



1 International Course on Disaster Risk Reduction at the Local Level

2 ESP 6170, 3 credits

3 Prerequisites or co-requisites

None

4 Course description

Disasters, whether due to natural, socio-natural or technological occurrences or phenomena, have an adverse effect on efforts aimed at sustainable development. Disaster Risk Reduction (DRR) is a key pillar of achieving peace and sustainable development. The course falls completely within the human security discourse, which forms the basis of much of the environmental security and peace thinking. The course purpose is to equip student practitioners in environment, peace and security with enhanced knowledge, skills, resources and technical abilities in disaster risk reduction. It will therefore provide the tools either to prevent such disasters, to mitigate their impacts or to resolve conflicts between different social groups that occur as a result of disasters. Some of the main topics developed will be: Nature of risks, especially for the most vulnerable populations; links between disaster risk, health and development particularly vulnerability reduction, human coping, and the theoretical and practical ways in which resilience to disaster is established at the local level; DRR processes and structures; introduction to varied social survey techniques, people-centered monitoring and evaluation, environmental analyses, and the application of appropriate methodologies to people-centered DRR issues; skills in conducting educational and training workshops. The course will be a mix of lectures by invited experts and student involvement in the learning process, by sharing their experiences, investigating about complex concepts, preparing and delivering seminars, and participating in simulation and field exercises and web-interactions.

5 Course length

The course will be taught intensively between February 18th and March 10th, 2009.

6 Instructors

- Lorena Aguilar, IUCN. lorena.aguilar@iucn.org
- Adriana Bonilla, La RED, adrimbv@gmail.com
- Rolain Borel, UPEACE, 22 05 90 84 rborel@upeace.org (Coordinator)
- Xavier Castellanos, IFRC, Panama. Xavier.CASTELLANOS@ifrc.org
- Jennifer Guralnick, EIRD, jguralnick@eird.org
- Mohit Mukerjee, UPEACE Center for Executive and Professional Education mmukherjee@upeace.org

7 Course meeting times and place

Every week day, between 9 am and 12 noon. Personal and group work in the afternoon. Room TBA, on the UPEACE campus in Ciudad Colón, Costa Rica. Some field trips will take place in the afternoon as well.

Web site for on-line information and interactions: <http://drr.upeace.org> .

8 Course overview

8.1 Intended participants

Local disaster prevention and emergency response professionals, community planners and national policy advisors. Regular UPEACE students from the ESP and NRP master programs.

8.2 Minimum and maximum number of students envisaged

Maximum of 25 students.

8.3 Prerequisite knowledge, skills, or sensitivities

For the outside students, English proficiency is required, as is a relevant field experience in DRR. For the UPEACE regular students, while previous knowledge of DRR is not a requisite, it will definitively enhance their capacity to learn from the course and contribute to it.

8.4 Type of issues addressed

The course is about disaster risk reduction: how to reduce the likelihood and the impact of natural disasters, from the prevention, mitigation and adaptation angles. Some of the main topics developed will be:

- Nature of risk, hazards and vulnerability/capacity; including the identification of risk and vulnerability indicators;
- Identification of the most vulnerable populations e.g. poor, elderly, disabled and ill, marginalized populations;
- Relationship between disaster and conflict.
- Broad understanding of DRR and its mainstreaming into sustainable development policy and planning; the Hyogo Framework of Action
- Primary international DRR processes and structures including forums, frameworks and networks that are relevant for local DRR mechanisms; the ISDR system
- Introduction to varied social survey techniques, people-centered monitoring and evaluation, environmental analyses, and the application of appropriate methodologies to people-centered development issues;
- New approaches and skills for coping with a variety of issues that may face a community after a disaster, using community-based, participatory, interactive, methods; IFRC's vulnerability and capacities assessment;
- Skills in conducting educational and training workshops;

8.5 Relations to larger issues of peace and conflict

Disasters are not natural phenomena. Rather, they are the result of the Earth's natural dynamic processes, be it hydro-meteorological or geological, combined with mankind's misuse and inequitable distribution of land and resources, as well as the overburden of environmental impacts on the more vulnerable groups. Disasters, whether due to natural,

socio-natural or technological occurrences or phenomena, have an adverse effect on efforts aimed at sustainable development. Timely access to adequate and reliable information is vital to the ability of local communities to prevent and respond to such events. Disaster Risk Reduction (DRR) is a key pillar of achieving peace and sustainable development.

Disasters undermine livelihoods and well-being of the rural and urban poor in many parts of the world, groups of people already marginalized by national policies and economic globalization. As a result, social discontent, governance problems and even social violence may rise.

The course falls within the human security discourse, which forms the basis of much of the environmental security and peace thinking. The subject of the course is also directly related to conflict of interests between societies that contribute to global climate change and those that mostly suffer its consequences. Another close link is the potential for conflicts that arise from the movement of disaster refugees.

The course will therefore provide the tools either to prevent such disasters, to mitigate their impacts or to resolve conflicts between different social groups that occur as a result of disasters.

8.6 Where the course fits in within the general programme of study

This course is part of the skill training component of the Environmental Security and Peace (ESP) and Natural Resources and Peace (NRP) master programs. It takes place at the beginning of the second semester at UPEACE, after the students have been exposed to the theoretical basis of the main schools of thought that inform the field.

8.7 Degree to which this course is oriented toward academic vis-à-vis professional education

The course is clearly within the realm of professional education. Reference will of course be made to the cutting edge conceptual developments in this field, but the emphasis of the teaching and practical exercises in this course will tackle the acquisition of professional skills.

9 Course purpose, goals, and objectives

The course purpose is to equip student practitioners in environment, peace and security with enhanced knowledge, skills, resources and technical abilities in disaster risk reduction.

At the end of the course, the students will have strengthened their:

- Capacity to analyze, synthesize and assess risk, hazards and vulnerability and their underlying ecological, social and economic dimensions.
- Comprehension and application of the main tools of prevention, mitigation and adaptation.
- Understanding of the relationship between disasters and conflicts, as well as of the facilitation of peace processes linked to disaster relief operations.

The students will also be motivated to replicate in their future activities the values consistent with several principles of sustainability: a) maintain and enhance quality of life; b) enhance economic vitality; c) ensure social and intergenerational equity; d) use a

consensus-building, participatory process when making decisions; and e) develop a culture of solidarity.

10 Teaching method/Class format

The recognition that DRR can only be successfully managed on a broad and multidisciplinary basis will be one of the main methodological pillars of the course. Therefore, many opportunities will be sought to involve the students in the learning process, by sharing their experiences, investigating about difficult concepts, preparing and delivering seminars, as well as reporting on their field practice experiences.

A web site allows the students easy access to a broad and up-dated collection of reference materials and promotes the communication between the course participants.

The course methodology includes a mix of lectures by invited experts, group work, seminars, simulation and field exercises and web-interactions. Significant components of the course will be delivered in the field, in interaction with local communities.

“Open” laptops are not allowed during class time, unless for specific tasks. Presentation of a particular reading, class presentation of a case study, small group work or finding information on the web, as required by the class are encouraged, but taking notes using a laptop and, obviously, emailing, chatting, and surfing the web will not be tolerated.

11 Learning resources

11.1 Required texts

- Atkisson A. 1999. *Believing Cassandra: An Optimist Looks at a Pessimist's World*. Chelsea Green. Chapter 9: The Innovation Diffusion Game. Pp. 175 – 197
- Cardona OD. 2003. The need for re-thinking the concepts of vulnerability and risk from a holistic perspective: a necessary review and criticism for effective risk management. In G. Bankoff, G. Frerks and D. Hilhorst (eds). *Mapping vulnerability: disasters, development and people*. Earthscan publishers, London. 17 pages.
- Cherniss C, Goleman D & Emmerling R. 1998. *Bringing Emotional Intelligence to the Workplace*. The Consortium for Research on Emotional Intelligence in Organizations. (www.eiconsortium.org)
- Gardner H. 2005. Multiple Lenses on The Mind. Paper presented at the ExpoGestion Conference, Bogota Colombia, May 25, 2005
- Gladwell M. 2000. *The Stickiness Factor*, The Tipping Point, Little Brown and Company, pp 89-132
- Lavell A & Cardona OD. 2002. Considerations on the Economic, Social, Political and Institutional Context and Challenges for Integrated Risk and Disaster Management in Latin America. Available at: http://www.desenredando.org/public/articulos/2000/cespi/CESPI_mar-1-2002.pdf
- Neumayer, E & Pluemper, Th. 2007. The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981-2002. Available at SSRN: <http://ssrn.com/abstract=874965>
- Renner M & Chafe Z. 2007. Beyond disasters. Creating opportunities for peace. Wordwatch Report. Worldwatch Institute, Washington. 56 pages.
- UNISDR. 2005. World Conference on Disaster Reduction. Hyogo Framework for Action 2005 – 2015. 22p.

UNISDR. 2008. Gender Perspectives: Integrating Disaster Risk Reduction into Climate Change Adaptation Good Practices and Lessons Learned. UN-ISDR Secretariat. 76 pages.

UNISDR. 2008a. Hyogo Framework for Action 2005 - 2015: Building the Resilience of Nations and Communities to Disasters. Brochure. UNISDR. 6 p.

UNISDR. 2008b. Indicators of Progress: Guidance on Measuring the Reduction of Disaster Risks and the Implementation of the Hyogo Framework for Action. United Nations secretariat of the International Strategy for Disaster Reduction (UN/ISDR), Geneva, Switzerland. 50 p.

12 Detailed outline of instructional sessions/units

See Annex 1

13 Assessment of assignments, exercises, and projects

Plagiarism: All assignments, where plagiarism is detected, will be marked with a “0” (zero) mark, independently of the normal reporting process to the UPEACE authorities and the sanctions that may arise from such a process.

Students (especially external students, who did not have the privilege of former UPEACE training on the subject) are invited to inform themselves about the elements that constitute plagiarism and, in the case of doubt, to seek advice from the course coordinator.

Grading policy: delivering the expected product with a quality that is congruent with postgraduate work attracts a B+ (between 85 and 89). A significantly higher quality, both in terms of format or substance attracts an A- (between 90 and 94) or, exceptionally an A (95 or above), when the work is close to publishable quality. Less than the expected product, in terms of quantity, quality or format will attract lower grades.

Assignments that are submitted without the proper **spell check** will not be graded.

13.1 Report on the field excursion (15% of final mark)

Students will be visiting the Orosi area, which was (still is) subject to large landslides that affected people's lives and many properties and communal infrastructures. The visit will include a comprehension of the geophysical and environmental parameters that explain the phenomenon, as well a thorough discussion of the socio-economic causes of the disaster.

The main subjects of the report will be the critical assessment of the risk situation in the visited locality, based on the participants' observations of the main threats and on bibliographic sources analyzing comparable situations worldwide; and the recommendations to the different actors at the different levels (e.g. CNE, municipalities and local communities).

Aspects to be evaluated are: **i)** validity and completeness of the assessment of the risk situation; **ii)** quality and originality of the recommendations; **iii)** completeness and relevance of the bibliographic references presented in support of the assessment and recommendations; **iv)** clarity, spelling and grammar and general presentation of the text in

accordance with the required format (each 1/4 of the mark). The 800-1000 words report in WORD 2007 format has to be submitted at the latest on **February 26, 2009** at rborel@upeace.org. Products that do not comply with the specified format will be considered as “not presented”. Late presentation will be penalized with 20 points (out of a maximum of 100 for this assignment) for each day delay, or fraction.

13.2 Report on the field exercise in DRR assessment and plan preparation (35% of final mark)

Students will present a group report (3-4 students per group) on their field work. The main subjects of the report will be the critical assessment of the risk situation in the visited locality, and of the local vulnerabilities and capacities, based on the participants' observations of the main threats, on interviews at the local level and on bibliographic sources analyzing comparable situations worldwide. The group will also make recommendations to the different actors at the different levels (e.g. CNE, municipalities and local communities).

Aspects to be evaluated are: **i)** validity and completeness of the assessment of the risk situation, and local vulnerabilities and capacities; **ii)** quality and originality of the recommendations; **iii)** completeness and relevance of the bibliographic references presented in support of the assessment and recommendations; **iv)** clarity, spelling and grammar and general presentation of the text in accordance with the required format (each 1/4 of the mark). All students in the same group will share the same mark, irrespective of their contribution. The 2000-3000 words report, in MSWORD format has to be submitted at the latest on **March 6, 2009** at rborel@upeace.org. Reports that do not comply with the specified format will be considered as “not presented”. Late presentation will be penalized with 20 points (out of a maximum of 100 for this assignment) for each day delay, or fraction.

13.3 Final seminar presentation (35 % of total mark)

The final seminar builds upon and serves as a capstone for all the other course components. Depending on the number of students in the course, individual or group (maximum of 3 students) contributions to the seminar will be accepted.

The seminar will consist of PowerPoint presentations (each 20-25 minutes maximum), followed by discussions for a total duration of 45 minutes per group (including setting up computers, projectors and other equipment). Time control will be implacable! Students will have to present their chosen topic to the course instructor on February 27th, 2009, when the final seminar program will be decided upon. Students who fail to present their topic on-time will be automatically assigned a presentation slot during the first day of the seminar.

Students may choose any topic in the field of DRR. The topic has however to be related to a concrete case. The elements of the reports are: conceptual approach to the case; (very) brief background information of the case; analysis of the particular topic based on published scientific evidence; policy recommendations for the particular case. Brevity, clarity, and precision are key to this assignment.

Aspects to be evaluated are: **i)** relevance of the conceptual approach to the choice of the case and topic; **ii)** quality, depth, brevity, organization and completeness of the information; **iii)** interest, novelty and feasibility of the policy recommendation; **iv)** clarity of the slide design; diversity of the evidences presented and their relation to the case; and **v)**

speaking ability of the presenters; conceptual and formal unity and congruence of the presentation by the group members; time management of the presentation and of the following debate, each for 1/5 of the total mark. Only the slides presented within the time limits will be considered in the evaluation. All students in the same group will share the same mark, irrespective of their contribution. The PowerPoint file will have to be presented at rborel@upeace.org before class on the day of the seminar. Failure to present the seminar on time will lead to a “0” (zero) mark for this component of the course.

13.4 Class participation (15% of final mark)

Students have to participate in all the course activities: absences will be penalized in the participation mark. Students have to show through their inputs in class that they have read the assigned readings and that they are able to contribute critically to the development of the class. The active participation in the in-class exercises, games and simulations as well as in fieldtrips will also be evaluated.

14 Instructors' biographical data

Lorena Aguilar Revelo. Born in San José, Costa Rica, in 1960. Master's degree in anthropology; cultural ecology major from the University of Kansas. Ten years of work in the field of development and design of public policy projects in Latin America, and 15 years actively engaged in the incorporation of social and gender aspects into the use and conservation of natural resources worldwide, account for part of her experience in the field of sustainable and equitable human development. Thanks to her efforts gender issues have been mainstream in the environmental sector (i.e. UNEP, Convention on Biological Diversity). She is an international advisor to various organizations, governments and universities in topics related to water, environmental health, and gender and community participation. Her current position is Senior Gender Adviser to the World Conservation Union.

Adriana Bonilla. Costa Rican. Geographer (UNED, Costa Rica). Postgraduate Programme on Environmental Management - Emphasis on Risk Management. (UNED, Costa Rica). Several postgraduate courses in Climate Change & Development (UK); Urbanization and Global Environmental Change (México); Remote Sensing (Sweden) and Agro-ecology, Organization for Tropical Studies (OTS) /. Costa Rica. She has been a consultant to the IFRC for best practices and project evaluation on risk reduction an associate researcher for human dimension and risk management analysis in climate projects for the Centre for Geophysical Research (CIGEFI) – University of Costa Rica (UCR); a risk management consultant for the Bureau for Crisis Prevention and Recovery (BCPR-UNDP); a climate change consultant for the Global Environmental Facility Regional Office – Panama; and an Associate Researcher in the Disasters and Risk Management Program at FLACSO, Office of the General Secretariat, among several other relevant assignments. She has extensively published on hurricanes and other hydro-meteorological events and ENSO, on urban environment and watershed management.

Rolain Borel (rborel@upeace.org) heads the Department of Environment Peace and Security at UPEACE. He was trained as an agronomist (Dipl. Ing. Agr. ETH, Zurich), with a specialization in livestock farming (Mag. Sci. IICA, Turrialba, Costa Rica) and further specialization in pasture agronomy (Dr. sc. Tech. ETH, Zurich). He worked for 12 years in international research centres in Africa and Central America in the development of

livestock and agro forestry production systems and for another 12 years as an international consultant for bilateral cooperation agencies on subjects of rural development, social forestry, institutional strengthening and environmental conflict management. In the last 10 years, he has coordinated research and training activities in environmental conflict management involving local communities and he is being involved in mediation between environmental organizations.

Xavier Castellanos is Deputy Head for the Americas, at the International Federation of Red Cross and Red Crescent Societies. He is Social Communicator with a specialization in Communication and Health (University Andina Simon Bolivar in Quito, Ecuador). He has worked in the humanitarian field for more than 25 years, combined as volunteer and pay staff with the Red Cross Movement. In that time he developed an extensive knowledge and experience in the field work of disaster response management and disaster risk reduction. Combining his knowledge in communication developed several trainings and training materials. He has worked in several disaster response operations in Nicaragua, Guatemala, Mexico, Costa Rica, Venezuela, El Salvador, Cuba, Dominican Republic, Panama, Saint Vincent and the Grenadines, Bahamas, Trinidad and his country of birth, Ecuador. In the field of disaster risk reduction activities, he has significantly contributed to scale up Vulnerability & Capacity Assessment knowledge in different parts of the world as well as several other disaster risk reduction initiatives.

Jennifer Guralnick. Canadian. BS in Urban Studies and Master in International Development. Ten years of professional experience in Central America on issues of urban planning, DRR and GIS. At present works for UNISDR-Americas as Reporting Officer and adviser in DRR. Her main tasks are to provide support to the implementation reports of the HFA, to manage the reporting needs of UNISDR headquarters, national actors, IGO's, and other ISDR partners. Working on the development of HFA-Pedia, an on-line encyclopedia on DRR based on the MediaWiki (from Wikipedia) technology: www.eird.org/hfa.html

Mohit Mukherjee is the Director of the UPEACE Centre for Executive and Professional Education, as well as a faculty member at UPEACE. Prior to this position, he served for four years as Education Programme Manager of the Earth Charter Initiative, an international nonprofit organization. He also spent three years in the private sector, at A.T. Kearney, a top-tier international management consulting firm based in USA, and three years as an educator in Ecuador. He has a Bachelor's degree in Industrial Engineering from Stanford University, and did his Master's at the Harvard Graduate School of Education.

Annex 1

Table 1. Course Outline and Schedule

Instructors initials:

AB	Adriana Bonilla	MM	Mohit Mukherjee
JG	Jennifer Guralnick	RB	Rolain Borel
LA	Lorena Aguilar	XC	Xavier Castellanos

Session & date	Topic	Assigned Readings	Assignments due
1 AND 2 Wed 18 Feb Morning AND Afternoon	<p>RB. Introduction. Presentation and discussion of course syllabus, assignments and course evaluation.</p> <p>AB. Central concepts and notions required to understand the existence and increase in disaster risks and to provide a firm basis for risk management seen as a dimension of sustainable development planning. Components of disaster risk (hazard, vulnerability and exposure). Social construction of risk and the distinct types of management strategies and instruments available. Class discussion and debate will attempt to clarify differences in interpretation deriving from different academic disciplines and push understanding towards more interdisciplinary based schemes. The interdisciplinary role of the natural, basic, applied and social sciences will be presented and discussed.</p> <p>Nature of risk, hazards and vulnerability/capacity; risk and vulnerability indicators; Comparison of "risk" in both the more industrialized and technologically developed countries as well as in the developing world; Identification of the most vulnerable populations e.g. poor, elderly, disabled and ill, marginalized populations</p>	<p>Course syllabus</p> <p>Cardona 2003</p> <p>Lavell and Cardona 2002</p>	

Session & date	Topic	Assigned Readings	Assignments due
<p style="text-align: center;">3</p> <p style="text-align: center;">Thu 19 Feb</p>	<p>RB. Field exercise in DRR assessment at the local level. The visit will include a comprehension of the geophysical and environmental parameters that contribute to increased risks and vulnerabilities, as well a thorough discussion of the socio-economic causes of disasters.</p> <p>Program: Bus leaves El Rodeo at 7.45, Banco Nal. 8.00, Pops de Curridabat 9.00. We will visit: Cot, Tejar, Cartago, Paraiso, Orosi. We will have the opportunity to stop at local soda for a quick lunch. Return around 4 pm.</p>		
<p style="text-align: center;">4</p> <p style="text-align: center;">Fri 20 Feb</p>	<p>JG. Primary international DRR processes and structures including forums, frameworks and networks that are relevant for local DRR mechanisms;</p> <p>ISDR role, the worldwide progress in Disaster Risk Reduction Agenda and its implementation; the Kobe World Conference, The Hyogo Framework of Action, a strengthened ISDR system for the HFA implementation, the First Global platform and its results, links with climate change, the national and thematic platforms, next steps.</p>	<p>UNISDR 2005</p> <p>UNISDR 2008a</p> <p>ISDR 2008b</p>	
<p style="text-align: center;">5</p> <p style="text-align: center;">Mon 23 Feb</p>	<p>RB. Disaster relief and peace making; relationship between disaster and conflict.</p> <p>Disasters can trigger conflicts by straining the social and economic fabric of affected communities. Areas of recent or current armed conflict are particularly at risk. But when disasters occur in conflict zones, they can produce an opportunity for peace.</p>	<p>Renner & Chafe 2007</p>	

Session & date	Topic	Assigned Readings	Assignments due
6 Tue 24 Feb	<p>MM. Skills in conducting educational and training workshops (Part 1)</p> <p>This session will explore different pedagogical approaches for conducting effective training and workshops. We will briefly discuss Howard Gardner's theory of multiple intelligences in order to think about its educational implications and demonstrate some techniques of working with adult learners. The Tipping Point will bring to us some interesting cases that look at the complex phenomenon of trying to change human behaviour.</p>	<p>Gladwell 2000</p> <p>Gardner 2005</p>	
7 Wed 25 Feb	<p>MM. Skills in conducting educational and training workshops (Part 2)</p> <p>This session will allow participants to practice developing a training session, leveraging the discussions and formats discussed in the earlier session. We will debrief on each presentation. The session will also offer space for participants to reflect on their own learning experiences and to share best practices.</p>	<p>AtKisson 1999</p> <p>Cherniss <i>et al.</i> 1998</p>	
Thu 26 Feb	No class		Report on the field excursion
8 Fri 27 Feb	<p>LA. In disaster situations, the gender approach is a conceptual and methodological tool that facilitates the recognition of unequal situations in which women and men face risks, and the development of effective proposals to reduce and control it.</p>	<p>Neumayer & Plümper 2007</p> <p>UNISDR 2008</p>	Topics to be presented at the seminar
9 Mon 2 Mar	<p>XC. IFCR's Vulnerability and Capacity Assessment (VCA).</p> <p>(VCA) is a process of participatory investigation designed to assess and address major risks affecting communities. It aims to determine people's vulnerability to those risks, and their capacity to cope and recover from a disaster.</p>		
10 Tue 3 March	XC VCA (continued)		

Session & date	Topic	Assigned Readings	Assignments due
<p>11</p> <p>Wed 4 Mar</p>	<p>XC VCA (continued) Field trip</p> <p>Program: We will leave on Wednesday March 4 at 6.45 am from El Rodeo, Bco Nacional 7.00, Javier's hotel at 7.05, airport at 7.45.</p> <p>In Puntarenas, the main topic of our inquiries will be Tsunami preparedness, as the whole city is in a particularly vulnerable situation. We will meet a school and local groups, as well as the Municipal Emergency Commission. Students will then carry out a vulnerability assessment.</p> <p>Overnight in Puntarenas.</p>		
<p>12</p> <p>Thu 5 Mar</p>	<p>XC VCA (continued) Field trip</p> <p>Report on VCA to the interested parties</p> <p>We will leave Puntarenas at 2 pm on Thursday and arrive back at CC and El Rodeo around 5 pm.</p>		
<p>13</p> <p>Fri 6 Mar</p>	<p>XC VCA (continued)</p>		<p>Group report on the DRR field assessment</p>
<p>14</p> <p>Mon 9 Mar</p>	<p>RB. Seminar 1</p>		<p>Seminar presentation</p>
<p>15</p> <p>Tue 10 Feb</p>	<p>RB. Seminar 2</p> <p>Course evaluation</p>		<p>Seminar presentation</p>