

STEP 2 Hazard assessment

The level and type of vulnerability will differ according to the hazard. The first practical step of PADR is to discover what hazard or hazards local people face.

What are hazards?

Notes for the facilitator

Hazards can be natural or man-made. Sometimes these overlap. For example, conflict (man-made hazard) may contribute to the impact of a drought (natural hazard), if farmers are no longer able to move their animals safely to grazing land.

Natural hazards include:

WEATHER RELATED

- Flood (river or coastal), with possible landslide and soil erosion
- Drought, with possible soil erosion
- Cyclone (Indian Ocean/Bay of Bengal), hurricane (Atlantic Ocean/Caribbean) or typhoon (Pacific Ocean), with possibility of storm surges (large waves blown inland), flood and landslide
- Hail storm
- Frost

EARTH RELATED

- Earthquake, with possible tsunami, landslide and fire
- Volcano
- Landslide
- Soil erosion

OTHER

- Fire
- Pest invasion
- Disease or illness (such as diarrhoea, cholera, malaria and HIV).

Man-made hazards can affect communities or individual households. They include:

- Technological accidents (such as chemical spillages and pollution)
- Eviction (particularly slum dwellers, refugees and internally displaced people)
- Kidnapping (particularly children, young girls and women)
- Riots
- Global price changes, which can affect the whole community if they are all growing the trying to sell the same crop.

In some places, a hazard might be obvious. For example, Bangladesh experiences flooding. Because this flooding happens each year, everyone living there is aware that flooding is a hazard. In other situations, the hazard may be less obvious. For example, people may be less aware that they may be affected by an earthquake or tsunami because these events happen less frequently. They may not happen in a person's lifetime. These types of hazards are quite rare, but when they occur, they can have devastating consequences. HIV is a hazard which may be less obvious because it is often felt only at individual level to start with. It becomes a slow-onset disaster, taking years to become AIDS, leading to death.

**Activities**

- 1 Organise focus group meetings.
- 2 Ask focus groups what hazards affect the local area.
- 3 Ask focus groups to prioritise the hazards in order of the size of their potential impact (see below).
- 4 Ask focus groups to assess the hazards (see below).
- 5 Compile the information collected from the focus groups and copy the findings onto a large version of the Crunch model, which can be displayed in the community. Ensure that any sensitive issues, such as references to specific people, are not included.

**Tools**

Relevant participatory tools for activities 2–4 include: hazard map, seasonal calendar, time line, ranking.

Prioritising hazards

If local people face several types of hazards, it is necessary to rank them in order of threat. People should decide how to define which hazard is the most serious. For example, death and injury may be seen as more serious than loss of property.

PADR should then be carried out for the hazard given the highest priority. If there is more than one hazard that is considered to be very important then each will need to be considered separately.

NOTE: If violent conflict is considered to be a priority hazard, either because conflict exists in the local area or because there is the potential of conflict, the PADR process should be used with caution (see Section 5.2). In extreme cases, it may be better to work with local people to address the conflict. The ROOTS book *Peace-building within our communities* may be helpful.

Assessing hazards

Hazard assessment involves an examination of the nature and behaviour of each hazard. Look at:

- **HISTORY** (looking at how the hazard has affected local people in the past)
 - Is the hazard part of normal life or rare?
 - When was the last disaster?
 - When was the biggest disaster?
 - Is the hazard getting worse, better, or staying the same? Remember that climate change may be changing the characteristics of weather-related hazards.
- **FREQUENCY** (to find out the likelihood of the hazard happening)
 - How often does the hazard happen?
 - Is it more or less frequent than in the past?
- **SPEED OF ONSET** (to find out how much warning there is before the hazard happens)
 - How quickly does the hazard happen?
 - What warning signs are there?
 - How do people define when a hazard becomes dangerous? (such as when water levels reach a certain height)

- **LOCATION** (to find out the size of the area affected by the hazard)
 - Which areas are affected by the hazard?
- **DURATION** (to find out how long the hazard is likely to last)
 - How long does the hazard last?
- **SEVERITY** (to find out how severe the hazard can be)
 - How severe can the hazard be? For example, water depth, wind speed, Richter scale for earthquakes.

This information will depend on the experiences and memories of local people. It is also helpful to ask technical experts and look at official statistics. Representatives from focus groups could be given responsibility to collect this information. The facilitation team may be able to help by finding information from sources further away, such as weather bureaux / meteorological offices, government departments or universities.

Secondary sources of information

Some of the information may need to be gathered from secondary sources. These include:

- local government statistics
- media reports
- weather reports
- NGO reports and evaluations
- United Nations reports
- information collected by Community Based Organisations.

Relationships with the organisations and individuals holding secondary information can be developed in the process of gathering information. Some of these relationships, particularly those with local government officials, may be important later on when developing an action plan to reduce disaster risk.

Ask each focus group to complete the following table:

Write the details in the boxes below.

HAZARD	
HISTORY	
FREQUENCY	
SPEED	
LOCATION	
DURATION	
SEVERITY	

Outsiders may have more awareness of possible hazards than local people themselves, especially if the hazard is rare and local people have no experience of it. If this is the case, it should be discussed with local people. In addition, outsiders with knowledge about climate change could share with people the possibility of increased weather-related hazards in the area in the future.

EXAMPLE OF HAZARD ASSESSMENT: Ethiopia

HAZARD	Drought
HISTORY	Regular periods of drought since mid-1980s
FREQUENCY	Every 5 years
SPEED	Indications over a period of months
LOCATION	Local area
DURATION	1–3 years
SEVERITY	Considered to be serious but not as bad as in the 1980s. The droughts lead to death and displacement of people, loss of livestock and crops. Livelihoods are badly affected.

EXAMPLE OF HAZARD ASSESSMENT: India

HAZARD	Flood
HISTORY	Flooding has become worse since the 1970s when embankments were built which trap floodwater.
FREQUENCY	Every year
SPEED	Sometimes there is about one week of rain before floodwaters become serious, but often it only takes a few hours.
LOCATION	Most of Dharbanga District in Bihar
DURATION	Up to 2 months
SEVERITY	Considered to be very serious. The flood damages many houses in the village and sometimes people are drowned.