

# How to Use GeoProMT within VHub

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# What is VHub?

- Overarching goals are to promote global collaboration and faster knowledge transfer
  - modeling and simulation
  - data sharing
  - education, training, and outreach
  - between volcano observatories
  - project specific groups
- Funded by the U.S. National Science Foundation's Cyber-Enabled Discovery and Innovation Program



Vhub.org is a site for collaborative volcano research and risk mitigation. Use the menus above to browse available simulation tools, data resources and links to all things volcanic.

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Field Guide: Monogenetic Volcanism of the South Auckland and Auckland Volcanic Fields. 4IMC Auckland, New Zealand 20-24 February 2012

in Publications, Feb 28, 2012

Program Book of the Fourth International Maar Conference: A Multidisciplinary Congress on Monogenetic Volcanism and Intra-Conference Field Guide: Rangitoto Island. Auckland, New Zealand 20-24 February 2012

in Publications, Feb 28, 2012

Field Guide: Miocene Subaerial to Subaqueous Monogenetic Volcanism in Otago, New Zealand. 4IMC Auckland, New Zealand 20-24 February 2012.

in Publications, Feb 28, 2012

Abstract Volume of the Fourth International Maar Conference A Multidisciplinary Congress on Monogenetic Volcanism. Auckland, New Zealand 20-24 February 2012.

in Publications, Feb 28, 2012

Kliuchevskoi\_1994\_timeline in Data Sets/Collections, Feb 14, 2012

Research collaboration, hazard modeling and dissemination in volcanology with Vhub in Presentations, Jan 31, 2012

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MAY 21 1st International Congress on management and awareness in protected volcanic landscapes

SEP 23 IAVCEI-CCC 4th Collapse Caldera Workshop

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# GeoProMT Geospatial Project Management Tool

For Interdisciplinary Class Work and Collaborative Research • LESAM Laboratory at the University at Buffalo

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## How To Use GeoProMT Within VHub

[Project List](#)

### Project Overview

[Project Users](#)[Project Settings](#)

#### Project Goal

This project shows how to create a successful Titan2D run using GDEM, GeoProMT and VHub. GeoProMT is used to keep record of all the data and files created. Titan2D is a numerical simulator used successfully to model lahars and pyroclastic density currents. Its main input parameter, for a successful run, is a Digital Elevation Model (DEM). This DEM is a GRASS raster file and not everyone uses this Geographic Information System (GIS) package to work with GIS data. Therefore, not everyone is aware of how to convert their current DEM to the specific GRASS file format needed to run Titan2D. The converted DEM is of the Santa Ana Volcano in El Salvador.

[Open location in Google Maps](#)

To obtain guest access, create your own GeoProMT account and send an email to [Jorge V. Bajo](mailto:Jorge.V.Bajo).

#### Team Members / Roles

[Jorge Bajo](#) has role: Project Manager

[Sylvain Charbonnier](#) has role: User

[Jose Palma](#) has role: User

[Chris Renschler](#) has role: Project Manager

[Graham Hayes](#) has role: Project Manager

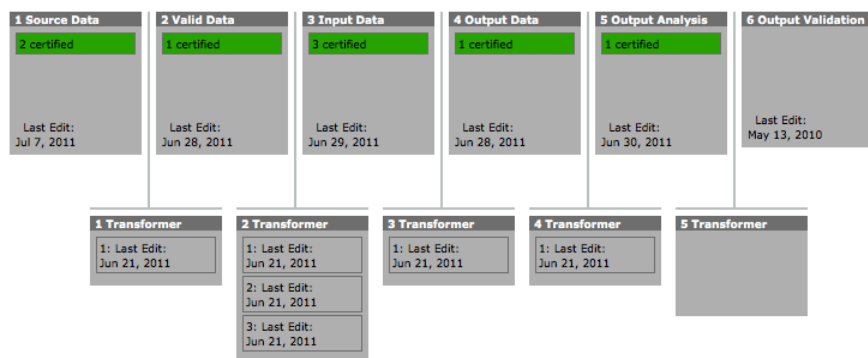
#### Created on

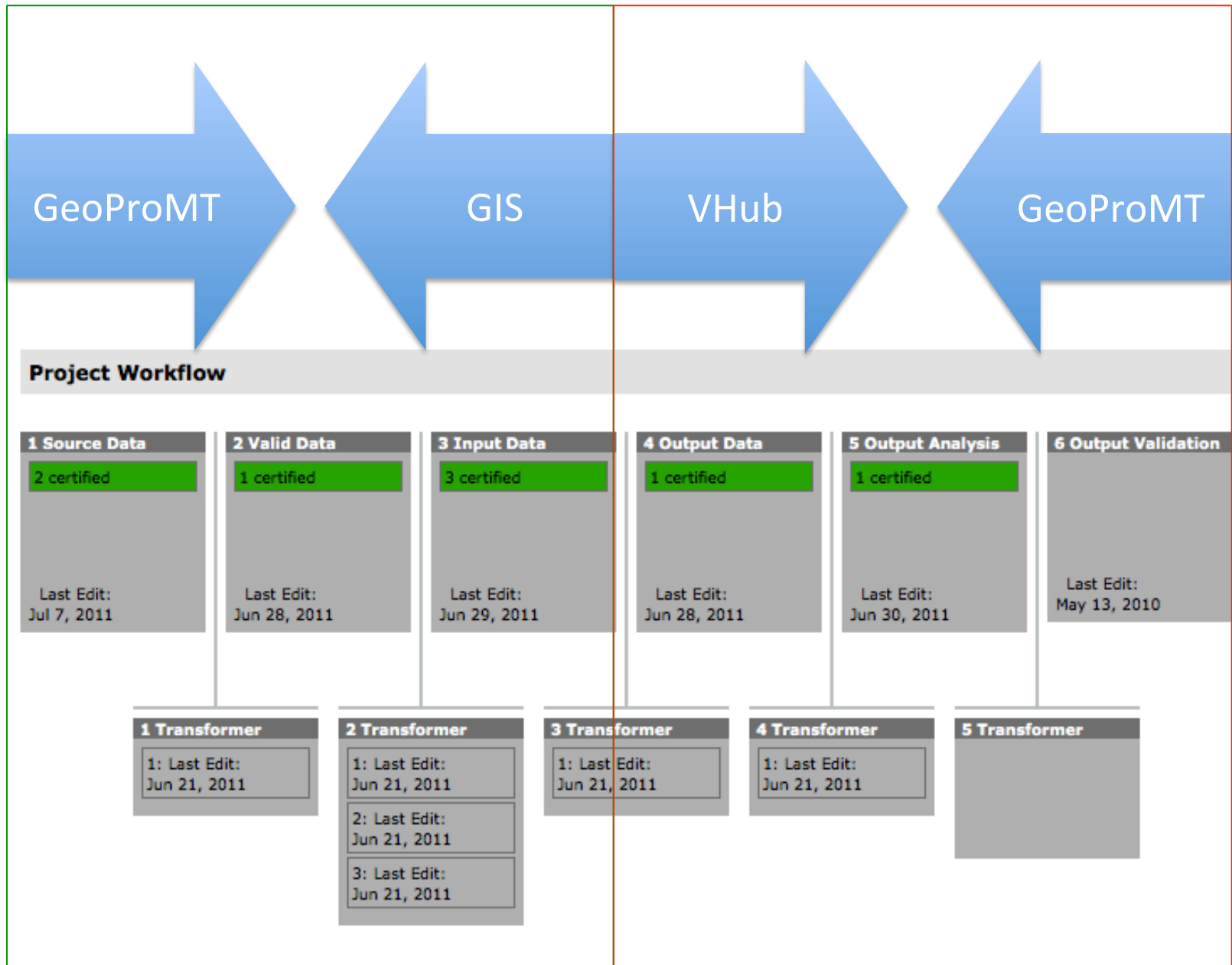
05/13/2010 07:19:04

#### Last edit on

08/31/2011 09:53:30

### Project Workflow

[Project Design](#)[Project Report](#)



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## How To Use GeoProMT Within VHub

[Project List](#)

### Transformer List

[Project Workflow](#)

[New Transformer](#)

#### Title and Description

##### AOI DEM FILL

This is done to eliminate any possible sinks and holes within the DEM.

##### AOI DEM FILL ASCII

This step is an important step in order to get a DEM that can be used with Titan2D. Titan2D only accepts GRASS Raster files and for that reason and to make the transition more easily from one GIS system to another this step is made.

##### AOI DEM FILL ASCII UTM

This is the last step before loading the DEM to the VHub.org site to run Titan2D.

#### Properties

##### Created By

First Last on: Tuesday, June 21, 2011 09:58 PM

##### Last Edit By

First Last on: Tuesday, June 21, 2011 09:59 PM

##### Created By

First Last on: Tuesday, June 21, 2011 10:10 PM

##### Last Edit By

First Last on: Tuesday, June 21, 2011 10:23 PM

##### Created By

First Last on: Tuesday, June 21, 2011 10:21 PM

##### Last Edit By

First Last on: Tuesday, June 21, 2011 10:25 PM

#### Tools

[Edit](#)

[Remove](#)

[Edit](#)

[Remove](#)

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## How To Use GeoProMT Within VHub [Project List](#)

### Edit Transformer [Transformer List](#)

**Title:**

**Description:**  
This is the last step before loading the DEM to the [VHub.org](#) site to run Titan2D.

#### Input Objects

#### Input Purpose

[New Input](#)

[+](#)  
DEM of the Area of Interest generated using the GDEM and the AOI shapefile. This DEM is the one to be used to run titan.

The [AOI DEM Fill ASCII](#) is used to re-project the DEM to [UTM](#) which is needed to run Titan2D. This step can be done with the [AOI DEM Fill](#) and re-project the resulting raster file.

[Delete](#)

#### Output Objects

#### Output Purpose

[New Output](#)

[+](#)  
This is the final step before moving the files to the VHub site to run Titan2D.

This is the new and final transformation done using [ArcGIS](#) software before loading the files to [VHub.org](#).

[Delete](#)

[Save](#) [Cancel](#)



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## How To Use GeoProMT Within VHub

[Project List](#)

### Edit Transformer

[Transformer List](#)

Title:

Description:

This step has been made simpler by using the file converter created by Dr. Jose [Palma](#) and that it can be found at the [VHub.org](#) site under resources.

#### Input Objects

#### Input Purpose

[New Input](#)

This is the final step before moving the files to the VHub site to run Titan2D.

This file is input into the file converter that can be found at the [VHub.org](#) site. This eliminates the step of having to use GRASS in order to be able to create a raster file that could be read by Titan2D.

[Delete](#)

#### Output Objects

#### Output Purpose

[New Output](#)

This is the DEM to be used to run Titan2D in VHub.org.

This is the DEM to be used to run Titan2D in [VHub.org](#).

[Delete](#)[Save](#)[Cancel](#)[LESAM Laboratory](#) | [Help](#) | [Feedback](#)



# **Geohazard Assessment - Tungurahua, Ecuador**

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# GeoProMT Geospatial Project Management Tool

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## Geohazard Assessment - Tungurahua, Ecuador

[Project List](#)

### Project Overview

[Project Users](#)[Project Settings](#)

#### Project Goal

GIS and debris flow modeling were used to evaluate the geological hazards near Banos, Ecuador, nestled in a deep quebrada (ravine) on the flanks of Tungurahua Volcano. Paths and areas of mud flows, pyroclastic flows, lahars and other dangers related to water, volcanic deposits and activity are delineated and mapped. This allows Banos to better understand and recognize high risk areas are located along its road. There are two main roads outfrom Banos that represent possible evacuation routes (Sheridan, 2008). Because Tungurahua Volcano is currently active, one of these routes, located on the volcano's flank, is constantly being closed or damaged due to the dangers mentioned above.

[Open location in Google Maps.](#)

#### Team Members / Roles

[Jorge Bajo](#) has role: Project Manager

[Michael Sheridan](#) has role: User

[Giorgio De Felice](#) has role: User

[Thomas Slomka](#) has role: User

[Leticia Calvo](#) has role: User

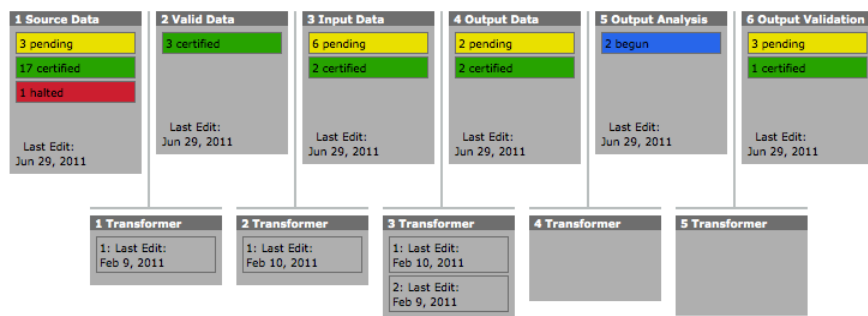
#### Created on

07/17/2010 20:54:11

#### Last edit on

06/30/2011 09:05:49

### Project Workflow

[Project Design](#)[Project Report](#)

Country	Certified	Project	12/21/2010 09:32	06/29/2011 12:30	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Cities	Certified	Project	09/20/2010 15:30	06/29/2011 12:30	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Provincias	Certified	Project	02/07/2011 10:41	06/29/2011 13:19	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Photo of Tungurahua	Pending	Project	02/07/2011 23:15	06/29/2011 13:19	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Area of Interest shp	Certified	Project	02/10/2011 08:07	06/29/2011 13:19	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Hazard Map	Pending	Public	02/07/2011 23:18	06/29/2011 13:20	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Hyperion	Certified	Project	02/07/2011 10:33	06/29/2011 13:20	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Modis data	Certified	Project	02/07/2011 10:35	06/29/2011 13:20	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Railroads	Certified	Project	02/07/2011 10:42	06/29/2011 13:20	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Landsat etm 1990	Certified	Project	02/07/2011 10:17	06/29/2011 13:21	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
p0306e_files	Halted	Project	02/07/2011 10:38	06/29/2011 13:22	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Volcanoes	Certified	Project	02/07/2011 23:13	06/29/2011 13:22	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Paisaje	Certified	Project	02/07/2011 10:38	06/29/2011 13:22	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Populated Places	Certified	Project	02/07/2011 10:40	06/29/2011 13:22	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Utilities	Certified	Project	02/07/2011 23:14	06/29/2011 13:22	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Roads	Certified	Project	02/07/2011 10:56	06/29/2011 13:22	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Geology Map	Certified	Project	02/07/2011 23:17	06/29/2011 13:22	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Landsat SRTM 1990	Certified	Project	02/07/2011 10:58	06/29/2011 13:23	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Topographic Maps	Certified	Project	02/10/2011 08:16	06/29/2011 13:23	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>
Regional DEM 10 m	Pending	Project	02/09/2011 22:27	06/29/2011 13:23	Jorge Bajo	<a href="#">Edit</a>	<a href="#">Remove</a>

## 1 Source Data

3 pending

17 certified

1 halted

Last Edit:  
Jun 29, 2011