Energy Agency. *World Energy Outlook*, 2012. OECD/IEA, 2012.

¹¹ Carbon Tracker & The Grantham Research Institute, LSE. *Unburnable Carbon 2013: Wasted Capital and Stranded Assets*. CT/LSE, 2013.

¹² Environmental and Energy Study Institute, "Fact Sheet: Jobs in Renewable Energy and Energy Efficiency," Washington, DC: EESI. June 2011.

¹³ Steer, Andrew, "Resource Depletion, Climate Change and Economic Growth," Working Paper 5. Global Citizen Foundation. June 2013.

¹⁴ ILO (International Labor Organization). 2011. *Skills for Green Jobs. A Global View: Synthesis Report Based on 21 Country Studies*. Geneva.

¹⁵ Bezdek, R. 2007. *Renewable Energy and Energy Efficiency: Economic Drivers for the 21st Century*. American Solar Energy Society, Boulder, CO.

¹⁶ Kirkegaard, Jacob, Thilo Hanemann and Lutz Weischer, "It should be a breeze: harnessing the Potential of Open Trade and Investment Flows in the Wind Energy Industry," Working Paper 09-14, World Resources Institute: Washington, 2009.

¹⁷ Stern, N. Nicholas Herbert, ed. *The economics of climate change: the Stern review*. Cambridge University Press, 2007.

¹⁸ World Bank. 2012b. "Seizing the Opportunity of Green Development in China." In *China 2030*. Washington, DC: World Bank; and Organisation for Economic Co-operation and Development. 2010. *Climate Policy and Technological Innovation and Transfer: An Overview of Trends and Recent Empirical Results*. Paris: OECD.

¹⁹ Definition: Feed-in tariffs set a premium price for the production of renewable electricity. Generators are paid a premium rate for each kWh of power fed onto the grid. Feed-in tariffs can be structured either by setting a fixed price for power generated by eligible sources and fed onto

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380,000 jobs,²⁰ and growth in the renewable energy sector includes capital investment (below \$5B in 2003 to over \$35B in 2008) and the number of new clean energy businesses (increased by 18% between 2000 and 2007).

the grid, or by setting a fixed premium rate, which is paid on top of the market price. The support is reduced as the cost of the technology decreases over time.

²⁰ This number is updated from the original from German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety, "Renewable Energy Sources in German: Key information 2012 at a glance." February 2013.