# Including additional considerations on gender and diversity, climate, livelihoods and health into Mapping

The following are suggestions elaborated by VCA practitioners from different parts of the world to adapt or improve particular aspects of the VCA tools. While basic aspects of these sectors have been mainstreamed into the revised tools we recommend you also look into the following proposed additions related to one or several of the following areas:

* Gender and diversity
* Climate change adaptation
* Livelihoods
* Epidemic risk

These should be read and used as a complementary note to the steps described in the [Mapping.](https://www.ifrcvca.org/mapping)

## Gender & diversity[[1]](#footnote-1)

The importance of gender and diversity in mapping

Based on gender, age and diversity factors, information collected through the mapping may differ in relation to:

* The perception of risks and hazards
* The importance and significance of these risks and hazards
* Experience and analysis of solutions to reduce and mitigate risk

Maps can be useful not only to highlight the physical issues in the community but also to indicate social issues, safety and security risks.

* One map should be made by a group of women and a separate one by men. Male-facilitators should facilitate the male team and female facilitators the female team
* It is important to ensure a representative approach within the sex-disaggregated groups, including, young, elderly, persons with disabilities, migrants etc. It is also recommended to hold separate mapping discussions with people of different age groups etc.
* Following an analysis/discussion of the data in the single sex groups first, each map can be presented to both groups in the community e.g. the map developed by the male group should be presented to the female group and vis versa. This will create a discussion around different perceptions and priorities which will support the development of practical solutions in the community.
* Mapping should be conducted at times of day identified in consultation with the community. This will ensure participation of men and women from diverse groups (e.g. persons with disabilities, older people, boys and girls, adolescents, migrants).
* During the mapping process ensure data of participants is recorded, disaggregated by sex, age and disability.

Risk and hazard mapping should allow you to:

* Understand gender-specific hazard risks/threats in the community and whether people in the community perceive this difference?
* Identify practical and strategic risk reduction measures according to gender and diversity needs and perceived threats
* Understand how and where women/men/diverse groups receive information on hazards and risks including formal and informal communication systems e.g. men may have access to more formal networks but informal women’s groups need to be highlighted
* Understand how best to communicate and sensitise community members on risk reduction based on gender and age.
* Develop adapted risk / hazard related awareness messages for women/girls and men/boys
* Understand and raise awareness of existing coping strategies by gender, age, disability and group
* Where and how accessible are available organisations in the community that work on specific issues for men and women
* Know areas in the community where men and women feel safe (which will be critical information when developing a community evacuation plan for example)

**Disability-inclusive approach**

It is recommended to produce one hazard map in collaboration with people with disabilities before the full village hazard map is developed. This allows people with disabilities to identify, in advance, the information specific to their reality before integrating this information into the village map.

VCA facilitators should invite all people with disabilities who can participate to do so. For people with serious mental, intellectual, physical impairment and children with disabilities, it is recommended to invite their family members to join[[2]](#footnote-2).

Through the risk and hazard mapping, people with disabilities and their family members can identify the following information:

1. risks for people with disabilities which may be not be perceived as risks to people without disabilities;
2. capacities and needs of people with disabilities;
3. households of people with disabilities who require early warning assistance;
4. early evacuation assistance and evacuation routes which are accessible to them;
5. Support provided from within the community – where is it available and who provides this

Mapping is a visual exercise so support should be identified for people with visual impairments in the community – to ensure their participation. This could involve having an extra facilitator who speaks the local language to talk through the map. Or using more sensory ways of recording feedback rather than only drawing e.g. the main outline of the village map could also be raised on paper / on the ground so the individual can sense where they are on the map.

## cid:image001.png@01D404BD.B91DE060

## Climate change adaptation[[3]](#footnote-3)

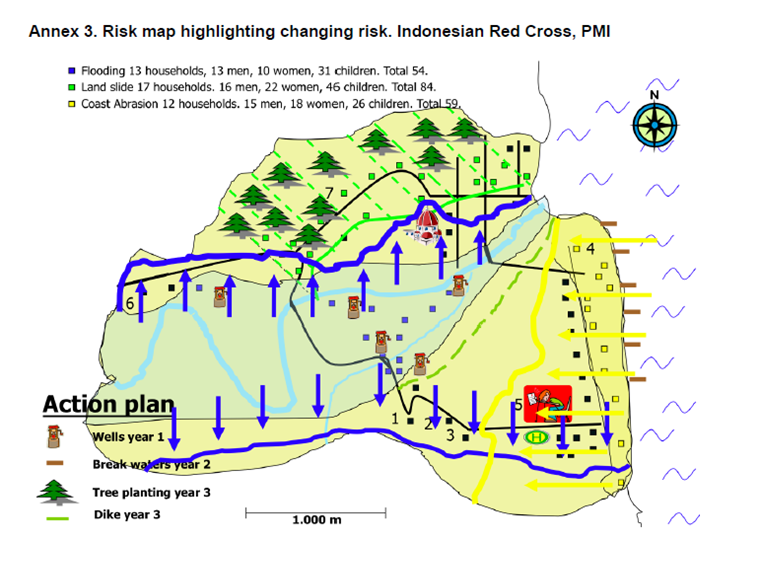
While developing the maps, ask people to describe not only the current situation but also how it may be changing. Ask for specific measurements (i.e. what level hazards such as floods come to and at what time of the year? Have these changed over time?).

Try to ensure that the map includes features of major environmental changes such as deforested zones, flood plains, erosion etc. It will be necessary to assess whether changes you are observing are related to climate change versus which may be related to other factors such as deforestation, over-extraction of groundwater etc. In addition, some environmental changes may exacerbate the risks associated with more extreme weather events (for example, increasingly heavy rain (with climate change) on a mountain slope increases risk of landslides, but it is even more of an extreme risk if the slope is also deforested). Simple examples of what to look for include:

* deforested slopes (locally): increasing risk of landslide
* deforested slopes (upstream): increasing risk of flash flood downstream
* encroached wetland: increasing risk of flooding.

To aid discussion of this you might find it useful to create a map from a local watershed (runoff area) perspective rather than just within the immediate community. See Annex 4 for further guidance on this analysis.

Based on the information you gathered when planning the VCA, you could use a baseline map to indicate places where changes are likely to take place in the future e.g. higher sea levels. This would indicate which locations are most vulnerable. (See example map from Indonesian Red Cross below).



RCCC How can climate change be considered in Vulnerability and Capacity Assessments? 2012. p 13.

Tips!

* Visit the mapped area with local people to verify the information (on a transect walk, for example).
* Contrast community inputs with scientific data on land use and the status of ecosystems (and again to validate observations).

For more resources on how to incorporate climate change considerations into this tool see:

* The [3CA toolkit developed by CADRIM](https://www.dropbox.com/s/dr1ghyxsycap0u7/3CA.FacilitatorsGuide.FINAL.pdf?dl=0) page 85-93 has good recommendations for tool adaptations for climate change and using GIS and GPS for mapping

It should be ensured that when analysing the map, the specific needs, identified risks and solutions from male and female participants and those from different groups that were consulted, are still identified as such and not aggregated after data collection.

## Livelihoods

At community level:

See Livelihood toolkit: [Identify livelihood zones](http://www.livelihoodscentre.org/-/community-mapping?p_r_p_564233524_resetCur=true&p_r_p_564233524_categoryId=26506)

Locate the main elements related to Livelihoods for the community, resources and services such as different shops/market, schools, health centres, roads and accesses, housing (types), leisure areas, flora and cultivation types, public buildings, livelihoods infrastructures and irrigation systems. Consider also natural resources, financial services and productive associations/cooperatives. Have a look to the livelihoods assets pentagon to know more about that.

Make sure you will represent these 3 elements:

* Use of the land: areas dedicated to human settling, community warehouses, cultivation (agriculture land and fishing land), commerce and industry.
* Economic activities: markets, routes of informal trade, micro business areas, medium – large industry (if any).
* Social organization: active cooperatives and its location, any other traders or agriculture associations, trade unions, etc.

Step 1: Discuss (or do a transect walk) to identify livelihoods assets and activities.

Step 2: draw the community map, or use one already existing, and represent the elements you’ve identified as livelihoods assets and activities and where are they placed.

Step 3: mark the location of the threats and risk areas for the community.

Step 4: Then analyze the results: what livelihood assets and activities are threatened where and by which hazards?

At household level:

Step 1: Identify household/family assets related to livelihoods next to the houses or where are they placed. Look at threats and risks that might influence these elements.

Step 2: Identify gender access / use of livelihoods assets, and gender roles in livelihoods activities.

Tips:

* Use a code/symbol to represent each type of element
* Use as reference existing secondary data sources such as maps, economic reports, etc.
* Use GIS and related tools if possible to ensure accurate information collection
* Describe accurately accesses and transport routes to ensure adequate analysis



## Epidemics

Mapping is a very useful tool to identify exposure to health epidemic hazards. To integrate epidemic risk into your eVCA mapping, it is essential to understand the transmission route of the disease considered. This could be found on the IFRC [epidemic control toolkit website](https://epidemics.ifrc.org/volunteer/disease). And it is always recommended to have a member in the EVCA with health background.

For example, mapping is useful data collection tool to assess the exposure to cholera. You need to know that cholera is a fecal oral disease. A person can get cholera by drinking water or eating food contaminated with cholera bacteria. In an epidemic, the source of the contamination is usually the faeces of an infected person that contaminates water or food. So you need to map:

* Open defecation sites and non-functional latrines.
* Water sources near those contaminated sites.

There is large group of diseases that, like cholera, have high epidemic potential and which exposure is strongly connected to the level of access to safe water and sanitation in the community. This is the case of hepatitis A, typhoid fever, acute watery diarrhoea, measles, etc.

Mapping is also very relevant for diseases that are transmitted by an animal vector. For example, in communities that have faced dengue outbreaks in the past, it is recommended to map masses of water (clean or muddy water, stagnant or not) where Aedes mosquito can easily breed and neighborhoods with poor housing/shelter where people are very exposed to mosquito bites. There are emerging diseases transmitted by animals, less known than dengue or malaria, like Rift Valley Fever, with increasing epidemic risk, that can be well assessed through mapping. In this case, mapping where cattle (buffalo, sheep, goats, and camels) are kept and in closer contact with humans is necessary for proper risk assessment.

Factors that increase vulnerability of the community against health hazards can be mapped:

* Ultra-poor families with no proper shelter, often living in crowded spaces with poor hygienic status and no commodities such as insecticide treated mosquito net, safe water, hygienic toilet and soap.
* Families that include people with special needs (elderly, disable, people with chronic diseases like HIV AIDS).
* Families with malnourished children.

Mapping is also very useful to map local capacities that enable communities to manage health epidemic risk:

* Health infrastructure and facilities (clinic, hospital, local pharmacy or first aid point)
* Social care facilities (old people’s homes, primary school).
* Presence of health-trained staff in the community (trained midwife, Red Cross Red Crescent volunteers, community health worker, veterinary, traditional healer, etc.)
* Sites/places where health information is communicated (churches, local NGOs, Red Cross branch office).
* Informal water vendors, water pump technicians, plumbers, latrine builders, latrine desludgers, etc.
* Availability of tools and manpower for communal cleaning, debris clearance, water drainage.

It is recommended to complement mapping with transect walks and direct observation when assessing epidemic risk. Transect walk helps to enrich the data set around exposure to epidemic risks. In the example of cholera, through transect walk you can:

* Measure distance between water sources and non-functional latrines that have high risk of leaking contaminated faeces.
* Observe household latrines and their hygienic status. Check how many latrines have a handwashing station nearby.
* Visit the local market and check whether street food vendors are selling food in hygienic conditions. Check whether communal latrines in public spaces like markets are kept in good hygienic conditions.

In the EVCA mapping, communities may have identified flood-prone sites. It is important to highlight that increasing epidemic risk can be a secondary effect linked to primary natural hazards such as floods. Floods result in stagnant water that increases breeding opportunity for mosquitos. It is important to capture that double risk in your map, especially in communities that have had flooding episodes in the past with associated outbreaks in the past.

1. [Gender and diversity sensitive Vulnerability and Capacity Assessment (VCA). IFRC](https://docs.wixstatic.com/ugd/7baf5b_ece27859d67347539a37a75c700cb484.pdf). [↑](#footnote-ref-1)
2. For further/step-by-step guidance on disability-inclusive VCAs refer to the manual on ‘Disability Inclusive Community-Based Disaster Risk Management’ developed by Malteser International and endorsed by the Disability-inclusive DRR network (DiDRRN) in December 2013.

   <http://www.didrrn.net/main/front/files/EN_TL_Disaster_Risk_Management_2page.pdf> [↑](#footnote-ref-2)
3. [Red Cross Red Crescent Climate Centre. How can climate change be considered in Vulnerability and Capacity Assessments? 2012.](https://docs.wixstatic.com/ugd/7baf5b_ea7bdbb5fa454ec59dc69ed30e1d3265.pdf) [↑](#footnote-ref-3)