

UN HABITAT
FOR A BETTER URBAN FUTURE

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UN HABITAT
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our change
7 Years of UN-Habitat in Pakistan

OUR CHANGE

BOOM!

PUBLIC HIGH SCHOOL
UNIVERSITY OF SCIENCES

AMBULANCE

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Published and Produced by	UN-Habitat, Pakistan

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First Edition, June 2012.

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7 Years of UN-Habitat in Pakistan

UN  **HABITAT**

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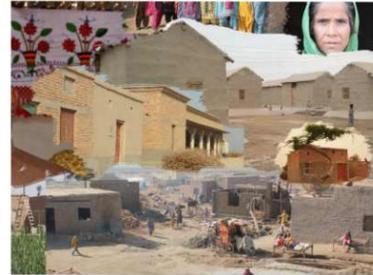
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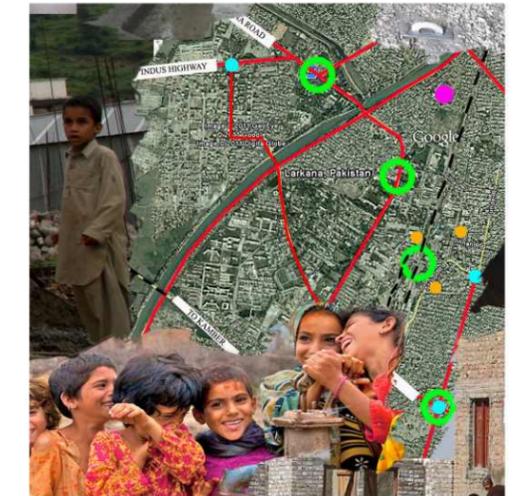
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Traditional handicrafts of Pakistan are sometimes used in this book, as transition elements to define articles end.

Foreword



UN-Habitat established its Pakistan country office after the earthquake of October 8, 2005. Since then, we have been involved in many projects with the focus on providing adequate shelter, basic services and community infrastructure needs for the survivors.

This work, *Our Change*, is a reflection of our Pakistan journey and how we have adapted the way we work to suit the country's special needs.

All UN-Habitat projects have a common goal of working and consulting with the people through what we call the community driven approach.

This approach has helped us understand the varying needs of afflicted populations around the country, growing in knowledge, experience and respect for the traditions and beliefs of the people of Pakistan.

It is my hope that this publication will be seen as a part of UN-Habitat's legacy. It is also my hope that it will be seen as part of the personal effort and sacrifices of so many Pakistani citizens. There is a real need to continue facing the challenges of adequate shelter, basic services and infrastructures.

At UN-Habitat we hope to continue serving and working with the people of Pakistan.

A handwritten signature in black ink, appearing to read 'Joan Clos', written over a light grey rectangular background.

Dr. Joan Clos
Under-Secretary-General of the United Nations,
Executive Director, UN-Habitat

A TIME TO CHANGE

Man cannot battle nature, nor can he predict its course. Earthquakes, cyclones, floods and torrential rains have battered but not defeated the resilient people of Pakistan. The financial impact of such disasters have affected the poor and prevented them from sustainable rural progress. A country with a big heart is still managing to trudge forward. But as history dictates, measurable changes must be made for measurable progress.

The need to change often arises after a disaster or crisis. To avoid repeating past mistakes, a change of attitude needs to be the priority. Risk resilient behaviour keeps us prepared and ready for future disasters however unpredictable they may be. It can prevent a disaster from turning into a catastrophe. To nurture the spirit of change, UN-Habitat has focused on behavioural changes among the affected communities.





A traditional compound wall adapted to floods, near the rivers

People who live near rivers that are frequently flooded, have naturally incorporated disaster risk reduction measures in the construction of their houses, as for generations, they have had to master and manage the behaviour of the rivers.

Since 2010, floods have reached places that have never been flooded before, but which will likely be flooded again. Increased flooding can be attributed to climate change, weak infrastructure or deforestation among other reasons, leading to special considerations for the protection of houses.



Strong foundation elevated over the ground level is a basic risk reduction measure



Different attitudes towards facing the same problem

Battling with different attitudes, in the face of disasters, has become fundamental in our response activities.

The results of our activities can be observed in the way people are changing their behaviours, facing day to day life through improvements in sanitation, construction, hygiene and sustainable environmental protection.





Real changes must be made not to repeat past mistakes.



The Devastating **EARTHQUAKE**

A majority of Pakistan lies in a seismically active zone. Dating as far back as 1893, when a massive earthquake struck the province of Sind, some **150,000** people lost their lives to a jolt that measured **8** on the Richter scale. Over the past decades, other major earthquakes have been recorded between **7** to **8** on the Richter scale. Hundreds of thousands of people have lost their lives as they have been trapped under the rubble of their homes. To date, approximately **339,515** people have lost their lives to earthquakes in Pakistan.





The morning of October 8th, 2005 altered the lives of hundreds of thousands of people. A massive earthquake of 7.6 on the Richter scale jolted the entire north of Pakistan and in moments the country lost 178,000 lives.

Seismic location of Pakistan

Pakistan is located in the heart of the meeting points of the Arabic, Euro-Asiatic and Indian tectonic plates. These 3 enormous extensions of land are constantly in contact causing friction, which accumulates tension between them. Whenever this force is liberated, the plates move by rubbing, sliding or submerging into the other. This phenomenon was clearly visible near Muzaffarabad.



The 2005 Pakistan Earthquake resulted in massive landslides. The 250 kilometer long Neelum River was completely under rubble and communities settled on higher grounds were carried away by an avalanche of boulders and stones.





The earthquake of 2005 resulted in a tremendous loss of life and widespread destruction in the country. The aftershocks instilled fear in the hearts of the people for a long time. Survivors slept in the open air, away from their homes in fear that the structures would collapse on them.

Earthquakes occur without warnings and although Pakistan is accustomed to frequent minor shocks, one of this magnitude was unimaginable.

Almost 95% of all casualties from earthquakes are a result of collapsed buildings. It must be taken into consideration that though we may not be able to prevent the occurrence of such disasters, we can take measures to prevent houses from collapsing through structural changes.





Local and international humanitarian communities joined hands in the rehabilitation of almost 3.5 million people. The main aim was to provide shelter to the displaced people away from the hazardous zones while teaching them hazard resistant construction techniques. The Earthquake Reconstruction and Rehabilitation Authority (ERRA) was created for this purpose and with them, UN-Habitat began a gradual yet effective process of promoting, monitoring and executing hazard resistant construction.





The Rebuilding Process

At UN-Habitat, we understood the complications of the rebuilding process. People who were already affected by extreme physical and psychological trauma, now needed to embrace a technical process that would allow them access to financial and technical assistance and the trainings necessary to begin the rehabilitation process.

A mass awareness campaign was developed to explain the programme's mechanisms. Training workshops for men and women were facilitated by skill development and monitoring to ensure quality, durability and community involvement.

Profiles and locations of extremely vulnerable families were identified through community mobilization and village reconstruction committees. Beneficiaries received cash grants in tranches to help them build their earthquake resistant houses.

You can make your NEW HOUSE safe against EARTHQUAKE!
FOLLOW 10 RECOMMENDATIONS
 For Single Storey Masonry Houses in Cement Sand Mortar

1. Site Selection

Steep and unstable slopes

Avoid to construct a house near river banks

Rock Fall Area

- Avoid steep & unstable slopes;
- Avoid areas susceptible to landslides and rockfall;
- Avoid construction on loosely filled grounds;
- Place house away from the river banks;
- Avoid construction too close to visible, permanent, deep and active faults;
- Distance between house and tree or with adjoining house should preferably be at least equal to the height of the tree or house.
- Avoid construction abutting mountain-side retaining walls; ensure space between retaining wall and house is equal to height of the wall.

You can make your NEW HOUSE safe against EARTHQUAKE!
FOLLOW 10 RECOMMENDATIONS
 For Single Storey Masonry Houses in Cement Sand Mortar

7. Vertical Reinforcement in Walls

Vertical Reinforcement in brick masonry wall

Vertical Reinforcement in concrete block masonry wall

Vertical Reinforcement in masonry wall

- The vertical reinforcement should be of a minimum diameter of 10mm and spaced at 450mm.
- The vertical reinforcement should be anchored into the foundation and roof slabs.
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You can make your NEW HOUSE safe against EARTHQUAKE!
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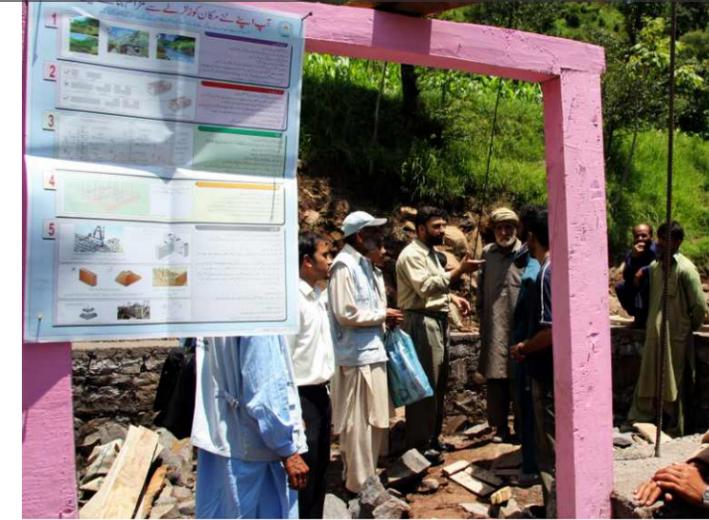
3. Foundation

Measurement in brackets (mm) (mm in inch)

- Use continuous strip footing.
- In case of soft soil, the depth of foundation below existing ground level should be at least 1m. For rocky areas, minimum depth should be 1.5m.
- Minimum width of footing should be 1.5m.
- In case of loose soil, provide concrete sand concrete at foundation level.
- If stone is used in masonry, reduce the thickness of foundation strip by 10%.
- Foundation Details: Foundation for various masonry systems should be as shown in the figure.

Have you built a 6 inch hollow block house ?
You can get the full ERRA payment.

Add an extra RCC band to make your house safe and compliant.
Contact your HRC for information.



2009



آئیے مل کر
اپنے شہر کی محفوظ تعمیر کریں



2005

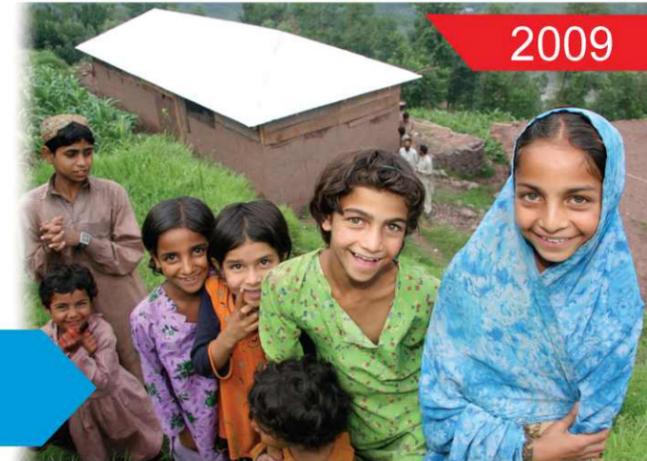
Build back a Safer City



2005



سلام کشمیر
400,000+
محفوظ دیہی گھروں کی تکمیل



2009

ہم خوش ہیں کیونکہ اب ہم محفوظ ہیں





Bhattar



Leepa

UN-Habitat Museum of model houses

To make it easier for people to adopt hazard resistant construction practices, model houses and demonstration buildings displaying approved techniques were constructed.

Special considerations were made to incorporate traditional designs and building customs to ensure that the structures reflected local cultural heritage. We applied construction techniques of Dhajji, Leepa and Bhattar, together with the local masons we strategized how to build them back, better.

Wherever possible we practiced and advocated the use of local construction materials and promoted the use of salvaged materials in order to minimize the environmental impact of reconstruction.

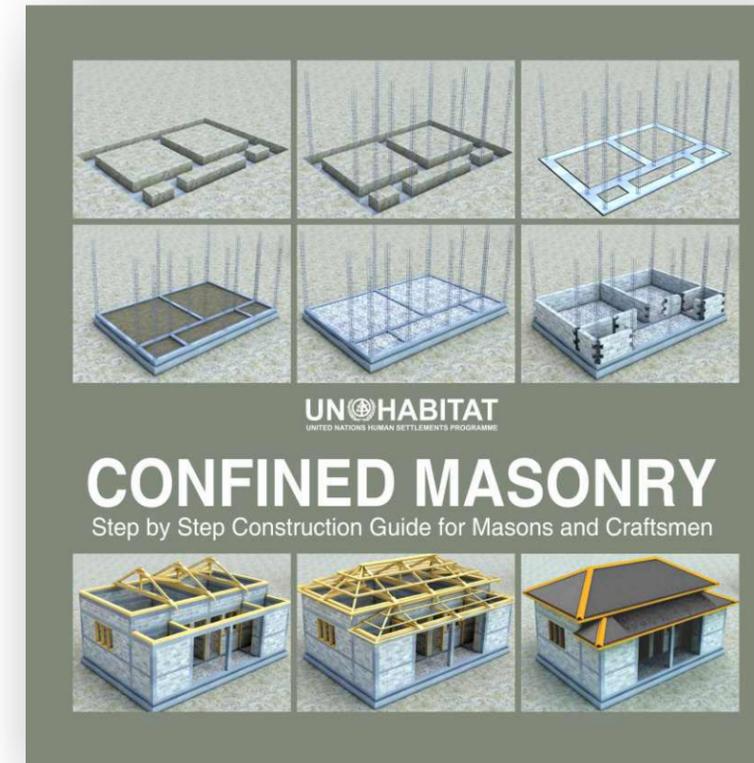


Dhajji





Model reinforced structures were also built for training and awareness purposes at the UN-Habitat Museum of Model Houses in Muzaffarabad, AJK.



Confined Masonry Guidelines

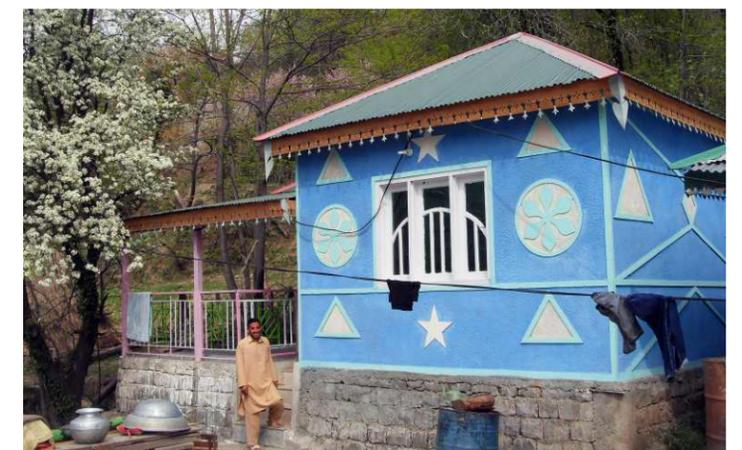
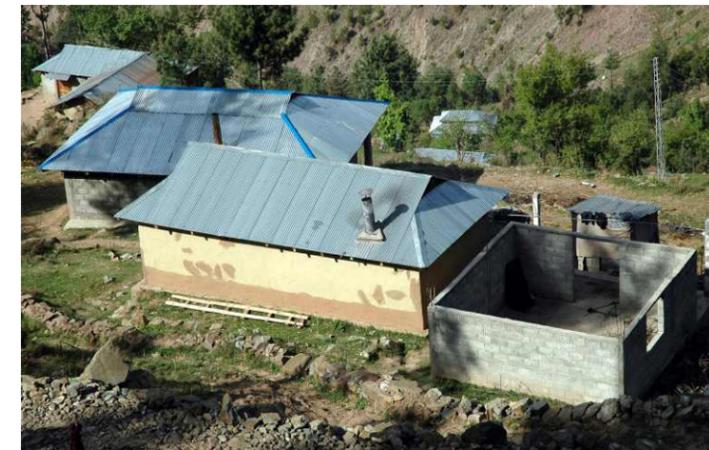
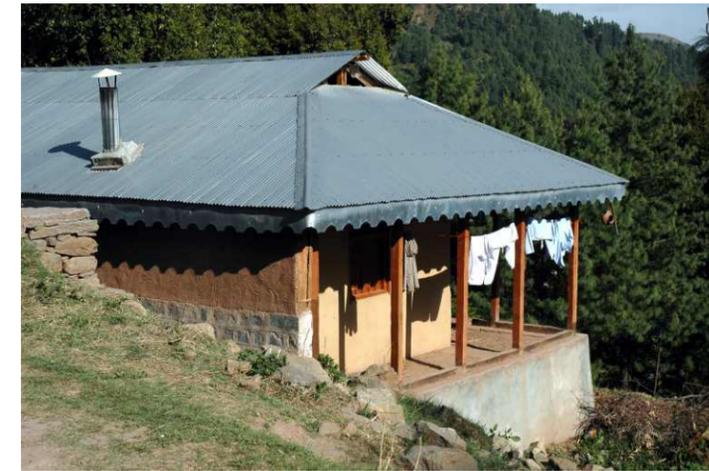
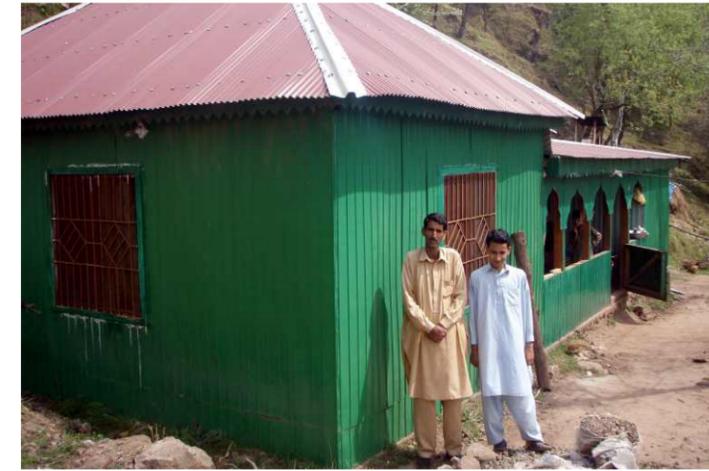
A manual on confined masonry was produced as a step by step guide of the particular construction system most often used as the safest earthquake resistant structure, specially in urban areas.



Earthquake Response

The earthquake of 2005 established the need for permanent solutions. It created awareness of Pakistan's vulnerability to natural disasters and ways for people to minimize the effects of such calamities through preparedness.

The strength of ERRA, as an institution, was proven over the next 5 years as the complex task of rebuilding **600,000** houses was accomplished.





Grievances

Grievances are common occurrences in the rehabilitation process especially at such a mass scale. As this was a learning process for UN-Habitat, it was anticipating that people would bring their queries and problems forward. A grievance redress mechanism was devised to address any complaints. For this, or any other programme to successfully achieve results while maintaining credibility, the redress system plays an integrated role. Over **150,000** complaints were received and through proper verification **80,000** were found to be genuine and consequently addressed.

600,000 houses were rebuilt after the 2005 earthquake, with the assistance of ERRA, UN-Habitat and other organizations.



Converting Hopes into REALITY

A Brief overview of the Rural Landless Programme 2007-2010

Saqib Sharif, UN-Habitat-Reporting Officer

The earthquake of 2005 shook and broke off huge pieces of the mountains in Azad Jammu and Kashmir (AJK). Many of these were once home to people. The weakened slopes were no longer safe for homes, leaving many people homeless and landless. People were evacuated from the hazardous areas and moved into temporary camps.



The Government of Pakistan initiated the 'Rural Landless Programme' to address the needs of people left without land. Relocating people from high-risk areas was a tremendous task and began with the identification of highly hazardous houses by the Geological Survey of Pakistan.

The affected people were divided into two categories: those who lost their houses along with their land and had no place for the construction of new houses, and those whose land was affected and were at risk from landslides or other climatic events in the future.

The landless beneficiaries were financially assisted enabling them to purchase land in safer areas. By May 15th 2008, 1,730 families had received the assistance package.

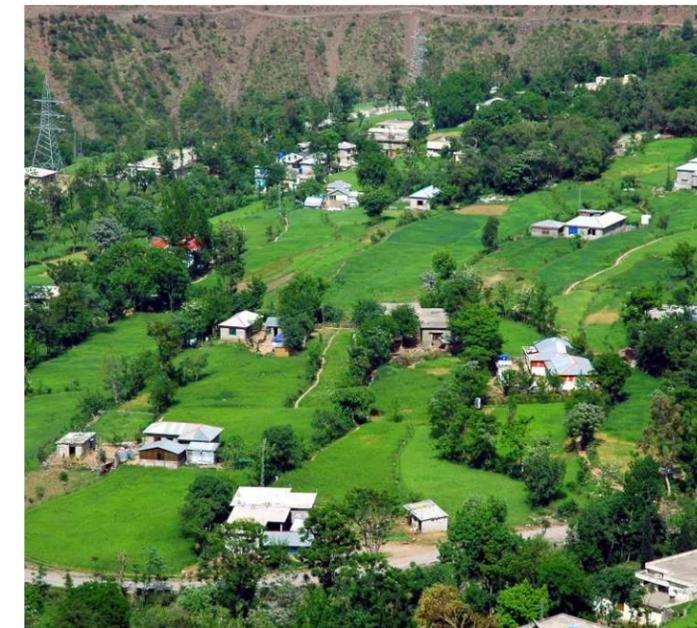


The unique approach of the Rural Landless Programme encouraged combined ownership of land among all family members and was successfully applied for the first time in the history of South Asia.

In the Indo-Pak sub-continent, generally, a head of household is the sole owner of land, however this programme enabled wives, sons and daughters of such families to be equal owners with proper observations in land records to ensure gender equity. To ensure fair use of land for habitation, a strict condition was enforced restricting the sale of that purchased land for a period of five years.



To cope with the complex land registration system, a 'One Window Operation' mechanism was introduced which made the process easier and transparent. The land purchaser along with his/her family members, seller, bank administration, Revenue Department officials, representative of the Earthquake Reconstruction and Rehabilitation Authority (ERRA) and facilitators of UN-Habitat would convene for public meetings. The transfer of land registration, buying and selling process, financial transactions and recording of events through photographs and were entered into a specifically designed database (Landless Information Management System) This process were jointly monitored by the concerned officials of the Government and UN-Habitat. This process was more financially efficient and less time consuming for the beneficiaries, concerned people and institutions involved.



ردیف	نام و نام خانوادگی	رقعہ نمبر	رقعہ رقبہ	قیمت	تاریخ	ملاحظات
1	محمد علی خان	82243-3388782-4	11.457	11.391	2008-08-01	...
2	...	82243-0850909-9	11.391	11.391	2008-08-01	...
3	...	82243-2566358-7	11.514	11.514	2008-08-01	...
4	...	82243-1139772-5	11.621	11.621	2008-08-01	...
5	...	82243-8218458-7	11.652	11.652	2008-08-01	...
6	...	82243-3543304-7	11.658	11.658	2008-08-01	...
7	...	82243-2358731-2	11.658	11.658	2008-08-01	...
8	...	82243-5443881-1	11.824	11.824	2008-08-01	...
9	...	82243-11994554-5	11.427	11.427	2008-08-01	...
10	...	82243-2359531-1	11.433	11.433	2008-08-01	...
11	...	82243-3543304-7	11.622	11.622	2008-08-01	...
12	...	82243-8686661-7	11.416	11.416	2008-08-01	...
13	...	82243-8334504-3	11.651	11.651	2008-08-01	...
14	...	82243-5871757-3	11.634	11.634	2008-08-01	...
15	...	82243-3748593-9	11.200	11.200	2008-08-01	...



Grievances

A strong grievance redress system was a hallmark of this programme. Special Grievance Redress Committees were formed under the leadership of retired but very experienced revenue officials. They collected complaints from rejected applicants and community members. After verification, the cases were decided upon within fifteen days. People were allowed to challenge the decisions of the grievance redress committees to the office of the Deputy Commissioner or District Coordination Officer or contact civil courts for suits.

Special considerations were given to orphans, female head of households, people with disabilities and elderly people without care. The policy was made accomodating to provide urgent compensation for them.

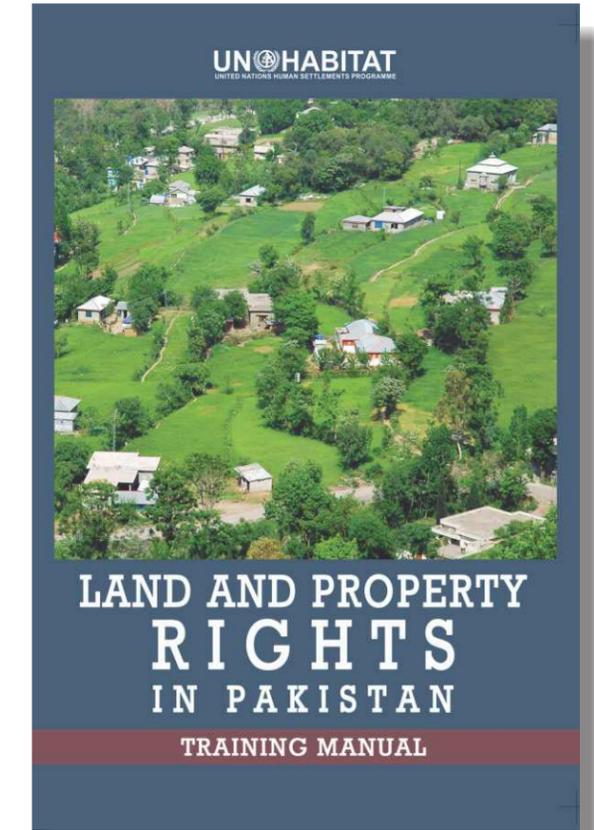
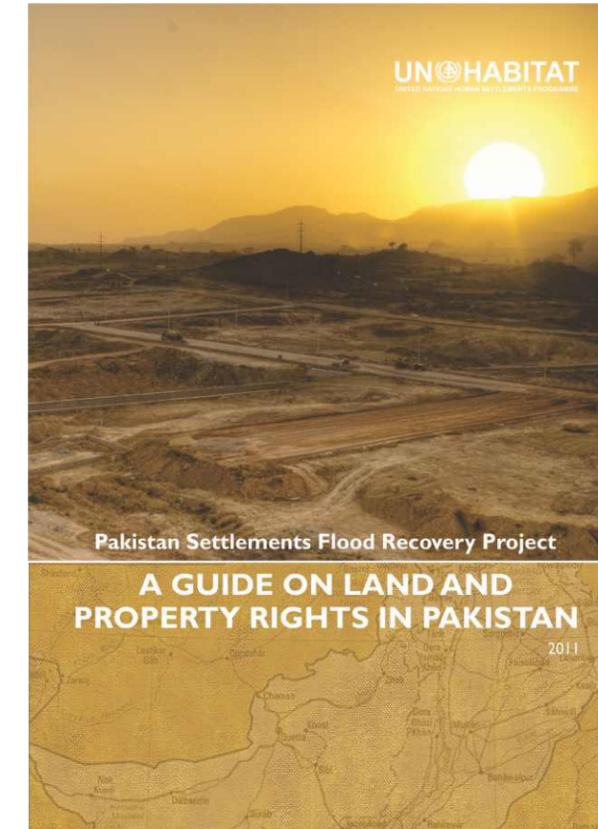
The Programme

The Rural Landless Programme was extremely successful and was quoted as a best practice, that could be replicated to reduce the vulnerabilities of people in similar situations.

The programme received worldwide recognition for its transparent mechanisms and achievements. UN-Habitat hails the programme as a success as it facilitated thousands of people, whose lives , otherwise would have remained at risk without safe land and a place to live.

Before the earthquake, many people were living on hazardous sites put these became unsafe to inhabit. The mass awareness campaign and reconstruction enabled people to look for safer land to reside on with the help of the authorities.

It took a situation of crisis to bring awareness towards risk preparedness and people realized the importance of behavioral and attitudinal change to increase their resilience towards future crises.



A Guide on Land and Property Rights in Pakistan

'A Guide on Land and Property Rights in Pakistan' has been designed by UN-Habitat. It is a guide compiled to facilitate the basic understanding of the major principles of Pakistani land administration system. It can be of use to donor agencies, international affairs organizations, national civil society organizations, lawyers and community leaders engaged in humanitarian, development or other similar works that necessitate basic information about the general features of the rural land administration system in Pakistan. It may also be used by district and provincial administrations throughout the country.

The guide elaborates the land administration system in settled areas, types of land ownerships, transfer and sale of land, acquisition of land, tenure and the rights of tenants/occupants. It is a general and brief introduction with basic facts and law. A training manual that helps people in understanding the mechanics of the system has been produced for these purposes.



A NATION UNDER THE WEATHER

In recent past, floods have become a common recurrence in the country. Following the monsoon rains and increased temperature contributing to rapid melting snow, the River Indus swells in the summer season and spills into neighbouring villages and towns. Since the first recorded major flooding in 1928, sixteen floods have affected the country, eight of these major floods have been in the last two decades. With every flood, populations in the millions have been affected. Most of those affected were barely able to rebuild their lives, before another flood.

The latest natural disasters have been the floods of 2010, 2011 and 2012. Considering the history of natural disasters in the country and the irreversible damage done to homes, lives and livelihoods, strategies must be in place to protect and safeguard the interests of the urban and rural communities that lack the means to self recover.



Only those who visited flood areas could truly witness the mass scale of destruction caused by the raging waters. UN-Habitat senior Engineer Hamid Mumtaz was part of the damage assessment team that was dispatched to Sindh.

“When we saw the conditions there, we thought that the people will not be able to survive. People were begging for water. Infants had no milk. Mothers would put their babies on our laps and beg us to give them milk.” Such conditions were widely witnessed throughout the affected areas in Pakistan.

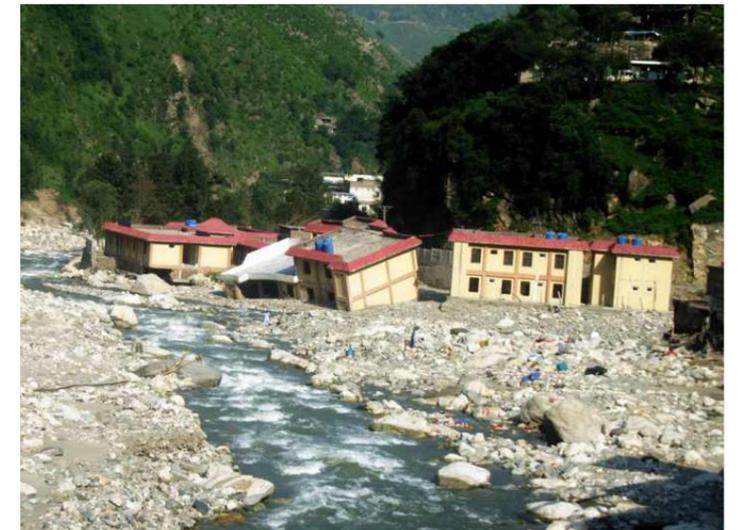
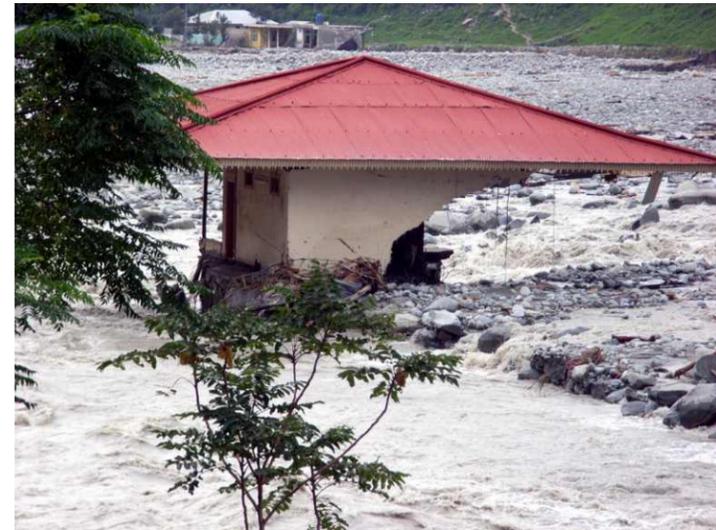


Invaluable mud architecture was destroyed during the floods were made to restore people's lives and assets.





During 2010-2011, Pakistan was again devastated by the severe floods. This was brought about by monsoon rains, floods swept through the north and washed over portions of the entire country along the Indus River banks. Gushing into the Arabian sea, these floods travelled some **3,180 km** destroying everything that came in its path.



Initially, the damage seemed to be minimal and confined to the northern areas, however, the unrelenting waters could not be contained. The Floods started in the province of Gilgit Baltistan and they spilled to the provinces of Khyber Pukhtunkhwa and Punjab, twisting south to Baluchistan and Sindh. The water found its way through the Indus River, which runs along the entire length of the country and wreaked havoc to all settlements surrounding the region. Under nature's siege, the country declared an emergency and disaster management teams were dispatched to assist the people.





2010 Aetbar-Khan Chandio, three months after the flood





1.7 million houses were destroyed or damaged. **1,343** people lost their lives. **14** million people were affected. The UN-Habitat staff arrived to stagnant flood-waters with camps set up by the government. Most of the camps had tents with no facilities inside. People had been provided with some essentials but far too many people were in need and access to only a few was possible.





There was not enough to shelter the large number of affected people. Improved basic shelters were scattered all around as people waited for aid to arrive.

FLOOD RESPONSE

An Integrated Approach

UN-Habitat penetrated the most affected districts across the country to rebuild vulnerable communities shelters, infrastructure and to improved hygiene, water and sanitation conditions.



UN-Habitat's teams visited the affected areas and recorded the real tragedy of devastated homes, livestock and agricultural land unfolded. Thousands of pictures and visual accounts were used to report the destruction caused by the path of the floods. No one was left untouched by the true terror of the hazard. Immediately, an assessment was conducted and a report was released.

Monsoon Flood 2010 Pakistan

Rapid Technical Assessment of Damage and Needs for Reconstruction in Housing Sector

October 2010



UN HABITAT

United Nations Human Settlements Programme



National Disaster Management Authority (NDMA)

Housing patterns



Sindh
Typical mud house with rooms in a row and grain silos.

Sindh
A settlement in northern Sindh.

Sindh
Typical mud house having larger compound area.

Sindh
In rural areas of Sindh there are locally made huts that run by donkey.

Punjab
Brick masonry houses with trees in the centre of courtyard to provide shade in summer.

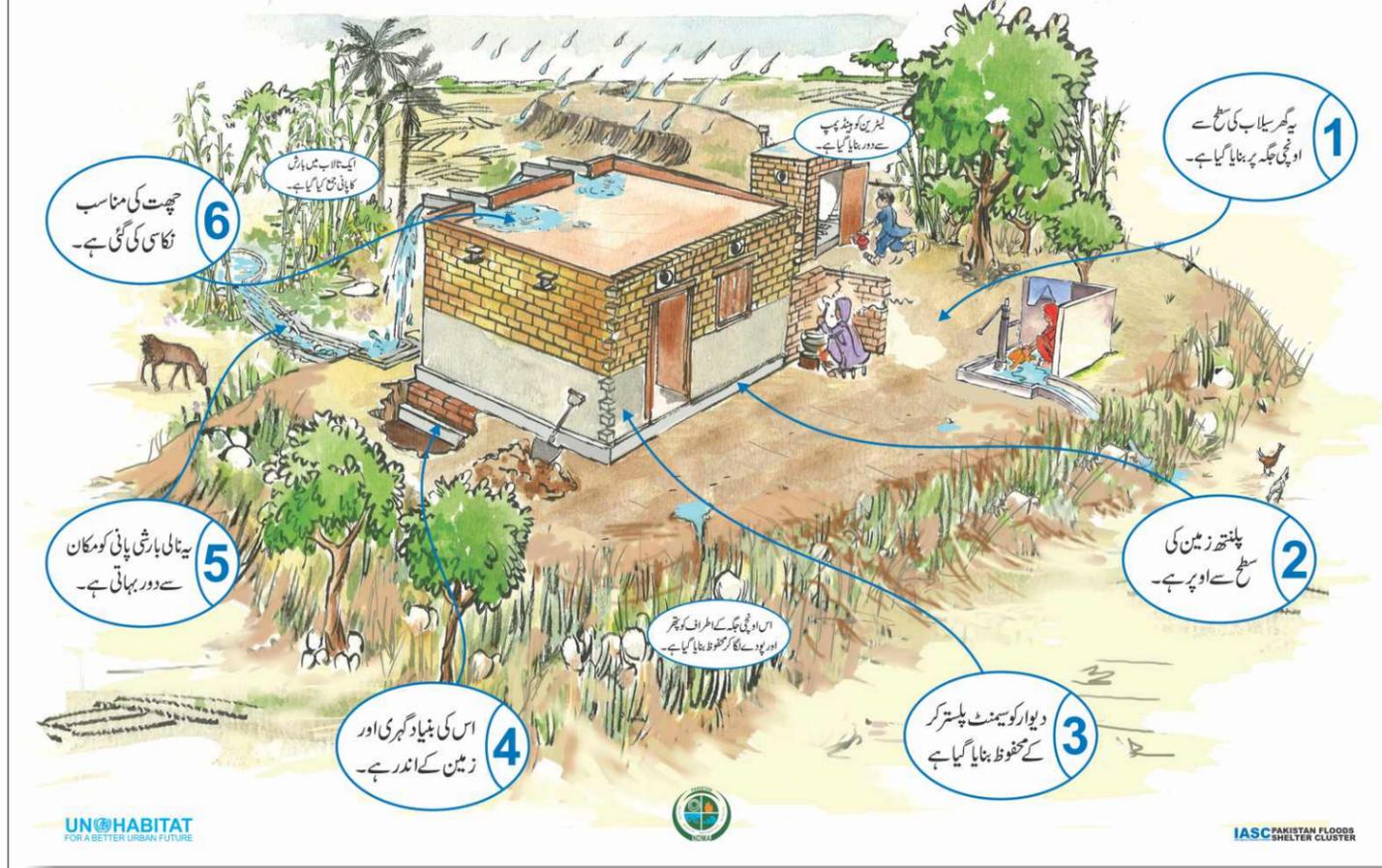
Punjab
Typical houses with cattle shed on one side. Increased number of rooms due to growing family size.



600 villages in 20 districts of Khyber Pukhtunkhwa, Punjab, Sindh and Baluchistan were identified. The long and extensive process of identifying beneficiaries began. Vulnerable or extremely vulnerable beneficiaries were defined as those unable to build their own shelter such as the elderly, sick, handicapped, widows or orphans. Each beneficiary received the provision of a one-room shelter and latrine and the shelters were built for them. In the case of other beneficiaries, technical guidelines were provided for building hazard resistant shelters and latrines. UN-Habitat advocated a community driven approach where beneficiaries were encouraged to participate in the rebuilding process. This imparted them with the skills and knowledge necessary to maintain their shelters in the future and also promoted a sense of ownership. Each beneficiary was required to contribute to the building process in the form of labour and material, which was generally salvaged material from their previous house.



سیلاب سے محفوظ گھر کے 6 طریقے



YOU CAN MAKE YOUR NEW HOUSE SAFER AGAINST FLOOD
FEW RECOMMENDATIONS FOR
SINGLE STOREY ADOBE HOUSE

Flood resistant Adobe house
Build on higher ground
Raise plate form if higher ground is not available. For flood protection use burnt bricks in foundation and provide cement/sand plaster/pointing up to flood level.
Provide proper slope for drainage of rain water from roof top.
Construct deep and strong foundation. Compact foundation in case of filled soil.

Foundation & Plinth
Depth of foundation: 4ft in soft soil and 2ft in hard soil.
Width of foundation: 1.5ft minimum. Foundation having less width does not properly transfer the weight of wall on ground underneath.
Keep a minimum 3ft distance b/w outer edge of house and edge of raised plate form.
Use burnt bricks in foundation with cement sand mortar or provide c/s plaster/pointing on both sides of wall.

Walls and protection
Width of wall - 13.5" minimum
Protection against flood: Use burnt bricks upto flood level and apply c/s pointing. Sprinkle water on masonry and use steel brush to remove mud mortar from the joints. Clean joints thoroughly, wet masonry again and apply c/s pointing 1".
Apply water proof mud plaster on both sides of wall up to flood level.
Adobe brick making: Add sufficient amount of water to soil to make it clay. Add small amount of sand. Pour prepared clay into the mould. Take out adobe brick and let it dry on dry sand plate form. Turn the brick on all edges until it gets a uniform white colour.

Roof
Provide bearing pad of concrete, wooden plate or burnt bricks under girder to avoid damage to walls. Girder should have bearing on wall not less than 1/4" times the thickness of wall. Provide 2" slope to drain water quickly.
Roofing layers:
1" mud plaster
4" compacted mud
2 layers of plastic sheet
3/8" thick check
Available thin branches of timber
3" dia bamboo @ 1ft c/c

Sanitation
Latrine pit should be 30ft (minimum) away from the water source. Cover the pit. Drain all the waste water from the house safely and use it for plantation. Build mound latrine if water table is high.

The post-flood reconstruction process aimed at creating sustainable settlements with preparedness as the primary target. Information awareness materials were dispersed among the affected communities to guide and educate them.



A mass awareness campaign was launched by UN-habitat in coordination with the shelter cluster in 2010. A poster was produced, depicting the six fundamental steps a necessary for a house resilient to floods.

- 1: House built above floods level
- 2: Plinth built over ground level
- 3: Wall plastered until window level
- 4: Deep and strong foundation
- 5: Proper drain outlets from the platform
- 6: Rain water are flowed out of roof through water spouts.



UN-Habitat began the work of rebuilding shelters and strengthening communities through WASH and community infrastructure rehabilitation using an integrated approach. The generous funds from the donor communities allowed for the rehabilitation and reconstruction of over **33,000** shelter and integrated interventions of vulnerable families in the most affected districts.



سیلاب سے محفوظ رکھی اینٹوں کا گھر
چند سفارشات

سیلاب سے محفوظ رکھی اینٹوں کا گھر
 گھر بنانے میں چمک چمک کر...
 گھر بنانے میں چمک چمک کر...
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بنیاد اور پلنگہ
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 بنیاد اور پلنگہ...
 بنیاد اور پلنگہ...

دیواریں اور سیلاب سے بچاؤ
 دیواریں اور سیلاب سے بچاؤ...
 دیواریں اور سیلاب سے بچاؤ...
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صحت و صفائی/پانی کی تکلیف
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 صحت و صفائی/پانی کی تکلیف...



One Room Shelter

When several hundred thousands of families are displaced, the challenges created are enormous. To enable effective, efficient, timely and culturally sensitive solutions, the Housing Early Recovery Working Group (HERWG) was created by the humanitarian cluster in Pakistan with the aim of establishing an overarching ER coordination mechanism.

For such large scale rehabilitation, coordination at a national level was critical. It was unanimously decided by the HERWG to address the 2010 floods housing crisis with the one-room shelter, using salvaged material and local labour while respecting the different cultural traditions in the various areas of interventions.



Displacement of people due to an emergency situation has become a major concern over the past years. On average, a household of 6-7 people become shelterless and move either to temporary camps or with relatives. These people are usually self-employed in the areas around the scattered, improvised settlements. In the event of a displacement, they are not just abandoned their homes, but also their livelihoods.





The shelter is a 200 ft², square structure and serves as a core room for 6-7 people. Additional construction may be done around the shelter depending on the family resources. UN-Habitat's shelter integrated approach provided latrines and community infrastructure facilities, hence fascinating the transition from shelters to settlements.

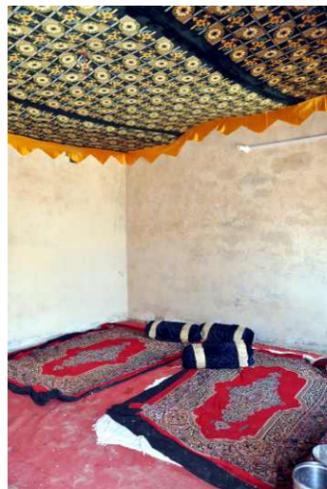




Ownership: As people participated in the process of building their shelters, a sense of ownership was visible.

Through guidelines distributed by UN-Habitat, they learnt about hazard resistant construction practices and not only men but women and children also joined in the construction process. From brick-laying to mud-mortar mixing, the communities started to learn the simple yet effective way of making their one-room shelters stronger and more resistant. As the structures developed, people from different areas started to introduce elements of design to their shelters. Vibrantly coloured doors and windows were visible on the completed shelters. Some drew patterns on the wet mud or cement coat to decorate the external walls.



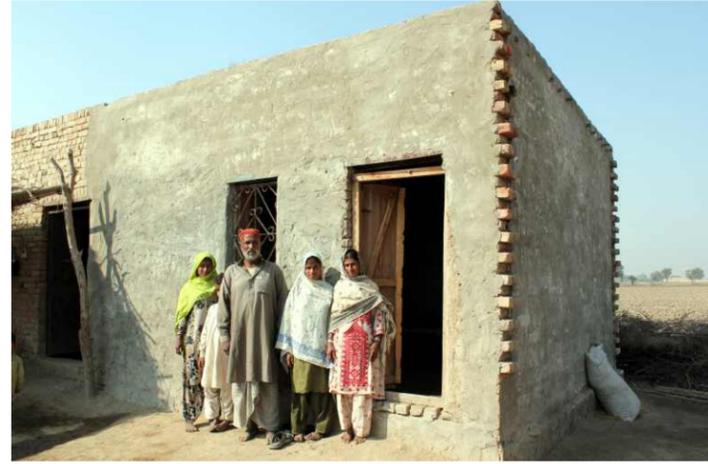


Shelter Interior

Stepping inside a one-room shelter was a very rewarding experience. From the floors to the roofs, designs and bright colours were visible in most shelters. Regardless of the region, all shelters had similar decorative elements. With the introduction of these personal touches, the shelter was turned into a home that was safer to decorate as it was stronger and more resilient just like the owner.







Construction practices varied from region to region and many reconstruction techniques were adopted for building the same One Room Shelter (ORS).

Cultural Considerations

One Room Shelter

The differences between a One Room Shelter (ORS) and a traditional house are hardly visible, but these differences are fundamental in resisting floods. Modern construction methods and techniques were introduced in building the units and traditional architectural concepts were adapted for the design of the ORS. This explains the local population's broad acceptance of the shelters, as the model suited adapts perfectly to their way of living.

The 'One Room Shelter' concept represents the traditional housing typology that has long existed in Pakistan. The criteria employed in the design of the dwelling units were developed with a vision to comply with local traditions through the use of locally available construction materials. The designs from a cultural point of view are identical whether the structures are made from stone, brick, adobe, wood, or if they were flat or pitched-roof, as dictated by climate or tradition.

The square proportion, a traditional layout of a house, creates a familiar homely atmosphere for the locals. By repeating the module, a family compound or even a settlement can be created.



In flood hazard zones, the entire house is raised above ground level through deep foundations and plinths, using water-resistant materials. Barriers against water protect the walls from absorbing humidity and a strong roof with inserted plastic layers that makes the structure lighter.

Other design alternatives and construction methods exist to address climatic disasters. However, they may be more expensive and their integration in the local cultural values and traditions would be hard or even impossible.

One-room shelter proved to be a permanent solution and has become a part of the Pakistani landscape. As soon as a unit is finished, the occupants decorate their new homes an expression of gratitude for a recovered life.



Some shelter solutions are soon abandoned because they do not correspond to the beneficiary's cultural values. Such is the case in regions like North Punjab, where the introduction of a pitched-roof shelter for example, would be a mistake as traditionally the pitched roof has been used only for animals, storage or as a temporary place.



A house, in that region is called a house, when it has a flat roof and multiple activities can be carried on, from drying grain to a fresh place to sleep during the hot season.

With an outstanding proportion, the one-room shelter rises above existing traditional houses. Higher, solid, simple and defiant, they stand as if waiting to be tested by the next floods.



The One room shelter has an architectural quality that we can call perfectly 'Contemporary', because of its simple shape and solid minimalism.

Earth Construction



The mesmerizing beauty of old earth houses is slowly disappearing from the Pakistani landscape. These enormous constructions that have resisted earthquakes and floods for centuries are slowly being destroyed under the forces of nature. Nothing can be done to save these landmarks but there are possibilities of rebuilding them properly.

Climate change, land erosion and deforestation along with human interventions such as the construction of highways, dams and irrigations canals have drastically altered the natural drainage of the run-off waters. In the rainy season, rivers overflow and puddles of water dissolve the ancient earth walls. This also occurs in seismic zones where the structures could perhaps resist the impacts of one or two more earthquakes.



Yet, mud houses are and will continue to be built using the cheapest existing materials on our planet and most of the time by hand. Like any home-made product, each house is unique and different from another.

The difference between old and new construction is noticeable when strong supporting elements are inserted. Pillars, plinth and roof bands, lintels over the openings and a well tied and resistant roof structure not only increase the structure's resistance against natural disasters, but also contribute to its aesthetic value. In this way mud architecture, the traditional model that makes the people who live in them proud of their own creation, can survive.



Building on HOPE

Bakht Meena and her husband have 8 children. When the floods hit her village in July 2010, she and her family fled their home and started living beside the Peshawar Motorway in Khyber Pukhtunkhwa. When the water receded, they returned to the village only to find their house completely destroyed.



Her husband and 18 year-old son participated in the building of their shelter. They learned construction techniques from technical guidelines and through demonstrations from master masons.

In June 2011, while the construction of their shelter was ongoing, the family was lived in a tent.



Four months later, we found Bakht Meena and her family were seen happily residing in their new shelter. They were extremely happy as they could sleep peacefully inside a sturdy shelter, which withstood the heavy rains during the monsoon season of 2011 and will continue to provide a roof over their heads.





There were many similar real life stories of people whose lives had changed forever. Although the people were from different parts of the country and spoke different dialects or languages, they all told the same stories. They told tales of hunger, helplessness, desperation, loss, grief, disrupted lives and uprooted families.



In 2005, the stories about the great earthquake started with what people were doing early in the morning. The stories of the 2010 floods, in Khyber Pukhtunkhwa, began with how people woke up at 2 a.m. In Baluchistan, people spoke about migrating to neighbouring villages. In Sindh, they spoke about being stranded. They were all in need of help and were looked for some means to end their suffering.

As people started to get involved in the reconstruction process, they began to learn how to help themselves. They learned about the power of functioning as communities and taking care of their most vulnerable. They learned about forming committees and organizing communities in order to combine their efforts. Women learned to participate in reconstruction with their men. Children learned to plaster mud on walls to make them flood resistant. They opened bank accounts for the first time and received their first cheques. They learned how to protect their environment by planting trees. People begin building latrines and slowly started to give up going to the fields.





UN-Habitat's stories are linked with the lives of these people. We call them success stories because their achievements mark the success of our programmes. From 2005 to date, we first learned about the people, their lives, beliefs, norms and cultures. In order to reach out to them we had to understand each other. It was through mutual understanding that we managed to make a difference and change the stories of their lives.



Quotes from the field:

"I was very upset and in a state of melancholy because my entire house was ravaged and I lost all my belongings to the gush of water. The level of water rose 4 to 5 feet."

"I am about 70 years old and have lived a generation but have not seen a flood like this."

"Our whole village has been wiped away with no shelter and no latrine."

*"Go to the people, live with them
Love them, learn from them
Work with them, with what they have
Build on what they know
And in the end
When work is done
The people will rejoice
We have done it ourselves"*





THE
OF
THE

VALLEY
BRAVE

Swat valley is one of the biggest tourist destinations in the country. Travellers from all over the world come to witness beautiful landscapes, glaciers and admire the rich Pashtun culture and history. Traditional handicrafts such as shawls and woollen caps (Pakol) for men are very popular among foreigners. It was named the Switzerland of South Asia by Queen Elizabeth II, yet, the valley has experienced great turmoil in recent years.

In August 2008, as 2.7 million people from the Khyber Pukhtunkhwa province and the Federally Administered Tribal Areas (FATA) became homeless, the Internally Displaced People (IDP) crisis became a focal point for the humanitarian community. The peak of this displacement was between April to June of 2009.

Swat Valley experienced widespread destruction of houses, markets, public services, hotels etc., because of political conflict during the year 2000. Major trading locations and small-scale businesses were shut down leaving many families without any source of income. As villages came under threat, people fled to neighbouring areas seeking refuge. Humanitarian agencies set up camps as temporary accommodation. Life for the IDPs was very tough as the winter and summer temperatures in the northern areas are very extreme.

The conservative nature of the people forced many away from camps where privacy was non-existent and living conditions were very tough. 90% of the IDPs sought to live outside camps with host families. Most host families were relatives of the affected people who voluntarily took in anywhere between 5 to 20 families. They lived in tiny accommodations with only one or two bedrooms and limited rations.

The Swat crisis is termed as the largest humanitarian and displacement crisis in recent times. The year long crisis badly affected the region and damaged community infrastructure. Roads and streets were cracked, water supply systems were damaged and irrigation channels were blocked.

“We were not sure how we would recover from such a crisis,” says Ali Shah, a local from the village.



Most villages in Swat are located on mountainous terrain and suffered as access roads were destroyed, and left families stranded. People were unable to go to the local markets and the sick were unable to reach health facilities in time causing many untimely deaths.



In 2009, UN-Habitat devised a programme to improve the living conditions of the IDPs and their host families. As with other UN-Habitat programmes, community based efforts were mobilised to receive humanitarian assistance. Temporary shelters were constructed so that the IDPs and their host families would have shelter and privacy until they could return to their areas of origin. Hygiene kits and buckets were distributed to encourage sanitary living conditions. Hand pumps were installed with the provision of latrines. UN-Habitat's efforts aimed at harmonizing and assisting the affected people with their host families.

Repairs were made to community facilities such as mosques, bridges, street pavements, drainage systems, community halls and culverts.

Technical and social teams in Swat were mobilized and started reconstruction projects including the rehabilitation of water schemes, bridges, access roads, streets and pavements.

The result of the UN-Habitat programme was appreciated by the local community.



"Our village is located at almost 9,000 feet above sea level and access to water in our village was once a dream. We never expected that such development projects would take place in Swat even in the next 100 years. We can go to our mosques in peace without getting mud on our clothes," says Sharif Khan, the president of a local Community Based Organization (CBO).

New irrigation and water channels were installed in order to improve the irrigation system of the villages. "The new irrigation channels have helped us a lot and we hope that our agricultural production will double in the coming months," says one man from Kishowra village.

"I have no words to describe the quality of our newly built roads. I can say this with great conviction that our roads and streets resemble Islamabad," says Sharif.

Continuous efforts are being made to regain the essence of the valley and attract travellers and tourists once again. It is possible through the strong and resilient efforts of the beautiful and brave people of Swat.



BRIDGING The GAPS

Suspension bridges are a conventional sight in Pakistan especially in the northern areas. Using local engineering and materials, the bridges are suspended by heavy ropes supported by towers. Wooden planks are used for decking. The river Swat flows through the entire Swat valley and nearby villages are accessible only through suspension bridges. Sometimes, these bridges are poorly constructed and could lead to many deaths, if they are not repaired regularly.

For more than 115 households living in villages Shawi, Sher Athrup and Makkad in Union Council Taligram, life had come to a complete standstill after all the rope tied bridges were damaged during military operations in the region in 2009. The damage to these bridges resulted in a number of crises for the people. Alternate routes were used by the residents, that took much longer for reaching the destinations. Normal daily tasks had become potentially life threatening since most people had no other option but to cross the river-bed and jump over huge boulders. Absence of a proper bridge resulted in the deaths of many people who could not be taken to nearby hospitals in time. In most cases patients expired on the way. Many children were advised to stay at home and remained absent from their local schools for days.

UN-Habitat with the help of the local CBO, Khushali Seer, facilitated the people in rehabilitating community infrastructures. With the newly constructed suspension bridge in Union Council Taligram, people now move freely from both sides.



New Constructed Bridge in UC Taligram



Guidelines for Community Infrastructure

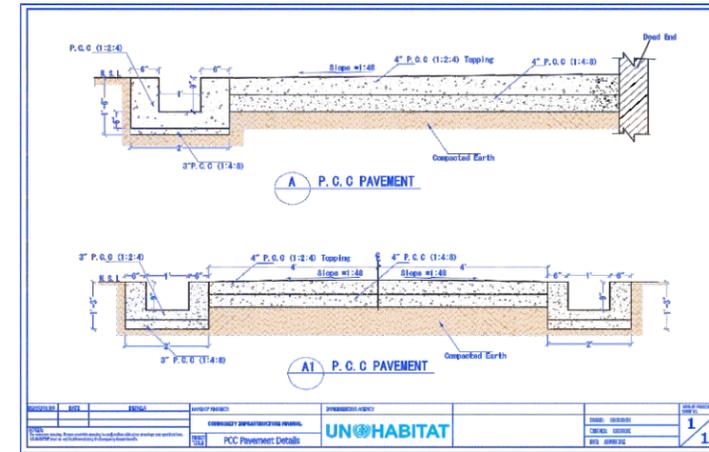
This guideline provides typical designs and cost estimates for common kinds of community infrastructures used in reconstruction and rehabilitation in the country. The guidelines help technical managers, engineers, sub engineers, communities and builders who are involved in rehabilitation and reconstruction of physical community infrastructure. This document provides designs, typical drawings specifications, terminologies and bill of quantities of the most common community infrastructure. The designs incorporate environmental and Disaster Risk Reduction considerations.



Brick masonry channel



Herringbone pavement



PCC pavement details



Pipe culvert



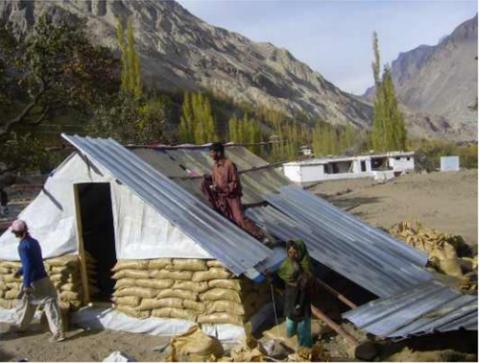
Vegetation in wetland

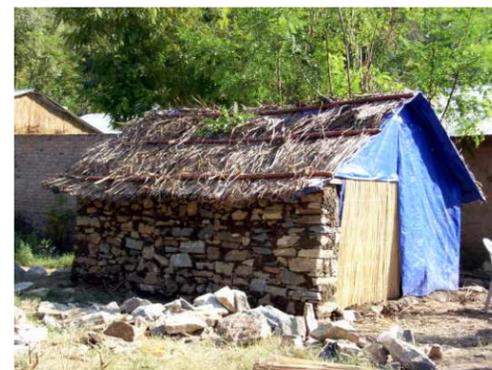


Gabion retaining wall

Temporary Shelters

In times of emergency, relief and recovery requires planning. In natural disasters, losing homes is the major cause of displacement and leaves entire families vulnerable to insecurity of health and safety. It is important to provide vulnerable people emergency, temporary and very basic shelters. The main function of these shelters is to provide a roof over the heads of the people and give them protection while they are in transition and until they can build their own, more permanent structures. These are generally made of reeds and are one-room shelters. They are cheap and quick to make and have some elements of disaster risk reduction. Beneficiaries often plaster them with layers of mud to make them more durable. They are not meant to be permanent structures and should not be treated that way. However, they do provide temporary relief from extreme weathers and natural elements and give privacy to vulnerable families.





Type of temporary Shelter

Beyond Relief





Tando Mohammad Khan is a district located south of the province of Sindh. It is a hot, barren area with several informal settlements scattered across. During the floods of 2011, the second year of massive flooding in Sindh, the district was severely damaged and the settlements almost disintegrated in the flood-waters.

The people of Tando Mohammad Khan are indigenous to Sindh but vary in religious beliefs, traditions and customs. Their education is minimal and they have barely any interaction with people outside of their community. Their almost gypsy-like lifestyle is tailored to accommodate their surroundings. Nothing but the heat is abundant.



After the floods, a time of despair arrived upon these people. Everything lost, they resorted to temporary shelters made of sticks and cloth. UN-Habitat identified a few areas for the rehabilitation of 6,345 temporary shelters with Water, Sanitation and Hygiene interventions. The community was provided with a basic bamboo framed shelters that were low-cost but had the option of being made more durable.



The initial months saw a scattering of artificially raised platforms with bamboo sticking out of the foundations. There was an order and structure to the line of shelters that were planned in the form of a community rather than being sporadically strewn around. The people responded well to the trainings and it seemed as if things would go according to plan.



A year later, the settlements were complete. The project completion was successful yet what lifted the spirits of the UN-Habitat staff was the unexpected change in attitude of the people. These were people who had been given basic trainings and raw material, yet when our staff visited the newly formed settlement, there was no visible bamboo or chic. These brilliant people had plastered mud on every wall, floor, pavement, dividing wall, patio floor and any other surface of their settlement. A vision of smooth caked mud shelters and verandahs, kept pristine and clean, with intricate designs and beautifully designed interiors now dominated the landscape. These people had minimal education but had learnt DRR techniques of making their shelters more durable. Their women, who traditionally made handicrafts, became involved in the construction process and entire families participated to transform shelters into a community. The children helped plaster the mud that was collected by their mothers from nearby vacant areas. Latrines were built on raised grounds, and their doors were decorated by beautifully embroidered cloth. The villagers, previously cut off from the rest of the world had welcomed strangers, learnt new ways of building and created a newer, safer world for themselves.





Tando Mohammad Khan is a lesson in resilience and self-reliance for everyone. It is a great story about people from different backgrounds and beliefs joining hands to protect their world.



Saving Lives

Through Behaviourial Change



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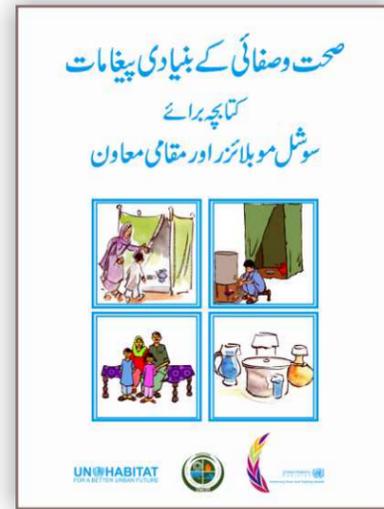
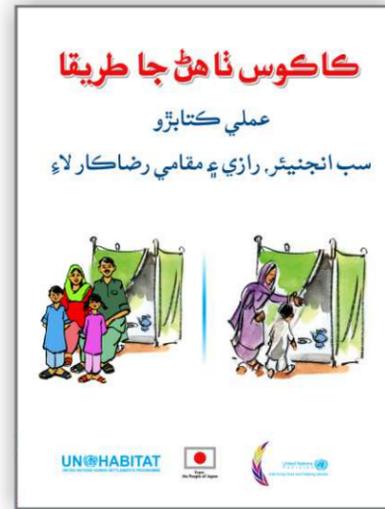
Thousands of children in Pakistan lose their precious lives every year due to unsafe water and poor sanitation services. They are also a major contributor to the low standard of living, especially for women.

In order to provide improved low-cost Sanitation and Water facilities for vulnerable disaster affected families, UN-Habitat Pakistan developed a large scale programme in response to the earthquake, crisis of internally displaced people and the recent floods. Temporary facilities were constructed during the relief phase and communities were assisted later in constructing permanent facilities during the recovery phase.



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With the aim of saving lives, UN-Habitat's Hygiene, Sanitation and Water 'HySter' Programme is maximizing efforts towards changing people's behaviour positively using Sanitation and Water facilities. Illustrations depicted in this page correspond to different manuals and publications produced by the Water Sanitation and Hygiene (WASH) department of UN-Habitat Pakistan.



Keep the courtyard clean and dispose household waste in a dustbin.



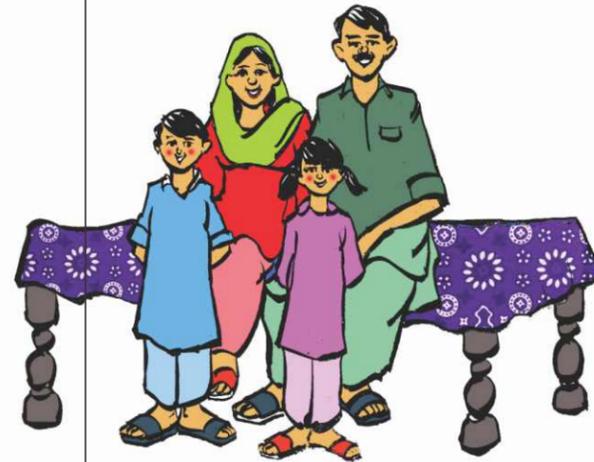
Wash your hands with soap especially before eating.



Wash your hands with soap.



Allah likes simplicity and cleanliness. Simple and clean clothes are important for human health and dignity.



Boil water for a minimum of 3 to 5 minutes.



Keep all water points like hand pumps and wells clean.



Clean sewerage lines in front of your house on a weekly basis



At the village level, bury garbage and waste in ditches.



Fill potholes of stagnant dirty water with mud to control malaria and other diseases.



Build latrines to meet the specific needs of disable/special people and assist them in washing their hands.

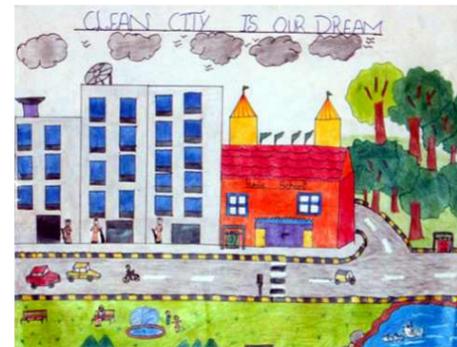


Keep your latrine clean.



Introducing Latrines in flood affected areas has led to behavioural change in people's traditions.





Children show their washed hands during a community mobilization exercise

The communities are mobilized through children led 'Environment Clubs' from local villages to achieve 'Total Sanitation' of a human settlement. 'Total Sanitation' includes a litter free, foul-water free settlement including sewage solutions.

In Pakistan, 47 environmental clubs are facilitated by UN-Habitat, involving 980 children. 23,824 latrines, 1,872 water facilities and 7,419 Behavior Change Communication (BCC) campaigns were launched in 18 districts of Pakistan during the 2010.

Urban Interventions

Our work in 21 urban slums of 7 cities in Pakistan has demonstrated low-cost solutions to address sanitation and water related problems faced by the communities.

During 2010 in Islamabad, a women-led team in an area called 'Faisal Colony', helped in the implementation of our urban development programme. Specialized or customized communication tools were used to bring sustainable change in the hygiene behaviour of people from this urban slum along with improvement in their sanitation and water facilities.

During the year 2011, there was a cholera outbreak in the slums of Islamabad, which claimed three lives and seriously affected 167 people, mostly women and children. Faisal colony was the only one that remained safe during the outbreak. Neighbouring communities have since begun adopting similar solutions to protect themselves, thus indicating sustainable change in their hygiene behaviour along with improvement in their sanitation and water facilities.





A change of attitude
is needed for this not to happen.

Sustainable URBANISATION

Sustainable urbanisation is a framework for managing urban growth such that it equally benefits both urban and rural populations, especially the marginalised and vulnerable groups without compromising resources necessary for the survival and development of the coming generations.

Under the One UN Programme in Pakistan, 'Sustainable Urbanisation' refers to a component of the United Nations' Joint Programme on Environment (JPC 4). UN-Habitat is the convener of the Sustainable Urbanisation component.

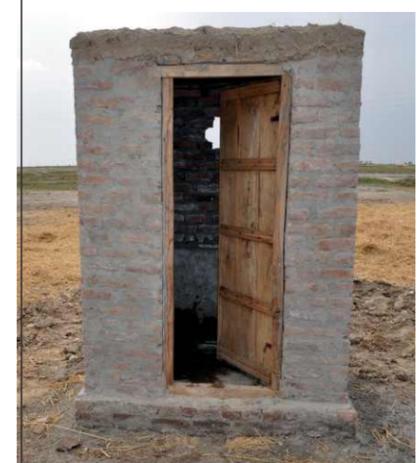
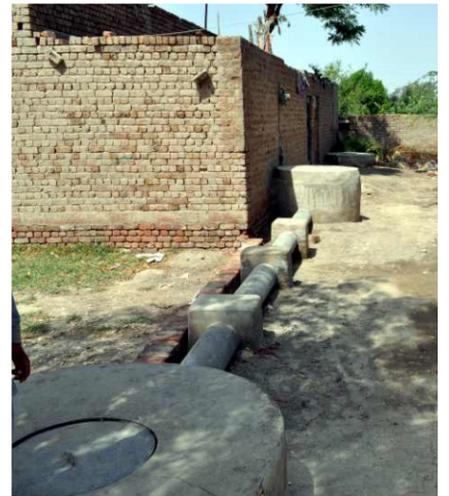
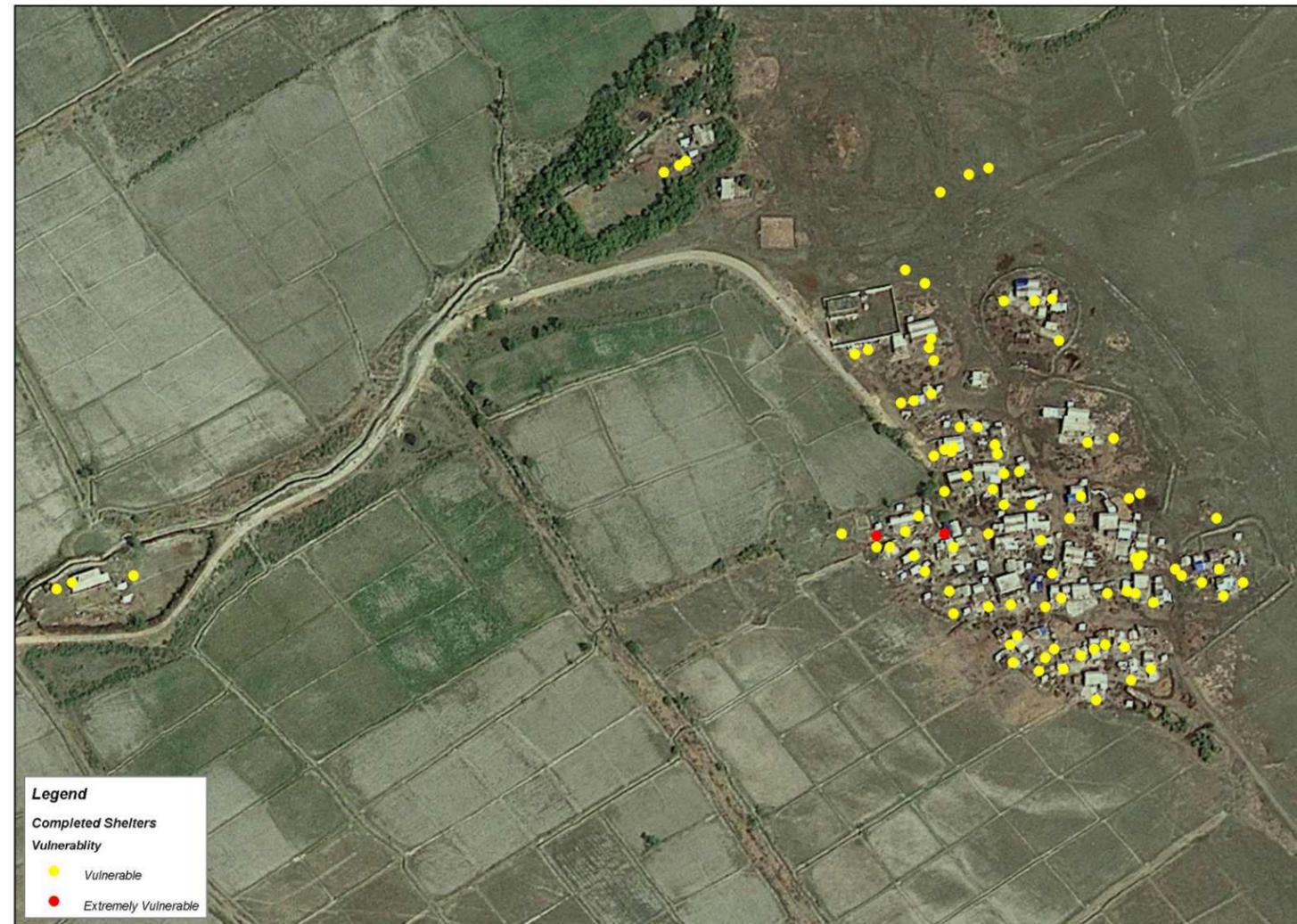
UN-Habitat and other UN agencies aim to establish and monitor baseline data and mapping on critical urban issues, create multi-stakeholder based mechanisms for participatory urban planning and management, and create innovative demand driven community development projects.

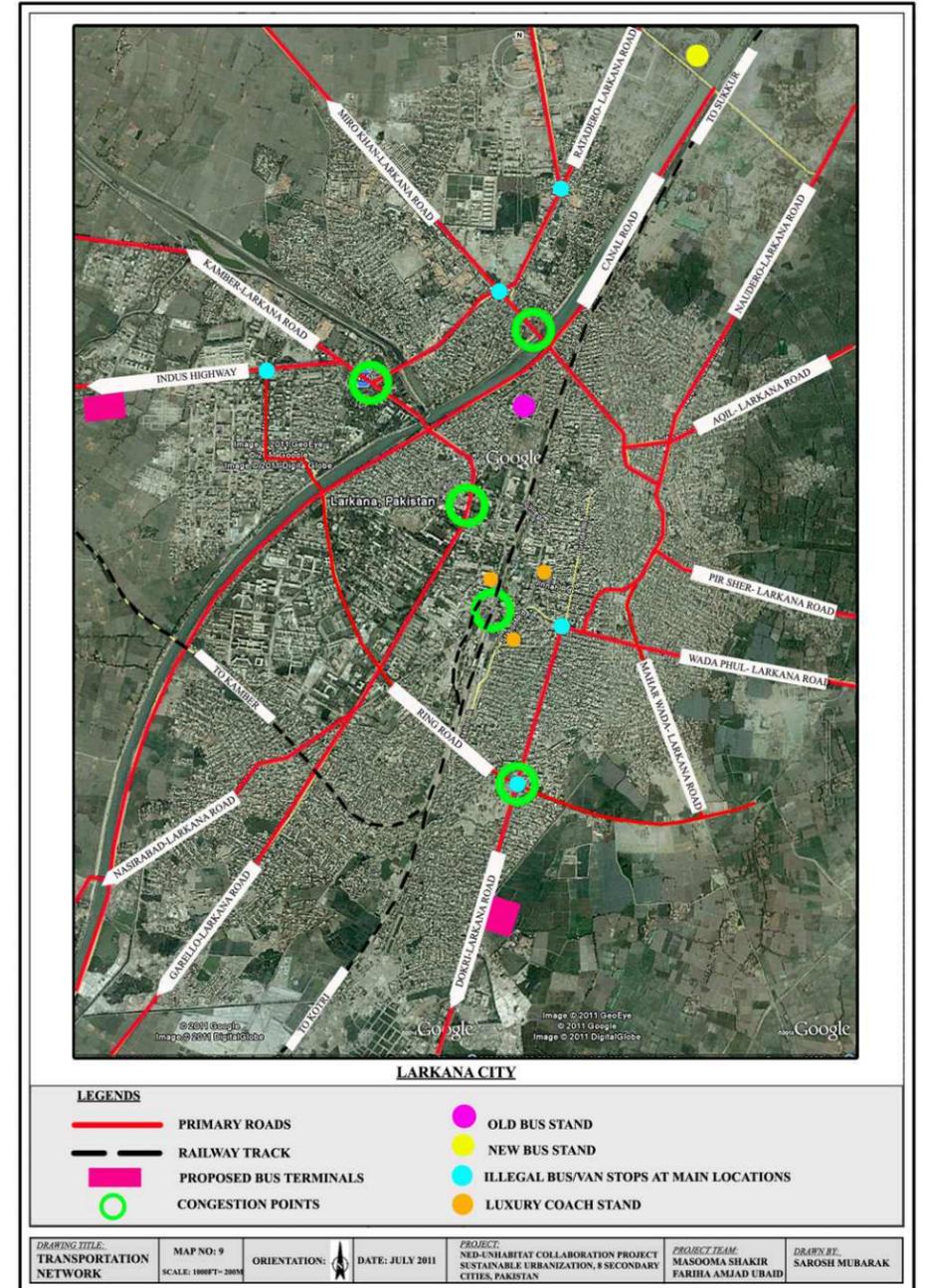
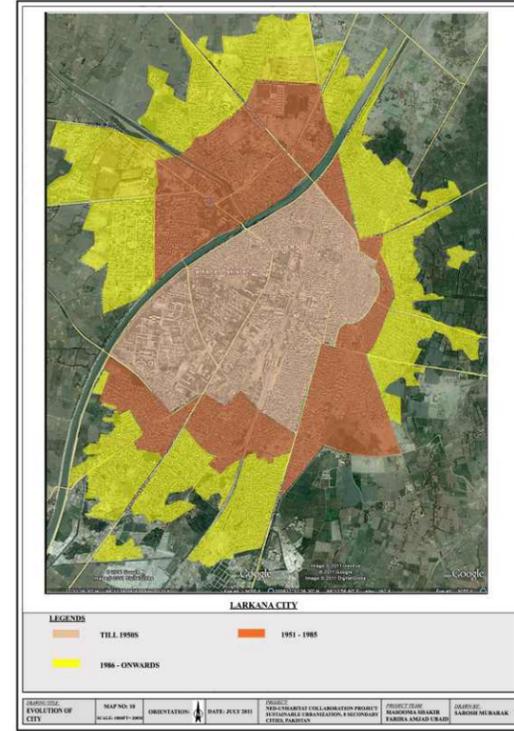
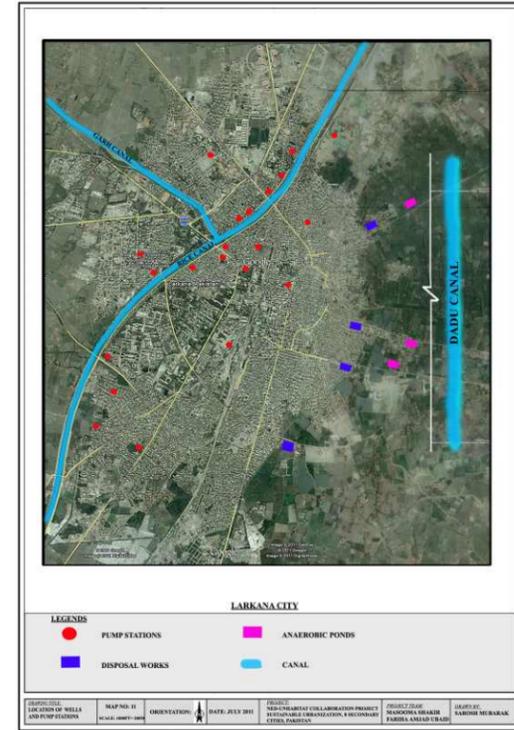
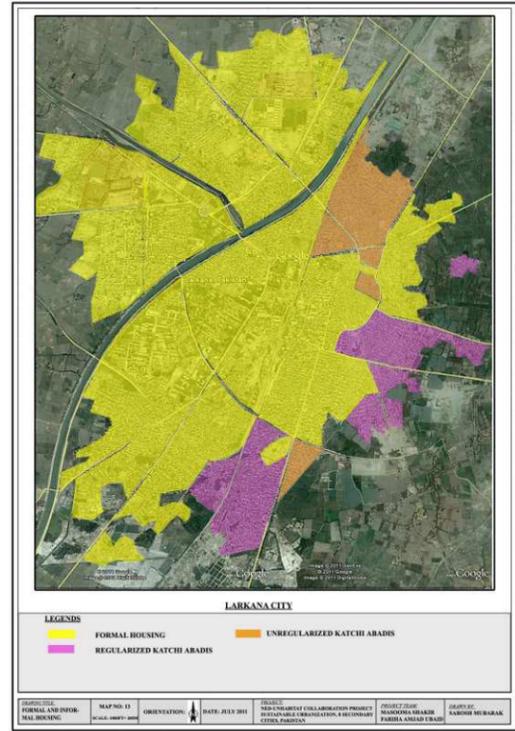
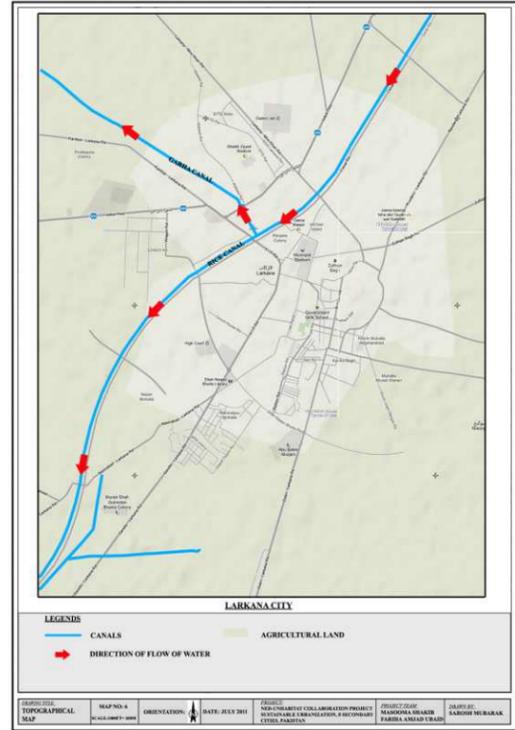
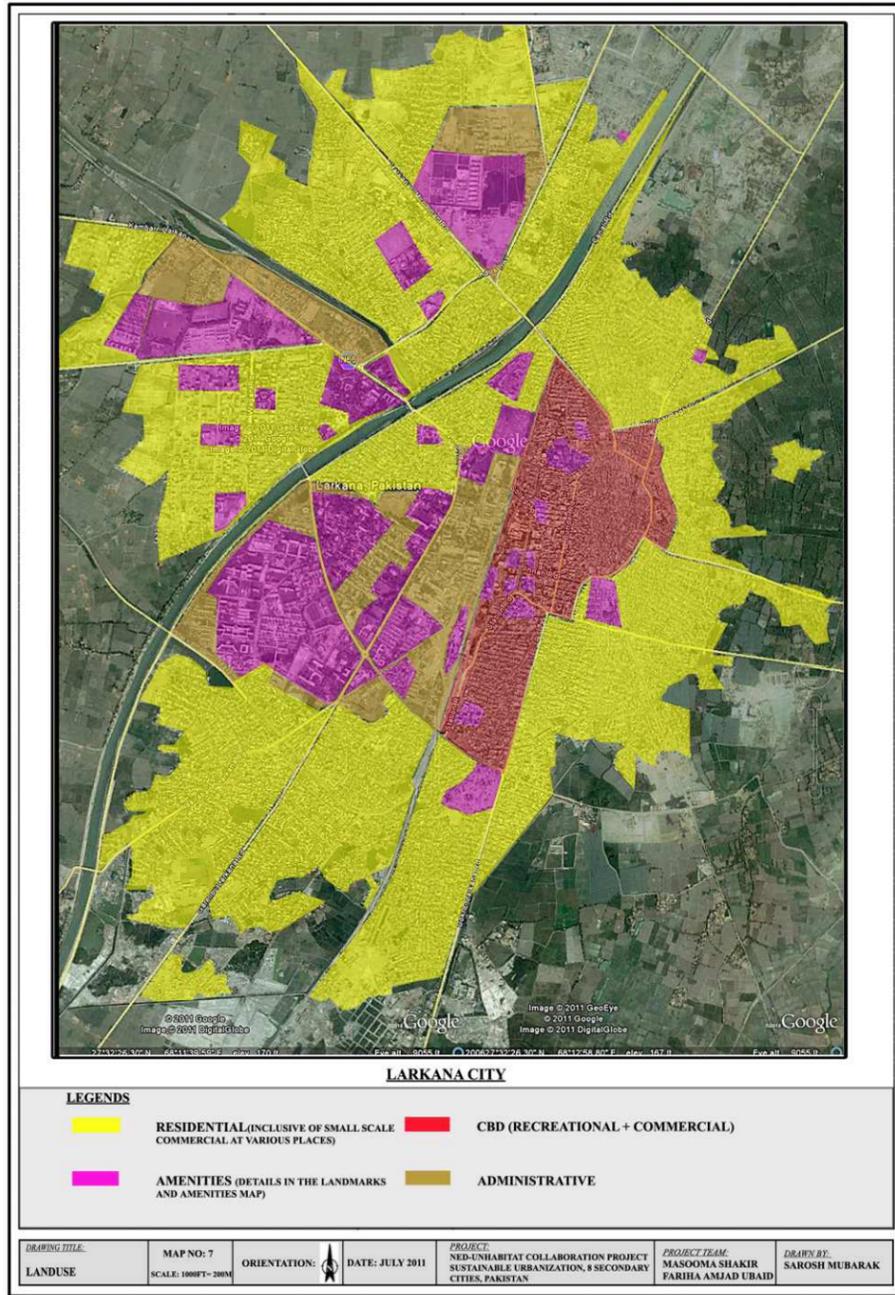


Village -Haji Allah Jhuriyo, Districk Thatta after the 2010 floods.
90% of the settlement was destroyed.

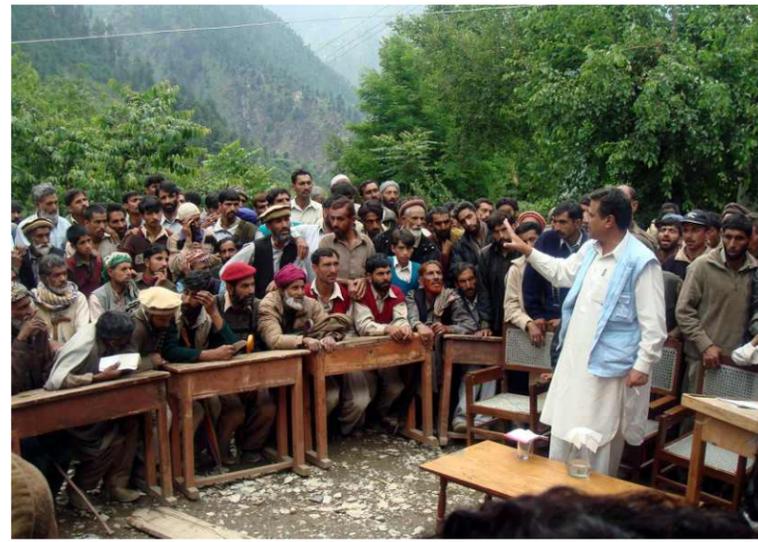
By building shelters, we are reconstructing the settlement. Through latrines, drains and water pumps we are providing sanitation. By constructing roads, we are rehabilitating the community infrastructure, and by constructing protection embankment we are protecting the entire area from future floods.

The initial phase of recovery provides a settlement with relief. However, the vulnerability of a village from future flooding is still a major concern. People who have reconstructed are scared for what future may hold for them. In one village embankment with tree plantation across the length was built. Surrounded by wheat and rice fields, the only space for the settlement to grow is on the right side. The embankment wall was chalked out with the consideration of growth pattern. The contours were set in the plain area for storm water drainage such that future roads, when built, are not flooded. The settlement will probably grow into a small town, the new shelters, infrastructure, community facilities and the market spaces will be more resilient.

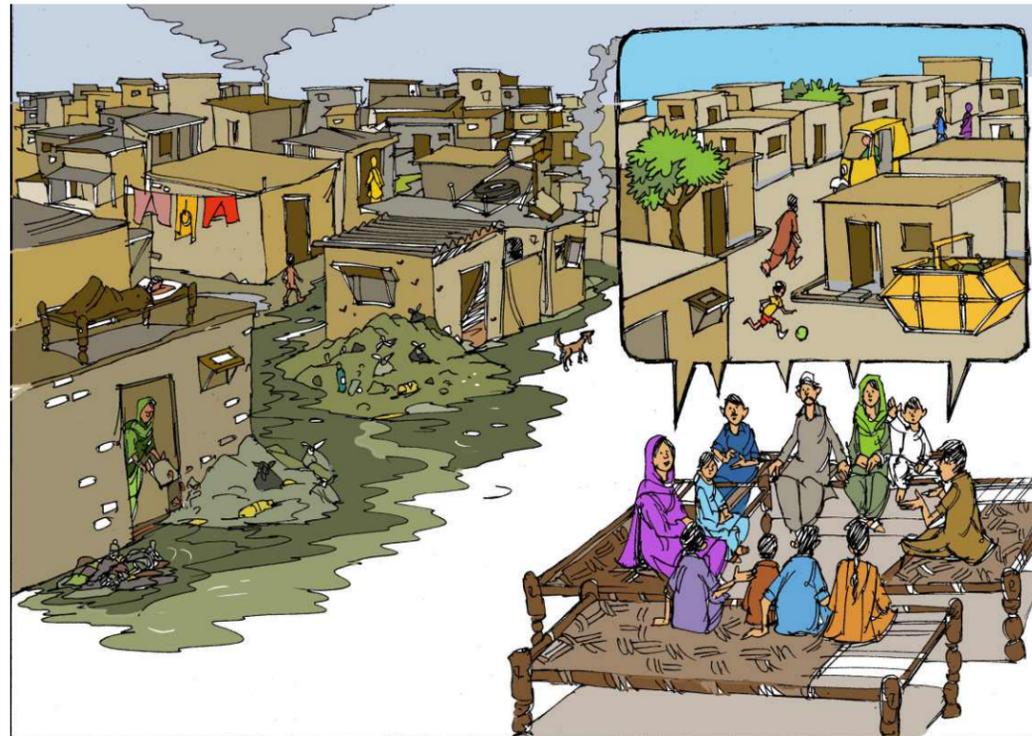




The need for connecting household services with the existing urban network leads us to analyse the whole city context. Only in this way can the upgrading of settlements be successful.



The collection of solid waste from households, recycling and composting in neighbourhood centers, is being carried out in six cities of Pakistan. This way the community is not only getting rid of its waste but it is being converted and sold as fertilized products.



The community discusses its future regarding solid waste management



Today, more than half of the world's population lives in urban areas.



As population increases in urban areas, urban slums increase too. Our goal for the year 2020 is to reduce the slums by 50%.

Houses Climbing The Mountains



Neighborhoods in Muzaffarabad along the river climb the hills in the need of expansion

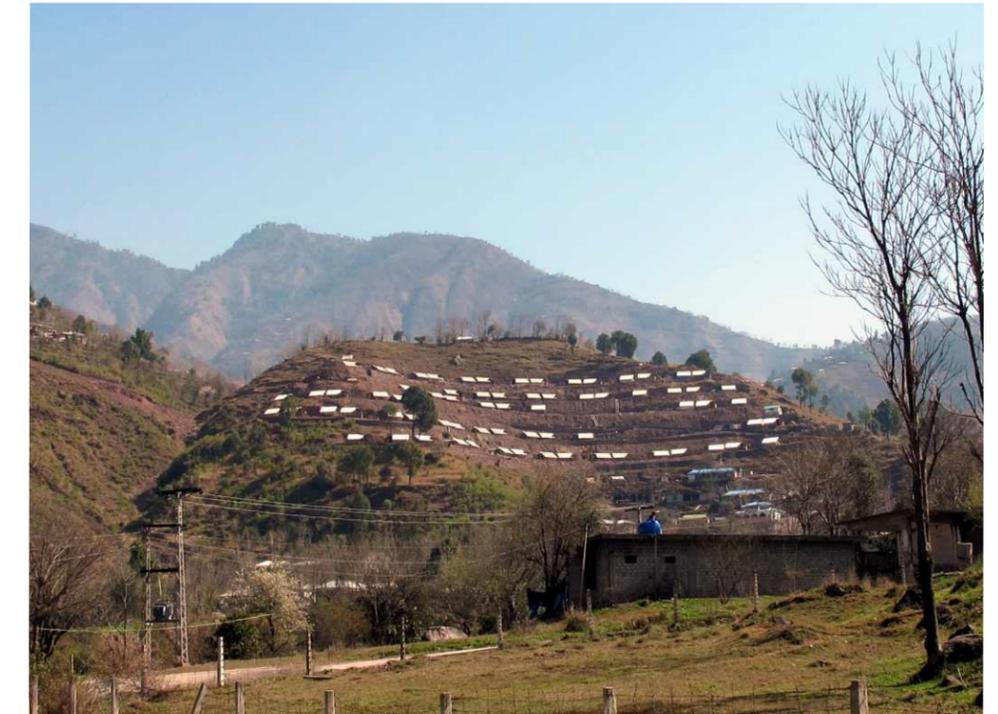


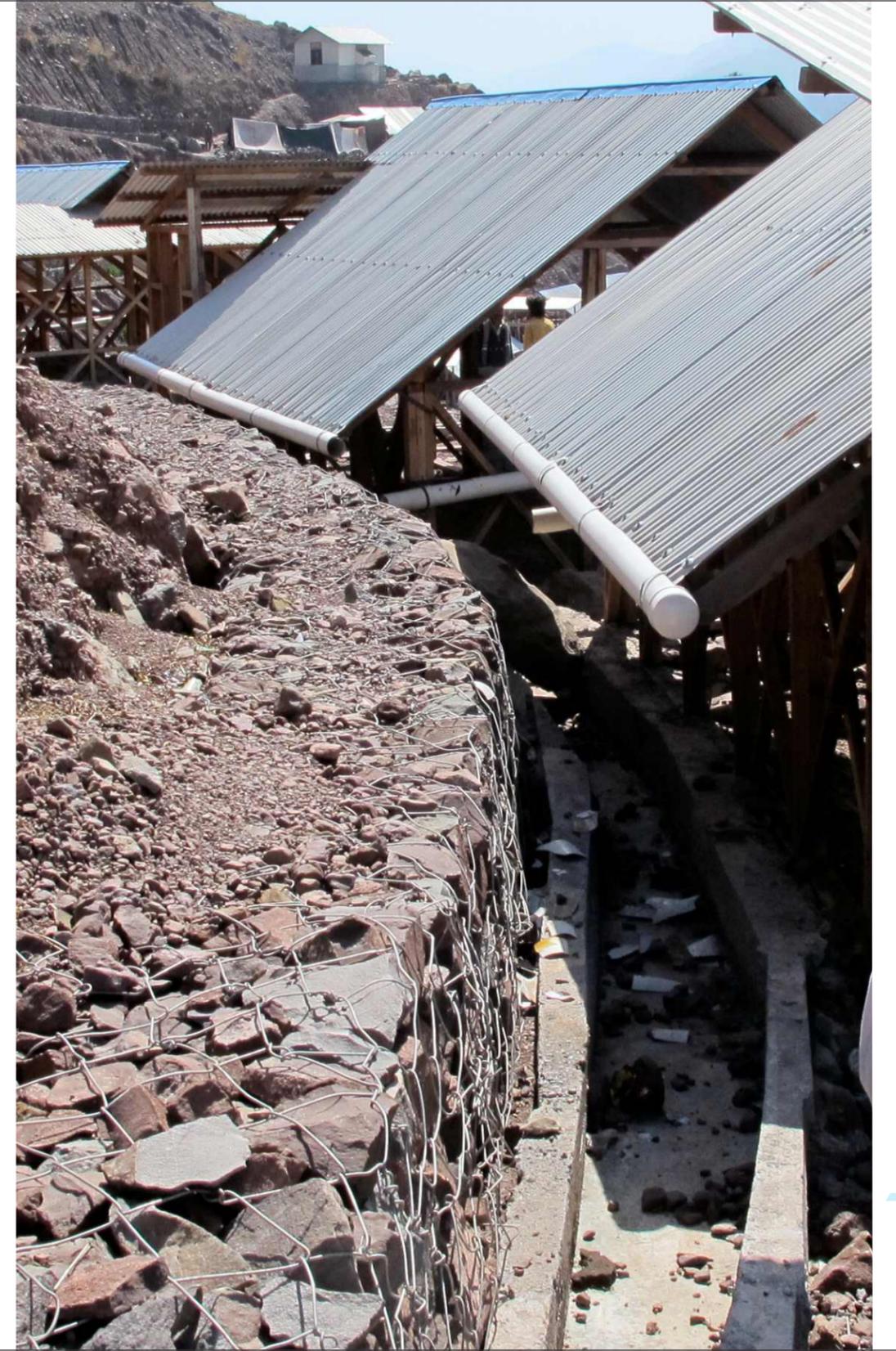
Houses literally climb mountains in Muzaffarabad, the capital of Azad Jammu and Kashmir. Land shortage is forcing the urban poor to build on surrounding hills that slope precariously, making construction and development difficult.

It is hazardous to live there, expensive to build and difficult to access basic services, such as water supply.

Since 2008, a group of sanitary workers campaigned for their housing rights. Following the floods of 2010, 79 families living on a riverbed were awarded plots in Rampura - a steep hillside near the airport.

UN-Habitat assisted the Government and the people in house construction and site development. People used heavy machinery for cutting terraces and making roads and drainage channels. Given the weather conditions, protests from neighbouring villagers and the limited budget and time, the project focused on strengthening the community-government partnership for sustainable development.





Following an existing pattern of building on terraces, houses were designed with rigid seismic resistant structures of wood, over solid foundations of stone and cement, to be filled by stones or bricks and plastered with mud. Water harvesting systems, drains and septic tanks were provided and house reoccupation begun.

The project has opened doors for the people, still living in scattered camps in the city, to acquire land in the surrounding hills. UN-Habitat continues to provide technical assistance and habitat development advisory services to make urban poor housing a reality.



A new settlement is born with the direct involvement of the community.

Not far from there, UN-Habitat assisted the construction of a school for girls in the year 2009, where all confined masonry seismic-resistant specifications were applied.



Tree PLANTATION

Tree plantation activities are carried out nationwide in the most vulnerable areas to protect settlements from environmental degradation. An integral component of all UN-Habitat Disaster Risk Reduction programmes encouraged communities to be prepared for the possibility of future natural disasters. These campaigns also minimize the environmental impact of reconstruction.

The process of reconstruction comes with its impacts. UN-Habitat takes special measures to reduce the impact of tree cutting during reconstruction through tree plantation campaigns, with the aim of being beneficial to both the communities and the environment.





The Neem Tree



Azadirachta indica, locally known as the Neem tree, is an iconic tree of the tropical and semi-tropical regions of South Asia. This fast-growing and evergreen tree can be seen widely in Pakistan, India, Sri Lanka, Bangladesh and Malaysia.

Neem is a major ingredient for a number of traditional remedies and herbal medicines. It is a natural alternative to synthetic pesticides. It controls more than 195 insects and even impacts pests that are resistant to synthetic pesticides. Being an excellent environment-friendly insect killer, the neem tree is now commercially grown in many countries.

Medicinal uses of the neem tree include treatment of allergic reactions, blood sugar in diabetic patients, herpes, heart diseases, hepatitis, fungal infection, malaria, psoriasis, and ulcer. Extracts of the neem tree are also proven to enhance the immune system.

The neem tree can adjust to climatic changes easily, for this reason, it is used in reforestation projects where it grows quickly and lasts long.



At the beginning of the year, between the months of January and February, 20 days were dedicated to planting trees. Saplings were transported to villages and with the help of the community, they were carefully planted near homes, around the villages and in areas with high water tables. Communities protected their newly planted trees by placing bricks or erecting twigs around them. This minimised any possible damage by harsh winds, heavy rains or intense temperatures.





Planted around the shelters in villages are fruit trees such as lemons, guava, olive, jamun, mango, orange, apricot and pomegranate. These are indigenous trees and yield plenty of fruit that can be used by the communities for personal consumption.

Pine, Eucalyptus, Neem, and banyan trees are planted for their medicinal properties. Other trees with deep roots that do not require abundance of water are planted in areas with long dry spells and the water logged areas. Shady trees are also planted for relief from the extreme summer heat.



The Sohanjana Tree

Moringa oleifera has many names—it is called the clarifier tree, horseradish tree and drumstick tree (because of its drumstick shaped seed pods). Locally it is known as sonjna or sohanjna. It can be used as a water purifier, for curing a number of diseases and as an excellent source of nutrition. In fact, it is now promoted as a prime source of nutrition in a number of countries to combat malnutrition. Moringa leaf powder contains protein, calcium, magnesium, potassium, vitamin C and is abundant in iron and vitamin A. No wonder it is called the miracle tree!





The concept of a small sized constructed wetland has been introduced in Pakistan by UN-Habitat, as an option for decentralized sewage treatment and promoting total sanitation solutions.

1

- Waste water is stagnant, mosquitoes and diseases are spreading
- Children look sick and pale
- Nothing is produced in the village, everything comes from outside
- Goats are around everywhere
- There is no shade and hardly any food
- The community looks poor and dirty

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2

- The community changed its attitude and is channeling waste water to ponds and constructed wetlands
- Ponds distribute water to gardens
- Constructed wetlands receive latrine water waste and bamboos and other plants grow in the dirty water
- A place for the goats is being constructed
- They are installing rainwater catching systems from the roofs
- Carts can now circulate, as the road are dry

148



3

- Trees are planted all around and all of them are well protected
- Bamboos and plants are growing in the constructed wetlands
- Gardens are green and vegetables are sprouting
- The community is looking better
- Children look healthier and play around happily
- Goats are kept properly



4

- **Now the village is full of trees.**
- Neems, sohanjnas, mangoes and other fruit trees are providing shadow, medicine, fruit and wood.
- Gardens are full of bananas, lettuces, beans and other vegetables
- Bamboos are growing and soon they will be ready to be used in construction
- The carts are now bigger as the community is selling more products in the market
- The community looks healthy and prosperous!



ISLAMABAD

A PERSONAL VIEW

Babar Khan Mumtaz

Babar Khan Mumtaz is an architect-economist-urban development planner working on housing and urban development policies and programmes for almost 40 years, advising national governments and international development agencies. Former Director, DPU, University College London.

As an architect and urban development planner, Islamabad has always had a fascination for me, and I must admit that my views regarding the city have undergone cycles of love and hate, joy and frustration, delight and disgust.

Islamabad is one of the few lasting outcomes of Pakistan's first military takeover. Until 1958, Karachi, the largest city, the most globally connected and probably the only place in the new country that Jinnah had links to, was the capital of Pakistan.

In the first decade of Pakistan, Karachi's population doubled, and in the next, it doubled again, drawing in people from all over India as well as from the rest of East and West Pakistan. It was the city that very quickly became "Pakistani" - as opposed to Lahore, Peshawar or Quetta for example, which remained Punjabi, Pathan and Baluchi. The influx of migrants bringing (capital and manpower) allowed for the emergence of industries that in turn attracted more migration, and as the capital, it also saw the rapid growth in civil servants.

The new military rulers, however, felt exposed and perhaps isolated and at Ayub Khan's behest, it was decided to move the capital from Karachi to the Potahar Plateau, close to the garrison town of Rawalpindi, which became the interim capital in 1959. In this, the Government was helped by the United States through the offices of the urban planner Doxiadis (see Box) who undertook the post-hoc rationalisation of the location and the Master Plan.

"Constantinos Doxiadis, the architect who during the 1950s and 1960s built new towns throughout the Middle East and Africa, was a leading figure in US Cold War policy. While hoping to inculcate democratic and free-market values in the developing world, the New Towns failed to take into account indigenous traditions. Today, Doxiadis's urban neighbourhoods have become something quite different to what he anticipated: Sadr city, Baghdad's giant slum, for example, where typhoid and hepatitis epidemics rage and which is now the backdrop for a new type of urban warfare."

"Though urban planning was definitely not a main priority, the Ford Foundation spent five million dollars on Doxiadis's design and research, the largest sum it ever spent on one private party. Starting with a grant to Doxiadis's design work for the city of Karachi in Pakistan in the mid-1950s, Doxiadis and the Ford Foundation became a truly close couple."

"The Ford Foundation described its urban planning projects (in India, Yugoslavia, Chile, and Pakistan) as "white bread": soft, with no particular taste, and liked by everybody. They could ease the way towards a different lifestyle - Western, efficient, and peaceful - and help Third World countries become rational civilizations and obtain well-deserved autonomy. In this sense, it is not an exaggeration to call Doxiadis' work part of the cultural and economic imperialism of the West in the developing countries."

"Local influence had a very limited, technical meaning for Doxiadis: it meant using local techniques and building methods, but did not involve using local identity or cultural traditions."

From: Michelle Provoost, *New Towns on the Cold War Frontier*, How modern urban planning was exported as an instrument in the battle for the developing world.



Islamabad, then, never was designed as a “Pakistani” city, and for the first decade or more, no Pakistani wanted to have any part of it. Those that had to be in Islamabad, because they were part of, or because they had to deal with, the government or the bureaucracy, commuted to it from Karachi or Lahore. As a result there was only one hotel, and hardly more than a couple of restaurants.

Wealthy bureaucrats who got land allocated cheap built most of the houses (the poor were not even allowed to be there) and then rented them to embassy staff and other foreigners, virtually recouping their costs with the rental advance. Few Pakistanis actually moved to Islamabad unless they were “forced” to, and only very recently has anyone started to admit that they are “from Islamabad”.

To an extent, in many respects, Islamabad got the same treatment as most of the other new towns and capitals - Brasilia, Chandigarh, Canberra and even Washington DC: unloved and un-lived, “dormitory” towns for the better off, and expensive and uninviting for those with limited means.

Yet, their very isolation was their salvation. When Karachi erupted in violence and Lahore succumbed to over exposure, Islamabad stood out like an oasis - or perhaps a mirage. Here was a city that was in Pakistan but was not Pakistani. It was planned to deter pedestrians and there was no employment other than as domestic servants, to draw in the poor. On the other hand, as the nation's capital, it had water and electricity, and public money for schools and universities, art and heritage galleries. Islamabad, with its landscaped environment, the beautiful backdrop of the Margalla Hills and the shimmering beauty of the Rawal Lake, the majesty of the Shah Faisal Mosque, the rustic charm of Saidpur...the list goes on. Even the security checkpoints are not enough to stop Islamabad's growth.

Let us work for the day the barriers are no longer needed - when this lovely city can start to breathe again. The basis and the fundamentals are there, but we need to transform some of the straight jackets imposed by the planners and the bigots. We need to come out of this impasse.



It is, perhaps, the best laid-out and serviced city in Pakistan since Mohenjo-daro and Harappa. The basis for developing community is there in the green trails that link each Sector, and where each Markaz offers its own character and attractions. What Islamabad needs now is more people, more citizens. Some of the most attractive, and “Pakistani” bits of the city are to be found in the newly emerging sectors to the west of Agha Shahi Avenue, and in the informal housing pockets like the French Colony. What Islamabad needs now is more action and interaction: between income groups, between nationalities and between functions and land uses.

We need to look at the city: it cannot keep expanding, growing forever (though Doxiadis considered an urban net from Athens to Bangkok). We need to make the sectors work - to introduce work opportunities within walking distance of the housing. Islamabad cannot exist by bureaucracy alone. It needs to become productive. It needs to become more dense, more intense. It needs a public transport system for people to access the whole city, it needs people to take over the city from the motorcar, it needs to “come home” - to Pakistan.



Low density housing, calm streets and green alleys can be appreciated in all the “government houses” neighbourhoods

Implementing with the Community

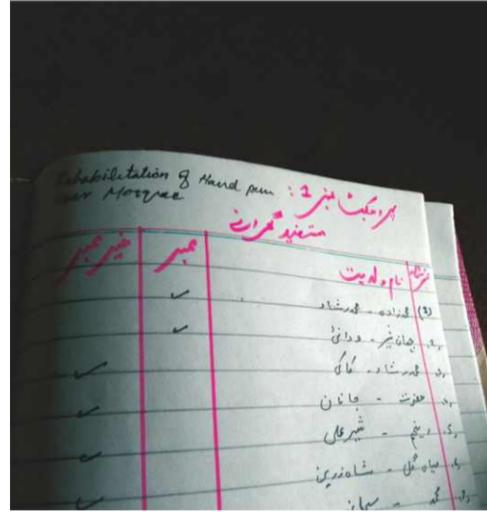
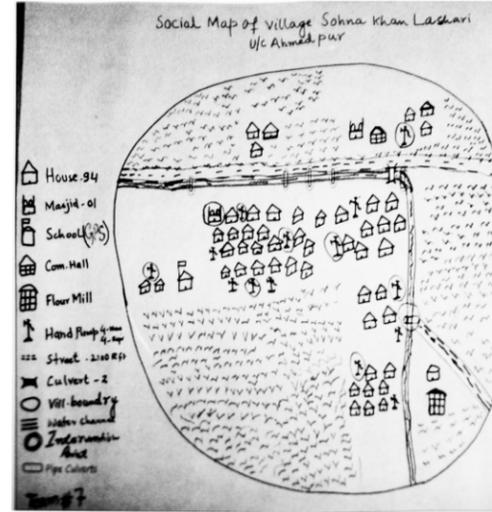
Bijay Karmacharya
Chief Technical Advisor, UN-Habitat, Pakistan

The earthquake of 2005, the floods of 2010 and the floods of 2011, called for massive recovery efforts as their effects were geographically spread throughout the country, affecting millions of people. Recovery from these disasters required a mechanism that would allow for rapid recovery within an acceptable period of time.



The recovery of communities and rehabilitation from natural disasters is best achieved by engaging the affected people themselves, through a community led process. Experiences from around the world have shown that the facilitated engagement of affected communities allows for accelerated recovery of post disaster or post conflict communities.





The 'Community Agreements' are founded on the principles of Shared Responsibility, Equity and Justice, Transparency in use of Resources, Payments based on Progress made, Accountability and Answerability to and among the beneficiaries.

Transparency in the use of resources and decision-making are ensured through a social audit where representatives of the CBO/CCB provide, on a public forum, the accounts of the project to the beneficiary population.

Community led recovery is based on the philosophy that the affected beneficiaries should not just be 'passive recipients' of the development aid but they should be 'actively engaged' in the process of their own recovery by putting their own effort into it. UN-Habitat has extensive experience and expertise in community-led recovery, rehabilitation and development in its countries of operation.



As the representative of the beneficiaries, the Community Based Organization (CBO) or a Citizen Community Board (CCB) enters in to a Community Agreement on behalf of the community with UN-Habitat. The entire project is managed by the community including identifying, planning, procuring materials, organizing labour and executing construction, as well as monitoring progress.

UN-Habitat team's role is to facilitate, empower, and build the capacity of the CBOs and beneficiaries. The field teams and monitoring teams of UN-Habitat are responsible for guiding and monitoring the physical quality of the constructions and materials used.





We use 'Community Agreements' (CA) as the primary tool for community led implementation of our projects.

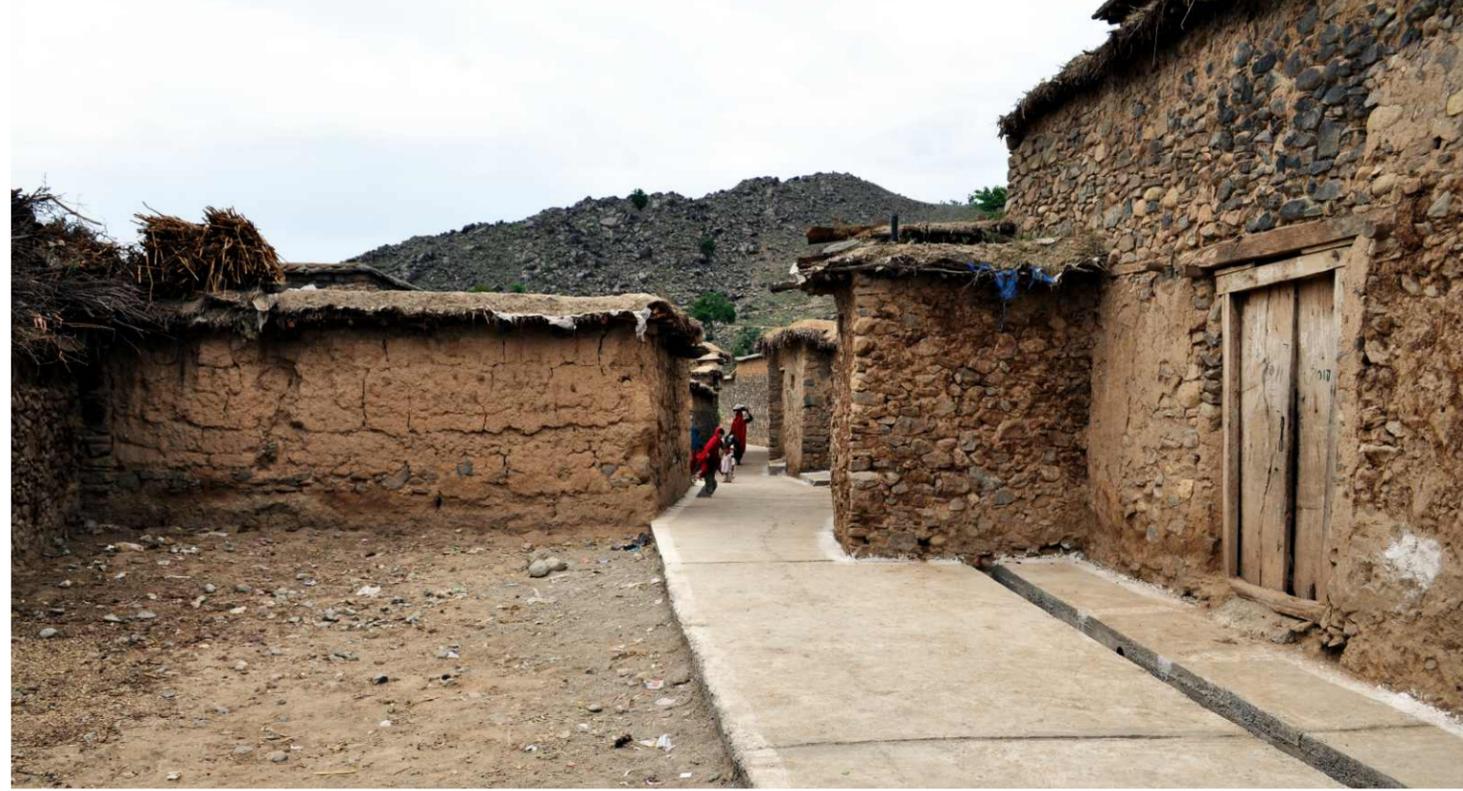
The 'owner driven element' has resulted in the rapid recovery of shelters, latrines and community infrastructures.

For the last seven years, under its major projects, UN-Habitat in Pakistan has implemented more than **590** 'Community Agreements', in more than **500** villages of **18** districts in Sindh, Balochistan, Punjab and Khyber PukhtunKhwa provinces, across the length and breadth of Pakistan.

'Community Agreements' have enabled the organisation to construct over **33,000** shelters, **5,000** latrines and rehabilitate and construct almost **3,000** various community infrastructure projects such as new roads, water points, bridges, praying spaces and other essential development parts of rural and urban human settlements.

The facilitated engagement of affected communities allows for accelerated recovery





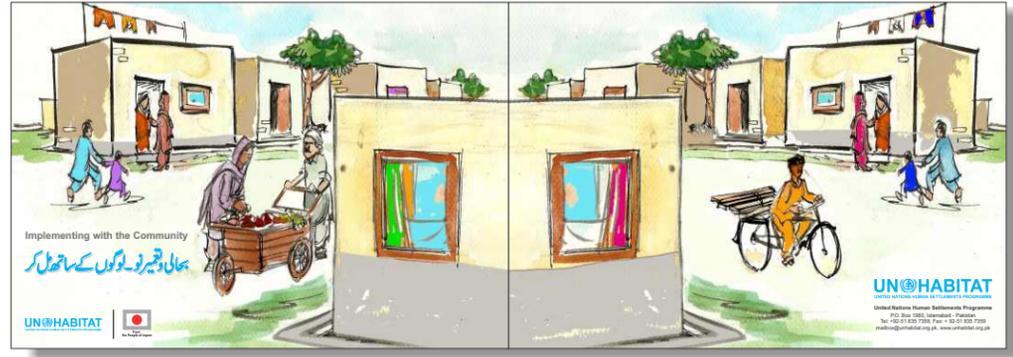
بحالی و تعمیر نو۔ لوگوں کے ساتھ مل کر

UN-Habitat has implemented the 'Pakistan Settlements Flood Recovery Project' in four provinces i.e. Balochistan, Khyber Pukhtunkhwa, Punjab and Sindh since early 2011. The project consists of an integrated approach in delivery of interventions of shelter, water and sanitation, hygiene promotion, and community infrastructure development. It has been implemented directly with the affected communities through community implementation agreements.



Implementing with the Community

A simple booklet was produced to facilitate communities in understanding the process of organised participation and contribution for projects implementation



1. Meeting with Key Community Representatives



2. Meeting Small Groups



3. Consultation



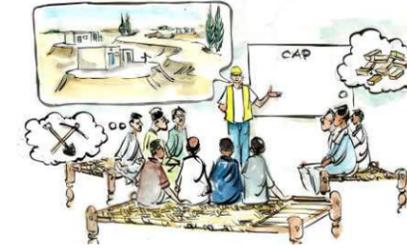
4. Participatory Visit



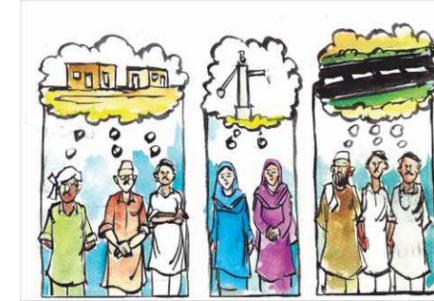
5. Social Map



6. Household Survey



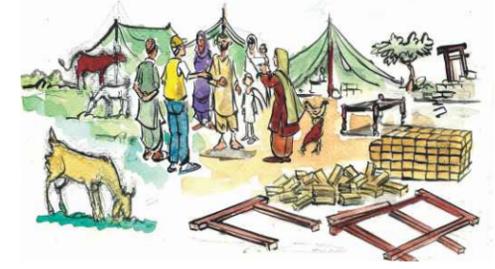
7. Community Action Plan



9. Formation of Project Committees



8. Preparation of Community Project Proposals



10. Community Contribution in Terms of Salvage Material and Labor



11. Procurement of Goods and Material for Project by Community



12. Physical Implementation



13. Monitoring of Project Activities by Community and UN-HABITAT



14. Project Completion and Inauguration of Facilities

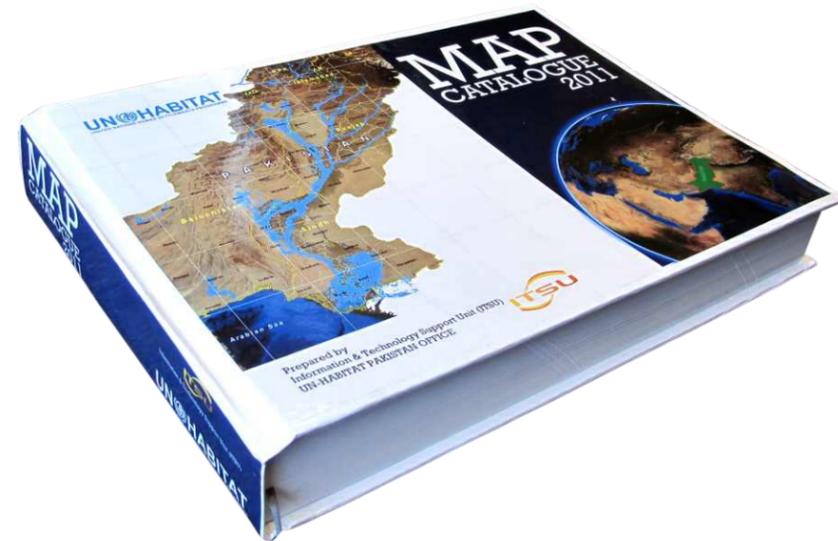
MAPPING PAKISTAN

The widespread impact of natural disasters in Pakistan has created a necessity for mapping events and locations.

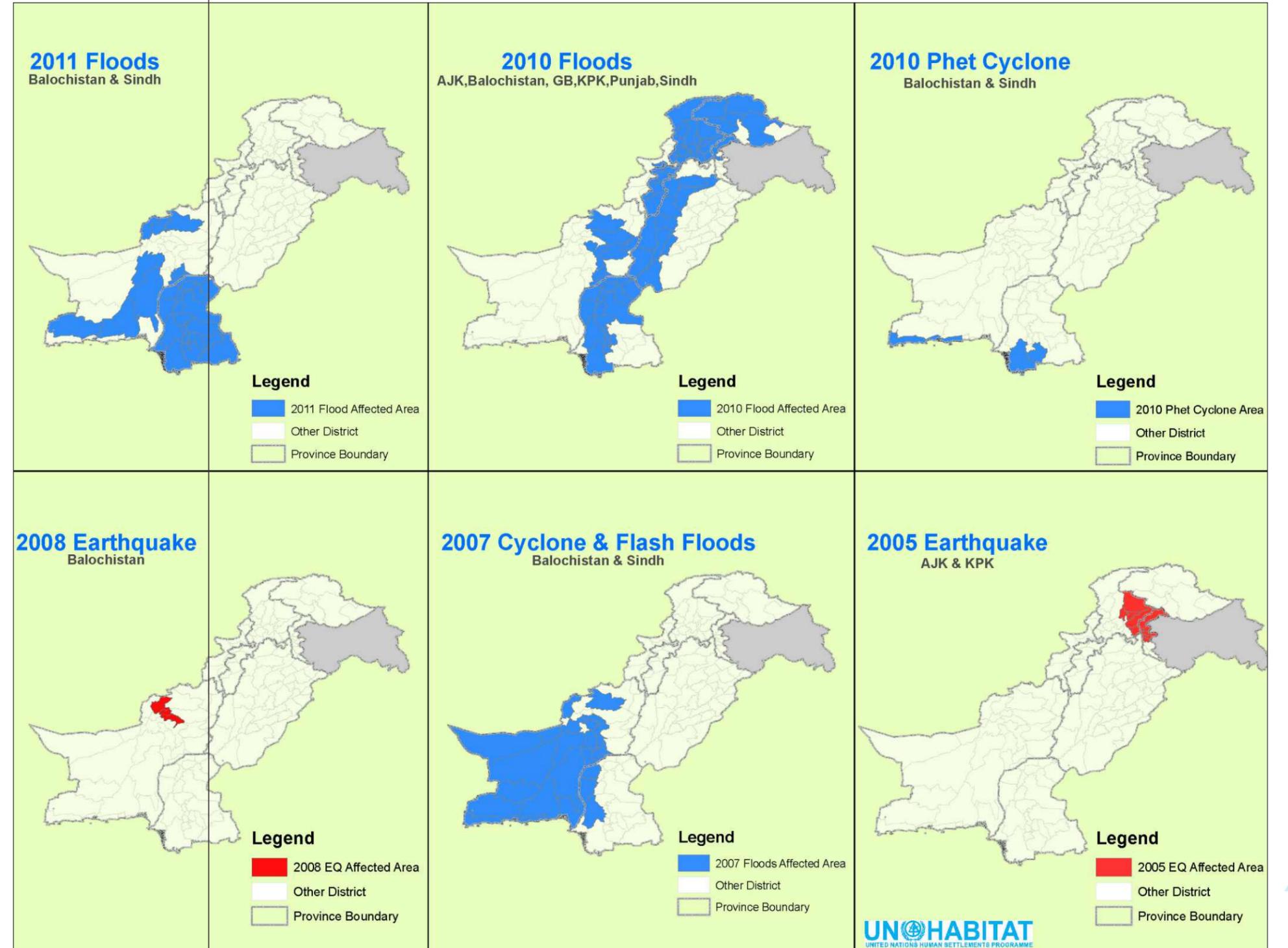
The Information Technology Support Unit (ITSU) was established by the UN-Habitat Pakistan office, in June 2006, to support GIS mapping, information system development, information collection, process and dissemination to other agencies and government organisations.

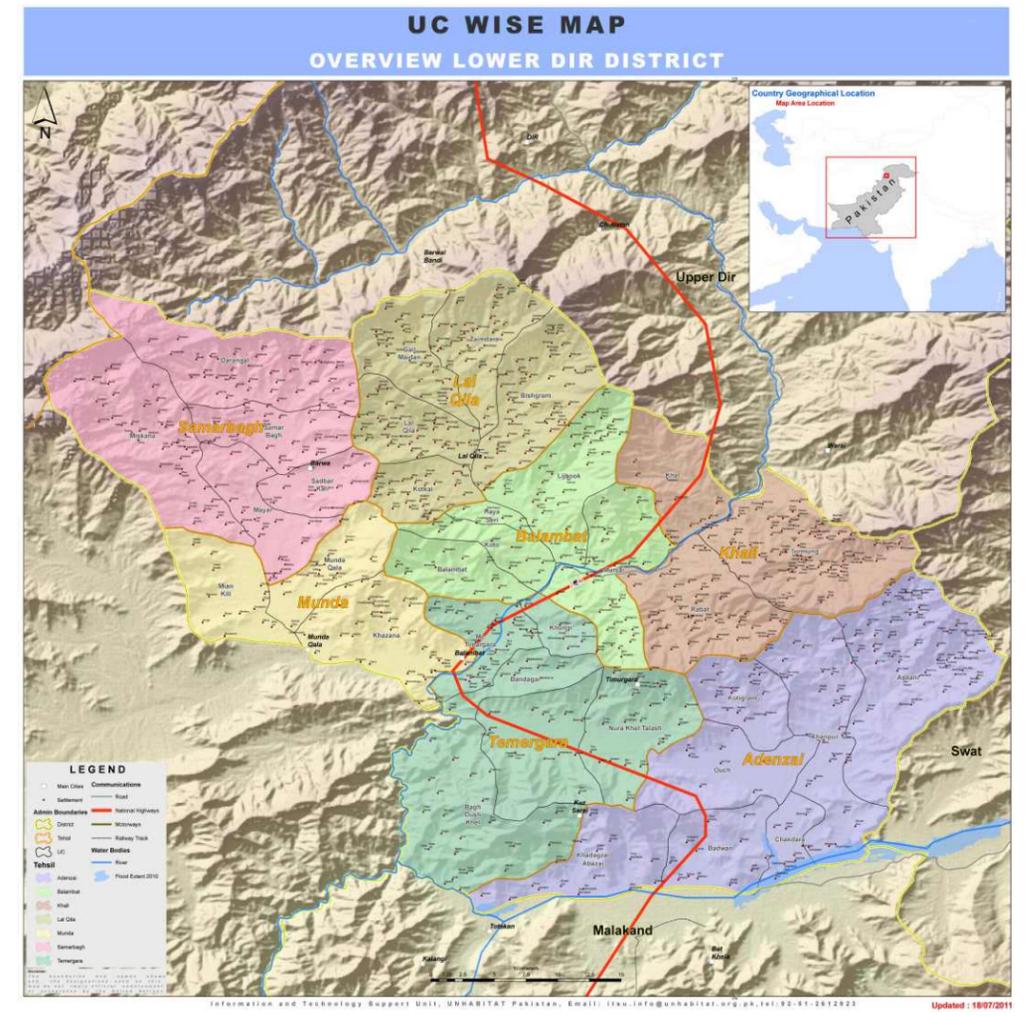
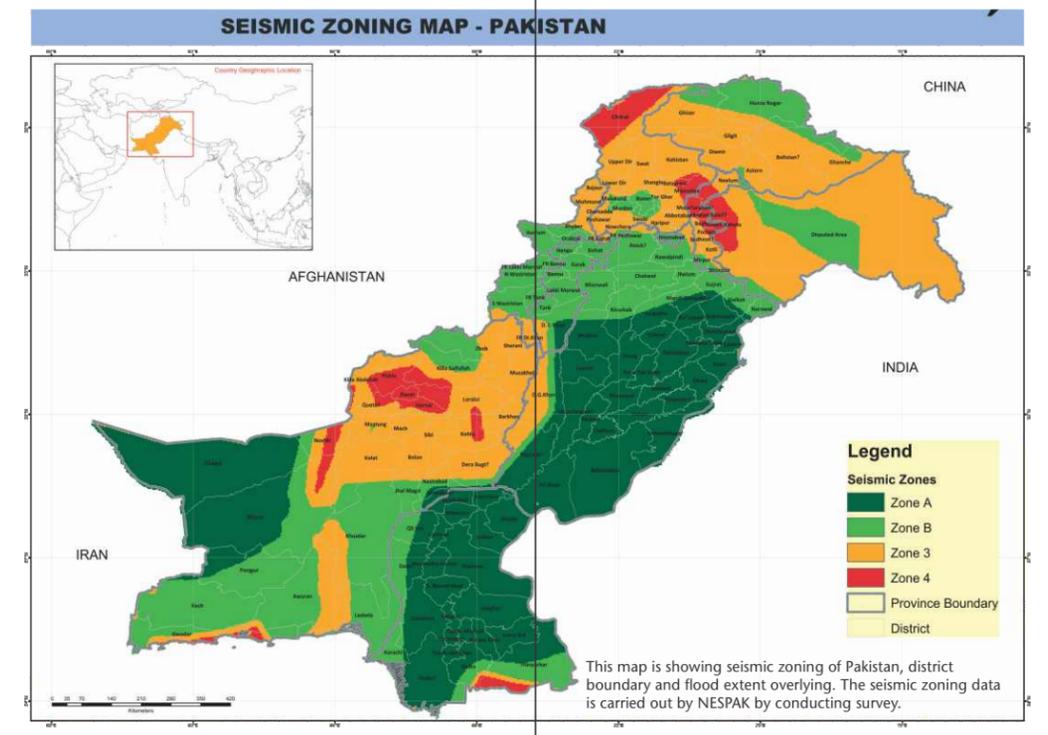
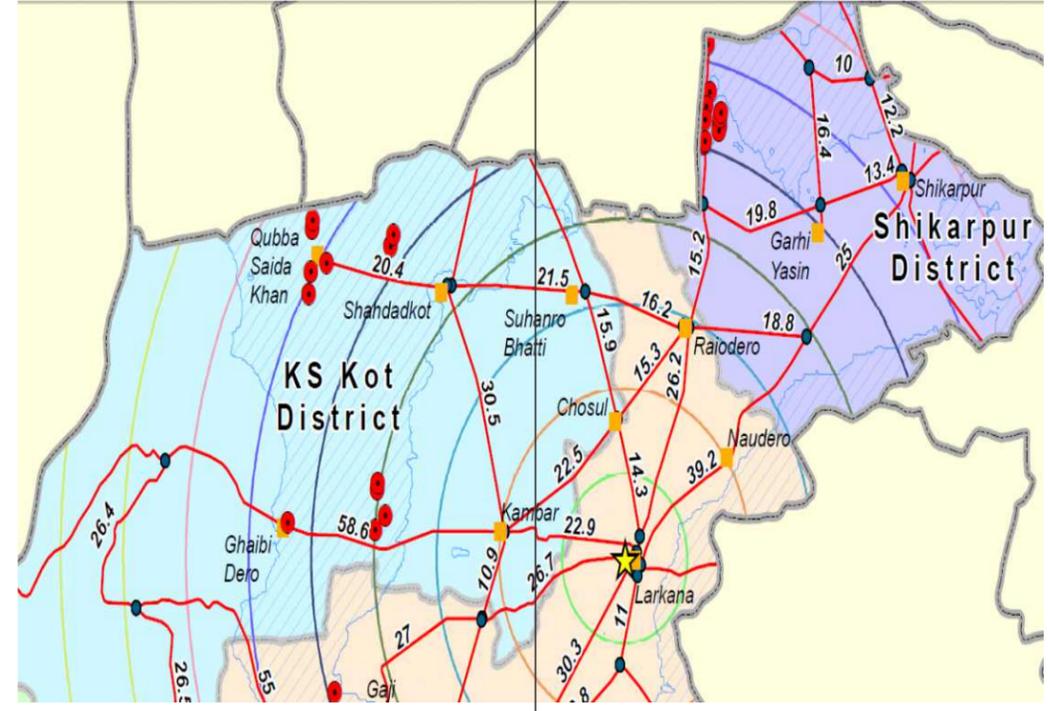
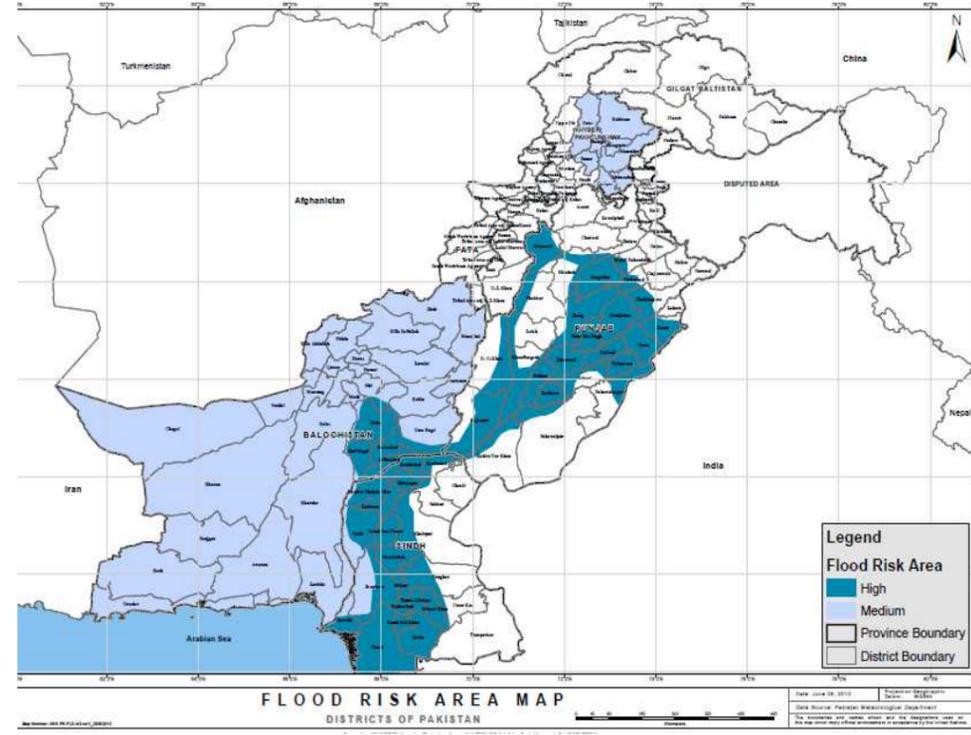
Since then, UN-Habitat is using maps to track and monitor the footprints of different calamities that have affected the country, and to study the rapidly urbanizing regions of Pakistan.

Fully established in 2009 in terms of infrastructure and technological equipment and software, the ITSU has generated several thousand maps of different kinds.



6 Map Catalogues containing thousands of maps related to natural disasters and relief activities in Pakistan were produced by ITSU, UN-Habitat since 2006.

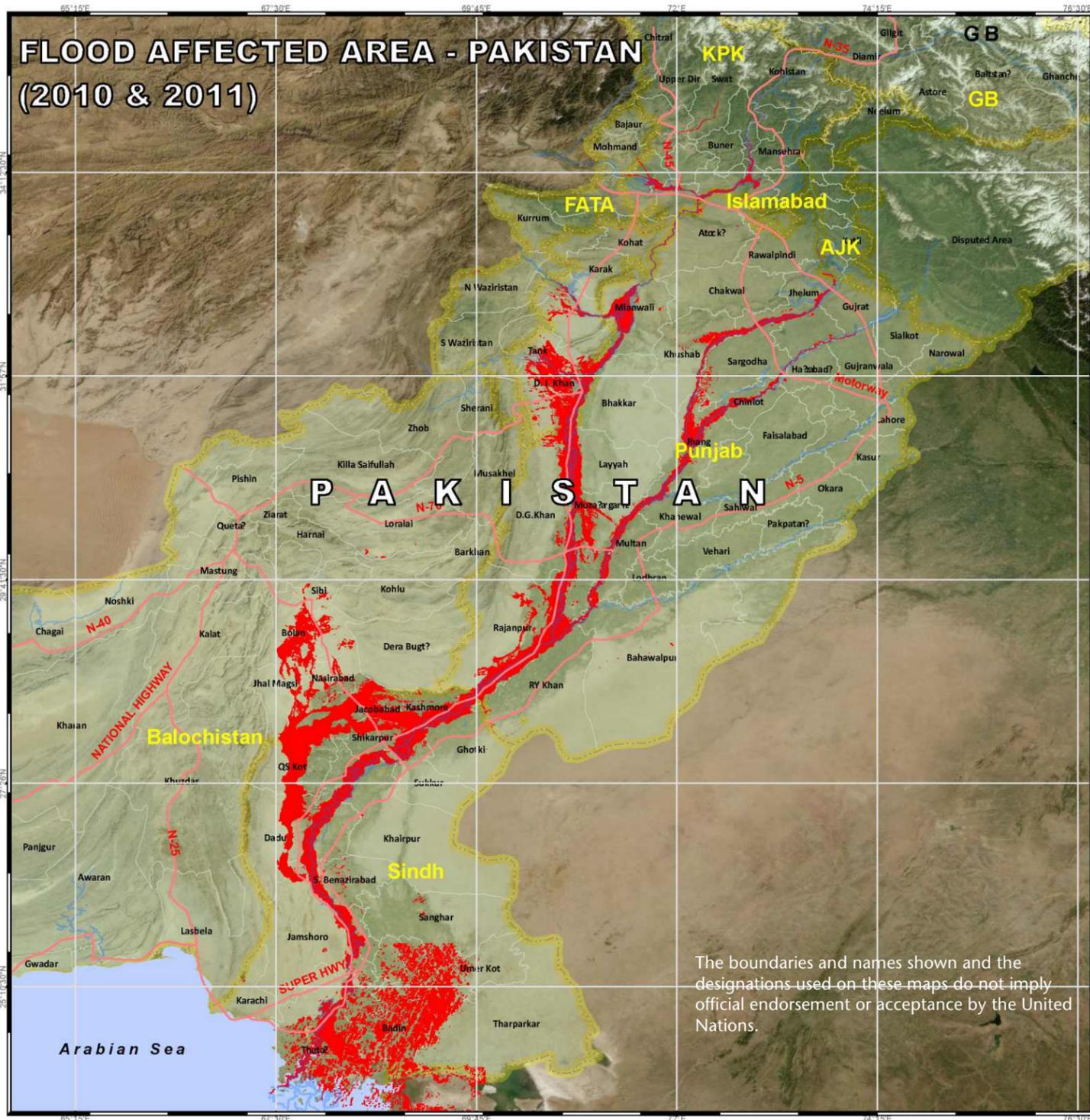




From a 'flood extension overview' to 'ongoing projects and interventions', from 'early recovery shelter distribution' to 'elevation patterns of Pakistan', earthquake epicenters, road distances, flood risk areas, everything has been converted into maps.

Complex maps are simplified according to provinces and districts, tehsils and union councils. Similarly, from cities to poor urban informal settlements, villages and rural areas, all are mapped and used for different activities.

Maps help form a bird's eye view of the overall targets and achievements of UN-Habitat. They aid in identifying areas of penetration and avoid duplicity of work from other humanitarian agencies. Through maps we venture into territories far and wide while closing physical gaps.

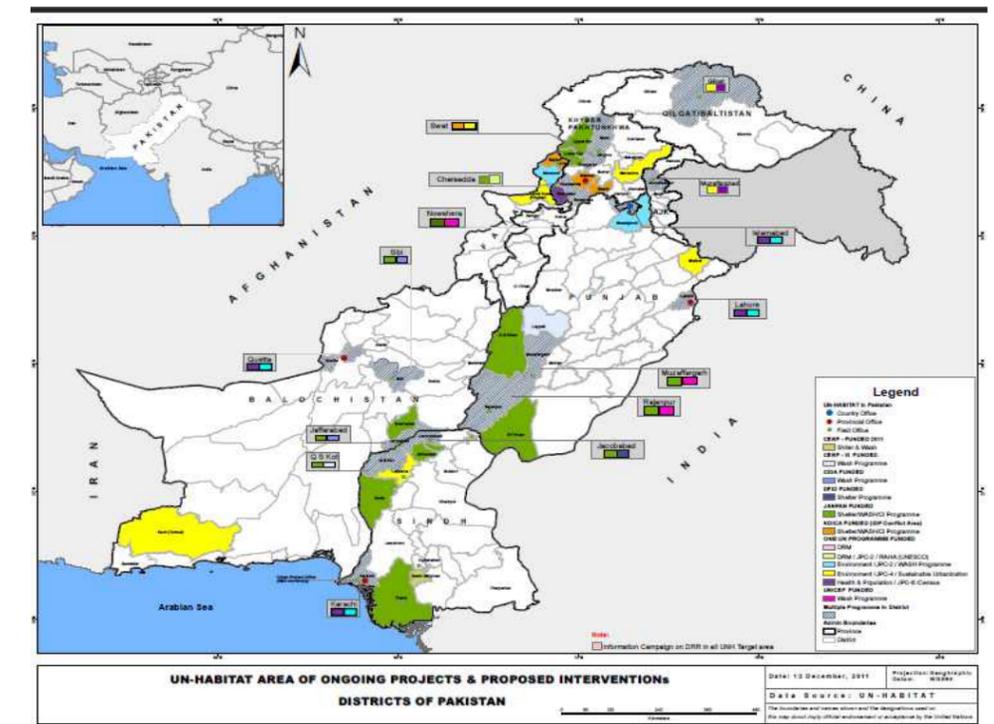
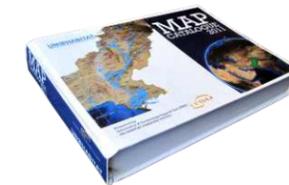


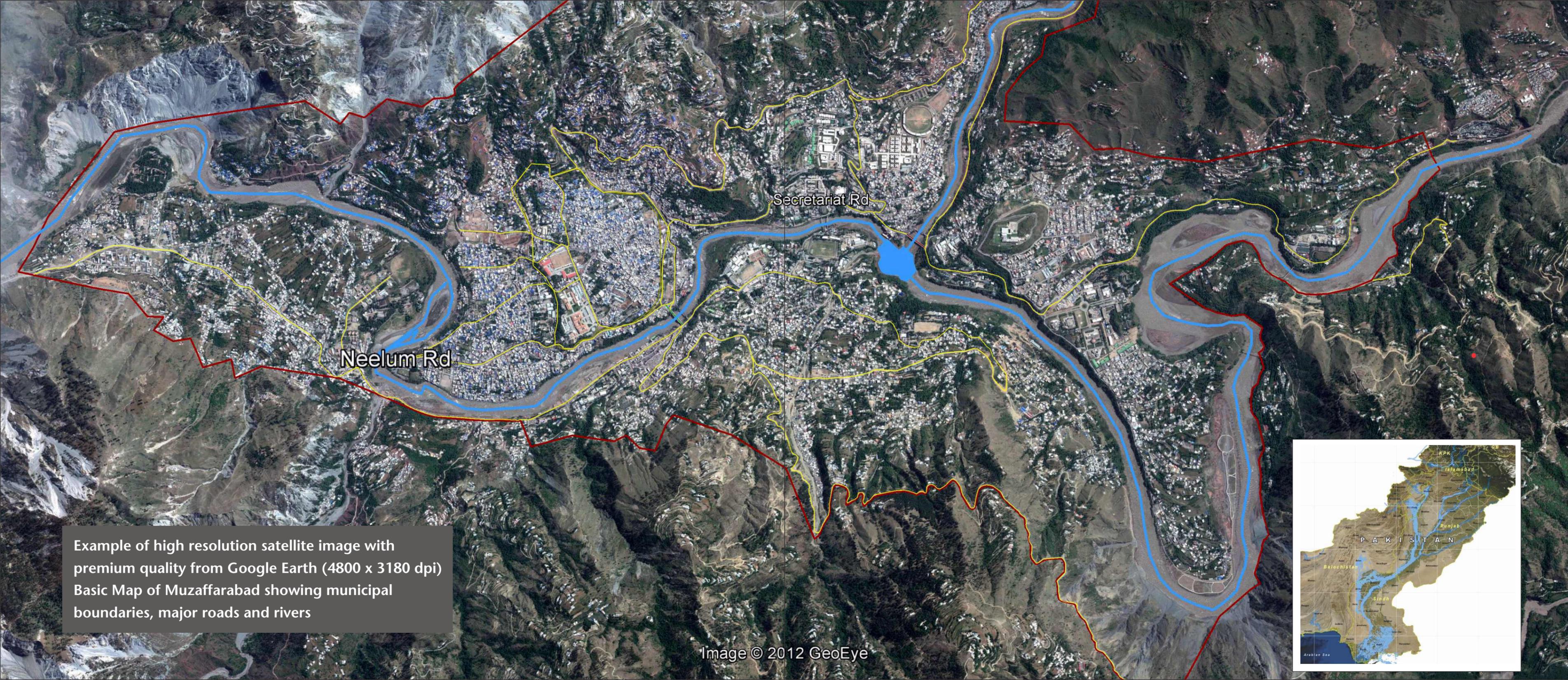
GPS coordinates are used to visualise vast landmasses while creating or rehabilitating rural or urban settlements.

Mapped coordinates help in planning and monitoring and are used to digitalise centuries old records into computerized data.

UN-Habitat maps are being used by many organisations for different types of information, all of them available at:

<http://www.unhabitat.org.pk/Maps.html>

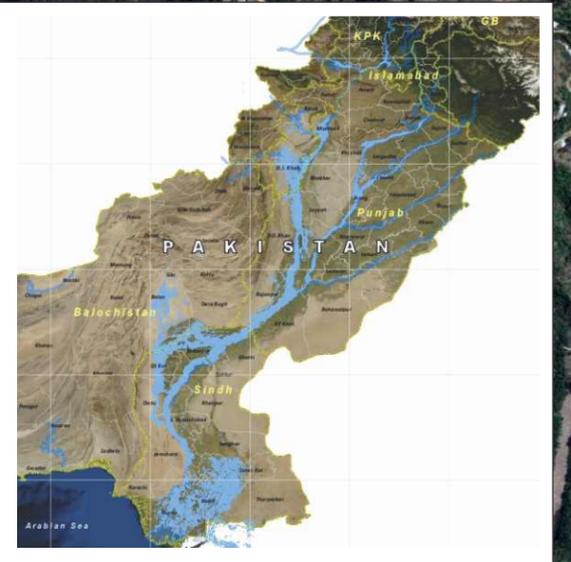




Secretariat Rd

Neelum Rd

Example of high resolution satellite image with premium quality from Google Earth (4800 x 3180 dpi) Basic Map of Muzaffarabad showing municipal boundaries, major roads and rivers



Behind The Curtains

Shahrukh Pracha

Operations Manager, UN-Habitat Islamabad. He has been with the UN-Habitat family since 2005



UN-Habitat started its operations in response to the earthquake of 2005 and on the invitation of the Government of Pakistan. There was no formal office, just the space of one room in a crowded high-rise building. Recruiting started with a representative from Nairobi Headquarters. I was one of the only two people to be hired initially and formed the core team that would start operations. We started with a \$500,000 grant from UNDP, which allowed us to set up and begin procuring relief materials such as CGI sheets and sand bags. We had two desks and two computers in the office and that was how we dealt with logistics work for three months. We rented or loaned vehicles from other agencies as we did not have the capacity to own vehicles then.

Work began to expand once we received a bigger grant for housing projects in six locations of AJK. There were still no departments and I handled logistics, finance and procurement. However, as the project demanded, we hired more people and formed critical links with ERRA through seconded staff. Technical and operations staff was hired first and later engineers were recruited. Offices were set up in the six locations of AJK where work continued for the next five years. Rapid recruitment began and consultants were brought in for the Rural Housing and Reconstruction Programme.



Our staff strength was near 250 in 2010, as the Rural Housing Reconstruction Programme was nearing completion and we needed more people to face the new unexpected challenges which emerged in the form of the conflict and later, the floods.

We witnessed our toughest days during the 2010 floods, when 20 to 40 members of our staff would travel to the affected areas for assessments without a specific destination in mind, as the affected areas were immense and spread all over the country. Logistically, it was extremely challenging to monitor and accommodate staff members who themselves had no idea where they would be by the end of the day.

To date, UN-Habitat has had the strength of almost 700 staff members throughout the country. Our priority has always been to rehire people who have worked with us before and many people from earlier programmes were brought in again. I, myself, must have interviewed close to 200 people.

As programmes and projects have expanded over the years, international and national staff have contributed to our success and we have learnt from our successes and our mistakes.

Through the years, we have evolved and adopted practices that enable us to be more effective and efficient. I never thought we would expand as much as we did or that I would be a part of this growth for so long.

From community agreements to requisitions for procuring materials, thousands of bundles of paperwork go through our hands and desks awaiting approvals, inspections, verifications and more. Though most paperwork is now digitised, we still deal with massive quantities of digital paperwork that are then recorded for monitoring purposes. Each project has a paper trail in the millions, but it is a necessary process because in this paperwork lies their success or failure. This is what really goes on in the world of operations and administration.



Communication

Ghazala Siddiqui
Communication Officer, UN-Habitat, Pakistan

In times of crises, communication acts as a critical information link between people in need and those in a position to help. It keeps us informed and aware in order to prepare for the appropriate response. Communication, if used as an effective tool to reach masses, can avert crises before they reach their full impact, can prepare people in the event that a disaster may not be averted and can bring help to affected people at the right time, in the right place. Communication between communities, organisations, government and people creates bridges to learning and minimises the gaps that are created by distance.

The term Disaster Risk Communications (DRC) was coined after the concept of disaster risk reduction was established. DRC specifically deals with communicating effectively the risks of disasters created through a lack of knowledge, awareness and preparedness. More often, it is the people that are cut off from communications who suffer the most during a crisis, whether due to the absence of electronic media, telephones or radio. The challenge is to find the ways and means to communicate despite such barriers.

UN-Habitat has long believed in communicating with the people and to the people in simple ways to understand complex situations. In a country as big as Pakistan, with multiple ethnicities and languages, as well as the delicate and constantly shifting political situation, the main aim is to give a uniform message that is understood by all. Unlike countries, where one language is predominantly spoken, Pakistan not only has different languages but varying customs and traditions as well. Keeping these ethnic differences in the forefront, communications strategies are devised to hold a universal meaning and consequently a universal effect.

At the time of the earthquake in 2005, it was understood that the varying literacy levels of AJK may stand in the way of all its residents understanding the unique yet complex mechanism of receiving financial aid. It was then, that the use of illustrations was implemented in order to reach a mass audience as they were easier to understand by even the least literate of people. This maximised the impact of the campaign and helped establish an easy form of communication that enabled people, rather than challenging them.

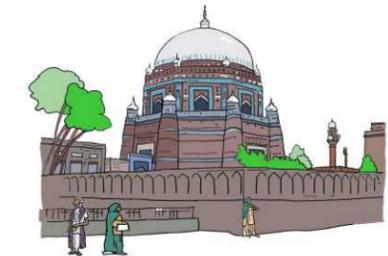


During the floods, the widespread destruction throughout Pakistan created a challenge for communications, yet we saw it as an opportunity to create strong, powerful images that would be imbedded in the minds of the people and bring awareness and preparedness to their lives. In order to penetrate the mind of every affected person, regardless of their ethnic background, a mass illustration based campaign was produced.

The main target of this campaign was not limited to adults. In an effort to leave long lasting messages that were practiced by families and communities, children were targeted. A child has the power to educate his/her entire family as well as nurture such messages throughout their lives, which made us focus on their awareness. The messages were entertaining in nature and were distributed in the form of games, calendars and booklets. Special importance was given to the shelf-life of the product carrying the messages so that communities would not just use and dispose off, but would keep the products with them due to their entertaining nature. In far-flung rural communities, where even electricity is a rare commodity, entertainment carries great value for families. Such campaigns have been widely successful in North and South Africa, Haiti South America and Asia.

The use of positive reinforcement in the messages helps communities embrace the concepts. Specifically, unless the product is a technical guide, UN-Habitat avoids the instructional approach. It delves instead, in a demonstrative approach where people can imagine themselves in similar situations and relate to the event appropriately. Images represent members of a typical family and their daily interactions, where messages are then imbedded. If the communities cannot relate to the messages or images, then the campaign is minimally effective. Our desired response is one of voluntary behavioural change. The alternative of instilling fear in the minds of people to convince them to adopt more prepared lifestyles does not create long lasting impacts and is not the preferred mode of communication for UN-Habitat.

One of the primary messages in all our campaigns is preparedness through behavioural change. Our campaigns advocate change through proactive alternate solutions to the existing practices of the rural communities. We give great respect to cultures and customs and have created campaigns in Urdu, Pushto and Sindhi. The biggest accolade we received was when a child was asked after playing 'the game' what he would do to protect his house from floods, and he replied in a language beyond his years about the benefits of a strong foundation. Such is the power of effective communications and we can only hope to reach every child in every village.



The Indus River Game

دریائے سندھ کا کھیل

The Indus River Game takes us on a journey along the Indus River from its beginnings in the high mountains of Kashmir to the Arabic Sea, passing through a rich variety of landscapes, monuments and traditional architecture that conforms to our country: Pakistan.



The game tells us about good and bad practices regarding Water, Hygiene, construction and Environmental issues that are commonly found along the river. With a special emphasis on floods, it delivers to the players some basic notions and useful recommendations to better prepare themselves for it.

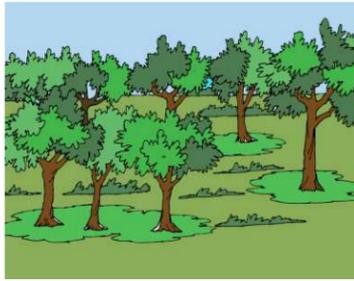
Good Practices



Houses built on firm and higher ground are more protected in the case of floods



Clean and well maintained drains take away rainwater from the settlement keeping streets clean and functional.



"Trees are the lungs of our planet", they give us shadow, fruits, wood for building and protect the land, preventing run off and desertification.



Washing your hands with soap before eating prevents dirt from going into your stomach!



Water for drinking has to be clean, by boiling or filtering or sanitizing it. This way you are safe from water-borne diseases.



The community can prepare themselves for a flood by planting trees, building bunds and preparing emergency plans.



Rainwater is clean and safe. We can collect it for drinking, home agriculture and animals. If we can store it properly, it can save us during times of drought.



To store food and medicines forms part of the emergency plan that every community should have.



Cleaning the roofs and the drains, plastering your house and other measures can be taken before the rainy season to have a secure and prepared house.

Bad Practices



Houses built (too low) without a separation from the floor/ground are prone to get flooded just with a light rain.



When drains are not maintained and get choked, debris accumulates and water becomes stagnant. Rainwater does not flow away and mosquitoes and other insects cause diseases.



Cutting of trees causes deforestation, which causes erosion. Land stays unprotected and water washes its nutrients. To cut a tree should be a planned practice so to replace them permanently.



Open-air defecation is a bad practice because your waste contaminates the land and water we later consume.



If you drink water directly from the river you will surely get ill.



The river grew and there was no protection or any emergency plan to evacuate the population.



When waste is not managed and stays in the street, stagnant water forms pools and diseases spread rapidly!



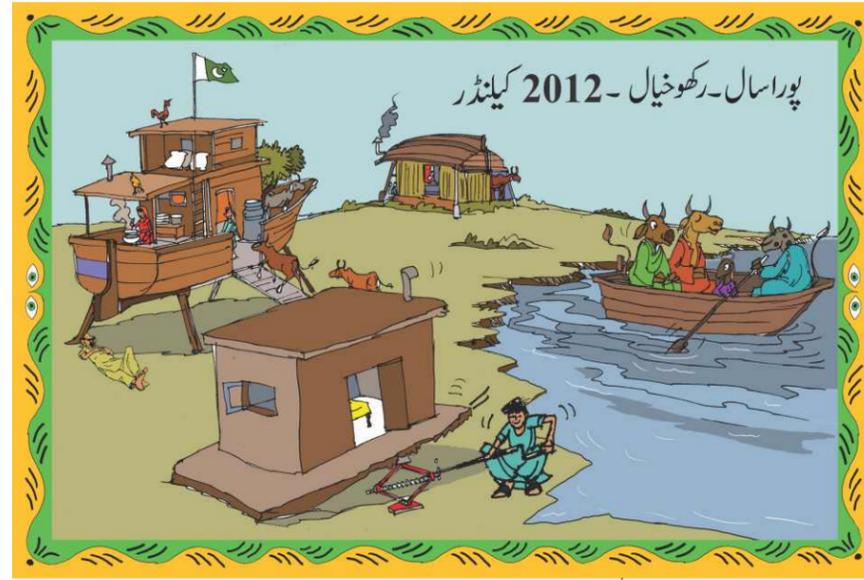
Sometimes the roof is so heavily built that it collapses with the rain.



Landslides are a disaster that can happen by the action of too much rain, but deforestation causes this to happen as well.

پورا سال - رکھو خیال - 2012 کیلنڈر

Calendar 2012 - Taking care all year round!



دسمبر 2012

Sunday اتوار	Monday پير	Tuesday منگل	Wednesday بدھ	Thursday جمعرات	Friday جمعہ	Saturday ہفتہ
30	31					1
۱۶	۱۷	۱۸	۱۹	۲۰	۲۱	۲۲
2	3	4	5	6	7	8
۱۸	۱۹	۲۰	۲۱	۲۲	۲۳	۲۴
9	10	11	12	13	14	15
۲۵	۲۶	۲۷	۲۸	۲۹	۳۰	۱ صفر
16	17	18	19	20	21	22
۲	۳	۴	۵	۶	۷	۸
23	24	25 Christmas	26	27	28	29
۹	۱۰	۱۱	۱۲	۱۳	۱۴	۱۵

Enjoy



فروری - February

Beware



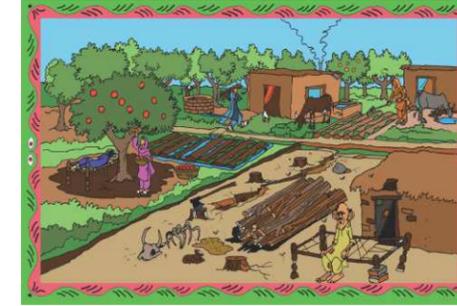
جون - June

Prepare



اکتوبر - October

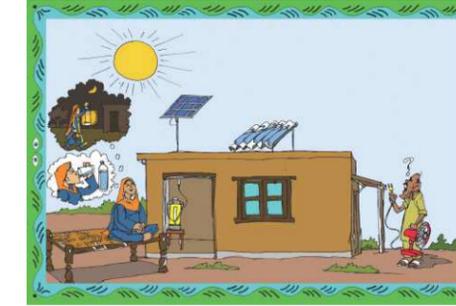
Illustrations are among the first form of communications ever, even before the formation of languages and words. It is the most naturally and widely understood universal language. It is the power of illustrations that make UN-Habitat employ the strategy of teaching and communicating through images.



مارچ - March



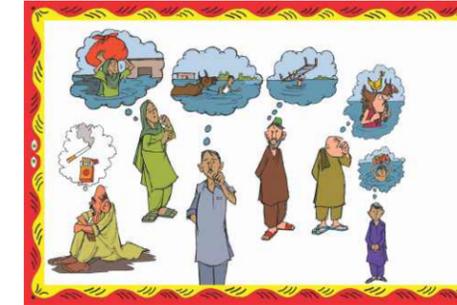
اپریل - April



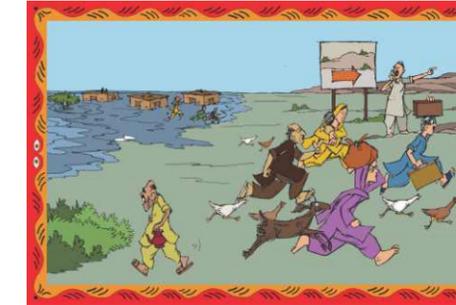
مئی - May



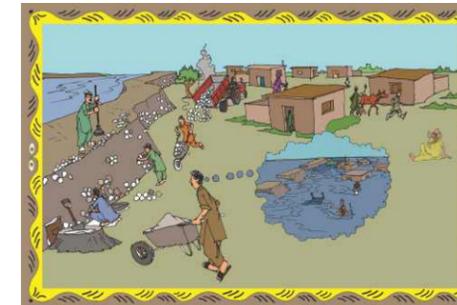
جولائی - July



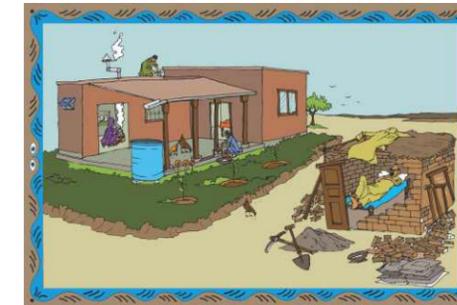
اگست - August



ستمبر - September



نومبر - November



دسمبر - December



جنوری - January

Raffa The Rat

Raffa faces many problems after being taken away from his home in the mountains by earthquakes, landslides and floods. He faces thirst, hunger and fatigue in this unexpected journey that takes him all along the River Indus to the sewages of Karachi, where a whole new life begins. Challenged by this unknown mega-city, Raffa applies his newly learned methods of adaptation and turns them into the tools of a re-born 'city-changer'.





Born in Pakistan, Raffa's adventures, through the varying landscapes of his country began when he was 10 years old.

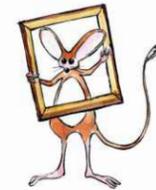
A few years ago (October 8th, 2005), his country suffered from one of the biggest earthquakes that shook the mountainous regions of the North. The effects of the earthquake were felt thousands of kilometres away from the epicentre and the damage was widespread. Situated in a seismically active zone, the country experiences earthquakes regularly that vary in intensity and are unpredictable.

In 2010 and 2011, Pakistan suffered from severe floodings that were a result of climate change. Triggered by the monsoon rains, the floods have affected all provinces from Gilgit-Baltistan to Azad Jammu and Kashmir, Khyber Pukhtunkhawa, Punjab, Baluchistan and Sindh.

Chronic droughts affected parts of Baluchistan for years due to water scarcity, and though disasters caused by natural phenomenon cannot be avoided, however, the severity of their affects may be minimized through planning and preparation.

Raffa's Journey takes him through these problems and he faces thirst, hunger, and fatigue. This great but unexpected Journey takes him along the River Indus into the sewerage of Karachi where a whole new life begins. Challenged by this unknown mega-city, Raffa uses his newly learned methods of adaptation and turns it into the tools of a re-born 'city-changer'.

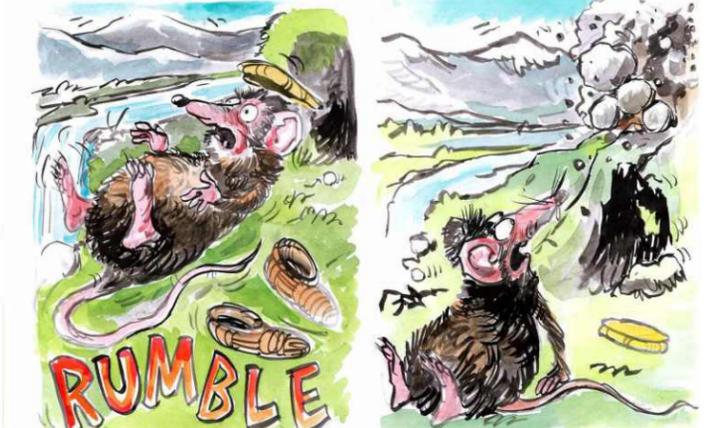
On his Journey, Raffa made two friends: the Jerboa and the Blind Dolphin. These friends were very special because there are so few of them in this world.



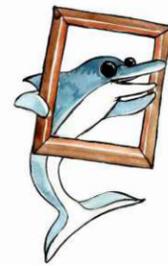
Jerboa: A Jerboa is a small rodent that looks like a mouse. It jumps with its very long hind legs and has a long tail. The Jerboa in this book is different from other Jerboas because of its extremely long ears. This species of Jerboa is on the verge of extinction due to man made changes in the environment, which are threatening their existence.



Raffa lived a very comfortable life, surrounded by grass, fresh air, trees, shade, clean water and shady clouds in the sky



...until one day, the earth trembled under his feet.



Indus River Dolphin: Also known as the blind Dolphin for its lack of sight, the Indus River Dolphin is an endangered species. Indigenous to the Indus River, these dolphins are dying out due to the increased pollution of the river. The Blind Dolphin has very small eyes, almost the size of a pin hole and they navigate through the river by swimming very close to the basin. The blind dolphin has no home other than the Indus River and their habitat must be protected to make sure that they survive and are not the last of their kind.

Karachi: Karachi is the largest city of Pakistan and the capital of the province of Sindh. The city has an estimated population of 15 million, while the total metropolitan area has a population of over 18 million. Karachi is one of the world's most populous cities.

RAFFA THE RAT



As rocks start to fall, Raffa hurriedly looks for his shoe, but it is too late,



in an instant, he slips down the steep slide.



Raffa doesn't know how to swim and he is in danger of drowning!

6



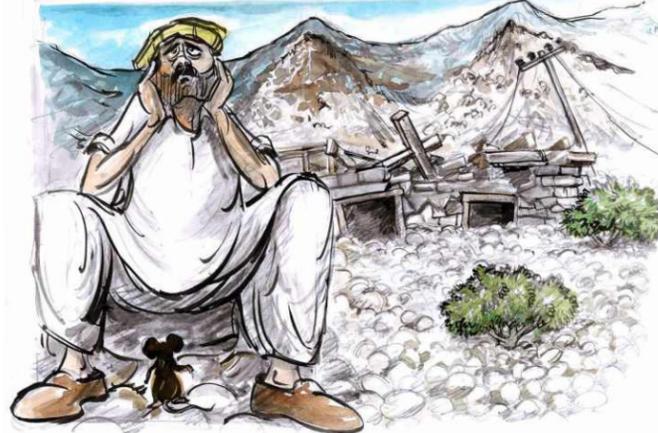
With an ultimate effort, he grabs a nearby floating branch and is carried down-stream for hours, leaving him sleepy, hungry and thirsty!

7



Soon the currents take him to a house, half buried under a river of stones.

8



"Poor man," Raffa thinks, "he has lost his house"

9



Full of sorrow for the poor man, Raffa went in looking for something to eat.

10



Everything was wet and broken and there was food everywhere

11



GOBBLE!
GOBBLE!
MUNCH..
MUNCH..

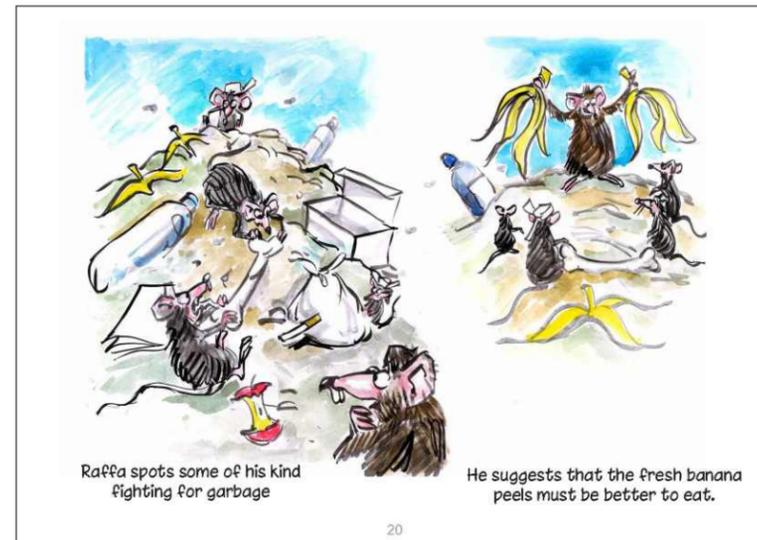
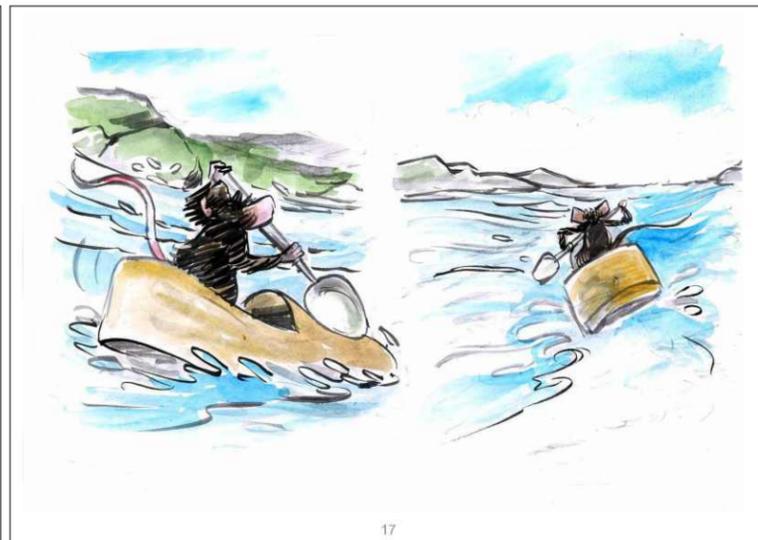
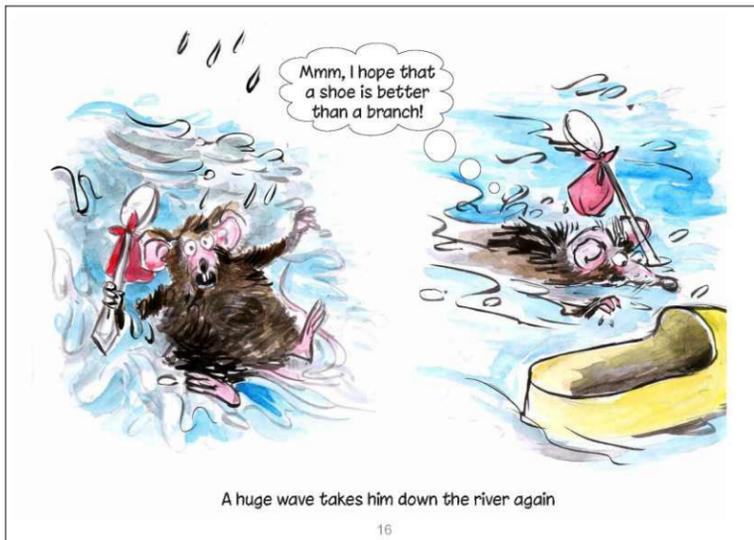
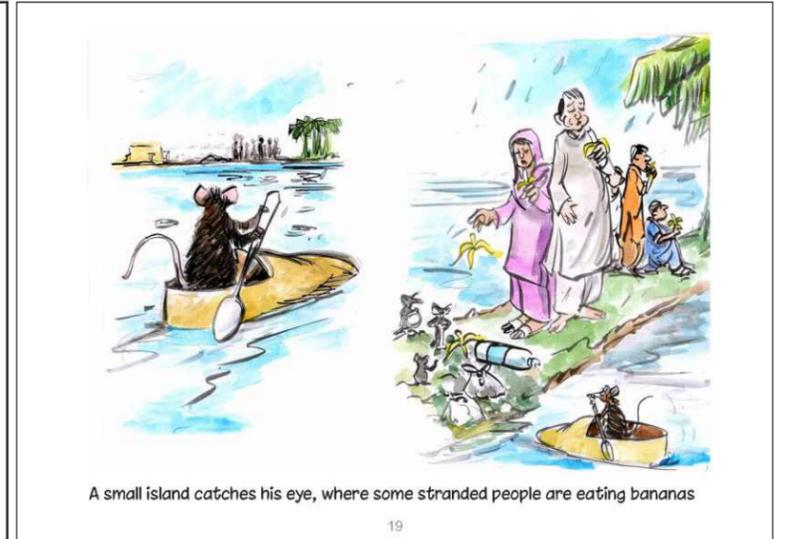
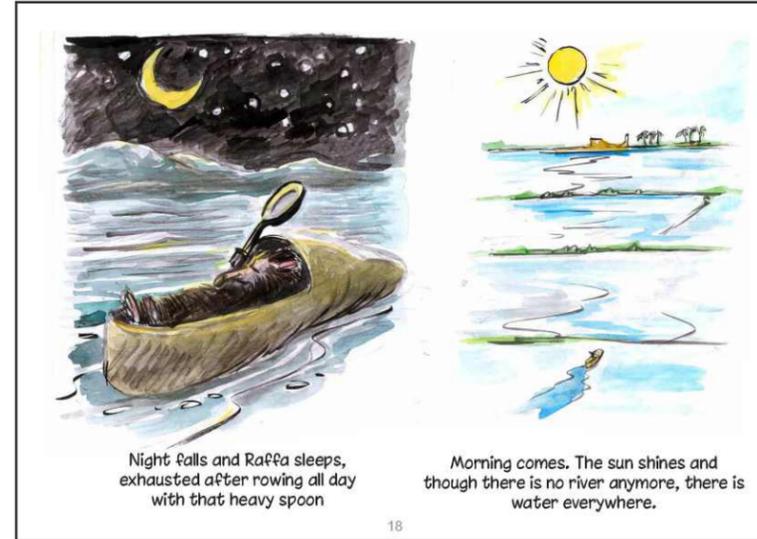
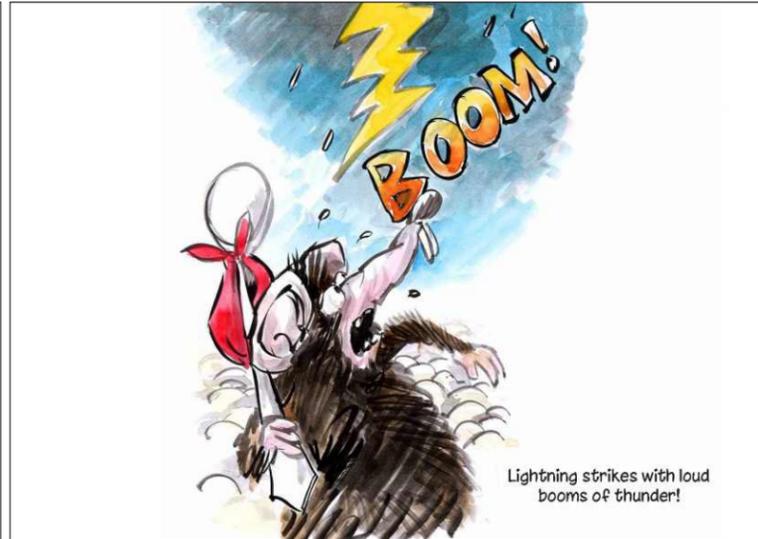
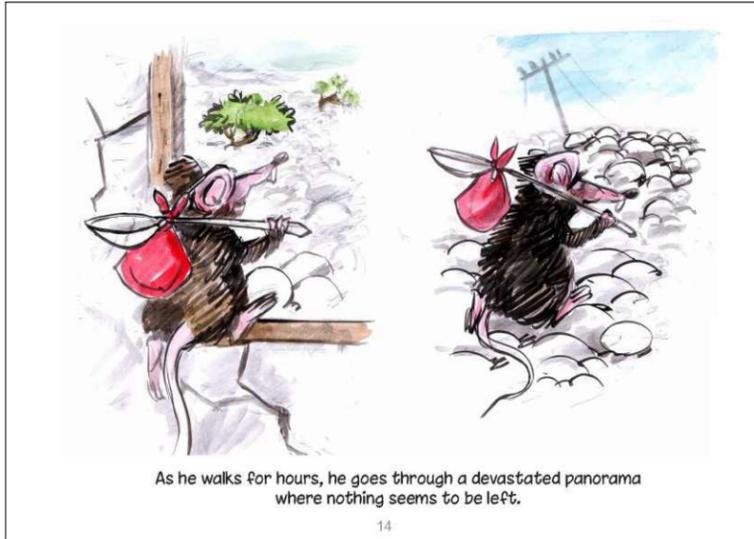
GLOBE
GLOB,
GLOB.

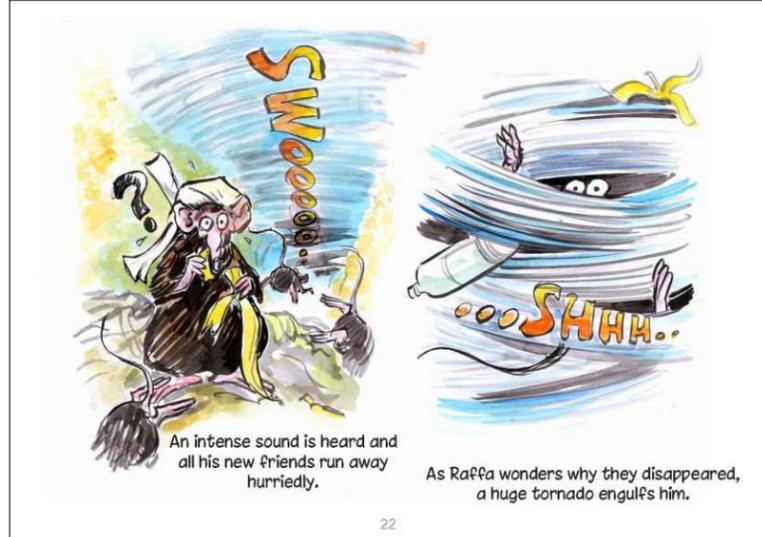
12



After having rested well and eaten enough, he takes some food for the road.

13





An intense sound is heard and all his new friends run away hurriedly.

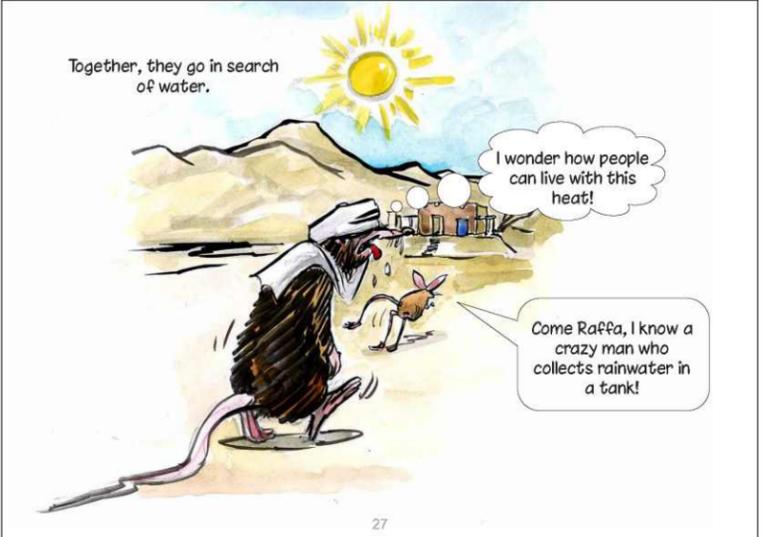
As Raffa wonders why they disappeared, a huge tornado engulfs him.



When the tornado stops, after hours of flying and nearly getting suffocated, he is suddenly released and a turban saves his life.



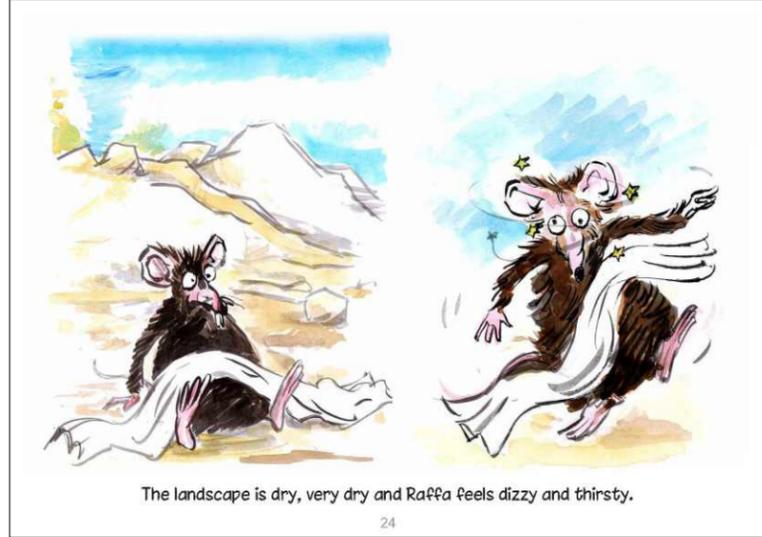
Distracted, Raffa notices the Jerboa. It looks more or less like his kind but jumps like a Kangaroo...



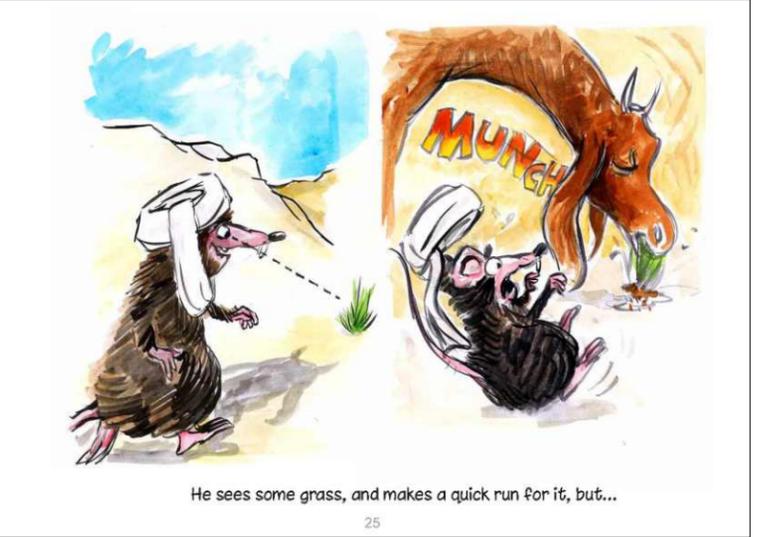
Together, they go in search of water.

I wonder how people can live with this heat!

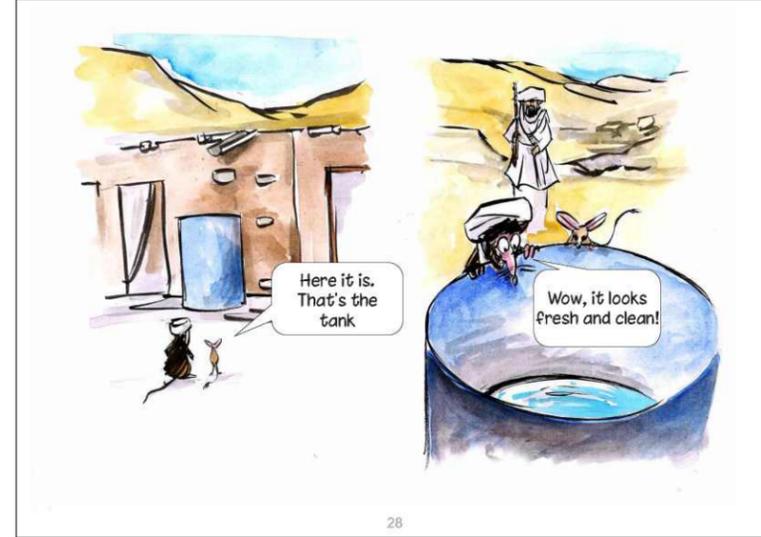
Come Raffa, I know a crazy man who collects rainwater in a tank!



The landscape is dry, very dry and Raffa feels dizzy and thirsty.

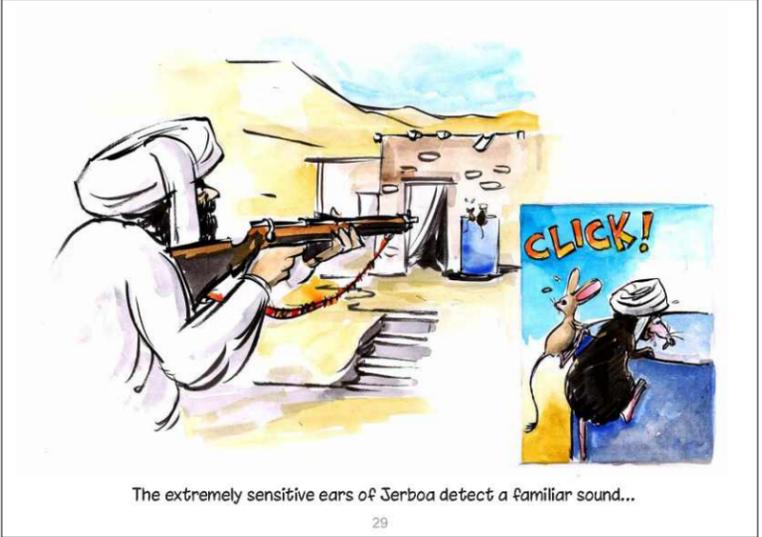


He sees some grass, and makes a quick run for it, but...



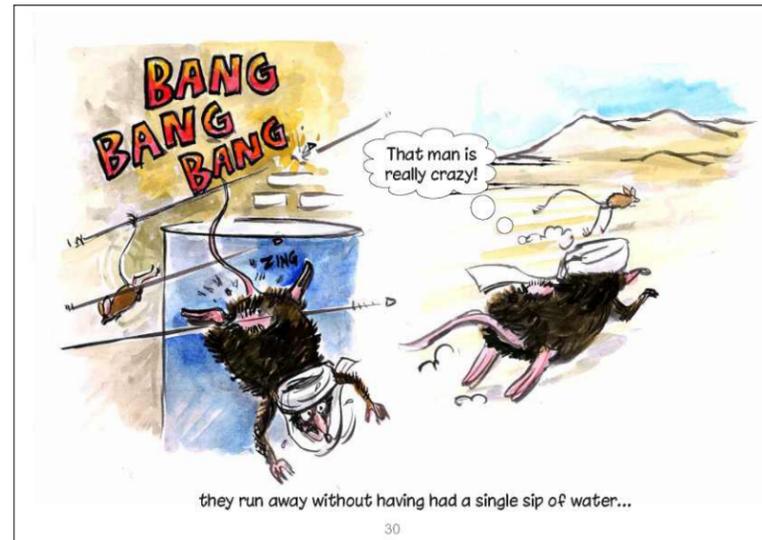
Here it is. That's the tank

Wow, it looks fresh and clean!

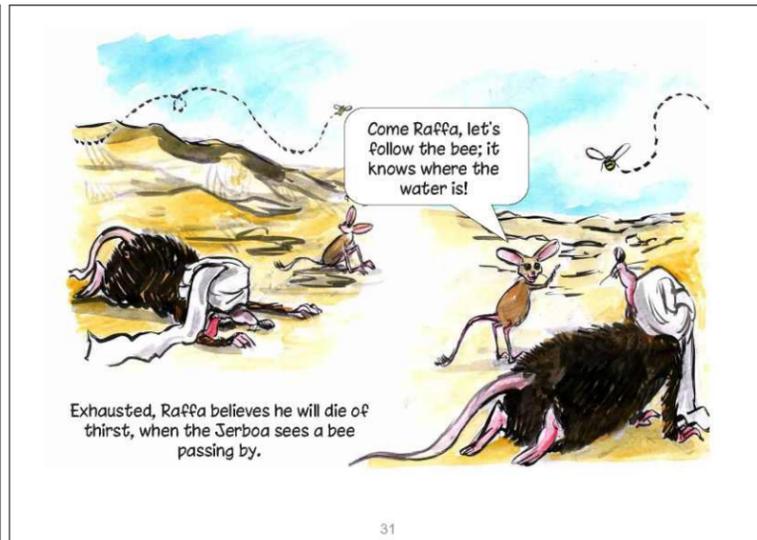


CLICK!

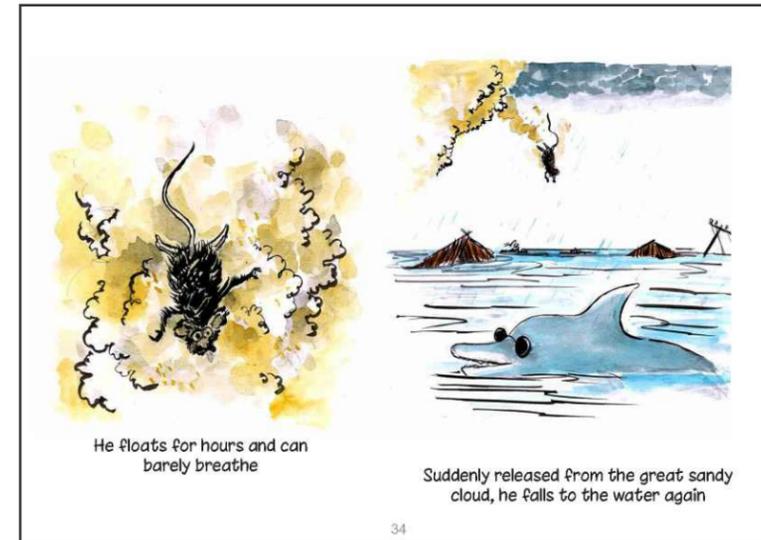
The extremely sensitive ears of Jerboa detect a familiar sound...



they run away without having had a single sip of water...

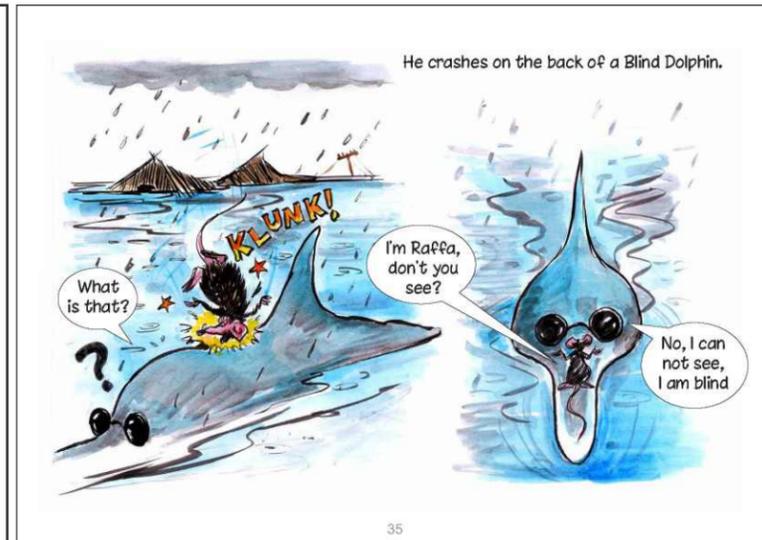


Exhausted, Raffa believes he will die of thirst, when the Jerboa sees a bee passing by.



He floats for hours and can barely breathe

Suddenly released from the great sandy cloud, he falls to the water again

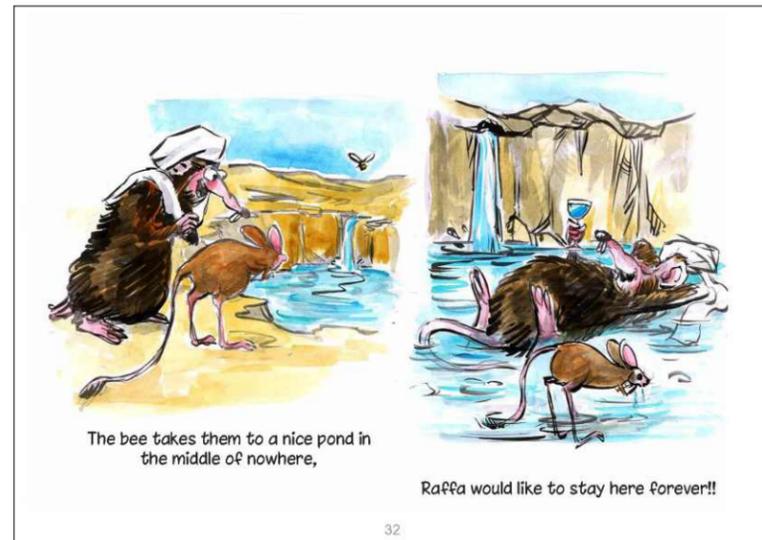


He crashes on the back of a Blind Dolphin.

What is that?

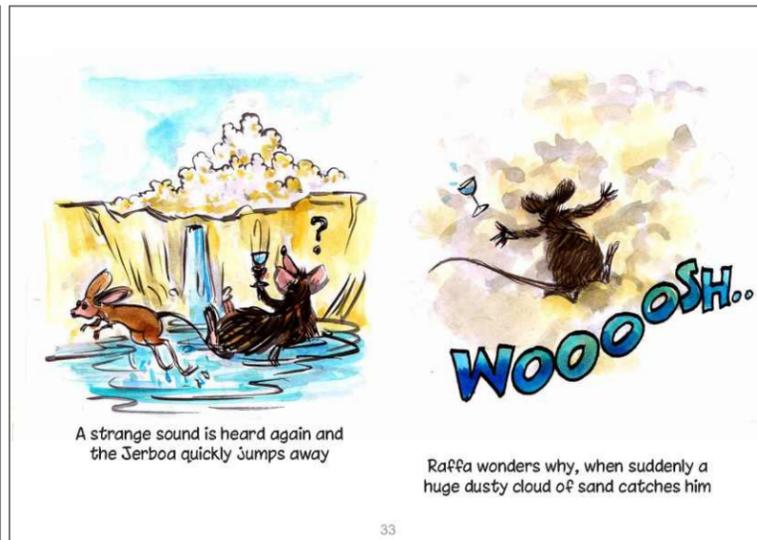
I'm Raffa, don't you see?

No, I can not see, I am blind



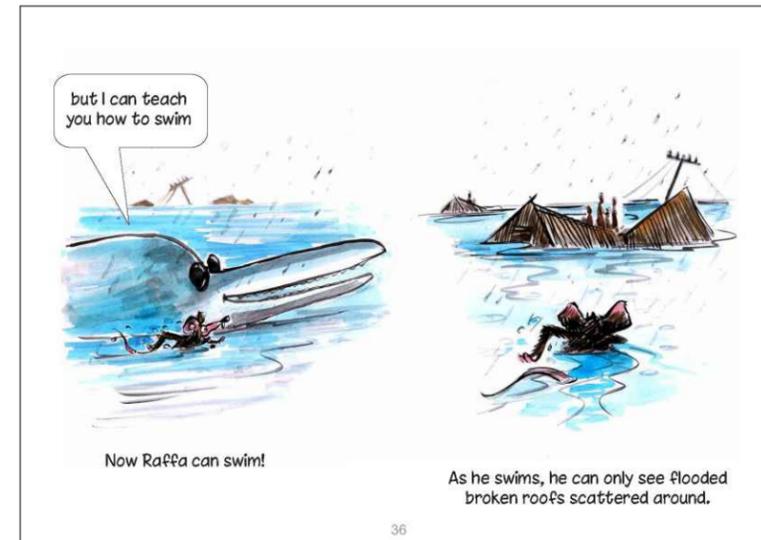
The bee takes them to a nice pond in the middle of nowhere,

Raffa would like to stay here forever!!



A strange sound is heard again and the Jerboa quickly jumps away

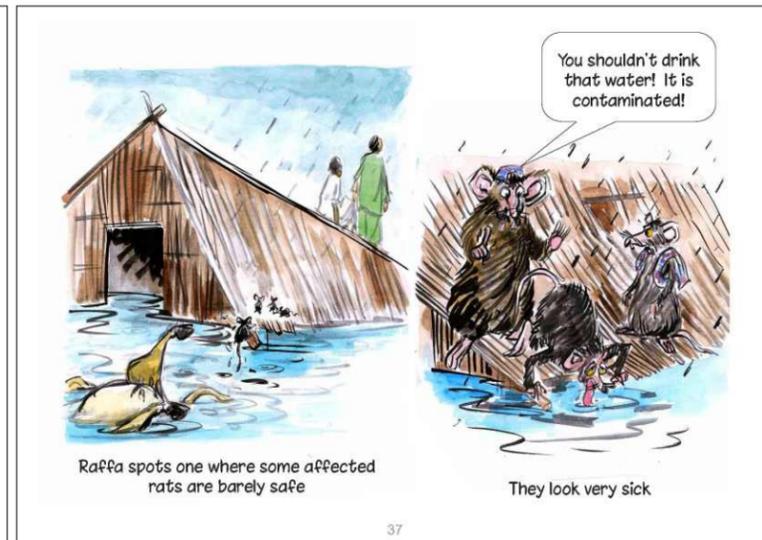
Raffa wonders why, when suddenly a huge dusty cloud of sand catches him



but I can teach you how to swim

Now Raffa can swim!

As he swims, he can only see flooded broken roofs scattered around.



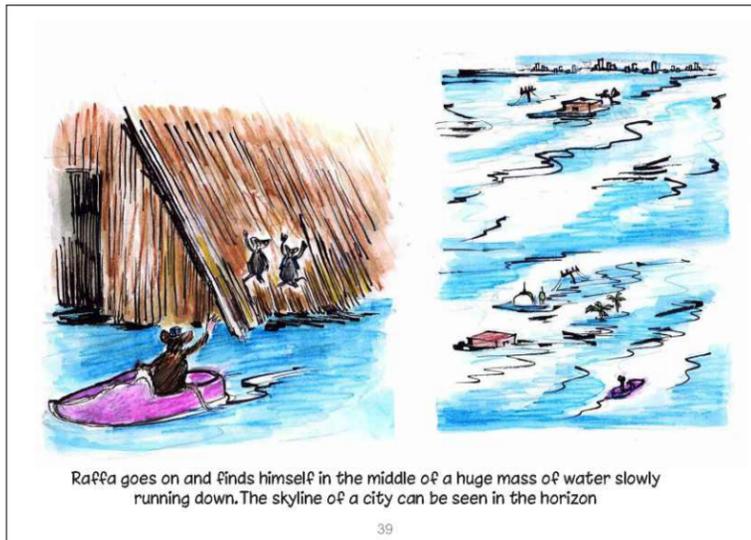
Raffa spots one where some affected rats are barely safe

They look very sick

You shouldn't drink that water! It is contaminated!



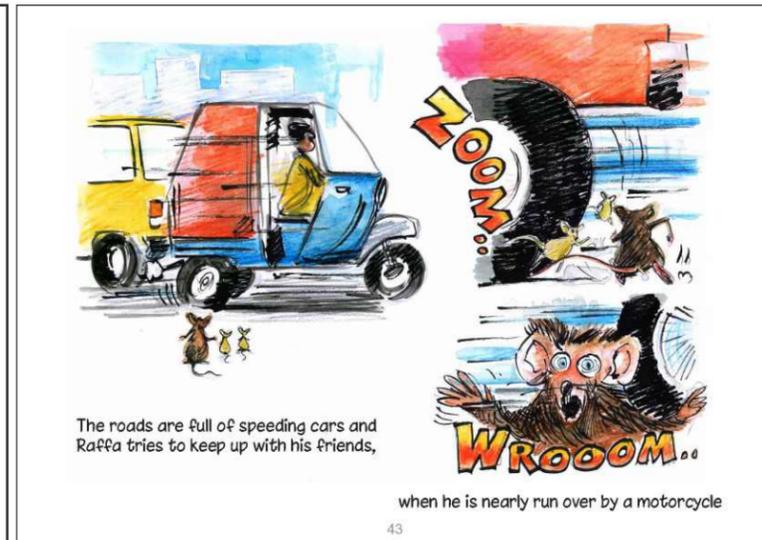
38



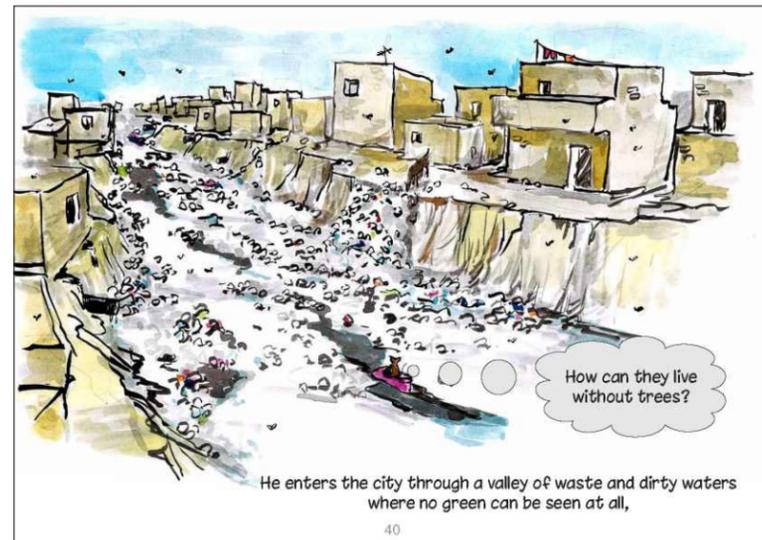
39



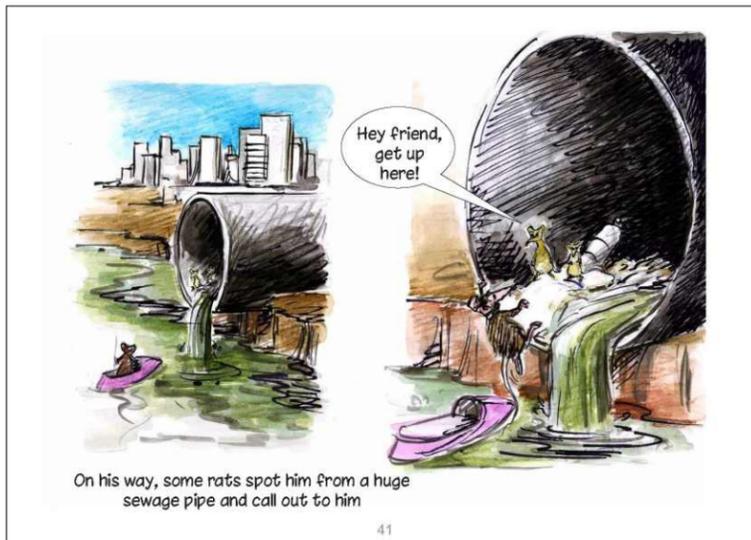
42



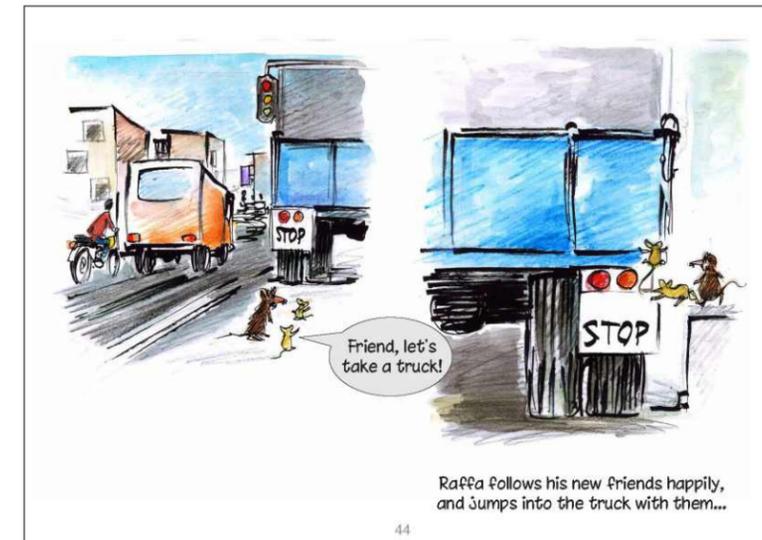
43



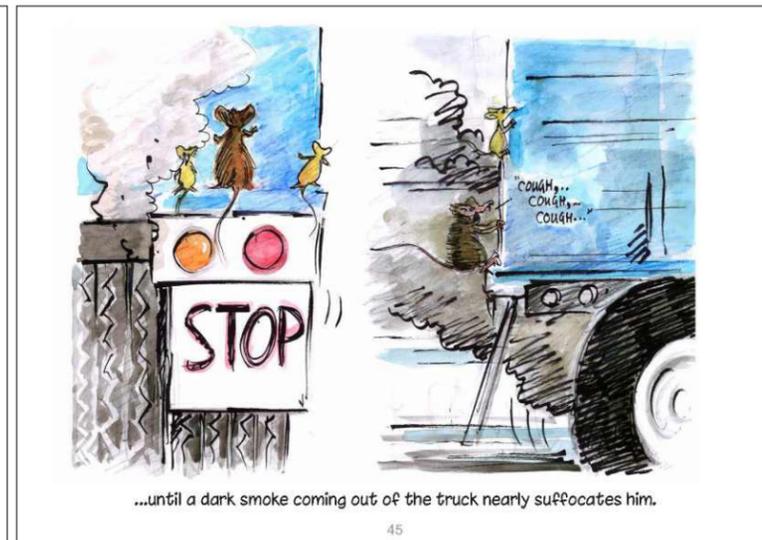
40



41



44



45



46



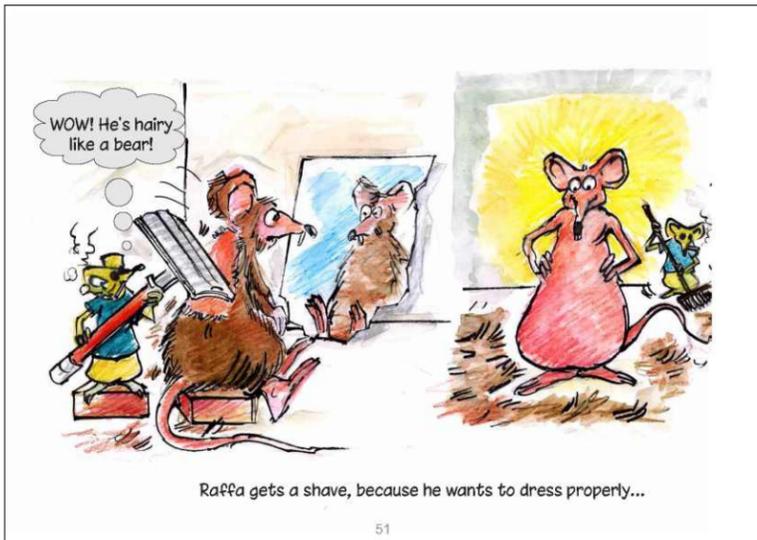
47

They all jump on to a bicycle...



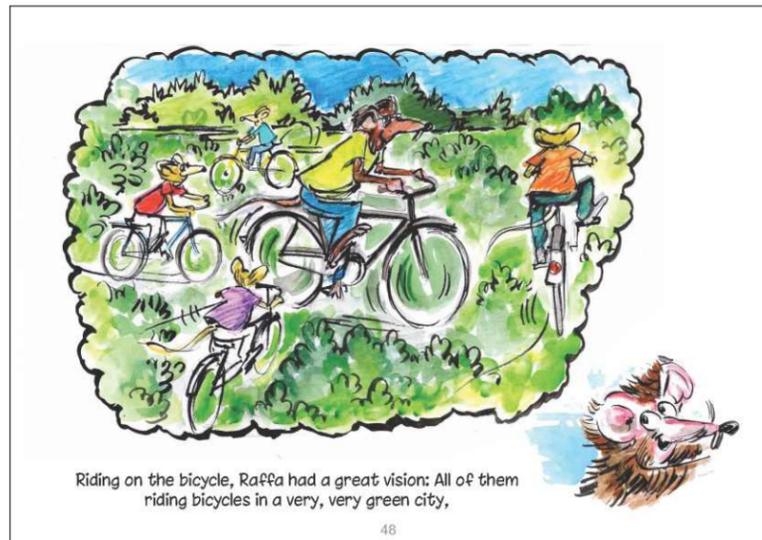
50

So Raffa chooses the biggest shirt that he can find...



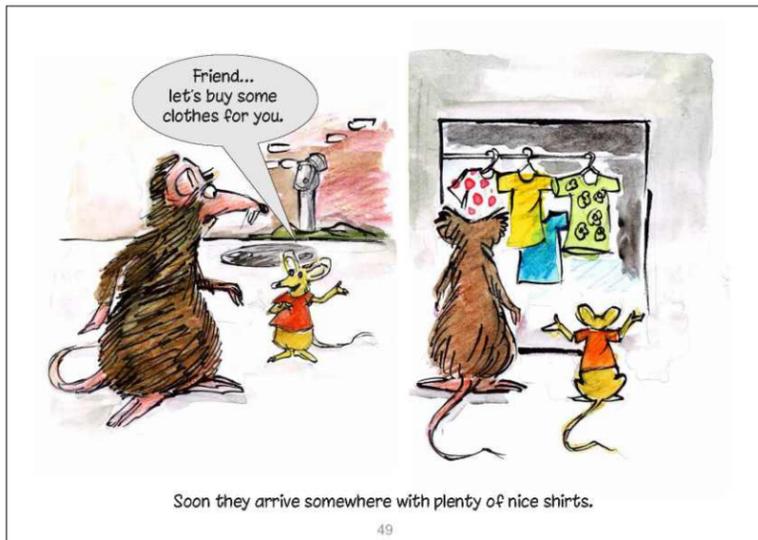
51

Raffa gets a shave, because he wants to dress properly...



48

Riding on the bicycle, Raffa had a great vision: All of them riding bicycles in a very, very green city,



49

Soon they arrive somewhere with plenty of nice shirts.



52

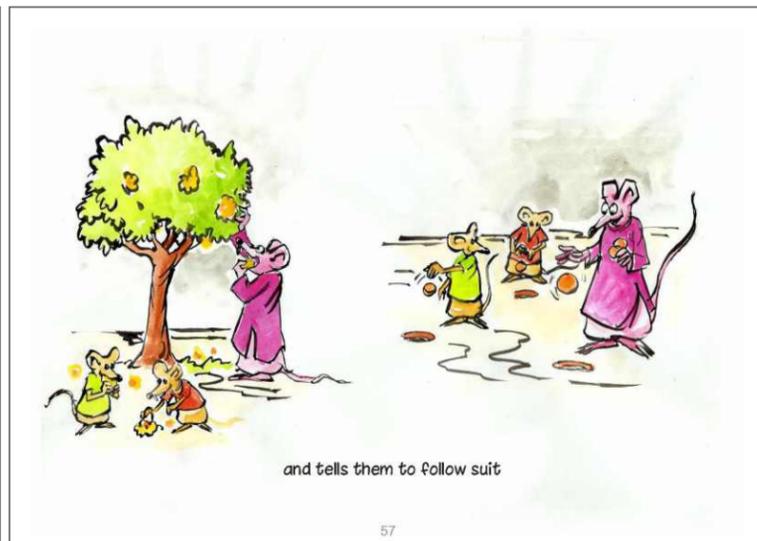
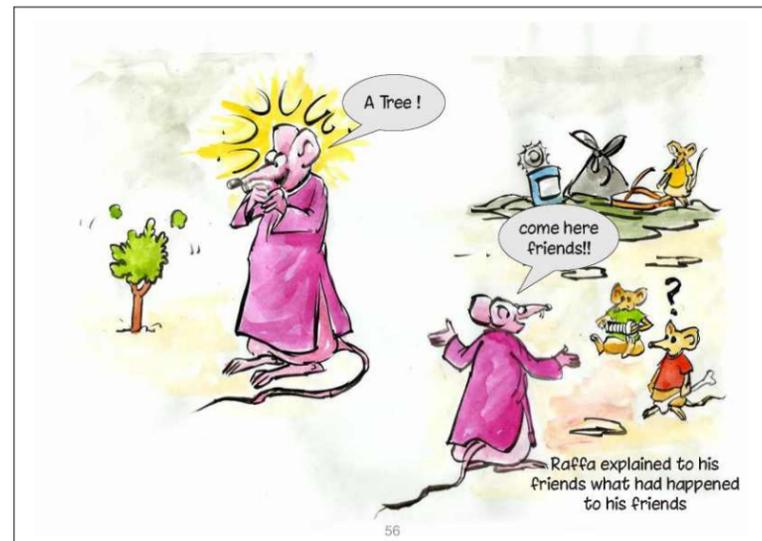
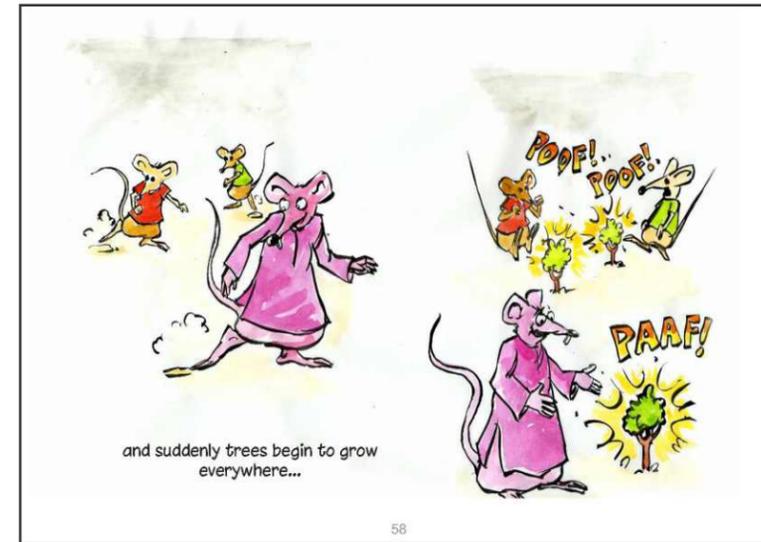
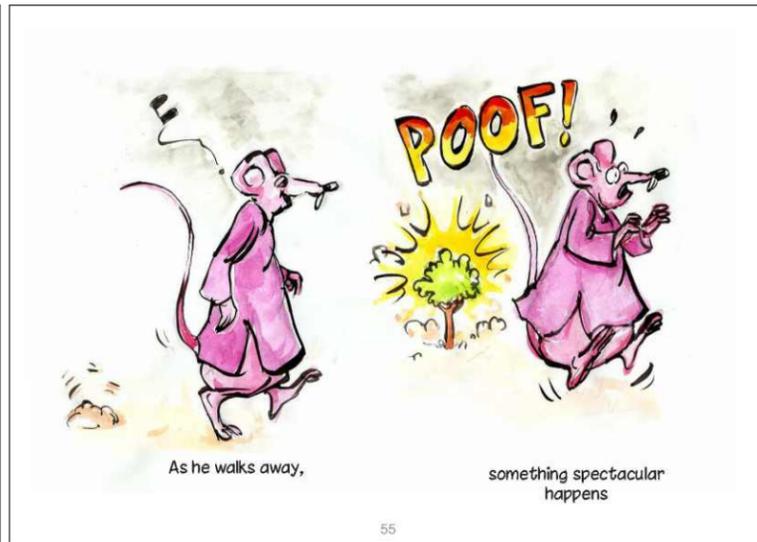
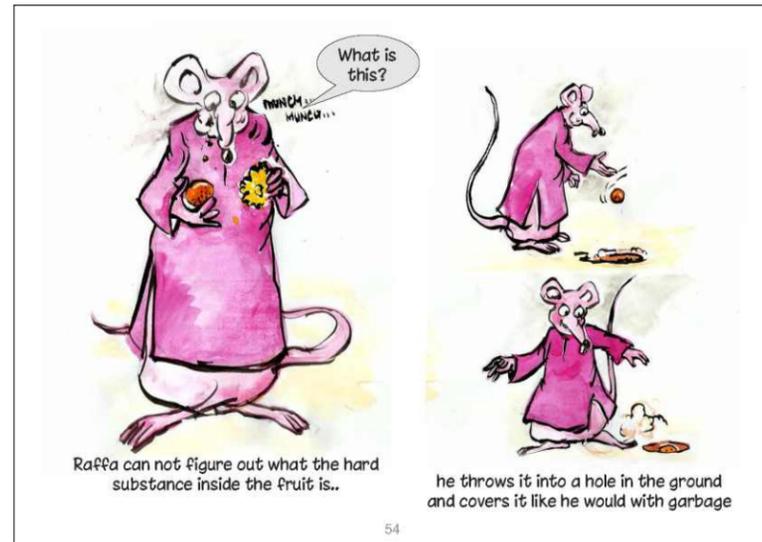
Now Raffa is comfortable in a nice "kurta"*.
*kurta surda for shirt

Let's go out to eat



53

Now a vegetarian, Raffa reaches out for the fruits hanging from a tree.





Acknowledgment

UN-Habitat acknowledges the financial and in-kind support of all donors and partner organizations through the years. It is with their support that we are able to make a difference in the lives of the beautiful people of Pakistan.

