



PRS92

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Task Group Balanacan created



Trekking the mountain of Mataas na Bundok leading to the Balanacan Station, the "mother of all surveys" (inset)

Administrator Diony A. Ventura has created the Task Group Balanacan headed by Mapping Department (MD) Director Jose Galo P. Isada, Jr. to undertake the development of the triangulation stations Balanacan and Baltazar. The task group will undertake research and gather available records and maps/plan, coordination meetings with concerned agencies, and information campaign activities. It will conduct resource assessment and demarcation surveys. It will prepare plans and secure necessary construction permits or clearances from concerned authorities for the civil works that will be undertaken.

The Balanacan Station defined the origin of the Luzon Datum of 1911. All surveys in the Philippines were corrected and based on the position of this station. The formed triangulation network spanned vast distances with stations that were located in high mountain peaks and far across straits and channels.

On 02 June 2008, a team headed by MD OIC Assistant Director Randolph S. Vicente conducted a reconnaissance survey of the vicinity of the "mother of all surveys" in Balanacan, Mogpog town, Marinduque.

Active Geodetic Stations established

As part of the initial stage for the installation of Active Geodetic Stations, six stations were established consisting of four roof-based stations located at NAMRIA main building, Urdaneta City Hall Pangasinan, Registry of Deeds building in Tagaytay City, and Basa Air Base at Floridablanca Pampanga and two ground-based stations located at Nueva Ecija University of Science and Technology (NEUST), Cabanatuan City and the 415th Police Provincial Mobile Group (PPMG), Candelaria, Quezon.

All stations have already been installed with GRX 1230 GG Pro Receivers, AT504 Choke ring antenna and radome, meteorological and tilt sensors, regulated power supply, batteries for backup power, and lightning surge arrestor for the antenna and grounding connection. Civil works for all stations and the Data and Control Center (DCC) have been completed. Antenna and receivers have been tested and configured for stand-alone setting. For the data gathering of the remote stations, the application for internet connection is currently in progress. The DCC is based in the NAMRIA main building.

In a related development, the PRS92 densification component has accomplished the following as of March 2008:

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Administrator Ventura inspects the newly-established Active Geodetic Station in Urdaneta City, Pangasinan.

NAMRIA and DENR LMS meet for the 4th-Order GCPs

NAMRIA hosted a coordination meeting with the DENR-Land Management Services for the establishment of fourth-order GCPs. The meeting was held on 16 May 2008 in the NAMRIA Conference Room.

Discussed in the gathering were the status of PRS92 densification activities and the inventory of cadastral data sets. Also taken up were the regional targets for fourth-order PRS92 densification and data integration for 2008. Officials from the DENR central office presented the policies for the release of funds for regional PRS92 densification activities. NAMRIA is in charge of releasing the funds to the regional offices for the data transformation and integration activities.

The meeting was attended by all DENR Regional Technical Directors for Lands, Chiefs of regional survey divisions, and respective staff of the DENR Planning and Policy Services and Financial Management Services.



Administrator Ventura presides over the meeting

IEC Task Group conducts cluster trainings

The Information, Education, and Communication (IEC) Task Group has completed three cluster trainings on Advanced GIS using *Manifold* for DENR regional technical staff. The trainings are in support of the development, implementation, and enhancement of the Geodetic Network Information System (GNIS), and the Land Survey Database Management System (LSDMS) which were developed under the PRS92 project. The technical trainings were conducted in Baguio City on 02-05 June 2008 for participants from Regions I, II, and the Cordillera Administrative Region; in NAMRIA on 16-20 June 2008 for participants from Regions III, IV-A, IV-B, V, and the National Capital Region; and in Tacloban City on 30 June-04 July 2008 for participants from Regions VI, VIII, and VIII. The trainings aimed to enhance the skills of the regional staff in the performance of their assigned tasks in the implementation of the PRS92 project. The resource persons were from the technical staff of NAMRIA.

GNIS and LSDMS are windows-, web-, and GIS-based systems which are capable of managing geodetic network data. They run on a local area network utilizing MS SQL Server database management system software.



IMD Director Papa addresses participants of one of the cluster trainings held in NAMRIA.

NAMRIA establishes Zero-Order Network

NAMRIA started the establishment of the zero-order network with the dispatch of survey teams last 15 May. Eight first-order GCPs (IFG1, PNG2, PNG4, ZBS2, ZBS3, QZN7, ARA2, and MMA1) located in Banaue, Ifugao; Rosales and Bolinao, Pangasinan; San Narciso and Sta. Cruz, Zambales; Naker, Quezon; Dinalongan, Aurora; and NAMRIA, Taguig City were observed for upgrading to zero order. The target number of zero-order GCPs for establishment this year is 65.

The zero-order points will have an accuracy of less than 10 parts per million with a nominal spacing of approximately 100 kilometers between GCPs of the network. The network will be useful in monitoring the dynamics of the current geodetic datum (PRS92) and its relative accuracy on the regional (Asian Region) scale.



Locations of the eight first-order GCPs

Regions visited for DI validation and assessment

The PRS92 Data Integration (DI) component conducted a series of regional visits to carry out the assessment of DENR regional accomplishments and targets. The said visits were organized to validate the accomplishments of the regions on data transformation and integration for FY2007, assess the targets for cadastral and other ENR data integration for FY2008, and evaluate the regional ENR datasets. The visits are a joint undertaking of the Mapping Department and the Remote Sensing and Resource Data Analysis Department which are overseeing the cadastral and ENR data integration in the regions, respectively.

For FY2007, a total of 149 municipalities/cities (~816,906 lots and 3,106 reference monuments) were targeted by the regions for cadastral data transformation and integration. During the Program Review Analysis and Planning Workshop held in New Horizon Hotel in Mandaluyong City, the regions reported 110% accomplishment for data conversion, 66.38% for recovery, 68.94% for observation, and 9% for evaluation.

All 16 regions have already been visited by the monitoring teams. There are several significant findings from the visits. Achieving the targets for data encoding is greatly affected by the availability and quality of records; while deviations from the original targets were noted in some regions. Some regions have exceeded their targets for encoding. Errors and inconsistencies in lot data computation sheets were noted during encoding. The LSDMS is now being utilized in some regions. Concerns regarding the use of this system were raised during the visit. The recovery and the observation of reference monuments are still ongoing. Finally, the derivation of local transformation parameters for most regions is yet to be conducted.

The draft Memorandum of Agreement for cadastral data integration of all the regions has also been finalized. A total of 421 municipalities/cities have been targeted by the regions for FY2008. The number corresponds to 2,644,242 lots and 8420 reference monuments. NAMRIA and the Land Management Bureau (LMB) have also agreed to help the regional offices meet the national target set this year of 566 municipalities/cities. NAMRIA committed to complete 60 municipalities while LMB will complete 85 municipalities. The initial 30% of funds for the said MOA was issued to the regions during the RTD for Lands Consultative Meeting held last 16 May in the NAMRIA Board Room. Meanwhile, the supplementary MOAs covering the other ENR data integration activities are being finalized by the RSRDAD.



The NAMRIA DI Team conducted a regional visit in DENR Region III Office in San Fernando City, Pampanga.

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277 second- and 272 third-order GCPs established and encoded in the GNIS; and 1,164 second-, 995 third-, and 2,959 fourth-order GCPs established by private service providers.

Under the vertical control network sub-component, NAMRIA established/releveled 1,095 benchmarks through geodetic leveling with 72 of them encoded in the GNIS. The contractors have established/releveled 5,970 benchmarks and submitted 6,127 benchmark descriptions.



A benchmark established in Pagsanjan, Laguna



Geodetic leveling activities held in Noveleta, Cavite

IEC in 3 provinces

As part of the IEC program, the PRS92 project was presented to the provinces of Pangasinan, Camarines Sur, and the Mountain Province during the second quarter. The information campaign enlightened the local executives of the provinces on the PRS92 project, on the importance of *mojons* in the locality, and on the need to protect them in order to prevent further destruction.

The project was launched in Sison, Pangasinan on 09 May 2008 with Representative Mark O. Cojuangco of the Fifth District of Pangasinan hosting the event, in partnership with DENR Region I. NAMRIA Administrator Diony A. Ventura expressed gratitude to Representative Cojuangco for supporting the PRS92 Project and for mobilizing the local government heads in his district to advocate the significance of *mojons*. Highlighting the occasion were the signing of a MOA between DENR Region I and Pangasinan fifth-district mayors for the adoption of *mojons* located in their respective areas and the ceremonial establishment of a *mojon*.

The information campaign in Camarines Sur was conducted on 06 June 2008 during the 34th National Convention and Directorate Meeting of the Geodetic Engineers of the Philippines (GEP). A MOA was signed between the province of Camarines Sur and DENR Region V for the adoption of *mojons* in the province.

The information campaign in the Mountain Province was conducted on 10 June 2008. To show their full support, Mountain Province Governor Maximo Dalog, Vice-Governor Louis Claver, Jr., and *Sangguniang Panlalawigan* members attended the gathering.



From top to bottom: (1) Administrator Ventura and Pangasinan Congressman Cojuangco during the ceremonial establishment of a mojon in Sison, Pangasinan; (2) NAMRIA Asst. Dirs. Randolph S. Vicente (first from left) and Enrique A. Macaspac (fourth from right), together with GEP officials, pose at the site of the newly-established mojon in Pili, Camarines Sur; and (3) Group photo of the NAMRIA team headed by Assistant Director Macaspac and the DENR-Cordillera Administrative Region headed by RTD Victor Carantes during their courtesy call to Mountain Province Governor Dalog and other provincial officials