

**Task**  
 Managing a volcanic hazard: research volcano using internet resources; writing a hazard management report and map  
**Presentation**  
 Group presentations: presenting the volcanic hazard and its management; peer and self-assessment of presentations



**Teaching:** Providing an integrated approach to a particular section of a 3<sup>rd</sup> year Honours course using different methods to teach and assess students. Promoting student-centred learning, transferable skills and a deep approach to learning

**Hazard Management Report**

Volcano \_\_\_\_\_  
 Explosive Index \_\_\_\_\_

Eruptive Style \_\_\_\_\_  
 \_\_\_\_\_

Brief History of Activity \_\_\_\_\_  
 \_\_\_\_\_

Current Stage of Alert \_\_\_\_\_  
 Changed Stage of Alert \_\_\_\_\_

Total Population at risk \_\_\_\_\_

**Promoting the enhancement of Teaching and Learning Activities: An Integrated Hazard Management Approach**  
 Sue Heard



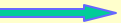
**Purpose - to outline an integrated approach towards the understanding of Hazard Management, which uses different teaching styles: lectures, a video and group work to enable students to be:**

- Efficient learners
- Active participants in their own learning process

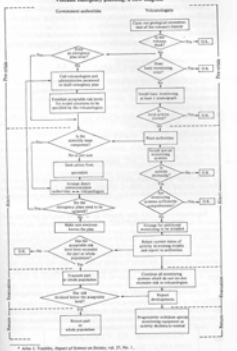
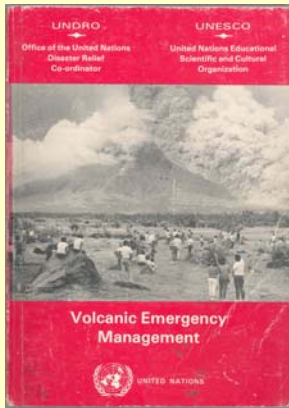
Use of an authentic UN Volcanic Emergency Management handbook was available to give some authenticity to the task

**Learning Activities**  
 Active listening and recording relevant information  
 Team work  
 IT Skills  
 Structured Report Writing  
 Presentation Skills  
 Peer Assessment  
 Reflection  
 Student-centred learning  
 Other Transferable skills: adaptability and flexibility  
 problem solving  
 using initiative  
 cartographic skills  
 working to a strict time limit  
 evaluating rapid change  
 synthesis of materials  
 decision making skills  
 enquiry and research skills  
 communication skills

Halfway through the first hour, students were given information which upgraded the alert levels, so they had to react to this new scenario e.g.  
 Kilauea Volcano  
 After some spectacular fire fountains, the north-east rim of the Kilauea crater has split and collapsed along a 200 metre front and lava is spilling out over the lower rim towards Glenwood. Sulphur Dioxide emissions have increased to 3200 ton/day and there is a moderate breeze from the south-west



Alert stage	Phenomena observed	Interpretation - Immediate or potential hazard potential	Action by Disaster Control Committee and by Department
I (Alert)	Abnormal local seismic activity, some ground deformations, fumarole temperature increase	Months or years	Inform all responsible officials, Review and update emergency plans.
II (Yellow)	Significant increase in local seismic activity, rate of deformation, etc.	Weeks or months	Check readiness of personnel and equipment for possible evacuation. Check status of air-traffic and relief supplies.
III (Orange)	Disastrous increase in above activities, local hot spots, mild eruptive activity	Days or weeks	Public announcement of possible emergency and of escape routes, deal with it. Mobilizing state of preparedness and equipment for possible evacuation. Temporary protective measures applied as felt.
IV (Red)	Protracted intense tremors, increased eruptive activity	Hours or days (less)	Evacuation of population from hazard zones.



**Reflection on the exercise**  
 •The task and presentations worked very well; students engaged with the exercise and were interested and motivated  
 •Peer and self-assessment of the presentations was not an original element of the exercise. With reflection it would be a valuable part of student learning, especially if the students were involved in setting the criteria for peer assessment.