Humanitarian Design: Join Efforts in the Face of Uncertainty

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How can we improve the ability of the public sector to meet the needs of those affected in emergencies? How can a user-centred approach contribute to the design of more effective strategies of safety and emergency preparedness?

Humanitarian design is a term that can be used to describe the process of designing products, services or systems for populations affected by natural and/or man-made disasters. At the intersection between humanitarian action and design, lie new skills to be taught and opportunities to launch a new generation of designers into new horizons, giving them applied challenges to deal with social vulnerabilities, contexts of high uncertainty and a multitude of stakeholders and competing priorities.

As introduced by Assistant Professor and seminar coordinator Brita Nielsen, teaching and promoting Humanitarian Design among young designers and individuals from different professional backgrounds is essential at a time when increased prevalence of disasters, combined with reduced public spending and rapidly changing geopolitical situations, challenge our conceptions of humanitarian crisis, where they unfold and who they affect.

This seminar was held with the aim to shed light onto different empirical perspectives of humanitarian design, its challenges, and futures, and to determine what can be learned from these practices to strengthen safety and emergency preparedness in face of expected societal collapses and crisis affecting Europe. These two days, made possible by the Norwegian Research Council under the portfolio theme Democracy and Governance, included a panel of 11 international speakers with different backgrounds and contributions for humanitarian action, a participative reflection workshop, and featured student project presentations.

"There is something really positive and futuristic about building bridges between these two different worlds."

Ana Santos (international consultant, Portugal), launched the seminar with the proposal of four key principles that are essential to bridge government and humanitarian action. The key principles were derived from an international project that focuses on identifying and reaching zero-dose and under immunized children through enhanced routine immunization in four African countries. The project focuses on hard-to-reach locations affected by conflict, fragilized because of contextual volatility, cross border areas or places where the government who usually provides services, is not present.

The first proposed principle is a common vision that is *transpolitical,* independent of political agendas. A vision of new systems and new organizations, born from the intersection of these two different worlds. A vision that offers space to new ways of working and sets specific objectives around citizen safeguarding and preparedness. This understanding leads to a second principle: the creation of new tools and professional orientations and skillsets. Universities and education entities have a role to play in that they need to work as networks and partnerships to support this transition with new skills. The third proposed principle calls for autonomous and decentralized action, and portraits the future emergency response as both very localized but also connected *translocally*. Here, civil society groups, associations and entrepreneurs have a role to play as they form and connect to act and learn. The final principle is to "know the rules". The collaborative work of various actors will help to identify inconsistencies and vulnerabilities at the intersection of existing policies and regulations (e.g. housing legislation, urban space usage, migration, etc) that may cause impediments to new responses so they can be proactively addressed.

These four principles call for a human-centric approach and are relevant in response to the expected societal collapses ahead such as new disease outbreaks, natural disasters, conflicts related to natural resources, or massive migrant flows. Such approach helps to ensure a diverse, inclusive and dignifying response by accounting and mediating the participation of all citizens, may they be of any gender, any age, be national or foreign, have disabilities, be negativists or community champions.

"People across different systems need opportunities meet – they naturally grow a shared sense of mission"

Ivonne Herrera (Senior Scientist, NTNU Social Researh, Norway) presented a collaborative training exercise based on scenario planning and citizen participation. The stewarding ENGAGE H2020 project focuses on bridging the gap between authorities and citizens in disaster response, in view of maximizing responses' resources and effectiveness. This is done through the creation of preparedness networks with formal and informal actors that can build on the strengths of the existing response systems, and adapt responses t in context, while democratizing learning. These networks require the empowerment of citizens with information and skillsets and the creation of a new collaborative reflective practice.

Rather than developing new tools, the project leveraged existing practices familiar to official first respondents. A training tool called Emergo was used to mediate an engaging play-based discussion between a set ecosystem of participants.

The national Red Cross, women and other civil society associations, police, search and rescue actors were involved in the evaluation of previous responses to landslides, in the preparation and building of new scenario and new responses. This action lab methodology allowed participants, typically siloed, and disengaged, to share meaningful experiences and perspectives. To recognize new and important sources of information, to map vulnerable groups who typically fall outside of the dissemination channels, and to devise strategies to optimize the response. According to Ivonne, the initiative demonstrated how trust networks between community groups and civil organizations can make participation more equitable. And although they may differ in different cultures, they are an essential investment to scale and deliver interventions.

"We lack government accountability towards internally displaced persons"

Eria Serwajja (Development Studies Dep. Makarere University, Uganda) shed light onto several case studies of natural disaster response to landslides in Uganda. He pointed at critical gaps in communication between government and local populations affecting warning alert dissemination and response.

Local communities receive less than 10% of the information disseminated by central government. Although at higher administrative levels, the use of email, social media and other technology is helpful, the dissemination to lower administrative levels in disaster-affected villages, is done through radio and word of mouth. Much information is lost in this one-way communication stream. Not only is it potentially misunderstood and undervalued because of language and lack of access by vulnerable groups (e.g. women and persons with disabilities), but also because information does not translate to assimilation of risk. Local communities rely mostly on indigenous knowledge which, despite useful doesn't provide enough accuracy intensity and risk.

Following a critical event, communities are highly involved in search and rescue activities with little resources to cope. Subsequent resettlement interventions are considered unsustainable, inadequate and poorly articulated with livelihood activities and needs. The lack of sustenance opportunities after relocation, and a protracted situation of temporary housing, illnesses, and abuse by host population, leads to resented population groups returning to the disaster hit areas to restart their lives.

As a call for action on political support and leadership, Eria remarks the importance of community participation and ownership. Good practices look to leverage existing community structures and mobilization mechanisms to share information equitably, and in two ways, not only meant to sensitize but to make sense of risk and empower citizens to make decisions together about resettlement interventions that affect them. Technology may bring an impactful contribution too, provided that it is combined with sustained training, with actual presence of qualified researchers and engineers, and with the involvement of communities at risk.

"We need to democratize the word panic."

The Klimadigital project, presented by Ivan Depina (Associate Professor in geotechnical engineering, NTNU), focuses on identifying and addressing the societal risks posed by landslides and other geohazards of increasing frequency in Norway.

The project joins research institutions, industry, and public partners to develop a multimodal risk assessment framework that helps to study, predict and plan responses around those most potentially affected. Central to Ivan's participation is the development of a digital system based on Internet of Things technology and Geospatial Information Systems. The presented system allows the project to collect data *in situ*, over time, and to forecast and produce early warnings that are localized and inclusive.

Threat monitoring and warning systems rely on behavioural issues like trust and risk aversion to so data platform development can benefit from user-centred approaches that promote the understanding and work around how people naturally think and act. Data is not only important to inform and backup restrictive housing policies, but most importantly to give a sense of control to citizens, to engage and harmonize preventive and response strategies together with them.

Ivan closed his session by building a bridge to Uganda, where e.g. in Bubuda, landslides are a critical threat to thousands of farmers living in highlands, who are relocated but return for farming activities. Making this affordable technology and data accessible, could allow governments to plan and to make data-informed decisions. Where technology application (e.g. maps, sensors) is feasible, there are alternatives to engage community groups to collect data about risk and to reduce impact of disasters by building inventories through testimonies and newspapers, and enhancing indigenous knowledge and nature based solutions.

Communities affected by humanitarian crisis witness today an unprecedent degree of technology experimentation that is shaping the aid sector structure.

"Are you even there?"

Kristin Sandvik (Research Professor in Humanitarian Studies, PRIO) challenged the audience with an eye-opening account on humanitarianism and generative artificial intelligence (AI). From blockchain, to edible drones to AI. According to Kristin, this may very well be the one real game changer, because of how it feeds, and breeds, on *everyone's* input, of how it can create a misleading view of reality, and of how challenging it is to regulate. We may be faced with a technology that can truly shake the foundations of trust and impartiality humanitarian aid is built on. Relevant to the future of humanitarianism are two thought-provoking concepts: humanitarian extrativism and digital body.

Humanitarian extractivism is concerned with the evolution and ubiquity of information technology in humanitarian aid, and the shift from what was used to be a largely product-based industry, to one that is reliant on services and information. The trend leading to what we today call dataveillance and digital borders, threatens the human-centredness of decision making of iNGOs. Data, directly collected from those affected by humanitarian crises, increasingly determines who receives or does not receive aid. Those who are not registered, or who choose not to provide data, become invisible. It is crucial that we reframe experimentation in humanitarian innovation by never understating risks, not ignoring body of laws, and avoiding or, at a minimum acknowledging untested tools.

Digital bodies are digitally stored personal information in form of images, biometrics, DNS, etc. They exist in form of identities, "live" beyond a human being's lifespan, and their "death" is only recently being addressed. Beneficiaries of humanitarian aid have such digital bodies but hold no control over them. This merge of the digital and the universal legal identities is critical when made a condition to receiving aid. No longer does physical presence alone, or an interaction with humanitarian organizations suffice in response to crises. Data is collected, stored and shared among a network of actors (including country governments) bonded by a variety of agreements, may that be in camp settings or among nations. These actors can identify, track, analyse through algorithms and that is the basis for access to essential services. Unfortunately, in many humanitarian contexts, this causes severe vulnerabilities to affected communities.

Therese Pankratov (Special advisor, The Humanitarian Innovation Programme) shared a donors perspective from Innovation Norway who established a funding mechanism focused on de-risking iNGO partnerships with the private sector. In response to a situation where needs outweigh the available resources, and humanitarian responses are perpetually underfunded, organizations need to find new ways of working. The starting point for HIP is to identify priority needs in discussion with iNGOs. This is followed by local or global market dialogues where companies are invited to provide insight on possible technology and business avenues. These discussions inform the creation of calls for partnership proposals, usually not aiming at organizational change, but at any other type of solution that meets a particular need of affected populations in humanitarian settings.

"I would like to see more impact research, there is a significant ask, especially in tight financing."

Currently innovation Norway focuses on four key areas: Green response, protection, health and sanitation, innovative financing. These are areas that benefit from alternatives to traditional funding and partnerships because they are not core activities from iNGOs, and they require new skillsets and know-how. And this is the bottom-line of the challenge: there is a clash of cultures at the centre of these market-donor partnerships around the ethics of profit, the impact of globalization, and generally, the shifting role of NGOs in humanitarian responses.

While iNGOs remain the main voice of affected communities, defining their needs and solutions for funding, there is a risk of becoming unsustainable because of shifting trends in sector. How can donors keep a sustainable and consistent focus on impact, beyond these trends? According to Therese, donors need to keep investing in scale and in building relationships that go beyond the implementing organizations, to permeate to national actors too, through e.g. local companies, national legislators, etc. More research is needed in good practices and here, national and international learning institutions have a significant role to play. Universities and VETs are not typically nominated by NGOs as partners but may in fact be the answer to many sustainability issues.

"Are designers the negotiators we need?"

Orla Canavan (Strategic and human-centred designer), presented a statement on the importance and role of the discipline of Design in humanitarian aid and innovation by pointing at the disconnect between assessed population needs and service delivery. This gap is caused by the lack of a systems view on, not only needs but aspirations and desires too. To illustrate this point, Orla humorously deconstructed the interconnected "desires value chain" of humanitarian aid. These start from the individuals in crises-affected locations who are unable to help themselves, and follows onto those nearby who are able to help, all the way to donors. This deconstruction is a bold suggestion to rethink the architecture of the humanitarian system, and to accommodate to the needed distribution of resources across that value chain.

A human-centred design approach can be instrumental in the negotiation of distributed resources to meet desires and needs, and key to ensure that humanitarian innovation interventions are sustainable, as they root themselves and grow in form of new "human architectures". Sustainable innovations must acknowledge the roles of e.g. different social hierarchies in refugee camps, the role of media outlets in conflict, or of local administrative leaders in natural disasters.

What needs to change then? Humanitarian innovation leverages money through proposal writing. Typically, those who apply and request money for humanitarian interventions either believe that their specific solution needs to be funded or looks at where the money is to adapt their solution. According to Orla, the understanding of this dynamic needs to be at higher decision-making powers within iNGOs so to influence donors, policy makers, and even peer organizations to advocate and adopt an iterative/learning approach to needs-based aid, acknowledging all needs across the value chain are needed to create sustainable, full impact solutions.

"The ability to make data-informed decisions in academia is an important skill in migration policy"

Cláudia Pereira (Senior researcher and professor at ISCTE, former secretary of state for migrations in Portugal), closed the plenary with an authentic and inspiring call for policy innovation based on two distinct experiences of receiving Afghani and refugees from Ukraine in Portugal between 2021-22. She named two central initiatives carried out by the government, while sharing the challenges she and her team faced and the success factors of each intervention.

The first was the simplification and mainstreaming of the personal documentation processes in integration policies, by targeting and removing administrative barriers. This enabled refugees who arrived in large influx, in a short period of time, to initiate work and to access essential services, through social security, taxpayer and health system beneficiary numbers upon arrival. The second was the activation of networks between municipalities, and local non-governmental organizations. These networks, convened and proactively maintained, enabled highly contextualized, trusted, and scalable responses.

Notwithstanding implementation difficulties, Claudia argued that policy innovation is extremely necessary. According to her, the value that scientific approaches and evidence bring to public policy and leadership should not be underestimated. “We need new mechanisms to assimilate these experiences and learnings”, to ensure that governments and partners ask the right questions, look for answers in concrete data. This may be the only way to guarantee migrant and refugee integration is done with the required dignity.

WHAT'S NEXT

The *Humanitarian Design* seminar was held with the objective to identify priority gaps in local emergency response services, and to lay the ground for opportunities of joint efforts to respond to these gaps. The participants shared several perspectives about the state of the art in humanitarianism from different professional backgrounds, and their reflections were enriched with case studies and practical experiences.

Five key areas for further research, investment and collaboration were identified. The identification of these areas resulted from a group reflection about the key drivers of change towards society preparedness and humanitarian action and a prioritization of competences that are required to bridge the divide between governmental and non-governmental ways of working in a sustainable and decentralized manner.

1. Global leadership informed by data and foresight

In today's tense climate, at the verge of breakdown of our planetary equilibrium, preparing the future of emergency response is more relevant than ever. The fast-paced development of information processing technologies, and the growth of decentralized networks, offer a tremendous opportunity to anticipate, sense and respond better, but above all, to learn. However, these tech developments are greatly influenced by large global powers, political and commercial, and increasingly binary, who regulate how data across the world is collected, used, stored or destroyed. So, as technology holds the ability to humanize and to connect, it also can dehumanize and divide. At the bottom line, future societies need leaders that understand how to work with technologies and make ethical use of data, leaders that will commit to the perpetual negotiation needed to ensure the right decisions are made, and the right futures unfold.

2. Decentralized networks of trained professionals

Cooperation and the ability to actually collaborate are essential conditions to establish and sustain a decentralized emergency response system. This is assumedly a complex system involving a multitude of actors that do not usually work with each other, that may not have protocols and processes in place to enable cooperation. To enable a collective and orchestrated anticipation, planning, decision making and crisis responses, an intentional investment by authorities and NGOs is required to strengthen the capacity of existing networks of professionals and civil society groups; to foster new strategic partnerships; and to design consensual multilevel governance models.

3. Community at the centre of emergency response

A consistent and intentional investment in community engagement needs to be at the forefront of local humanitarian action, to articulate (and prepare for) the contrasting pace between planning and response. Societies need a commitment to transform local emergency responses from a top down, asymmetrical system to a community centred one. Current systems have several system vulnerabilities and policy gaps, leading to community groups, or community members with given status being left behind for not holding equal rights to others. To centre responses at the community level, a significant mindset transformation at the community itself needs to happen to accommodate to the diversity and richness at the intersection of different cultures

e.g. migrant communities, disability, age or minority groups. This can only happen through transformative learning and critical reflections where individual experiences and social dynamics are leveraged to create new narratives that inform policy and inspire action

Through such continued engagement it is possible to create enabling information. Enabling information is transmitted through trustworthy communication channels and easily accessible i.e. affordable, inclusive, and considerate of social/cultural/religious norms. When information is engaging, not only *informative*, it is possible to increase and equalize the agency of all citizens to actively take part in response.

4. Investments along the emergency continuum

It is well known that a sustainable system of emergency response requires consideration for all phases of the disaster management lifecycle: from anticipation, to response, to rebuilding. Such system, to be sustained, must stand on an apolitical commitment and vision, and on a long-term funding strategy. And this can be a true a game-changer. Ideally co-created with donors and investors, and based on concrete evidence on impact, such apolitical vision (and investment) can go beyond punctual responses and instead focus on transformation and change towards an autonomous independent and flourishing system.

There is a thrilling momentum ahead inspiring the shift from top-down, uncoordinated and delayed responses, to anticipation-focused, decentralized, and collaborative responses. More than ever, non-traditional actors like the private sector and local civil society groups gain visibility at a considerable scale offering opportunities to rethink old models, identify new sources of funding, new actors and new approaches. Above all, these are opportunities to learn.

5. A tangible output of humanitarian Design

The variety of Design disciplines can be put to good use for the creation and improvement of local emergency response systems through enabling technology and democratized access to services co-created with local populations. Design education in academia has an important mediation role to play as a bridge between different technical, scientific, and practical professional fields. A Designerly approach to humanitarian action is fundamentally focused on applied learning through co-created experiments. These Design experiments span across disciplines of user behaviours and services, products and technology, businesses/industries and policy. As such, Humanitarian Design must continue to add value through the creation and testing of new products and services, physical and digital interventions.

An emergent exchange community

The participants' group agreed to start nurturing an exchange platform, and committed to share and learn, publish and disseminate knowledge on key strategic areas that may contribute to the body of knowledge and practice relevant to building awareness and capability at the intersection of public responses and humanitarian crisis.

FEATURED PROJECTS

Global updates from HumAct

"Humanitarian Action: Climate Change and Displacements" (HumAct) is a 3-year partnership between African and European higher education institutions financed by the Erasmus+ programme. The project responds to the need of professionalization in the humanitarian sector in these conflict and natural disaster affected countries, as well as the need to enhance capacities in the field of higher education. The project is coordinated by ISCTE – University Institute of Lisbon (Portugal) and includes the National and Kapodistrian University of Athens (Greece), the University of Cape Verde and University of Santiago (Cape Verde), the Pedagogical University, University of Pungue, and University of Rovuma (Mozambique) as partners.

Odair Varela (MSc program director and researcher, School of Business and Governance, University of Cape Verde) presented the context of humanitarian action in Cape Verde through the types of most prevalent natural disasters i.e. fires, floods, landslides, and their impact over the last century. The presentation included a reflection about the current humanitarian response ecosystem, the challenges faced and the success factors of multi-stakeholder interventions.

Hélio Nganhane (Lecturer and researcher, Universidade Pungue, Mozambique) presented a very rich description of the demographic and geological context of Mozambique, and of the extreme burden of frequent natural disasters on infrastructure and on population. Mozambique is one of the 10 countries with the highest number of internally displaced people in the world, making the investment on response and recovery capabilities very relevant.

Júlio Masquete (Professor, Rovuma University, Mozambique) shared insights on the last decade crisis leading to internally displacement in Mozambique. His presentation had an emphasis on a community socialization program aimed at conflict mediation between internally displaced and host communities. This successful intervention resulted from a collaboration between academics, local humanitarian organizations, forcibly displaced women and host communities in Malica, Niassa.

Humanitarian Design course

NTNU created a humanitarian design course aiming at developing students' knowledge and familiarity with methodological tools to sustainable and ethical design interventions, from technology to services and systems for a humanitarian market. This course introduces students to contexts with high unpredictability, vulnerable populations and with a variety of stakeholders that include humanitarian organisations, private and public stakeholders. Several disciplines come into play in humanitarian design e.g. design anthropology, service innovation, scenario building, contingency planning and entrepreneurism. During the seminar, two student projects were presented: The design of an inclusive early warning for persons with disabilities in Uganda, and the design of a disposal system for de-mining personal protective equipment in Zimbabwe.