

**Programme of
Forests-Water-People in the Humid Tropics:
Past, Present and Future Hydrological Research for Integrated
Land and Water Management**

**Day 1
Sunday, 30 July 2000**

Registration

Inaugural addresses and poolside welcome reception

- ?? Welcoming speech by the Vice Chancellor Universiti Kebangsaan Malaysia, host of Symposium & Workshop, Prof Datuk Dr Anuwar Ali.
- ?? Welcoming speech by Mike Bonell, Head, Section on Hydrological Processes and Climate, Division of Water Sciences, UNESCO Paris.
- ?? Opening Ceremony by the Rt. Chief Minister of Selangor, The Rt. Hon. Dato' Dr Hj Abu Hassan Omar

**Day 2
Monday, 31 July 2000**

Session I: Land-use change in the humid tropics: current trends and perspectives

Chairperson: H. Grip

1. Overview of land cover changes taking place in the humid tropics
R. Drigo
2. Impacts of land-use change: a policy maker's perspective
D. Murdiyaso
3. Impacts of Land-Use Change in the Brazilian Amazon from a Resource Managers Perspective
E. A. Serrão & I. Thompson
4. Forest People and Changing Tropical Forestland Use: The Role of Hydrology
J. Schweithelm

Session II: Hydrological processes in 'undisturbed' forest

Chairperson: J. Gash

1. The meteorology and climatology of rainfall in the humid tropics
J. Callaghan, M. Bonell, G. Connor & E. Planos Gutierrez
2. Climatic variability including ENSO events (droughts, extreme events)
E. Servat, G. Mahe & Maley
3. Physical and physiological controls of evaporation
J. M. Roberts, J. Gash, M. Tani & L.A. Bruijnzeel
4. Runoff generation processes mostly at the headwater scale
M. Bonell, H. Eisenbeer, S. Noguchi & O.O. Ogunkoya
5. Erosion, sediment yield and solute loads in the Humid Tropics
J.L. Guyot & I. Douglas

6. Biogeochemical cycling
J. Proctor

Day 3

Tuesday, 1st August 2000

Session III: Hydrological and soils impacts of natural and anthropogenic forest disturbances

Chairperson: L. A. Bruijnzeel

1. Natural Disturbances and the Hydrology and Ecology of Humid Tropical Forests
F. N. Scatena, E. Planos Gutierrez & J. Schellekens
2. Spatially-significant effects of selective, tropical forestry on water, nutrient and sediment flows: a modelling-supported review
N.A. Chappell, A. Rahim, & Y. Zulkifli
3. Effects of shifting cultivation and forest fire
A. Malmer, D. Murdiyarso & M. van Noordwijk

Soil and water impacts of forest conversion

Chairperson: E. Planos-Gutierrez

1. Soil and water impacts during forest transformation and stabilisation to new land use
H. Grip, E.A. Serrão, J.M. Fritsch & L.A. Bruijnzeel
2. Impacts of forest disturbance and conversion on freshwater invertebrate communities
N. Connolly & R. Pearson

Session V: Soil and water impacts associated with forest recovery and rehabilitation of degraded land

Chairperson: W.R.S Critchley

1. Forest recovery: changes in vegetation structure, nutrient pools and the hydrological cycle
D. Holscher, J. Mackensen & J.M. Roberts
2. The hydrological impacts of reforestation of grasslands, natural & degraded and of degraded forest in the tropics
D.F. Scott, M.J. Waterloo, J. Mackensen & L.A. Bruijnzeel
3. The potential of Agroforestry for Sustainable Land and Water Management
J. Wallace, A. Young & C.K. Ong

Session VI: New methodologies to help evaluate the effects of land-use change at various scales

Chairperson: M. Tani

1. Parsimonious, spatial representation of tropical soils within dynamic, catchment hydrological models
N.A. Chappell & R. Vertessy

2. New Remote Measurement Tools in Forest Hydrology and Management
A. Held

Day 4

Wednesday, 2 August 2000

Continue : Session VI: New methodologies to help evaluate the effects of land-use change at various scales

Chairperson: M. Tani

3. Change detection in series of hydrological data
W.Z. Kundzewicz & A.J. Robson
4. Modelling of streamflow discharge in ungauged catchment of Northern Thailand
S. Schreider & A. J. Jakeman
5. A comparative study of humid tropics catchment models
C. Barnes & M. Bonell
6. Isotope Tracers in Catchment Hydrology: Research Tools for Integrated Land and Water Management
J. McDonnell & C. Kendall
7. Assessment of the impact of logging activity on forest stream ecology - temperate and tropical techniques and experiences
P. Davies

Day 5

Thursday, 3 August 2000

Session VII: Different perspectives on people - land use - water issues

Chairperson: E. A. Serrao

1. Policy and Management issues arising from the previous scientific sessions
D. Lamb & D. Gilmour
2. Useful Myths and Intractable Truths, The Politics of the Link Between Forests and Water in Central America
D. Kaimowitz
3. Forest management practices and watershed services - a Malaysian perspective
Chiew T. H.
4. Economic analysis of energy flows at the national level
C. Hall & Ko J.-Y.
5. Economic Analysis of Land-use Change in a Watershed Context
B. Aylward
6. People in tropical forests: problem or solution?
A. Hall

Session VIII: Critical appraisal of existing guidelines for best management practices

Chairperson: M. Bonell

1. Guidelines for controlling the watershed impacts of timber harvesting operations - a critical appraisal of Logging and watershed management some reflections on the disjuncts between policy and practice
D. Cassells
2. Guidelines for forest clearing operations
L.S. Hamilton
3. Soil and Water Management Methods for Rainfed Upland Agriculture
W.R.S. Critchley

Day 6

Friday, 4 August 2000

Session IX: Management and policy implication - a framework for research action (Workshop)

1. Summary of policy and management issues arising from sessions VII and VIII presentations
D. Lamb, M. Spilsbury & D. Gilmour
2. Workshop Topics
 - Topic 1: Important Hydrology-related Problems
Coordinator: J. Vanclay
Rapporteur: D. Cassells

Question to be addressed:

What are the major tropical land management problems in relation to hydrological processes?

- Topic 2: Application of knowledge
Coordinator: Chiew T. H.
Rapporteur: M. Spilsbury

Questions to be addressed:

- a. What are the best methods (policy; tools; techniques etc) to use new and exciting hydrological, knowledge to enhance Ecologically Sustainable Forest Management?
- b. What are the constraints that limit the application of this knowledge?

3. General Discussion of Workshop Findings
Chairperson: D. Lamb
4. Workshop overview
D. A Gilmour
5. Recommendations & Resolutions for the XXI IUFRO World Congress
L. Hamilton & J. Gash

- discussion

Concluding remarks
M. Bonell

Mr Koichiro Matsuura, Director General of UNESCO to address the audience/Closing Ceremony.

Departure of Mr Matsuura and dignitaries

End of Workshop & Symposium

Planned additional contributions to the monograph but which were not presented during the Symposium sessions as indicated

Session II: Hydrological processes in 'undisturbed' forest

7. Large-scale hydrological impacts of forest conversion
8. Swamp forest hydrology
9. Tropical montane cloud forest hydrology

Session VI: New methodologies to help evaluate the effects of land-use change at various scales

8. Biological-traditional knowledge on water quality indicators
9. Erosion modelling