

Fire Brigade Training & Equipment

Theme: Climate Change response / Disaster Risk Reduction

**Countries: Ethiopia, Kenya, Uganda, Tanzania
Mozambique, Zimbabwe, Zambia, Angola
Mali, Burkina Faso, Niger**

Timeline: 6 months to 3 years

Project may be implemented directly by PCPM or in partnership with UN-Habitat

Key objectives:

- Limiting humanitarian impact of man-made crises and natural disasters thanks to improved rescue response in main cities at threat of flooding, cyclones or urban slum areas fire of Mozambique, Kenya, Malawi and Zimbabwe with the focus on the areas previously affected by deadly cyclones, floods or landslides.
- Improving disaster response capacity of the targeted urban area fire brigades to respond to flooding, cyclones or urban slum areas fires through provision of training and equipment, as well as developing cost-effective fire engine (fire truck) solutions, suitable for local conditions.
- Contributing to post-cyclone recovery of the affected urban centers of Mozambique, Malawi and Zimbabwe
- Limiting humanitarian impact of fire emergencies through improved rescue response in high-density districts, particularly informal settlements in urban areas

Key activities:

- Provision of up to 22 sets of fire brigade and flood rescue equipment to main at-risk cities previously affected by deadly cyclones, floods or landslides.
- Professional training of fire and rescue services in targeted cities through on-job training in target cities, as well as specialized training in the Fire & Rescue Training Center in Kiambu, Kenya, operated by PCPM - Polish Center for International Aid.

Activity 1: Basic and advanced training of fire brigades in flood rescue and other emergency response skills.

Professional training of fire and rescue services in targeted cities through on-job training in target cities, as well as specialized training in the Fire & Rescue Training Center in Kiambu, Kenya, operated by PCPM - Polish Center for International Aid (38% of the budget).

On-job training in target cities of Mozambique, Malawi and Zimbabwe is meant to benefit all personnel of local fire brigades and be tied to the local conditions, challenges and equipment available.

The training package would be delivered by PCPM's Fire Brigade trainers, who have trained 50% of Kenya's firefighters and based on a Basic Fire & Rescue Certificate vocational curriculum, currently under approval by the Kenyan authorities.

On-job training would benefit 400 firefighters and rescue personnel from the target cities in Mozambique, Zimbabwe and Malawi. The training package would include:

- Firefighting training or refresher
- Flood rescue training
- Rope rescue training
- Management of mass-casualty incidents, including first aid.

Advanced training would be delivered in PCPM-operated Fire & Rescue Training Center in Kiambu (Kenya). This facility,



PCPM rope rescue training in Meru, Kenya



PCPM confined space firefighting training

equipped with fire brigade training ground, can accommodate up to 35 trainees.

The training package would be based on Advanced Fire & Rescue Certificate vocational curriculum, currently under approval by the Kenyan authorities, and would include:

- Advanced flood rescue training, including swimming in fast-flowing waters and advanced rope rescue (2 weeks)
- Advanced paramedic training based on International Trauma Life Support course (2 weeks)
- Advanced fire brigade, breathing apparatus and mass casualty training (2 weeks).

The advanced training would benefit firefighters and rescue personnel from all four target countries. Training cost budgeted includes air travel to Kenya.

Activity 2: Equipment support

Provision of 22 sets of fire brigade and flood rescue equipment to main at-risk cities previously affected by deadly cyclones, floods or landslide. The main component of the equipment support will be provision of a new type of a fire engine, that has been developed to match difficult terrain, climatic and maintenance conditions in Africa's interior.

The medium fire engine is:

- Based on popular medium truck chassis: Isuzu, Mitsubishi or Hino/Toyota. These three vehicles are easy to repair as spare parts available throughout Africa
- Chassis would be converted locally in Kenya or other African countries using simple iron welding techniques, which would make it easy to repair even in small cities. The chassis could be marked with JICA logo, as appropriate.
- Installation of independent, replaceable water pumps ease repair and limit downtime of a fire engine
- The fire engine would have a carrying capacity of up to 8,000 liters of water and a crew of 5-6 persons.

The fire engine would be able to operate independently thanks to the following set of equipment:

- Portable pump (1 or 2 sets) - for example manufactured by Japanese company Kochin.
- Fire hoses, branches, dividers, foldable water tank
- 2 ladders
- Rope rescue kit
- First aid kit, spinal board

In addition, each fire engine would be equipped with basic or advanced flood rescue set. An advanced flood rescue set would include a flat bottom boat with engine that could be carried atop of the fire engine and used to rescue persons stranded by the flood waters.

Please note that the fire engines donated by Japan and other donors to several African countries have none or very limited water carrying capacity. Due to lack of hydrants and available water sources, a fire engine must bring as much water as possible to the scene of fire emergency.

Project rationale:

Africa's disaster profile is dominated by both manmade and natural crisis including human conflicts, fires, floods, road accidents, collapsing buildings, technological accidents, terrorism, landslides, diseases and epidemics that destroy



Flood & Rope Rescue training in Meru, Kenya



The main component of the equipment support will be provision of a new type of a fire engine, that has been developed to match difficult terrain, climatic and maintenance conditions in Africa's interior.

people's livelihoods, infrastructure, divert planned use of resources, interrupt economic activities and retard development.

Over the last five years, PCPM implemented basic and advanced fire brigade training program for over a half of counties of Kenya, which included flood rescue, factory fires and HAZMAT (hazardous materials).

Although some African countries have relatively well established training emergency response services, other countries lag behind or have only rudimentary emergency response services in place and very little in terms of disaster risk reduction. This was plainly shown during the 2019 cyclone Kenneth / Idai in Malawi and Mozambique. Large deficiencies in flood rescue services were made plain during the 2018 disastrous floods that affected.

Floods in Africa are so deadly because the **vast majority of the population can not swim and quickly drown**. Any amount of flood waters is therefore a lethal threat to the public. Quick response of flood rescue-trained fire brigades is therefore a priority.

With increasing global population, mega-cities, pollution, climate change and poverty, more and more people have to face the impacts of disasters. This results in:

- Increased number of persons at risk of disasters due to rapid, often unplanned, urbanization and emergence of mega-cities in Africa. Informal settlements are at particular risk due to high density and lack of access / evacuation routes. In 2018, floods affected almost half of Kenya's territory (see map)
- Major flooding, resulting from new weather patterns and climate change.

Disaster preparedness is highly beneficial for communities located in disaster-prone areas. Preparedness to hazards, such as extreme weather, volcanic activity and flooding, can help reduce the impact of such catastrophes on lives, livelihoods and communities. Better know-how, practice and response mechanisms, such as early warning systems and other disaster preparedness activities can save lives and speed up the recovery of communities.

In addition, disaster risk reduction (DRR) programmes are cost-effective and save aid money. **On average, every U.S. Dollar spent for reduction and preparedness activities saves between four and seven U.S. Dollars which would be spent to respond in the aftermath of disasters.**

Related PCPM activities:

Since 2014, PCPM support¹ to the Kenyan Fire & Rescue Services centered on on-job training for County fire services. Thanks to steady financing support from Polish Aid, over the last five years, PCPM experts provided basic and advanced Fire Brigade training to approx. 50% of Kenya's County fire brigade personnel.

In order to continue training fire brigade personnel from over 25 counties, PCPM invested in a modern training facility in Kiambu that will serve fire brigade personnel from all over Kenya. PCPM has intended to mobilize donor support for

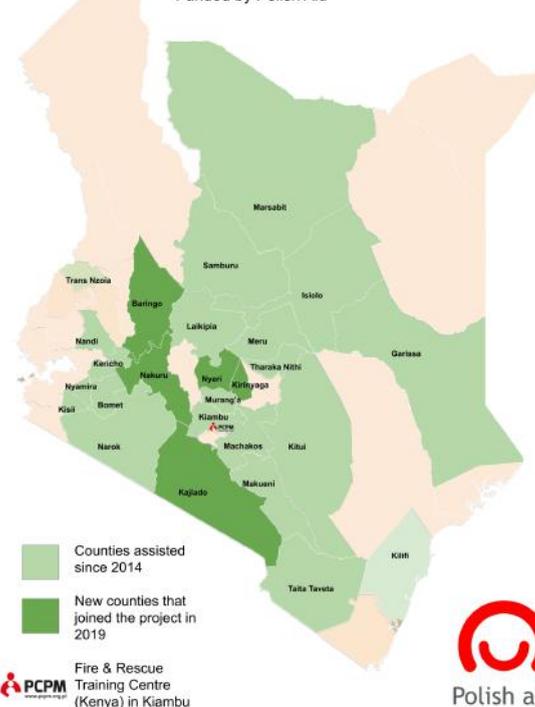


Completed building of the Fire & Rescue Training Centre in Kiambu. The Centre has a capacity to train around 40 persons.



Trainees at Fire & Rescue Training Centre in Kiambu, Kenya with new Personal Protection Equipment.

PCPM TRAINING AND EQUIPMENT SUPPORT TO FIRE & RESCUE SERVICES IN KENYA
www.pcpm.org.pl Geographical Extent of PCPM project in 2019
Funded by Polish Aid



Since 2014, PCPM experts provided basic and advanced Fire Brigade training to approx. 50% of Kenya's County fire brigade personnel.

¹ PCPM commenced training support thanks to good services of Kenyan PCPM employee, who helped extend PCPM's Fire Brigade Training Program from South Sudan to Kenya, commencing with Machakos, Murang'a and Kiambu.

continued training of Fire & Rescue Services' personnel and to this end the facility had to be in close proximity to embassies, donor offices and the United Nations in Nairobi. Furthermore, due to proximity to an international airport in Nairobi, the **Fire & Rescue Training Centre** in Kiambu can also be used to train firefighters from Uganda, Ethiopia, Tanzania and other African countries.

Indicative project budget in USD:

Budget line	Amount for 1 city	Amount for 10 cities	Amount for 20 cities
Fire Engine equipment and fire engines, provision of flood rescue, firefighting and rescue equipment packages	\$225,000	\$2,250,000	\$4,500,000
On-job training for fire brigades and rescue personnel in destination countries	\$50,000	\$500,000	\$1,000,000
Specialized training for firefighters and rescue services in Kiambu Training Center	\$140,000	\$1,400,000	\$2,800,000
Expansion of the Kiambu Training Center to accommodate additional trainees		\$150,000	\$300,000
Project support cost (7%)	\$29,000	\$301,000	\$602,000
TOTAL	\$444,000	\$4,601,000	\$9,202,000

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