NOVEMBER 27 – 29, 2017
HERRENHAUSEN CONFERENCE
HERRENHAUSEN PALACE, HANOVER

CONFERENCE SUMMARY

“Dangerous Landscapes – Re-thinking Environmental Risk in Low-income Communities”

Organizers: Volkswagen Foundation
in collaboration with the Institute of Landscape Architecture, the Institute for Environmental Economics and World Trade and the Institute of Hydrology and Water Resources Management at the Leibniz University of Hannover as well as the TRUST Research Initiative, UN-Habitat and the Urban Risk Lab.

Dangerous landscapes and risk management

The conference ‘Dangerous Landscapes – Re-thinking Environmental Risk in Low-income Communities’, as part of the series ‘Herrenhausen Conferences’ took place from November 27 to 29 at Herrenhausen Palace, Hanover. It initiated an international platform for dialogue between experts from international institutes and political bodies, academics from very different disciplines, civil society representatives, and young researchers from 20 countries. The conference identified interfaces and discussed new questions concerning the life and livelihood of risk affected people and regions in Africa, Asia and Latin America as well as our future research and transformative practice. The conference was jointly organized by the Volkswagen Foundation and the Leibniz University Hanover (Prof. Dipl.-Ing. Christian Werthmann, Institute of Landscape Architecture, and scientific board: Dr.-Ing. Jörg Dietrich, Institute of Hydrology and Water Resource Management; Prof. Dr. Ulrike Grote, Institute for Environmental Economics and World Trade). As Christian Werthmann clearly pointed out at the beginning, not the landscapes are dangerous, but the way in which humans treat them — as the example of settlements in floodplains clearly demonstrates.

Thus, the invited international contributors referred to linkages between landscapes, the immense urbanization processes, the massive increase of people living in informal settlements, predicted by the UN to reach 2 billion in 2050, the rigorous effects of climate change — more storms, floods, earthquakes, droughts, landslides — and the subsequent climate migration.

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Interdisciplinary perspectives on risk and risk assessment

Keynote speaker Dan Lewis, former chief of the Urban Risk Reduction Unit, UN-Habitat, pointed out that we have to deal with a variety of risks: earthquakes, droughts, volcano eruption, coastal erosion, storm surges. The poor countries and the coastal areas — most of the world’s largest cities are located on coastlines — are more prone to risk. Due to climate change, the melting ice sheets cause a global rise in sea levels, resulting in social and economic hazards: over 1 billion people are exposed and global losses of 52 billion US dollars per year are expected by 2050. The low-income communities are most affected by risks caused by anthropogenic impacts. The World Migration Report 2015 points out that there is still a massive lack of basic data on urban poverty. Furthermore, preparing for disasters cannot be accomplished in isolation. Instruments like Earth observation data to analyze the morphology of informal settlements, remote sensing and early warning systems (EWS) for the rapid onset of crisis following earthquakes, tsunamis or floods were scientifically proven and presented.

According to Torsten Schlurmann, Professor for Coastal Engineering at Leibniz University Hannover, there is a need to address multi-hazard EWS by transdisciplinary approaches, and most of all to reach affected people by identifying the hotspots of vulnerabilities and introducing evacuation drills. Furthermore, as Ronak Patel, founding director of the Urbanization and Resilience Program at the Harvard Humanitarian Initiative pointed out, we have to produce more knowledge about the interactive effects of both risk and protective factors to optimize policies for improving resilience. Understanding risk and listening to those affected by risk should become more granular and tied to outcomes. The City Resilience Profiling Programme (CRPP) of UN Habitat is one important approach as well as a challenge for predictive planning. With a horizon of 20 to 50 years, it is to provide a framework for populations, the economy and states to manage relocation processes, the loss of urban and agricultural property, and the creation of new economic development corridors.

Need for integrated knowledge and community involvement

Among the participants it was a coherent impression that global processes and political guidelines as well as scientific research are often detached from the ground, i.e. local community realities. With a lot of emphasis Rajendra Singh, social activist and winner of the Stockholm Water Prize in 2015, reminded the audience that solutions are local. Both research and interventions for risk prevention have to understand natural flows and systems — the river parliament, water migration, river geologies. They also have to include local community experiences. Dealing with the specific challenges means meeting nature knowledge and traditional indigenous knowledge ‘with love and dignity’. The cases of community-organized water management in Malawi (Kate Harawa, Water for people-Malawi) and risk management in informal settlements in Medellin (Fernando Zapato, Fundación Sumapaz, Medellin) have shown that local management strategies can work, but that it is important to have immediate benefits in order to activate people for long term development. Providing access to safe drinking water and sanitation, the award-winning Malawi development organisation engages with the local community, the private sector, local government and civil society to build resilient water and sanitation systems and flood response strategies. Furthermore, how collaborative work between students, residents and NGOs produce applied knowledge to natural risks and mitigation strategies on a micro and a macro scale has been demonstrated by Johann-
Christian Hannemann, Landscape architect at TU München, and Gerardo Gazmuri, architect and collaborator of NGO TECHO Haiti for the unplanned urbanization area Onaville/Canaan in Haiti which is threatened by a variety of environmental risks. The master student project and the transdisciplinary research project platform “Urban Strategies for Onaville, Haiti” have generated problem solutions both supporting self-help in local communities for flood risk assessment and adaptation and alternative planning visions for decision makers. That includes integrated and landscape-based urban planning and water management strategies.

The perspectives from the politics emphasize that also social conflicts need to be addressed in greater discourse. Therefore, also economic issues and attitudes as far as financial models and funding to generate resources for risk mitigation and to create equity have to be considered. In the next two years the proposed Center for Studies in Climate Change, Equity and Sustainable Development in Post-conflict Colombia aims to articulate national goals with local priorities including environment and economic development between different local governments, the private sector and local communities. As mentioned by Koko Warner, Manager for Impacts, Vulnerabilities, and Risk at the UN Climate Secretariat and leading author for the Intergovernmental Panel on Climate Change, priority should be given to include affected people in decisions and planning by integrating risk tolerances and values. Policies like the Paris Agreements and the SDG’s are important commitments but they need to be implemented to facilitate robust large scale transformation. These projects already demonstrate an impulse for coordinated governmental and local efforts to dealing with intertwined environmental and socio-economic problems and risks and the creation of common ownership.

Landscape-based strategies and the role of design

The ambitious goal of the conference was to look at the challenges from different perspectives. Risk was also addressed from a landscape-based viewpoint. The questions of scaling were hardly discussed: The role of design in terms of small-scale entry projects versus accelerating disaster. How to expand the scale of urban design and infrastructural interventions and transfer them by taking into account processes, systems relations and social, cultural and economic needs? Urban planner Chelinda Odbert, co-founder and executive director of the non-profit Konkuey Design Initiative, presented the productive public spaces model, which includes an innovative way to transform garbage dumps into community spaces for physical activity, economic and social amenities. The community development initiative collaborates with underprivileged communities in the US, Africa, and Latin America, from conception through implementation to the empowerment of the communities. In the case of the Medellín project, presented by Alejandro Echeverri, Director of URBAM, Center for Urban and Environmental Studies at EAFIT University, in an area prone to landslides it is important to face anticipating strategies like, on the one hand, preparing for natural disaster and discouraging risky settlements, and on the other hand mitigation measurements for water- and waste management, stabilizing the slopes, and infrastructure improvements.

Another case presented was Kigali, where 80% of the settlements are regarded as unplanned areas. Heavy rain events in combination with steep hills are steadily causing risk. The Rapid Planning project represented by Undine Giseke, professor for landscape architecture at TU Berlin, demonstrates how generating synergies between the various material flows can contribute to risk minimizing. As a special

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contribution, the keynote speaker Miho Mazereeuw, Director of Urban Risk Lab, MIT Cambridge showed in a pioneering way how everyday needs can be linked to design and responsive technology. One example is a physical type of infrastructure: the PREHubs, designed to increase disaster resilience. In everyday as well as emergency situations, it provides the community with energy, communication and information about water and food supply. According to David Gouverneur, associate professor at the Department of Landscape Architecture at the University of Pennsylvania, there is a power of design. He proposes to create transformative landscapes by implementing a system of design components – corridors, patches and stewards to secure spatial requirements and to cope with changing demands of people. Landscape design should be actively used structuring informal urbanization and thus lowering vulnerability.

**Takeaways from the conference and future perspectives**

Four workshops related to the session topics took place. Here too, it became apparent that dealing with risk means embracing complexity, especially in areas of low-income communities. That includes also the question of climate resilience and planning for risk as well as contingency arrangements. The power of design for landscapes taken in combination with technology occurred to have a strong impact for creating a more resilient future. The question of responsibility surrounding ‘fight or flight’ — and who is going to decide — was discussed among the workshop participants. Their common impression was that a bottom up approach can be used effectively to identify, understand and manage risk. From the World Bank perspective, implementation in low capacity environments means public and private investment in a long-term vision. A balance has to be found between sector-focused and integrated solutions. The role of science is not only to understand risk but also to shape risk perception and to develop adaptation pathways.

Discussants agreed that there is a lot more to be done, and research in future will benefit from adopting new perspectives. More attention is to be given to the variables of vulnerability while quantifying and qualifying the risks. The same applies to the regional scale and the urban-rural continuum. Policies and mitigation strategies should integrate both natural processes and community knowledge ‘with love and dignity’.

Research results have to be better linked and explained to decision makers and communities, and the role of women, children and indigenous communities must be taken more into account. Stakeholder engagement and the creation of common ownership and mutual interest are crucial for actively collaborating with stakeholders in order to identify, manage and prevent risk, and to develop trust between stakeholders and decision makers.

Owing to the inter- and transdisciplinary perspectives, the conference impressively sensitized for differentiated coaction between social, political and natural components. It was made clear that there is a growing dimension of climate change related risks that threaten the world population. The conference initiated a significant impulse for tackling this immense challenge by integrating indigenous/local knowledge and expert knowledge and by integrating scales.

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