RISK AWARD

RISK Award
First-hand news
Best project proposals 2015

GLOBAL RISK FORUM
GRF DAVOS
GRF

UNISDR

Munich Re Foundation
From Knowledge to Action

Contents

The projects appear in alphabetical order according to the names of the applying organisations.

Disaster risk reduction – people-centred, innovative and sustainable

Humanity finds itself confronted every day with the risk of natural and man-made disasters. Cities and developing countries are particularly strongly affected. Due to population growth and the increasing intensity and frequency of catastrophic events in many regions of the world, it is more important than ever to enhance people's resilience.

Disaster risk reduction plays an important role. Resources must be used wisely and efficiently. The RISK Award partners UNISDR, GRF Davos and Munich Re Foundation recognise three important key issues: people-centred solutions, innovation and sustainability. Activities for risk reduction must integrate the people at risk and make use of their traditional coping techniques and knowledge. General solutions are often likely to fail, approaches should be tailor-made. The world is developing at vast speed, sometimes leaving adequate risk mitigation measures behind.

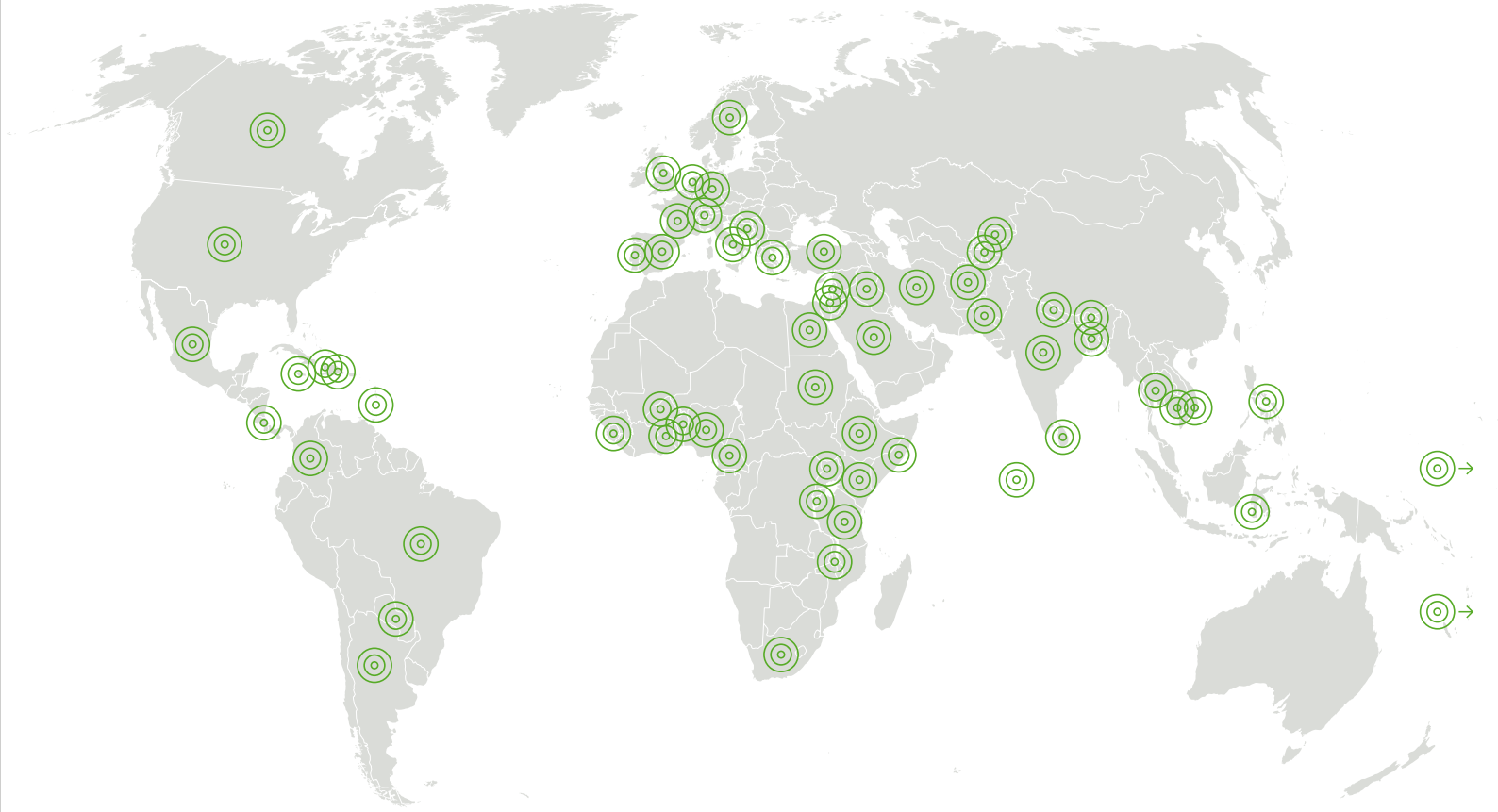
As a result, modern and innovative ideas are indispensable. Pilot projects in disaster risk management often last two or three years. If the results are not integrated into political frameworks at local, regional or even national level, the positive effects can vanish. To be sustainable, solutions must integrate the socio-political, economic and hazard exposure aspects. We wish you a pleasant read.

Christian Barthelt, RISK Award secretariat

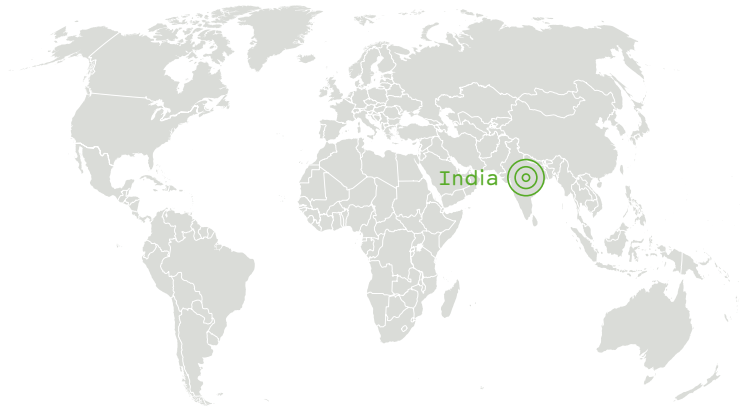
The 2015 RISK Award applications

145 organisations from 62 countries have applied for the third RISK Award. The project proposals range from specifically local activities for the promotion of risk reduction to holistic and systematic ideas at national level. This publication summarises a jury selection of the best project proposals in 2015. They provide valuable information as to how effective disaster risk reduction projects can be implemented.

For this publication we received photographs and reports of varying quality and types. The presentations may therefore vary in style. It must also be taken into account that different cultures use different languages. The most sincere thanks of the RISK Award partners UNISDR, GRF Davos and Munich Re Foundation go to the project owners and contributors for their efforts and dedication.



Community self-assessment and planning with women's participation for disaster risk reduction in vulnerable communities



The project will be a global innovation as it will address three aspects hitherto neglected vis-à-vis disaster risk reduction in disadvantaged communities in developing countries: 1. Empowerment of the vulnerable slum communities from urban areas to assess own disaster preparedness, disaster risk reduction planning and development of participatory visual tools for self-assessment by the slum community, 2. Participation of women who are among the most vulnerable to disaster impacts, 3. Development of children-friendly visual tools.

"We are not aware of disaster risks and their mitigation and preparedness. This project will be very crucial as it will build our capacities and community resilience to take adequate measures for mitigating disaster risks. We want to secure a safe future for our children."

Lakhsmi Koli,
a targeted beneficiary from
the 'Mahatma Gandhi Slum'
in Pune

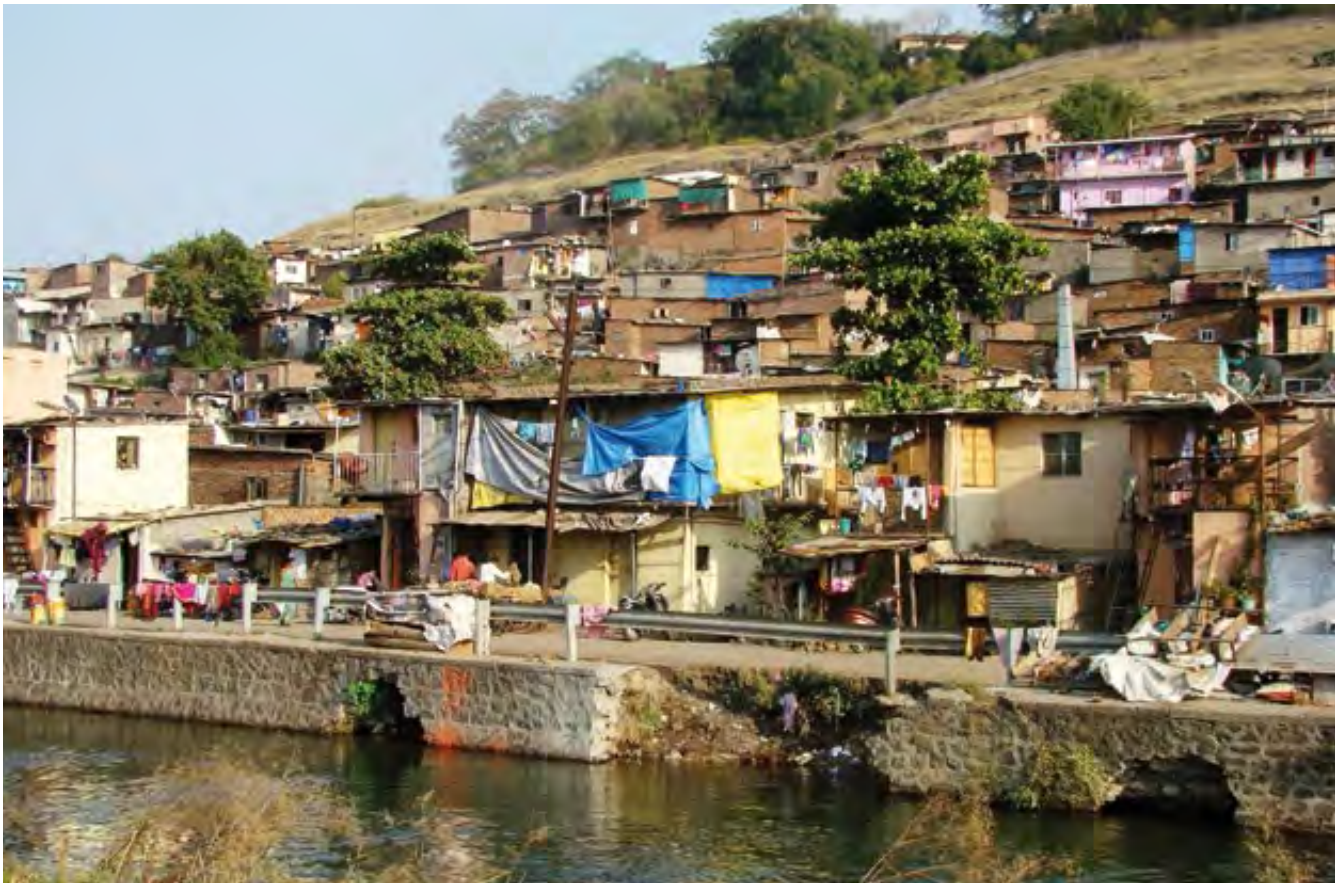
Pune is one of the most multi-hazard-prone districts in the country. A large proportion of Pune's population (21.1%, 0.69mn slum population, 0.151mn slum HHs) resides in 477 slums in uninhabitable conditions and is highly susceptible to vulnerabilities on account of natural disasters (such as landslides, floods, heavy rains, earthquake, cyclones etc.) or man-made disasters (fire, collapsing buildings etc). At least nine large slum pockets in Pune are located on hills/sloping lands and are prone to landslides during heavy rains, at least eleven slum pockets are located on the riverside in high flood zones prone to flooding during monsoons. A new emerging threat is of urban flooding due to unplanned development, high density and the lack of basic services and infrastructure in slums. Pune city moreover falls under the Seismic Zone 3 threshold thereby adding the vulnerability of slums and slum dwellers to earthquakes. Apart from the natural disasters, this population in deprivation is also at risk of man-made disasters such as fire, collapsing buildings, electric shock, hazardous waste etc. Women and children are most heavily affected by the disasters.

Design: The project will address all three aspects vis-à-vis disaster risk reduction, namely 1. Disaster risk identification and assessment, 2. Preparedness for effective response and 3. Knowledge management and education.

Goals: Disaster risk reduction in urban vulnerable communities in slums with a special focus on children and women, through

- Empowerment of the vulnerable slum communities from urban areas to assess their own disaster preparedness and plan disaster risk reduction,
- Mobilisation of proactive participation of women who are among the most vulnerable to disaster impacts,
- Development of a cadre of community volunteers as master trainers and
- Development of children-friendly information, education and communication (visual tools).

Beneficiaries: The beneficiary of the project will be a slum dweller population of more than 25,000 people from ten slums in the city of Pune.



'Parvati' – a slum located on hill slopes sprawling up to the river making the population extremely vulnerable to landslides and river flooding during monsoons.

'Mahatma Gandhi Vasti', a densely populated slum characterised by unplanned development, located close to railway lines on the western side and adjoining the high-way on the eastern side, is at high risk of rail and road accidents, urban flooding and devastating fires.

All India Institute of Local Self-Government (AIILSG)

www.aiilsg.org

Solid, affordable and eco-friendly building material for low-income groups in Bangladesh

Five million households do not have adequate shelter in Bangladesh. One of the main reasons for this is that solid houses are too expensive for large sections of the population so that they use substandard building material such as corrugated iron sheet. Building Pioneers makes solid houses more affordable by providing Compressed Stabilised Earth Blocks (CSEB) to the market in Bangladesh – a construction material that achieves approximately 25% costs savings in comparison to conventional brick walls.

Clockwise from top left: Substandard corrugated iron sheet house; Durable CSEB house; Labourer operating the CSEB "Auram Press 3000" designed and developed by Auroville Earth Institute; CSEB with interlocking shape that dispenses with mortar;

Did you know that there is a way of making houses affordable for millions of people? CSEB is a proven technology that achieves approximately 25% costs savings compared to conventional brick walls. The cost advantage comes from the less expensive production process and the smart interlocking building system that requires less mortar and no masons. CSEBs are resistant to water, fire, storms, insects and mould. They are durable and have excellent thermal properties.

Did you know that CSEB is an opportunity for creating jobs for thousands of unskilled labourers? Building Pioneers empowers unskilled labourers as CSEB producers in cooperatives of five people. They obtain production equipment, training and raw material through Building Pioneers, run the production and sell the CSEBs back to Building Pioneers, which then takes care of sales and distribution.

Did you know that two million tons of firewood are burned in Bangladesh's kilns every year to produce more than twelve billion bricks? The production of CSEB dispenses with curing in kilns. This reduces CO_2 emissions by 90% compared to fired clay bricks and prevents deforestation for firewood.

Did you know that there is a way to provide affordable, solid and eco-friendly building material on a large scale? Building Pioneers is conceived as an income-generating social business. The model is financially attractive for cooperatives, distributors, customers and Building Pioneers alike. Therefore it has great potential scale and makes CSEBs available in all regions of Bangladesh.

"If we want to solve the global housing crisis, we cannot rely on charity alone. We need business models that are financially sustainable and scalable."

Ava Mulla,
co-founder and CEO of
Building Pioneers

Franchise-like business model

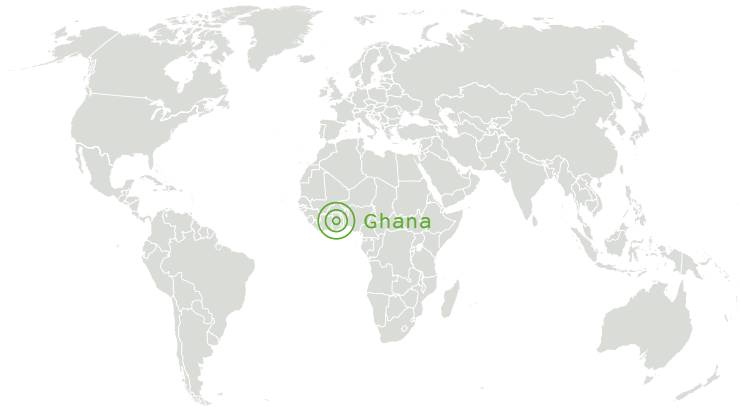
Cooperatives obtain training, equipment and raw material from Building Pioneers against a fee financed with a microloan. They produce CSEBs, sell them to Building Pioneers (purchase guarantee) and thereby earn a reliable income. Building Pioneers sells CSEBs to customers and generates revenue.

BUILDING PIONEERS

Building Pioneers

www.building-pioneers.org

Climate change adaptation in northern Ghana enhanced project extension (CHANGE)



Radio listening group at Pieng, Upper West Region. Innovative participatory radio campaigns and weather forecasts improve climate change and risk reduction knowledge with 85% of smallholder farmers indicating that they rely on local language weather forecasts from the project's participating radio stations.

The CHANGE extension project prioritises disaster risk reduction (DRR) interventions to address the urgent need of northern Ghana's female and male smallholder farmers to understand the causes and effects of climate variability and climate change and so reduce and manage climate-related risks. By supporting climate change adaptive initiatives at grass-roots level and promoting the integration of DRR into agriculture and livelihoods programming, CHANGE-DRR will strengthen the capacity of smallholder farmers to reduce and manage climate-related risks.

CANADIAN FEED THE CHILDREN

Canadian Feed The Children (CFTC)

www.CanadianFeed TheChildren.ca

Climate change is taking a significant toll on the 4.2 million people living in northern Ghana. With temperatures on the rise and rains becoming more unpredictable, the smallholder farmers of Ghana's northern regions are increasingly unable to make a living or feed their families. Built around the following pillars, the CHANGE-DRR project will ensure that 78,500 smallholder women and men farmers in 17 communities in Ghana's Northern, Upper West and Upper East Regions will have increased access to information about climate change and its effects, increased capacity to reduce the risk to livelihoods and well-being and enhanced community resilience to climate-related hazards.

1. Make DRR a local priority by using people-centred approaches to engage farmers, communities and local governments in vulnerability assessments and community and district-level action plans.

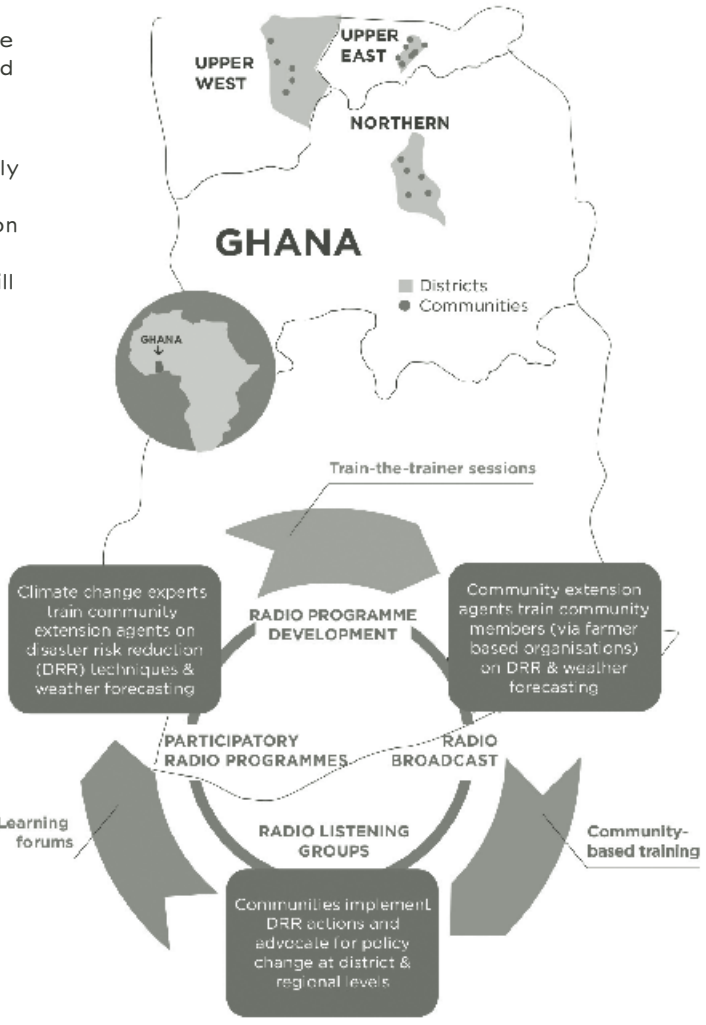
2. Identify, assess and monitor disaster risks and enhance early warning by improving the availability of quality information about weather and climate hazards for farmers while building their capacity to make informed agricultural planning and risk reduction decisions.

3. In addition to providing weather and climate information through Effective Radio Advisory Services, CHANGE-DRR will use an innovative participatory radio campaign (PRC) model to improve climate change and risk reduction knowledge to build a culture of safety and resilience.

4. Reduce underlying climate change and climate variability risk factors for female farmers especially by helping them to diversify their livelihoods, increasing their incomes from sources of production and trade that are less sensitive to the impacts of climate change (such as basket weaving), which will also have environmental co-benefits.

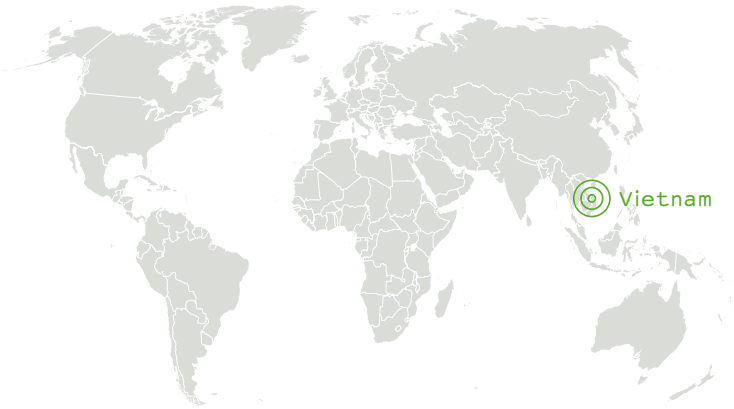
"We used to have problems like floods and droughts, but no one knew how to tackle them. Training has helped us adjust to climate risks."

Gilbert Atanga,
Community Extension Agent



The train-the-trainer model of climate risk reduction training combined with radio programming is the power behind CHANGE-DRR. The model expands the project's reach and ensures it is scalable, owned by the communities themselves and is also sustainable.

Climate-change-resilient farming using the hybrid system



Vietnam is one of the most vulnerable countries in regard to the impacts of climate change such as floods and droughts. The agricultural sector is highly affected due to its importance to the country's economy, its role of poverty reduction and food security. The proposed project aims to assist farmers at local level in strengthening their technical capacities for integrated disaster risk management and climate change adaptation action. It proposes to do this through supporting farmers in improving the food quality and safety of their produce by means of effective drying and storage systems.

Farmers are often faced with challenges when it comes to drying and storing their crops in times of harsh weather conditions.

The Centre for Creativity and Sustainability assists farmers at local level in strengthening their technical capacities for integrated disaster risk management and climate change adaptation. This project will be implemented in the Ba Vi district, a suburb of Hanoi in which 60 farming households have been facing harvest losses due to climate change events, such as out-of-season rains, flooding and drought.

At present, farmers are drying their products in open spaces that are exposed to wind, rain, pollution and insects. The hybrid system that will be designed and implemented at the farm in collaboration with the farmers will combine a biomass gasification system and a solar heating system to create a space in which farmers can dry their products for preservation and easier transportation. Combining the low-cost, accessible, rapid-heat sources from the gasification system and the natural warmth from the solar heating system, farmers will be able to rapidly dry their vegetables, fruits, spices, and herbs.

Unlike the natural sun-drying method, which allows only a single layer of drying material, our hybrid system consists of ten layers of drying racks and allows temperature regulation. This critically increases the productivity and yield and reduces labour compared to the current sun-drying method where farmers must spread their crops in the mornings and collect them in the afternoon for several days until they are completely dry. By using this hybrid system, farmers can dry and sell their products on the market for a higher value as a result of the quality achieved by the natural preservation methods.

"Unpredictable weather has been harming my farm and my livelihood. Farmers need a cheap and effective solution to keep crops safe from this changing weather."

Tran Thi Thom,
project beneficiary

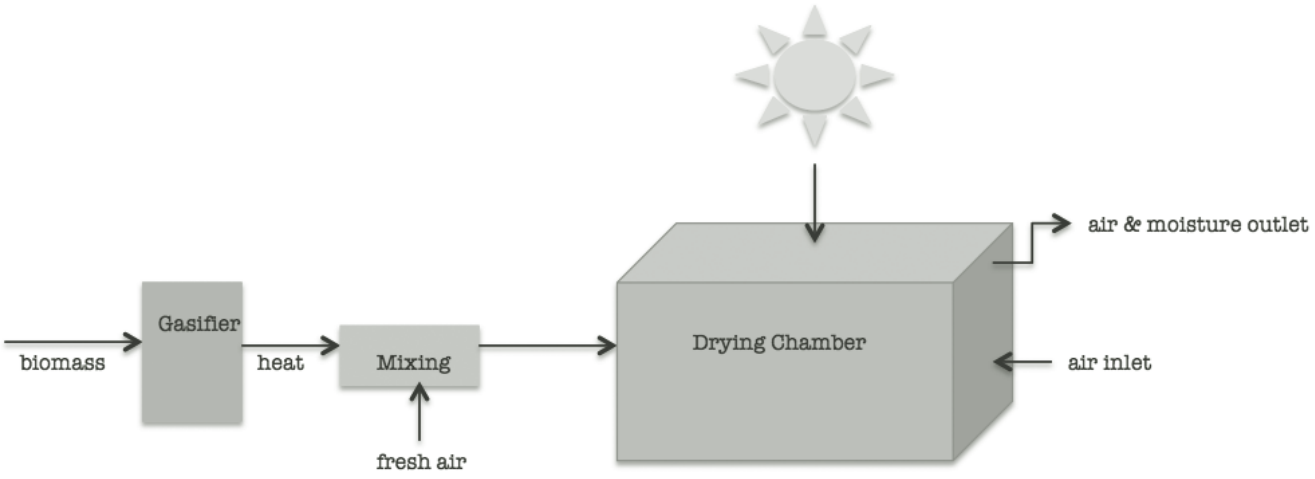
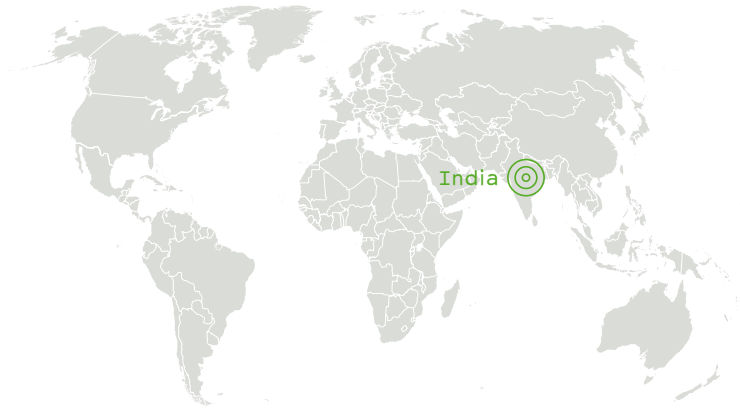


Diagram of the hybrid system which CCS proposes to build using the existing biomass gasifier and a solar heating chamber. This hybrid system uses all natural sources of energy, is easy to use and available to farmers at a low cost.

Centre for Creativity
and Sustainability (CCS)

www.ccspin.org

Building resilient communities



The "Building resilient communities" project will equip 59,000 people in 82 disaster-prone communities in the Tuticorin district of Southern India with the skills and knowledge to mitigate the impact of disasters. These communities are organised into community-based organisations (CBOs) and federated at village, district and apex levels to respond to various forms of disasters. The project follows a child-centred approach and empowers children, young people and other key stakeholders in association with local CBOs to reduce and manage risks.

"Our project helps 59,000 people in 82 vulnerable communities to prepare, respond and manage disasters."

Josephine,
Chairperson, Village Knowledge Centre (VKC), Manapad

Thoothukudi District, India, is prone to chronic droughts, cyclones, storm surges and tsunamis, made most devastatingly apparent by the catastrophic losses experienced during the Indian Ocean Tsunami of 2004. The lack of knowledge about disaster management and the capacity to mitigate the effects results in farmers and fishermen suffering repeated losses, exacerbating their own vulnerabilities – and most particularly increasing the risks to their children.

Project objective:

The ultimate goal of this project is to build disaster-resilient communities in protected environments equipped with adaptive skills through participatory and sustainable development processes.

The project aims to equip 82 specific communities organised in CBOs, equipping children, young people, school teachers, women and leaders with the ability and capacity to respond to disasters appropriately. The project will also equip key stakeholders with the knowledge and training on community-based disaster risk management resulting in the formation of disaster response task forces in every village with specialised skills to respond to and manage disaster response effectively.

The project will integrate both risk reduction and emergency preparedness towards a participatory development process. The CBOs will act in collaboration with concerned departments and disaster management bodies at all levels for risk reduction and risk management and partner at various levels to continue risk mitigation activities and community development initiatives.

The project duration is 18 months with an overall budget of €137,500.

A task force in Manapad coastal village preparing for rescue operations.

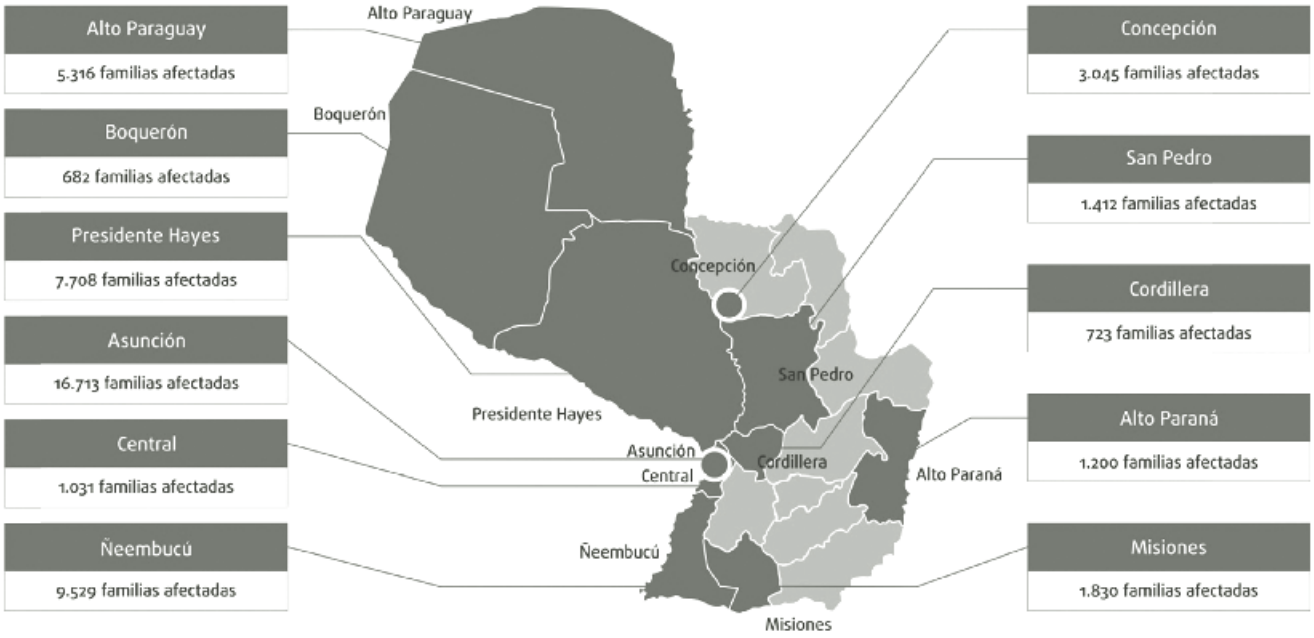
Map of Manapad coastal village showing different roads and streets to reach the safest places during disasters. This map is displayed in the Village Knowledge Centre for public viewing.

Christian Children's Fund of Canada

Christian Children's Fund of Canada (CCFC)

www.ccfcanada.ca

Kuarahy: large-scale 2014 flood disaster recovery and long-term people-centred multi-hazard solution plan in three departments in Paraguay



In 2014, Paraguay suffered the greatest flood in the past 30 years which affected over 250,000 low-income citizens, forcing them to move to precarious shelters. After the flood, people returned to their homes to rebuild their communities. With support, they can design a holistic development plan for a long-term solution by promoting community action to strengthen social groups and the role of civil organisations as resilience and sustainable development stakeholders.

In 2014, Paraguay suffered one of the biggest floods in the past 30 years. A total of 49,189 families was affected. The map shows the most severely affected regions in the country and the number of families affected in each of them.

The flood that Paraguay suffered in 2014 was one of the biggest floods in the past 30 years and affected more than 250,00 people, in particular the poor populations living in the slums around the Paraguay and Paraná rivers and the indigenous population in the occidental region. With the help of citizens from all around the country, the communities affected by the flood last year developed a networking system to face the disaster and compensate for the late and limited government assistance.

The 2014 flood showed the solidarity and dignity of the people and the resilience that the communities, especially the most badly affected vulnerable groups – poor people and indigenous populations – are able to build and sustain. However, this example and expression of solidarity must be organised.

The main goal of the project is to design a multi-hazard, people-centred disaster risk reduction programme with holistic development plans for vulnerable groups to find a long-term solution for the 2014 flood in five communities of Asunción, Central Department, and the Chaco. It will promote community action to strengthen social groups and the role of its civil organisations as resilience and sustainable development stakeholders and help build cooperation networks in the public and private sectors.

The project focuses on community participation and the reinforcement of social civil organisations, understanding the role of these organisations as risk reduction and resilience builders and as development stakeholders.

"We experience floods every year, but this was the biggest. In our community we look forward to a long-term solution."

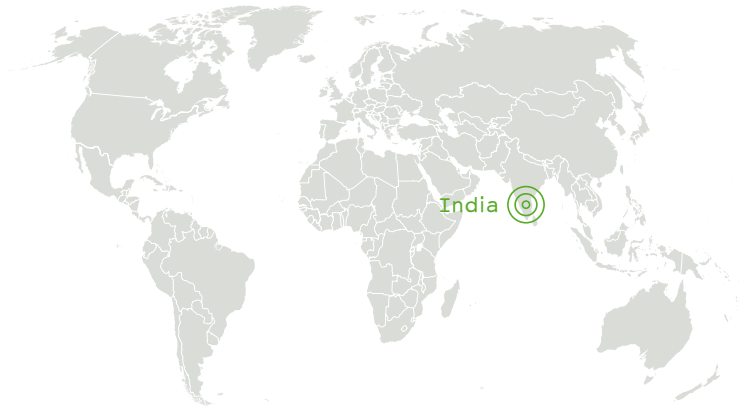
Rosa Quintana,
flood victim

The flood demonstrated the solidarity and resilience of the communities, which developed a networking system. The main challenge now is the development of multi-hazard, people-centred, disaster risk reduction including a holistic development plan to achieve a long-term solution to floods and other hazards.

Cultura y Participación (CyP)

www.cyp.org.py

Building climate-smart communities (CSC) to combat risks in the semi-arid regions (SAR) of Southern India



The southern peninsular of India is prone to multiple and recurrent risks such as droughts, cyclones and floods. Approximately half the population in this region works in agriculture. Uncertain rainfall, prolonged spells of drought and market uncertainties often force them to leave their lands fallow, borrow from local moneylenders at high interest rates for survival or migrate to nearby towns. This project would help them build resilience by intervening with sustainable soil, water and agricultural practices.

Farm ponds are the most crucial "shock absorbers" for farmers involved in rain-fed farming. They provide life-saving irrigation for the crops during critical growth phases if a prolonged dry spell sets in.

Project goal: "To build climate-smart communities capable of adapting to changes and overcoming risks through independent and collective action for achieving livelihood and ecosystem stability."

The repetitive nature of the disasters in this region has put the agrarian community at high risk in the semi-arid regions (SARS) of Southern India. Multiple risks and stressors, and the uncertainties associated with them, can be viewed as prime factors aggravating vulnerability and undermining community adaptation and resilience to climate stressors in SARs. Addressing climatic issues requires large-scale and holistic intervention at community level. The DHAN Foundation believes in community-led development and action for addressing the issues. It considers the poor and their institutions as partners and enables them to achieve the desired development through their own institutions.

The project addresses multiple risks by encompassing components such as knowledge management, risk transfer through microinsurance, micro weather stations to support insurance products, climate-resilient agricultural practices, improvement of the harvesting potential on common and individual land, improvement of water utilisation efficiency and soil health. The target households are the poor and vulnerable farmers who would otherwise change their livelihood due to income and food insecurity aggravated by the complexity of risks associated with their current farming practices. The project facilitates access to a mix of traditional and modern knowledge to help cope with these risks. It would impact 10,000 households directly and 15,000 households indirectly.

"Farmers know what their needs are. They are mostly unorganised and do not have access to the entitlements meant for them from the mainstream institutions. The project envisages that alone by organisation in self-managed institutions and creating space for collective action, they can overcome risks and achieve food and income security."

M.P. Vasimalai,
Executive Director,
DHAN Foundation

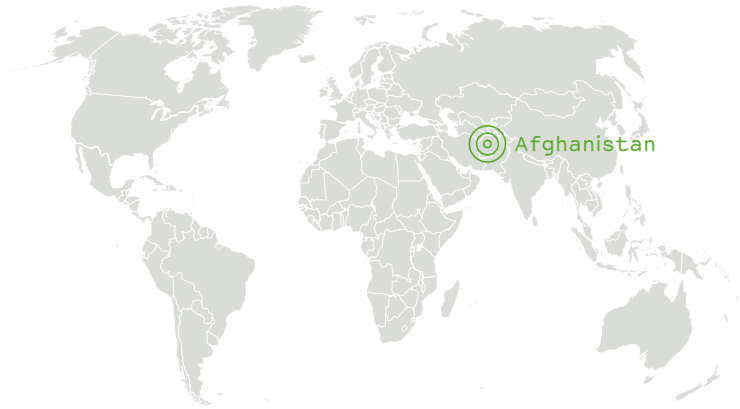
The project proposes to address various risks arising from climate change in the Chittoor district of Andhra Pradesh, the Tumkur and Yadagir districts of Karnataka and the Kancheepuram and Thiruvallur districts in Tamil Nadu.

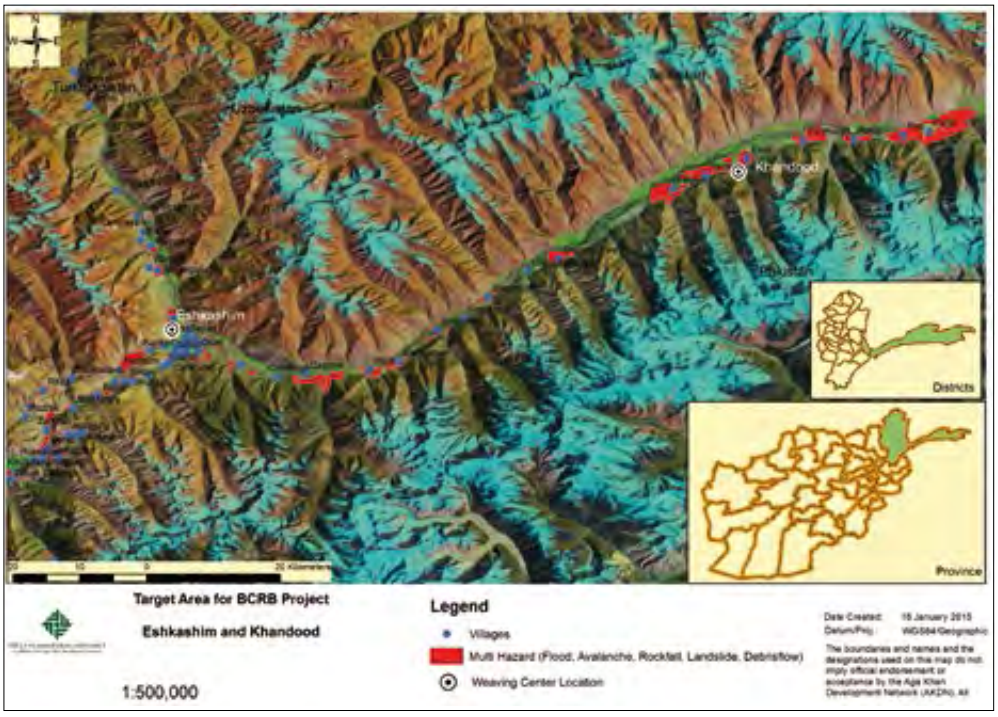
DHAN Foundation

Development of Humane Action Foundation (DHAN)

www.dhan.org

Building community resilience in Badakhshan (BCRB)





The roads to Badakhshan's provincial capital, Faizabad, are in very poor condition and are often closed due to snow, landslides or flooding. In this context, sustainable solutions that enable self-reliance and generate economic opportunities for women will have a particularly powerful impact.

Working primarily with women from some of the poorest regions in Badakhshan province, Afghanistan, BCRB will pilot a holistic social enterprise model so that local people can reduce disaster risks and diversify their sources of income. The project will establish two gabion-weaving centres (GWCs) to operate as community-owned enterprises and training centres. Using a market-oriented approach, the centres will improve disaster preparedness, mitigate disaster risk and increase socio-economic resilience.

FOCUS HUMANITARIAN ASSISTANCE

Focus Humanitarian Assistance, Afghanistan (FOCUS, A)

www.akdn.org/focus

BCRB plans to sustainably improve the socio-economic and disaster resilience of communities in some of the most remote regions of Afghanistan by enabling them to mitigate the risks of landslides and flooding more effectively. BCRB will train local women to manage and run two gabion-weaving centres (GWCs) in the Ishkashim and Wakhan districts in the far north-east of Afghanistan. Local gabion production will make gabions less expensive for communities and relief organisations and pre-positioning will enable local organisations to address disaster risks much more quickly. The GWCs will become dynamic business and training centres that will empower women and enable local people to understand and address their risks more comprehensively. GWC participants will also act as disaster risk reduction agents, disseminating information about risks and mitigation measures within their communities.

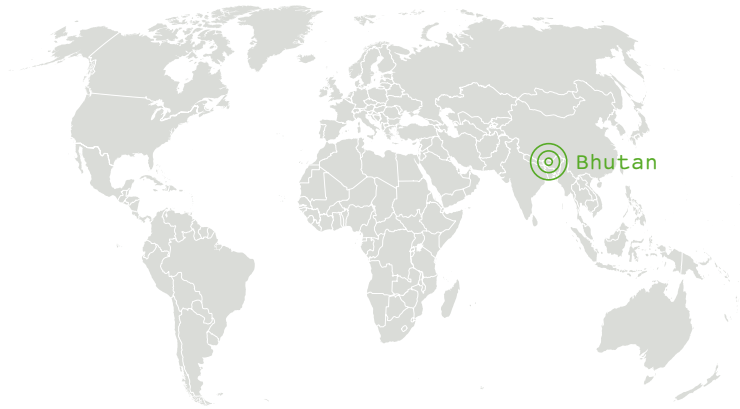
Badakhshan is characterised by high elevations, poor agricultural productivity and extremely harsh winters. The population is often food insecure and very vulnerable to natural hazards. Local people and their institutions are used to responding in the event of a crisis, though they often lack the knowledge and means to do so in an efficient manner. Using a community-based and market-oriented approach, the GWCs will offer local people the opportunity to develop practical skills that will enable them to improve their livelihood opportunities as well as their resilience to natural disasters.

"This project will let people understand that women can be involved in any activity and can help their community."

Fatima Akbary,
FOCUS Team Leader

The use of gabion-baskets produced and sold locally can have a significant impact on a community's ability to prevent and mitigate disasters including landslides and flooding. In addition to this, the participating women will work outside the home, offering new opportunities for social and economic empowerment.

Improving rainfall forecasting to increase the rainfall and flood resilience of Bhutan's subsistence farmers



Bhutan's increasingly erratic weather and extreme rainfall are especially impoverishing to small-scale subsistence rice farmers, who account for more than half of Bhutan's agriculture-based economy. Unanticipated rains at harvest time can destroy their crops, and many live in areas subject to devastating floods. This project brings reliable and understandable rainfall forecasts and warnings directly to vulnerable farmers, so that they can make informed decisions to protect their lives and livelihoods.

"Erratic monsoons, cyclones, wind and hailstorms have caused heavy losses. Many households lost 80% – some 100% – of their crops to Cyclone Phailin."

Ganesh B. Chettri, Officiating Director General, Bhutan Department of Agriculture

Forecasts and messages developed through this project will help subsistence rice farmers anticipate and respond to extreme rainfall. The goals are: 1) To enable farmers to receive, understand and act on rainfall forecasts, 2) To build Bhutan's climate forecasting capacity, 3) To position Bhutan to implement a national rainfall and flood warning programme.

Rice farmers have relied on ancient customs and auspicious dates to sow, plant, transplant, treat pests and to harvest. Climate change now undermines that approach, but farmers have lacked climate information that could help them adapt.

GeoHazards International will help develop a new programme that brings daily rainfall updates via mobile phone directly to farmers. Many people cannot read, so Bhutan's Department of Agriculture will create voiced forecasts and messages that encourage action, such as "Major storm arrives Tuesday. Harvest after." Farmers, village leaders and agricultural extension agents will help test and refine the messaging. With experience, farmers can compare the forecasts with actual weather conditions and develop confidence that the advice benefits their farms.

To track rainfall risk, Bhutan's Hydrometeorology Department will learn to use advanced climate science tools that forecast rainfall patterns several days in advance. They will monitor regional weather data and communicate daily with Agriculture and Disaster Management departments which will use strategies from the pilot programme to create a national early warning system.

Left: Paro Valley, a major rice growing region in Bhutan, is the location for the pilot programme. Most rice farmers depend on rain-fed irrigation and at harvest time leave cut paddy to dry in the field.

Right: Rice farmers will receive daily forecasts and warnings that they can understand, trust and act upon. Increasingly extreme weather has disrupted the traditional farming calendar and left them vulnerable to crop loss.

To track the rainfall risk, Bhutan's Department of Hydrometeorology will learn to use advanced climate science tools to forecast rainfall patterns several days in advance – a boost for current capacity. The Climate Forecast Application Network of the Georgia Institute of Technology will mentor the scientists.

GeoHazards International

GeoHazards International (GHI)

www.geohaz.org

Altos de la estancia, Ciudad Bolivar, Bogota: a case of community resilience to build up a metropolitan park

The project will promote the transformation of Altos de la Estancia, a high-risk area in the South of Bogota, into a Metropolitan Park and strengthen a resilient community through capacity-building to increase governance within the territory and adaptability to global climate change. The landslides affected nearly 73 acres. It was necessary to resettle around three thousand families, combining technical expertise and financial resources to reduce their level of vulnerability.

The implementation of innovative and low-cost technologies to control land erosion, superficial run-off and landslides has shaped the landscape of the park inviting people to walk through the public spaces. This is part of the recovery process implemented by the government, the community and academia.

The "Bogota Humana" Bogota Development Plan aims to overcome social segregation, to adapt the territory around water sources and to strengthen governance. It includes a risk management programme that promotes adaptability to climate change effects combining institutional, territorial and sociocultural approaches. Within this programme, one of the goals is to recover Altos de la Estancia. During the past year, a specific project has been implemented through a cooperation agreement with IDIGER, the Botanical Garden of Bogota and the UNESCO Chair on Sustainability at the Polytechnical University of Catalunya with its joint office in Colombia represented by the Technological University Institution of Antioquia. It plans to implement social and environmental measures to recover the high-risk area and develop a participatory vision plan for the park.

This project has successfully set up five community initiatives enabling people to execute mitigation risk measures that increase their sense of ownership of the park. One of the communitarian organisations, for example, is implementing bioengineering works to control water flow in the area. This was the first step towards the creation of a resilient community. Nevertheless there is a need to strengthen this intervention and continue working with the community to consolidate a public space for the city and its metropolitan area and also create capacities for human development in the area on a sustainable basis.

"The achievements in Altos de la Estancia are a living testimony of a humane Bogota; a city that adapts to climate change and dignifies its inhabitants."

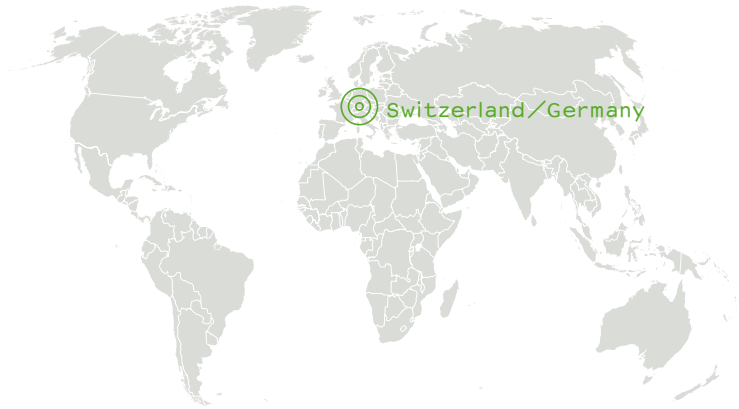
Duvan Hernan López, Deputy on Risk Analysis and Effects of Climate Change, Institute for Risk Management and Climate Change of Bogota

Communitarian, cultural and recreational activities are organised by the government institutions and the community-based organisations to increase ownership and redefine the utilisation of the high-risk area of Altos de la Estancia for other purposes to balance out the current public-space deficits in the city.

Institute for Risk Management and Climate Change of Bogota

www.idiger.gov.co/altos-de-la-estancia

Openstreetmap crowd-sourcing as a tool for gathering world-wide data for the risk assessment of natural hazards (OSMREX)



The world awaits the next earthquake disaster with hundreds of thousands injured buried beneath the rubble of buildings. However, the locations of hospitals, schools and critical facilities in developing countries are not known to the rescuers.

The great need for global data concerning the built-up environment (dwellings, offices, industrial plants) and for critical facilities to assess the risk posed by natural disasters of all kinds will be addressed. This will harness the enthusiasm of the many contributors to the crowd-sourced OpenStreetMap (OSM) project (www.openstreetmap.org) by teaching a new community of mappers how to gather useful information for risk estimates and mitigation. This is a new idea and bound to revolutionise and accelerate the collection of data on the attributes of the built-up environment, especially in developing countries.

"Understanding earthquake risk through participating in crowd sourcing building-stock information in one's own community will motivate the residents of earthquake-prone regions to strengthen their dwellings."

The OSMREX Team

OSM, the rich and constantly growing geographical database, is an ideal foundation for this project. More than 2.5 billion geographical nodes and 130 million building footprints (growing at a rate of ~100'000 per day) and a plethora of additional information on schools (~800'000), hospitals (150'000) and other critical facility locations allow us to exploit this dataset for risk-related computations. We will harvest this dataset by collecting exposure and vulnerability indicators from explicitly provided data (e.g. hospital locations), implicitly provided data (e.g. building shapes and positions) and semantically derived data, i.e. interpretation applying expert knowledge. Using this approach, we can increase the resolution of existing exposure models from fragility classes distribution via block-by-block specifications to building-by-building vulnerability.

Additional goals are to:

- Encourage communities to understand their risk by thinking about the mapping
- Identify the distribution of high-risk buildings for civil protection and first responders
- Enable mitigation measures by identifying structures requiring modernisation
- Help individuals to understand their risk and compare it with other communities
- Help communities to conduct independent risk assessments
- Spread risk-assessment techniques to nearby communities

Loss scenarios, including the estimated numbers of fatalities and injured, will be calculated for the two target cities of Shimla in India and Athens / Piraeus in Greece. These cities have been selected to provide examples for best procedures in a developing and in an industrialised country. We will use the already existing data together with the data gathered in this project, and the results will be discussed with the local participating crowd to augment local awareness of the earthquake risk.

This project is bound to snowball into a worldwide effort of crowd sourcing in which participants will become increasingly skilled in the provision of data on the built-up environment that are relevant for the mitigation of natural disasters.

Example of data in OSM: in Piraeus, Greece, not only can critical infrastructure (here schools, universities, and hospitals) be identified but also predominant land use can be captured thus allowing the assessment of building occupancy types.

Shimla is a city in acute danger of being devastated by an M8 class earthquake that is inevitable as a result of the collision of India with Eurasia. The regional estimate of people injured in such an event exceeds one million, but the locations and capacities of hospitals are not known, thus hindering efficient rescue efforts. Moreover, the locations of schools and their resistance to strong tremors is not known.

International Centre for Earth Simulation (ICES)

GFZ Helmholtz-Centre

www.icesfoundation.org

www.gfz-potsdam.de

Accelerating local expertise on resilience threats (ALERT): a community-based approach on climate change adaptation and disaster risk reduction management

Hazard and vulnerability map of Bulacan Province, the Philippines. The map shows flood prone areas in Bulacan.

The ALERT Project aims to develop and strengthen the technical and management capacities of selected communities in Bulacan in responding to disasters. The project will consist of three components aimed at accelerating local expertise to better manage and respond to risks through the assessment of vulnerabilities and adaptive capacities, promoting participation and awareness through capacity building and conducting simulation exercises to build a culture of resilience.

ICLEI Local Governments for Sustainability

International Council for Local Environmental Initiatives – Southeast Asia Secretariat (ICLEI-SEAS)

http://seas.iclei.org

The ALERT project aims to generate a model where local governments and communities work together to produce an effective community-based and community-driven disaster risk reduction and management (DRRM) plan. The methodological framework can easily be replicated in other areas threatened by flood risks provided that the necessary institutional arrangements are in place.

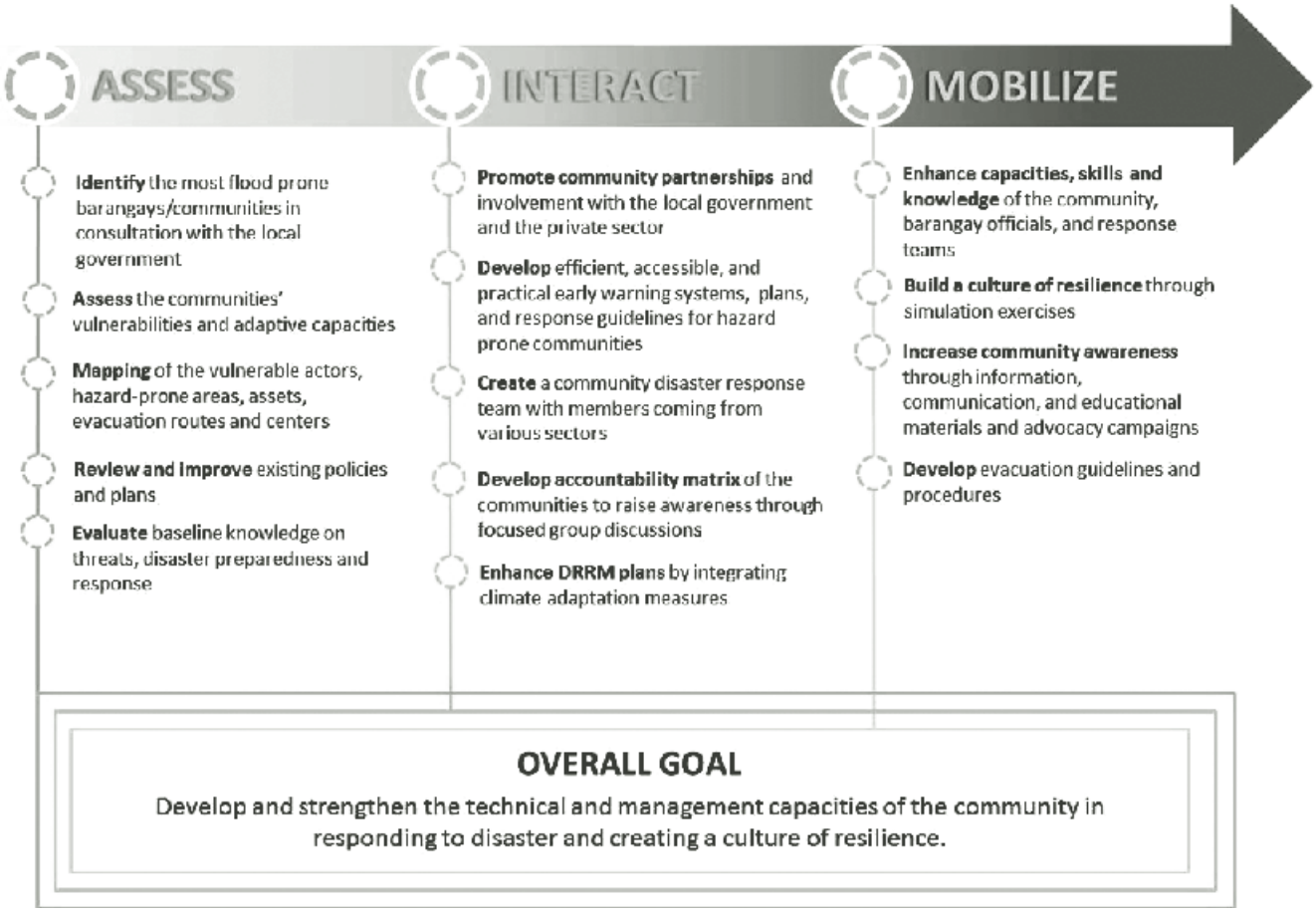
Bulacan is the eighth most vulnerable province to disasters in the Philippines (Economy and Environment Programme for South-East Asia, 2010). Located in the Basin of Pampanga River, Bulacan also houses three rivers and tributaries whose headwaters originate from Sierra Madre mountain range. Within the province there are three dams: a hydropower, an inversion and an irrigation dam. Due to its geographical location and characteristics, Bulacan perennially contends with flooding, especially when excess water from the hinterlands and rivers simultaneously flows during heavy rainfall.

The goal is to develop and strengthen the technical and management capacities of selected vulnerable communities in the province of Bulacan, Philippines, in terms of responding to disasters.

"Resiliency can be strengthened when local governments and communities work hand-in-hand. This partnership becomes more crucial during disasters."

Vic Aquitania,
Regional Director,
ICLEI-SEAS

ALERT-Project Framework



The Rio Nuevo watershed improvement and food security project, phase II

Jamaica noted in 2011 that rural farming communities such as Jeffrey Town were particularly susceptible to watershed degradation due to 80% hilly or mountainous terrain. The Rio Nuevo Watershed Improvement and Food Security Project, Phase II, aims to reduce the risk for 15,982 residents exposed to the impacts of disasters exacerbated by degradation and climate change through a series of enabling and preventative measures. These apply to infrastructure, crop diversification and value-added products plus extensive training by means of a public awareness campaign on preparedness and recovery techniques.

"During the disaster preparedness training, we did first aid. I was able to render assistance to a stranger who collapsed at the roadside."

Horace Walters, member of Jeffrey Town Farmers Association

The Jeffrey Town project concept was designed in a consultative community process in which all the watershed hazards and threats and the main aims for redress were identified. Funds have been sought to cover specific areas of the plan. This project is an extension of Phase I and will initiate the formation of disaster preparedness teams and complete the resilience components within our community by:

Improving soil stability in vulnerable areas in Jeffrey Town through the use of river grind and best practices.

Comprehensively training and supporting the implementation of disaster management teams in FIVE surrounding communities plus a refresher course for the Jeffrey Town team in conjunction with the national Office of Disaster Preparedness and Emergency Management and the parish council disaster team. Providing each community team of up to thirty delegates with eighteen days of training, incorporating a process for the assessment and documentation of their own situations.

Increasing food security during episodes of bad weather through crop diversification and replication of best top-soil retention practices supported by value-added goods production, in particular by drying starches.

Improving public awareness through targeted original programming about adaptation, disaster preparedness and food security made by community members aired on Jet FM 88.7, the community radio.

Equipping Jeffrey Town basic and primary schools with water harvesting, water tanks and solar lighting equipment to increase their resilience and ensure uninterrupted schooling.

This is a rural community located at 1700' above sea level. The 2011 census-stated population amounted to 2,982 inhabitants, 47% of which were female. Unemployment was at 33% and of those working, 42.2% were engaged in hillside agriculture.

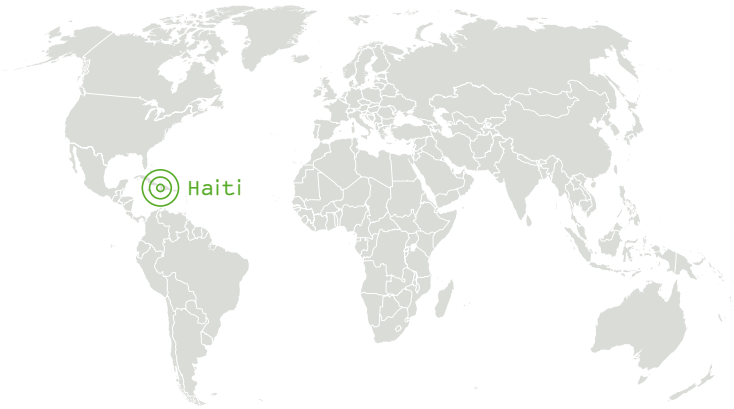
Jeffrey Town community members working to build their second major gabion basket wall. Sharon Fyffe said, "I heard a really loud sound like an earthquake, and when I looked, the water was rushing, Ms Fay's house had broken up, one wall gone and if it weren't for the gabion wall by the bridge, Lincoln's house would have gone and half of Wallingford too."

Map of Jamaica with watershed project area highlighted.

Jeffrey Town Farmers Association Ltd.

www.jeffreytown.org.jm

Ann pwoteje la vi nou (Let's protect our lives)



Against the backdrop of the devastating earthquake in Haiti in 2010, this project aims to empower the people of Port-au-Prince to take preventative action in the face of any future disasters. It aims to create an emergency first response team trained to save lives, develop a community map to pinpoint key safety locations, create school evacuation plans for all schools in the impoverished neighbourhood of Delmas 32, and train residents to ensure their homes are disaster-resistant.

J/P HRO Community Agents receiving basic first aid instruction in August 2014. Similar trainings will be provided to first responder teams as part of the let's protect our lives project.

Let's Protect Our Lives (Ann pwoteje la vie nou) will be implemented in Delmas 32, an area in Port-au-Prince heavily affected by the January 2010 earthquake. The goal of the project is to make disaster risk reduction a priority and to save lives by empowering the community to take prompt and decisive action in the event of a natural disaster. This will be done through the following activities:

- Community reconstruction training – We will train 800 people to rebuild and retrofit their homes to withstand future disasters.
- Formation and training of first responder teams – We will train teams in CPR, triage, the special needs of highly vulnerable groups, location of community exits and communication skills.
- A community map – The map will show community exits, schools, healthcare services and water distribution points and will be distributed to all students. A large version will be painted in three key locations and will be updated regularly.
- DRR days – Teams will go into the community spreading DRR messages by megaphone, giving information, distributing maps and performing DRR demonstration plays in key areas.
- Text message campaign – To promote DRR awareness and provide rapid warnings in case of disaster.
- School evacuation plans – All schools will produce evacuation plans and practice them six times throughout the project.
- DRR clubs – School DRR clubs will train students on disaster response.

"DRR is an important challenge that we can meet through the education of children in order to rebuild the country and restore hope to Haiti's youth."

Madame Charline Honoré, principal of J/P HRO's Ecole de l'Espoir

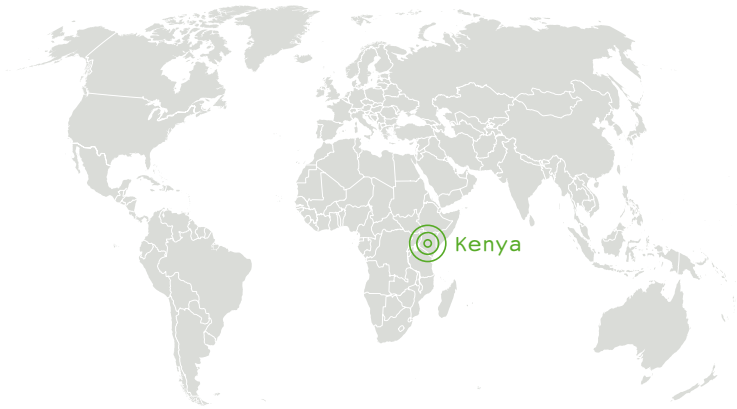
View of Delmas 32, the densely populated neighborhood where the let's protect our lives project will take place.

J/P HAITIAN RELIEF ORGANIZATION

J/P Haitian Relief Organization (J/P HRO)

www.jphro.org

Enhancing the resilience of the Galole community to floods in Tana River County



In Kenya, the heavy rains of 1997/98, 2006, 2009, 2013 brought with them wide-spread flood devastation. This was particularly the case in the south-eastern parts of the country such as the lower Tana River with a resulting loss of lives, livestock and pasture land. This project offers a participatory community approach in disaster risk management and seeks to build the capacity of the communities in Tana River County to analyse geospatial information and remote-sensed data to delineate disaster risk zones and take appropriate preparedness action.

"This project will reduce loss of life, property damage and increase the capacity of beneficiaries in flood management while improving their livelihoods."

Phyllis Engefu Ombonyo, Director Business Development NETFUND

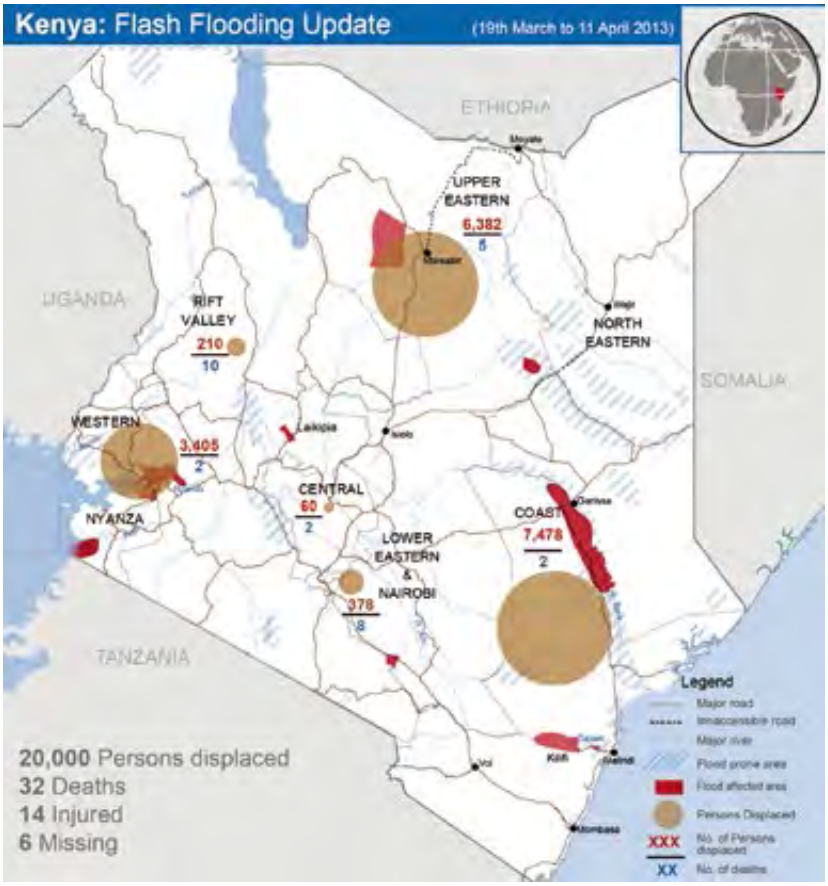
The project intervention area is Tana River County, an arid and semi-arid region covering an area of 35,378 km2 with a population of 240,075. The county is characterised by poor rural households, with 80% of the population relying on agriculture, pastoralism and fishing as the main source of livelihood. These livelihoods are unfortunately affected by seasonal floods leading to the loss of life and property. The vulnerability of these communities to floods has been heightened by the rising poverty levels. This situation is further compounded by the lack of comprehensive, up-to-date information describing hydrological conditions that would enable the community to take appropriate preparedness actions.

The project proposes to increase the resilience of the poor rural communities in the Galole sub-county of Tana River County to flood vulnerabilities. This will be done by zonation and mapping of flood prone areas; capacity building of communities in disaster action planning and response; dissemination of weather-related information through mobile applications and trained volunteers and the promotion of climate-sensitive alternative livelihoods. These measures will increase awareness levels and skills in regard to flood management and greatly improve the people's livelihoods. The community will also establish a disaster fund which will be used to cater for its basic needs in the event of flood disasters especially for the marginalised group of children and women in this patriarchal society.

NETFUND

National Environment Trust Fund (NETFUND)

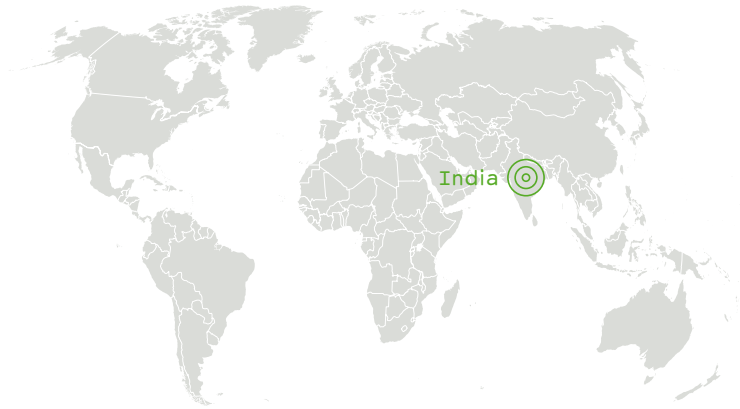
www.netfund.go.ke



Above: Heavy floods displaced many people along the Tana River and in Garissa destroying 880 acres of arable land due for harvesting and property belonging to the rural poor while spreading water-borne diseases and taking human lives.

Left: Map; areas affected and prone to flooding, numbers of persons displaced (20,000) and number of deaths (32). The success of this project will be replicated all over the country.

Increasing resilience to extreme heat health risks across rapidly urbanising India



As climate change is expected to increase the frequency and severity of heat waves and the associated health risks, NRDC, IIPH and our partners are piloting an innovative early warning system and interagency disaster risk reduction plan to increase the resilience of vulnerable communities in Indian cities. Through awareness-raising, increased health-care capacities and government-issued early heat alerts, our pioneering heat action plan in the city of Ahmedabad increases preparedness and resilience to extreme heat and ultimately saves lives.

Outreach such as this heat vulnerability assessment was conducted within Ahmedabad's at-risk slum communities to help the development of the city's heat action plan.

Heat waves are becoming increasingly severe, exacerbated by climate change. After a deadly heat wave hit the rapidly urbanising city of Ahmedabad in 2010, the Ahmedabad Municipal Corporation (AMC) partnered with a coalition of academic, health and environmental groups to improve the city's heat disaster response with a comprehensive early warning system and preparedness plan for extreme heat. Identifying the city's most vulnerable residents (children, the elderly, slum communities and outdoor workers), the Ahmedabad Heat Action Plan was launched in 2013 and deploys a three-pronged approach to reduce heat-related health risks:

1) Building public awareness of health risks through training, public advertisements and community outreach.

2) Implementing an early warning system that coordinates government agencies, health officials, emergency response teams and media outlets to alert the public of impending heat waves.

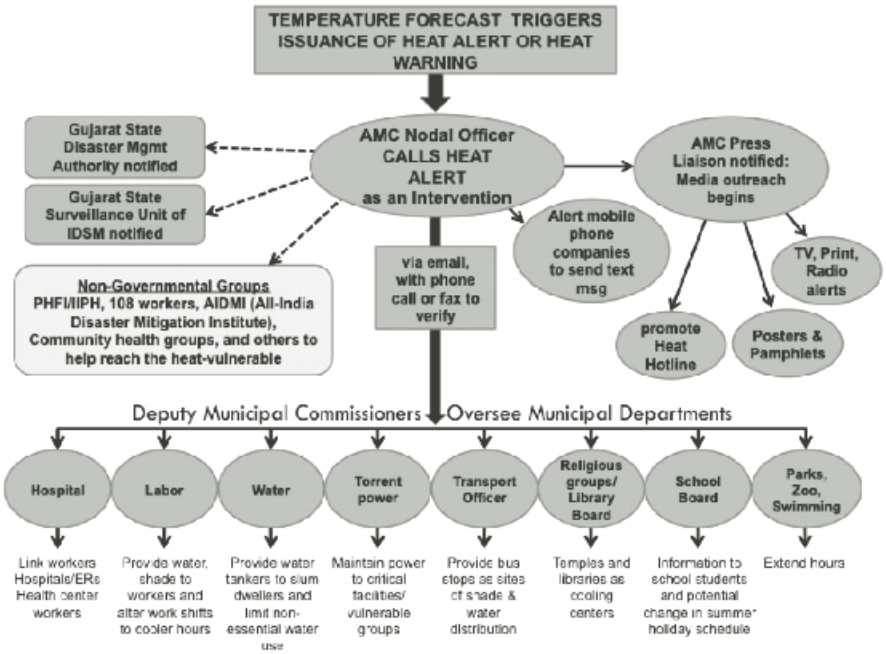
3) Increasing capacity among health-care workers to recognise and treat heat-related illnesses.

Based on the lessons learned from Ahmedabad's Heat Action Plan, we plan to expand the project's impact, collaborating with leading cities and states in India to tailor and implement their own early warning systems and heat preparedness plans. We will also work with the Indian government to mainstream heat-wave planning at state and national levels, supporting disaster risk reduction plans to increase community resilience to extreme heat and overall capacities in climate adaptation efforts across India.

"The Ahmedabad Heat Action Plan is a necessary step towards protecting our communities from extreme heat and a beautiful model for future climate adaption efforts."

D. Thara,
Ahmedabad Municipal Commissioner

A communication plan depicts the interagency coordination triggered by issuing heat alerts, which is an essential part of the early warning system that warns vulnerable community members.

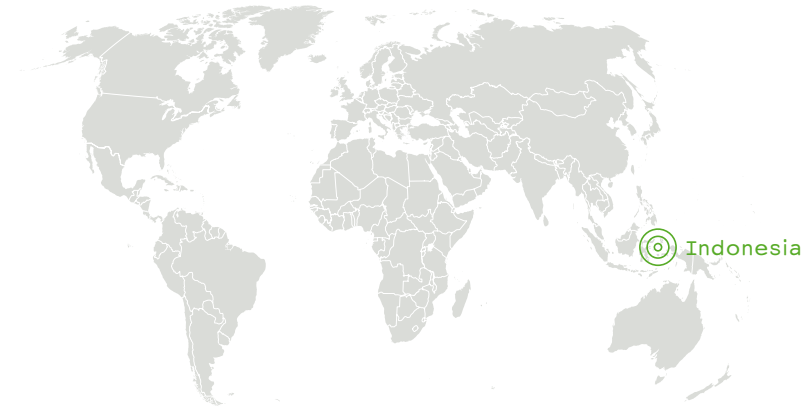


Natural Resources Defense Council (NRDC)

Indian Institute of Public Health, Gandhinagar (IIPH)

www.nrdc.org

Sustainable coastal planning and ecosystem management to reduce disaster vulnerability and adapt to climate change



This project aims to mainstream disaster risk reduction and climate change adaptation into a local sustainability programme and regional development plans in the coastal area of Yogyakarta in southern Java, Indonesia. We implement a wide range of activities to support the enabling conditions for building community capacities, early warning, preparedness for disasters and sustainable livelihoods by employing a bottom-up strategic planning model to engage multiple stakeholders in our partnerships.

The coastal area of Yogyakarta Special Region in southern Java, Indonesia, provides livelihoods for fishermen, traditional fish ponds, cattle ranchers and sand farms. In addition to heavy monsoons all year round, this region is threatened by the direct impact of tsunamis, earthquakes, extreme waves and abrasive action. Furthermore, the recent conversion of beaches into commercial fish ponds has exacerbated the vulnerability of open beaches to tsunamis, strong winds and abrasive waves. Climate change has moreover intensified these hydrometeorological disaster risks and made the local communities even more vulnerable to the environment.

This project aims to tackle the threat by empowering coastal communities by building and strengthening local capacities, by participatory community involvement and stakeholder engagement and also by the development of long-term sustainable plans. More specifically, this programme employs a disaster risk reduction-climate change adaptation (DRR-CCA) convergence approach for enhancing community resilience to the pressing threats. Our scope of work includes 1) coastal management through area rehabilitation and sustainable livelihood development plans; 2) establishment of an information network connecting coastal villages to a contingency plan and an early warning system; (3) increasing community preparedness for disasters by strengthening capacities in information and technology; (4) institutionalisation of the DRR-CCA approach to mainstream it into regional development plans.

Abrasion on an open beach in Kulon Progo. Abrasive waves threaten the coastal ecosystem and the livelihoods of local people.

LINGKAR

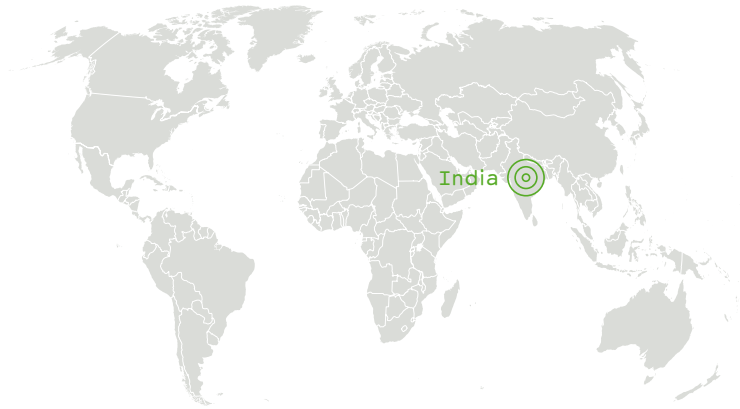
Perkumpulan Lingkar

www.lingkar.or.id

With this project, people such as this traditional fisherman will be able to improve their quality of life. The establishment of an information network connecting coastal villages and climate/weather information systems will prepare them better for their next fishing journey.

The community-based approach will ensure active participation of the communities and position them as a subject. This project will increase their capability of managing livelihood assets and encourage them to become actively involved in coastal conservation efforts such as mangrove rehabilitation.

Citizen-based DRR to reduce disaster tolls in the Himalayas



Vulnerability mapping with community members at village workshops

The difficult geography and remoteness of the Himalayas implies that resident communities are highly vulnerable to disasters due to the lack of forewarning and inadequate outreach of relief and support compounded by poor infrastructure, dispersed habitations, and a near total information blind. The project will implement a citizen-based Disaster Management System tailored to the Himalayan region to overcome area-specific issues related to effective preparedness and humanitarian response.

Pragya

www.pragya.org

Natural disasters, increasing both in scale and in frequency, are causing immense destruction of life and property in Himalayan communities (210 million), particularly of the poor and of women. The project aims to pilot a citizen-based disaster management system that would bring improvements in critical areas of preparedness and humanitarian response in the Himalayas, thereby enhancing local resilience and reducing disaster tolls. It will pilot the system in select localities, disseminate and build capacities for a larger scale roll-out.

Key components of the project are:

1. Citizen Science and Early Warning System (CSEWS): a simple, indicator-based system for prioritised hazards of the Himalayas, would enable micro-level and real-time monitoring of environmental threat levels. Based on the rationale that DM cannot be a centrally-managed function but must be deployed in each village, the tool is suitable for operation by trained village adolescents and young adults with governance by village councils.

2. Relief Information System (RIS): protocol designed to address critical gaps in information and communication for disaster response, which significantly reduces disaster tolls. RIS would ensure the structured collection of information on the status and needs of the disaster-affected population, disaggregated by sector, age, gender and vulnerable groups, including grades and areas of vulnerability and would address the constraints of relief delivery to remote communities through the timely relay of comprehensive information to all responders.

"Our village is flood prone. We need to be on the alert all the time. Training and technologies will surely be very helpful for us, for our survival."

Kumari Deveshwari,
Bhatwari Sunar village,
Rudraprayag District,
Uttarakhand

The map shows three disaster-prone districts in the Indian Himalayas where the project will be piloted.

Making our communities more disaster resilient

Jamaica's DRR capacity is weak at national, community and local levels. The lack of resources, be they human, financial, technical or operational, and the lack of institutional commitment remains our greatest challenge. The absence of a dedicated budget for the leading national agency to reduce the vulnerability of the populations at greatest risk is also a serious threat to the country's capacity. While the country grapples with trying to find the financial resources to build its DRR capacities, a large pool of willing and able human capital – adolescents and young adults – is quite often overlooked. St. Patrick's Rangers is currently the only grass-roots organisation working with young people to build the capacities of communities for greater resilience.

"Helping others gives purpose to my life. Thanks to St. Patrick's Rangers for giving me such an opportunity."

Asquith Harris,
Committee Coordinator

Applying a multi-stakeholder approach, St. Patrick's rangers will be working in ten of the most vulnerable inner-city communities in the capital city, Kingston, to improve their resilience by various means of intervention. The Rangers will first seek to expand and build the capacities of its core group of community volunteers to raise awareness of disaster preparedness and prevention and then, along with the community members, will launch activities for mitigation and response.

The approach encompasses methodologies such as "Edutainment" which involves the use of drama, dance and music to make the messages more appealing, simulations and drills to add a measure of realism, and training for the trainers within the communities to give instructions in DRR to other groups such as youth clubs and schools as a means of further enabling the project's sustainability.

Other aspects of the programme will involve the performance of vulnerability and capacity assessments (VCA) in two of the communities, drawing upon the experiences gained while conducting similar activities along with other stakeholders in seven such communities, and small-scale mitigation projects including roof and house structure repairs for the elderly and disabled and also repairs of manholes, cleaning drains and gullies. These activities will build the spirit of volunteerism amongst the young people and the community in general, while making the communities more resilient and fostering a greater feeling of community spirit.

The project aims to bolster the knowledge, preparation, mitigation and emergency capacities of ten of the most vulnerable communities in Kingston, Jamaica, while providing a renewed sense of purpose and identity for the many unemployed adolescent and young residents in those communities.

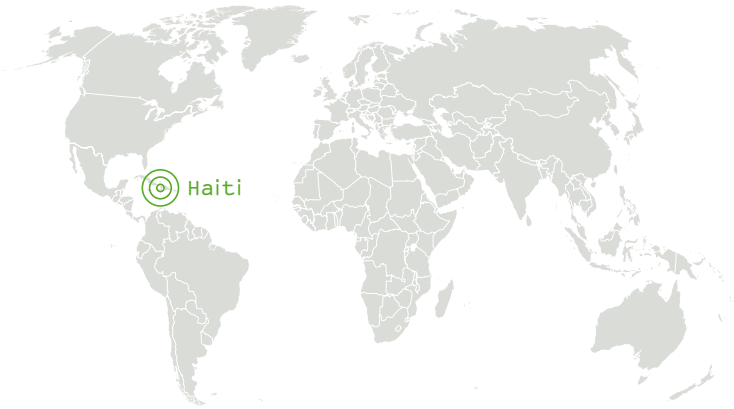
Rangers erecting a house for an indigent

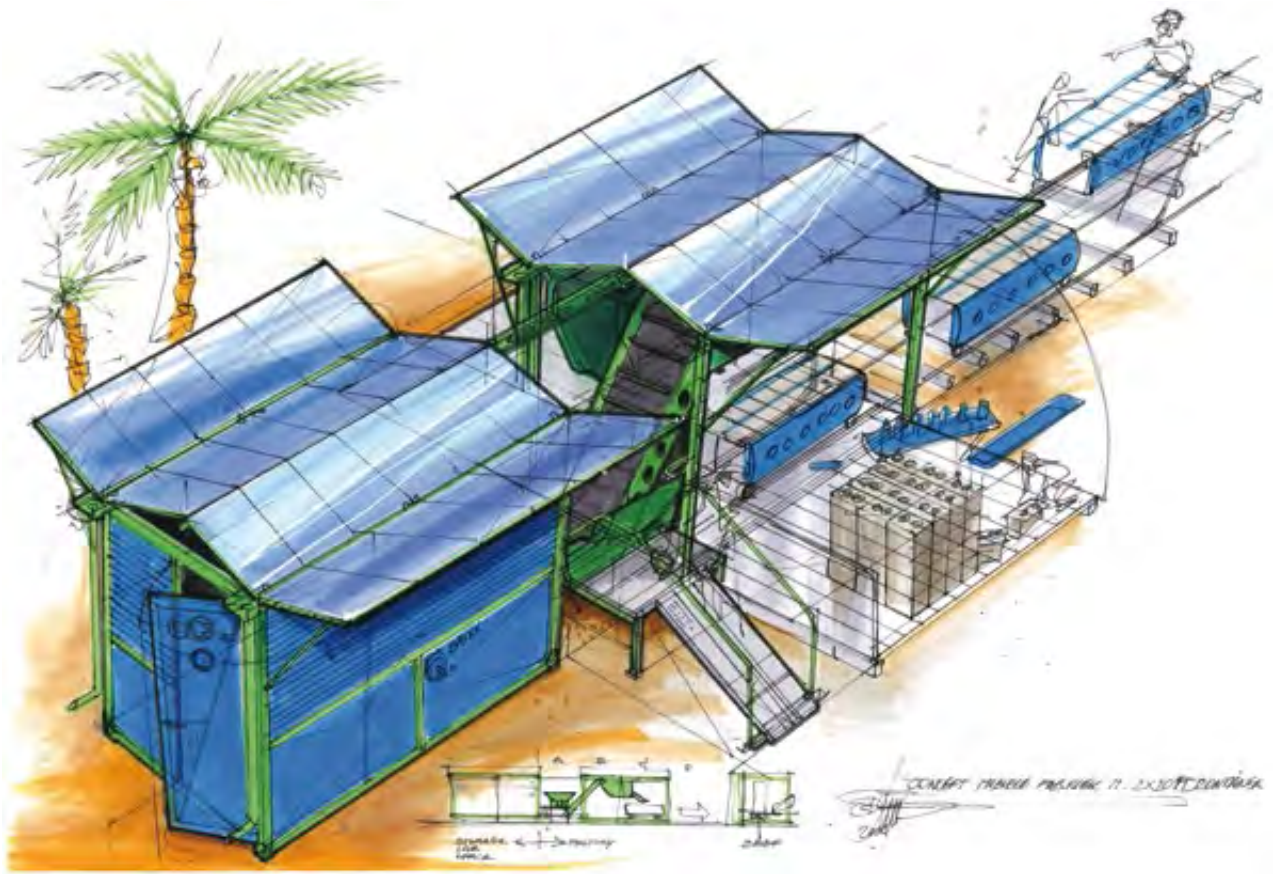
Rangers painting DRR messages on the east-facing wall of the basic school in the Callaloo Mews community.

St. Patrick's Rangers

www.stpatricks rangers.org

The Mobile Factory





In terms of volume, debris is the largest contributor to environmental waste and at the same time a source for high-quality building material. With The Mobile Factory , the people of Haiti will manufacture their own earthquake-resistant homes from debris found in the vicinity whilst reducing environmental pressure.

The Mobile Factory consists of two 20' containers and is powered by solar panels for rapid deployment and direct start-up after a disaster.

Earthquakes and other natural disasters are a problem of the poor. Of the 230,000 people killed by the earthquake in Haiti, 85% lived below poverty level. Unsafe housing, bad construction and the use of low-quality materials were actually the main causes of death.

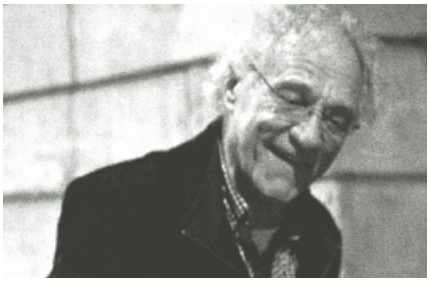
Concrete debris is not only the biggest killer but also the biggest polluter on earth. Not just in terms of volume due to waste streams, earthquakes, wars and city growth: the production of new concrete alone is responsible for 20% of worldwide CO_2 emissions.

The Mobile Factory has developed a production system which converts the debris found in the vicinity into building blocks for the rapid construction of safe homes for underprivileged people.

The production system is installed in locations in which concentrated masses of rubble can be found. Construction is based on an interlocking system that allows flexible and rapid assembly by unskilled workers. The houses are built on flexible foundations that have also been made from recycled debris. This ensures the high earthquake-resistance of the buildings.

Our goal is to share transformation knowledge and transformation technology. We aim to train unemployed, unskilled workers to implement the system at local level. As a result, we create jobs for the underprivileged, we reduce environmental pressure and realise substantial cost reductions in the chain.

We will test our developed system and process with a locally embedded proof-of-concept pilot project to build two houses in "post-disaster Haiti".



"It's not only about the environment and cost reductions: to me, self-help is instrumental for the breakthrough of the poverty circle."

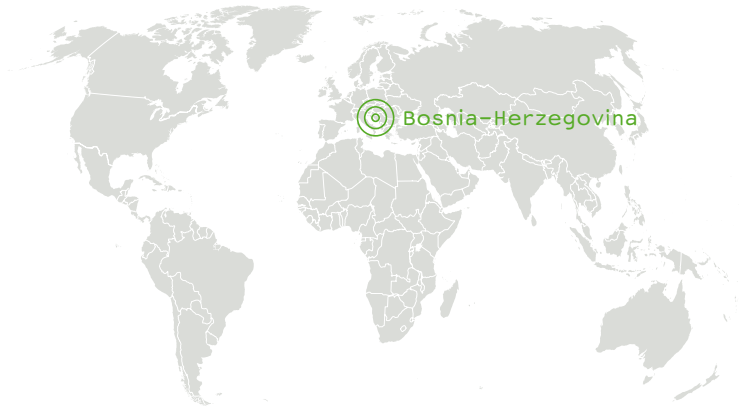
Gerard Steijn, founder of The Mobile Factory

Proof of the technical concept: Haiti-style T-shelters on The Mobile Factory campus in Amsterdam harbour made of interconnected bricks. No mortar needed.

The Mobile Factory

www.demobielefabriek.nl

Children-led disaster risk reduction planning in five flood-affected areas of Bosnia and Herzegovina



As part of this project, 125 children and young people, including those from vulnerable/marginalised groups, will be introduced to the basic concepts of disaster risk reduction (DRR) such as community and family resilience. Equipped with this knowledge, children's groups will develop DRR plans for their communities and identify priorities for the improvement of each community's disaster preparedness. This will allow the integration of these plans on the respective local levels and promote advocacy for the process itself on broader entity, national, and regional levels.

"Although significant improvements have been observed in response to floods in Bosnia and Herzegovina, many needs in the areas of shelter, livelihood and access to rights and services remain unaddressed."

Sarah Bearup,
World Vision Bosnia and Herzegovina National Director

Continuous heavy rainfall in mid-May in 2014, and in some areas again in August, resulted in extensive flooding in Bosnia and Herzegovina. Over one million people were affected by floods and subsequent landslides, while almost 90,000 were forced to leave their homes. The flood response pointed out gaps in the preparedness and coordination of the response that lead to extended lag times and also occasional overlaps in resource allocation between responders which in turn result in a less-than-optimal response and prolonged difficulties and recovery for the affected populations.

The project goal is to improve family and community resilience and disaster risk and recovery mechanisms by engaging children and adolescents to understand, analyse and develop plans for disaster preparedness, coping mechanisms and capacities at family and community level, and thus leverage this experience to maximise impact.

The project engages children as DRR change agents by developing online access to general DRR information for young people, and furthers the development of specific community DRR-learning and awareness-raising plans in five Bosnian and Herzegovinian communities. It will be implemented in the form of DRR summer camps for children, both in and out of school, in communities that have been badly hit by recent floods. Special attention will be given to the inclusion of marginalised groups (including Roma) in this summer-camp process.

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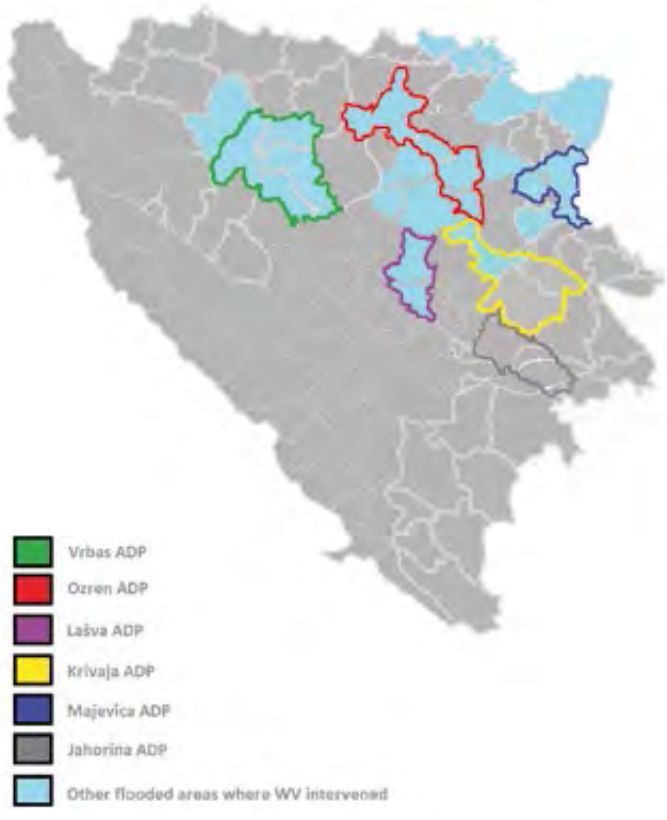
The economic impact of the record-breaking floods (destruction of or severe damage to property, infrastructure and goods as well as the effects of destruction on livelihoods, incomes and production etc.) is estimated at €2.04bn. It is also estimated that 81 municipalities in the country suffered damage, losses, social and/or environmental impacts of varying degrees.



Through its six area development programmes (ADP), World Vision reached thousands of people within 24 hours of the onset of the record-breaking floods in Bosnia and Herzegovina. As part of World Vision's response, more than 1,600 children were helped by child-friendly spaces established in flood areas.

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