

Republic of the Philippines
Department of Education
Central Office - Administrative Region
DIVISION OF BAGUIO CITY
SCHOOL DIVISION OFFICE - BAGUIO CITY
MORONG AVENUE, BAGUIO CITY

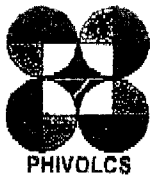


1st Indorsement

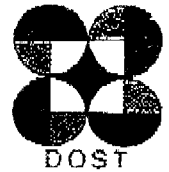
29 January 2014

Respectfully referred to all school heads concerned, the herein attached request of the Philippine Institute of Volcanology and Seismology, UP Campus, Diliman, Quezon City re: conduct of a preliminary field visits on schools mentioned for your information and appropriate action.


FRANCIS CÉSAR B. BRINGAS, CESO VI
OIC – Schools Division Superintendent



Republic of the Philippines
Department of Science and Technology
PHILIPPINE INSTITUTE OF VOLCANOLOGY AND SEISMOLOGY
PHIVOLCS Bldg., C.P. Garcia Ave., University of the Philippines Campus, Diliman, Quezon City
Tele. 426-1468 to 78; 926-2611; Fax: 929-8366



28 January 2014

FRANCIS CESAR B. BRINGAS, CESO VI
Officer-in-Charge – Schools Division Superintendent
Baguio City Division
Department of Education

Dear **Mr. BRINGAS**,

The Philippine Institute of Volcanology and Seismology (PHIVOLCS) would like to endorse the request of **Ms. MURIEL NAGUIT**, a candidate PhD student of the Research School of Earth Sciences of the Australian National University to conduct her research in Baguio City. Her doctorate study aims to determine site-specific topographic effects on earthquake ground motions in Baguio City. This will require a deployment of a number of earthquake-recording instruments for a period of at least six months to one year.

A number of schools have been identified as potential sites for the deployment. This network of temporary stations will provide information on the level of seismic hazard of the school compound where it is installed. It may also raise the awareness of students and teachers of the science and seismicity in the locality. The instruments will not pose any hazard and it will be installed in areas not frequently used like storage rooms. In addition, there will be no associated costs in power consumption as the instruments are equipped with batteries.

Instrumentation set-up will include a Nanometrics Trillium Compact broadband seismometer capable of measuring the movement of the ground, a digital recording system and a navigation GPS receiver. A detailed description of the deployment and the deployment map are provided in the next pages.

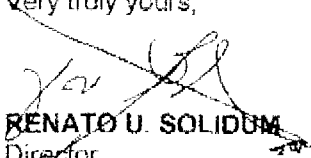
Due to the potential value of the results of her study, PHIVOLCS agreed to closely work with her to provide guidance and logistical support. In this regard, we would like to request approval from your office to allow the installation within the different **target schools**. Any suggestions to facilitate the deployment at these sites will be appreciated.

The team will conduct a preliminary field visit in the selected schools from the 29th to 31st of this month. We would be happy to explain further the details of this research. Should you need to contact us for inquiry, here are the contact details:

e-mail: muriel.naguit@gmail.com / ishma01@yahoo.com
mobile: +63 915 990-7997

We hope for your favorable support for this research endeavor. Thank you very much.

Very truly yours,

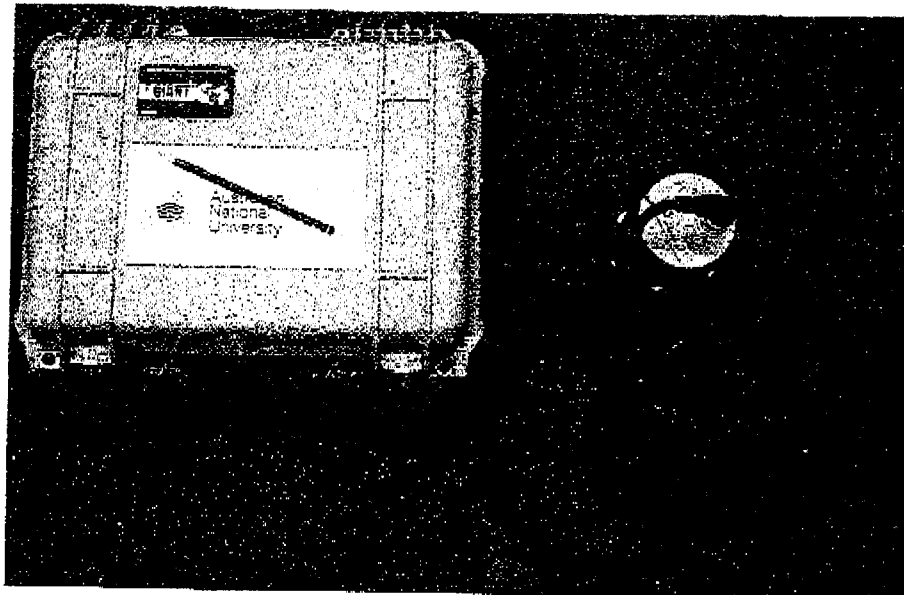

RENATO U. SOLIDUM
Director

Temporary Seismograph Deployment in Baguio City

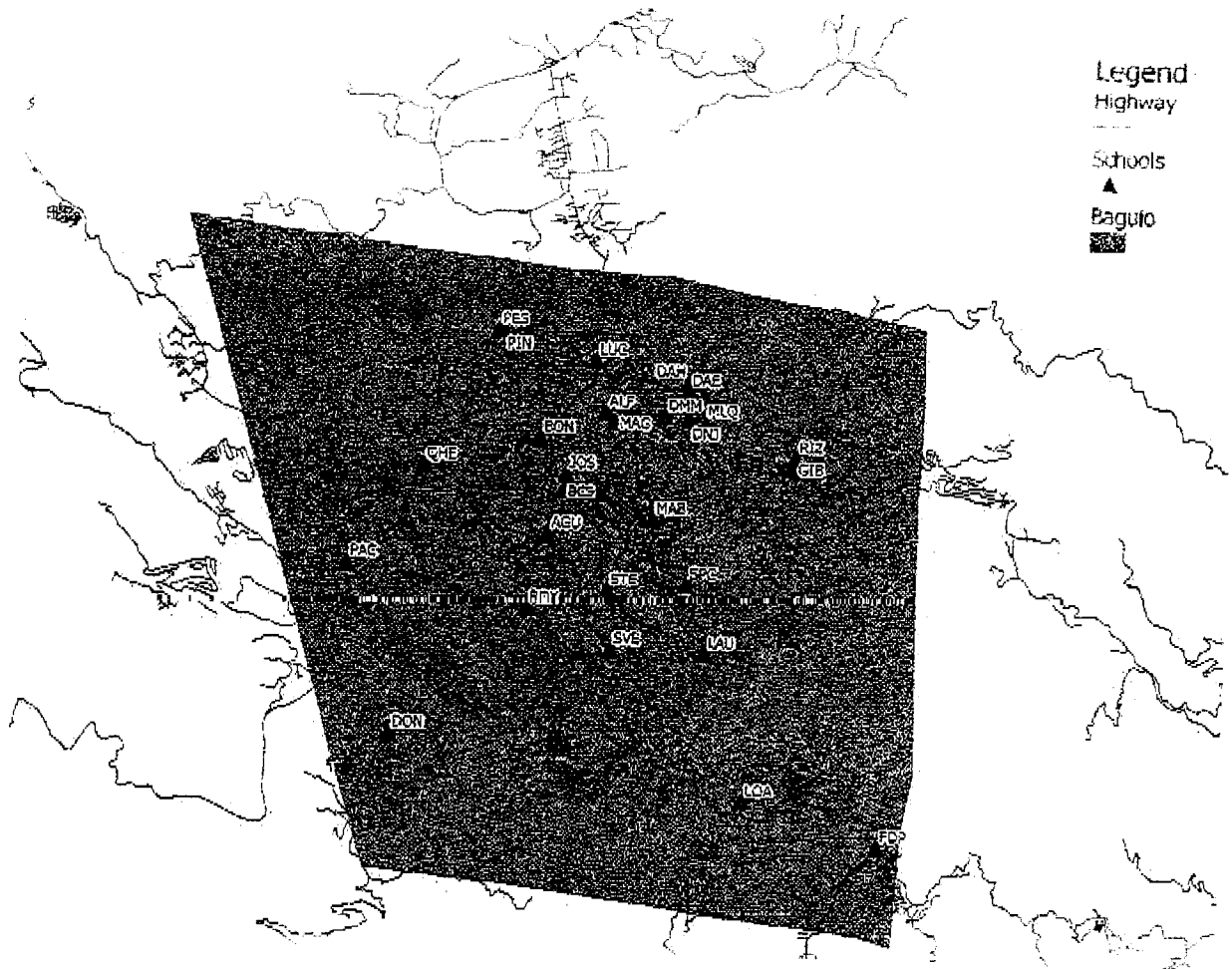
PHIVOLCS will collaborate with the Australian National University in an experiment to study the potential for earthquakes to cause damage in Baguio City. Earthquakes generate seismic waves that can shake buildings, and this shaking is sometimes strong enough to cause damage or destruction. The amount of shaking depends on the size of and distance to the earthquake, but it also depends on the geology near the affected site. The effect this local geology has on seismic waves can be estimated using measurements of seismic 'noise' – small vibrations that are always shaking the ground beneath our feet but are too weak for us to feel.

The temporary seismograph deployment in Jakarta will measure these imperceptible vibrations of the ground over a period of a few months. After this time, the data will be analyzed to estimate how much the local geology tends to amplify seismic waves. This will help us understand how much damage future earthquakes might cause in Baguio.

The seismometer simply listens to 'sound' in the ground. It has no effect on its surroundings – it makes no noise and does not move. It is a small, cylindrical device of about 10 cm in diameter and 10 cm high, weighing about 1 kg. The seismometer will be connected through a cable to a recording device of roughly 30 x 20 x 10 cm dimension. The recording device contains electronic circuitry and a battery, and is connected to a small antenna that receives a GPS signal for accurate timing. The setup is illustrated in the picture below.



Proposed deployment of broadband seismometers



Name of School	Station Code	Name of School	Station Code
Aguinaldo Elementary School	AGU	Lucban Elementary School	LUC
Alfonso Tabora Elementary School	ALF	Mabini Elementary School	MAB
Baguio Central School	BCS	Magsaysay Elementary School	MAG
Bonifacio Elementary School	BON	M.L. Quezon Elementary School	MLQ
Don Mariano Marcos Elementary School-	DMM	Pacday Quiño Elementary School	PAC
Doña Aurora Elementary School	DAE	Pinget Elementary School	PIN
Doña Aurora H. Bueno Elementary School	DAH	Pinsao Elementary School	PES
Doña Nicasia Juco Puyat Elementary School	DNJ	Quezon Hill Elementary School	QHE
Dontogan Elementary School	DON	Rizal Elementary School	RIZ
Fort Del Pilar Elementary School	FDP	Roxas Elementary School	ROX
Gibraltar Elementary School	GIB	San Vicente Elem. School	SVE
Josefa Cariño Elementary School	JOS	SPED Center	SPC
Laurel Elementary School	LAU	Sto. Tomas Elementary School	STE
Loakan Elementary School	LOA		