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A Report on a Strategy for  
Disaster Related Courses in  
University Programmes  
(Revised version)

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# ***THE MICRODIS PROJECT***

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Worldwide, the increased frequency and intensity of natural disasters, brought about by such factors as climate change, unplanned urbanization, rapid population growth and environmental degradation, have severely affected the economic and social well-being of individuals and communities especially the poor in developed, developing, and least developed countries.

Because the increased incidence and severity of natural disasters threatens to erode many of the gains made in the Millennium Development Goals, there is now an increasing consensus for a shift in disaster response strategies from one of disaster relief operation to disaster mitigation and preparedness. Such a shift requires re-tooling and reeducation of disaster planners and managers to provide them with the requisite skills for effective management of disasters.

One of the objectives of the MICRODIS project, an integrated project, composed of 16 partners from 11 countries in Europe and Asia which is funded under the European Union's sixth framework programme, is to develop strategies for disaster related courses in the undergraduate and postgraduate university teaching programmes of MICRODIS partners. This report covers the discussion during the Expert's Consultation Meeting for MICRODIS partner Universities which took place in the context of the bigger Consortium Meeting last October 10 – 15 2009 in Jakarta, Indonesia.

Prior to the meeting, each university consortium partner was briefed as to the expected output as well as the objective of the meeting. During the formal meeting, each partner described the disaster-related courses offered at their respective institutions after which a detailed discussion on the different opportunities that exist to develop closer academic partnerships within the MICRODIS project and beyond.

## I. COURSE OFFERING

### a. Heidelberg University

Heidelberg conducts two Masters Courses in International Health—~~one a one year residential track and one European Track, in which participants have up to 5 years to finish the programme. The second one is linked to the tropED network. tropEd module.~~

tropEd is an international network of 29 institutions for higher education in international health. It collaborates closely with institutions in Africa, Asia and Latin America. tropEd provides postgraduate opportunities for education and training contributing to sustainable development. It focuses on improving the management of health services for disadvantaged populations. The innovative approach is based on mobility of people, the exchange of experiences in different disciplines and the establishment of a common standard in education and training.

~~tropEd is the training and educational branch of TROPMEDEUROP—the association of Institutes and Schools of Tropical Medicine in Europe. Collaborating closely with 24 member institutions in 13 European countries, tropEd offers a Master's program in International Health at associated tropEd institutions.~~

To strengthen South- South collaborations in East Africa where trop-Ed courses have been accredited jointly with the Muhimbili University for Health and Allied Sciences in Dar es Salaam- Tanzania. Heidelberg University actively participated/coordinates- in EDULINK, a program funded by the European Union which aims ed to improve the effectiveness and the impact of ACP-EU co-operation in the field of higher education.

Among the short-term courses offered at Heidelberg is *Public Health and Disasters*. The course aimed to provide tropEd students, health professionals from industrialized and developing countries, Medical Doctors, nurses, epidemiologists,

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social scientists and public health experts with a a better understanding of the issues related to the health care of refugees, internally displaced persons and the affected host population in unstable situations such as natural and man-made disasters. Disaster trainings is also integrated in *Health and Human Rights* and *Climate Change and Health*.

The University also has two e-learning courses into which the topic on disaster can possibly be integrated.

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*b. Universitas Indonesia*

Indonesia has experienced almost every kind of natural disasters—earthquake, floods, tsunami, etc—which is why awareness about disaster management has been growing over the years. At the University of Indonesia, disaster management is offered as a sector-based training. The School of Epidemiology for example offers Disaster Epidemiology, Emergency Nutrition, Health Promotion in Disaster Situations, and Disaster Management. Disaster related courses are also offered for students in the School of Medicine, Psychology, Nursing, Sociology, and Technology.

The University of Indonesia, however, has not yet managed to develop a study program on disaster. Currently the University is developing collaboration with several institutions in a bid to develop a strong study program in disaster management.

*c. University of Northumbria*

The University has over 25 years of teaching environmental issues at the undergraduate level and since 2000 an MSc program in Disaster Management and Sustainable Development has also been offered.

The program aims to develop knowledge on disaster management and sustainable development. It also develops the skills required for evaluation and planning in the core areas of early warning, preparedness, immediate and long-term response systems and sustainability with a focus on: hazard and disaster information systems; biophysical and political ecological environments of hazard; environmental and human vulnerabilities and resilience; the role of institutions in disaster management and capacity building in institutional development (international, transnational, governmental and civil societal).

The Masters Program at University of Northumbria is unique because it addresses the twin issues of disaster management and sustainability, a scenario not seen in many other universities.

In the first semester of the Program, students will take three core modules which are taught in block form of four weeks each and in the second semester, Research Methods module and two option modules will be taken.

The dissertation consists of 20,000 words and is usually completed over the summer months and submitted in September the following enrollment. However, students are also granted up to five years to submit their Masters Dissertation.

*d. Hanoi School of Public Health*

The Hanoi School of Public Health offers a two-year post-graduate course in Public Health, a two-year post graduate course in Hospital Management and a four-year Bachelors Degree in Public Health.

The four-year Bachelor of Science in Public Health aims to develop knowledge in general and social sciences, health basics and public health to enable students to identify priority health issues, formulate culturally sensitive and appropriate interventions, plan, manage, monitor the implementation of health programs and provide health education to the community. For students to graduate, they must complete a total of 142 educational credits consisting of: 53 general education units, 47 compulsory specialized education units, 6 elective specialized education units.

The two-year Master of Public Health is designed for medical doctors and other graduates in the fields of health and social sciences who have at least two years working experience in health care and management of health care services. The course aims to provide advanced training to medical doctors and other leading personnel in the public health sector including health planning, organization, administration, implementation and evaluation of health services.

The two-year Master of Hospital Management is designed for persons who are managers of hospitals and others who have at least two year working experience in health care management or/and in hospitals.

The Masters program is divided into two ten-month period. The first ten months which is spent inside the classroom provides students with the necessary theoretical orientation using a variety of student-centered teaching methodologies. The second ten-month period which is field-based provides exposed students to a wide range of health and health care situations for them to earn firsthand experience on how real situations are dealt with in the field. The field-based training is supervised by health care providers who are trained and selected as adjunct faculty of the HSPH and who work daily in the field. A Master of Science in Public Health will be awarded by the Ministry of Training and Education of Vietnam to candidate who pass all parts of the course assessment including: Assessment of the course work, three written papers, and a Dissertation.

Hanoi School of Public Health provides the following disaster related courses:

A five-day course on Management of Public Health in Emergencies and Disasters is one of the compulsory subjects of the bachelor of Public Health programme. This subject provides basic principles of disaster management and management of public health issues in emergencies and disasters.

A three-day course on Safe Hospital will be offered from 2010. This course is designed for master of Hospital management programme. This course provides students with basic concepts on safe hospital, assessment of vulnerability of hospitals, development of plans for safe hospital and advocacy for safe hospital.

Additionally, the Hanoi School of Public Health also offers a host of short specialized trainings among which is a three-day training on Health Response in Disaster Situations for capacity building of leaders of Provincial Department of

Health. HSPH also offers a one-week ‘training of trainers’ for selected province, district, commune, etc.

*e. University of Delhi*

Starting the academic year 2010-2011, an optional module on Anthropology and Disasters for Masters students will be offered at the University of Delhi. It has been noted that in India, there is an acute shortage of institutions covering non-structural and soft areas of disastrology such as courses on anthropological, sociological, economic, psychological, public health components of disasters.

Microdis researchers at the University of Delhi are also actively involved in the formulation of the first ever distance Masters Course in India on Disaster Management. Prof. P. C. Joshi, Microdis-Asia Coordinator, has been nominated as a member of expert academic committee to frame the syllabus for course. The medium of instruction for this Masters program is Hindi language and it is offered at the Mahatma Gandhi International Hindi University.



*f. Université catholique de Louvain / Centre for Research on the Epidemiology of Disasters*

The Center for Research on the Epidemiology of Disasters, a research unit of the Université catholique de Louvain (UCL) situated at the School of Public Health of the UCL Brussels campus organized a course on Assessing Public Health in Emergency Situations (APHES).

The course which is offered annually is open to professionals at the level of field officer with some experience in humanitarian and emergency management. Additional 2-3 slots are reserved to students from the European Masters in Humanitarian Action.

This two-week course which covers topics on malnutrition, mortality, morbidity, and population displacement aims to familiarize professionals with epidemiological techniques to determine impacts of disasters and conflicts. The course will introduce participants to the methods and tools of epidemiology in the context of humanitarian emergencies and also cover the different uses of quantitative tools for the assessment of health needs in populations affected by catastrophic events.

## **II. Strategies Discussed**

*a. distance learning*

Distance learning, while not entirely new, is perhaps one avenue for learning that is yet to be made popular and extensively utilized in the field of disaster education. Unlike residential instructional system, distance learning is not constrained by time and distance. Instructional materials can be uploaded online for an e-learning course, distance learning would result in the dramatic cost reduction associated with residential instructional system. Thus, distance learning could make disaster education available to many people from many different parts of the world.

The challenge with distance learning, however, is that the instructor needs to spend longer hours online (thus incurring high opportunity cost) as emails from the learners

come 24/7. In an e-learning course, student contact is very poor and is not time-bound and meaningful learning interaction and physical assessment of learned skills are deficient. Students taking e-learning courses often require longer periods to complete the course than do students taking classroom-based courses.

Moreover, the challenge to start distance learning in disaster education has yet to stand the test of time. Experience from other distance learning courses show that an excellent program is actually possible if instructional materials are carefully selected. Clearly, the need of quality academic materials is imperative; catered to fit according to the target population.

*b. combination of residential and distance learning*

One way of addressing the inherent issues of distance learning is to develop a course which combines residential instruction and e-learning. For example, a week may be spent in a university and the rest will be spent online. This strategy would significantly reduce the cost associated with residential training while at the same time strengthen the e-learning format.

Recently UOI with the Ministry Of Health and the World Health Organization are developing a serial participatory course for disaster designed for various levels. This approach will have wider coverage of students, professionals and development workers.

*c. partnership*

It was agreed that the MICRODIS partners should maximize the project impact and continue to strengthen partnerships with other international and national institutions beyond 2011 when the project officially ends. Partners need to consider more of the continuing relationships and explore options for raising funds e.g. DAAD, EDULINK, Inwent).

*d. student placement*

One of the most important issues of academic institutions is student job placement after graduation. Predominantly, students take career courses not responsive to social concerns and issues. Academic institutions have to strengthen link with job markets and to be more sensitive to its demands. For example UKL- Heidelberg utilizes this approach and caters to both private and public sectors.

*e. roadmap for curriculum development*

The academic partners agreed to develop a roadmap for integration of disaster-related courses in the curricula. Such integration is envisioned to have government's mandate in order to institutionalize its implementation.

*f. sharing of course outline and syllabi*

Considering that the European academic partners have the experience and resources in integrating disaster-related courses, it is deemed beneficial for them to share course outlines and syllabi, mentoring partners from developing countries and providing valuable insights and lessons learned. Moreover, the sharing must take cognizance of the uniqueness and complexity of local characteristics. It was further agreed that partners can develop their curriculum together by sharing materials online through the MICRODIS website.

The posting of electronic teaching materials can be decentralized and focal points can be created within each country. It may also benefit Partners if the approach undertaken by the United Nations where regional hubs are created will be adopted by the consortium.

*g. documentation/ publication of best practices*

This involves evaluation and monitoring the impact of the curriculum integration as well as recording best practices and lessons learned. For instance, Xavier University had successfully implemented the integration of disaster-related topics in the courses of Preventive and Community Medicine of the School of Medicine and in the College of Engineering. The integration was implemented beginning the School Year 2008 up to the present with the approval of the Commission on Higher Education of the Department of

Education of the Philippines. The module evolved includes gender perspective. However, no proper documentation and dissemination was instituted.

### **III. Challenges**

#### *a. harmonize curriculum*

Several institutions of higher learning in many parts of the world had started offering disaster related university courses. However there is a great need to harmonize and standardize the content, emphasis, methods, and tools taught in these courses. Presently, disaster related courses are taught within the context of specialized courses with little holistic and interdisciplinary collaboration. For example, disaster courses for medical students are likely to focus on preventing the spread of diseases during disasters while those for engineering students focus on the integrity of structures.

#### *b. capacity building of human resources within each institution*

The effort to establish disaster related courses in academic institutions is fairly new. Thus, there is a need to strengthen the human resource capacities of each institution to offer quality disaster related academic programs. Capacity building programs can include workshops, seminars and trainings. Field exposure by means of exchange programs, cross-posting, and fellowships are also excellent means of human resource capacity building.

#### *c. internship*

Colleges and universities offering disaster related programs need to identify, if not create, a platform by which theories learned in the classroom are supplemented by practical experiences gained through an internship program.

#### *d. lack of textbook for undergraduate-level students*

One common challenge faced by academic institutions, both in developed and developing countries, is the lack of textbooks on disaster for undergraduate students. As a result, lessons are a collection of materials culled from several sources including the internet. The conspicuous absence of a textbook hinders the development of holistic scientific thinking among students.

#### **IV. Recommendations**

These suggested recommendations are culled from the strategies described above. Operationalization of these recommendations demand that cultural uniqueness and resource capabilities have to be examined and taken into consideration.

1. Consortium partners are in accord that there is a need for a disaster related academic program in higher educational institutions. Although learning materials for such a course are already available, academic institutions need to strengthen partnerships with other academic institutions for sustainability, developing strategies to reduce the cost of the learning (e.g. develop e-learning materials) and establish job placement programs for the graduates.

2. A consensus was reached among partner universities to strengthen and widen multisectoral partnership among different stakeholders (non-government organizations, civil society groups, local government units, etc.) involved in disaster management in each country/area.

3. The MICRODIS project was deemed a good platform to act as nexus for developing interdisciplinary and holistic collaboration among actors in and outside the academe.