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## **Assessment of Integrated Research on Disaster Risk: Project Prospectus (AIRDR WG for Integrated Research on Disaster Risk Programme)**

### ***Introduction***

Our knowledge on natural hazards and their interaction with human systems is being challenged by a rapidly changing and increasingly interdependent world--one transformed by technological change, globalization of economic systems, and political and economic instability. In such a highly interdependent world a disaster not only affects the immediate area where it occurs, but also has cascading impacts that can affect nations near and far. How does our present understanding of hazards and disaster risk respond to such concerns? How do we understand disaster risk under changing conditions where disasters may be increasing in frequency and intensity and where global climate change may influence both the severity and frequency of extreme climate-sensitive hazards? How does our present scientific understanding of disaster risk assist in responding to such complex and challenging questions?

Entitled **Integrated Research on Disaster Risk (IRDR)**, an international decade-long integrated research programme was jointly launched by the International Council for Science (ICSU), the International Social Science Council (ISSC), and the U.N. International Strategy for Disaster Reduction (UNISDR). The purpose of the programme was to strengthen multi-disciplinary research to confront the challenges brought on by disasters: characterizing hazards, vulnerability, and risk; understanding decision-making in complex and changing risk contexts; and reducing risk and curbing losses through knowledge-based actions. Four ad hoc working groups, Forensic Investigations of Disasters (FORIN), Risk Interpretation and Action (RIA), Disaster Loss Data (DATA), and Assessment of Integrated Research on Disaster Risk (AIRDR), have been established to achieve main IRDR objectives. These working groups bring together diverse disciplines and formulate new methods for addressing natural hazards. This involves conceptualizing completely new approaches to disaster risk reduction that extend outside the bounds of any field of study, as well as promoting innovative research consistent with the working groups objectives.

### ***Assessment of Integrated Research on Disaster Risk (AIRDR) Programme***

The Assessment of Integrated Research on Disaster Risk (AIRDR), under the umbrella of IRDR, is a 3-year project designed to undertake the first systematic and critical global assessment of integrated research on disaster risk. The enormity and complexity of disaster risk requires knowledge from natural sciences, social sciences, health sciences, and engineering operating in an integrative fashion, not as separate disciplines examining one aspect of the problem. Such a synthesis of perspectives is not easy, but is vital in producing the new understanding of disasters and their impacts and in achieving the objectives of IRDR.

### ***Goals of AIRDR***

The goals of AIRDR are:

- (1) to provide a baseline of the current state of the science in integrated research on disaster risk to measure the effectiveness of multiple programmes;
- (2) to identify and support a longer-term science agenda for the research community and funding entities;
- (3) to provide the scientific basis to support policy and practice.

### ***AIRDR Work Plan***

- (1) Document and critically assess the existing scientific literature research on integrated disaster risk. How has integrated research constituted and organized? What kinds of research qualify as integrated risk on disaster risk? This includes the compilation of a bibliographic database, an evaluation of the quality and robustness of the research, and the potential applications of the research in policy and practice.
- (2) Identification strengths, weaknesses, gaps, and opportunities for integrated research on disaster risk.
  - Strengths – What is known well within the research community in terms of capacity, technology, tools and mythologies regarding the integrated research on disaster risk? What evidence is there to support such strength in understanding?
  - Weaknesses – What is less well-known in the research? Where do the shortcomings come from? What is the newly-emerged phenomenon which needs additional study? What gaps are evident in our empirical understanding of disaster risk?
  - Opportunities – outline and show the possible avenues for learning from the co-production of knowledge—opportunities that engage multiple disciplines, methodologies, and users of such knowledge. How do we integrate experiential knowledge and practice into science-based assessments?
  - Gaps – How do we identify what is not now known through our research, but should be known? What barriers impede integrative research on disasters and how might these be overcome?

### ***AIRDR Approach***

The AIRDR project requires involvement of researchers in the natural, social, health and engineering sciences and also practitioners, professionals and decision-makers in disaster risk reduction from the international community. The IRDR Scientific Committee will provide the overall guidance for the development of the AIRDR project and be responsible for overseeing its implementation. The AIRDR project will have a Scientific Steering Committee charged with developing the strategic framework, the work plan, and its implementation. Selected members of the Scientific Steering Committee will serve as key editors, charged with drafting the documents and reports of project outcomes.

During this process, the AIRDR Scientific Steering Committee meetings will be convened two or three times a year to discuss and decide AIRDR-related issues. Potentially, an AIRDR Forum would be conducted once a year.

This forum will include the panel of experts engaged in conducting the assessment and in drafting the report. The forum provides the mechanism for integration across the panels as well as the sharing of preliminary results.

The assessment teams will consist of nine or ten panels of experts, with six to eight people per panel, working in multi-disciplinary, international teams will produce individual chapters of the report. Every effort will be made to achieve balances in regional representation, specializations, gender, and career level.

It is estimated that AIRDR will cost roughly USD\$3-4 million. The funds will cover information and data-collecting, travel, and management costs in order to accomplish the AIRDR project and achieve its goals. While some of the AIRDR work can be conducted via the internet and conference calls, periodic face-to-face meetings of the research teams are needed to accomplish the AIRDR project goals. It is expected that funding resources can be raised from institutions, governmental organizations, and national or international societies which share common interests in the AIRDR project.

### ***The Outcome of AIRDR***

Important outcomes of AIRDR:

- (1) An Assessment of Integrated Research on Disaster Risk.
- (2) A guideline on assessing the effectiveness of integrated research on disaster risk, which includes a consideration of the methodology, criteria, factors, and the process of conducting such an assessment.
- (3) A long-term scientific research agenda will be identified and developed as references for scientific input and investment in IRDR research.

Additional outcomes to be generated by AIRDR include:

- (1) An AIRDR Forum with full engagement of the international scientific research community.
- (2) Integrated research on disaster risk will be stimulated at the national, regional and global levels.
- (3) A baseline and potential outline for future science investments will be established.
- (4) A young generation of researchers and practitioners will be engaged and educated during the AIRDR development process.