i-Rec's seven-year old programme of contributions to improving human settlements and the quality of urban life through better post-disaster reconstruction and disaster risk reduction in developing countries.

1. Background

i-Rec (Information and Research for Reconstruction) is an international organisation that gathers respectful and active specialists on reconstruction of human settlements after disasters and on disaster prevention. i-Rec is a decentralized and independent network that links important agencies, prestigious research centres and universities, active Non-governmental Organisations, effective community-based groups and various public institutions world-wide. Over the past seven years, **i-Rec's initiative has been instrumental in contributing to the betterment of living conditions in human settlements around the world by improving post-disaster reconstruction and reducing disaster risks, particularly in developing countries.**

i-Rec's seven-year old program of improving post-disaster reconstruction and reducing disaster risks in developing countries has been achieved through six effective areas of intervention:

1. Giving voice to vulnerable, poor and affected communities: The more than 200 independent members of i-Rec (see Annexe IV) are the voice of hundreds of community-based groups, local actors, vulnerable communities, marginalized groups and war-affected populations in developing countries that otherwise have limited possibilities to make public their needs, expectations and constraints. i-Rec members highlight the vulnerabilities and challenges of communities and contribute to defend the rights of poor and isolated areas such as Cupica (Colombia), Netreg (South Africa), Kashmir (Pakistan and Inida), etc.

2. Creating knowledge: the work of i-Rec members is now the most important international reference for understanding post-disaster reconstruction processes and the vulnerabilities of human settlements. The knowledge gathered by i-Rec has challenged commonly-accepted practices of housing provision in developing countries, thus leading to more appropriately adapted community reconstruction.

3. Promoting awareness and acting as a pressure group: in the last seven years, i-Rec has organized unprecedented international forums, targeted discussion groups with decision makers and respected publications for promoting awareness of disaster-related issues and their relations with human settlements. Together, i-Rec members act as a pressure group to constantly improve living conditions in human settlements and to create awareness about the impacts of climate change on the built environment.

4. Linking information and knowledge between people and organisations: for seven years, i-Rec has promoted information exchange between 77 research institutes and centres of excellence located in 20 countries, more than 15 partners and 63 Non-governmental organizations (NGOs), community-based organisations (CBOs), and public and international agencies that work in the development of housing conditions for the poor in as many as 15 countries (see Annexe II).

5. Supporting specific interventions: i-Rec supports the work of well over 20 members that conduct consulting services on post-disaster reconstruction, disaster prevention and policy making that constantly influence decision-making in housing projects world-wide.

6. Preparing the next generation of decision makers: Oriented towards the future, i-Rec activities encourage and promote education and training for preparing the next generation of practitioners, decision makers and specialists on human settlements.

The i-Rec initiative is aligned with the technological, social and urban characteristics of the 21st century:

- In the age of information, i-Rec creates scientific knowledge and exchanges information related to human settlements in developing countries and transforms it into effective public awareness, disaster prevention policies, plans of intervention, innovations for the building industry, project management best practices, etc.

- In the era of virtual social networks, i-Rec creates web-based links between more than 200 specialists in architecture, engineering, construction, humanitarian aid, international development and the social sciences.

- In the worrying times of climate changes, i-Rec studies and creates awareness on the fragile relations between the natural environment and human settlements.

- In a recently declared urbanized world, i-Rec is concerned with the effects of disasters and hazards in urban centres and vulnerable human settlements.

- Aligned with the UN-Habitat objective of promoting harmonious cities, i–Rec constantly promotes environmental sustainability, cultural identity, equity, gender parity, pro-poor growth and participatory governance by encouraging responsible post-disaster reconstruction and resilience.

i-Rec conducts this program independently. Due to its decentralized structure and its use of technological means and engaged voluntary (and free) affiliation, i-Rec does not require permanent staff, equipment, offices or a fixed administration with related costs. This allows i-Rec to work without having its mission compromised by the interest of funding agencies, pressure groups, donors or political ideologies. Its independence and decentralization allows i-Rec to genuinely put all its efforts in the improvement of human settlements. i-Rec is a 100% bottom-up organisation composed by members engaged with the cause of human settlements. All i-Rec activities (discussions, forums, publications, grant applications, consulting services, etc) are initiated by individuals or organisations that are members of i-Rec. Then, they are voluntarily joined or supported by other members and partners that help promote them achieving a domino-effect.

2. Description of the initiative

i-Rec members and partners conduct individual projects and interventions in human settlements world-wide. **i-Rec's seven-year old initiative of contributing to improving human settlements in developing countries creates a bond between those actors, helps them achieve better results, serves as a platform of support, and compiles and divulgates the lessons learned from their activities.** Here we explain some examples of the achievements obtained by this initiative through its six main areas of intervention. We have selected a limited number of examples gathered from eleven members that represent different disciplines, locations and institutions (please see annex I for a list of the members mentioned in this application):

1. Giving voice to unheard communities and groups: i-Rec organizes an international forum every two years: In Montreal (2002); Coventry, UK (2004); Florence (2006); Christchurch, New Zealand (2008) and New Delhi (2010). Moroever, i-Rec is currently organizing a subject-specific forum on the procurement of projects for human settlements within the international context of construction and globalization. This forum will take place in Montreal in October 23-25, 2008. The i-Rec forums connect together academics and practitioners, researchers and organizations, public institutions and private partners, religious and secular organizations, community-based groups and international agencies, etc.

i-Rec members located in developed countries have contributed to fund the participation of local actors from developing countries at the international i-Rec meetings. Financial advantages are also given to representatives of poor communities and local actors from developing countries to attend the i-Rec forums. The international forums are not only a suitable environment for knowledge transfer and training, but also an opportunity to give a voice to local actors, affected communities and small organizations. This is accomplished in four different ways:

a. Researchers and practitioners expose the difficulties, vulnerabilities and constraints experienced by disadvantaged communities in remote areas. In 2008, for example, Alfonso Solano exposed for the first time in an international forum the reality lived by the displaced community of Cupica in the remote jungles of Colombia. This report transformed the way the needs of displaced populations and their relations with their built environment are perceived.

b. i-Rec members report successful cases of housing development, community building, sustainable development, etc. particularly those that receive little attention by the media and those that are conducted by neglected actors of the building sector. In 2006, Gonzalo Lizarralde exposed the – until then – largely unknown informal industry of pre-fabricated shelters that builds millions of housing units in the townships of South Africa. This report has had an important influence on the way the informal sector is now perceived in South Africa.

c. The i-Rec activities are a privileged forum for exposing and promoting the work of small NGOs and community-based groups that do not receive international coverage or promotion. In 2002, for example, K. Sivaji received support from i-Rec members to attend the 1st i-Rec forum in Montreal where she exposed relevant lessons learned from the community work conducted by the Sanghamitra Service Society in Vijayawada, India.

d. Exposure to local actors. In 2002, Annie Jayaraj presented in the 1st i-Rec forum the work she has accomplished in disaster management in Andhra Pradesh, giving relevance to a initiative that had an important – but largely unknown - local impact.

2. Creating knowledge: The i-Rec members conduct research on the following subjects: (i) Reconstruction of human settlements; (ii) Resilience; (iii) Disaster mitigation and prevention; (iv) Community development for improving human settlements; (v) Sustainable urban development; (vi) Urban heritage conservation and management.

Since 2002, i-Rec members have published 139 peer-reviewed articles on post-disaster reconstruction and disaster prevention. Senior specialists and new researchers that are members of i-Rec have recently participated in writing two books for the publisher Taylor and Francis; one in disaster prevention and resilience (edited by Lee Bosher) and one on sustainable post-disaster reconstruction edited by Gonzalo Lizarralde, Colin Davidson and Cassidy Johnson. i-Rec's principles of intervention can be grouped in five areas:

a. Project management and stakeholder participation
b. Legal and policy frameworks for reconstruction
c. Finance and resources for reconstruction and disaster prevention
d. Architectural design and urban planning for human settlements.
e. Education and training on human settlements and disaster risk reduction.

3. Promoting awareness and acting as a pressure group: The i-Rec forums and meetings influence both researchers and practitioners alike. During a recent forum in New Zealand, and particularly while one of the i-Rec members was presenting the results of recent research work on modes of housing provision in India, an officer of the Red Cross replied: “we have read your reports about the options of housing provision and we have changed our practices since”. This is an example of the relations that are constantly promoted by i-Rec. In these forums, publications and in the web-based discussions, i-Rec members constantly challenge established organisations and put pressure on NGOs, politicians and agencies to improve their practices in human settlements.

4. Linking information and knowledge between organisations: i-Rec members are convinced of the importance of sharing information and knowledge between actors, and this in various levels: South-south, North-north and North-south. Our network shares best practices and successful strategies between large, medium and small organizations. In the 2008 forum, for example, 22 Universities (from 11 countries) and from different levels were represented: from Purdue University (US) to the Ion Mincu University of Architecture and Urbanism from Bucharest, Romania. Various levels of organizations were also represented: from the Royal Institute of Chartered Surveyors of Australia to the Practical Action group of Sri Lanka or the Indonesian Agency for Rehabilitation and Reconstruction of Aceh and Nias (BRR).

5. Supporting interventions: i-Rec connects senior and experienced practitioners with junior officers in order to facilitate knowledge transfer. A senior researcher and practitioner in the field of human settlements, Jennifer Duyne of the World Habitat Research Unit directed in 2005 an international project of comparative research between India and Nicaragua, funded by the Swiss National Science Foundation (SNSF) and the Swiss Agency for Development Cooperation (SDC). The project was carried out in partnership with the Kutch Nav Nirman Abhiyan (an Indian NGO Network for local resilience and disaster preparedness), the Universidad de Centro America (Nicaragua) and the Department of Social Anthropology of the University of Zurich. After the 2008 i-Rec forum in New Zealand, Jennifer Duyne is establishing ways of working with emergent research groups from developing countries to establish south-south technology transfer for housing and infrastructure development.

i-Rec also supports consulting projects targeted to improve human settlements and reduce risks in developing countries. In 2007, Gonzalo Lizarralde conducted the project evaluation of a successful 1200-unit housing initiative in Facatativa, Colombia. This project has permitted drawing various lessons about the administrative and legal capacities of small municipalities for dealing with human settlements. The lessons are now being shared through the i-Rec network of contacts and partners, and the report was presented to the municipality in order to improve housing policies in the future.

6. Preparing the next generation of decision makers: Every two years, i-Rec organizes an international student competition of architectural solutions for post-disaster human settlements. Participating projects must address: architectural solutions (architectural design), logistics and process-related organization. The students are therefore encouraged to think about both the products and the processes of reconstruction (see Annexe VII).

Since 2002 the i-Rec student competition organized by Gonzalo Lizarralde has put together more than 18 Schools of architecture from Europe, Asia, Latin and North America including: Université de Montréal, Canada, Politecnico di Milano, Italy, Victoria University of Wellington, New Zealand, Universidad Javeriana, Colombia and Shahid Beheshti University, Tehran, Iran. The jury evaluates the projects through evaluation criteria that include: Cultural and contextual sensitivity, Environmental sensitivity (e.g. use of local and/or recycled building materials), Economic and Technical feasibility, Community involvement, Sensitivity towards collective requirements, Innovativeness and Transferability. The i-Rec competition has been exhibited in Canada, the UK, Italy and New Zealand and it is now an important reference for architectural education in the area of human settlements in developing countries.

In order to facilitate training and education in human settlements, the i-Rec members prepare (since 2002) an open-access online bibliography of publications related with post-disaster reconstruction and human settlements. Besides, various i-Rec members promote education and training in human settlements and housing reconstruction. Gonzalo Lizarralde, Cassidy Johnson, Colin Davidson, Nese Dikmen, Regan Pontagaroa, Rohit Jigyasu, Jeniffer Duyne, Isabelle Thomas-Maret and others are responsible for studios and graduate courses that educate the new generation of architects, urban planners, social workers, etc. i-Rec promotes their work while its web-based resources (the members' database, the online bibliography, the online publications and the listserv) serve as a platform for exchanging experiences, linking multidisciplinary specialists and giving relevance to the work of professors and students alike.

3. Main partners

One of the most important barriers for effective housing delivery is lack of coordination between organizations (public, private, local, external, etc.) and – even worse - between organisations and beneficiaries. It is for this reason that i-Rec members are constantly working in cooperation with various partners; some of them animate the i-Rec activities, including:

- The IF Research Group - grif, Université de Montréal, Canada
- The Development Planning Unit, University College London, UK
- The International Council for Research and innovation in Building and Construction
- Coventry Centre for Disaster Management, Coventry University, UK
- Dip tecnologia dell'Architecttura e Design. Università degli Studi di Firenze, Italy
- The Resilient Organizations, New Zealand

Some partners have contributed to fund the activities of i-Rec, including:
- The IF Research Group - grif, Université de Montréal, Canada
- The International Development Research Center of Canada IDRC
- Le Groupe Arcop (private company present in Canada and India)

Some partners promote research activities and publications. These include:
- The Taller Ubicar, Universidad Javeriana, Colombia
- World Habitat Research Unit of the University for Applied Sciences of Southern Switzerland
- The Resilient Organizations, New Zealand
- The IF Research Group - grif, Université de Montréal, Canada
- Loughborough University; UK, particularly through the 'PRE-EMPT' Project; The 'RE-DESIGN' Project and the 'Water Tight' Project.

With the support of i-Rec, our members work with other partners in local and individual projects. Rohit Jigyasu, for example, has contributed to enhance the quality of historic urban environments in South and South-East Asian region by working with the following agencies: UNESCO, UNDP, ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property), The J. Paul Getty Conservation Institute, The Asian Academy for Heritage Management, and the World Seismic Safety Initiative (WSSI).

Similarly, Jennifer Duyne Barenstein, Daniel Pittet and Camillo Boano work with the World Habitat Research Unit of the University for Applied Sciences of Southern Switzerland with multiple partners that include: the Kutch Nav Nirman Abhiyan (Gujarat), the Hunnarshala Foundation (Gujarat), Arid Communities and Technologies (ACT), Ecosmart India, the South Indian Fishermen Federation Society, the International Federation of Red Cross and Red Crescent Societies, the International Water Management Institute (Mexico) and the International Water Management Institute (India). They have also worked with academic institutions such as the department of Social Anthropology, University of Zurich, Switzerland, the Department of Architecture and Planning, Universidad del Litoral, Santa Fe, Argentina, the Universidad de Centro America, Nicaragua, the Indian Institute of Technology (IIT) and the department of Architecture and Planning, University of Tribhuvan (Nepal).

In this way, i-Rec collects hundreds of years of multidisciplinary experience by putting together the expertise of architects, engineers, urban planners, sociologists, psychologists, designers, and the work they do and they have done individually. For example, the work that anthropologist Alicia Sliwinski conducted with the firm Universalia Management Group between 1998 and 1999, and for which she conducted project evaluation commissioned by the Canadian International Development Agency has been crucial in her recent work with other i-Rec members for denouncing deficient practices and secondary effects of community participation in more recent projects in the municipality of Armenia, El Salvador.

i-Rec members meet in **global gatherings and share knowledge internationally while acting locally** and while exploiting their own local networks. Iftekhar Ahmed, for example, has brought to i-Rec conferences and publications his expertise and experience gathered after many years of working with the the United Nations Development Programme in Bangladesh in which he worked with a great number of local partners including : the Bangladesh Rural Advancement Committee, the Dhaka Ahsania Mission, the Gono Shasthya Kendra, the Islamic Relief, and Prodipan. He also shares his experience and knowledge gained after his work with the Asian Disaster Preparedness Center in Thailand, in which he worked with theAga Khan Planning and Building Services, Pakistan, the Canadian Center or International Studies and Cooperation and the Center for Disaster Preparedness of the Philippines.

As further examples, Lee Bosher has worked with the NGOs “Creators”, “Sravanti”, “ACTION”, and “Jagriti” while working in the coastal regions of Andhra Pradesh, India. Regan Potangaroa has worked with offices of CARE in Indonesia, Sri Lanka, India and Australia in housing reviews and evaluations and with various offices of the UNHCR from Pakistan Indonesia, Darfur and Syria for planning emergency camps.

4. Impact

i-Rec activities have five levels of impacts:

a. On i-Rec members. By impacting on trainers, professors, decision makers, NGO representatives, etc. i-Rec achieves a **domino-effect** that magnifies the impact of knowledge,

information, training and resources. i-Rec forums and web-based resources permit sharing and learning from each other's experiences and transferring this knowledge to others.

b. On communities and affected populations. By giving voice to community groups, local actors, and affected populations i-Rec initiatives improve the chances of obtaining better results in the interventions on human settlements. Regan Potangaroa, for example, was the Technical Coordinator of the Permanent shelter program of 35,000 houses for survivors of the Dec 2004 tsunami in Aceh, Indonesia, a work he conducted with UNHCR, UNICEF, CARE and other organizations.

c. On agencies, NGOs, politicians and international organizations that work in human settlements. i-Rec members and their publications constantly report deficiencies, reduced performance, secondary effects and negative consequences of the actions conducted by agencies and institutions, while highlighting and encouraging good practices and positive lessons obtained from successful experiences.

For example, in 2008, Camilo Boano, Daniel Pittet and Jennifer Duyne (from the WHRU in partnership with TCG International, Washington,) were awarded a World Bank assignment to prepare a Handbook on Post-Disaster Housing Reconstruction Manual and Website. The Handbook and Website will be used by the World Bank and other agencies to design their reconstruction approaches and strategies.

d. On the general public. i-Rec initiatives promote public awareness on the fragile relations between the natural environment and human settlements and on the impacts of climate changes in the built environment. Besides, i-Rec acts as a pressure group to improve practices in the built environment. i-Rec forums and meetings are attended by representatives of private and public agencies that are confronted by questions and comments by other non-affiliated specialists. Lee Bosher recently edited the book "Hazards and the Built Environment: Attaining Built-in Resilience" that highlights the importance of resilience in mitigating the effects of natural hazards. Isabelle Thomas-Maret co-organized the ECORISE (Emergency Forum of City Officials on Rebuilding Infrastructure for a Sustainable Environment) conference in New Orleans after hurricane Katrina, which involved stakeholders who came to share experiences on resiliency and reconstruction strategies. That initiative showed the importance of involving and gathering public and private stakeholders, as well as academia, to work together on the future strategies to build sustainable and resilient communities.

e. On the next generation of practitioners of the built environment. i-Rec members train and transmit best practices to the professionals and practitioners that are now responsible for building human settlements and those that will be responsible for human settlements world-wide in the near future.

From 2004 till date, Rohit Jigyasu has conducted and taught in nine national and international training programmes for more than one hundred mid-career professionals / administrators in the field of heritage conservation and management, as well as disaster management. The work of various other i-Rec members also has direct impact on communities. For example, Iftekhar Ahmed was the principal consultant in housing for the urban poor and poverty assessment projects for ACHR and DIG that provided policy guidelines and intervention strategies in urban poor settlements in Dhaka, Bangladesh. The ongoing DIG intervention for capacity building and network formation through local slum-based organizations has the potential to reach 2 million residents of settlements for the urban poor, as well as impacting on local municipal authorities' policies.

5. Sustainability

i-Rec initiatives have created lasting change by enacting new housing policies and principles of intervention (in Colombia, South Africa, India, Nicaragua, etc). Giving voice to vulnerable communities and local groups has promoted capacity building and community empowerment in Sri Lanka, Bangladesh, Indonesia, Colombia and other countries. i-Rec's work has strengthened institutional frameworks, and enforced efficiency, accountability and transparency among NGOs in Canada, the United Kingdom, New Zealand and Italy.

i-Rec members act as constant observers of housing initiatives and report deficiencies and negative effects when they occur in order to guarantee sustainable results in post-disaster human settlements and in affected areas. For example, the evaluation conducted by Gonzalo Lizarralde of the housing project developed by the NGO Development Action Group in Netreg (South Africa) was presented to the officers of the NGO and included various recommendations for modifying common practices used in the South African housing sector. The document has become a reference for challenging the traditional subsidized housing in Cape Town and a base for teaching a graduate studio in architecture led by Mr. Lizarralde at Université de Montréal. Similarly, Isabelle Thomas-Maret is teaching sustainable urban planning at the University of Montreal, which involves not only case studies from developing countries but also from New-Orleans where she has taken an active part in the recovery after hurricane Katrina.

A sustainable approach to human settlements is being promoted now by Alicia Sliwinski. This approach is based on her six-month participation in a reconstruction settlement in El Salvador between 2001 and 2002. This experience has permitted her to create a third-year university course entitled *Disaster and development* for the Global Studies Department of Wilfrid Laurier University in Canada. Similarly, for eight years Jennifer Duyne has been a lecturer at the Department of Social Anthropology of the University of Zurich where she developed a curriculum and lectures on Anthropology of Disasters and on Anthropology of housing and disasters. Within this framework she also prepared about 15 graduate students to conduct research through fieldwork in India (Andhra Pradesh, Gujarat and Tamil Nadu) and Indonesia (Aceh) on various issues related to housing, livelihoods and post-disaster reconstruction. Several of her students joined humanitarian agencies and worked in housing reconstruction projects in India and Indonesia upon completion of their education.

6. Transferability and upscaling

In order to guarantee transferability and upscaling, i-Rec members constantly share experiences and exchange lessons learned from them. For example, Rohit Jigyasu is currently working on a resource manual for "Disaster Risk Reduction of World Cultural and Natural Heritage Sites", a publication by the UNESCO World Heritage Centre for Site Managers aimed at strengthening the capacity of the managers of World Cultural and Natural Heritage Sites to undertake various steps and procedures for reducing risks of natural and man-made disasters in these sites.

Gonzalo Lizarralde and Alfonso Solano have worked in various universities in Panama, Mexico and Colombia to establish academic courses and research projects that seek to transfer good practices obtained from successful projects developed in Armenia, Cupica and Mompox, Colombia. They have participated in regional forums and international workshops in human settlements. Similarly, Cassidy Johnson has transferred knowledge from the Development Planning Unit of University College London to various Turkish Universities. She also worked with Gonzalo Lizarralde in conducting a workshop in post-disaster housing at McGill University in

which students built a full-scale prototype of an innovative module using only recycled materials similar to those which would be available in disaster affected Kashmir.

7. Innovation

i-Rec's innovative approach to improving human settlements is based on a decentralized network of affiliated members that share i-Rec's web-based resources (see Annexe V):

- A Listserv that acts as an online forum of discussion
- A List of 139 online free-access peer-reviewed publications
- A database of members that allow participants to share articles, project reports, students' work, research work, curriculum vitas, etc. and to get informed about which specialists work in certain areas and in certain location. This database allows i-Rec members to link problems with specialised people capable of solving them.

This allows them to:

1. Prepare joint publications and research projects
2. Combine resources and expertises to apply to research grants in multidisciplinary teams
3. Meet every two years in international forums of discussion
4. Meet in regional and local meetings for developing specific initiatives
5. Conduct consulting in projects, policy making and planning for human settlements
6. Cooperate to give visibility and voice to local actors and community-based organizations that are located in remote areas or in vulnerable communities.

i-Rec's innovative functioning avoids permanent expenses and staff and allows for democratic participation of all actors, partners and participants and to give equal participation and voice to members from different contexts, nationalities and backgrounds.

For example, Colin Davidson has developed an innovative approach that combines housing, project management and organizational design for the construction of human settlements. This approach has been instrumental in his contribution (i) to the organization BELACD (Maïngara, Chad) for which he prepared a project and a business plan for developing community sports within Maïngara and surrounding villages and (ii) to the organization Galaxie Jeunesse Internationale for which he prepared (in collaboration with Gonzalo Lizarralde) a project and a business plan for a village at Bouaké, (Ivory Coast) destined to help unemployed youth. He also launched a specialisation in project management and housing for the Masters in Architecture and the Masters in Project Initiation and Management of Université de Montréal, from which various students have later joined NGOs and international agencies. He is also the founder of the IF Research Group, an active animator of i-Rec initiatives.

Architect and Professor Alfonso Solano is the director of the Department of Architecture of Universidad Javeriana and the director of the "Taller Ubicar" a centre of excellence for post-disaster reconstruction and low-cost housing for displaced populations in Colombia. Taller Ubicar develops consulting to poor communities in war-affected areas of Colombia. It transfers knowledge to the University through research and teaching in architecture (particularly though design studios). Taller Ubicar has worked with at least three poor communities that have been displaced by violence resulting from the 40-year armed conflict in Colombia. Alfonso Solano participated in the 2004 and 2008 i-Rec international forums, where his publications were very well received. His team participated in the i-Rec student competition in 2008 and 2004, when one of his students was awarded for presenting an innovative project for producing emergency units for employing displaced populations in Colombia. Taller Ubicar has changed the way displaced populations are perceived in Colombia, showing the human side of the problem while highlighting its important potential for development. Opposing traditional approaches that

concentrate in people's vulnerabilities, the work of Alfonso Solano and other i-Rec members is based on the principle that disaster-affected, displaced and vulnerable populations have great potentials that are useful for improving their own quality of life.

Architect and Professor Iftekhar Ahmed has also prepared important technical innovations in housing. He proposed the stabilization of mud plinths of rural houses in Bangladesh, an innovation he developed through action research projects and subsequently applied in the large UNDP-supported post-flood housing reconstruction project in 2004. Another innovation developed by the Building Research Establishment and Mr. Ifthekhar consisted of injecting creosote into bamboo for insect-resistance, which was adapted by using local waste engine oil and applied in the UNDP project. In 2008, it was found that partners are still replicating these innovations because they had shown effective results.

8. Recognition of the initiative

i-Rec is a decentralized organization that does not have a protagonist figure and that has adopted a low-profile strategy that renounces activities destined to influence the media or the public for obtaining funds, or for receiving publicity or public recognition. Contrary to many other organizations working on post-disaster situations, i-Rec does not promote media and publicity that uses images and testimonies of affected families and devastated areas. i-Rec members recognize that the suffering and vulnerabilities of poor families should not be used to promote the causes of the organization.

The i-Rec website: http://www.grif.umontreal.ca/i-Rec.htm
Its reference from the IF Research group - grif: http://www.grif.umontreal.ca/

Few examples of publications about i-Rec activities (see annexe VI):

- Curran, Peggy (2008) « UdeM team designing model village to help homeless youth in Ivory Coast » in *The Gazette*, May 9, 2008.
- La Gazette (2006). "A winter home for some". Brief note in the Editorial. April 4, 2006. Montreal.
- The McGill reporter (2006). "Doing his best…" Brief note in the Editorial. April 13, 2006. Montreal. Vol. 38, No. 15. Montreal.
- Forum Université de Montréal (2006). "Après un tsunami, un seisme, un cyclone…" Dominique Nancy Ed. Université de Montréal. Vol. 41, No. 6. October 2, 2006. Montreal.
- The Social Sciences and Humanities Research Center of Canada – SSHRC (2005). "Rebuilding lives in Sout h Asia: Careful planning key to successful reconstruction" *Winning Research Publication*. Special article about our expertise on post-disaster reconstruction. www.sshrc.ca/web/winning/stories/lizarralde_e.asp, August 2005. Ottawa.

Note that the work of some i-Rec members is cited on the 2008 OCHA-DFID publication of United Nations "Transitional settlement and reconstruction after natural disasters, Field edition".

ANNEXE I: LIST OF i-REC MEMBERS MENTIONED IN THIS APPLICATION FOR THEIR CONTRIBUTION TO i-Rec INITIATIVES

Name	Affiliation, email, website	Discipline	Countries of interest / experience
Gonzalo Lizarralde	IF Research Group – grif. Université de Montréal gonzalo.lizarralde@umontreal.ca www.grif.umontreal.ca	Architecture and project management	Colombia, El Salvador, Honduras, South Africa, Ivory Coast
Colin Davidson	IF Research Group – grif. Université de Montréal colinhdavidson@sympatico.ca www.grif.umontreal.ca	Architecture and project management	Ivory Coast, Mexico, Brazil, Egypt, United States
Isabelle Thomas-Maret	Institut d'Urbanisme. Université de Montréal. isabelle.thomas.maret@umontreal.ca http://www.urb.umontreal.ca/	Urban studies	United States, Canada
Alfonso Solano	Taller Ubicar. Universidad Javeriana alsol@javeriana.edu.co http://www.javeriana.edu.co/Facultades/Arquidiseno/principal.html	Architecture	Colombia, Panama, Cuba
Alicia Sliwinski	Wilfrid Laurier University asliwinski@wlu.ca http://www.wlu.ca/	Anthropology	El Salvador
Lee Bosher	Department of Civil & Building Engineering, Loughborough University, England L.Bosher@Lboro.ac.uk http://www-staff.lboro.ac.uk/~cvlb/index.htm	Disaster Risk Management and Engineering	India, Sri Lanka, Pakistan, United Kingdom
Iftekhar Ahmed	Faculty of Architecture, Building & Planning, University of Melbourne and Global Cities Institute RMIT University kahmed@unimelb.edu.au http://www.abp.unimelb.edu.au/	Architecture	Bangladesh, Pakistan, Indonesia Philippines, Sri Lanka Vietnam
Jennifer Duyne	World Habitat Research Unit of the University for Applied Sciences of Southern Switzerland j.duyne@bluewin.ch http://www.worldhabitat.supsi.ch/	Anthropology	India, Bangladesh, Sri Lanka, Nicaragua
Regan Potangaroa	Resilient Organisations (NZ) based at the School of Architecture, Unitec, Auckland, New Zealand rpotangaroa@unitec.ac.nz http://www.resorgs.org.nz/	Engineering, Architecture and Management	Pakistan, Syria, West Darfur, Indonesia, Timor, Sri Lanka, India, and China.
Cassidy Johnson	University College London (UK), Columbia University (New York) cassidy.johnson@ucl.ac.uk http://www.ucl.ac.uk/dpu/	Urban studies	Turkey, United Kingdom, Canada, United States
Rohit Jigyasu	Research Centre for Disaster Mitigation of Urban Cultural Heritage, Ritsumeikan University, Kyoto, Japan rohit.jigyasu@gmail.com http://www.ritsumei.ac.jp/eng/	Heritage conservation	India and other countries in South Asia, Japan

ANNEXE II: SCOPE OF THE INITIATIVE

ORGANISATIONS THAT HAVE PARTICIPATED IN i-Rec EVENTS BETWEEN 2002 AND 2008

1	American Red Cross	USA
2	American Red Cross-Sri Lanka delegation	SRI LANKA
3	AMI Insurance Ltd	NEW ZEALAND
4	ARUP, Building and Engineering Consultancy, London, U.K.	UNITED KINGDOM
5	ATMA Consultancy Services	NEW ZEALAND
6	BCEI ZRMK	SLOVENIA
7	Birchrust Limited, Civil/Structural Engineering Consultants	INTERNATIONAL
8	BRR NAD Nias	INTERNATIONAL
9	Building and Civil Engineering Institute ZRMK	SLOVENIA
10	Building Research	NEW ZEALAND
11	CECI	CANADA
12	Centre for Disaster Management and Humanitarian Assistance, Western University College of Science and Technology	KENIA
13	Centre for Disaster Management, Coventry University	UNITED KINGDOM
14	Centro Internazionale Città d'Acqua	ITALY
15	China Architectural Design and Research Group	CHINA
16	de Lisle Jenkins Architects Ltd	NEW ZEALAND
17	Fulton Hogan Limited	NEW ZEALAND
18	Geological Survey of Canada	CANADA
19	GNS Science Ltd	NEW ZEALAND
20	Golder Associates Ltd	UNITED KINGDOM
21	Hutt City Council	NEW ZEALAND
22	Hutt Valley Emergency Management Office	NEW ZEALAND
23	Indonesia Rehabilitation and Reconstruction Agency for Aceh Nias	INDONESIA
24	Indonesian Agency for Rehabilitation and Reconstruction of Aceh and Nias (BRR)	INDONESIA
25	International Blue Crescent Humanitarian Relief Organization (IBC)	TURKEY
26	International Centre for Radio Science, “OM NIWAS” A-23, Shastri Nagar	SOUTH ASIA
27	International Federation of Red Cross & Red Crescent Societies	SWITZERLAND
28	Joint Centre for Disaster Research	NEW ZEALAND
29	Lisle Jenkins Architects Ltd.	NEW ZEALAND
30	Ministry of Civil Defence & Emergency Management	NEW ZEALAND
31	Ministry of Environment and Forestry	TURKEY
32	New Zealand Earthquake Commission	NEW ZEALAND
33	NIWA	NEW ZEALAND
34	NSW Dept of Commerce	AUSTRALIA
35	NSW Police Force	AUSTRALIA
36	NSW State Emergency Management Committee	AUSTRALIA
37	Options NZ Limited	NEW ZEALAND
38	Opus International Consultants	NEW ZEALAND
39	Order of St John	NEW ZEALAND
40	Pell Frischmann Consulting Engineers Limited	UNITED KINGDOM
41	Practical Action	SRI LANKA
42	Programme for Sustainable Human Settlements, Council for Scientific and Industrial Research (CSIR)	SOUTH AFRICA
43	PSA Project Management / RMIT University	AUSTRALIA
44	PT Consultex	INDONESIA
45	Ramakrishna Mission	INDIA
46	Research Institute for the Built & Human Environment	UNITED KINGDOM
47	Resilient Organisations Research Group	NEW ZEALAND

48	Risk Frontiers	AUSTRALIA
49	Royal Institute of Chartered Surveyors	NEW ZEALAND
50	Royal Institution of Chartered Surveyors	AUSTRALIA
51	Royal Institution of Chartered Surveyors	UNITED KINGDOM
52	Sanghamitra Service Society	INDIA
53	SCALA: UNITEC	NEW ZEALAND
54	Seattle Public Utilities	UNITED STATES
55	Taranaki Civil Defence Emergency Management	NEW ZEALAND
56	The Gnome Project	INTERNATIONAL
57	Transit New Zealand	NEW ZEALAND
58	UNITEC	NEW ZEALAND
59	Venture Southland	NEW ZEALAND
60	Waitakere City Council	NEW ZEALAND
61	World Habitat Research Unit, University of Applied Sciences of Southern Switzerland	SWITZERLAND
62	World Vision International	UNITED STATES
63	World Wildlife Fund	UNITED STATES

UNIVERSITIES AND ACADEMIC CENTERS THAT HAVE PARTICIPATED IN i-Rec EVENTS BETWEEN 2002 AND 2008

1	Ion Mincu University of Architecture and Urbanism	Romania	Bucharest
2	Civil & Environmental Engineering Dept, University of Auckland	New Zealand	Auckland
3	Civil Engineering & Applied Mechanics, McGill University	Canada	Montreal
4	Civil and Natural Resources Engineering Dept, University of Canterbury	New Zealand	Cristchurch
5	Civil Society and Local Authorities Department, Anadolu BIL University	Turkey	İstanbul
6	Coventry Centre for Disaster Management, Coventry University	United Kingdom	Coventry
7	De Montfort University	United Kingdom	Leicester
8	Department for International Development,	West Indies	Montserrat
9	Department of Architecture and Design Technologies "P.Spadolini,"University of Florence	Italy	Florence
10	Department of Architecture, Iowa State University	United States	Iowa
11	Department of Architecture, Kultur University of Istanbul	Turkey	Istambul
12	Department of Architecture, Middle East Technical University	Turkey	Ankara
13	Department of Architecture, Suleyman Demirel University	Kazakhstan	Almaty
14	Department of Architecture, Yıldız Technical University	Turkey	Istambul
15	Department of Civil and Building Engineering, Loughborough University	United Kingdom	Loughborough
16	Department of Construction Management, Florida International University	United States	Miami
17	Department of Geography, Sistan & Baluchestan University	Iran	Zahedan
18	Department of Physical Geography, Macquarie University,	Australia	North Ride
19	Department of Sociology, University of Dhaka	Bangladesh	Dhaka
20	Department of Urban & Regional Planning, Tarbiat Modares University	Iran	Tehran
21	Department of Urban and Regional Planning, College of Environmental Designs King Abdulaziz University	Saudi Arabia	Jeddah
22	Dept of Civil Engineering, McMaster University	Canada	Hamilton
23	Dept. of Civil & Natural Resources Engineering, University of Canterbury	New Zealand	Christchurch
24	DINSE-Dipartimento di scienze e tecniche per i processi di insediamento,Politecnico di Torino	Italy	Turin
25	Dipartimento BEST (Building, Environment Science and Technology),Politecnico di Milano	Italy	Milan
26	Emergency Management Program, York University	Canada	Toronto
27	Erasmus University Rotterdam, IHS	Netherlands	Rotterdam
28	Faculty of Architecture, Izmir Institute of Technology	Turkey	Urla- Izmir
29	Faculty of Architecture, Yıldız Technical University	Turkey	Istambul
30	Faculty of Business, Environment & Society, Coventry University	United Kingdom	Coventry

31	Gateway Antarctica. University of Canterbury	New Zealand	Christchurch
32	HDRA- International development Programme	United Kingdom	Coventry
33	IF Research Group, Faculté de l'Aménagement, Université de Montréal	Canada	Montreal
34	Istanbul Technical University	Turkey	Istambul
35	Istanbul Technical University, Faculty of Architecture, Department of Architecture	Turkey	Istambul
36	King Abdulaziz University	Saudi Arabia	Jeddah
37	Kultur University of Istanbul, Faculty of Engineering and Architecture	Turkey	Istambul
38	Leeds University Business School	United Kingdom	Leeds
39	Loughborough University	United Kingdom	Loughborough
40	Middle East Technical University, Faculty of Architecture	Turkey	Ankara
41	Monash University	Australia	Clayton
42	National University of Singapore	Singapore	Kent Ridge
43	NED University of Engineering & Technology	Pakistan	Karachi
44	Norwegian University of Science and Technology	Norway	Trondheim
45	Pennsylvania State University	United States	State College
46	Pontificia Universidad Javeriana	Colombia	Bogota
47	Purdue University	United States	West Lafayette
48	Ryerson University	Canada	Toronto
49	School of Applied Sciences, University of Wolverhampton	United Kingdom	Wolverhampton
50	School of Architecture (ScALA), Unitec	New Zealand	Auckland
51	School of Architecture, McGill University	Canada	Montreal
52	School of Architecture, Rensselaer Polytechnic Institute	United States	Troy
53	School of People, Environment & Planning, Massey University	New Zealand	Auckland
54	School of the Built Environment. UNITEC	New Zealand	Auckland
55	TEMENOS Research group, DASTEC Dept., Faculty of Architecture,Mediterranea University of Reggio Calabria	Italy	Reggio Calabria
56	Università degli Studi di Firenze	Italy	Florence
57	Università degli Studi di Roma "La Sapienza"	Italy	Roma
58	Università degli Studi Mediterranea di Reggio Calabria, Facoltà di Architettura, Dipartimento DASTEC, Unità di Ricerca TEMENOS.	Italy	Reggio Calabria
59	Université de Montréal	Canada	Montreal
60	Université Laval	Canada	Laval
61	University College London	United Kingdom	London
62	Western University College of Science and Technology	Republic of Kenya	Kakamega
63	University of Architecture and Urbanisme "Ion Mincu"	Romania	Bucharest
64	University of Dhaka	Bangladesh	Dhaka
65	University of Exeter	United Kingdom	Exeter
66	University of Genoa	Italy	Genoa
67	University of Hertfordshire	United Kingdom	Hatfield
68	University of Melbourne	Australia	Victoria
69	University of New England	Australia	Biddeford
70	University of Otago	New Zealand	Dunedin
71	University of Ottawa	Canada	Ottawa
72	University of Queensland	Australia	Brisbane
73	University of Salford	United Kingdom	Salford
74	University of Sussex	United Kingdom	Falmer Brighton
75	University IUAV of Venice	Italy	Venezia
76	Victoria University of Wellington	New Zealand	Wellington
77	Wilfrid Laurier University	Canada	Waterloo

ANNEXE IV : MEMBERS THAT HAVE ATTENDED THE i-Rec INTERNATIONAL FORUMS

	NAME		AFFILIATION	COUNTRY
I-Rec 2008	Middleton	David	New Zealand Earthquake Commission	New Zealand
	V. Matthews	Graham	Royal Institution of Chartered Surveyors, London, UK	UK
I-Rec 2008	Warren	Clive	University of Queensland, Australia	Australia
	Potangaroa	Regan	Unitec	New Zealand
I-Rec 2008	Ghosh	Aditi		
	Johnston	David	Joint Centre for Disaster Research, Wellington, New Zealand	New Zealand
	Dolan	Laurence	Private consultant	New Zealand
	Saunders	Wendy	GNS Science, Lower Hutt, New Zealand	New Zealand
I-Rec 2008	Glavovic	Bruce		New Zealand
I-Rec 2008	Duyne Barenstein	Jennifer	World Habitat Research Unit, University of Applied Sciences of Southern Switzerland	Switzerland
	Gharaati K	Mehran	McGill University	Canada
I-Rec 2008	Davidson	Colin	University of Montreal	Canada
I-Rec 2008	Glavovic	Bruce	Massey University	New Zealand
I-Rec 2008	Wilkinson	Suzanne	Department of Civil and Environmental Engineering,Faculty of Engineering,The University of Auckland	New Zealand
I-Rec 2008	Lang	Heracles	BRR NAD Nias	Indonesia
	Kestle	Linda	School of the Built Environment. UNITEC – Auckland	New Zealand
I-Rec 2008	Potangaroa	Regan	School of Architecture. UNITEC – Auckland.	New Zealand
I-Rec 2008	Proverbs	David	University of Wolverhampton	UK
I-Rec 2008	Giovinazzi	Sonia	University of Canterbury	New Zealand
	Podestà	Stefano	University of Genoa	Italy
I-Rec 2008	Lizarralde	Gonzalo	Université de Montréal	Canada
I-Rec 2008	Sabandar	William		
	Olabode Bamidele Rotimi	James	Dept. of Civil & Natural Resources Engineering, University of Canterbury, New Zealand.	New Zealand
	Wilkinsonb	Suzanne	Civil & Environmental Engineering Dept., University of Auckland, New Zealand	New Zealand
I-Rec 2008	Myburghc	Dean	Options NZ Limited	New Zealand
I-Rec 2008	Easthope	Lucy		
	Ul Haque Farooqui	Rizwan	Florida International University	Etats Unis
I-Rec 2008	H. Lodi	Sarosh	NED University of Engineering and Technology	Etats Unis
I-Rec 2008	Roseberry	Rachel	University of Sussex	UK
	Arslan	Hakan	Istanbul Technical University	Turkey
I-Rec 2008	Ünlü	Alper	Istanbul Technical University	Turkey
I-Rec 2008	Easthope	Lucy		
I-Rec 2008	Ahmed	Iftekhar	University of Melbourne	Australia
	Gostiè	Samo	Building and Civil Engineering Institute ZRMK	
I-Rec 2008	Dolinšek	Blaž	Building and Civil Engineering Institute ZRMK	
	van Breda	Anita	World Wildlife Fund	
I-Rec 2008	Laprade	Robert	American Red Cross	
	Beetham	Richmond	GNS Science Ltd., Lower Hutt, New Zealand	New Zealand
I-Rec 2008	Sinclair	Bill	PT Consultex, Jakarta, Indonesia	Indonesia
	Sagun	Aysu	Loughborough University	UK
	Bouchlaghem	Dino	Loughborough University	UK
I-Rec 2008	J. Anumba	Chimay	Pennsylvania St ate University	Etats Unis
I-Rec 2008	King	Andrew	GNS Science	New Zealand

	Cousins	Jim	GNS Science	
	Heron	Dave	GNS Science	
	Matcham	Iain	GNS Science	
	Pringle	Robin	GNS Science	
	Bell,	Rob	NIWA	
	Reese,	Stefan	NIWA	
	Schmidt,	Jochen	NIWA	
I-Rec 2008	Henderson	Roddy	NIWA	New Zealand
I-Rec 2008	MacBurnie	Ian		
	Adank	Rodney	Massey University	New Zealand
I-Rec 2008	Snowdon	Jake	Massey University	New Zealand
I-Rec 2008	Thorburn	Craig	Monash University	Australia
	Davidson	Colin	Université de Montréal	Canada
	Lizarralde	Gonzalo	Université de Montréal	Canada
I-Rec 2008	Johnson	Cassidy	University College	UK
I-Rec 2008	Solano	Alfonso		
	Gociman	Cristina	“Ion Mincu” University of Architecture and Urbanism, Bucharest, Romania	Romania
I-Rec 2008	Dinu	Elena	“Ion Mincu” University of Architecture and Urbanism, Bucharest, Romania	Romania
I-Rec 2008	Amaratunga	Dilanthi		
	(Daniel) Oh	Eun Ho	Purdue University	Etats Unis
I-Rec 2008	Hastak	Makarand		Etats Unis
I-Rec 2008	Powell	Felicity	Opus International Consultants	New Zealand
	Vishaka Hidellage	Punyavan		
I-Rec 2008	Pullenayegem	Vasant		
	Cheema	Abdul Rehman	School of People, Environment & Planning, Massey University	New Zealand
	Scheyvens	Regina	School of People, Environment & Planning, Massey University	New Zealand
I-Rec 2008	Imran	Muhammad	School of People, Environment & Planning, Massey University	New Zealand
	Russell	Anna	Unitec	New Zealand
	Potangaroa	Regan	Unitec	New Zealand
I-Rec 2008	Feng	Vicky	Lisle Jenkins Architects Ltd.	New Zealand
	Hewitt	John	School of Architecture (ScALA), Unitec, Auckland, New Zealand	New Zealand
	Potangaroa	Regan		New Zealand
I-Rec 2008	Wilkinson	Suzanne		New Zealand
I-Rec 2008	Neyazi	Yousef	Department of Urban and Regional Planning, College of Environmental Designs King Abdulaziz University, Jeddah, Saudi Arabia	Saudi Arabia
	Feng	Vicky		
	Russell	Anna		
I-Rec 2008	Potangaroa	Regan		
I-Rec 2008	Saunders	Graham		
I-Rec 2008	Saunders	Wendy	GNS Science	New Zealand
	Becker	Julia	GNS Science, Lower Hutt, New Zealand	New Zealand
	Saunders	Wendy		New Zealand
	Hopkins	Lesley		New Zealand
I-Rec 2008	Wright	Kim		New Zealand
	Giovinazzi	Oriana	University of Venice IUAV, Italy.	Italy
I-Rec 2008	Giovinazzi	Sonia	University of Canterbury, New Zealand.	New Zealand
I-Rec 2008	Wilson	John	Dept of Civil Engineering, McMaster University	Canada

	Giovinazzi	Sonia	University of Canterbury, New Zealand	New Zealand
I-Rec 2008	Podestà	Stefano	University of Genoa, Italy	Italy
I-Rec 2008	McIntosh	Jacqueline	Victoria University of Wellington	New Zealand
I-Rec 2008	Greene	Tiffany	The Gnome Project	
	Margetts	Jacqueline	Unitec New Zealand	New Zealand
I-Rec 2008	Barnett	Rod	Unitec New Zealand	New Zealand
I-Rec 2008	Kartika	Astrid	Indonesia Rehabilitation and Reconstruction Agency for Aceh Nias	Indonesia
	Amaratunga	Carol	University of Ottawa	Canada
	Carter	Michelle	University of Ottawa	Canada
	Thille	Patricia	University of Ottawa	Canada
	P. Phillips	Karen	University of Ottawa	Canada
	R. Saunders		University of Ottawa	Canada
I-Rec 2008	L. O'Sullivan,	Tracy	University of Ottawa	Canada
	Bosher	Lee	Department of Civil and Building Engineering, Loughborough University	UK
	Dainty,	Andy	Department of Civil and Building Engineering, Loughborough University	UK
	Carrillo,	Patricia	Department of Civil and Building Engineering, Loughborough University	UK
I-Rec 2008	Glass	Jacqueline	Department of Civil and Building Engineering, Loughborough University	UK
	Price	Andrew		UK
I-Rec 2006	Hakan Arslan Alper Unlu		Istan bul Technical University, Faculty of Architecture, Department of Architecture, Istanbul, Turkey	Turkey
I-Rec 2006	Ali Asgary, Ali Badri		Emergency Management Program, York University, Toronto, Canada	
	Mojtaba Rafieian Ali Hajinejad		Department of Urban & Regional Planning, Tarbiat Modares University, Department of Geography, Sistan & Baloochestan University	Iran
I-Rec 2006	affer Baca		International Blue Crescent Humanitarian Relief Organization (IBC)	
	Ömer Faruk GÖRÇÜN		Civil Society and Local Auhorities Department-Anadolu BIL Universty	Turkey
I-Rec 2006	Berna Baradan		Faculty of Architecture, Izmir Institute of Technology, Turkey	Turkey
I-Rec 2006	Esra Bektas		Erasmus University Rotterdam, IHS	Turkey
I-Rec 2006	Silvia Belforte Davide Fassi		DINSE-Dipartimento di scienze e tecniche per i processi di insediamento,Politecnico di Torino, Italy	Italy
I-Rec 2006	Roberto Bologna		Dip. TAeD, Via San Niccolò 93 - 50125 Firenze (IT)	Italy
I-Rec 2006	Lee Bosher,			
I-Rec 2006	Andrew Dainty,			
I-Rec 2006	Patricia Carrillo,			
I-Rec 2006	Jacqueline Glass		Department of Civil and Building Engineering,	United
I-Rec 2006	Andrew Price		Loughborough University	Kingdom
I-Rec 2006	Susan G Broadbent		Pell Frischmann Consulting Engineers Limited, UK	United Kingdom

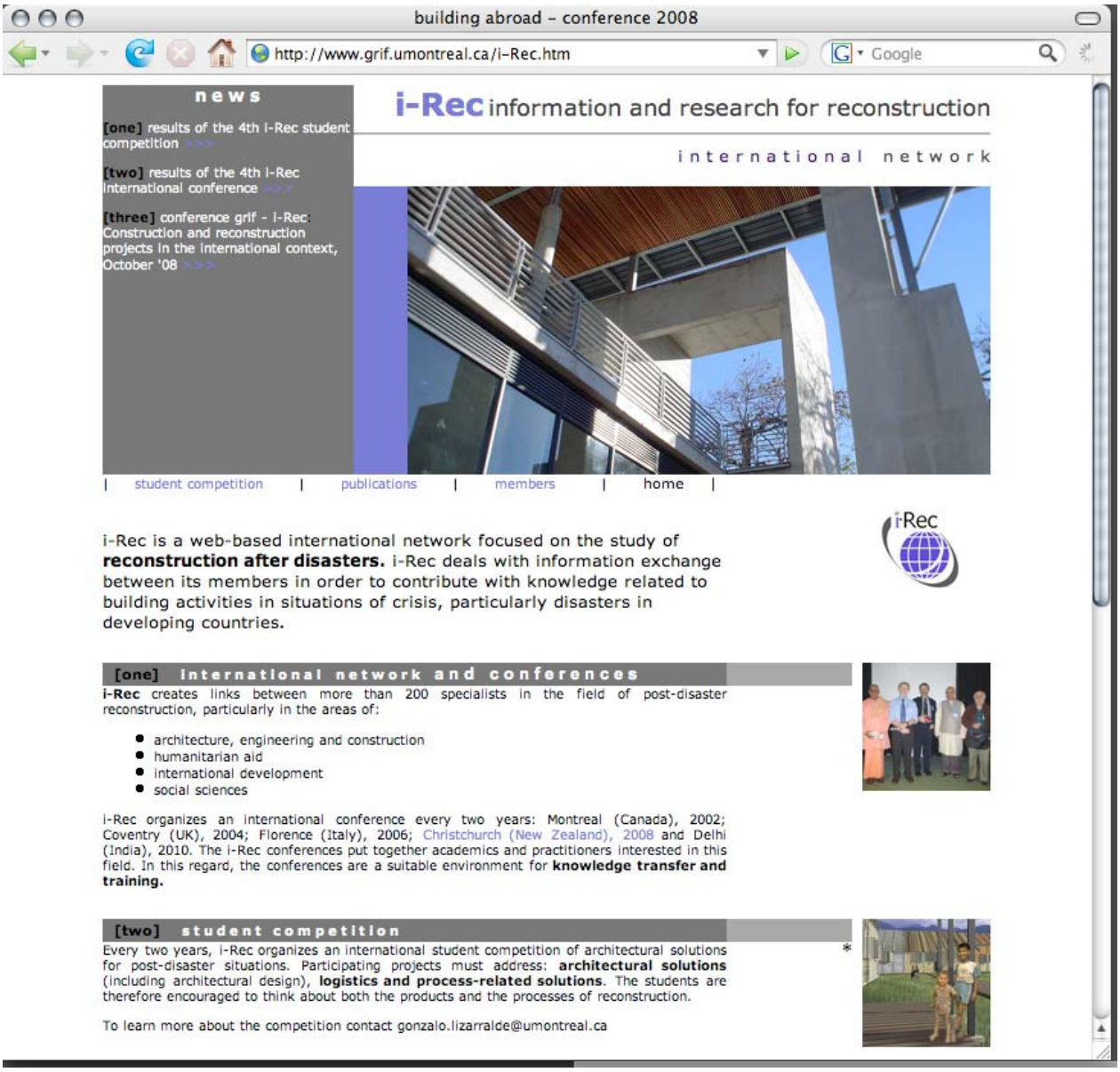
	D Michael Broadbent	Faculty of Business, Environment & Society, Coventry University, UK	
I-Rec 2006	Giovanni Casadei Roberto Bologna	Department of Architecture and Design Technologies "P.Spadolini,"University of Florence	Italy
I-Rec 2006	Banu Çelebioglu		
I-Rec 2006	Sevgül Limoncu	Department of Architecture, Yıldız Technical University	Turkey
I-Rec 2006	Colin H. Davidson		
I-Rec 2006	Cassidy Johnson	IF Research Group, Université de Montréal, Canada	Canada
I-Rec 2006	Nese Dikmen	Department of Architecture, Suleyman Demirel University	Turkey
I-Rec 2006	Evren Burak Enginoz	Department of Architecture, Kultur University of Istanbul, Turkey	Turkey
I-Rec 2006	Mehran Gharaati	School of Architecture, McGill University	Canada
I-Rec 2006	Rosario Giuffrè	Università degli Studi Mediterranea di Reggio Calabria	
	Ernesto Maria Giuffrè	Università degli Studi di Roma "La Sapienza"	
I-Rec 2006	Cristina Olga Gociman Elena Dinu	University of Architecture and Urbanisme "Ion Mincu", Bucharest, Romania	Romania
I-Rec 2006	Maria Rita Grasso	TEMENOS Research group, DASTEC Dept., Faculty of Architecture,Mediterranea University of Reggio Calabria	Italy
I-Rec 2006	A Jayantha R Gunasekera	Practical Action Sri Lanka	Sri Lanka
I-Rec 2006	Melissa Harvey	HDRA- International development Programme, Coventry, UK	UK
I-Rec 2006	Marco Imperadori	Dipartimento BEST (Building, Environment Science and Technology),Politecnico di Milano	Italy
I-Rec 2006	Cassidy Johnson, Gonzalo Lizarralde and Colin H. Davidson	IF Research Group, Université de Montréal, Canada	Canada
I-Rec 2006	Linda Kestle	School of the Built Environment. UNITEC-Auckand, New Zealand.	
I-Rec 2006	Regan T. Potangaroa	School of Architecture . UNITEC-Auckland, New Zealand.	
I-Rec 2006	Bryan Storey	Gateway Antarctica. University of Canterbury, Christchurch, NZ.	New Zealand
I-Rec 2006	John R. Labadie	Senior Environmental Analyst, Seattle Public Utilities	Etats Unis
I-Rec 2006	Sevgül Limoncu	Faculty of Architecture, Yıldız Technical University,	
I-Rec 2006	Banu Çelebioglu	Turkey	Turkey
I-Rec 2006	Gonzalo Lizarralde and Colin Davidson	IF Research Group, Faculté de l'Aménagement, Université de Montréal,	Canada
I-Rec 2006	Sibilike K. Makhanu	Centre for Disaster Management and Humanitarian Assistance (CDMHA), Western University College of Science and Technology (WUCST), Kenya	Kenya

I-Rec 2006	S.K. Makhanu	Centre for Disaster Management and Humanitarian Assistance (CDMHA), Western University College of Science and Technology, Kenya	Kenya
I-Rec 2006	S.B.B. Oteng'i		
I-Rec 2006	S.S. China		
I-Rec 2006	G. W. Waswa		
I-Rec 2006	M.N. Masibo		
I-Rec 2006	G.W.B. Masinde		
I-Rec 2006	S. K. Makhanu	Centre for Disaster Management and Humanitarian Assistance (CDMHA), Western University College of Science and Technology, Kakamega, Kenya	Kenya
I-Rec 2006	G. W. Waswa		
I-Rec 2006	Makhanu K. S.	Centre for Disaster Management and Humanitarian Assistance (CDMHA), Western University College of Science and Technology, Kakamega, Kenya	Kenya
I-Rec 2006	Waswa G. W.		
I-Rec 2006	Masinde G. W.		
I-Rec 2006	Ali Tolga Özden	Middle East Technical University, Faculty of Architecture, Ankara, Turkey	Turkey
I-Rec 2006	Antonio Pizzonia		Italy
I-Rec 2006	Regan T. Potangaroa	Associate Professor of Architecture, Unitec, Auckland NZ.	New Zealand
I-Rec 2006	Neelam Raina	South Asian Research, De Montfort University, Leicester, United Kingdom.	United Kingdom
I-Rec 2006	Samantha T. L. Rex	ARUP, Building and Engineering Consultancy, London, U.K.	United Kingdom
I-Rec 2006	James O.B. Rotimi	Civil Engineering Dept, University of Canterbury, New Zealand.	
I-Rec 2006	Jason Le Masurier	Civil Engineering Dept, University of Canterbury, New Zealand.	
I-Rec 2006	Suzanne Wilkinson	Civil & Environmental Engineering Dept, University of Auckland, New Zealand	New Zealand
I-Rec 2006	Alicia Sliwinski	i-Rec, IF Research Group, University of Montreal, Canada	Canada
I-Rec 2006	Carol Toms		
I-Rec 2006	Heather MacLeod	World Vision International	
I-Rec 2006	Corrado Trombetta	Università degli Studi Mediterranea di Reggio Calabria, Facoltà di Architettura, Dipartimento DASTEC, Unità di Ricerca TEMENOS.	Italy
I-Rec 2006	Kelvin Zuo		
I-Rec 2006	Suzanne Wilkinson	Department of Civil and Environmental Engineering, The University of Auckland, New Zealand	
I-Rec 2006	Jason Le Masurier		
I-Rec 2006	Jetske Van der Zon	Department of Civil Engineering, University of Canterbury, Christchurch,New Zealand	New Zealand
I-Rec 2004	David Alexander		
I-Rec 2004	Filiz Baycan	Environmental Engineer, Ministry of Environment and Forestry, Turkey	
I-Rec 2004	Roberto Bologna	Università degli Studi di Firenze	
I-Rec 2004	S G Broadbent	Birchrust Limited, Civil/Structural Engineering Consultants	

	D M Broadbent	Coventry University	
I-Rec 2004	Philip Buckle	Coventry Centre for Disaster Management, Coventry University	United Kingdom
I-Rec 2004	O P N Calla	International Centre for Radio Science, “OM NIWAS” A-23, Shastri Nagar,	
I-Rec 2004	Eve Coles	Centre for Disaster Management,Coventry University, UK	United Kingdom
I-Rec 2004	Nese Dikmen	Department of Architecture, Middle East Technical University, Ankara, Turkey	Turkey
I-Rec 2004	Soofia Tahira Elias-Ozkan Evren Burak Enginoz	Kultur University of Istanbul, Faculty of Engineering and Architecture	Turkey
I-Rec 2004	Gene Farmer,	Department of Construction Management,Florida International University	Etats Unis
I-Rec 2004	Ronald A. Baier Suneetha Mallikarjuna Edward Forwood		
I-Rec 2004	Andrew Fox	Coventry University, UK	United Kingdom
I-Rec 2004	Jessica S.E. Mercer	Coventry Centre for Disaster Management, Coventry University	United Kingdom
I-Rec 2004	Rohit Jigyasu	Architect, Planner and Conservation Consultant, India	India
I-Rec 2004	Jacqueline Homan	School of Applied Sciences, University of Wolverhampton	United Kingdom
I-Rec 2004	Swami Nikhileswaranan da	Ramakrishna Mission, West Bengal, India	India
I-Rec 2004	Guy Mbayo Kakumbi	Freelance Consultant	
I-Rec 2004	A. Solano de Fransisco	Pontificia Universidad Javeriana	Colombia
I-Rec 2004	Martin Petersen	Golder Associates (UK) Ltd	United Kingdom
I-Rec 2004	Gonzalo Lizarralde	Universite de Montreal	Canada
	Marie France Boucher	Université Laval	Canada
I-Rec 2004	Graham Marsh	Coventry University	United Kingdom
	Philip Buckle	Coventry University	United Kingdom
	Rev. Syd Smale	Ida Court	Australia
I-Rec 2004	Melissa Harvey	HDRA, International Development Programme,Coventry University	
	Julia Wright	HDRA, International Development Programme	
I-Rec 2004	K. Méheux	Department of Physical Geography, Macquarie University, North Ryde	Australia
	E. Parker	Coventry Centre for Disaster Management, Coventry University	United Kingdom
I-Rec 2004	Ian Jardine Young	Department for International Development, Montserrat, West Indies	United Kingdom
I-Rec 2004	Nehal Karim	University of Dhaka, Bangladesh	Bangladesh
I-Rec 2004	Hodgson R L P	University of Exeter, Harrison Building, North Park Road, Exeter	United Kingdom
I-Rec 2004	Cassidy Johnson	IF Research Group, Faculté de l’Aménagement, Université de Montréal	Canada
I-Rec 2004	Gonzalo		

	Lizarralde		
I-Rec 2004	Colin Davidson		
I-Rec 2002	Mark Napier	Programme for Sustainable Human Settlements, Council for Scientific and Industrial Research (CSIR), South Africa	South Africa
I-Rec 2002	George Ofori	National University of Singapore	Singapore
I-Rec 2002	Rohit Jigyasu	Norwegian University of Science and Technology, Trondheim, Norway	India
I-Rec 2002	Sarwat Viguar		
I-Rec 2002	Andrew Fox	Centre for Disaster Management, Coventry University, UK	England
I-Rec 2002	Cassidy Johnson	Faculty of Environmental Design, University of Montreal	Canada
I-Rec 2002	Alex Salazar	Independent researcher, Associate AIA, Apprentice architect	United States
I-Rec 2002	Philip Amstislavski	School of Architecture, Rensselaer Polytechnic Institute, Troy, NY	United States
I-Rec 2002	Gonzalo Lizarralde	Université de Montréal	Colombia
I-Rec 2002	Jean-Lou Hamelin		
I-Rec 2002	Philippe Rosset	Civil Engineering & Applied Mechanics, McGill University, Montreal, Canada	Canada
	Alejandro De la Puente	Civil Engineering & Applied Mechanics, McGill University, Montreal, Canada	Canada
	Luc Chouinard	Civil Engineering & Applied Mechanics, McGill University, Montreal, Canada	Canada
	Denis Mitchell	Civil Engineering & Applied Mechanics, McGill University, Montreal, Canada	Canada
	John Adams	Geological Survey of Canada, Ottawa, Canada	Canada
I-Rec 2002	Bruce Etherington		United States
I-Rec 2002	Robert A. Findlay	Department of Architecture, Iowa State University	United States
I-Rec 2002	Nehal Karim	Department of Sociology, University of Dhaka	Bangladesh
I-Rec 2002	K. Sivaji	Sanghamitra Service Society, Vijayawada, India	India
I-Rec 2002	Annie Jayaraj	ATMA Consultancy Services	India
I-Rec 2002	Ye Yaoxian	China Architectural Design and Research Group	China
I-Rec 2002	Roger B. Richard	Université de Montréal	Canada

ANNEXE V: SITE INTERNET i-Rec



ANNEXE VI: EXAMPLES OF RECOGNITION

CISION

Order/Commande

The Gazette (Montreal, QC)

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Date 09.05.2008 Circ. 136271 Page A8 1 / 1

U de M team designing model village to help homeless youth in Ivory Coast

PEGGY CURRAN
on universities

For street kids in the ramshackle African slums of Bouaké in Ivory Coast, the journey to a better life often begins on the soccer field.

Sports programs run by a non-governmental organization called Galaxie-Insertion Internationale gradually woo away the troublemakers from the life of petty crime and prostitution by encouraging them to learn a trade or go to school.

But for a while now, Galaxie has been eager to improve the odds by providing homeless youth with a truly safe haven, a genuine refuge from storm and strife.

Tomorrow, the NGO will take a first step toward making that happen, thanks to an innovative partnership with a group of architecture students at the Université de Montréal.

Led by professors Colin Davidson and Gonzalo Lizarralde and architect Juan Malo, 21 master's degree students were asked to design a model village that could be built over a 20-year-period and serve as a "shop window" for Galaxie's local initiatives.

"What we didn't want was Laval des Rapides in the middle of Africa."

They'll unveil their concept to Galaxie officials and assorted dignitaries, among them ambassadors for Ivory Coast and Burkina Faso and the head of Bouaké's regional council.

Working in teams of two or three, students designed modules that would meet the needs of different types of families and provide space for children's dormitories, workshops, businesses, small-scale farming, playing fields and even a cybercafé.

"What we didn't want was Laval des Rapides in the middle of Africa," Davidson said. "This could not be a typical subdivision. We needed a community that could develop according to its needs, where there would be compounds for extended families."

An emeritus professor, Davidson said he's been busier than ever since he retired last year after 40 years at the U de M. In recent years, his research has focused on post-disaster reconstruction.

He helped set up i-Rec, an international Web-based network that gathers research data and provides expertise on how to rebuild after a disaster, be it a natural catastrophe like this week's devastating cyclone in Myanmar or the slow agony of famine and civil war in central Africa.

In the days immediately after a calamity like the Myanmar cyclone, Davidson said, needs are basic and urgent: food, water, medical care. Emergency shelter – usually tents or plastic sheets – comes next, followed by temporary housing.

Permanent housing can take a year or more. But i-Rec experts argue it makes more sense to treat those as phases of a whole instead of squandering resources in the transition period.

The Bouaké project poses different challenges. "This project is not about reconstruction after a short and devastating natural disaster but rather construction in a long-term and catastrophic situation," Davidson said.

The next hurdle will be pushing the project beyond conceptual model to detailed blueprints and, eventually, construction.

The Bouaké council has set aside a square-kilometre site on the edge of town, but the NGO needs to drum up cash to make the Galaxie village happen. It's looking for support from the French government and the Montreal chapter of the Union française.

Davidson said U de M students clearly relish opportunities to immerse themselves in work that obliges them to think outside the box – or, in this case, inside the box.

"There's broader scope for students to do interesting projects in the developing world," he said. "It can be more fulfilling than just building a house for Mr. and Mrs. So-and-So."

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Rebuilding lives in South Asia

Careful planning key to successful reconstruction

As efforts begin to rebuild homes destroyed by the deadly tsunami in South Asia, Gonzalo Lizarralde wants to make sure everyone has their priorities straight.

"The United Nations have promoted community participation as the key to reconstruction," says Lizarralde, a PhD student in environmental design at the Université de Montréal. "But that does not guarantee the success of a project."

Lizarralde, who has conducted fieldwork in communities leveled by earthquakes across Central America, has considerable expertise judging the performance of post-disaster housing reconstruction.

His own home country, Colombia, suffered a devastating earthquake in June 1999 just weeks before he planned to leave for Canada to further his studies on low-cost housing in developing countries. The quake, which left thousands homeless, gave Lizarralde's research a whole new focus.

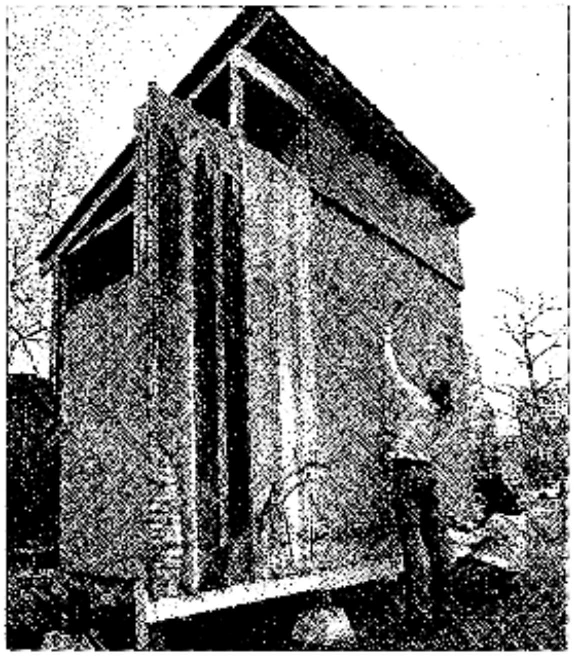
"Community involvement is crucial to reconstruction," he says. "But what we found in Colombia, Honduras and El Salvador was that three other aspects were even more important—especially for long-term sustainability."

In particular, strategic planning is a first priority. Second is ensuring that everyone has a specific and well-defined role, but are also working closely together. Finally, an obvious, but often overlooked, piece of the puzzle: the homeless person's role in making decisions about their new home.

"The most important aspect of the user's participation is their responsibility to make choices about what is really required, whether it's a house, a store or a septic tank," explains Lizarralde. "But very often this doesn't happen, and the product is designed using inappropriate technology or exotic materials, which make it very difficult for the user to modify and repair things later."

While Lizarralde applauds Canada and the world's immediate funding

A WINTER HOME FOR SOME



MARIE-FRANCE COALLIER THE GAZETTE

McGill architecture students Danielle Vroom (left) and Patricia Joong work on a post-disaster shelter as part of a project in which students had to create housing suitable for residents of the earthquake-ravaged region of Kashmir. Shelters had to be low-cost, but warm enough for a mountainous winter climate. This shelter took three days to build.

ANNEXE VII: Report of the 4th i-Rec International student competition

Fourth International Conference 2008
Building resilience: achieving effective post-disaster reconstruction

student Competition

Wednesday 30 April – Friday 2 May 2008, Christchurch, New Zealand

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introduction

Undergraduate and graduate students of architecture and related design fields were invited to participate in a competition that attempts to bring out innovative ideas to radically improve post-disaster reconstruction strategies for developing countries.

results

29 projects were submitted to the competition. One project was disqualified for not respecting the minimum requirements of the competition. The projects were exhibited between April 30 and May 2, 2008 parallel to the 4th i-Rec conference in Christchurch, New Zealand.

Seven universities were represented in the competition:

- Université de Montréal, Canada
- Ryerson University, Canada
- Politecnico Di Milano, Italy
- Victoria University of Wellington, New Zealand
- Universidad Javeriana, Colombia
- University of Auckland, New Zealand
- Shahid Beheshti University, Tehran, Iran

The projects were evaluated by an international and interdisciplinary jury composed by:

- Mr. John Hewitt, Architect and urban planner, Unitec and Resilient organizations, New Zealand
- Dr. Lee Bosher, Professor Loughborough University, UK
- Dr. Jennifer Duyne, Anthropologist, World Habitat Research Unit, Switzerland
- Abdur Rehman Cheema, Student, Massey University
- Iftekhar Ahmed, Architect, School of architecture, Univ. of Melbourne, Australia

After a comprehensive appraisal of the projects, the jury developed a list with the following evaluation criteria:

1. Cultural and contextual sensitivity
2. Environmental sensitivity (e.g. use of local and/or recycled building materials with low environmental impact)
3. Economic viability
4. Technical feasibility
5. Time effectiveness
6. Community involvement and use of local skills and labor
7. Modularity, adaptability to individual requirements and upgradeability

8. Sensitivity towards collective requirements (communal spaces, water and sanitation, etc)
9. Comfort, safety and privacy
10. Innovativeness
11. Replicability
12. Quality of the presentation

awarded projects and statement of the jury

"The jury was impressed by the high quality and originality of all projects reflecting enthusiasm, commitment and creativity. We (the jury) would like to compliment and congratulate all participants for their projects, which gave us the challenging task to select among the many good projects the outstanding ones. Based on the above criteria the jury finally proposed to award two projects:

1. Emergency shelter proposal for the Rocinta Favela in Rio de Janeiro (Brazil) by Jacob Whitehead, Duncan Scott, and Jalin Young, School of Architecture of Victoria University of Wellington, New Zealand

This project was awarded for its contextual sensitivity, the modularity, flexibility and upgradability of the proposed solution. The proposed emergency shelter assistance is cost effective and makes use of locally available resources including recycled material. The students recognized the critical importance of involving the community right from the beginning instead of treating them as passive victims by proposing their involvement in the site preparation and the collection of building material. The involvement of the community however was not just considered in terms of labor but also instrumental in terms of fostering social cohesion.

The proposed shelter solution is accordingly technically simple as to allow the community participation in building the shelters. The shelter design recognizes the importance of open spaces that may be closed at a later stage (horizontal extension) and also foresees the possibility of vertical extensions. It proposes an interesting settlement layout and communal spaces. The shelters are simple but beautiful and can easily be personalized. The project is well-presented, with good drawings and relevant information.

2. The "Colorful Black Box" by Celia Holmes, Abbie Whangapirita, Hayley Wright and Hester Borren

This project was selected for the award for its originality, a outstanding capacity to plan upon a critical understanding of local social conditions, and for its profound empathy and understanding of informal urban dwellers' key concerns. The students understood two critical issues:

- An excessive upgrading of the habitat could inflate the value of the land occupied by the urban poor and hence their eviction. Paradoxically, this means that housing security of the project's target group is contingent upon *perpetuating* the vulnerability of the site!

- Due to eviction risk, urban poor without formal land titles are not much inclined to invest in their shelter but tend to spend their resources in movable assets (e.g. TV, kitchen equipment, vessels, etc). In case of a disaster, priority should be given to protect these movable properties. Based on these contextually and socially highly relevant and accurate observations the project proposes to build a storage space (a black box).

While evaluating the projects we could not avoid noticing that the most outstanding projects focused on housing assistance to the landslide affected favela dwellers in Rio de Janeiro, Brazil. Only after the announcement of the award we found out that all these projects were developed under the guidance of the Brazilian architect Daniel Abreu e Lima, Lecturer at the School of Architecture of the Victoria University of Wellington. We would like to compliment Ms. Daniel e Lima for having been conveyed to her students"

The previous statement of the jury was presented by:

Jennifer Duyne Barenstein, PhD
World Habitat Research Unit
Department of Environment, Constructions and Design
University of Applied Sciences of Southern Switzerland
www.worldhabitat.supsi.ch

On behalf of the jury

Christchurch, 2 May 2008

prizes

The organizers of the competition will contact the authors of the awarded projects to give them a 500 CAN$ prize to each of the two winning teams. A certificate of award will also be delivered to these two groups of students. The organizing committee congratulates all the participants of the 4th i-Rec competition.

next exhibition

The projects will be next exhibited at the Faculté de l'aménagement of Université de Montreal (Montreal, Canada) parallel to the conference "Building Abroad", organized by the IF Research Group – grif. The exhibition will take place in October 23 - 25, 2008. All the participants are invited to attend the exhibition.

Gonzalo Lizarralde
i-Rec