

# **Geospatial Information and the Data Revolution**

## **“A Quick Win” for Sustainable Development in Asia-Pacific**

# **Meeting Report**

Date: Friday 27 March, 2015

Time: 9:00am – 12:30pm

Organized by:

UN-ESCAP Statistics Division

UN-ESCAP ICT and Disaster Risk Reduction Division

### **1. Introduction**

The following document summarizes the discussions conducted during the main side-event hosted during the 4<sup>th</sup> Session of the Committee on Statistics. The side-event took place over two sessions, each lasting approximately 1hr 30min, which covered:

1. Presentations of Geospatial work being done around the region
2. Panel Discussion on “Utilizing Geospatial Information as a tool for the SDGs”

This side-event was co-organized by the UN-ESCAP Statistics Division and ICT and Disaster Risk Reduction Division. A great deal of support in preparing for the event was also provided by UNSD, in particular Mr Greg Scott, Global Geo-spatial Information Management expert.

The presentations and discussions were received extremely well by all who attended the event, so congratulations to all those colleagues at UN-ESCAP, UNSD and in particular to those facilitators, presenters and panelists, who in some instances travelled from overseas, for the efforts in making the event a great success.

## 2. Objectives

The initial purpose of the side event was two-fold:

1. Illustrate ways in which geospatial information is being used around the region to promote better evidence for improved policy implementation. In this respect, the goal will be to raise more awareness of the use of geospatial information, as presented by those effectively exploiting its potential, to those who are still learning about its power in achieving NSS objectives.
2. Examine closely how geospatial information can be used as an effective tool for measuring and monitoring the progress of SDGs. In particular, issues which will be tackled will include:
  - a) Bridging the “knowledge gap” when it comes to awareness of geospatial information and its use
  - b) Which areas within the SDG framework could geospatial information be used most effectively for a “quick win”
  - c) How can developing countries, integrate and sustain the use of geospatial information into their national system

### **3. Session 1: Presentations of Geospatial work being done around the region**

#### Facilitator

*Gemma Van Halderen, First Assistant Statistician, Population, Education & Data Integration Division, Australian Bureau of Statistics*

#### Presenters

*1) Ms. Wu Yun, Associate professor, editor, Surveying and Mapping Press, National Administration of Surveying Mapping and Geoinformation, NASG, China )*

*2) Dr. Arturo S. Daag, Chief Science Research Specialist, Philippine Institute of Volcanology and Seismology*

*3) Dr. Lal Samarakoon, Director, Geoinformatics Center, Asian Institute of Technology*

#### **Presentation 1: Supporting Post-2015 Agenda with GlobeLand30 (Wu Yun)**

##### Abstract

Global land cover (GLC) and change are essential information for the environmental change analysis, earth system simulation, global understanding and sustainable development. Recently, China has completed a four year's GLC mapping project, and produced a 30-m resolution GLC data product, named GlobeLand30. This presentation gives a brief introduction about GlobeLand30, about what is GlobeLand30, how it can be used, and future prospect.

##### Presentation

<http://www.unescap.org/resources/supporting-post-2015-agenda-globeland30> (Power point)

##### *What is GlobeLand30?*

GlobeLand30 assigns the earth's land in to 10 classes all over the world; Water Bodies, Wetland, Artificial Surfaces, Cultivated Land, Forest, Shrubland, Grassland, Bareland, Tundra, Permanent Snow & Ice. It is produced with a resolution of 30 metres, whereas previously this information was provided with 300 metres and 1000 metres resolution. The information has been produced at two time points for comparative purposes (2000 and 2010) and has been assessed by a 3<sup>rd</sup> party to be 83% accurate. The producers of the information have provided open access to the data for non-profit use, and it was donated to the UN in September, 2014. Currently there are around 87 countries around the world accessing this information, with most use taking place in the Asia region largely due to the popularity of the product in China.

##### *How can it be used?*

Three main benefits of GlobeLand30 were presented:

- Shows all the built-up areas around the globe
- Shows change in the ecological environment (eg, changes in river structure)
- Shows the impact of urbanization (eg, changes in the amount of cultivated and ecological land areas over time for coastal areas compared to inner-land areas)

Can also be used to undertake big data analysis and undertaking analysis across three main classes; “cultivated land”, “wetland” and “built-up areas”. Examples provided during the presentation included i) an illustration of how forestation had increased around the border of China and Myanmar as a result of substitute planting and ii) locations of protected areas all over the world (joint project with UNEP WCMC).

*Where are they heading now?*

Two key goals were presented for future work of the GlobeLand30 team:

- 1) Providing better land cover based information: Want to collect all global, regional and national land websites to provide a one-stop shop service. This will produce a global land cover portal, which the team then plans to provide on-line geo-tagging, updating, validation and value-added applications.
- 2) Setting up a global geo-information platform to support post-2015 agenda: Currently have all the GlobeLand30 data, so wish to provide an added service to help monitor and measure change in the post-2015 era.

*Cooperation with UN?*

- China established a Technical Cooperation Trust Fund on capacity development with UN-GGIM 2013-2017.
- Support ESCAP initiatives in effective applications of geo-spatial information for disaster risk reduction and sustainable development
- Contribute to ESCAP’s capacity building programme for developing countries
- GLC30 case study to contribute to ESCAP’s Asia-Pacific Disaster Report 2015

Additional comments by facilitator

Three main dimensions of the domain on land statistics:

- 1) Land cover (as presented in the GlobeLand30 presentation)
- 2) Land use (is important for statisticians when running surveys)
- 3) Land quality (quality of soil, earth)

Useful in bringing Land cover information together with Land use statistics to form a Land Account as supported by the System of Environmental Economic Accounting.

## **Presentation 2: Utilizing GIS-based Disaster Information for Disaster Risk Reduction in the Philippines (Dr. Arturo S. Daag)**

Abstract

The Philippines is a disaster-prone country when it comes to severe wind brought by typhoon, flood, storm surge, earthquake, tsunami and volcanic eruption. Nowadays, disaster-related information such as hazard maps and other data are presented to the various stakeholders are GIS- and web-GIS based. Many DRR mandated agencies responsible for generating hazard maps such as the Philippine Institute of Volcanology and Seismology (PHIVOLCS), Philippine Atmospheric Geophysical and Astronomical Services (PAGASA), Mines and Geo-science Bureau (MGB) together with National Mapping Resources and Information Administration (NAMRIA), Department of Science and

Technology (DOST) DRR projects and several NGOs have been working together to make GIS-based hazard information available to public and utilized for policy making, planning and disaster response.

### Presentation

<http://www.unescap.org/resources/utilizing-gis-based-disaster-information-disaster-risk-reduction-philippines> (Power point)

### *Existing partnership with ESCAP*

There are 4 key areas of cooperation between ESCAP and Govt of Philippines in this area:

- 1) Philippines has a long standing partnership with ESCAP through the Regional Space Applications Programme for Sustainable Development (RESAP).
- 2) ESCAP provided near real time satellite imagery in the case of disasters (including typhoon Yolanda in 2013).
- 3) Training provided by ESCAP and Republic of Korea on applications of GIS for DRR and Space Technology for DRR targeting technical officers of local governments
- 4) A forum for policy making for DRR in the local governments was provided in February 2015 regarding the wide applications of geo-referenced information system for disaster risk reduction and sustainable development sector such as urban planning.

### *Overview of natural Hazards in Philippines*

Main types of natural hazards experienced by Philippines include; Earthquake, Tsunami, Volcanic Eruption, Typhoon, Storm Surge, Floods & Land Slides. Examples were provided of use of satellite imagery in Philippines for Typhoons and Floods (Flood Hazard Maps) as well as example of maps produced at Province level as well as Village level to show impacts of various disasters (floods, earthquakes, etc) and which areas are most prone to experiencing these disasters. Active fault maps were also displayed to illustrate where not to build certain structures.

### *GIS-Based Hazard Mapping and DRR Initiatives*

Background information was provided for a few key projects underway in Philippines at the moment:

- 1) READY project: Produce different hazard maps at different scales with a focus on provinces which are high risk (covering earthquakes and storm surge). Maps after production are shared with the communities.
- 2) Software related DRR activities (REDAS) – can simulate earthquakes and show the effects on GIS maps
- 3) Regional Information Education Campaigns (IECs): Hazard maps produced for LGUs placed in google-earth compatible maps
- 4) One stop shop maps: Is a Philippine Geoportal where all partner agencies place their data in this portal so end users can download required information for their own systems
- 5) Within this Geo-Portal you can select a hazard and it will display where the hazards occur most often in Philippines on the map
- 6) International collaboration with Sentinel Asia producing a lot of hazard maps using space based information (eg, in metro Manila measuring ground subsidence – only a few cms a year, but significant)
- 7) Department of Science and Technology (DOST) project: Web-based system use to view meteorological maps and maps of rainfall and incidences of dengue, etc

## Comments by Facilitator

The Geoscience community are producing great quality information regarding potential hazard areas in countries (egs, active fault maps & sink hole maps). If we can combine this information with vital population data it produces a great base of information for knowing how to deal with disaster risk and disaster recovery. Not only do we know which areas are most at risk of disasters, but we also then know who will be effected by such disasters.

## **Presentation 3) Geo-Spatial Technologies for Resources Planning and Management (Lal Samarakoon)**

### Abstract

The Proposed Sustainable Development Goals for post MDG identifies 17 priority areas mainly targeting poverty eradicating through sustainable management of resources and providing equal opportunities for all individuals. The strength of geo-spatial technologies including GIS, remote sensing, GNSS, sensor networks, and integrated use of these technologies have identified and demonstrated through many applications and the outcome in scientific and demonstration experiments that can strengthen the effort of UN and other experts groups planning to work on post MDG activities. Earth observation (EO) satellites provide images at various wavelengths that assist mapping and monitoring status of valuable resources as a timely and cost effective manner: Global navigation satellite systems (GNSS) assists by providing precise location and navigation data: GIS serving as a platform to integrate various forms of data including space based and census/statistics data, would help planners and managers in sustainable use of limited resources and identifying gaps. This presentation discusses and demonstrates the use of satellite based rainfall data in drought assessment and by combining with socio-economic data to identify drought risk areas. Also, integration of various spatial data together with socio-economic data in flood hazard mapping and flood risk mapping in a developing country is discussed. Use of Geospatial tools in health services planning will be demonstrated. Finally, the need of awareness and capacity building activities to strengthen the use of space-based technologies will be discussed.

### Presentation

<http://www.unescap.org/resources/geospatial-technologies-resources-geospatial-technologies-resources> (Power point)

### *Geoinformatics for SDGs*

Of all the 17 SDGs currently presented, they all have location specific characteristics. For example poverty, hunger, etc, we wish to identify the impact of these issues for specific locations. If we can therefore bring all this information together into a geo-reference system (eg, GIS) – this can assist the implementation of monitoring the SDGs. Using poverty as an example, if we can measure poverty for small geographical areas, then we can also look at the areas with high incidence of poverty and try and determine what factors might be contributing to poverty (eg, lack of project development, natural disasters, etc). Example maps were shown (Indonesia and Cambodia) to illustrate that poverty incidences increased the further you moved away from the city area. Other key SDGs mentioned where geo-spatial information can play a key role in monitoring include Goal 2 – Hunger, Goal 11 – Safe Cities and Goal 13 – Climate Change.

### *Information Integration for Flood Risk Mapping*

An example of work done in Sri Lanka on Flood Risk Mapping was presented. This work involves undertaking different data collections which in turn feed in to two separate types of analysis – “hazard analysis” ( done by flood experts) and “vulnerability analysis” (looking and social and infrastructure

information) and mapping data from these two sources to identify major risk areas (production of a risk map). Given the audience was largely NSO based, more detail was provided on the sort of information impacting on “vulnerability analysis”; demographics of population, land characteristics, water resources, economic strength, position of area relative to rivers, etc.

### *UNESCAP Geo Portal for Information Integration*

The Geo-Portal is a system with shareable data and sharing of infrastructure where you can combine data (GIS data or satellite images) with providing user permission for particular users to use. An example was shown with Sri Lanka where a Flood Hazard Map was placed over a Population Vulnerability Map to show which areas are at highest risk of being effected by a flood disaster.

### *Summary*

Five key areas raised during the presentation included:

- Geospatial technologies provide efficient tools for monitoring SDGs
- Applications of Geospatial technologies can provide “quick wins” for many SDG targets
- Integration of socio-economic and physical data through Geospatial technologies provide a great platform for identifying Vulnerability and Risk
- Efforts should be placed on reaching end users, addressing end user needs
- UN agencies need to continue to influence the link between stakeholders

### **Questions and comments from Floor**

Although time was short for questions during the first session, a few issues were raised by country participants which were addressed by the presenters and facilitators where possible. A summary of the main issues raised (in italics) with the response by the presenters/facilitator is as follows:

*Slight concerns over how meaningful it may be to combine geo-spatial information with data collected in sample surveys with small sampling fractions.*

Whilst the geo-spatial information can be very detailed (as discussed above with a resolution of 30metres), sample fractions for some surveys can be as low as 1% for larger countries or even less. Having said this, nearly all countries also run censuses (every 5 yrs or 10 yrs) – which can cover population and housing, agriculture and even economic. Census data can be linked with sample survey data to produce small area estimates for very small areas, using a range of modelling techniques. Extra care does need to be taken however to make sure confidentiality laws are not breached when presenting results for small areas. The Philippines also added they have been using World Bank methodology to produce small area estimates and are able to produce municipality based maps. Due to the popularity of this work, the Philippines now include this work in its budget for the Philippines Statistics Authority (PSA).

*There were some concerns about the accuracy of the GlobeLand30 maps and also the cost. It was asked how the NSO can get these electronic map freely which is updated regularly? China are currently trying to do for a range of areas, but coming across problems with respect to accuracy and cost. Is GlobeLand30 with 30 meters resolution the most accurate in the world and what is the cost?*

It was responded that GlobeLand30 has taken 4 years and involved a lot of people. The GlobeLand30 team are trying to update every 5 years but this takes a lot of money. GlobeLand30 have donated freely the 2010 data as it is the best information available at the moment, but for next 5 or 10 years it is still in planning. It was also added that the accuracy of hazard maps depends a lot on the methodology being adopted – in some case there are some limitations (eg if mapping a big area it’s hard to produce quality information) especially if ground validation is required.

*The question was raised regarding the classifications being adopted by GlobeLand30, and whether this could be expanded to cover more aspects relating to Land Use, as opposed to simply Land Cover. It was felt that with 30 meters resolution more could be done to show what land was being used for, such as crop production, forestry, etc. The frequency in which these maps could be produced was also raised - every year?*

The response from the panel stated it is currently unrealistic to update these maps on an annual basis given the amount of time and effort required to produce them, but hopefully every 5 years could become a possibility. With respect to expanding the work to further address Land Use, it was suggested that down the track with more collaboration with local agencies within countries this could be possible and also help speed the process up a little.

*A question was raised as to who out of the National Mapping Organization and National Statistics Office, should be responsible for coordination this work, given they are separate organizations?*

The Philippines responded that the mapping organization has the mandate, although this may differ from country to country



## 4. Session 2: Panel Discussion on “Utilizing Geospatial Information as a tool for the SDGs”

### Facilitator

*Mr Stefan Schweinfest, Director, United Nations Statistics Division*

### Panelists

- 1) *Ms Gemma Van Halderen, First Assistant Statistician, Population, Education & Data Integration Division, Australian Bureau of Statistics*
- 2) *Dr. Arturo S. Daag, Chief Science Research Specialist, Philippine Institute of Volcanology and Seismology*
- 3) *Mr Lal Samarakoon, Director, Geoinformatics Center, Asian Institute of Technology*
- 4) *Mr Rana Hasan, Principal Economist, Asian Development Bank*
- 5) *Dr. Taravudh Tipdecho, Geospatial Information Consultant, Thailand National Statistics office*
- 6) *Mr Epeli Waqavonovono, Government Statistician, Fiji Bureau of Statistics*

### **Presentation: UN-GGIM – An Overview (Stefan Schweinfest)**

<http://www.unescap.org/resources/un-ggim-overview> (Power point)

Prior to 2011 there was nothing around within the UN to address Geo-spatial information, so a UN Committee of Experts on Global Geo-spatial Information Management was formed (UN-GGIM). UN-GGIM is like a sister of the Statistical Commission – they also meet annually, discuss norms, worry about capacity, collect data, etc. One big difference between the Geo-spatial Community and the Statistics Community is the high level of engagement which the Geo-spatial Community has with the private sector.

The Committee of Experts on GGIM aim to better coordinate GGIM activities undertaken by member States, make joint decisions and set directions on the use of geo-spatial information within national and global policy frameworks and works with Governments to improve policy, institutional arrangements, and legal frameworks.

There is also a High Level Forum (HLF) on GGIM which is different to the Committee of Experts. The HLFs are more like conferences and platforms and involve a lot more interaction with the private sector, with outcomes generally being just a 1-2 page declaration covering main conclusions ideas which is brought back to the main Committee session. The HLF also aims to bring in the political level and involve a ministerial segment. The central theme of the most recent HLF addressed the SDGs, and it was quite clear that the SDGs present a great opportunity for the geo-spatial information community to make its contributions and inputs, particularly with respect to integrating the three pillars; social, economic and environment.

In the last couple of years the UN-GGIM Committee of Experts have under-pinned the global committee with a regional structure (eg UN-GGIM Asia-Pacific, etc).

The main drivers in integrating statistics and geo-spatial information include the post-2015 development agenda and in general the need to undertake more integrated analysis bringing dimensions such as social, economic and environment together and the geo-spatial platform is a very powerful tool in achieving this.

## **Panel Discussion**

The panel discussion took place in three “waves” which addressed the following issues:

Wave 1: What is it that we are trying to do and where we can work together?

Wave 2: How can this be achieved (eg, how can we overcome institutional challenges?)

Wave 3: How can we better connect with the policy makers and get the users involved?

To summarize the discussions held for each wave, the key question asked by the facilitator has been presented in italics, with the responses and comments from the panel and audience following, under a range of themes.

### Wave 1: What is it that we are trying to do and where we can work together?

*Question from the facilitator directed at NSO representatives on the panel primarily: How can geo-spatial information be used to measure SDGs and beyond. Can you provide examples of how this can be used for not just SDGs but also for the upcoming 2020 round of censuses?*

#### *Utilization for the census*

Fiji plan to use geo-spatial information to help minimize under-counts in the census. They are also looking at mapping outputs such as electricity grid access and the water supply network and making this available to users. (Fiji)

#### *Meeting SDGs*

In Fiji for the SDGs, the focus is mostly on providing small area estimates for poverty which has been successfully done in the past. Fiji have produced poverty maps with the help from WB, and the Australian Government has since stepped in and provided more funds for an “access to education” project, with areas identified as having high incidences of poverty being targeted for this project which has been ongoing for 3 years due to its success. (Fiji)

In the context of SDGs, a lot of the targets will be simply looking at the difference between urban and rural, and maps will be a powerful way to compare these two areas. (Australia)

#### *Interest in Disaster Risk Reduction*

Given Bangladesh is a disaster prone country, want to learn more about how they can use geo-spatial information as a tool to identify disaster risk areas, so they need more training in this area. (Bangladesh)

#### *Providing data files in a GIS friendly format*

ABS also provide their data to users in KMZ files which is easily picked up by GIS so the information can be mapped if desirable by users. (Australia)

GIS software used to be more expensive previously, but now becoming a lot more accessible and affordable. In Philippines a lot of local government units which are producing land use plans are now integrating all the data using GIS already, so they are requesting now for data in GIS format. (Dr Daag).

### *Addressing the issue of baseline data for SDGs*

For the MDGs there was a baseline of 1990, whereas for the SDGs the Baseline will be the end of 2015. How can geo-spatial information be linked with census data to help produce the baseline information required for the SDGs? (Myanmar)

There is an obvious issue in that the baseline information for the SDGs is 2015 whereas most countries around the world won't be producing their next census until 2020. However, there is a time frame of 15 years taking us up to 2030, so no need to get too nervous about having everything in place straight away – it's better to set it up right and do 10 years of quality monitoring, rather than rushing to have a weaker system in place by end of 2015. (UNSD - Facilitator)

### *Struggles with meeting user demands*

Lots of demands from business people to provide data within a 5km distance from town centers, but the statistics department doesn't currently have this knowledge as yet, so need more training in order to meet these user needs. (Sri Lanka)

Sri Lanka raised a good example where there are many users which need more information, and it's not being met due to communications between NSOs and Geo-spatial experts – problem may therefore not be in the technology or matching of various datasets, but the political environment in not fostering a strong collaborative environment between the key parties able to provide users with the required information (Dr Lal)

### *Geo-coding and Geo-referencing*

For statistics to be linked with geo-spatial information it is crucial to collect the right sort of geographical information during data collection processes to enable building of national estimates from smaller geographical areas. Needs to happen especially in the context of SDGs which require location based information thus requiring geo-coding to take place in all countries for the collection of data. Adoption of standards for this process will assist this process. (India)

When geo-referencing you don't need to necessarily assign a unit an X-Y coordinate. It may be sufficient to assign units to grids or census blocks, so if countries are having problems in attaching GPS weigh points to data collections, it may not necessarily prevent them from using the benefits of this tool. (Australia)

Many Pacific Island countries have had a lot of success in attaching GPS weigh points to their data collections. This is largely because the task is not as large for small island countries, so Fiji learnt a lot from the experience of Timor Leste and have applied that themselves to the situation in Fiji. (Fiji)

Encountered problems using GPS marking for the population census and dropped the idea after testing experiences showed unreliable results (depending on where enumerator stood around the house) and also GPS units went missing during the tests. (Nepal – during session 1)

As raised by Australia already, in addressing the geocoding problem – it's not necessarily critical to geo-code individual households – geo-referencing to small geographical areas may be sufficient. It can be advantageous to have geographical coordinates for units in data as well as knowing which geographical areas those units belong to. (Dr Lal)

### *Automated collecting of GPS weigh points*

Pakistan has used tablets for pilot surveys using GIS references especially in Living Standards Survey. As the interviewer goes to a house and opens their tablet the GIS system is directly entering the location in to the computer as well as the time. As data is entered and the survey is completed all data is automatically send to the server. Only done in urban areas thus far, not for the rural population

(60%) which is more difficult due to how scattered these areas are. So currently not able to integrate their data for the whole country as yet, but plan to do so down the track. (Pakistan)

#### *Integration of data with different geo-coding*

In Thailand each government department has different data sources which each have different maps and geographical coding which makes integrating the data more difficult. How can we solve this problem? In the short term - try and undertake a data matching exercise manually to integrate the data. In the long term - Thailand have set up a Fundamental Geographical Data Set (FGDS) which has 13 layers of geographical information for all Thailand which the NSO can then use to match its data with other government departments. (Thailand)

#### *Other general comments*

Geo-spatial Information providers are very good at providing information as opposed to data. It's easy for people to interpret a map and identify where they are located on what the status of their location is like compared to other locations. This challenge for NSOs is how they can embrace geospatial information so they can be better information providers, as opposed to data providers? (Australia)

For a country like India - work mostly at state level rather than national level and a lot of funding ADB provide goes in to roads. Question asked by the Ministry of Finance is that with all this work done in this state, what are the development outcomes we are seeing? To answer that we are trying to combine economic census data with household survey data (using small area estimation techniques) and overlay with information on where the roads are. If we can overcome the challenge of the geocoding we can hopefully, using modelling techniques, get the causality right. (ADB)

#### Wave 2: How can this be achieved (eg, how can we overcome institutional challenges?)

*Question from the facilitator: How do we work together? We have 2 different communities and 2 different government agencies getting involved (Statistical community and Geo-spatial community). If want to build this new strong information empire they need to work closely together. How is this happening in countries and how can we foster stronger relationships?*

#### *The challenges for the Maldives*

In Maldives with the unique geography they have with so many islands making up its country, geographical information and GIS is very important. Unfortunately not much progress has been made thus far as GIS is in one department and Statistics in another department so the development of the GIS system is not going at the pace which would be desirable. The NSO is also a little reluctant to share information for small geographical areas for confidentiality reason. In Maldives, one island = one resort = one business entity, so can't share information always. Advocacy is also very important – need to see advantages of having the system, so we can take advantage of the benefits of linking our systems.

#### *The success story of Bangladesh*

Bangladesh Bureau of Statistics has developed the geographical area code involving all the government departments and even the mapping organization, so the integration process is very easy in Bangladesh. They are using the geocode in the census and surveys and the mapping organization are using the same codes as are the election commission. Passport department is also using the same geocode. Other countries could take a similar lead as Bangladesh.

### *Some food for thought from the ADB*

Addressing the issue of improving collaboration between the two communities can be achieved by learning by doing. One example is an ADB technical assistance project where they are looking at using remote sensing technologies. The project entails working with the NSO on how to produce multiple estimates per year of crop area production (particularly rice) - working in 4 countries; Laos, Philippines, Thailand and Vietnam. One issue they are encountering is the software is quite complex - not for geo-spatial experts but for statistical community it is. A part of the TA is therefore addressing the issue of improving or simplifying the software used.

### Wave 3: How can we better connect with the policy makers and get the users involved?

*Question from the facilitator: The last piece of the puzzle brings in the 3<sup>rd</sup> big player – Policy Makers. How do we link with the policy dimension to make a strong triangle. The geo-spatial community and statistics community have a common problem – how do we sell this product to policy makers?*

#### *Improved education of policy makers*

Policy makers are after results rather than information. Sometimes the policy makers require more detailed information which doesn't exist or too difficult to produce so better education of policy makers on what is practical to produce may be required. (Dr Daag)

This issue is more easily solved if we have smart policy makers (joke). The issue at hand is why policy makers do not rely on the information provided by statisticians and geo-spatial experts? Perhaps they don't understand the information being produced enough and the complexities associated with integrating systems. Also part of the problem may be that previous results provided have not been clear or can't solve their problems and hence is not used. Improved education of policy makers is therefore required. (Thailand)

Cost aspect is important; data collection is costly and geo-spatial software are costly and the collection of data compatible to geospatial application is also costly. Hard to convince policy makers to understand why you need unit record data geo-coded and then getting this data aggregated for production at different levels. What is important is how we standardize the process – if process involves collecting data at the unit level it becomes a difficult proposition for making a budget friendly operation for the government to accept – Is a major concern and decision making in these areas will be difficult unless we make a compromise on how we would provide our estimates – top down or bottom up approach? (India)

#### *Use evidence based information more during the planning phase*

NSOs and geospatial experts have a common problem in getting politicians to the table and share ideas especially in getting them to invest in this work. What is lacking is that most countries don't have enough evidence based policy directives so if we can start to improve this then it should create a great chance to integrate various information together. UN agencies and agencies like ADB when involved in major projects, it would be great if evidence based information is used in the planning stage as well as the monitoring stage. If this occurs then we a chance to influence politicians on gaining support for this work. (Dr Lal)

#### *Meet more regularly with policy makers to update them of progress of work*

Philippines Statistics Authority report to a high policy making body (PSA board) – members include vice-ministers of all nine agencies (co-chairs are the Minister of Planning and Vice Minister of budget) – this is the link they have with the policy makers in Philippines. The PSA need to be very strong about maintaining its independence. Not all vice-ministers attend board meetings as they are

very busy so they get one of their directors to attend in their place (PSA request it's the same one so they have a history of discussion). PSA also conduct inter-agency committees which meet once a quarter to show policy makers what statistics are doing. (Philippines)

*Better use of outputs to generate funding for future projects*

One experience from an agriculture project ADB was involved in was they managed to convince one of the agencies responsible for budgeting to provide more resources on the basis of presenting the different estimates of the crop yields from the different surveys. Having geo-spatial maps to present the results would have an even greater impact. (ADB)

*Role of UN and International Agencies*

Facilitator final comments) There is a role for the UN and international agencies to help countries with advocacy with good examples and working with the government in helping to overcome some of the institutional problems we are facing. (UNSD – Facilitator)

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