Aga Khan Agency for Habitat

3RD INDUS BASIN KNOWLEDGE FORUM

RESEARCH, POLICY AND CURRENT PRACTICES IN THE INDUS BASIN

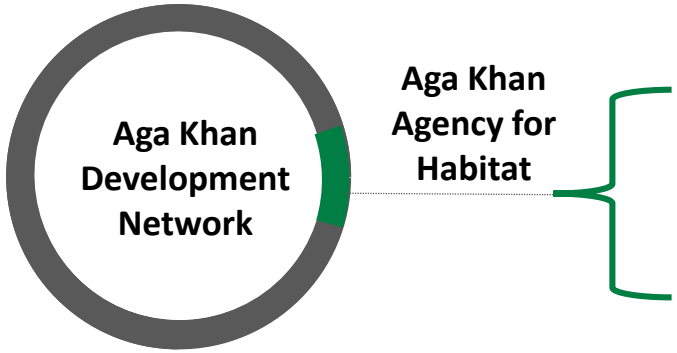
1 June 2018

Vienna, Austria

Mandate

The Aga Khan Agency for Habitat has been established to develop a holistic approach to all aspects that constitute a safe and sustainable habitat in which communities, families and individuals can thrive. AKAH merges the activities of FOCUS, AKPBS and DRMI.

AKAH's mandate as stipulated in the Establishment Memorandum is

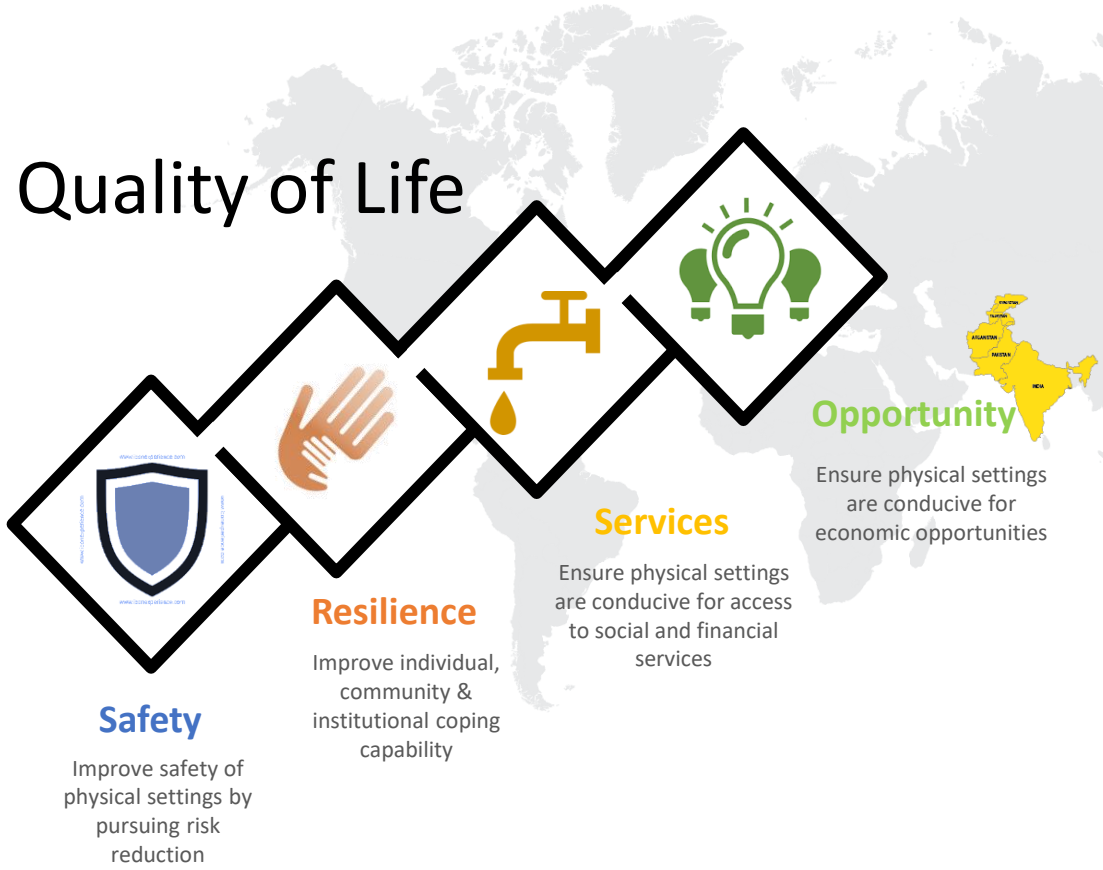


- To ensure that target popultation lives in physical settings that are as safe as possible from the effects of natural disasters
- To ensure that target population is able to cope with disaster events in terms of preparedness and response
- To ensure that these settings are conducive to developing economic opportunities and access to social and financial services

Improve the quality of life of individuals, families and community

Strategic Framework

AKAH will aim to ensure that communities in the areas of focus have consistent levels of safety and resilience, no matter their geographic setting. This will require specific approaches, especially for remote mountain communities.



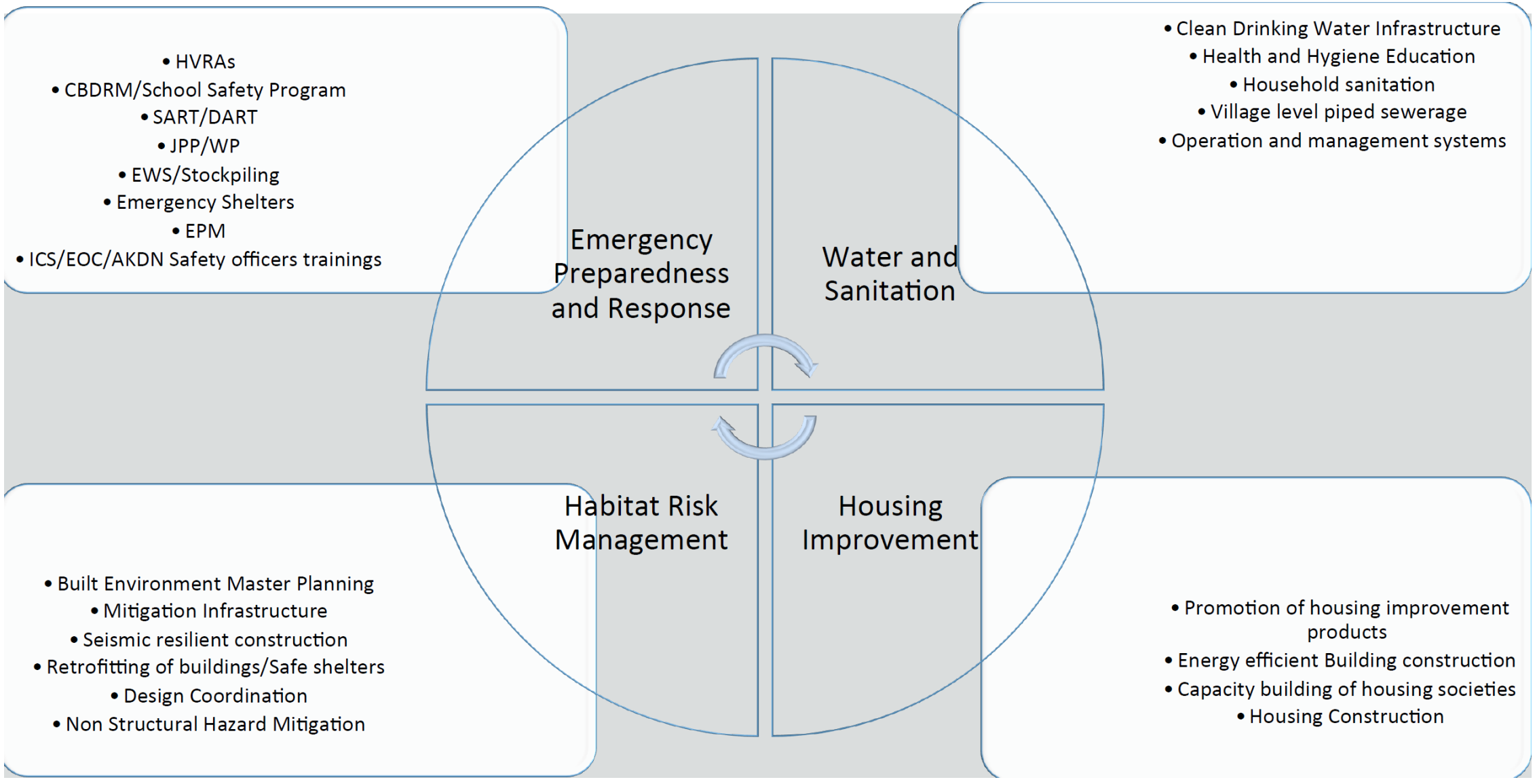
AKAH's strategic framework thus starts at home:

A safe home and surrounding habitat in a resilient community are the foundation stones that allow communities to build their quality of life. AKAH will work to ensure that we build not only a solid foundation, but also empower communities to lead and realize the aspirations they have for their children and beyond. Access to quality social and financial services provides the staircase to the first floor of the "quality of life building". The elevator to the next level of the quality of life building is provided by a set of conditions that ensure economic opportunity for all.

Goals

AKAH Goals for 2018 -2022
Promote Integrated Habitat Management
Access to Services & Opportunities
Construction Management Systems
Strengthen Emergency Management Systems
Elevate Safety & Environmental Consciousness
Build Resilient Structures

Main Programme Interventions in Indus Basin



Effectiveness of Disaster Risk Reduction and Mitigation Projects

Over 181 houses in Puli Khumri Afghanistan were damaged or destroyed by flooding and debris flow in May 2018.

Aga Khan Agency for Habitat
Afghanistan

Quli Qasibi Mitigation Project and Ahandara Khurd Debris Flow Channel Clearing, Puli Khumri, Baghlan

Under the pillar of safety, one of the four pillars of AKAH's operational framework, AKAH works to improve the safety of physical settings in which communities live through initiatives such as structural mitigation projects

Puli Khumri city is the capital of Baghlan Province, and is prone to natural hazards, including flash flooding, debris flow and rockfalls. In recent years, the residents of Puli Khumri have experienced debris flow on a number of occasions, including in 2014 and 2015, which caused damage to houses. Puli Khumri is also subject to flash flooding, especially during the seasonal spring rains. The Aga Khan Agency for Habitat conducted a detailed hazard map of Puli Khumri, and based on the hazard maps, completed two mitigation projects to protect the 600 households, equating to over 3,500 individuals, which are in areas prone to debris flows. One of the projects was the Quli Qasabi Gabion Walls, terracing and dams, which was put in place to ensure the safety of households residing in the path of debris flow. The second mitigation project implemented by AKAH was the clearing of the debris flow channel.

Debris Flow Clearing in PLK, Baghlan Province

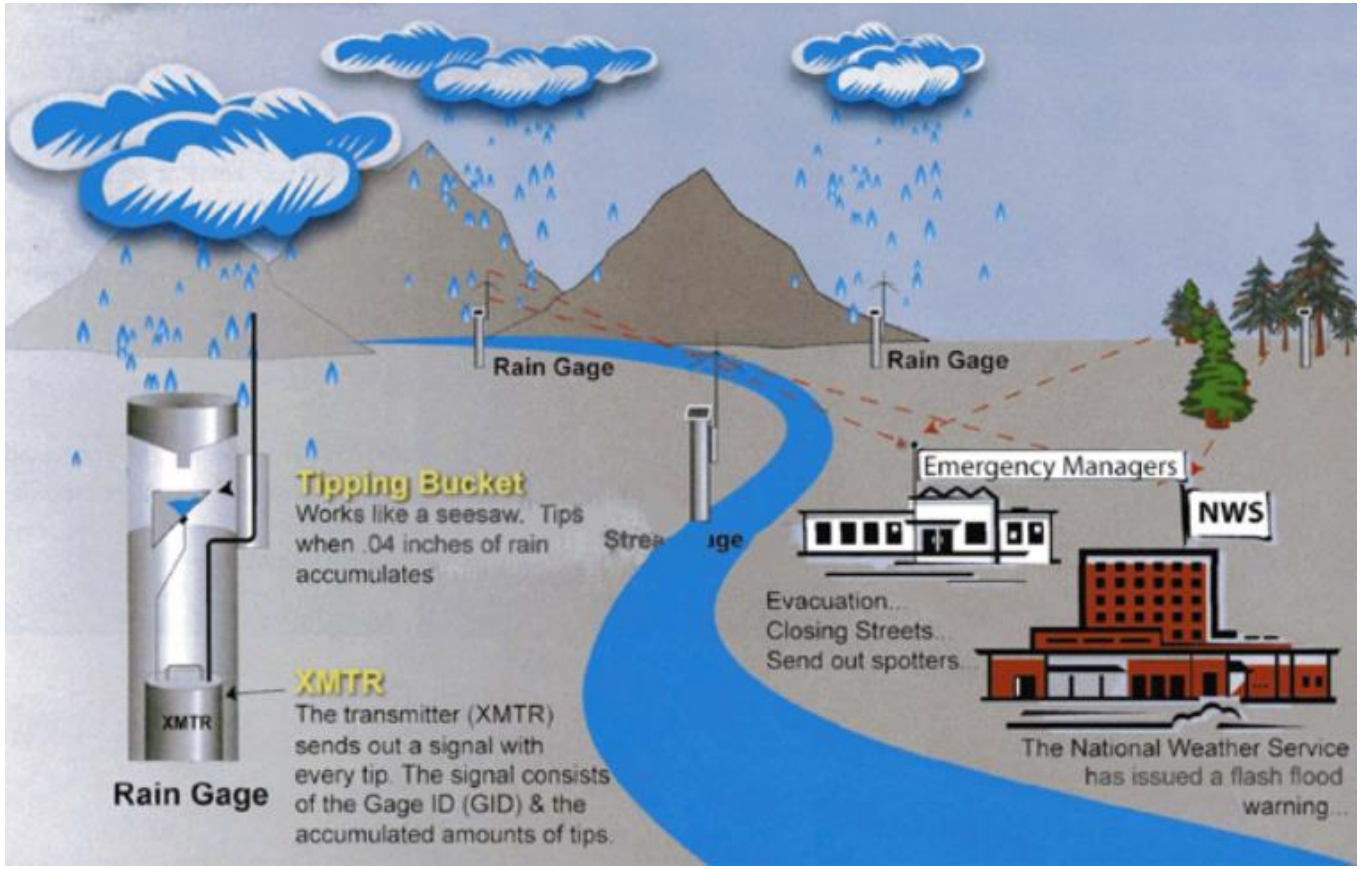
Puli Khumri was heavily impacted by debris flow

This year, heavy rainfalls led to flooding in Baghlan Province, heavily affecting Puli Khumri. AKAH mitigation projects ensured that communities were protected and lives and assets were saved during the natural disaster, and that no houses in the Quli Qasabi area were damaged by flooding and debris flow. The residents of Puli Khumri, such as Ghulam Ali, who has lived in the city for many years, praised AKAH for the effectiveness of the mitigation projects. He noted, that "despite the debris flow and water levels rising even higher than they usually did, the AKAH project meant that the people and the houses were safe." Mohammad Jamil, who lives in Puli Khumri with his wife and children, also noted that the clearing of the debris flow channel helped protect the residents, as it meant the "debris flow was able to cross the village without causing risks to the community." If the AKAH had not cleared the channel "the debris flow would have damaged many more houses, as houses on both sides are at direct risk."

Over 180 houses in Baghlan were damaged by debris flow

Research, policy and practice on water resources in AKAH countries

DRR context: Too much water (flood) and too little water (drought)



Research to understand how and when it happens (hazard)?

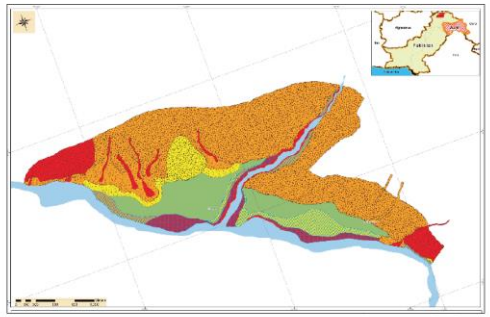
Research to understand how hazard evolves to disaster?

Policy and practice on how to better manage water and land management to minimize/avert disaster.

Risk Anticipation, Informed decisions and Land Use Plans in Indus Basin

Hazard and Risk Maps

What are they used for? How are they produced?
How are they interpreted?



Hazard map Singal (Ghizer)

The maps are used

(1) to guide village development: use safe areas and avoid hazard zones;
(2) as a basis to plan and design mitigation structures to protect existing elements and reduce future disaster losses;
(3) to plan emergency measures like warning systems, evacuations schemes or safe havens;
(4) to raise awareness of local authorities, communities and individual villagers.
(5) to help people prepare their own emergency planning.

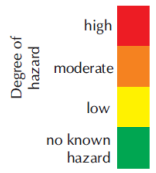
Hazard and risk map in village planning

zone: Stop! Highdegree of hazard. High risk for existing buildings and structures; totalcollapse or heavy damage possible. Any new development should be omitted.

zone: Caution!!Moderate degree of hazard. The construction of new houses can be tolerated; important infrastructure should not be built in this zone.

zone: Caution!Low degree of hazard. Low risk for houses and infrastructure;damaged has to be assumed but nottotal collapse. Important infrastructure can be tolerated but need local protection.

zone: Go! According to today's knowledge hazards do not occur in these areas. These zones can be considered safe from mountain hazards and suitable for development.
Earthquake risk may prevail in this zone and needs to be expected



What are hazard and risk maps?

Anything that has the potential to cause harm and loss is called a hazard. Natural hazards are floods, debris flows, rock fall or avalanches.

Risk is the probable loss, high or low, when somebody or something is harmed by the hazard.

Hazard and risk maps represent hazardous processes and the possible effects of these processes on our living environment.

Disasters are the effects of hazards on life, livelihood and assets not adapted to the force of nature

Why are hazard and risk maps produced?

Maps drawn by Specialists

Hazard and risk maps help to better understandexisting risks and possible disasters in a particular area.

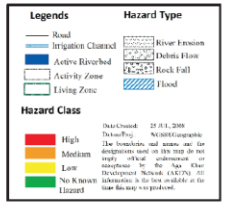
They are indispensable tools for reducing risks and disasters and to learn to be prepared in case of an emergency.

The maps:

- illustrate areas prone to hazards like landslides, floods or snow avalanches;
- identify areas/ zones with different degrees of natural hazards;
- locate assets in hazard prone areas and thereby provide first information about prevailing risks;
- Show emergency measures (e.g. stock pile) and other protective measures.

What do hazard

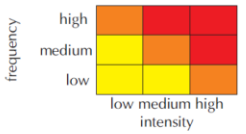
The type of hazard is shown with particular symbols:



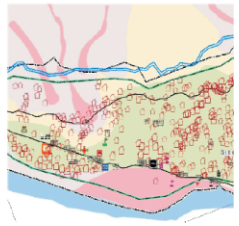
The frequency of the hazard is also called return period. Return periods of 10, 30, 100 years are considered.

The intensity of the hazard describes the size or severity of a damaging event;
high: building is destroyed;
medium: building is severely damaged;
low: building suffers some damage.

The degree of hazard is a combination of intensity and frequency



The various elements at risk are overlaid on the hazard zones. Existing risks and problem zones are immediately visible like the school in the flood zone of the Ghizer River.



Risk communication is seen as a gap in DRR practice

Hazard to risk: Moving to risk based early warning system

The impact scenario based EWS should be pursued to support civil protection departments with actionable information.

It needs applied research and policy support to make it happen.

Reaching out to the most vulnerable section of the communities

Making sense to the last person

The research should focus on how best to communicate so that it makes sense to the last one in the communities.

These information should yield actions by putting into practice. There has to be external support mechanism including policy support and actions: awareness, drills, etc.

Thank you