



**VOLCANO  
ACTIVE**

FOUNDATION

# VOLCANO ACTIVE

INTERNATIONAL FOUNDATION FOR DISASTER RISK REDUCTION IN VOLCANIC ECOSYSTEMS

“If I had to select one sentence to describe the state of the world, I would say we are in a world in which global challenges are more and more integrated, and the responses are more and more fragmented, and if this is not reversed, it’s a recipe for disaster.”

*António Guterres, United Nations Secretary-General, January 2019*





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A dramatic background image of a volcano erupting, with bright orange and red lava flows and sparks rising from a dark, smoky crater.

# OUR AIM

WHY WAS THE FOUNDATION BORN?

We strongly believe that there is an urgent need to  
***prioritize proactive disaster risk reduction***  
rather than react to disaster events.

Volcanoes, especially those associated with strato-volcanoes that have a potential for major eruptions, often represent ongoing hazards. A major eruption can definitely be devastating for adjacent areas.

The smaller scale secondary activity is more pervasive, however, in the form of minor eruptions, ash falls, pyroclastic flows, lahars, lava flows, landslides, and associated mud flows. These can continue intermittently for months or even years, and hence represent continuing problems that create damages and losses for a long time . For instance, ash falls destroy crops, harm livestock, contaminate water supplies and are related to an increase in respiratory diseases.

Communities in such areas, therefore, face an enduring battle, and recovery efforts can be curtailed by further geophysical activity.



In addition, the disruption caused by volcanic disasters can lead to social change. Volcanic disasters may act as catalysts accelerating the rate at which adjustments in social and political institutions occur. Community resilience, therefore, is probably dependent on pre-existing social, economic and political conditions as well as post-disaster responses, relief efforts, mitigation strategies and longer-term rehabilitation programs.

Community Resilience and Volcano Hazard: The Eruption of Tungurahua and Evacuation of the Faldas in Ecuador.  
Graham A. Tobin & Linda M. Whiteford. University of South Florida

# ***THE ACTIVE VOLCANO FOUNDATION ASPIRES TO BE A CATALYST FOR THE DEVELOPMENT OF ANALYSIS, REPORTS AND STRATEGIES RELATED TO THE VOLCANIC ECOSYSTEMS OF THE WORLD***

At the Foundation, *we strongly believe that a volcanic eruption is a global problem that must be answered globally.*

# ***VOLCANOES DISASTER RISK REDUCTION***

*Volcanic activity* does not only *affect volcanic ecosystems* and specially those *with less resilience*: it also directly affects *climate change* and *sea level rise*.



# ***KEY ACTIONS IN DISASTER RISK REDUCTION (DRR).***

Disaster prevention and management is the responsibility of governments, professional teams of the highest level, response and recovery organizations, communities and individuals. The goal is to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions (UNISDR, 2017). The Volcano Active Foundation connects and coaches all these organizations to make sure all effects of a disaster are prevented and appropriately controlled once said disaster happens.

***Disaster preparedness is the key to ensuring an effective response and building back better in recovery, rehabilitation and reconstruction (Sendai Framework priority for Action 4).***

# ***HOW VOLCANOES INFLUENCE CLIMATE?***

***Volcanic eruptions*** disrupt the climate by ***throwing gases into the stratosphere that produce short-lived sulfate aerosols and reflect and absorb solar radiation by creating a shield.***

This causes a quick global surface cooling for approximately two to three years, followed by a decade-long warming period during which the climate recovers.

Faster Arctic Sea Ice Retreat in CMIP5 than in CMIP3 due to Volcanoes

Erica Rosenblum and Ian Eisenman Scripps Institution of Oceanography, University of California, San Diego, La Jolla, California

# ***HOW VOLCANOES INFLUENCE SEA LEVEL RISE?***

Aerosols thrown into the stratosphere during volcanic eruptions scatter incoming solar radiation and cause a rapid cooling of the atmosphere and a reduction in rainfall, as well as other changes in the climate system:

***Large volcanic eruptions result in rapid reductions in ocean heat content and global mean sea level.***

Church, J., White, N. & Arblaster, J.  
Significant decadal-scale impact of volcanic eruptions on sea level and ocean heat content.  
Nature 438, 74–77 (2005) doi:10.1038/nature04237



# WHO WE ARE

WE ARE SCIENTISTS WHO GO BEYOND SCIENCE

We strongly believe that there is an urgent need to  
***prioritize proactive disaster risk reduction***  
rather than react to disaster events.



# OUR VISION

We define the *resilience of volcanic ecosystems*, and enhance the *capacity of adaptability of the environment* as a means to reduce disaster risk.

# OUR MISSION

We establish *common governance guidelines in volcanic ecosystems* for disaster risk reduction

# ***OUR AIM***

The creation of an ***international volcanic ecosystem management and study network*** for disaster risk reduction.

# TARGETS

The targets focus on substantial changes:

## ***Reductions:***

- Disaster mortality
- Number of affected people
- Direct economic losses
- To reduce the damage to critical infrastructure and the disruption of basic services.

## ***Increase:***

- National and local disaster risk reduction strategies
- Enhanced cooperation with developing countries, a substantial increase in multi-hazard early warning systems, disaster risk information and assessments.

The Sendai Framework for Disaster Risk Reduction 2015-2030

# ***HOW DO WE DO IT?***

- We understand disaster risk
- We strengthen disaster risk governance to manage disaster risk.
- We investigate disaster risk reduction to improve resilience.
- We enhance disaster awareness in order to get an effective and immediate response, and to work on reconstruction in the most quick and cost-effective way.

The Sendai Framework for Disaster Risk Reduction 2015-2030



# OUR VALUES



## TRANSPARENCY

We take responsibility for our projects and the environment. We value honesty and present a clear picture of social and economic accounts to our partners, collaborators, donors, beneficiaries and society.



## EQUALITY

We believe in a better future for all, that is why we look after the dignity and rights of all, supporting diversity.



## COMMITMENT

It is our duty to fulfill our mission and vision, to give the best of ourselves to carry out projects to the best of our abilities.



## PASSION

It is the force that moves us, we are passionate about the study of volcanoes and the rights of people. We love what we do. We are proactive, determined and we fight for this project to become a reality.



## UNITY

We believe in collaboration as the driving force of all systems, we build our project with other organizations and institutions to increase opportunities and improve performance.



## SOLIDARITY

We want to eradicate inequality in the communities with which we work, through a development approach based on Human Rights.



# WHAT DO WE DO?

WE PREVENT VOLCANIC RISK

*We cannot stop a volcanic eruption* but by building knowledge through surveillance and education we can reduce its impact on volcanic ecosystems and local communities.





# ***WE ACT THROUGH***

## ***01 SCIENCE***

Study of the resilience, adaptability and transformability of volcanic ecosystems.

## ***02 EDUCATION***

Disclosure for knowledge of volcanic ecosystems and their disaster risks.

## ***03 GEO-CONSERVATION***

To arrange and oversee the preservation of natural volcanic areas for the socio-economic improvement of local inhabitants.





## ***WE ARE THE VOICE OF THE LOCALS TO THE REST OF THE WORLD***

We aim to **work** with the countries' governments ***for the creation of governance guidelines in volcanic ecosystems***. The Foundation is a the link between scientists, local populations, local authorities, government agencies and supranational organizations. And manages all organizations accordingly.





# PROGRAMS

WE DEVELOP OUR WORK IN THREE AREAS

Volcanic disaster risk prevention can save thousands of lives and the environment.  
This is why we develop three different programs:  
***Volcano Science, Volcano School and Volcano Geo***



# SCIENCE

ACTIVE SCIENCE FOR THE SERVICE OF LOCALS

*We promote the profesional education* of volcano specialists and look after the academic development of local scientists.

## GOALS

### 01 TO INVESTIGATE

We study and analyse the field to discover and establish the resilience in volcanic ecosystems.

### 02 TO PREVENT

We identify the main topics and areas in which we can use science as a protection tool in order to prevent disasters.

### 03 TO COLLABORATE

We develop local and global knowledge, with the aim of generating successful opportunities for transformability and governance of volcanic ecosystems.





# SCHOOL

WE CREATE A CONSCIOUSNESS OF VOLCANIC RISK

The project aims to *introduce volcanology and DRR to children and young adults all round the world*. We're based on the Sendai Framework on Disaster Risk Reduction 2015-2030

## GOALS

### 01 TO UNDERSTAND DISASTER RISK

With knowledge and support, children and youth end up being active participants in assessing disaster risk in creative and collaborative ways.

### 02 TO STRENGTHEN DISASTER RISK GOVERNANCE AND MANAGE DISASTER RISK

We develop programs that strengthen knowledge in children and youth at different ages and work with advisory groups, student councils and youth-led networks





# GEO

## GEO-CONSERVATION OF VOLCANIC AREAS

We use our projects to raise awareness of volcanic risk and investigate opportunities for sustainable socio-economic development.

## GOALS

### *01 TO KNOW*

Volcanoes and their ecosystems for their conservation and risk prevention.

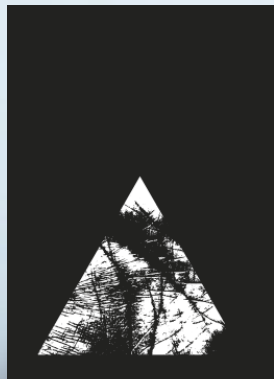
### *02 TO EDUCATE*

Communities in geo-active parks in order to actively prevent and minimize the impact of a disaster.

### *03 TO PRESERVE*

Values and environments for future generations.





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# THANK YOU

YOUR HELP MAKES A DIFFERENCE

***ACTIVE PEOPLE***  
[www.volcanofoundation.org](http://www.volcanofoundation.org)

Volcano Active Foundation 2020