

DISASTER CITY: Potentials for Risk Prevention, Emergency Resilience and Reconstruction Management in Cities facing Catastrophes

1. Description and Aims

Post-catastrophes management and reconstruction have in recent time exceeded the technical dimension of building techniques and financing to include social, environmental elements, thus turning into a complex, multidimensional challenge. While the actions of reconstruction attempt a respond to the immediate need for infrastructure and housing through rapid or temporary construction methods, several other issues arise in dealing with damaged assets such as the appropriateness of restoration and reconstruction of urban fabric and buildings, its social acceptance, its cultural pertinence and its comprehensive sustainability.

In this perspective, facing destruction and the need to rebuild, several questions arise: What policies need to be adopted or formulated to strengthen territories affected by natural disasters? How are these policies implemented in practice? How to involve the public authorities, the population and the technicians in order to improve the resilience of both communities and the built environment? Is it necessary to develop ad-hoc or prescriptive tools? How are these relevant towards a wider regional intervention? While the actions of reconstruction attempt a respond to the immediate need for housing through construction methods of rapid development, several other issues of longer timespan consequences need to be accounted for and integrated in the early interventions.

The Thematic Conference, main activity of the Project aims at the identification of specific thematic areas for academic and teaching development in the articulation of three fields regarding catastrophes management and reconstruction after catastrophes: Potentials for Risk Prevention, Emergency Resilience and Reconstruction Management in Cities facing Catastrophes. It is based on existing contacts and previous cooperation at the level of faculty members and draws on the strategic partnership declared between TU-Berlin and POLIMI, towards joint work in critical areas of common interest.

2. Problem Scope: Risk, Emergency, Resilience and Reconstruction As a result of the proposed

Conference and related activities a number of specific topics will be identified and agreed among the partner researchers, based on an open discussion of their previous experiences, as being relevant for further cooperation, teaching and research. The topics identified will be further

elaborated both in Italy and in Germany as a result of the conference and subsequent Compact Seminar, and will be synthesized in a Publication. These results should lead to the formulation of new cooperation projects in teaching and research applications.

3. Cities, Climate Change and Disaster Risk Management Towards Habitat III

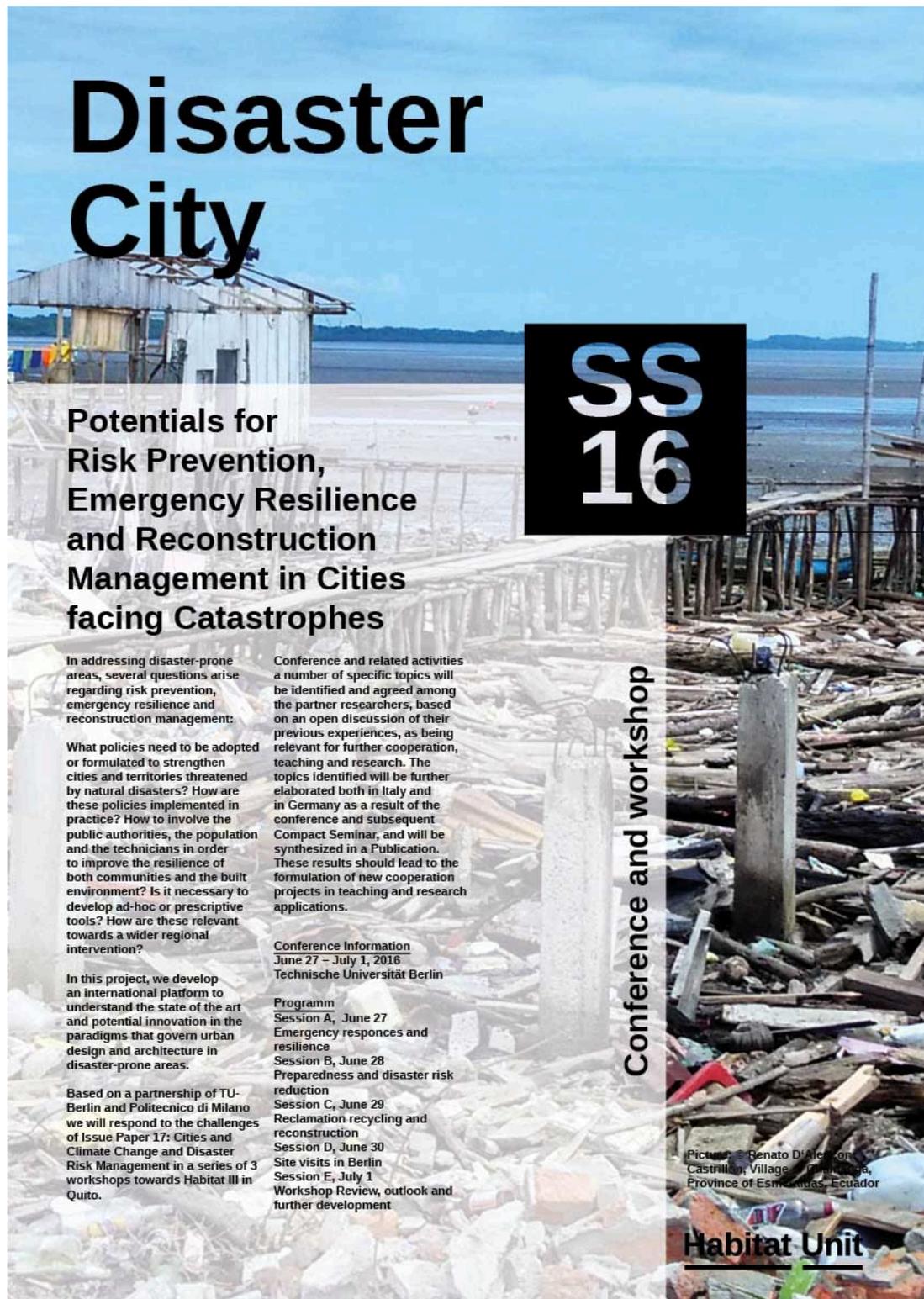
In preparation of Habitat III, in the Issue Paper 17 – “Cities, Climate Change and Disaster Risk Management” has characterized the role of cities in a context of Climate Change and Disaster Risk:

“Being the engines of socio-economic development, cities inevitably become concentrations of disaster risks and greenhouse gas emissions, in turn fueling Climate Change and its impacts. But some cities and people are more vulnerable than others. Per the Intergovernmental Panel on Climate Change (IPCC, 2014): “Much of the health risk and vulnerability to climate change is concentrated in [informal] settlements. Many cities include dangerous sites, such as steep slopes, low lands adjacent to unprotected riverbanks and ocean shorelines, and have structures that do not meet building codes”. Vulnerability to the impacts of climate change goes beyond mere exposure to extreme weather events. Many cities in developing countries “are caught in a ‘perfect storm’ of population growth, escalating adaptation needs and substantial development deficits created by a shortage of human and financial resources, increasing levels of informality, poor governance, environmental degradation, biodiversity loss, poverty and growing inequality” (IPCC 2014).

“Disasters, many exacerbated by climate change, impede progress towards sustainable development, sometimes reversing years of advances in a single event. Evidence indicates that exposure of persons and assets in all countries has increased faster than vulnerability has decreased, with significant economic, social, health, cultural and environmental impact, especially at the local and community level” (GAR 2015).

Trying to integrate the concepts proposed in this Issue Paper, the opportunity of Habitat III in Quito and the recent occurrence of a major earthquake in the coast of Ecuador, TU-Berlin and POLIMI have broadened the scope of interest to that country taking as cases of study in the periphery of Quito Carapungo - Calderón and in the coastal region, Chamanga. This has led to an extended cooperation platform including the Universidad Tecnológica Equinoccial UTE, based in Quito. With this extended team, the work has been organised integrated in a series of Workshops of which this takes part: Workshop Quito (3WinAReQ Quito 2016 Carapungo- Calderón / Chamanga): June 6 - 10; Workshop Berlin: (Disaster City) June 27 - July 1; Workshop Milano (MiArch): October 5 - 8; UN-Habitat Conference: October 17 - 20; Also following the guidelines of Issue Paper 17, the cooperation work group

has defined as keywords the following issues: Climate Change Adaptation, Climate Change Mitigation, vulnerability, disaster and climate risks, disaster risk management, risk-informed urban development and investment.



Disaster City

Potentials for Risk Prevention, Emergency Resilience and Reconstruction Management in Cities facing Catastrophes

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Conference and workshop

In addressing disaster-prone areas, several questions arise regarding risk prevention, emergency resilience and reconstruction management:

What policies need to be adopted or formulated to strengthen cities and territories threatened by natural disasters? How are these policies implemented in practice? How to involve the public authorities, the population and the technicians in order to improve the resilience of both communities and the built environment? Is it necessary to develop ad-hoc or prescriptive tools? How are these relevant towards a wider regional intervention?

In this project, we develop an international platform to understand the state of the art and potential innovation in the paradigms that govern urban design and architecture in disaster-prone areas.

Based on a partnership of TU-Berlin and Politecnico di Milano we will respond to the challenges of Issue Paper 17: Cities and Climate Change and Disaster Risk Management in a series of 3 workshops towards Habitat III in Quito.

Conference and related activities a number of specific topics will be identified and agreed among the partner researchers, based on an open discussion of their previous experiences, as being relevant for further cooperation, teaching and research. The topics identified will be further elaborated both in Italy and in Germany as a result of the conference and subsequent Compact Seminar, and will be synthesized in a Publication. These results should lead to the formulation of new cooperation projects in teaching and research applications.

Conference Information
June 27 – July 1, 2016
Technische Universität Berlin

Programm
Session A, June 27
Emergency responses and resilience
Session B, June 28
Preparedness and disaster risk reduction
Session C, June 29
Reclamation recycling and reconstruction
Session D, June 30
Site visits in Berlin
Session E, July 1
Workshop Review, outlook and further development

Picture: © Renato D'Alemon, Castrillon, Village of Pambanga, Province of Esmeraldas, Ecuador

Habitat Unit

The event is organised in cooperation with Politecnico di Milano. The conference and workshop are funded by DAAD „Hochschuldialog mit Südeuropa“ program.

Conference and Workshop Schedule

Session A - Monday, June 27, 2016

EMERGENCY RESPONSES and RESILIENCE

10:00 M.Sc. Students Seminar Workshop Kick-off, General Introduction, Students and Supervisors

10:30 M.Sc. Students Seminar Presentation on Recycling and Reconstruction, Presentation of Conclusions of 3WinAReQ Quito 2016 Workshop, Students

11:15 Work program and briefing, Supervisors

13:00 Lunch Break

Conference Lectures

14:00 Precarious Settlements Planning and Improvement for Preparedness, Prof. Dr. Philipp Misselwitz

14:45 Permanence v/s Variability, Dr. Juan Carlos Dall' Asta

15:30 L'Aquila After the Earthquake. Reactivation of the Historic Center, M.Sc. Arch. Nina Bassoli

16:15 Disaster, Planning, Resilience, Reconstruction: The earthquake and the city of Chillán, Dr. Horacio Torrent

17:00 Seismic monitoring and vulnerability framework for civil protection, Prof. Dr. Yuriy Petryna

17:45 Round Table Discussion, Referents and Audience

Session B - Tuesday, June 28, 2016

PREPAREDNESS and DISASTER RISK REDUCTION

09:00 M.Sc. Students Seminar Workshop Supervision, Students and Supervisors

12:00 M.Sc. Thesis Presentation: Natural hazards impacts on urban development: The Case study of Aigio, Greece, Andre Schwartz

13:00 Lunch Break

Conference Lectures

14:00 La rigenerazione dei tessuti urbani marginali: costruire un percorso di ricerca tramite sperimentazioni progettuali, Prof. Dr. Ilaria Valente

14:45 Planning Laboratory: Nord-Neukölln reuse and participation, Dr. Paola Alfaro

15:30 TBD, Prof. Dr. Emilia Corradi

16:15 Stem urban Cells, Prof. Arch. Tagliabue

17:00 Round Table Discussion, Referents and Audience

Session C - Wednesday, June 29, 2016

RECLAMATION RECYCLING and RECONSTRUCTION

09:00 M.Sc. Students Seminar Workshop Supervision, Students and Supervisors

12:00 PhD Thesis: Water Urban Sensitive Design - Resilience practices for climate change adaptation in the case study of East Napoli, Cristina Visconti

13:00 Lunch Break

Conference Lectures

14:00 History of Archeology as a History of Recycling, Prof. Dr. Andrea Gritti

14:45 Reclaiming Heritage: Reusing debris materials and recovering building methods for reconstruction, M. Arch. Renato D'Alencon

15:30 Minimal invasive Techniken für den substanzschonenden Umbau von Lehmbauten in Erdbebengebieten, Dipl.-Ing. Arch. Eike Roswag

16:15 Padiglione - Museo Artemision, Siracusa, Arch. Vincenzo Latina

17:00 Round Table Discussion, Referents and Audience

Session D- Thursday, June 30, 2016

SITE VISITS IN BERLIN

9:00 - 10:30 Urban Resilience and Reconstruction in Berlin. Urban Models for Reconstruction and Community Development, Prof. Dr. Misselwitz

10:30 - 12:00 Exemplary Buildings in Berlin: Chapel of the Reconciliation, 'Platten Wiedervereinigung', Monuments Reconstruction, Dipl.-Ing. Arch. Eike Roswag

13:00 Lunch Break

15:00 M.Sc. Students Seminar Workshop Supervision, Students and Supervisors

20:00 Conference Dinner

Session E - Friday, July 1, 2016

WORKSHOP REVIEW, OUTLOOK and FURTHER DEVELOPMENT

9:00 Resilience-based design and disaster risk mitigation as opportunity for urban regeneration

**10:00 M.Sc. Students Seminar Workshop Supervision
Students, Supervisors**

13:00 Lunch Break

**14:00 Workshop Review, Outlook and Further Development,
Supervisors and Guests**

18:30 Farewell

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