



Declaration of Fortaleza

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Second International Conference on Climate, Sustainability and Development in Semi-arid Regions (ICID 2010)

Fortaleza, Ceará, Brazil, 16 – 20 August, 2010

A Drylands Call For Action

The Drylands worldwide contain the largest concentrations of poverty and suffer the greatest pressures on their natural resources such as water, soils, and biodiversity.

Their populations are extremely vulnerable to the adverse consequences of environmental changes related to climate variability and change, and are among the least able to cope effectively with them. Desertification alone, as a symbol of environmental threats in the Drylands, adversely affects the livelihoods of one billion (1,000,000,000!) people.

A gathering of 2,350 participants from 80 countries, including public officials, natural and social scientists, representatives of the private sector and international agencies, and members of non-governmental and other civil-society organizations, met in Fortaleza, state of Ceará, Brazil, from August 16th to 20th, 2010, in the *Second International Conference on Climate, Sustainability and Development in Semi-arid Regions (ICID 2010)*. They exchanged information and lessons of the past two decades about sustainable development in Drylands around the globe and offered policy recommendations for consideration at the Rio+20 summit in 2012.

Since the first ICID was held in 1992, human-induced global warming and environmental changes and their consequences for human and ecosystems well-being are now widely accepted as fundamental development issues.

Although significant advances continue to be made in scientific knowledge and public understanding concerning the interactions among climate, environmental sustainability and socio-economic development and despite progress and the best of government intentions, the challenges continue to increase and constrain efforts to effectively reduce poverty, mitigate and adapt to climate change and achieve sustainable development and the Millennium Development Goals (MDGs).

Political resolve, sustained commitment to action and to provide additional resources are urgently needed to realize these objectives. These challenges are critical but surmountable in the underrepresented arid, semi-arid and dry sub-humid regions, collectively called “Drylands”.

Past errors, poorly conceived policies, and exploitative practices have resulted in environmental and social conditions that are not easily reversed without substantial and sustained development efforts that require increased national and international financial support. Declining productivity in the Drylands of their natural resources, the prevalence of poverty and significant inequities as well as institutional weaknesses are expected to be worsened by climate variability and change.

Drylands regions contribute much less to global climate change (ie, as sources of greenhouse gas emissions) than other biomes, but are likely to be much more adversely affected by it. **Extreme weather and climate events around the globe** — most recently floods in Pakistan and forest and peat fires in Russia and Indonesia, dust storms in China, erratic monsoon behavior in India, droughts and food shortages in sub-Saharan Africa, severe prolonged droughts and water shortages in northern Mexico and Northeast Brazil among other disastrous events elsewhere — **underscore the urgency for governments to prepare for an uncertain climate future.**

The economic and social impacts of such high-impact climate, water and weather events include sharply reduced agricultural output and productivity, damages to infrastructure, disruption or loss of basic services, massive dislocation of population, and increasing frequency of conflict, violence, and misery in the poorest parts of the developing world. Industrialized countries are not immune from adverse climate-related changes and are also increasingly susceptible to the similar high impact phenomena. Yet, the world's Drylands possess many important assets, including rich social, cultural and biological diversity. They are responsible for more than 20% of food production around the globe.

Drylands present many opportunities for sustainable development, especially renewable solar, wind and biomass energy. Many of the actions required to address climate challenges are of benefit now as well for long-term economic growth, sustainable development and poverty alleviation in future decades. They require a high priority consideration from governments, national and regional, from the international community and from the private sector.

Deliberations during the Second International Conference on Climate, Sustainability and Development in Semi-arid Regions (ICID 2010) resulted in a call for the following action:

**Climate Change and Sustainable Development:
Challenges and Opportunities for the Drylands**

1. The sustainable development of Drylands, through improved governance, enhanced livelihoods and greater voice, empowerment, and political representation of their populations especially the poor), should be the foremost objective of local to international action.
2. Climate-sensitive development interventions from local to global must be substantially increased paying special attention to the needs of women, children and the elderly, throughout the Drylands.
3. “Win-Win” opportunities to cope with global warming must be identified and pursued, especially climate adaptation tactics and strategies that reduce local vulnerability, increase resilience and build assets of the poor. Efforts are needed to develop greater institutional capacity for managing climate variability today in the context of projected climate changes (e.g., greater emphasis on improved climate and environmental monitoring networks, drought preparedness planning based on a risk-based management approach, development of appropriate decision-support tools, and improved information delivery systems to aid decision making). Efforts must promote access to land and to markets, as well as effective civil-society grassroots participation in decision-making, implementation, and evaluation of development activities.

4. Mechanisms should be strengthened through integrated action to arrest and avoid land degradation, to mitigate the effects of droughts, fires and floods, to conserve soil and water resources and biodiversity, and to resiliently adapt to climate change and its consequences. In addition, mechanisms to financially compensate local communities for the environmental protection services they provide must be identified and implemented. Multilateral and bilateral development agencies can play an important role.
5. Investment opportunities should exploit the comparative advantages of dryland areas such as solar power generation, as well as other alternative and renewable energy sources (including hydropower, wind, and biomass). They should also support techniques for rainwater capture, improved sanitation, wastewater reuse in irrigation and low carbon, resource saving and environmentally-friendly activities. Such investment would enhance energy and food security by the improved efficient management of demand for water through adequate pricing and other means. The integration of water basins should also be considered.

Political Representation from local to international

6. The concerns of Drylands peoples are often poorly represented in international, national and local policy processes. Good governance of the Drylands will also bring knowledge, cultural values, needs and aspirations of local inhabitants into multi-level policy and decision-making.
7. To promote the recognition and well-being of Drylands, second and third-order implications of the climate-poverty-sustainability interface should be widely acknowledged, and Drylands countries should become equal partners in the global environment and development agenda.
8. The United Nations should urgently consider the current plight of the Drylands, including the risks to global security associated with the growing impoverishment and food insecurity, increasing vulnerability to natural disasters and climate change, and rising conflicts and violence in Dryland regions.
9. Convene a “Drylands Summit on Sustainable Development” to refine policy options for Drylands worldwide. Inputs from ICID 2010 and those of the proposed Drylands Summit would enhance discussion of the importance of Drylands issues in the Rio+20 Conference agenda. Summits for other eco-regions should also be identified and convened.
10. A new strategic geo-political Drylands Initiative, if not alliance, can be developed to coordinate efforts to address common climate, development and sustainability related problems, prospects and opportunities.
11. Generate support for development and implementation of community-level knowledge-based strategies to educate children, adults, policy and decision makers, including parliamentarians, and the media, about the obvious as well as hidden implications of climate and environmental changes in the Drylands.

Biodiversity Protection

12. There is also the need to recover degraded areas, strengthen the management and sustainability of existing and newly protected areas and to prevent environmental deterioration of those

that are as yet well preserved. Dryland regions should catalogue and prioritize the various sustainable uses and conservation of biodiversity.

Synergies Among Global Environment and Development Initiatives

13. Synergies among global, national, regional and local interventions to mitigate and adapt to climate change, conserve biodiversity, and curb desertification should be maximized. Interactions among and with the three Rio Conventions (UNCCD, UNCBD, UNFCCC) should be integrated with broader domestic and international efforts to foster quality of basic education, combat poverty and promote sustainability.

Financing Climate-Sensitive Sustainable Development

14. Enhancing climate-sensitive sustainable development activities will require additional financial resources. Part of these costs should be absorbed by national economies, but, because of the global public goods nature of these issues, a larger share of the needed incremental financing should come from industrialized countries.
15. Previous financial pledges by industrialized countries to support sustainable development efforts must be met. Existing institutional arrangements and financial instruments must not only be strengthened but must become more efficient. Disbursement of concessionary resources from recently established Climate Investment and Adaptation Funds, for example, should be accelerated, and local and national institutional absorptive capacities strengthened to effectively utilize these resources.
16. Holding emitters of greenhouse gases accountable by applying the “Polluter Pays” principle, and other such measures, should generate additional sources of financial resources to support new investments in adaptation measures. Financial innovations to advance sustainable development under climate change conditions should also include: (i) funds to finance adaptation and associated sustainable development activities in Dryland subregions, such as the proposed Fund for the Caatinga ecosystem in Brazil; (ii) payment for ecological and other environmental services, including establishment of a fund for reduction of emissions from land degradation and desertification, along the lines of existing ones for reduction of emissions from deforestation and forest degradation in tropical forest areas (REDD); and (iii) climate-related damage compensation and insurance instruments.

Education and Food Security for Sustainable Development

17. Contextualized quality education at all levels should be a priority, cooperatively supported by all agencies involved. In addition to a high-return investment in human capital, this should be viewed as the need to raise the awareness of local populations about the linkages among climate change, poverty and sustainability. This will ensure an effective voice, empowerment and representation in public decision-making regarding the future of Dryland regions. Specific Drylands education policies should be developed. The priority focus should be on the

youth of both genders beginning with early childhood development. They have the most at stake and will become the next wave of policy and decision makers.

18. Food Security for Sustainable Development must be a key area of concern among civil society, NGOs, international agencies, government institutions and other forms of organization, as food security remains a fundamental need for reducing vulnerability and promoting resilient adaptation.

Knowledge and Information Exchange

19. An integrated multidisciplinary climate research, observation, modeling and applications program should be implemented to inform resource managers, policy makers, planners, educators and local populations about adaptation to the consequences of a changing climate.
20. While information technology and knowledge based on the complex causes and effects of climate variability, extremes and change have advanced significantly during the past two decades, significantly greater inputs from the social sciences are needed, especially to focus on the social and political causes of vulnerability and resilience as well as the societal impacts of climate variability and climate change.
21. The gap caused by a mismatch between scientific and technological investigation related to the Drylands along with knowledge about production systems on the one hand, and the prevailing system of decision-making and environmental and local governance, on the other, should be eliminated. New Science and Technology (S&T) knowledge must be developed in existing and new Drylands institutions. Sustainable development efforts must respect the cultures of indigenous, traditional and other local populations that have inhabited these regions for centuries.
22. Drylands knowledge networks should be enhanced with two basic objectives: (i) scientific and applied research: exchange of information, discussion of methodologies, communication of scientific discoveries and joint development of research activities; and (ii) participatory planning and action: create a forum for exchanging experiences among specialists, government authorities and civil society.

International Cooperation

23. Strengthen measures to facilitate international cooperation and appropriate technology transfer, including the fostering of southsouth and tripartite cooperation and the establishment of local laboratories and observatories.
24. Efforts to improve coordination and reduce the existing compartmentalization of development programs should be promoted at all levels, especially in areas such as education, land, water and forest resource management, the combating of desertification, adapting to climate change, protecting biodiversity, improving food security, and poverty reduction.

A Sense of Urgency

25. The urgency to respond to current and emerging climate, development and sustainability challenges and opportunities in drylands must not be understated. The international community

has shown its intention to place drylands development on the international agenda by the launching at ICID 2010 of the '*United Nations Decade of Deserts and the Fight Against Desertification 2010-2020*'. In light of ICID 2010's findings and in view of global climate change scenarios that intensify the drylands development imperative, the dawn of this new UN Decade is a welcome recognition that decisive action for human and ecosystems well-being in the world's drylands is needed now!

Supporting documents from the preparatory meetings and panels of ICID 2010, including special contributions on Africa and Latin America, are available at URL: www.icid18.org.