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WOVOdat as localhost volcano monitoring database for crisis response

Christina Widiwijayanti[1], Fidel Costa[1], Nang Thin Zar Win[1], Erickson Fajiculay[1], Christopher G Newhall[2], Antonius Ratdomopurbo[3], Karine Tan[1], and WOVO

[1]Earth Observatory of Singapore – Nanyang Technological University, Singapore,

[2]Mirisbiris Garden and Nature Center, Santo Domingo, Philippines

[3]Geological Agency of Indonesia

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The early stage and ongoing volcanic unrest can be apparent from seismic activity, ground deformation, gas emission, thermal, and other unrest indicators. The unrest signals in each volcano and each eruption style can manifest differently. Advances in monitoring techniques and data processing now allow to collect large amounts of data and information in a short time. Knowledge on volcano eruptive history and on going magmatic processes is the key to a successful eruption forecasting. While all the above mentioned are important, the success is still relies on the capability of organizing, plotting and the large amount of data in real time, and on the local scientist to analyze and interpret the data further action during the crisis. Understanding this, WOVOdat put effort to promote improvement on a stand-alone monitoring database system at volcano observatory level with various purposes as: (1) Efficient and systematic data archiving system, (2) Ready accessible tools to interactively consult the historical and current data, (3) Comparing unrest parameters and unrest phenomena/events, within or between analogous volcanoes (4) Best practice tools and lesson learnt for observer and staff to understand the behavior of their volcano, (5) Improve ability to analyze and familiarize with the evolution of unrest, through multi-parameter precursory indicators, during volcano crisis. A WOVOdat installable standalone package, an open source system, is available for observatories that want to adapt WOVOdat and developing their own database for managing volcano monitoring data. We provide a ready installable MySQL database template as well as interactive tools for user to submit, query, and visualize data. Users may consult and download documentations (user manual, SQL schema, XML format, table formats). Currently WOVOdat standalone version being used in PHIVOLCS (Philippines), CVGHM (Indonesia), and soon NIED (Japan). We welcome and open to collaborate with worldwide observatories.