

Ambrym & Gaua

Vanuatu volcano's eruptions in 2009

Coordination in non humanitarian
/transition situation

Issues & challenges

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Dr Bernard FABRE-TESTE



Vanuatu

fabretesteb@wpro.who.int

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Presentation's outline

- Little countries – Enormous burden...
- 2009 Vanuatu major natural events
- Continuous volcanic activity - Impacts and needs
- Ambrym history
- Vanuatu response
- Vanuatu appeal...
- Outputs
- Follow up...Lessons learnt...
- Gaua - The issue of today and tomorrow
- Conclusions – Questions & challenges

Little countries – Enormous burden

<i>Just compare... Just imagine</i>		<i>Equivalent in Vietnam or in The Philippines to around</i>
Solomon's tsunami, 2007	50 deaths	10,000 deaths
Samoa tsunami, 2009	150 deaths	120,000 deaths...
Vanuatu Gaua move phase 2	600 people	200,000 people
Vanuatu Gaua evacuation phase 3	3,000 people	1,000,000 people

The 650 people dead or missing in the French Disaster of Malpasset dam's break in 1959 just represent 5 deaths in equivalent for Solomon and 3 only for Vanuatu...

You can't imagine what impact had this event in France, in Europe and worldwide at this time...

2009 Vanuatu major natural events

- Ambrym eruption since December 2008
- Ambrym floods and landslides the 15th April
- Tongoa earthquake the 29th May
- Gaua eruption since the 18th November



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Continuous volcanic activity

Impacts and needs (1)

- **Potential chronic human health impacts**
 - respiratory problems
 - psychological stress
 - chemical impacts of gas or ash
 - chronic dental fluorosis / possibly skeletal fluorosis (Fluoride concentration in drinking water)
- **Massive volcano eruption**
 - mass displacement of population
 - comprehensive evacuation plan covering emergency humanitarian needs during evacuation period
 - medium/long term strategy to identify durable solution and recovery of livelihood.
 - early warning activity is crucial by monitoring the volcanic activity and warning the population in timely manner

From a Vanuatu report on Tana & Ambrym volcanos, 2002

Continuous volcanic activity

Impacts and needs (2)

- **The areas of priority humanitarian needs**
 - Provision of safe water including technical assessment
 - Health intervention
 - Food/nutrition
 - Formulation of comprehensive evacuation plan and preparedness
 - Early warning including volcano monitoring
 - Public awareness
 - Volcanic and seismic technical assessment
- **Multisectoral assessment** at early stage is crucial for defining comprehensive picture of risk and potential needs of affected population with specific focus on vulnerable population
- **Logistical support** to the government is needed to facilitate assessment, coordination and response activities.

From a Vanuatu report on Tana & Ambrym volcanos, 2002

Ambrym history

- Long history of a live volcano ...
1888, 1894-1895, 1912-1929, 1950-1953, 1964-1966, 1981, 1988-1989... 2005, 2009
- In 1913, destruction of Lonwolwol Hospital – 21 victims
- In 1929, partial evacuations
- In 1951, evacuation of the all population to nearby islands
- In March 2005, extreme degassing with estimation of 20,000 tons of SO₂ per day
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- Dec 08 – new eruption started
- Jan-Feb 09 observation by Geo-Hazards team (*emissions of thick ash plumes to more than 2 km high on Jan 29th*)
- But no effective attention /response from national level (Gov. side) to communities...
- So, at end of Feb, alarming “rumours” started – but based on real issues with issue of acid rains and unsafe water supply consequence – agricultural products contamination - health problems with in particular children missing school...
- March 09, increase of activity intensity - Ambrym ejected >10,000 tons SO₂ daily during from 16th to 20th march
- First quick campaign of G-H team confirmed acid rain (when its pH is under 5.6) in most of the samples collected - 4,000 people living in western part are affected
- 3rd April – First donor meeting called by NDMO (Gov.) to present potential areas for external assistance - Decision of necessity of better assessment

“Initial situation / information”

- *Dark smoke and acid rain continue to overshadow Ambrym posing a threat to human lives.*
- *More than 9 000 people are affected particularly those living in Western part of Ambrym.*
- *Before information concerning volcanic activity came from a based Research Team (ORSTOM, Noumea) but this team has left and there is no monitoring station at this time.*
- *Reports are only from communities affected by acid rain.*
- *No reported damages to infrastructure*
- *Almost 95% of the population is dependent on rainwater collection or underground water as an alternative source of water which has been contaminated by acid rain.*

Vanuatu response (1) - Government

Government allocated funds for phase 1 operation including:

- Deployment of Rapid Technical Assessment multi-sectoral team
- Community assessment and awareness program
- Possible fresh and clean water re-supply operation to fill all existing water wells and tanks in most affected communities
- Deployment of scientific teams
- Procurement of extra logistics supplies to be used during water re-supply operation
- Volcanic evacuation planning consultations at community, provincial and national levels
- Establish FOB EOC at West Ambrym
- Plan a food supplementary supply strategy
- Maintain close consultations with partners and donor communities
- Prepare international appeal to address immediate support
- Deploy communication support between worst affected areas such as Malampa Province and the National Government through NDC.

Vanuatu response (2) - *Community*

- Communities have been warned on the dangers of volcanic activities as well as the consequences of consuming water contaminated by acid rain and have received recommendations regarding food consumption.
- Monitoring and information between communities was ongoing at all times. The needs of special groups such as pregnant women, infants, elderly, and the disabled were constantly checked.
- Possible evacuation centers and the availability of resources are assessed.
- Malampa Provincial Councils conducted a preliminary assessment covering the whole island.

Vanuatu response (3) – *MOH & UN*

- MOH (environmental unit) coordinated with NDMO, other government sectors and agencies, local and international health partners to assess the situation and provide timely and appropriate response.
- WHO supported the deployment of a MOH team to Ambrym.
- UNICEF and UN OCHA are involved in assessment, response and coordination meetings with government agencies and rapidly organized a more comprehensive multi-sectoral assessment.
- Environmental health and water quality expertise (volcanic chemistry) (Mission of Pr Cronin supported by WHO) was setup to determine the level of volcanic health threat to the local population (West Ambrym, 2-6 May).

Vanuatu Appeal

- Coordinated and prepared by UNOCHA (Minako mission in Vanuatu)
- Based on multi-sectoral assessment
- Summary of response plan

Sector	Response plan	Amount
WASH	Emergency assistance to vulnerable population affected in North and West Ambrym	USD 246,100
Health	Scientific assessment of water quality	USD 5,027
		WHO
Protection	Technical assistance for Evacuation Plan	USD 17,000
Food/Nutrition	1. Food distribution for 2 month	USD 98,876
	2. Supplementary food for specific groups for two months	UNICEF
Early Warning	1. Volcanic/Seismic technical assessment	USD 17,000
	2. Volcano Monitoring	USD 86,000
	3. Public Awareness	USD 10,000
Assessment	Multi sectoral rapid assessment	USD 14,500
Logistics	Strengthening logistical capacity of the government	USD 10,000
Total		USD 504,503

- Best-case scenario: volcano ceases activity – recovery situation after short term intervention...
- Worst-case scenario: volcanic eruption → displacement 4,000 people

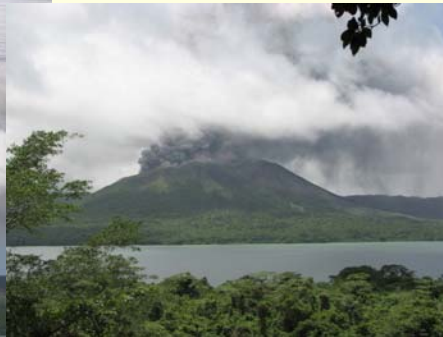
Outputs ...

- Good start of political commitment, even a little late in timing...
- Successful field-test of new revised assessment form (*initiated by UNICEF*)
- Good multi-sectoral approach for the assessment process
- Revitalisation of partnership within national and international stakeholders
- Elaboration of tentative plans and budgets for the worst scenario case
- Starting point of advocacy process for a stronger development partners mobilization for long term support (*Particularly for costly monitoring plan*)
- Development of awareness and education/information process for communities regarding water supply and consumption
- Environmental health and water scientific assessment of the 2009 eruption consequences and comparative study with 2005 eruption data
- A series of good recommendations in particular regarding the necessity
 - ✓ to better and permanently monitor volcano activity nationwide
 - ✓ to strengthen emergency and disaster preparedness and put in actions all previous relevant recommendations of trainings and workshops (*WHO PHEMAP, Red Cross trainings, SOPAC workshops, etc.*)
 - ✓ to develop a specific water supply plan and control for volcanic context
- Demonstration of the needs to reinforce NDMO capacity (*lack of human resources and means*)

Follow up... Lessons learned

- The results of the assessment has shown that the situation was not so “serious” than probably expected after initial rumours
- The potential appeal lost its force - Demobilization (???)
- Concurrence immediate of other events to occupy “key people” and us also...
 - Ambrym floods - Tongoa earthquake - H1N1 pandemic - Nationwide supplementary measles immunization integrated campaign
- Political commitment is fragile
- Intention is good and easy but real action is more difficult (allocation of money don't mean immediate disbursement...)
- MOH still in its Health Reform process and the key PHEMAP recommendation (E&D Health Coordination unit) is still a dream...
- Contingency planning workshop in September...
- Experience of neighbour countries (Samoa) – Tsunami alert in October: the first time that population reacted (nearly) adequately...
- Cost, difficulty and uncertainty of monitoring Volcano activity – when to take appropriate decision with major consequence such as a mass evacuation
- Demand of national request, appeal to “officialise” international help

Gaua

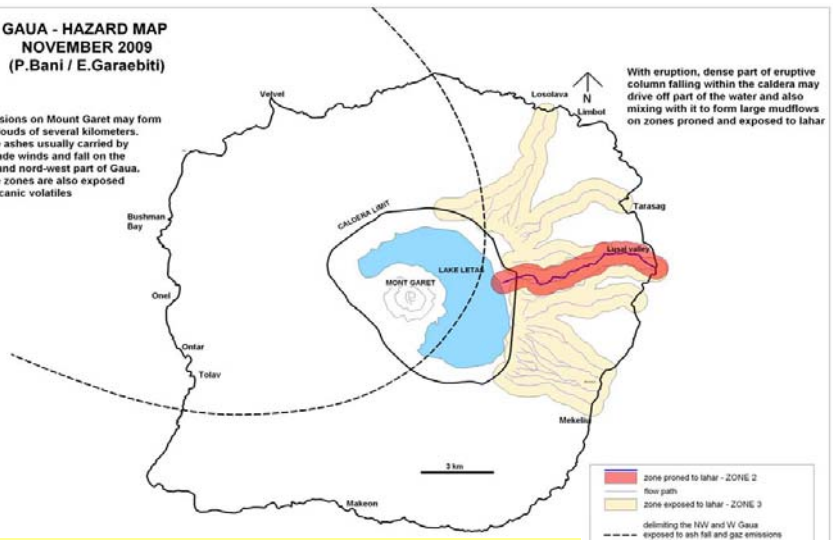


The issue of today and tomorrow

Just to present the scene of this new problem...

**GAUA - HAZARD MAP
NOVEMBER 2009
(P.Bani / E.Garaebiti)**

Explosions on Mount Garete may form ash clouds of several kilometers. These ashes usually carried by the trade winds and fall on the west and nord-west part of Gaua. These zones are also exposed to volcanic volatiles.



With eruption, dense part of eruptive column falling within the caldera may drive off part of the water and also mixing with it to form large mudflows on zones prone and exposed to lahar

3 phases of operations activated by NDC:

- Phase 1 - M&E - Information dissemination - Awareness - Planning
- Phase 2 - Move of 600 people (400 from West part + 200 from Waterfall zone) within the island in East part
- Phase 3 - Evacuation whole population (3,000) to Vanua Lava Is.



Tomorrow...
in case of total evacuation

Vanuatu means...
International support?
How to mobilize partners?



NDMO – MOH – MOA – All GOV. VANUATU – RED CROSS (Vanuatu & France)



Thank you and Welcome to Vanuatu

WHO – UNICEF – UNOCHA – UNDP – UNFPA – ILO
UNIFEM

IRC – SCF – WORLD VISION – PEACE CORPS – Etc.

AUSTRALIA – NEW ZEALAND – FRANCE – CHINA – EU – NEW CALEDONIA