

CURRICULUM VITAE

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EDUCATIONAL HISTORY

- (1) Primary and secondary school in Queensland, Australia
- (3) QDA (Queensland Dipl. Agriculture) at Qld Agricultural College, Lawes (Gatton) 1956.
- (4) B.Agr.Sc. Queensland University, 1963, with major in plant breeding and genetics.
- (5) M.Sc. Forestry Department, Australian National University, Canberra 1971.
- (6) Ph.D. Forest science. Forestry Department, Australian National University 1976

HONORARY ACADEMIC APPOINTMENTS

- (1) Adjunct Associate Professor, School of Tropical Biology, James Cook University, Queensland (1999-2006)
- (2) Adjunct Associate Professor (1994-99) Adelaide University, Botany Department.
- (3) Honorary Research Fellow, CSIRO Division of Wildlife and Ecology (1994-99).
- (4) Research Fellow, Conservation International. (1999 to 2000).
- (5) Senior Associate Scientist, Center for International Forestry Research (CIFOR) (1998 to 2002)

EMPLOYMENT HISTORY

- (1) 25.08.57. Assistant Agricultural Officer, Extension. Department of Agriculture, Stock and Fisheries, Papua New Guinea Public Service.
- (2) 14.02.61. Agricultural Officer PNG
- (3) 30.11.64. Botanist PNG Dept of Forests
- (4) 18.05.66. Ecologist PNG Dept of Forests
- (5) 01.02.67. Forest Officer PNG Dept of Forests.
- (6) 28.12.72. Experimental Officer, Woodland Ecology Unit, Commonwealth Scientific and Industrial research organization (CSIRO) Divison of Land Use Research, Canberra. Australia.
- (7) 1977. Senior Research Scientist CSIRO, LUR

- (8) 1981 – 1986 Principal Research Scientist CSIRO, LUR
- (9) 1986 - 1994. Principal Research Scientist, CSIRO Division of Forest Research and later at the Tropical Forest Research Centre, Atherton (CSIRO Division of Wildlife and Ecology).
- (10) 1994-01/04/98 Principal Research Scientist at CIFOR (Center for International Forestry Research, Bogor, Indonesia). Project leader, Forest Ecosystem Management.
- (11) 05/1998 to 06/2002: Senior Associate Scientist (consultant) for CIFOR.
- (12) CEO, Center for Biodiversity Management, (Australia) (September 1999 ongoing)

LEARNED SOCIETIES

- Member, and Past President*, Ecological Society of Australia (1974-current)
- Fellow*: Explorer's Club of New York (1981)
- Member*: (Chairman, Canberra), Australian Systematic Botany Society (1980-93)
- Member*: Australian Society of Authors (1989-ongoing)
- Member*: American Institute of Biological Sciences (2000-ongoing)
- Member*: American Association for the Advancement of Science (2000-ongoing)

INTERNATIONAL ADVISORY AND REVIEW PANELS

2007. Appointed to Roster of Experts (biodiversity) on the Scientific and Technical Advisory Panel (STAP) of the Global Environment Facility (GEF).

RESEARCH FOCUS

Sustainable land management requires understanding the nexus between primary ecosystem drivers and economic tradeoffs. Because the acquisition of baseline information is essential to this process, I have focused on developing generic, cost-efficient methods of rapid resource appraisal including biodiversity. Basic research is coupled with technology transfer in the form of user-friendly software to assist data collection, storage and analysis and potential mapping of plant and animal distribution. In the past decade I have established a network of global, ecoregional study sites in several key agroecological zones including the Eastern and Western Amazon Basin, Indomalesia, Humid Tropical West Africa and the Southwest Pacific. These became multi-disciplinary *foci* for comparative studies on the impact of land use on biodiversity and productivity, resulting in significant improvements in biodiversity survey methods and generic, training modules in rapid resource assessment. In addition the Center for Biodiversity Management has access to uniformly collected, primary resource data from more than 1800 sites worldwide that is contributing to modelling vegetation response to environmental change (IGBP/ DIVERSITAS/QUEST 'Fast Track Initiative') and the global public access database TRY. The gradient-based, rapid survey technology, now implemented by many agencies (WCMC, US-NPS, UNEP-CBD, FAO) has enabled the identification of actual and potential linkages between biodiversity, above-ground carbon and key soil physico-chemical properties. Ongoing research aims at replicating sites in poorly studied regions regions to assist in understanding the dynamic linkages between biodiversity and profitability. Outcomes provide critical baselines for

estimating payments for environmental services (PES) or biodiversity offsets. Intensively studied baseline data from multidisciplinary surveys in Brazil, Bhutan, Indonesia, Mozambique and Thailand have resulted in readily identifiable generic indicators for biodiversity and agricultural productivity. This research background has provided me with the necessary expertise for assessing EIA and SEA in a wide range of tropical environments and island ecosystems that most recently include circumboreal studies in Fennoscandia and the Russian far East.

INTERNATIONAL COMMITTEES (1998 TO PRESENT)

Member, Global Steering Group, ICRAF, global ecoregional project on Alternatives to Slash and Burn.; CBM representative as ASB consortium member 2000 ongoing; Member, Coordinating Committee, Global Monitoring Network for Biodiversity, Conservation International 1999-2001. Member, Advisory Committee, Global Litter Invertebrate Decomposition Experiment (GLIDE) 2003-5. Other numerous advisory committees in CSIRO and CIFOR (see consultancy reports)

PAPERS PRESENTED AT WORKSHOPS, INTERNATIONAL SYMPOSIA AND OVERSEAS INSTITUTIONS

More than 100 papers and keynote addresses presented at international symposia and institutional meetings including numerous papers, mostly on biodiversity and forest ecosystem management and mainly in Australia (CSIRO, various universities) Europe and USA (IGBP, BAHC, EU, MEA, Cornell Univ., World Bank, UNDP, USAID, ESA, Smithsonian Institution); UK (Oxford & Cambridge Univ., Natural History Museum, Institute of Terrestrial Ecology; Millennium Ecosystem Assessment). In addition I have delivered many presentations at research and training institutions in South-East Asia (Indonesia, Thailand, Vietnam, Philippines), mainland Asia (Bhutan, India) and East Africa (Mozambique) and the Russian Far East (Vladivostok, IBSS, FEBRAS).

PRESENTATIONS AT INTERNATIONAL MEETINGS 2009

- Gillison A.N. (2009). *Exploiting linkages between soil quality, biodiversity and agricultural production*. UN-DESA. High-Level Intersessional Meeting of the Commission on Sustainable Development. *African Agriculture in the 21st Century: Meeting the Challenges, Making a Sustainable Green Revolution* 9-10 February 2009 Windhoek, Namibia.
- Gillison A.N. (2009). *Biodiversity and conservation – a continuing study*. Desert Training and Research Centre, Gobabeb, Namibia. 14 Feb. 2009.
- Gillison A.N. (2009). *Assessing biodiversity – some contemporary pathways*. National Botanical Research Institute, Windhoek, Namibia. 20 Feb. 2009.
- Gillison, A.N. (2009). *A Dynamic Information Framework in Bhutan (DrukDIF) for sustainable biodiversity management*. Workshop on preparation for DrukDIF (Government of Bhutan, NSSC; DANIDA and World Bank). (Thimphu, 27 March 2009).

Gillison, A.N. (2009). *A Dynamic Information Framework for Bhutan (DrukDIF) and the National Biodiversity Commission (NBC)*. (Serbithang, Thimphu, 1 April 2009)

Gillison, A.N. (2009). *Agro-bio-climatic models: Towards a generic Land Management Typology*. UN-DESA expert group meeting on “Sustainable land management and agricultural practices in Africa: Bridging the gap between research and farmers”. (16 April 2009) Gothenburg, Sweden.

PUBLICATION LIST

Pre-1990

Gillison, A.N. (1969). Plant succession in an irregularly fired grassland - Doma Peaks Region, Papua. *J. Ecol.* 57, 415-28.

Gillison, A.N. (1970). Structure and floristics of a montane grassland forest transition, Doma Peaks Region, Papua. *Blumea* 18, 72-86.

Gillison, A.N. (1970). Dynamics of biotically induced grassland/ forest transitions in Papua New Guinea. Unpubl. M.Sc. Thesis, Dept Forestry, Australian National University, Canberra.

Gillison, A.N. (1972). The tractable grasslands of Papua New Guinea. In: M. Ward (ed.) *'Change and Development in Rural Melanesia'*. Proceedings of the Fifth Waigani Seminar, pp. 161-72. University of Papua New Guinea and the Australian National University, Port Moresby.

Gillison, A.N. (1975). Phytogeographical relationships of the northern islands of the New Hebrides. *Phil. Trans. R. Soc. Lond. B.* 272, 385-90.

Gillison, A.N. (1976). Taxonomy and autecology of the grey box *Eucalyptus moluccana* Roxb. (*s. lat.*), Myrtaceae. Ph.D. Thesis, Forestry Dept, Australian National University, Canberra.

Gillison, A.N. (1976). Report on the conservation of vegetation on Christmas Island, Indian Ocean. In *'Christmas Island Environment and Conservation'*, 25pp. Report from the Environment Reconnaissance team, (Department of Administration Services, Canberra.)

Gillison A.N. (1976). A review of problems and techniques in restoring the tropical forest ecosystem once it has been altered. *Report on Symposium on Ecological Effects of Increasing Human Activities on Tropical and Subtropical Forest Ecosystems*. University of Papua New Guinea. 28 April-1 May 1975. Australian UNESCO committee for Man and the Biosphere. Publ. No. 3, pp. 51-71. (Aust. Govt Publ. Service, Canberra)

Gillison, A.N. (1978). Minimum spanning ordination - a graphic-analytical technique for three-dimensional ordination display. *Australian Journal of Ecology* 3: 233-8.

Gillison, A. N. 1980. The management of mangrove forest systems in Micronesia. Preliminary report for CSIRO Division of Land Use Research. Institute of Earth Resources, Canberra, Australia.

- Gillison, A.N. (1981). Towards a functional vegetation classification. In: A.N. Gillison and D.J. Anderson (eds.) *'Vegetation Classification in Australia'*, pp. 30-41. CSIRO and Aust. Natl University Press, Canberra.
- Gillison, A.N. (1983). Resource inventory and conservation aspects in tropical vegetation. In: Ooi Jin Bee (ed.) *'Natural Resources in Tropical Countries'*. pp. 371-401. (Singapore University Press, Singapore).
- Gillison, A.N. (1983). Tropical savannas of Australia and the South-west Pacific. In: F. Bourlière (ed.) *'Tropical Savannas'*, In: D.W. Goodall (ed.-in-chief) *'Ecosystems of the World'* 13, 183-243. (Elsevier, Amsterdam).
- Gillison, A.N. (1984). The 'dry' rainforests of Terra Australis. In: G.L. Werren and A.P. Kershaw (eds.) *'Australian National Rainforest Study Report to the World Wildlife Fund (Australia)'* Vol. 1. pp. 213-30. Proc. workshop on the past, present and future of Australian rainforests, Griffith University, December 1983, Geography Department, Monash University, for the Australian Conservation Foundation.
- Gillison, A.N. (1984). Gradient oriented sampling for resource surveys - the gradsect method. In: K.R. Myers, C.R. Margules and I. Musto (eds.) *'Survey Methods for Nature Conservation'* pp. 349-74. Proc. Workshop held at Adelaide Univ. 31 Aug. to 31 Sept. 1983. (CSIRO (Aust.) Division of Water and Land Resources, Canberra).
- Gillison, A.N. (1985). The dry rainforests of Australia. P. Figgis (ed.) Chapter 7 in *'Australian Rainforests'*. Wattle Books, Sydney.
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- Gillison, A.N. (1987). The Role of Vegetation Science in Regional Planning and Environmental Monitoring in the Year 2000. In: Suchata Jinachitra, (ed.) *Proceedings of Regional Seminar on 'The Role of Science and Technology in the Year 2000: Strategies for Development'*. pp. 78-95. Publ. The Science Society of Thailand under the auspices of Chulalongkorn University and UNESCO.
- Gillison, A.N. (1987). The dry rainforests of *Terra Australis*. In: A.P. Kershaw and G. Werren (eds.) *'The Rainforest Legacy'* Volume 1. Special Australian Heritage Series Number 7(1): 305-321.
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- Gillison, A.N. (1989). The use of plant functional attributes and biophysical gradients in estimating fire risk in tropical vegetation. In: B.R. Roberts and G.L. Unwin (eds.) *Fourth Queensland Fire Research Workshop*. pp. 11-24. Darling Downs Institute, Toowoomba, Qld. (Proceedings produced as a book, 1991)
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1990-2000

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- Gillison, A.N. (1993b). Grasslands of the Southwest Pacific. In: *Natural Temperate Grasslands: Eurasia, Africa, South America and Oceania*, R.T. Coupland (ed.) In: *Ecosystems of the World* ed.-in-chief D.W. Goodall, 8B. pp. 435-469. Amsterdam: Elsevier Scientific Publ. Co.
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- Gillison, A.N. (1997). Mapping the potential distribution of plants and animals for wildlife management: the use of the DOMAIN software package. In: K. Romimoharto, S. Hartono and S.M. Sonarno (eds.). *Proceedings of the National Seminar on The Role of Wildlife Conservation and Its Ecosystem in National Development*, pp.114-19 + two maps. The Indonesian Wildlife Fund (IWF), Jakarta, Indonesia.
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- Gillison, A.N. (2000b). Summary and overview. In: A.N. Gillison (Coord.) Above-ground Biodiversity assessment Working Group Summary Report 1996-99 Impact of different land uses on biodiversity. pp.19-24. Alternatives to Slash and Burn project. ICRAF, Nairobi.
- Gillison, A.N. (2000c). A Field Manual for Rapid Vegetation Classification and Survey for general purposes. (CD-ROM) Center for International Forestry Research, (CIFOR), Bogor, Indonesia.
- Gillison, A.N. (2000d). VegClass software package for data entry and analysis for vegetation survey. CD-ROM Center for International Forestry Research, (CIFOR), Bogor, Indonesia.
- Gillison, A.N. (2000e). Intermediate agroforests and late fallow systems as optimal strategies for sustainable management of biodiversity and profitability in tropical forests. Paper presented at workshop, *Cultivating (in) tropical forests. The evolution and sustainability of intermediate systems between extractivism and plantations*. CIFOR-FORESASIA, 28 June-1 July 2000, Lofoten, Norway.
- Gillison, A.N. et al, (1998). Overview report of the ASB Intensive biodiversity baseline study Nov.-Dec. 1997. Ca. 65 pp. 12 Tables, 5 Annexes and 4 Maps CIFOR Working Paper
- Gillison, A.N. and Boyle, T.J. (1995). Contributors In: K. Miller, M.H. Alegretti, N. Johnson and B. Jonsson eds: Section 13: Measures for conservation of biodiversity and sustainable use of its components.(13.3.3 Managing biodiversity in forestry) pp. 952-960. In: V. H. Heywood and R.T. Watson (eds.) *Global Biodiversity Assessment*. Cambridge University Press.

- Gillison, A.N. and Carpenter, G. (1997). A generic plant functional attribute set and grammar for dynamic vegetation description and analysis. *Functional Ecology* 11, 775-783.
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- Carpenter, G., Gillison, A.N. and Winter, J. (1993). DOMAIN:a flexible modelling procedure for mapping potential distributions of plants and animals. *Biodiversity Conservation* 2, 667-680.
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2001-2010

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2010-2013

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Technical Memoranda (CSIRO)

[Commonwealth Scientific and Industrial Research Organization (CSIRO)
Division of Water and Land Resources, Canberra]

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Constantino, R., Couto, E.G., Djarwadi, Hairiah, K., Jepson, P., Kartono, A.P., Maryanto, I., Neto, G.G., Neto, R.J.V., van Noordwijk, M., Nunes, P.C., de Oliveira, D.M. Silveira, E.A., Sinaga, M.H., Susilo, F-X. & Vosti, S.A. Plant functional types and traits as biodiversity indicators for tropical forests: two biogeographically separated case studies including birds, mammals and termites Submitted to *Biodiversity and Conservation* April 2013

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Gillison, A.N. **Vegetation Classification and Survey.** (Wiley-Blackwell Publishing UK).

INTERNATIONAL CONSULTING AND RESEARCH SITES

Australia, (including Christmas Island (Indian Ocean), Australian Sub-Antarctic Territory, Lord Howe and Norfolk islands); India- (Assam, Arunachal Pradesh), Indonesia- (Borneo, Java, Sulawesi, Maluku, Sumatra), Nepal, South Korea, Outer Mongolia; Thailand, Vietnam, Malaysia (Sabah), Philippines; New Zealand, Nauru, Papua New Guinea, Vanuatu, Solomon Islands, Fiji, W. Samoa, American Samoa, Tonga, Micronesia: Guam, (FSM) (Marianas, Ponape, Yap, Truk, Belau); French Polynesia – (Papeete, Moorea); Argentina, Bolivia, Brazil – (Eastern, Southern and Western Amazon basin), Chile (incl. Easter island), Colombia, Costa Rica, French Guyana, Guyana, Martinique, Mexico (Veracruz, Yucatan), Panama, Perú, Venezuela; Iceland, Finland, Norway, Sweden; Austria, Germany, Switzerland, UK (England, Scotland), Spain (Canary Is.), Georgia (Central Caucasus Mts); Burkina Faso, Cameroon, Kenya, South Africa, Madagascar, Malawi, Mali, Moçambique, Namibia, Russia (Far East, Vladivostok, Kamchatka), Tanzania, Uganda, United Arab Emirates; Canada (Ontario, British Columbia), USA (N.E.) including Hawaii and E. Samoa.

LANGUAGE PROFICIENCY

English, mother tongue; limited conversational French and Spanish; fluent in South West Pacific pidgin languages (NeoMelanesian pidgin, Bislama (Vanuatu), including Hiri Motu (Papua); conversational Bahasa Indonesia.