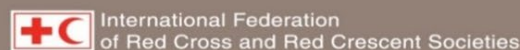




## Emergency Plan of Action (EPoA)

### Comoros: Yellow alert volcano Karthala



<b>DREF Operation n°</b>	<b>MDRKM009</b>	<b>Glide No.</b>	<a href="#">VO-2022-000319-COM</a>
<b>Date of issue:</b>	<b>26 September 2022</b>	<b>Expected timeframe:</b>	<b>4 months</b>
<b>Date of start:</b>	<b>21 September 2022</b>	<b>Expected end date:</b>	<b>31 January 2023</b>
<b>Category allocated to the of the disaster or crisis: <b>Yellow</b></b>			
<b>DREF allocated: CHF 172,379</b>			
<b>Total number of people at risk</b>	293 610	<b>Number of people to be assisted:</b>	<ul style="list-style-type: none"> <li>Direct beneficiaries: 44,041 persons</li> <li>Indirect beneficiaries: 293 610 (persons)</li> </ul>
<b>Regions at risk:</b>	<b>4 regions</b>	<b>Targeted regions:</b>	<b>4 Sub-division: Mbadjini, Hambou, Bambao and Itsandra</b>
Host National Society(ies) presence (n° of volunteers, staff, branches):			
<b>Red Cross Red Crescent Movement partners actively involved in the operation:</b> International Federation of Red Cross and Red Crescent Societies (IFRC), French Red Cross – PIROI.			
<b>Other partner organizations actively involved in the operation:</b> Civil Society Direction, Ministry of Health, UNICEF, OMS.			

## A. Situation analysis

### Description of the disaster

On 15 July 2022, abnormal activity of the Karthala volcano in the Comoros was recorded by the Karthala Volcano Observatory (KVO), which manifested itself as persistent microseisms on the western flank of the island of Ngazidja. Regular observation of the volcano's activities has been initiated by the observatory with regular reports of continued seismic activity. Considering this worrying information transmitted by the Karthala observatory and according to the National Emergency Plan related to Karthala's activities in the country, the Minister of Interior in charge of security launched the yellow alert on 17 August 2022. The country was thus entering the phase of volcanic vigilance.

On 22 August, the Directorate of Civil Security convened the first information meeting of all risk and disaster management actors, including the Comoros Red Crescent, to discuss the immediate actions to be taken following the alert.

In the Fixed Command Post meeting on 5 September, the Karthala Volcano Observatory showed that the evolution of the volcano was worrying as the seismic movements had decreased and the magma pockets gone from 12km deep to 1.5km and insisted on vigilance as the magma could move quickly to the surface which could surprise everyone in case there was no preparation then. The KVO experts showed that the reaction of the Karthala volcano could be unpredictable. According to their analysis, it meant that there was very little control and certainty over whether the orange or red phase would be triggered. The level of volcanic alert might therefore last for days, or weeks or even a year but could also return to a normal situation. The nature of the eruption was not known in advance, but several risks were already identified by the KVO based on current observations and historical data:

- Risk of eruption through lava flows that required the evacuation of the population living in the areas at risk,



- The propagation of volcanic ash which could spread everywhere depending on the wind direction and pollute the water,
- Gas emissions (CO<sub>2</sub>) which are a mortal danger for the population living near the volcano or approaching the volcano,
- Seismic tremors which would directly threaten all infrastructures and lahars which are also dangerous for the population.

According to the Karthala Observatory, four regions of the island of Ngazidja were at risk: Mbadjini in the south, Hambou, Bambao and Itsandra in the centre, with an estimated population of 293,610 inhabitants and an estimated displaced population of 44,042 people. A total of 115 villages in the risk zones were all at risk from any type of impact. Previous volcanic eruptions have also shown the vulnerability of the water supply system which were left exposed regardless of the nature of the volcanic eruption.

The first stakeholders' meeting, under the leadership of the Minister of Interior in charge of civil security, retained two important decisions:

1. Inform the population on time, to avoid panic and avoid any camping activity around the volcano (before impact).
2. Recommend to all sectors to proceed to a needs assessment for the elaboration of an urgent response plan (in case of impact).

However, it is essential to note that certain factors in the analysis of the situation underline the need to be prepared but also to strengthen the emergency response capacity of the NS in a context of unpredictability of impact. Indeed, the lack of equipment for geo-seismic surveys does not improve the accuracy of the information and could lead to serious consequences for the population in the event of an unprepared orange or red alert level. This inaccuracy coupled with the KVO conclusions mentioning the unpredictability of the eruption and the type of eruption further increases the risk context of the exposed populations. These elements may lead to a late warning to the population and the implementation of measures or to mitigation measures of the above-mentioned risks of impacts which will be done late or too little time before the impact. However, given the impact of the latest eruptions in the country and the evolution of the volcano's activities since 15 July, the last meeting with the KVO underlined the urgency to prepare for a potential impact and to be prepared for all eventualities.

This means that the Comoros Red Crescent is automatically integrated into the implementation of the government's priority decisions, but also has to ensure the preparedness of its teams and communities.

## **Summary of the current response**

### **Overview of Host National Society.**

The Comoros Red Crescent is well established in the areas threatened by the Karthala volcano with local (village) committees, prefectural committees, and community volunteers. In addition, it has set up volunteer brigades and community management committees in these localities, which facilitate all the National Society's community actions. Given the experience gained in its interventions during the 2005, 2006 and 2007 volcanic eruptions, the Comoros Red Crescent will contribute to communication with the population on the types of alerts and volcanic risks and then on water protection with the prevention of water-related diseases.

For communication, in line with the idea of avoiding panic that came out of the first information meeting on the yellow volcanic alert, the Comoros Red Crescent plans to use the strength of volunteers living in all the villages at risk to prepare the population on how to behave in the different phases of the alert. But in order to do so, these volunteers need to be trained on the different forms of volcanic eruptions and the warning phases. It also seems essential to raise awareness in the villages that could potentially be responsible for receiving the victims so that they can prepare themselves as well as possible in order to promote cohesion between the host population and the displaced population.

For the protection of water, it is urgent to protect the rainwater collection cisterns as this is the water supply system for more than 80% of the population living in Comoros and as water pollution with volcanic ash was the main consequence of the latest volcanic eruptions. It is therefore urgent to raise awareness of the importance of covering cisterns (many are left open) before a potential volcanic eruption and to distribute tarpaulins to the most vulnerable households without the means to protect their cisterns. This rainwater harvesting cisterns protection activity will be followed by awareness raising on the prevention of water-related diseases. This will go hand in hand with the training of volunteers on water protection and the prevention of water-related diseases.

In order to launch these activities, a preliminary assessment is needed to set up a database of volunteers to intervene in this yellow alert phase and the situation of existing water cisterns in the area at risk.

### **Previous volcanic eruptions, actions from Comoros Red Crescent and lessons learnt**

Main learnings that should be considered in this plan are:

- ✓ People were informed about possible volcanic eruptions but were not prepared for the warning and evacuation system, which led to panic in some areas in 2005 and 2006.
- ✓ In 2005 there were dust fumes, and the water supply cisterns were polluted, and the same thing happened again in 2006 because protective measures were not taken during the yellow alert. That is why this time the Comoros Red Crescent wants to prioritize this activity.

- ✓ The yellow alert was announced in 2003 and the eruption took place in 2005. Even if the situation returns to normal, we still need to be vigilant so as not to be surprised like in 2005. So, communication and preparedness of the population must continue.
- ✓ Volcanic ash surprised everyone in 2005 and 2006 and caused many respiratory infections among the population, which is why the Comoros Red Crescent is planning to distribute protecting masks for most vulnerable groups such as children, pregnant women and people with respiratory diseases.

### Volcanic events in recent years

Date	Impact	Affected areas	NS assistance
13 January 2007	Karthala magmatic eruption at secondary crater. No evacuation but population alerted	Volcano top zones	Communication and information
28 may – 03 June 2006	Magmatic eruption at the main crater No significant impact on the population	Volcano top zones	Communication and information
24 Nov – 08 Dec 2005	Phreatic-magmatic eruption at the main crater, ash cloud affecting ¾ of the island of Grande Comoros.  The authorities have advised the population to stay at home. A total of 2,000 people has been displaced from their areas of residence. Drinking water cisterns were contaminated, affecting 118,000 people.	Volcano top and regional zones	- evacuation of the population from the centre to the north - cleaning of dust in administrative areas - cleaning of rainwater supply cisterns in 4 regions of the island (Mbadjini, Hambou, Bambao and Itsandra) - sensitisation of the population in risk areas on the prevention of water and hygiene related diseases
16 – 18 April 2005	Phreatic-magmatic eruption at the main crater: most of the island received ash fallout. Approximately 10,000 people living on the eastern side of the island were evacuated.	Volcano top and regional zones	- evacuation of the population from the centre to the north - cleaning of dust in administrative areas - cleaning of community rainwater cisterns in 3 regions of the island (Mbadjini, Dimani and Washili) - supply of water to community cisterns - sensitisation of the population in the risk areas on the prevention of water-related diseases and hygiene
11 July 1991	Phreatic eruption at the volcano top zones of the main crater, strong gas release	Volcano top zones	- participation in the government crisis unit - information to the population of the alert
5 – 10 Avril 1977	Phreatic eruption with magma effusion at Singani. About 4,000 people were evacuated. Three villages were destroyed or partially destroyed.	Hambou region	- informing the population of the alert

The Comoros Red Crescent was very active during the volcanic eruptions of 2005 and 2006 in the area of WASH. The water in the rainwater collection cisterns was polluted by volcanic ash, and Red Crescent volunteers cleaned them and made the water safe to drink. They also conducted awareness-raising sessions on water protection and the prevention of water-related diseases. This is an activity that the Comoros Red Crescent will continue to carry out as the volunteers are experienced in managing drinking water.

### Overview of Red Cross Red Crescent Movement in country

The International Federation of Red Cross and Red Crescent Societies (IFRC) is present in the Indian Ocean region and its office based in Madagascar, supports National Societies in the region in organizational development, resource mobilization and risk and disaster management. The IFRC makes DREF funding available to facilitate National Society

interventions in these types of response. The status agreement, which has recently been signed between the IFRC and the Comorian Government, will facilitate IFRC interventions in the country.

The Indian Ocean Regional Response Platform (PIROI) strongly supported the Comoros Red Crescent in its response to the 2005 and 2006 volcanic eruptions. It has a pre-positioned stockpile on the island to facilitate response during disasters. It can also mobilise experts from its headquarters in Reunion Island and other equipment from other countries that are part of the platform. The French Red Cross has a delegation in Comoros that supports the National Society during emergencies.

A first coordination meeting with the participation of IFRC, PIROI/CRF and CoRCS took place by video conference on 25 August 2022 and an intervention plan was agreed upon including the drafting of an action plan for a DREF request for the preparation of the National Society for volcanic alert. The CoRCS holds regular situation update sessions and follows up on reports of volcanic activity with the KVO and the Government. As part of the update and follow-up, a second meeting was held on Thursday 8 September between the IFRC delegation, the IFRC at regional level, French RC/PIROI and the CoRCS.

The Comoros Red Crescent is meeting with the French Red Cross delegation to prepare the possible actions to be supported by the French RC after this yellow alert phase according to the scenarios retained by the Fixed Command Post developed in the sections below. An assessment of the needs in terms of intervention equipment was carried out, specifying the existing and the needs at the level of each alert phase.

### **Overview of non-RCRC actors in country**

The Comoros Red Crescent is part of the fixed command post and therefore participates in coordination meetings. The NS also participates in sectoral group meetings (Health, WASH, Migration, etc.). The Command Post includes the Ministry, the United Nations, the Comoros Red Crescent, among others.) A meeting of all ambassadors at the country level was recommended by the Command Post after the alert was launched as well as a simulation of the eruption at the island level.

The Director of Civil Security has already produced a television programme to inform the population. Communication with the population is the first activity prioritised by the national preparedness plan and by the Comoros Red Crescent response plan. Community management committees will be integrated into all community interventions to facilitate messages to the population. The Government has also confirmed the possibility of evacuating 80,000 people at risk in the event of an impact. Outside Grand Comoros by sea or in other areas of the island by land.

The Comoros Red Crescent has always worked with UNICEF in emergency response, particularly in the area of WASH. During the volcanic eruption of 2005 and 2006, the Comoros Red Crescent benefited from UNICEF the funding to clean water cisterns and raise awareness about water protection. Advocacy actions may be undertaken in the event of an orange or red alert.

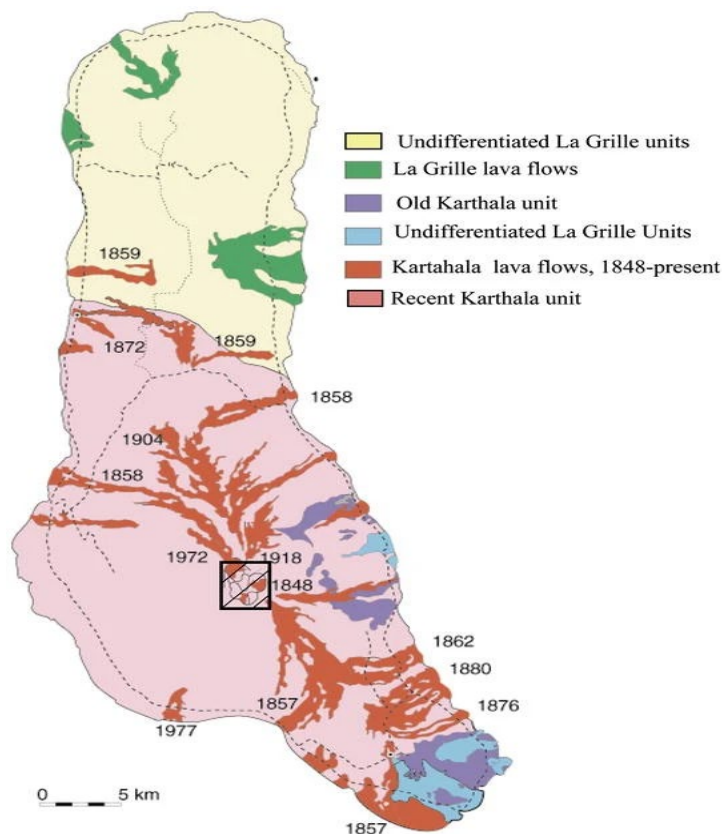
## Needs analysis, targeting, scenario planning and risk assessment

### Needs analysis

The Karthala volcano is located on one of the islands of the Comoros, on the island of MORONI, still called Grand Comoros.

[Karthala Volcano](#) is the southernmost and largest of the two shield volcanoes forming the island of Grande Comoros (also known as Ngazidja Island), Karthala contains a 3 x 4 km volcano top zones caldera generated by repeated collapses. Historical eruptions have changed the morphology of the volcano top zones caldera, which is now irregular. More than twenty eruptions have been recorded since the 19th century from the volcano top zones caldera and vents on the northern and southern flanks. Many lava flows have reached the sea on both sides of the island. In 1860, a lava flow from the volcano top zones caldera travelled about 13 km northwest, reaching the west coast north of the capital Moroni. The last known eruption was in 2007, a magmatic eruption. The distance and the directions of the eruption over the years is one of the parameters analysed in the vulnerability analysis.

In the case of this alert, the areas exposed to possible fumes would immediately be the sub-prefectures of Mbadjini, Hambou, Bambao and Itsandra. but others areas are not excluded to be impacted. It should also be noted that the volcano is located in the capital, which has a high concentration of people and administration. More than 293,610 people are exposed to this risk for only an evacuation capacity of 80,000 people by the Government.



Source: Springer link analysis article. Access [here](#).

### Risk classification and rationale for anticipatory actions

According to the analysis made in the national Karthala plan of 2022, on average, an eruption of Karthala has occurred every eleven years over the last two hundred years, with the last volcanic eruption in 2007. Following the historical data summarise in the above sections, volcano risk remains a threat to the population and can have negative consequences for human activity and the natural environment. Hence the importance of monitoring and setting up a disaster preparedness plan. The time required for action and the number of victims and material damage are conditioned by the type of eruption and its extent. But these cannot be definitively identified because of the difficulties in obtaining formal forecasts in this type of disaster. The KVO underlined once again the insufficiency of the equipment for the surveillance of the volcano and that the latter can surprise everyone. Thus, the Fixed Command Post recommended an immediate assessment of the existing equipment and needs in order to be able to quickly submit a response plan to financial partners. Monitoring the evolution of seismic phenomena is compromised, so from the yellow alert onwards, it is necessary to start preparing for the different possible phases. Information on the different alerts will be received from the Government based on the KVO data and the intervention emergency will be defined by the Karthala National plan and the government strategy. However, the meeting of the Command Post conducted on 5 September 2022 highlighted the urgency of preparing for the response as the evolution of the magma pockets has been very rapid over the last 2 weeks, they have gone from 12km to 1.5km in depth. This implies a response focused on risk reduction with NS preparedness, mobilization of existing stocks, monitoring and passive protection of communities. Especially considering the history of the Karthala volcanic [eruptions occurrence](#) which is recorded in an average of 11 years and the last one was in 2007.

Phase	Urgence
Yellow phase already declared by the Government via the Civil Protection following the reports of the KVO	<ul style="list-style-type: none"> <li>- Mobilisation of means (material, financial, human)</li> <li>- Prepare volunteer teams</li> <li>- Communication and information</li> <li>- Protection of water cisterns</li> </ul>
Orange phase via KVO report and government publication	<ul style="list-style-type: none"> <li>- Communication and information</li> <li>- Evacuation and first aid</li> <li>- Protection of water cisterns</li> <li>- Coordination</li> </ul>
Red phase via KVO report and government publication	<ul style="list-style-type: none"> <li>- Coordination</li> <li>- Communication and information</li> <li>- Evacuation and first aid</li> <li>- Psychosocial support</li> <li>- WASH, health, food/non-food assistance</li> </ul>

### Classification of needs according to the type of eruption

Depending on the type of volcanic eruption, the Comoros Red Crescent will have to adapt its intervention. If it is a lava flow, the Comoros Red Crescent will participate in the evacuation of the population to safe areas, provide first aid to the injured and assist the displaced population to temporary accommodation sites organized by the government. If it is an eruption with volcanic ash, National Society volunteers will intervene in the area of WASH and health by assisting the population in securing water and distributing masks and protective eyewear. If it is particle and gas eruption, staff and volunteers should be protected with masks to be able to intervene and contribute to the protection of the population. In any case, the National Society's preparedness to respond to any form of volcanic eruption remains urgent.

### Summary table of risks with Comorian Red Crescent responses capacity (For communities and volunteer activities).

Possible risks	Impacts	Preparatory actions (yellow alert)	Response to be considered if the event occurs (orange and red alert)	Existing resources from French RC/PIROI planned to be made available in case of impact	Needs
<b>Eruption with lava flow</b>	<ul style="list-style-type: none"> <li>- Destruction of infrastructure</li> <li>- Lack of communication</li> <li>- Lack of electricity</li> <li>- Deaths</li> <li>- Injuries</li> <li>- Displacement of the population</li> </ul>	<ul style="list-style-type: none"> <li>- Inform the population about the different types of warnings</li> <li>- Prepare evacuation plans with the population</li> </ul>	<ul style="list-style-type: none"> <li>- Assist in the evacuation of the population from the affected area to the north</li> <li>- Helping the displaced population to move to accommodation</li> <li>- Distribute basic necessities</li> <li>- Providing psychological support</li> </ul>	<ul style="list-style-type: none"> <li>- 978 kitchen kits cuisines</li> <li>- 200 blankets</li> <li>- 57 electrification systems with 4 generators</li> </ul>	<ul style="list-style-type: none"> <li>- water cisterns</li> </ul>
<b>Eruption with emanation of volcanic ash</b>	<ul style="list-style-type: none"> <li>- Destruction of crops</li> <li>- Invasion of homes and workplaces</li> <li>- Water pollution</li> <li>- Respiratory diseases</li> <li>- Waterborne diseases</li> </ul>	<ul style="list-style-type: none"> <li>- Assessment of the condition of water supply cisterns in risk areas</li> <li>- Protection of water cisterns</li> <li>- Cleaning of cisterns</li> <li>- Pre-positioning of dust masks</li> </ul>	<ul style="list-style-type: none"> <li>- Cleaning of polluted water cisterns</li> <li>- Water supply</li> <li>- Distribute dust masks to the population</li> <li>- Distribute protective glasses</li> <li>- Awareness raising on prevention of</li> </ul>	<ul style="list-style-type: none"> <li>- 2600 tarpaulins</li> <li>- 0 dust masks</li> <li>- 526 goggles (IOI Cluster stock)</li> </ul>	<ul style="list-style-type: none"> <li>- 10L buckets</li> <li>- Squeegees</li> <li>- Brushes</li> <li>- Wire brush</li> <li>- Shovels with brush</li> <li>- Rope</li> <li>- Gloves</li> <li>- Headlamp</li> <li>- Wetsuit</li> <li>- Chlorine</li> </ul>

		- Awareness raising on prevention of water-related diseases and hygiene	water and sanitation related diseases		- Goggles - Tarpaulin
Eruption with gas release	- Death - Displacement of the population	Inform the population about the different types of alerts - Prepare evacuation plans with the population - Prepare masks - Raising awareness among the population	- Assist in the evacuation of the population from the affected area to the north - Assist in moving the displaced population to shelter - Message dissemination adapted to the risk - Distribute basic necessities - Providing psychological support	- 978 Kitchen kits - 200 Blankets - 57 units electrification system with 4 generators	- Child-sized protective masks - Dust mask

The National Response Plan exists and is built on 5 pillars. The effectiveness of the "KARTHALA PLAN" depends mainly on:

1. The organisation of the Command.
2. Alerting.
3. The speed with which resources are put in place.
4. The use of sufficient and appropriate means.
5. Coordination in the implementation of these means.

#### Disaster risk reduction:

There is a high risk to the population which requires the establishment of a warning mechanism and the strengthening of information to communities. This imperative is further heightened by the factors limiting clear predictions and impact triggers.

- The Karthala volcano observatory expressed concern about the theft of its volcano monitoring equipment (solar panel and battery) and requested that this equipment be reinforced. The World Bank has agreed to follow up on this request.
- Volcanic eruptions are unpredictable, and the yellow alert can quickly change to an orange and red alert, the margin can be very fine according to the KVO experts.
- The Volcano Observatory cannot define the type of volcanic eruption and all the types of eruptions mentioned are possible, however one should be prepared especially for the types known in the country such as lava flow and the diffusion of volcanic ash or toxic gases.

Consequently, only a good preparation of the country, the National Society and the communities stand out as a mitigating factor that will limit the consequences of a possible volcanic eruption. The Comoros Red Crescent, with its network of volunteers present in all the localities at risk, with pre-positioned stocks of equipment and the movement's partners in support, has a major role to play in the preparedness and response phases. In terms of preparedness, the needs are focused on:

- Surveillance and passive protection of responders and communities.
- Preparation of the NS. As the last volcano eruption was in 2007 and the last DREF was also several years ago, the Red Crescent teams in the risk branches, although still active, need an upgrade. The immediate need is to ensure the formation, training and mobilisation of emergency response teams. Ensure disaster risk reduction preparedness through appropriate training and simulation exercises.
- Community preparedness and early warning in line with the 2 priority areas declared by the Government. This will include defining evacuation mechanisms and locations, practicing orange alert simulations, pre-positioning of masks needed in case of ash eruption, setting up a communication and information system for communities at risk via watch teams.
- Evacuation preparedness
- Emergency distribution of protective equipment to volunteers and communities.

#### Health and care:

Explosive volcanic eruptions erupt a mixture of gases and rock fragments of various sizes (including ash and pumice) that present various hazards. Less explosive volcanoes may quietly emit gases and lava flows. These gases can also be released between eruptions, for months or years after an eruption has ended. Volcanic emissions can cause air pollution which can be dangerous to people, animals, agriculture and property. The danger varies according to the type

of gas emitted and the protective measures in place. Only dust, ash and larvae fumes are visible to the eye of communities, but volcanic gases are all colourless and invisible. In general, they can be recognised by different smells: SO<sub>2</sub> - matches or fireworks, H<sub>2</sub>S - rotten egg smell, HF and HCl - strong, irritating, acrid, CO<sub>2</sub>, CO and radon - odourless. In the event of scientific non-detection, it would be advisable to ensure that communities are made aware of the need for vigilance in odour changes as these fumes can also emanate from isolated volcanic fissures. Beyond the different preventive measures against gas and particles, protection and keeping safe distance and vigilance remain the most essential needed to be disseminated in accordance with National plan. It is also important to raise awareness of the adverse effects of skin contact and the importance of covering up completely and wearing suitable protective masks (gas masks). The vulnerability of individuals is accentuated from one person to another, and as with any health risk, some groups may be more likely to experience more severe effects than others. These include people with existing cardiac and respiratory diseases, the elderly, infants, children, and pregnant women.

Even if in the event of an impact, the Contingency plan (National Karthala plan) instruction is to evacuate, CoRCS based on past incidence with particles emissions possible in all the types of impact, considers the emergency to ensure protection of the most vulnerable population against the above emissions. Children and people with high vulnerability need protection from volcanic particle fumes. Considering technicalities on the health risks<sup>1</sup>, gas masks do not protect against CO<sub>2</sub> and CO and these items are essential when approaching the volcano. However, FFPE/N95 adapted masks has proven effective protection against the most frequently emitted particles. But it should be properly adapted and fit to the face to ensure good protection. This means having quantities and size N95 mask pre-positioned and distribute within the 2 hours from the impact. Children size as well as adult masks need to be purchased to be available in Comoros in the desired quantity and for children's sizes. Another critical factor being the beginning of the school period in October, the need for children to have protective masks with them.

In the event of an impact, the Comoros Red Crescent has an important role to play in health and care. Volunteers can provide first aid in the event of an impact. Similarly, volunteers can also provide psychological support.

### **Water, sanitation, and hygiene**

The exposure of water plants and the management of community water supplies is a major concern. It is essential to ensure the protection of these water supplies that feed communities and to ensure access to safe drinking water in the event of an eruption. In addition, in the event of an impact, water quality monitoring will be necessary, as well as awareness-raising and disinfection sessions for the prevention of water- and hygiene-related diseases.

### **Targeting**

Based on information provided by the Karthala Volcano Observatory, approximately 293,610 people live in the risk zones of Mbadjini, Hambou, Bambao and Itsandra. This operation will target all these communities in the preparatory phase (yellow alert). 293,610 people (48,935 households) benefiting from community awareness activities, WASH for water protection and then pre-positioning of protective equipment against toxic fumes. If the situation deteriorates towards red alert, the CoRCS will coordinate with various stakeholders to contribute to the relief of the affected population before a possible revision of the proposed strategy.

Similarly, according to the disaggregated data table from the CoRCS databases, approximately 15% of the population (44,041 people) correspond to the groups with high vulnerability to volcanic fumes cited in the needs analysis. These populations will be taken into account in the distribution of masks. They are mainly children (12%) and 3% of the most vulnerable groups. The vulnerability criteria applied include: the elderly, infants, people living with chronic diseases, people with high respiratory or cardiac vulnerability, and children, pregnant and lactating women, people with water cisterns most at risk. These vulnerability criteria will be coupled with the economic criterion of level of access to health care and income in order to identify the populations that have the least possibility of acquiring the necessary protection by their own means. The same mechanism will be put in place for water system coverage.

However, based on past experience, CoRCS estimates that at least 1,500 households have water supplies that are highly vulnerable to fumes, ash and other pre- or post-eruption pollutants/ particles during the amber phase. Each of the 1,500 cisterns can supply several households. The initial assessment will help to confirm or further narrow this focus.

### **Disaggregated data according to CoRCS**

Population with specific vulnerabilities	Percentage
Women of childbearing age	23%
Pregnant woman	4%
Child < 5 years	12%
Child < 5 years	3%
People with reduced mobility	0,05%
Population >=70 years old	3,68%
Population >= 25 years	42,55%
Diabetic population	11%

<sup>1</sup> Source, [National Society et Gouvernement Island guide.](#)

## Scenario planning

Scenario and situation	Humanitarian impact and consequences	NS response
<p><b>Yellow phase is declared and lifted before 6 months</b></p> <p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>▪ • Seismic activity report shared by KVO or civil protection. The Karthala Volcanic observatory (KVO) agency or international surveillance experts<sup>2</sup></li> <li>• agency publishing monthly alerts from the country's seismic agency and relayed via the civil protection website here.</li> <li>• • Fixed Command Post Report</li> </ul> <p><b>Trigger:</b></p> <ul style="list-style-type: none"> <li>• • Yellow alert bulletin</li> <li>• Government statement lifting the alert</li> </ul>	<ul style="list-style-type: none"> <li>- Panic among the population</li> <li>- The population will try to leave the villages at the slightest false alarm and risk of accidents</li> </ul>	<ul style="list-style-type: none"> <li>- Raising awareness of the population on the types of warnings and the warning system</li> <li>- Preparation of evacuation plans with the population</li> <li>- Pre-positioning of protective equipment</li> <li>- Protection of water cisterns</li> <li>- Capacity building of volunteers on the warning system, emergency assessments, distribution and prevention of water and hygiene related diseases</li> <li>- Raising awareness of water-related diseases</li> <li>- Preparing volunteers for the reception of displaced people on the 3 islands</li> </ul>
<p><b>Yellow phase is declared and maintained beyond 6 months.</b></p> <p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>▪ observatory agency publishing monthly alerts from the country's observatory agency or international surveillance experts</li> <li>▪ Fixed Command post report, include civil protection</li> </ul> <p><b>Triggers:</b></p> <ul style="list-style-type: none"> <li>▪ Yellow alert bulletin</li> <li>▪ Government statement remains that of 22 July 2022</li> </ul>	<ul style="list-style-type: none"> <li>- The population may neglect the alert</li> <li>- The population is likely to be surprised when the alert is changed to orange or red and the panic could lead to many injuries and even deaths</li> </ul>	<p>The actions planned in are maintained and the NS continues to monitor with local partners the evolution of the alert and keep the IFRC updated regularly.</p> <p>In parallel to this operation, the NS is exploring the possibility of extending its preparedness phase through the simplified early action protocol.</p>
<p>The volcano actually erupts within 6 months or more</p>	<ul style="list-style-type: none"> <li>- Water pollution</li> <li>- Displacement of the population</li> <li>- Injuries</li> <li>- Deaths</li> </ul>	<p>Revision of the Action Plan to include response if within 6 months or launch a response DREF or appeal depending on the level of impact.</p>

On the basis of the above: forecasted possibilities, impact and consequences for drinking water in Ngazidja Island, the Comoros Red Crescent through this plan will focus on scenario 1 corresponding to the current situation, starting with a period of monitoring and preparedness adapted to the needs and risks identified in the yellow phase. This will involve, among other things, water protection to avoid the water pollution experienced during the last volcanic eruptions and the consequences on the health of the population. Communication will be reinforced in this phase to prepare the population and avoid panic in case of a volcanic eruption. Protective equipment will be distributed to protect the population from volcanic ash and toxic particle emissions as well as the protection of rainwater cisterns.

## Assessment of risks related to the implementation of the operation

Risks	Probability of occurrence (high, medium, low)	Severity of risk impact (high, medium, low)	Mitigation measures
Other natural disasters or epidemics (cyclones, sign epidemic, etc.)	Medium	High	<ul style="list-style-type: none"> <li>- The Government has a practice of appointing a national epidemic committee if such cases arise.</li> <li>- Support from PIROI and IFRC</li> </ul>
Increase in COVID-19 positive cases in targeted areas	Medium	Low	<ul style="list-style-type: none"> <li>- The current DREF operation and its operational strategy take into account the risks associated with the current COVID-19 pandemic.</li> <li>- The National Society has benefited from Africa CDC funds to assist the Government in its efforts to combat the Covid-19 pandemic.</li> </ul>
Increased workload for staff and volunteers already assigned to other interventions.	Medium	Low	<ul style="list-style-type: none"> <li>- With a clear division of labour, the Comoros Red Crescent will ensure that the coordination of the different interventions runs smoothly.</li> <li>- Volunteer managers at branch level will be called upon when needed.</li> <li>- PIROI and IFRC or Surge staff can provide technical support.</li> </ul>
Impact of eruption occurring before preparedness activities are completed	Medium	High	<ul style="list-style-type: none"> <li>- The NS monitors the impact with information from the KVO, civil protection and provides regular updates to the IFRC. In case of impact, preparedness activities not yet carried out will be reviewed to move to an emergency response phase and provide appropriate assistance to communities.</li> <li>- Considering the lack of certainty on impact predictions</li> </ul>

## B. Operational Strategy

### Overall operational objective:

The overall objective of the operation is to prevent the consequences already encountered in the management of previous volcanic eruptions by contributing to good population communication and water protection for 293,610 target people in 115 villages. These are activities that cannot be carried out during the red alert of a volcanic eruption.

It should be noted that this operational strategy is aligned with the health sector operational plan and is part of the activities to be carried out during the yellow alert phase.

### 1. **YELLOW ALERT PHASE (Early Action)**

For this phase, the main activities will include assessments, identification of storage locations in safe areas, training of volunteers, community sensitization and coordination. Relocation of stocks and distribution of materials will be planned in the event of an orange or red alert.

#### a) Assessments

The initial assessment to be conducted by CoRCS aims to assess the current needs, gaps, and level of vulnerability of households and the water supply system in the villages. The assessment will be carried out in each locality by CoRCS with the support of PIROI's CRF partners as needed. Among other things, this assessment will also identify

- The beneficiaries of the material support to limit the impact of the fumes on the populations
- Possible meeting places that will be used to define alert and evacuation plans if possible
- The water supply system and the most exposed water points
- Continuous assessment of the water situation

**b) Training**

Due to the lack of a volcanic eruption contingency plan and the absence of hazard-related activities for more than 10 years, the Comoros Red Crescent Society needs to organize training on the topic with key messages on the different types of alerts for volunteers and National Society staff and other training to strengthen the volunteers' response.

- Training on emergency needs assessments. Volunteers trained on this topic will carry out cistern assessments to obtain information on the number of cisterns in each village located in risk zones, covered and uncovered cisterns and non-functional cisterns.
- Training of volunteers and staff on the different types of volcanic eruptions and the different types of warnings. There will also be a module on communication.
- Training of volunteers on WASH. They will be trained on water protection and potabilization and prevention of water and hygiene related diseases.
- Training of volunteers on first aid and psychosocial follow-up to support the population in case of displacement or damage caused by a volcanic eruption.
- Training of volunteers on the assembly of emergency shelters. Volunteers will be trained in tent erection and transit shed construction in preparation for assisting affected households in the event of relocation.
- Training and simulation exercise on evacuation plans to be shared by the Government in the coming weeks. The training will define the role of each volunteer in this process.
- Briefing of volunteers on the AEC and the basics of protection, gender and inclusion.

These trainings can be grouped into one training session that will be conducted over 10 days including the first simulation exercises for 70 volunteers due to cascade training in the 4 locations.

**c) Mobilization and deployment of volunteers and team**

- Deployment of 70 volunteers to cover the districts for community awareness on volcano warning, water protection and water related diseases.
- Deployment of 5 volunteers per subdivision for rainwater harvesting cistern assessment.
- Deployment of 6 trainers who will also be the supervisors of the various volunteers deployed.

**d) Early warning: Dissemination of protection and warning messages to communities**

- Identify key messages and appropriate communication methods with communities and beneficiaries (mass media and interpersonal communication).
- The CoRCS will follow the technical guidelines for volcanic hazard response made available by the IFRC and granted by the command post.
- Volunteers will provide regular community outreach in collaboration with village committees. Each week during the yellow alert phase, 3 days a week for 4 months. The messages will focus on protective measures, good practices, vigilance and the importance of staying alert, updates on the volcanic situation etc. The messages should remain in line with the Government's current communication policy and ensure that they do not create panic.
- Development and dissemination of IEC materials as a support to community awareness. Approximately 5000 flyers.

**e) Protection of water supplies, reserves, and populations**

This will involve the pre-positioning of items needed for health prevention activities and community water supplies. The following items will be procured and pre-positioned:

- 44,041 FFP2/N95 respiratory protection masks against particles and materials that may arise during the eruption. The masks to be procured will be 35,233 child sizes (12% of the population at risk) and 8,808 adult sizes according to the specific vulnerability criteria in the targeting. Specification aligned with Movement item catalogue<sup>3</sup>.
- Replacement of 1,500 tarpaulins taken from the PIROI warehouse. 10 tarpaulins per village for destitute, most vulnerable families to cover water cisterns. 1 tarpaulin per cistern per household.

The tarpaulins will be installed immediately after the cistern cleaning activities, while the masks will be positioned at the village committees or the warehouse in Moroni. The masks need to be stocked in advance, but distribution will take place at the first sign of fumes, as the warehouse and the risk areas are in the same district. Volunteers will receive the masks in advance. Ideally, the masks should be acquired prior the orange phase, in advance to the impact and be

<sup>3</sup> Movement partners emergency items joint [catalogue](#).

available for a maximum of 1 to 3 hours distributions. If not distributed, as DREF stocks, it will be taken into consideration for the development of a simplified early action protocol planned in scenario 2.

The urgency of acquiring masks is that these items are usually not available in this quantity in the local market and in the event of an impact would require several weeks to be available in Moroni. The initial assessment and ongoing monitoring to be carried out by NS will identify any additional equipment needed to ensure the protection of reservoirs and communities.

## 2. THE ORANGE/RED PHASE: IMMEDIATE ASSISTANCE AND RESCUE

The difficulties in predicting the time between the passage from the yellow alert phase to the impact necessitates taking into account immediate relief actions which will be budgeted for in this operation. They will be activated in the hours following the impact.

### f) Continuous monitoring

### g) Post-impact needs assessment

### h) Evacuation preparedness and evacuation of populations

For evacuation management, the current strategy of the NS is to ensure capacity building of the NS and to make resources available for deployment:

- A training session is planned for 70 volunteers as well as simulation exercises including the village committees that are currently formed and mobilised since the beginning of the alert. Both the training and the exercises will be based on the government's evacuation plan. After the trainings, CoRCS will ensure that the village committees are briefed on the evacuation plans and assign roles and responsibilities in the event of an impact and the process that will be followed.
- Adoption of the evacuation plan and sharing with the teams and committees. The NS evacuation strategy will be to support the Government's plan. As part of the command post that manages the Karthala response plan, the CoRCS will receive information and the Government's evacuation plan which, according to the information from the command post meetings and with the authorities, will be shared within the next 2 weeks.
- The dissemination of the evacuation plan will be done once it is obtained and will allow the definition of the SN's support to this plan and the specific resources needed.
- Volunteer early warning message drops will also cover evacuation alerts once government go on is obtained and the evacuation plan is confirmed.
- Part of the messages to be printed on the IECs will be reserved for messages and printing of evacuation plans set up for communities at risk. That is 2,000 flyers and 1,000 posters.

Regarding evacuations and the actions of the CoRCS for the orange/red phases, it should be noted that these depend on the response guidelines of the government, which is aligned with a passive warning system and will define the evacuation plan upstream, which will make it possible to confirm the priority deployment axes of the teams in the event of an impact.

### i) First aid and psychological first aid for those affected

PIROI has first aid kits and will position them in the various target localities for use in the event of an impact. This DREF allocation will allow the replenishment of these 20 kits to be taken from PIROI's stocks to provide first aid in the days following a possible impact.

j) **Twice daily update of volunteers and teams and adapted awareness to the priority messages**, include evacuation plan-protocols-focal point etc, security and safe access, appropriate protective measures and WASH messages.

To note, the phasis strategy will be aligned to the Karthala National plan and agreed actions with the Government and/or during the post commando consultation.

## 3. ACCOMPANYING PREPARATION AND INTERVENTION MEASURES

### k) Coordination

- **Operational command post:** The Comoros Red Crescent Society will set up an emergency management cell which will be composed of the Comoros Red Crescent Society's secretary general, the risk and disaster management manager, the health manager, the WASH manager, the accountant and the planning, monitoring, evaluation and reporting manager. The cell will meet at least once a week.
- **Coordination with government and stakeholders:** The Comoros Red Crescent sits in the Government's fixed command PS according to the specific Karthala emergency plan. Therefore, the Secretary General of the Red Crescent or his representative will participate in the coordination meetings. It is on this occasion

that he shares the activities carried out by the Comoros Red Crescent with everyone. It is the government that sets the tone of the alert messages to be disseminated and according to recent guidelines, the emphasis is on a passive alert aimed at not increasing panic.

#### **l) Community engagement and accountability:**

Village management committees and community volunteer brigades will be heavily involved in community awareness activities. Meetings will be held with village committee members (1 in each village) and they will play a major role in protecting water cisterns and evacuating people if the alert goes red. An information and rumour management system (collection and feedback) at community level will be put in place. Volunteers will encourage communities to adopt preventive and physical protection measures and water supply systems (water cisterns). Awareness raising will be used to mobilize volunteers.

#### **m) Protection:**

Throughout the operation, the CoRCS will integrate aspects of prevention, response and provision of referral services for sexual and gender-based violence into Volcanic Alert operations plans. Prevention of sexual exploitation and abuse (PSEA) and child protection will be integrated into the Volcano Warning Preparedness and Response operation.

#### **n) Advocacy with the humanitarian community, government partners and other stakeholders**

- Humanitarian diplomacy efforts targeting the Comorian government, UN agencies, other stakeholders and community resource persons will be intensified during this period to ensure synergies of action between all actors involved.
- Engagement and coordination of the Comoros Red Crescent with the Ministry of Interior and the Ministry of Health to fulfil the auxiliary role of the government and to reinforce the principles of independence and neutrality of the RC/RC will be enhanced.

### **Operational support services**

#### **Human resources**

This operation will need to involve the following human resources:

- CoRCS HQ will provide 6 staff from HQ to support the operation and provide technical supervision and training.
- The CoRCS branch: 70 volunteer supervisors and 2 branch managers during the yellow phase. They will then ensure the briefing cascade in case of the transition to orange-red alert for the 238 volunteers available in Moroni.
- Depending on the scenario, people trained in first aid and who have benefited from BDRT training in the regional branches may be called in to reinforce the Ngazidja branch.
- Based on analysed needs, IFRC and PIROI support in human resources will be requested. IFRC to strengthen the capacity of the CoRCS will deploy a managerial officer for the operation over 3 months.

The Comoros Red Crescent Society does not yet have a security plan for its staff and volunteers. The first meeting of the Comoros Red Crescent's crisis unit therefore decided to urgently develop a plan to secure the National Society's staff, volunteers and equipment.

#### **Communication and information management:**

The network of volunteers in all the villages of the island is a force for giving accurate information to the population. For example, local Comorian Red Crescent committees are integrated into the emergency plan for volcanic alerts. In line with the government's wishes, messages to communities must be careful not to cause panic. The CoRCS will therefore be aligned with the Government's media broadcasts and will only accompany this with volunteer drops and some IEC tools on the same messages: personal protection, alert, vigilance etc.

#### **Logistics and supply**

The logistics department will be in contact with the movement's partners (PIROI, IFRC) for the supply of masks, and tarpaulins and coordinate with PIROI for eyes protection if needed as they are available in the stocks PIROI. It will then identify the storage location for the pre-positioning of these materials in the risk areas in collaboration with the local Comorian Red Crescent offices and the village management committees.

**Planning, monitoring, evaluation and reporting (PMER)**

This activity will be carried out by the PMER Coordinator who will be supported and guided by the Comoros Red Crescent Society Secretary General and the National Society Disaster Risk Management Officer and by IFRC PMERs if technical support is required. The monitoring, evaluation and reporting process will focus on adhering to the minimum standards of humanitarian response, the principles of the movement and supporting the regular evaluation and reporting process. Field monitoring and technical support visits will be carried out as necessary and subject to the security of the delegation and the National Society. As foreseen by the IFRC's emergency funding operational learning mechanisms, a lesson learned workshop will be organised to allow for the operational review of this intervention at its end. This intervention will record the key technical, coordination and implementation elements of this operation to inform future Comorian Red Crescent interventions.

**Finances and administration**

Through its Finance Department, the IFRC will provide the necessary support for the review and validation of budgets, bank transfers, technical assistance to the National Society on expenditure justification procedures and review and validation of operational invoices. Transfers to the NS will be made in the above-mentioned phases. The transfer of the last instalment should correspond to the amount of the post-impact activities. Transfers will take an average of 3 days and will depend on the follow-up of alerts and the first emanations.

The Comoros Red Crescent has a permanent finance department. This department will be responsible for the financial execution of the operation under the guidance of the Secretary General. The CoRCS will therefore establish a finance team to support the scaling up of the response. This may require contingency procedures during the specific period and the establishment of parallel fund transfer methods.

**Security**

Petty crime, including pickpocketing and muggings, is the most significant risk. Tropical storms and associated flooding periodically affect the country. Major disruptions can occur due to poor road infrastructure and limited rescue capabilities. Mount Karthala, on the island of Grande Comoros, is an active volcano that erupts every two years. The country can experience outbreaks of political and civil unrest, particularly in the run-up to major elections.

To reduce the risk of staff falling victim to crime, violence and danger, active risk mitigation measures should be adopted. A security orientation and briefing for all teams prior to deployment should be undertaken to help ensure the safety of response teams. Minimum security requirements will be strictly adhered to. All National Society and IFRC staff actively involved in operations must successfully complete the IFRC online security training courses (i.e., Level 1 Fundamentals, Level 2 Personal and Volunteer Security, and Level 3 Leadership Security) prior to deployment. The IFRC security plans will apply to all IFRC staff throughout the operation. A specific security risk assessment for each operational area will be conducted if IFRC personnel are deployed there and risk mitigation measures will be identified and implemented.

## C. Detailed Plan of Action



### Water, sanitation and hygiene

Targeted people: 293,610

Men 51% : 149,741

Women 49% : 143,869

**Needs (CHF) 73,094**

**Needs analysis:** Protection of water against pollution with volcanic ash is a priority during preparedness in the yellow alert phase. An assessment of rainwater harvesting cisterns is necessary for a situational analysis. When there is a volcanic eruption with volcanic ash, all rainwater harvesting cisterns will be exposed to pollution as experienced during the last volcanic eruptions. Families will be sensitized to cover their cisterns but before that volunteers will clean them if necessary. The Red Crescent will distribute (per village) tarpaulins to the poorest families who are unable to cover their cisterns and protect them from volcanic ash. A total of 1500 tarpaulins are estimated to cover the 115 villages in the risk areas. Equipment for cleaning the cisterns is also planned.


**Population to be assisted:** The target population is the population living in the risk zones mapped by the Karthala volcano observatory, comprising 4 regions of the island, 115 villages with 293,610 inhabitants.

**Implementation standards:** Sphere standards

**Note:** All activities will be aligned with the Karthala National Emergency Plan

P&B Output Code	Outcome 1: Immediate reduction of waterborne disease risk in targeted communities	# of population reached by water protection and treatment awareness activities (Target: 293,610 people)															
	Output 1.1: Water protection and treatment is provided through awareness raising and water cistern covers	<ul style="list-style-type: none"> <li># of population supported for water cistern protection (Target: 1,500 households)</li> <li># of people reached by awareness raising activities (Target: 293,610 people)</li> <li># of volunteers and staff trained</li> </ul>															
	Planned activities Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AP026	Train Red Crescent volunteers on water, sanitation and hygiene situation assessment and water-related disease prevention	■	■														
AP026	Conduct an initial assessment of the water, sanitation and hygiene situation in the target communities		■	■													
AP026	Monitor the WASH situation in the target communities on an ongoing basis			■	■	■	■	■	■	■	■	■	■	■	■	■	■
AP026	Agree with other WASH actors on the target group and the appropriate response to their needs and select them.	■	■														
AP030	Identify key messages and methods of communication with beneficiaries (mass media and interpersonal communication).	■	■														

AP030	Develop a hygiene communication plan. Train volunteers to implement the activities in the communication plan	■	■	■															
AP030	Design/print IEC materials		■	■	■														
AP030	Raise awareness of the population at risk on water and hygiene related disease prevention		■	■	■														
AP030	Encourage and engage the community on the acceptance of cistern covers			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
AP030	Distribute tarpaulins to the poorest families to cover the cisterns														■	■	■	■	■
AP030	Encourage and assist with cistern cleaning											■	■	■	■	■	■	■	■
AP030	Build or encourage the construction and maintenance of handwashing facilities in target communities				■	■	■	■	■										



### Disaster risk reduction

Targeted people: 293,610  
 Men 51% : 149,741  
 Women 49% : 143,869  
**Needs (CHF) : 52,952 (readiness activities for first aid and PSS included here)**

**Needs analysis**

The population's understanding of the different types of warnings and evacuation is essential to avoid panic and the consequences that may follow. Therefore, communication and preparation of the population during the yellow alert phase is essential. Volunteers should be trained on key messages to disseminate to the population at risk. The population must be protected from toxic dust. Masks should be pre-positioned for distribution to people at risk during the yellow and red alerts. Protective glasses should also be ready for distribution. Beyond everything, early warning will be key of the DRR and readiness to evacuation and possible post-impact response.

**Population to be assisted:** 293,610 people located in 115 villages.

**Implementation standards:** Activities in this focus area will aim to meet Sphere standards.

<b>P&amp;B Output Code</b>	<b>Outcome 1: communities in high-risk areas are prepared for and able to cope with the disaster</b>	<i># of population reached by volcanic communication activities (Target 293,610 people)</i>																	
	<b>Output 1.1: communities take concrete steps to strengthen preparedness for rapid and effective disaster response</b>	<ul style="list-style-type: none"> <li><i># of people reached by awareness raising (Target: 293,610 people)</i></li> <li><i># of people benefiting from the distribution of dust masks (15% of the population at risk)</i></li> <li><i># of volunteers trained (Target: 70 volunteers)</i></li> </ul>																	
	Planned activities/ Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
AP001	Train volunteers on the different types of alerts																		

AP001	Raise awareness of the population living in the areas at risk about the different types of alert																		
AP001	Prepare the population at risk for evacuation (identification of gathering places and means of evacuation)																		
AP002	Emergency alert exercises with village committees																		
AP002	Maintaining NS monitoring teams																		
AP001	Order dust masks																		
AP001	Identify locations for pre-positioning of masks in risk areas																		
AP001	Train volunteers on distribution																		
AP001	Design a volcanic eruption contingency plan																		
AP001	Distribute masks during orange and red alert																		
AP001	Assist with evacuation during orange and red alert																		
AP001	Rescue the injured during red alert: first aid and PSS																		

**Implementation strategies**  
**Budget (CHF) 46,333**

P&B Output Code	<b>S1.1: National Society capacity building and organizational development objectives are facilitated to ensure that National Societies have the necessary legal, ethical and financial foundations, systems and structures, competences and capacities to plan and perform</b>	<ul style="list-style-type: none"> <li>• # of volunteers mobilised and deployed (70)</li> <li>• # of volunteers briefed on security measures (70)</li> <li>• # of volunteers trained in CEA/PGI and volcanic prevention measures (70)</li> </ul>																	
	<b>Output S1.1.4: National Societies have effective and motivated volunteers who are protected</b>	Planned activities Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
AP040	Assisting the 70 volunteers involved in the volcano alert activities																		
AP040	Briefing volunteers on the concepts of CEA, PGI, operation security and volcanic risk prevention																		
P&B Output Code	<b>Output S1.1.6: National Societies have the necessary infrastructure and institutional systems</b>	<ul style="list-style-type: none"> <li>• # of villages covered by the teams deployed (115)</li> <li>• # of cars deployed ( )</li> <li>• # of monitoring mission conducted branch (16)</li> <li>• # of monitoring mission HQ conducted (02)</li> </ul>																	
		Planned activities/ Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
AP042	Operational and technical follow-up SN headquarters and branches																		
AP042	Ensure fuel and maintenance of cars																		
AP042	Ensuring the layout of the meeting room for coordination meetings																		
P&B	<b>Outcome S2.1: Effective and coordinated international disaster response is ensured</b>	#of surge deployed (01)																	

Output Code	Output S2.1.1: Effective and respected surge capacity mechanism is maintained.	#of mission from IFRC delegation (02)																
		Activities planned Week / Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AP046	Deployment of the RR surge (01)																	
AP049	Follow-up- monitoring of IFRC delegation																	
P&B Output Code	Output S1.1.7 : Capacity building of NS to support disaster risk reduction, response and preparedness at local level	<ul style="list-style-type: none"> <li># Lessons learnt conducted (01)</li> <li># Lessons learnt report (01)</li> </ul>																
		Planned activities Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AP002	Inform the Design of volcano contingency plan Karthala																	
AP002	Organisation of a lessons learned workshop and development of a lessons learned report																	
P&B Output Code	Outcome S2.1 : Disaster response and risk reduction capacity building activities with the NS	# of Coordination meetings with local authorities /government/KVO and partners (08)																
	Output S2.1.1 : Maintaining effective response preparedness and maintaining the NS emergency response capability mechanism	# of Security briefing for volunteers (1)																
	Planned activities Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
AP002	Coordination with relief agencies, partners, KVO and civil security																	
AP002	Briefing on prevention and protection measures in case of a volcanic eruption																	

## Funding Requirements

Overall budget for this plan is CHF 172,379 summarised as below

International Federation of Red Cross and Red Crescent Societies

all amounts in Swiss Francs (CHF)

### DREF OPERATION

MDRKM009 - Comoros - Volcanic Eruption Alert

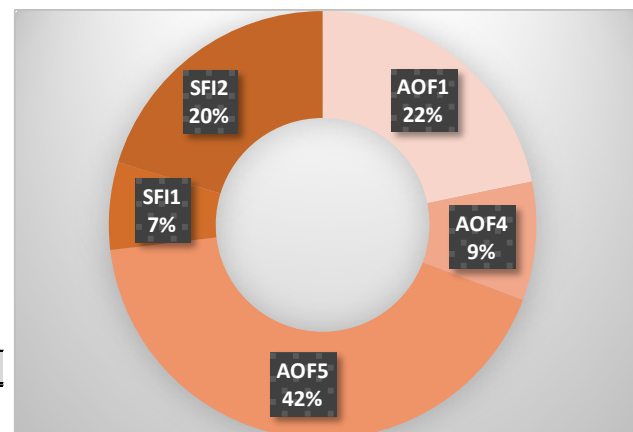
21/09/2022

#### Budget by Resource

Budget Group	Budget
Shelter - Transitional	18,000
Water, Sanitation & Hygiene	4,000
Medical & First Aid	43,233
Teaching Materials	5,800
<b>Relief items, Construction, Supplies</b>	<b>71,033</b>
Distribution & Monitoring	1,200
Transport & Vehicles Costs	1,600
<b>Logistics, Transport &amp; Storage</b>	<b>2,800</b>
International Staff	22,500
National Society Staff	6,000
Volunteers	32,925
<b>Personnel</b>	<b>61,425</b>
Workshops & Training	16,700
<b>Workshops &amp; Training</b>	<b>16,700</b>
Travel	6,300
Office Costs	1,200
Communications	1,600
Financial Charges	800
<b>General Expenditure</b>	<b>9,900</b>
<b>DIRECT COSTS</b>	<b>161,858</b>
<b>INDIRECT COSTS</b>	<b>10,521</b>
<b>TOTAL BUDGET</b>	<b>172,379</b>

#### Budget by Area of Intervention

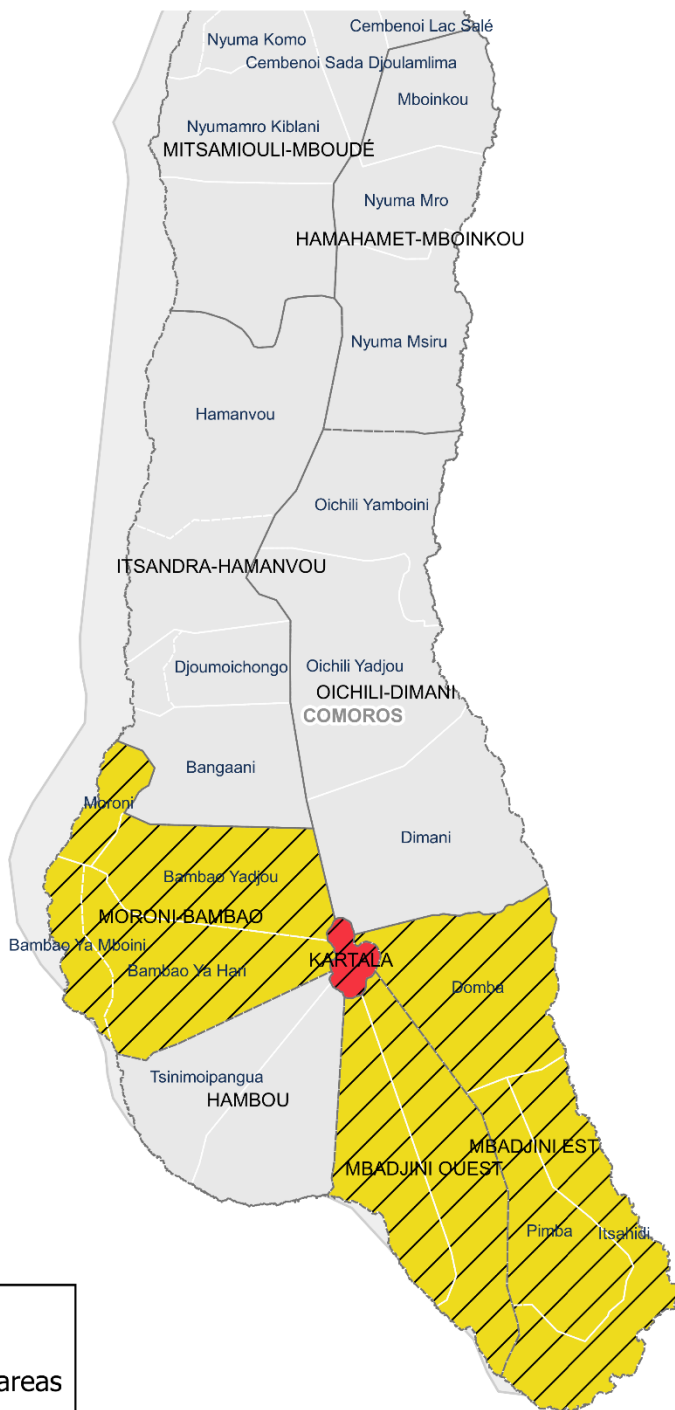
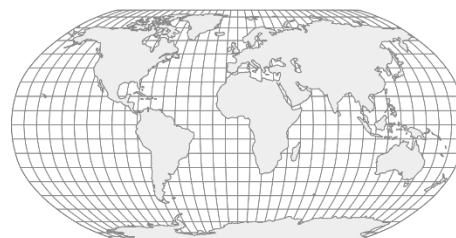
AOF1 Disaster Risk Reduction	37,488
AOF4 Health	15,464
AOF5 Water, Sanitation and Hygiene	73,094
SF11 Strengthen National Societies	11,401
SF12 Effective International Disaster Management	34,932
<b>TOTAL</b>	<b>172,379</b>





# Comoros : Volcanic Eruption

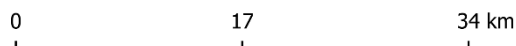
21/09/2022 •



**Legend**

- Affected areas
- At risk areas
- Other area
- Targeted area

The maps used do not imply the expression of any opinion on the part of the International Federation of the Red Cross and Red Crescent Societies or National Societies concerning the legal status of a territory or of its authorities.  
 Map data sources: GADM, Comoros RC, IFRC. Map produced by: IFRC Africa Regional Office, Nairobi



## Reference documents



Click here for:

- Previous Appeals and updates
- Emergency Plan of Action (EPoA)

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## How we work

All IFRC assistance seeks to adhere to the **Code of Conduct** for the International Red Cross and Red Crescent Movement and Non-Governmental Organizations (NGO's) in Disaster Relief and the **Humanitarian Charter and Minimum Standards in Humanitarian Response (Sphere)** in delivering assistance to the most vulnerable. The IFRC's vision is to inspire, encourage, facilitate and promote at all times all forms of humanitarian activities by National Societies, with a view to preventing and alleviating human suffering, and thereby contributing to the maintenance and promotion of human dignity and peace in the world.

The IFRC's work is guided by Strategy 2020 which puts forward three strategic aims:



**Save lives,**  
protect livelihoods,  
and strengthen recovery  
from disaster and crises.



Enable **healthy**  
and **safe** living.



Promote **social inclusion**  
and a culture of  
**non-violence** and **peace**.