

Photo-report on the Northern Negros Natural Park
P 3-D Modeling and Trainers' Training
July 23-27, 2007
NFEFI Compound, Bacolod City

By: *Fer M. Ramirez*¹
Overall Facilitator and Trainor

Objectives

- Northern Negros Natural Park in a 3-dimensional format for natural resource management planning
- For the resource to be meaningful to the stakeholders
- Trainor's training

It all began with a meeting in Guimaras with the staff of NFEFI, Daboy Castor and Arlene Ebalde in December 2006. Preparatory exchanges were by email and text messaging, phone calls. The dates proved to be critical because of RP availability and consultations with the participants. Discussions were made on the basics and what to consider in conducting a P 3-D modelling activity.

Also months before was a casual pre-planning conversation with the main person of the modeling, Mr. Gerry Ledesma of Negros Forests Ecological Foundation, Inc. Much ahead of the time the Resource Person gave a photocopy of the manual on P-3DM to him so that he would have an idea of the preparatory work before the actual activity. This is because of the costs of mobilization, actual conduct of the activity and materials preparation depending on the objectives and scale of the model. There should be no waste of time and materials.

July 22 (ARRIVAL) - Afternoon arrival to adjust presentations to the real situation in the area and to have a look at the preparations --- primarily the venue (AVAILABLE WORK SPACE), materials prepared (CARTONS), the base table and most importantly THE CONTOUR MAP. The office space was spacious with a not-so-small covered concrete area where the table and model will be constructed and the orientation will be done. It seemed small for the RP and we will have to do with it, explore other open areas. The presentation was briefly shown to the staff including Sir. Gerry to hone it. The feeling was strange because all the materials were not there yet --- cutters, paints and others. There are however 50 carton boards already but not of the exact size (6 feet by 9 feet). At a maximum elevation of 1,840 meters, 4 mm thick cartons, this should suffice at a vertical scale of 1:10,000.



¹ Mr. Fernando M. Ramirez is the Luzon Regional Operations Manager of the Foundation for the Philippine Environment

The map is supposed to be at a horizontal scale of 1:20,000. The RP has not seen the map yet. The next day July 23 will see whether preparations have been done thoroughly to start and finish the job on time.

July 23 (DAY 1) Monday:

Early in the morning, the RP looked at the work space once more thinking of the possible ways to make use of possible shaded areas where the “assembly line” could do the work. The shaded areas were not a possibility though because of the caged wildlife around that may be disturbed. The staff of NFEFI, Iris, Dory, Steph, Brenda, Daboy and Tams, have started arranging and cleaning the venue, connecting the equipment, the registration area, the kits and the other preparations; but still there was no table and map yet. The RP has to

rearrange the venue to accommodate more participants and have a better viewing presentation. A sound system has already been put up.

At 8:30 AM most of the NFEFI staff and some of the participants have



already started coming. While waiting for the participants and the most important of all, the base map and the table, the video shots of Danajon Double Barrier Reef 3-D modeling activity was shown for the early participants to have a glimpse and the idea of how the next few days would be.



It was already 9:00 am and the participants have numbered only about eighteen (18). It was quite worrying to see a very few participants present with the program orientation set to begin. There was only one from the community representation, a partner from MUAD. The

program though had to begin with a few participants. Ms. Iris of NFEFI called on Mr. Ernesto

Moleta of MUAD to lead the invocation followed by the national anthem. Mr. Gerry Ledesma of NFEFI gave the welcome remarks and then Daboy facilitated the expectations setting.

Before the main presentation of the RP, the GIS specialist provided by Philsurin, Butch gave a short presentation on the maps he prepared. They were shown to the facilitator for comments before they were finally printed.



The main facilitator of the 3-D modeling workshop, Fer M. Ramirez of the Foundation for the Philippine Environment (FPE) started with presenting the program of the next five days followed by the presentation on P 3-D modelling as an art, process and participatory tool. At this point the set expectations of the participants were also processed by Mr. Ramirez, the main facilitator and resource person (RP) from the Foundation for the Philippine Environment (FPE). The objectives of the workshop and the week's activities should respond to the participants' expectations. These were mainly: what is P 3-D modeling all about, how is it done, gain knowledge and learn about the process and its importance in general and in watershed management planning in particular.



It was already 12:30 PM when the presentation ended with the FAQs responded to by the facilitator. There were looks of anticipation and apprehension from the faces of the participants. The morning session ended with the grouping of the “assembly line workers” done. It was agreed that the afternoon session would begin at 1:30 depending on the availability of the printed base map and the base table.

The afternoon session started at 2:00 PM when the maps arrived. The giant carbon paper has been prepared while waiting. The maps were joined and trimmed into a single rectangular map measuring 6x9 sq.ft. *The base map I realized later showed only the contour lines of the Protected Area, trimmed at the boundaries! The outlying areas of the NNNP are not projected.* While fixing the map, the base table eventually arrived, uniquely constructed with removable base legs made of usable boxes. With all the most important materials finally there, the cartons were resized to that of the map and to be fitted at the center of the. *It was found out that the table was larger than the base map and the cartons. We had to make new reference corners to accommodate the model at the center of the table.*



At this point the team was still undecided on what resource attributes or data would be inputted into the model. It was difficult because of the pins, yarns and paints that were necessary to be purchased.



The different workshop groups were convened for final briefing before the work finally began. The RP fitted the map onto the table emphasizing the reference corner, the N-S orientation and reference nails driven into at least three (3) peak points. The most critical at this stage is the tracing. The other teams had to wait for the first carton board with the first contour line traced, for cutting and eventually for the gluers to

assemble. It was reminded by the RP that the cutters can prepare their equipment and look for a place where they can work best. The gluers were instructed to prepare pre-cut crepe paper sizes while the RP mixed the glue with water at 1:3/4 ratio.

Finally, it was time to START....TRACING!

It took some time before the tracing of the first carton layer at 40-meter elevation started. It was already mid-afternoon. When the tracing was finished, while the cutters are cutting, the team led by Butch, the GIS expert from Philsurin realized that projecting the map by multi-media showing clearly the uniquely colored contour line to be traced would help the tracers and avoid confusion (*NEW TIP from Bacolod experience for future similar activities*). It proved to be very effective the following days.



The day's output: 3 carton layers (out of the targeted 47 layers in 3 days) which mean 120-meter elevation on the ground.

The most difficult day, the first day was over.



July 24 (DAY 2) Tuesday:

The second day was a miracle. Although the RP was earliest to arrive to refine previous day's output and prepare the work area, the participants were early; quick to the job forming the assembly line automatically. The RP was aiming at the 1000-meter elevation with the work pacing. We managed 680 meters and it was not bad.



There were various techniques provided to the trainee cum participants:

the use of stone chips for small traced and cut pieces and small peaks; the participants were also taught assembling separating components of the model that could be worked on alone; the use of weights to compress the layers; hitting



the reference nails; they were also trained how to have an eye for missing parts and to validate, reconstruct by going back to a support map. This was made possible with assistance and support from Pepsi and Nathan of PEMO. It was really a feeling of fulfillment for the RP. He realized then the task could be finished in time, a day earlier than the RP projected. The lady staff, Iris (the gluing expert), Dory (docu), Arlene (overall logistics), Steph, Brenda, and Tams (for all the task phases) provided a tremendous amount of *will power* to all

the groups. There was only one thing always missed - the N-S orientation mark and the elevation.



One very important learning from the experience in Bacolod 3-D modeling was the usefulness of the hobby knife and the baby scissors (*TIP # 2 from Bacolod experience for future similar activities*).

July 25 (DAY 3) Wednesday:

The target this day is to be able to hit the highest peak at 1,840 meter elevation. That was a grueling 28 carton layers to be traced, cut and glued! But the experience of the pacing of the previous day would see us through - so the RP hoped!

The team's activity was also to be interrupted for a while because Blas Tabaranza, Mithi and other Haribon staff would be coming. The bigger problem was, by 9 AM, nobody has arrived yet, only the participant from San Carlos of the Department of Agriculture; he was always first to come. "Kinabahan na naman ako," the RP thought. "How can we finish with so many tasks still to be done?"



There was still the concern of processing what resource use and information should be inputted onto the model. The yarns and paints, some more pin types needed to be purchased. The apprehension was gone only when the participants started to arrive



one by one. The RP was even able to convene the group for strategizing, pointers and moral boosting.



Everybody automatically proceeded to their respective work areas. The assembly line was really functioning to the max. Some teams have to be coached to assemble separating

components. There was a need to remind the team of gluing the right way, so that by the end of that day everything was properly dried and information inputting could be processed.

The work was hampered by media interview (local ABS-CBN) which was aired the following morning over ABS CBN Bacolod channel (*Video coverage available at the NFEFI office*).



But as we have targeted the raw (RAW AS IN RAW) blank model was in place before nightfall of the third day! The 4th day then would be easier.



July 26 (DAY 4) Thursday:



The 4th day was to be devoted for information inputting. The RP needed to process this with the organizers and the participants. But first the group had to refine and finish the raw model into a very clean one for ease of perception in terms of coding information; yarns and rivers first, forest lines, etc.

The aim was to facilitate what kinds of information could be placed onto the model after lunch.



Refining/painting the blank: This was the RP's team ticket to palapala (a famous backstreet seafood resto.

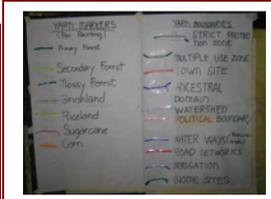
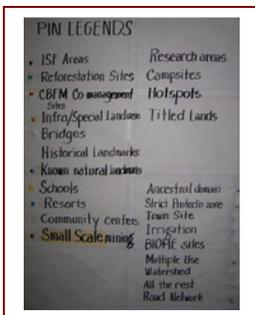
It was time for the most important phase of the project, information inputs from the participants supposed to be representing the various stakeholders.

The RP facilitated this activity before handing it to the participants themselves. There had to be an agreement on what to input. The organizers were represented by NFEFI's Mr. Gerry Ledesma. This would later on dictate the legends



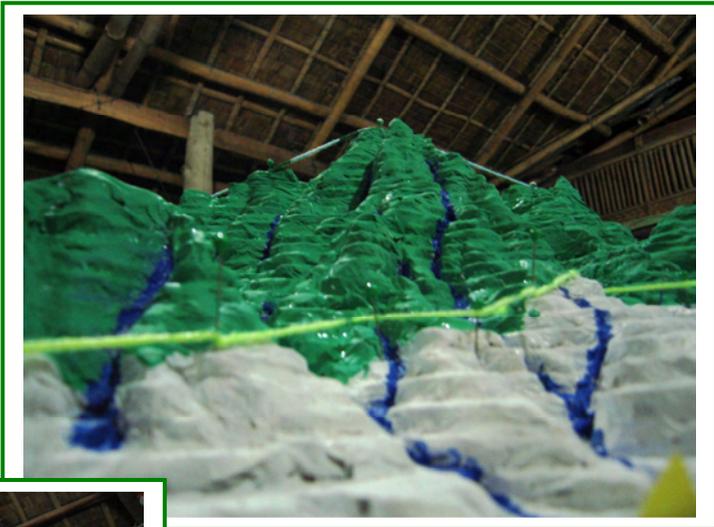
that need to be posted for reference during inputting and making available the materials needed - pins, yarns and paints, brushes, containers, etc.

Until finally, the first waterway line was indicated by a blue yarn. The rest of the information supply from the participants came easy after that first blue yarn. The legend and materials preparation was in full swing while some of the missing parts of the model were being managed by the map experts from PEMO assisted by Fer Ramirez. *(The photo-series show all these.)*



After the first waterway line was put, all the participants started identifying the tributaries realizing in the process made them realize that NNNP is indeed a major watershed! The RP emphasized that rivers, creeks, waterfalls should be marked with pinned label. They were also amazed by how the model clearly

shows the lake within a crater (*tinagong dagat*). The threats were also showing.



By the end of the 4th day, everybody was satisfied looking forward to the last and final day. The ticket to *palapala* was won!



Victory shot with Haribon

July 27, Final Day (DAY 5) Friday:

The morning of the last day was very focused on adding information and hopefully a clean 3-D format of the NNNP replete with information by lunch time. The group was set to be interrupted for a while because Sen. Loren Legarda would be coming.

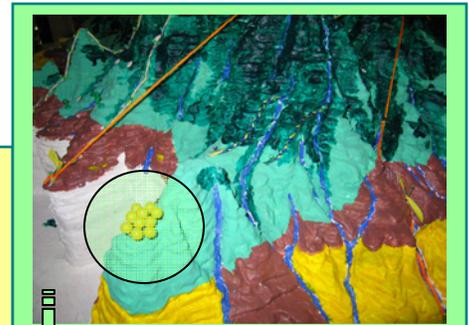
The series of photos below clearly explains the actions and the output of the final day.



Collage of paint colors representing different types of information (land use, vegetation forest types)



Painting the mossy forests at the ridges of the crater near the waterfalls



Small peak - host to a lot of infra, communication towers and many others (issue of resource use fees later on for the IPAF)



Cleaning up table with white paint (not because Ms. Loren is coming but it was a necessary step)

By lunch time, what the team targeted was realized; it was really a moment of truth for all. The next challenge in the afternoon was the putting in some more information (pins for structures) and the methods by which these pieces of information can be extracted back and printed into an updated thematic map.

Mid-morning of that final day the activity was to be graced by none other than the number one Senator of the Republic, Sen. Loren Legarda. *(the photo-ops below).*



Advocacy move: Sen. Loren Legarda, the number one Senator of the Republic graced the activity and even painted some portions of the model.



It was back to work for the team after Sen. Legarda's visit:



More yarns for boundaries and pins for landmarks!



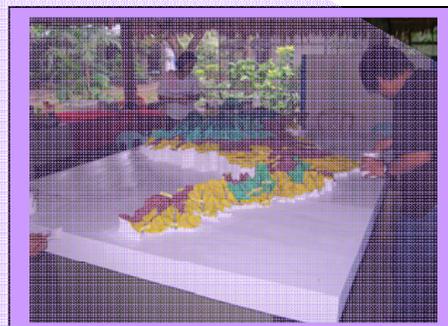
...and more details



Up to the reference corner...



It was time to clean up with a solid white acrylic paint that is water-based, without water and glue mixed. The blank spaces all around the 3-D model would serve as the areas for the laminated labels for the N-S orientation, the activity, list of participants probably and most importantly the LEGEND.



Afternoon - the next steps: Putting the grids so that information can be extracted once validated and geo-referenced.

First was the orientation by the facilitator. It was also time to go back to the very first step of the whole process and the way to end. The framework for the whole 3-D modeling activity was again reiterated by Mr. Ramirez. By then, most participants are seated hoping it was almost ending; but they needed to work on something more.



The RP clarified first why the need for putting the grids, the importance of the process because the follow through would depend on this. It was also clarified that in most if not all cases that the RP had come across with, the Protected Area boundary was last transposed. In the case of the NNNP, the model is the exact boundary; so why put grids? For purposes of capability-building for the trainees, they have to be put in place and how extraction of the updated information could be done. This would also serve as validating activity for the various sets of information inputted onto the 3-D model. They needed to be field-verified before any new thematic maps are to be produced.

IT WAS CLEAR FOR ALL! The group was back to playing with a purpose.





There was no choice but to put the grids.



Once the grids are in place it was time for the RP to input on the extraction process. Three ways - heads down using plastic sheets and acetate pens (the most tedious, time-consuming and error-prone; use of glasstop above the model and extracting info using laser pens which was even more expensive; and the most processing technique using high resolution digital cameras (photometry) which are readily available nowadays and less time-consuming; it was only a matter of simple mathematics, scaling, use of trigonometry with parallel lines (for successive shots) and orthogonal lines (third plane as against parallel lines). The rest follows - image stitching or merging and digitizing (once raster images are taken) and information manipulation (once images are transformed into vector images). The software for these simple and provided features of a digital camera always comes with the camera.

THEN, IT WOULD BE PRINTING TIME FOR A NEW UPDATED THEMATIC MAP OF THE RESOURCE AREA.

How to take care, maintain and update the model was also shared by the facilitator to the participants. *(An added tip by one of the participants from the PEMO, GIS man, Nathan, was to indicate the coordinates of the map on the 3-D model grid lines, so that geo-referenced gathered data by field personnel can handily be transposed into the model.)* It was very sensible and could be a subject of PPGIS e-group for discussion.

The last photo-series of the extraction techniques:



It was explained by the Resource Person, Fer Ramirez that the excess in cartons and other materials was because of the late information on the scale, size of the model desired by the organizers and what to include in the model in terms of area. The outlying areas outside the Protected Area boundary, the RP realized, were not to be included; otherwise, the materials would have been just enough. These could be used anyway for succeeding activities related to this one.

.....and it was graduation time!



It was fulfilling on the part of the resource Person because the task was finished in time. *Kudos to the organizers and the participants!*

Of course, all wanted to hear from the participants, insights and feedback!



One of the participants

*Leni of BASIWA
(water district)*



RP listening to insights



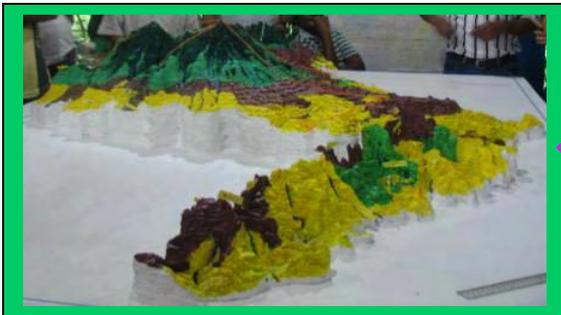
Special mention for the PEMO



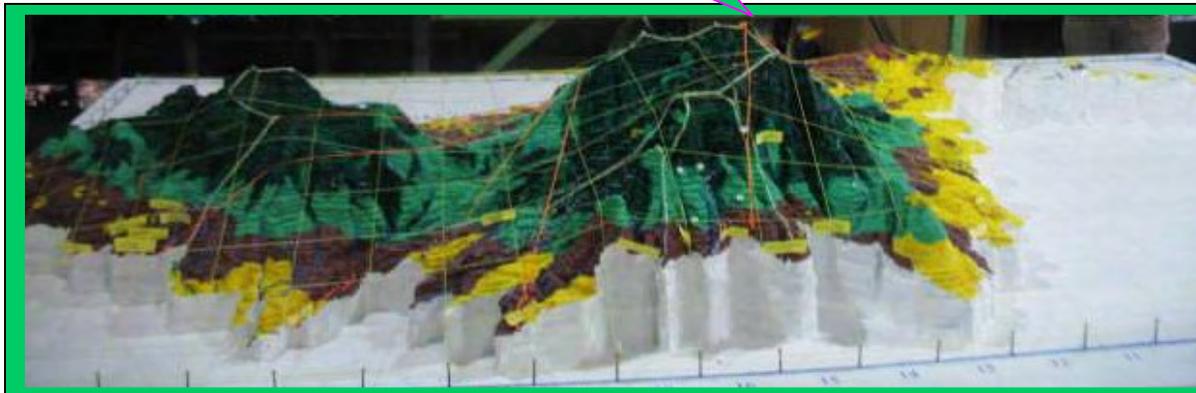
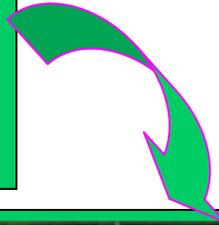
... the backbone of the work



THE END PRODUCT OF THE NNP 3-DIMENSIONAL MODELING WORKSHOP



JUST LIKE IN COMPUTERS 3-D



THE MEDIA MILEAGE



6 Visayan Daily Star Monday, July 30, 2007

3-D model of park assembled

A team of local government and non-government organizations and community groups has made the first Participatory 3-Dimensional Map of the Northern Negros Natural Park a press release from The Negros Forests and Ecological Foundation Inc. said.

In a week-long workshop held at the NFEFI enclosure by the Capitol Lagoon in Bacolod City recently, the 3-D model was assembled using corrugated carton boards, glue and crepe paper.

Using a thematic 2-dimensional map as a guide, the team meticulously cut-out the shapes of the contour lines and each layer was then glued into a place. The result was a 6 ft x 9 ft three-dimensional map of the park at a horizontal scale of 1:20,000 and vertical scale of 1:10,000 – the first ever made



Team members put the finishing touches to the 3-D map of the North Negros National Park*

of any forest area in Negros, the press-release said.

The team was led by Fernando Ramirez from the Quezon City-based Foundation for the Philippine Environment.

Ramirez said there were many advantages over a 2-dimensional map, as with it, one can touch the resources, touch the mountains and touch the

land use. This means the local communities can relate much better to an area and its needs.

The 3-D model will be used for natural resource planning and management of the Park. Being a major watershed of Bacolod, the park has to be efficiently managed by the different stakeholders as 11 municipalities and cities depend on its valuable water resources.

The workshop, directed by Ramirez and organized by NFEFI, also served as a "trainers' training" for the participants, the press-release said.

The NNNP was proclaimed a Natural Park in 2005 under the initial component of the National Integrated Protected Areas System. The stakeholders are hoping congressional action can be reached by way of a presidential decree, so an Integrated Protected Area Fund be put in place, the press-release added.*

Note: A media release for the local Bacolod paper, Daily Star was provided by FMRamirez to Robert Harland (the media connect) to be published Monday, July 30, 2007(above). (Photos taken by Fer M. Ramirez, some by NFEFI staff)

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