

A new dimension to participatory development planning in Manus Province, Papua New Guinea

A 3-dimensional model of the Manus lands and waters built by community representatives from across the island is embraced by National and Provincial leaders as a demonstration of the effectiveness, scope and impact of participatory, bottom-up development planning.

By James Hardcastle and Theresa Kas, September 2011



Manus Administrator Ku-Len Hamou (3rd from left, pointing) with Deputy Governor Andrew Galga (to his right), and members of Manus and national planning departments on a 'tour of Manus' led by participants in the P3DM exercise.

Development Planning in Papua New Guinea

During the week of 5th September 2011, a **national workshop on provincial-scale development planning** took place in Lorengau, Manus province. The workshop focused on national planning efforts, and on improving PNG's ratings on the Human Development Index and agreeing on

indicators for progress on the **Millennium Development Goals**. Participants from several provinces joined with the Manus Government to engage in discussions with the National Planning office on how to implement the 'Papua New Guinea Vision 2050: National Development Planning Reform Process'. Central to the PNG Vision 2050 is the integration of bottom-up planning approaches, and the integration of climate change into development strategies at all levels.

Linked to these discussions but in a parallel process next door in a large former gymnasium, nearly 100 participants carried out a '**participatory 3D modeling**' (P3DM) training and activity. These men, women and youth were from every corner of Manus and its surrounding islands, from local community groups and community representatives, local NGOs and local government. Collectively, they created a large model (1:25,000 scale) of the province, and transposed their local knowledge of features and land-use changes, and interpreted maps and existing data, to provide a detailed, verified, geo-referenced living landscape of the province. With many of the national and provincial planners having joined the energetic model building efforts during the week, they were all formally invited to a final presentation by the P3DM participants. This gave a platform to present their view of Manus and discuss their perspective on requirements for current and future development plans.

Participatory 3D modeling (P3DM)¹ the Manus Way

Participatory 3D modeling (P3DM) is a fully collaborative exercise that combines community mapping with open discussions on land-use and land-use planning scenarios. It combines



The significant level of detail on the model combined local knowledge with available data, reports and scientific information.

geographic precision with local, individual spatial knowledge and 'mind-maps' of locality and familiar settings. The Manus Participatory 3D modeling event took place in Lorengau from Monday 29th August until Friday 9th September 2011. There were two distinct phases to the modeling, creating the model (1st week) and then making the blank model come alive (2nd week). During the P3DM exercise, all participants contributed to make a physical, hands-on wood-and paper model, to scale, of Manus province, representing their own community, island or area.

¹ See <http://community.eldis.org/.59e7ebf1/> and www.iapad.org for manual and resources on P3DM.

The model was created on a large table (2.6m x 5.0m) in the centre of the meeting hall. Once the model was made, then people become 'resource persons' and informants, and everyone contributed to placing features and places onto the model.

Participants from all areas of Manus, and with all technical and local backgrounds, discussed and added information to the model, including point data (features such as houses, schools, lighthouses, waterfalls, caves etc), line data (roads, streams, rivers, tracks, paths, boundaries, fences, cables, runways etc) and area data (polygons, such as mangroves, forest concession areas, reef flats, beaches, airports etc). Local knowledge on boundaries and features from participants from each part of Manus contributed to an overall local picture of the province. Official and technical data was also cross-referenced with local understanding, and represented on the model. This was an excellent way to link, compare and communicate science with local knowledge.



Each participant paints their community lands and waters

"When we began, we thought this was a game, like a school project.

But then we realized that we are actually playing with our lives and our future.

Of course we know a lot about our land and seas, but we didn't realize just how much we do actually know...

...and we recognize how this knowledge is so important to keep the whole of the island on the right track.

That is for development that does not compromise the future for our short-term gain."

Councilor John Tokios,
M'Buke community, Manus, PNG.

In this way, the model in Manus is more than just a map, it is a representation of spatial knowledge of the participants, and a source of discussion and interpretation around key issues.

Towards the end of the second week, a facilitated discussion addressed key issues including ecosystem services and existing and proposed protected areas; current and proposed development activities (mining, forest concessions, urban and commercial expansion); and information related to predicted climate change impacts.

In Manus, the whole activity was facilitated by Kenn Mondiai, executive director of the PNG organization 'Partners With Melanesians'. Kenn is a trained P3DM facilitator. Kenn and his team worked with the local participants with support from The Nature Conservancy, WWF, Wildlife Conservation Society (WCS) and other international development agencies collaborating in the AusAID-funded partnership ***"Building the Resilience of Communities and their Ecosystems to the Impacts of Climate Change in the Pacific"***.

Under the same project, a video of community-level P3DM for adaptation planning produced in the Solomon Islands in February 2011 can be viewed here <http://youtu.be/LOL2CdCfRts>. A short documentary film of the Manus P3DM for provincial development planning will be finalized by end of October 2011.



Core group of participants now trained in Participatory 3D modeling, with their collective creation, Manus province.

The Manus MOSAIC

Existing community efforts at natural resource management, conservation and protection of reefs, coasts, islands and forests were placed on the model. It was apparent that existing protected areas cover a fraction of the province, and that there is little connectivity or

networking between sites. Several vulnerable areas were identified that are currently under no protection, and facing increased development pressures. Existing areas already logged were starkly obvious on the model, and concern was raised at the potential impacts of future logging and mining concessions. Further areas that may be susceptible to climate change were identified and discussed, such as the Lorengau town watershed catchment, and many stretches of coastline and very low-lying offshore islands. A program to develop and connect a network of locally managed protected areas, named the Manus MOSAIC (Management Of Strategic Areas for the Impacts of Climate change), will be further developed by the Manus Government, local stakeholders and partner conservation and development agencies in 2012.

Results of the Manus P3DM exercise:

- A large and 'live' model of the community lands and waters of Manus is proudly placed in the province administrative centre, accessible to all, a useful tool for decision-making;
- The event provided an open platform for dialogue between the various community leaders and Government representatives over their current issues and future plans;
- Provincial planning, finance and administrative departments are more aware of, and involved in, hands-on tools for bottom-up planning. They better understand the importance of participation and participatory approaches to development planning;
- Provincial leaders and national planning officers provided supportive commitments and comments to the participants and eagerly received and welcomed the modeling activity;
- As part of that dialogue, an assessment of climate change vulnerability and adaptive capacity for the province has been presented using a spatial and participatory medium;
- There is now a shared, hands-on experience of this planning tool with practitioners from across Melanesia and across different organizations;
- The activity and the broader efforts at climate change adaptation in Manus have now been well reported in the media, including radio and television, in PNG and elsewhere.



The Nature Conservancy and the Australian Government / AusAID supported project “Building the Resilience of Communities and their Ecosystems to the Impacts of Climate Change in the Pacific”.