SUMMARY OF TYPHOON COMMITTEE ROVING SEMINAR 2007
(Manila, Philippines, 5 - 8 September 2007)

(A) EVENT SUMMARY

I. Organization

1. The Seventh Roving Seminar of the Typhoon Committee was held at the Diamond Room of the Tiara Oriental Hotel, in Makati City, Philippines, from 5 to 8 September 2007.

2. The TC Roving Seminar 2007 was attended by a total of 43 participants, which included 2 from China; 2 from Hong Kong, China; 2 from Malaysia; 3 from Viet Nam; 1 each from Singapore, Republic of Korea and Thailand; 27 from the Philippines; as well as 3 lecturers from the USA and Japan.

II. Opening

The TC Roving Seminar was declared open by Acting Director Martin F. Rellin, Jr. of the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) at the Tiara Hotel on 5 September 2007.

Dr. Olavo Rasquinho, Secretary of the Typhoon Committee delivered his opening message and also read the message of Mr. Edwin S.T. Lai, Chairman of the Training and Research Coordination Group (TRCG).

The Keynote Address of the Secretary of the Department of Science and Technology (DOST), Hon. Estrella F. Alabastro, was delivered by Asec. Carol M. Yorobe of DOST.

III. Adoption of the Program

The Roving Seminar adopted the program (not shown here).

IV. Working Seminar

1. The Roving Seminar officially started with Mr. Bart Hagemeyer of National Oceanic and Atmospheric Administration (NOAA) giving his lecture on Doppler Radar Analysis (Rain and Wind) after which a question-and-answer discussion followed.

2. Mr. Roger Edson of NOAA was the second lecturer with a topic on Satellite Analysis (QuikScat and Microwave Imageries) followed by a question-and-answer forum.

3. Dr. Tetsuo Nakazawa of MRI/Japan Meteorological Agency (JMA) gave his lecture on Interaction of Tropical Cyclones with Monsoon Systems and was followed by a question-and-answer discussion.

4. The Roving Seminar also included a visit at the facilities of the Weather and Flood Forecasting Center of PAGASA from after which a lecture was given to the participants by Messrs. Robert Sawi and Robert Rivera, who are both PAGASA forecasters.

5. The three lecturers gave the second parts of their respective lectures on the next succeeding days of the seminar.

The participants gave a warm appreciation to the three lecturers for their outstanding presentations, which provided the participants new insights on the topics discussed.

V. Proposals/Recommendations

Round-up discussions among the participants and lecturers resulted in a number of proposals and recommendations as shown in Section (B).

VI. Closure of the Roving Seminar

The participants from the member-countries of the Typhoon Committee expressed their gratitude and appreciation to the Government of the Philippines and the PAGASA for the successful hosting of the Roving Seminar, for their excellent arrangements and warm hospitality.

The Closing Remarks was given by Dr. Prisco D. Nilo, Chairman of the Typhoon Committee, after a brief remark by Dr. Olavo Rasquinho and the presentation of certificates of completion to the participants. Gifts or tokens were also distributed to the foreign participants and lecturers. The Roving Seminar was closed on 8 September 2007.

(B) SEMINAR RECOMMENDATIONS

1) Radar module: (a) more technical training in different uses of the Doppler radar; (b) separate training for radar operators to coincide with the Roving Seminar; (c) training for a smaller group of participants to give more focus and more days in a real workshop.

2) Satellite module: (a) more practical training on Dvorak analysis; (b) general satellite interpretation and tropical cyclone analysis.

3) Monsoon module: (a) research study on systems that develop to the west of the Philippines; (b) quantitative rainfall forecast through the use of models,

nowcasting techniques, satellites and radars; (c) mesoscale systems outside the tropics, or rainfall events not related to the tropics.

4) Others: (a) possibility to include some knowledge on current status of probabilistic forecast; (b) topics on proper utilization of numerical models for NMHSs in future roving seminars; (c) use of ensemble forecasts to understand variations of different models; (d) accommodating more participants and afterwards they can share the knowledge to others; (e) subjects related to aeronautical meteorology; (f) effects on tropical cyclones due to global warming; (g) separate training for research and operational groups; (h) wave, storm surge and marine forecasting; (i) intensity and intensification of tropical cyclones; (j) tropical cyclones landfall impact and forecasting aspects for disaster preparedness; (k) modelling and statistical methods for track and intensity forecasts; (l) NWP forecasts augmented by systematic or knowledge-based approach and highly experienced chart analysis.

Prioritization as suggested by lecturers:

Mr. Edson: 1) combination of ensemble and numerical forecasting, understanding the behaviour of TCs; 2) understanding of waves, storm surge and marine forecasting; 3) rainfall forecasting; 4) knowledge-based systematic approach to tropical cyclone forecasting.

Mr. Hagemeyer: 1) focus on applications and better use of radars for landfalling tropical cyclones; 2) quantitative rainfall forecasts several days in advance; 3) storm surge and marine forecasting.

Dr. Nakazawa: 1) a balanced understanding of events across different spatial and time scales; 2) wider coverage for El Nino and La Nina.

Other feedback received from lecturers: 1) capacity building for running non-hydrostatic models for tropical cyclone forecasting; 2) use of ensemble techniques to ascertain forecast uncertainties; 3) development of radar-based products and applications for forecasts and warnings of tropical cyclones.

(C) SEMINAR EVALUATION

All three lecturers and 38 participants (though not all gave answers to all questions) returned their evaluation forms.

On seminar arrangement and logistics, trainers and trainees were asked to rate 10 various aspects as “below”, “met” or “exceeded” expectation. The top two aspects were “refreshments” and “helpfulness and friendliness of organizers”; the relatively low scores, just meeting expectation, were “accommodation” and “funding arrangements”.

On the contents and delivery of the three training modules, and on a scale of 1 to 5, the following average scores were obtained from the trainees:

Level of interest:	4.7
Contents:	4.5
Organization:	4.4
Presentation:	4.6
Training and practical material:	4.4
Language and understanding:	4.6
Overall effectiveness:	4.3

For a simplistic interpretation of the scores, both the level of interest and achieved effectiveness were high. In search of room for improvement, such as for effectiveness to match the level of interest, may be more attention should be given to the organization and preparation of training material. The view was also shared by one of the lecturers during the discussion sessions, who suggested that training notes (3-4 pages) be distributed describing the overview of presented material to give participants a better idea of what topics were to be discussed.

On the designs and structures of the three modules, trainees were asked to make some qualitative assessment. In summary, the radar and satellite modules were both just about right in terms of objectives, scope of coverage, technical level, and theoretical vs. practical emphasis; but both were considered to be too short in duration, reflecting a popular demand for more discussion, interaction with trainers, and hands-on practical sessions. The monsoon module was found to be too wide in coverage and slightly too theoretical; probably the result of mixing a topic with slightly more research flavour for a group of predominantly operational trainees.

For potential applications of the training material, nearly all trainees considered the knowledge and techniques acquired would be operationally useful. Even more encouragingly, over 90% of the respondents indicated that they would be able to apply such knowledge and techniques operationally within five years, and nearly 60% of respondents in a matter of two years.

Links pointing to some web-based training and reference materials on TC forecasting:

http://www.meted.ucar.edu/topics_hurricane.php

http://www.bom.gov.au/bmrc/pubs/tcguide/globa_guide_intro.htm

http://www.nrlmry.navy.mil/training-bin/training.cgi

http://rammb.cira.colostate.edu/wmovl/VRL/PPtLectures/TROPICAL/
or
http://rammb.cira.colostate.edu/wmovl/VRL/PPtLectures/Lectures.htm

http://www.isse.ucar.edu/trmm/presentations.html

https://metocph.nmci.navy.mil/jtwc/jtwc_fcst_env_files/frame.htm