

CURRICULUM VITAE

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December 2010

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EDUCATION

- (1) Primary and secondary education in Queensland, Australia
- (2) QDA (Queensland Diploma in Agriculture) at Qld Agric. College, Lawes 1956.
- (3) B.Agr.Sc. Queensland University, 1963, major in plant breeding and genetics.
- (4) M.Sc. Forestry Department, Australian National University, Canberra 1971.
- (5) 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

- (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) Division of Land Use Research (LUR), Canberra. Australia.
- (7) 1977. Senior Research Scientist CSIRO, LUR
- (8) 1981 – 1986 Principal Research Scientist CSIRO, LUR

- (9) 1986 - 1994. Principal Research Scientist, CSIRO Forest Research Div. and later at the Tropical Forest Research Centre, Atherton (CSIRO Div. 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 (1981/2)

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)

Member: British Ecological Society (current)

RECENT INTERNATIONAL ADVISORY AND REVIEW PANELS

- 2005 Reviewer science proposals NWO, Netherlands.
- 2007. Appointed to Roster of Experts (biodiversity) on the Scientific and Technical Advisory Panel (STAP) of the Global Environment Facility (GEF).
- 2009. Member, international expert panel on agricultural technology for African smallholders. UC/M.I.T. Berkeley. Gates Foundation.
- 2009. Associate editor, (new journal) 'Vegetation Classification' (Wiley Blackwell).
- Reviewer/ referee numerous scientific journals.

RESEARCH FOCUS

The rapid decline of biodiversity worldwide demands cost-efficient methods of rapid resource appraisal in order to acquire appropriate baseline information for policy planners and land managers. To this end I have developed a rapid survey protocol where key biophysical data are sampled using environmental, gradient-directed transects (gradsects). Gradsect methodology is now in wide use (WCMC, UNEP-CBD, FAO) including the mainland USA (US-NPS) where gradsects form the underlying framework for national vegetation classification and ecological survey. The science-based methodology (the 'VegClass' system) builds on previous systems but includes the recording of plant functional types using a now established, generic typology. The system is supported by user-friendly, public domain software that facilitates data collection, storage and analysis as well as potential distribution mapping of biota. It is well suited to technology transfer and has been successfully applied in training workshops in 12 developing countries. The method is being increasingly used as a teaching tool in many universities.

My aim is to establish a global database for biodiversity conservation for which adequate networking and environmental coverage are essential. In 1999 I established the Center for

Biodiversity Management (CBM)¹ as a hub for a network of study sites in key agroecological zones that include the Eastern and Western Amazon Basin, Indo-Malesia, Humid Tropical West Africa and the Southwest Pacific. The CBM 'VegClass' database includes uniformly collected, primary resource data from > 2000 terrestrial sites worldwide that together represent more than 90% of climatic conditions capable of supporting vascular plant growth. While the aim is to make these data accessible in the public domain, they are currently in use for modelling vegetation response to environmental change in international projects such as the IGBP/ DIVERSITAS/QUEST 'Fast Track Initiative' and the developing EU-based TRY database². Comparative baseline studies in three continents show the system is well suited to identifying indicators for assessing and monitoring biodiversity.

Recent baseline studies along regional environmental gradients show that the coupling of plant functional, taxonomic and vegetation structural data with other primary resource inputs (soils, hydrology, land use) provides a ready context for modelling ecosystem dynamics. From a research perspective, the VegClass methodology and the developing global database offer a potentially useful framework for a comparative assessment of resource partitioning within and between species and functional types and for evaluating biodiversity pattern from local to regional scale.

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. Appointed to Roster of Experts (biodiversity) on the Scientific and Technical Advisory Panel (STAP) of the Global Environment Facility (GEF) 2007. Other numerous advisory committees in CSIRO and CIFOR (see consultancy reports)

PAPERS PRESENTED AT WORKSHOPS, INTERNATIONAL SYMPOSIA AND OVERSEAS INSTITUTIONS

More than 200 papers and keynote addresses presented at international symposia and institutional meetings including numerous papers, mostly on biodiversity and forest ecosystem management principally in Australia (CSIRO, various universities) Europe and USA (IGBP, BAHC, EU, MEA, Cornell Univ., World Bank, UNDP, UN-DESA, USAID, ESA, Smithsonian Institution); UK (Oxford & Cambridge Univ., Natural History Museum, Institute of Terrestrial Ecology; Millennium Ecosystem Assessment). In addition, numerous presentations at research and training institutions in South-East Asia (Indonesia, Thailand, Vietnam, Philippines), mainland Asia (Bhutan, India), Africa (Cameroon, Kenya, Mozambique, Namibia, Tanzania) and the Russian Far East (Vladivostok, Institute of Biology and Soil Science).

¹ www.cbmglobe.org

² www.try-db.org/index.php?n=Site.AboutTRY

RECENT PRESENTATIONS AT INTERNATIONAL MEETINGS

- Gillison, A.N. (2009). *Exploiting linkages between soil quality, biodiversity and agricultural production*. United Nations - [Department of Economic and Social Affairs](#) (UN-DESA). High-Level Inter-sessional 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)*. (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”. **Göteborg, Sweden** (16 April 2009).
- Gillison, A.N. (2009). *Methodological approaches for a second habitat assessment of the Javan Rhino (Rhinoceros sondaicus)*. Ministry of Forestry, Directorate General for Forest Protection and Nature Conservation. **Jakarta, Indonesia**. (15 June 2009).
- Gillison, A.N. (2009). *Rapid survey methods for assessing biodiversity with emphasis on habitat selection for the Javan Rhino (Rhinoceros sondaicus)*. Yayasan Badak Indonesia. HQ, **Ujung Kulon, Java**, Indonesia (19 June 2009).
- Gillison, A.N. (2009). *Preliminary results of a biodiversity survey of the alpine section of the Wang Chhu watershed, Eastern Himalaya, Bhutan*. Ministry of Forestry, National Soil Services Centre, Semoktha, **Bhutan**. World Bank. (11 Aug. 2009).
- Gillison, A.N. (2010). *Ecological gradients as teaching and research platforms in tropical Australia*. School of Marine and Tropical Biology, James Cook University, Smithfield campus, Cairns Nth Queensland..

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.

- Gillison, A.N. (1985). Rainforests: Definition and Ecological Context. Australian National University, Centre For Resource and Environmental Studies, Working Paper 1985/2 pp.1-5.
- 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.
- Gillison, A. N. and P. E. Neil. (1987). *A Feasibility Study for a Proposed Kauri Reserve on Erromango Island, Republic of Vanuatu*. Canberra, Australia: CSIRO, Institute of Biological Resources, Division of Water and Land Resources, Bot SD667 .V2 G54 1987. (Forerunner of payments for ecosystem services)
- Gillison, A.N. (1989). *Alpinia boia* - the world's largest ginger: some ecological implications for Fijian rain forests. *Domodomo* **1-4**: 44-48. (Fiji Museum Quarterly).
- 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)
- Gillison, A.N. and Anderson, D.J. (Eds.) (1981). *'Vegetation Classification in Australia'*. CSIRO and Aust. Natl Univ. Press, Canberra. 229 p.
- Gillison, A.N. and Brewer, K.R.W. (1985). The use of gradient-directed transects or gradsects in natural resource survey. *Journal of Environmental Management* **20**, 103-127.
- Gillison, A.N. and Walker, J. (1981). Woodlands of Australia. In: R.H. Groves (ed.) *'Australian Vegetation'* pp. 177-97. Cambridge Univ. Press, Hong Kong.
- Gillison, A.N., Lacey, C.J. and Bennett, R.H. (1980). Rhizostolons in *Eucalyptus moluccana* Roxb. *Australian Journal of Botany*. **28**, 299-304.
- Lacey, C.J., Gillison, A.N. and Whitecross, M.I. (1982). Root formation by stems of *Eucalyptus botryoides* Sm. in natural stands. *Australian Journal of Botany* **30**, 147-59.
- Löffler, E., Sullivan, M.E. and Gillison, A.N. (1983). Periglacial landforms on Macquarie Island, subantarctic region *Zeitschrift Geomorphologie N.F.* **27**, 223-36.
- Nix, H.A. and Gillison, A.N. (1985). Towards an operational framework for wildlife and habitat management. In: J. Kikkawa, (ed.) *'Wildlife management in the forests and forestry-controlled lands in the tropics and the southern hemisphere'*. Proceedings of a workshop held at Univ. Queensl. Australia 16-18 July 1984. IUFRO S1.08 Wildlife and its Habitats. Published by IUFRO and MAB.
- Mott, J., Williams, J., Andrew, M. and Gillison, A.N. Australian Savanna ecosystems. In: *Proceedings of 1984 International Savanna Symposium*, Brisbane, May 1984.
- Walker, J., and Gillison, A.N. (1982). Australian savannas. In: B.J. Huntley and B.H. Walker (eds.) *Ecology of Tropical Savannas* pp. 5-34. (Springer Verlag, Berlin).

1990-2000

- Gillison, A.N. (1990). *Comments on the utility of a dirigible-supported raft for rainforest studies. Biologie d'une canopee de foret equatoriale*. Rapport de mission, radeau des cimes Octobre-Novembre 1989. Petit-Saut Guyanane-Francaise. Dept Industrie de Xylochimie. p. 27.
- Gillison, A.N. (1991). The use of plant functional attributes and biophysical gradients in estimating fire risk. In: B.R. Roberts (ed.). *'Fire Research in Rural Queensland'* pp.216-228. Selected Papers from the Fire Research Workshop Series 1980-1989. Publ. Univ. Southern Queensland.
- Gillison, A.N. (1993a). Overview Chapter, Grasslands of Oceania. In: *Natural Temperate Grasslands: Eurasia, Africa, South America and Oceania*, R.T. Coupland (ed.) In: *Ecosystems of the World* D.W. Goodall, (ed.-in-chief) 8B. pp. 303-313. Amsterdam: Elsevier Scientific Publishing Co.
- 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.
- Gillison, A.N. (1994). Woodlands. In: R.H. Groves (ed.) *'Australian Vegetation'* Ch. 8. pp. 227-255. Cambridge Univ. Press. 562 pp.
- Gillison, A.N. (1994). Distribution of plant functional types within and below a rain forest. First International Canopy Conference, Sarasota, FL (USA), 9-13 November 1994 *Selbyana* **15** (2): A9.
- Gillison, A.N. (1995). Contributor In: N.E. Stork and M.J. Samways (eds): Section 7: Inventorying and Monitoring. (7.2.4. Baseline data). pp. 480-481. In: V. H. Heywood and R.T. Watson (eds.) *Global Biodiversity Assessment*. Cambridge University Press.
- 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.
- Gillison, A.N. (2000a). Rapid vegetation survey. In: A.N. Gillison (Coord.) Above-ground Biodiversity assessment Working Group Summary Report 1996-99 Impact of different land uses on biodiversity. pp. 25-38. Alternatives to Slash and Burn project. ICRAF, Nairobi.
- 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.
- Gillison, A.N., Liswanti, N. and Ismail A. Rachman (1996). *Rapid Assessment , Kerinci Seblat National Park Buffer Zone: Preliminary report on plant ecology and overview on biodiversity assessment*. CIFOR Working paper No. 14.
- Gillison, A.N., Liswanti, N. and Arief-Rachman, I. (1997). Rapid Ecological Assessment in HPH Pt Serestra II and HPH Pt Bina Samaktha. Pre-implementation, Integrated Conservation and Development Project, Kerinci Seblat National Park. World Wildlife Fund for Nature, Indonesia Program. In: Final Report, Rapid Ecological Assessment in HPH Pt Serestra II and HPH Pt Bina Samaktha. Pre-implementation, Integrated Conservation and Development Project, Kerinci Seblat National Park. World Wildlife Fund for Nature, Indonesia Program. Bappenas, The World Bank.
- Gillison, A.N. and N. Liswanti. (1999). *Biodiversity and productivity assessment for sustainable agroforest ecosystems. Mae Chaem, Northern Thailand: Preliminary Report*. Alternatives to Slash and Burn project International Centre for Research in Agroforestry, Nairobi, Kenya.
- 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.
- Hill, C.J., Gillison, A.N. and Jones, R.E. (1992).The spatial distribution of rain forest butterflies at three sites in north Queensland. *Journal of Tropical Ecology* 8, 37-46.
- Kotto-Same, J., Moukam, A., Njomgang, R., Tiki-Manga, T., Tonye, J., Diaw, C., Gockowski, J., Houser, S., Weise, S., Nwaga, D., Zapfack, L., Palm, C., Woomer, P., Gillison, A.N., Bignell, D. and Tondoh, J. (2000). Summary Report and Synthesis of Phase II in Cameroon. ICRAF, Nairobi, Kenya.
- Schulze, W., Schulze, E.D., Pate, J.S. and Gillison, A.N. (1997). The nitrogen supply from soils and insects during growth of the pitcher plants *Nepenthes mirabilis*, *Cephalotus follicularis* and *Darlingtonia californica*. *Oecologia* 112, 464-471.

- Tomich, T. P., M. van Noordwijk, S. Budidarseno, A. Gillison, T. Kusumanto, D. Murdiyarso, F. Stolle, and A. M. Fagi. (1998). *Alternatives to slash-and-burn in Indonesia. Summary report and synthesis of Phase II*. ICRAF (International Centre for Research in Agroforestry) S.E. Asia, Bogor, Indonesia.
- Vanclay, J., Gillison, A.N. and Keenan, R.J. (1997). Using plant functional attributes to quantify site productivity and growth patterns in mixed forests. *Forest Ecology and Management* **94**, 149-163.
- Watling, D. and Gillison, A.N. (1993). Endangered species in low elevation cloud forest on Gau island, Fiji. In: L.S. Hamilton, J.O. Juvik and F.N. Scatena (eds.) *Tropical Montane Cloud Forests*. pp 217-223. Publ. East-West Center; Honolulu, Hawaii.
- Zapfack, L., Weise, S., Ngobo, M., Tchamou, N. and Gillison, A. (2000). Biodiversité et produits forestiers non-ligneux de trois types de jachère du Cameroun méridional. In C. Floret & R. Pontanier “*La jachère en Afrique Tropicale*” (Ed. 2000): **1**, 484-492.

2001-present

- Gillison, A.N. (2002). A generic, computer-assisted method for rapid vegetation classification and survey: tropical and temperate case studies. *Conservation Ecology* **6**, 3. [online] URL: <http://www.consecol.org/vol6/iss2/art3>
- Gillison, A.N. (2004). Biodiversity Assessment in the North Bank Landscape (Brahmaputra), North East India. WWF-India, New Delhi, pp. 46.
- Gillison, A.N. (2005a). Forecasting biodiversity response to global change in broad-leaved forests: a role for plant functional types. Abstracts, p.37. XVII International Botanical Congress, Vienna, Austria.
- Gillison, A.N. (2005b). Generic functional descriptors as a basis for scale-free vegetation classification. Abstracts, p.19. XVII International Botanical Congress, Vienna, Austria.
- Gillison, A.N. (2005c). The potential role of above-ground biodiversity indicators in assessing best bet alternatives to slash and burn. Pages 82-118 in: C.A. Palm, Stephen A.Vosti, P.A. Sanchez, P.J. Ericksen and A.S.R. Juo (Eds.) *Slash and Burn: The Search for Alternatives*. A Collaborative Publication by the Alternatives to Slash and Burn Consortium, the World Agroforestry Centre, The Earth Institute at Columbia University and The Center for Natural Resources Policy Analysis at the University of California, Davis. Columbia University Press, New York, NY, USA.
- Gillison, A.N. (2008). *New Technology for Rapid Assessment and Monitoring Change in Forest Dynamics*. Proceedings from the Third International Ecological Forum : Nature Without Borders. (Vladivostok, Russia) (Nov. 2008). http://www.ibss.febras.ru/seminar/Gillison_2008.pdf
- Gillison, A.N. and Liswanti, N. (2004). Assessing biodiversity at landscape level: the importance of environmental context. In: T.P. Tomich, M. van Noordwijk, and D.E. Thomas (Eds.) *Environmental Services and Land Use Change: Bridging the Gap between Policy and Research in Southeast Asia . Agriculture Ecosystems and Environment* **104**: 75-86.
- Gillison, A. N., Liswanti, N., Budidarsono, S., van Noordwijk, M. and Tomich, T.P. (2004). Impact of cropping methods on biodiversity in coffee agroecosystems in Sumatra, Indonesia. *Ecology and Society* **9** (2), 7. [online] URL: <http://www.ecologyandsociety.org/vol9/iss2/art7>

- Gillison, A.N., D.T. Jones, F.-X. Susilo and D.E. Bignell. (2003). Vegetation indicates diversity of soil macroinvertebrates: a case study with termites along a land-use intensification gradient in lowland Sumatra. *Organisms, Diversity and Evolution* **3**, 111-126.
- Jones, D.T., Susilo, F.X., Bignell, D.E., Hardiwinoto, S., **Gillison, A.N.** and Eggleton, P. (2003). Termite assemblage collapse along a land-use intensification gradient in lowland central Sumatra, Indonesia. *Journal of Applied Ecology*, **40**, 380-391.
- Lewis, J., S. Vosti, J. Witcover, P.J. Ericksen, R. Guevara and T. Tomich. (2002). Alternatives to Slash-and-Burn in Brazil. Summary report and synthesis of Phase II. International Centre for Research in Agroforestry, Nairobi, Kenya. (**A.N. Gillison**, contributor to section on aboveground biodiversity).
- Murdiyarso, D., Van Noordwijk, M., Wasrin, U. R., Tomich, T.P., **Gillison, A.N.**, (2002). Environmental benefits and sustainable land-use options in the Jambi transect, Sumatra, Indonesia. *Journal of Vegetation Science* **13**, 429-438.
- Secretariat of the Convention on Biological Diversity (2003). Interlinkages between biological diversity and climate change. Advice on the integration of biodiversity considerations into the implementation of the United Nations Framework Convention on Climate Change and its Kyoto Protocol, Montreal, SCBD, 154p. (CBD Technical Series no. 10). (A.N. Gillison, contributor).
- Tomich, T. P., M. van Noordwijk, S. Budidarseno, **A. Gillison**, T. Kusumanto, D. Murdiyarso, F. Stolle, and A. M. Fagi. (2001). Agricultural intensification, deforestation, and the environment: assessing tradeoffs in Sumatra, Indonesia. Pages 221-244 in D. Lee and C. Barrett, (eds). *Tradeoffs or synergies? Agricultural intensification, economic development and the environment*. CAB International, Wallingford, UK.
- Tomich, T.P., Timmer, D., Velarde, S.J, Palm, C.A., van Noordwijk, M. and **Gillison, A.N.** (2007). Research Perspectives. Chapter 18, pages 322-343 in: *Farming With Nature: The Science and Practice of Ecoagriculture* (S.J. Scherr & J.A. McNeely eds.). Island Press, Washington DC, USA.
- Vosti, Stephen A., Julie Witcover, Chantal Line Carpentier, Samuel José Magalhães de Oliveira, Jair Carvalho dos Santos, with Eufra do Amaral, Tâmara Claudia de Araújo Gomes, Henrique José Borges de Araujo, Evaldo Muñoz Braz, Jailton Carneiro, Carlos Castilla, Divonzil Gonçalves Cordeiro, Idésio Luis Franke, **Andy Gillison**, Ângelo Mansur Mendes, Marcus Vinicio Neves d'Oliveira, Cheryl Palm, Vanda Rodrigues, Luís M. Rossi, Claudenor Pinho de Sá, Abadio Hermes Vieira, Judson Ferreira Valentim, Stephan Weise, and Paul Woomer. (2001). Intensifying Small-Scale Agriculture in the Western Brazilian Amazon: Issues, Implications and Implementation. In: *Tradeoffs or Synergies? Agricultural Intensification, Economic Development and the Environment*. David Lee and Chris Barrett (eds.). Wallingford, UK: CAB International.
- Williams, S.E., **Gillison, A.N.** and van Noordwijk, M. (2001). Biodiversity: issues relevant to integrated natural resource management in the humid tropics. ASB Lecture Note 05, ASB/ICRAF-SEA Lecture Note Series: 'Towards integrated natural resource management in forest margins of the humid tropics: local action and global concerns', Meine van Noordwijk, Sandy Williams and Bruno Verbist (Editors) .

Technical Memoranda (CSIRO)

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

- No. 77/5 J.Walker, A.N. Gillison, M.S. Hopkins, A.O. Nicholls, J.A. Robertson, A.P. Spate, B.W.R. Tursell and B.R. Tunstall. *'The Woodland Ecology Research Program.'*
- No. 80/8 Gillison, A.N. and Bennett, R.H., Vegetation of the Puckapunyal training area. In: A.P. Spate compiler, *'Natural Resources of the Puckapunyal Training Area'*, pp. 56-74.
- No. 80/8 Spate, A.P., Bennett, R.H. and Gillison, A.N., Off-road vehicle access. In: A.P. Spate compiler, *'Natural Resources of the Puckapunyal Training Area'*, pp. 75-81.
- No. 83/15 Gillison, A.N. 'Field collection data for a numerical analysis of the grey box (*Eucalyptus moluccana* Roxb. *s.lat.*) complex'.
- No. 87/4 Gillison, A.N. and Neil, P.E. *'A feasibility study for a proposed kauri reserve on Erromango Island, Republic of Vanuatu'*. [first assesement for 'Payment for Environmental Services or Biodiversity Offests']
- No. 88/3 Gillison, A.N. *'A Plant Functional Proforma for Dynamic Vegetation Studies and Natural Resource Surveys'*

Technical Reports 2000-2004

- Gillison, A.N. (1999) (coordinator), *Above-ground biodiversity assessment working group summary report 1996-99. Impact on biodiversity of different land uses. Alternatives to slash and burn project. ICRAF, Nairobi, Part A: Executive summary, pp. 2-3. Part B: Above-ground, ecoregional benchmark surveys. Pp. 4-14.*
- Gillison, A.N. and Liswanti, N. (2000). *Biodiversity and productivity assessment for sustainable agroforest ecosystems. Mae Chaem, Northern Thailand: Preliminary Report.* Part D in: Gillison, A.N. (1999) (coordinator), *Above-ground biodiversity assessment working group summary report 1996-99. Impact on biodiversity of different land uses. Alternatives to slash and burn project. ICRAF, Nairobi. Pp. 38, plus maps and Annexes.*
- Gillison, A.N., Liswanti, N., van Noordwijk, M., Suseno, and Tomich, T. (2000). *Biodiversity and productivity assessment for sustainable agroforest ecosystems.* Part F. In Gillison, A.N. (1999) (coordinator), *Above-ground biodiversity assessment working group summary report 1996-99. Impact on biodiversity of different land uses. Alternatives to slash and burn project. ICRAF, Nairobi. pp. 25-38.*
- Gillison, A.N. and Liswanti, N. (2000). *Biodiversity and productivity assessment for sustainable agroforest ecosystems. Impact of Oil Palm plantations on biodiversity.* Part G. In Gillison, A.N. (1999) (coordinator), *Above-ground biodiversity assessment working group summary report 1996-99. Impact on biodiversity of different land uses. Alternatives to slash and burn project. ICRAF, Nairobi. pp 19-24.*

CONSULTANCY REPORTS (1988-1992 CSIRO)

- Gillison, A.N. (1988) *Environmental Impact assessment for a proposed oil pipeline across southern Papua. Rainforest Management Investigation. PPL-100 Environment Plan.* for Government of Papua New Guinea. (Consultancy undertaken for Natural Systems Research Pty Ltd. on behalf of Chevron Pacific).
- Gillison, A.N. (1988) *Impact of Sulphur Dioxide Emission on Rainforest – Lihir Island, New Ireland Province, Papua New Guinea.* (Consultancy undertaken for Natural Systems Research Pty Ltd. on behalf of Kennecott Niugini Mining Joint Venture).
- Gillison, A.N. (1989) *Site Rehabilitation Manual.* Rainforest Management Investigation. PPL-100 Environment Plan for Government of Papua New Guinea. (Consultancy undertaken for Natural Systems Research Pty Ltd. on behalf of Chevron Pacific).
- Gillison, A.N. (1989) *Evaluation of boundaries for register of a National Estate for Christmas Island, Indian Ocean.* Report for Australian Heritage Commission, Canberra.
- Gillison, A.N. (1990). *Environmental study for Allardyce Reforestation Project: Santa Isabel, Solomon Islands.* Consultancy for Shedden Agribusiness Ltd, on behalf of AIDAB.
- Gillison, A.N. (1990). *National Forest Inventory, Republic of Vanuatu: Training in tree identification and survey design procedures.* For Queensland Forest Service on behalf of AIDAB.
- Gillison, A.N. (1990) *Report on the findings of the Australian team in French Guyana on the utility of a dirigible-supported raft for rainforest studies in Australia.* Compiled for the Department of Trade Industry and Commerce, Canberra.
- Gillison, A.N. (1991) *Overview of Terrestrial Resource Management Input: National Management Environment Project.* IUCN/Environmental Services Australia, National Management Plan for Fiji.
- Gillison, A.N. and Carpenter, G. (1992). *A regional sampling strategy for natural resource inventories within the Wet Tropics World Heritage Area.* Report for the Wet Tropics Management Agency. October 1992.

**CONSULTANCY REPORTS – (2000-2009)
CENTER FOR BIODIVERSITY MANAGEMENT**

- Gillison, A.N. *Potential use of plant species for soil improvement in Mali and Burkina Faso.* Report for International Centre for Research in Agroforestry (ICRAF), Nairobi (6-20 February 2000).
- Gillison, A.N. *Reforestation alternatives and biodiversity hotspots viability for the Sierra Madre region: Luzon, Philippines.* Report for Conservation International. (26 March – 20 April, 2000).
- Gillison, A.N. *A Review of the Impact of Climate Change on Forest Biological Diversity.* Prepared for the Secretariat of the Convention on Biological Diversity. (January 2001).
- Gillison, A.N. *The potential of carbon sequestration forestry projects to protect biodiversity and improve rural livelihoods in developing countries.* A report to the Center for International Forestry Research (CIFOR) (October, 2001).
- Gillison, A.N. *Promoting biodiversity conservation and sustainable use in the frontier forests of Northwestern Mato Grosso: Bioregional assessment, land use*

- and zoning for biodiversity conservation*. Report prepared for UNDP/GEF and PróNatura (August, 2001).
- Gillison, A.N. *Vegetation Survey and Habitat Assessment of the Tesso Nilo Forest Complex; Pekanbaru, Riau Province, Sumatra, Indonesia*. Report prepared for WWF-US. (October-November, 2001).
<http://www.eyesontheforest.or.id/doc/tesso%20nilo%20biodiversity.pdf>; (see also publication download list in www.cbmglobe.org)
- Gillison, A.N. *Vegetation and land cover reconnaissance survey and capacity-building for baseline bioregional assessment :Juruena, Cotriguaçu and Castanheira Municipalities, NW Mato Grosso, Brasil*. Report prepared for UNDP/GEF and PróNatura (January 2002).
- Gillison, A.N. *Training Workshop in Aboveground Biodiversity Assessment and Survey Design Juruena, NW Mato Grosso, Brazil*. Report for UNDP/GEF and PróNatura (June 2002).
- Gillison, A.N. *Bioregional assessment, land use and zoning for biodiversity conservation in NW Mato Grosso : Baseline Survey for the Municipalities of Castanheira, Cotriguaçu and Juruena*. Report prepared for UNDP/GEF and PróNatura (July 2002).
- Gillison, A.N. *Report on Second Workshop on Bioregional Planning and Management in Northwest Mato Grosso*. Prepared for UNDP/GEF and PróNatura (Feb.2003).
- Gillison, A.N. (2004). *Training workshop in aboveground biodiversity assessment: N.E. India*. Report submitted to WWF-India and Smithsonian Institution National Zoological Park and Conservation Research Center, Va. USA. Center for Biodiversity Management Report No. 01.04 5 January 2004.
- Gillison, A.N. (2004). *Biodiversity assessment in the North Bank Landscape, N.E. India: a preliminary survey*. Report submitted to WWF-India and Smithsonian Institution National Zoological Park and Conservation Research Center, Va. USA. Center for Biodiversity Management Report No. 02.04 10 January 2004.
- Gillison, A.N. (2004). Biodiversity indicators of ecosystem function. Contribution to: *Mainstreaming Sustainable Land Management in the Agricultural and Rural Development and Natural Resource Management Programs*. The World Bank, ESSD-ARD 1818 H Street, Washington, DC 20433, USA. July 7 2004.
- Gillison, A.N. (2005). Managing Biodiversity in Sustainable Land Management. Contribution to synthesis paper: *Sustainable Land Management: Conceptual Guidelines for Regional Strategies & Rural Operations*. The World Bank, ESSD-ARD 1818 H Street, Washington, DC 20433, USA. 18 June 2005.
- Gillison, A.N. and Fernandes, E.C.F. *Approaches to 'Best-bet' management – synthesis and indicators for monitoring*. Paper presented at Second Workshop on Bioregional Planning and Management in Northwest Mato Grosso (Brazil). Report prepared for UNDP/GEF and PróNatura (Feb.2003).
- Gillison, A.N. and Silveira, E. *Bioregional planning: soils vegetation and fauna. NW Mato Grosso*. Paper presented at Second Workshop on Bioregional Planning and Management in Northwest Mato Grosso. Report prepared for UNDP/GEF and PróNatura (Feb.2003).
- Constantino, R. and Gillison, A.N. *Termite diversity and interaction with soils and vegetation NW Mato Grosso*. Paper presented at Second Workshop on Bioregional Planning and Management in Northwest Mato Grosso. Report prepared for UNDP/GEF and PróNatura (Feb.2003).

- Fernandes, E.C.M., **Gillison, A.N.**, Asner, G. and Richey, J. (principal authors). Lower Zambezi River Basin: *Baseline Data On Landuse, Biodiversity, And Hydrology*. GEF - Zambezi Valley Market Led Smallholder Development Project. World Bank, Washington DC. (October 2006).
- Gillison, A.N. (2007) Phase 1 Baseline Report on Biodiversity in the Lake Victoria Basin. In (World Bank/GEF reconnaissance Mission, November 2007) *Lake Victoria Environmental Management Plan 2 (Kenya, Tanzania, Uganda)*.
- Gillison, A.N. (2009). Developing a Functional Landscape-Scale Land Cover, Biodiversity, Hydrology Modeling Framework (DrukDIF) for the SLMP areas of Bhutan. Phase I: Rapid Natural Resource Assessment Along Land Cover and Land Use Gradients. DANIDA/World Bank, *Sustainable Land Management Project, Bhutan*. 5 June 2009.
- Gillison, A.N. (coordinator) In: *Report on a Second Habitat Assessment for the Javan Rhinoceros (Rhinoceros sondaicus sondaicus) Within the Island of Java*. Ramono, W., Isnain, M. W., M., Sadjudin, H.R., Gunawan, H., Dahlan, E.N., Sectionov, Pairah, Haryadi, A.R., Syamsudin, M., Talukdar, B.K., and Gillison, A.N. 28 August 2009. International Rhino Foundation, Yulee, FL, USA.
- Gillison, A.N. (2009). Developing a Functional Landscape-Scale Land Cover, Biodiversity, Hydrology Modeling Framework (DrukDIF) for the SLMP areas of Bhutan. Phase II: Rapid Natural Resource Assessment Along Land Cover and Land Use Gradients. Wang Chhu watershed, Alpine section (3000-5000m). World Bank, *Sustainable Land Management Project, Bhutan*. 5 Sept. 2009.
- Gillison, A.N. (2009). Developing a Functional Landscape-Scale Land Cover, Biodiversity, Hydrology Modeling Framework (DrukDIF) for the SLMP areas of Bhutan. Phase II: Rapid Natural Resource Assessment Along Land Cover and Land Use Gradients. Wang Chhu watershed, Biodiversity Baseline Survey of the Wang Chhu Watershed Section "B" Mid-elevation zone (1500-4600m). December 2009. World Bank, *Sustainable Land Management Project, Bhutan*.
- Gillison, A.N. (2010). Developing a Functional Landscape-Scale Land Cover, Biodiversity, Hydrology Modeling Framework (DrukDIF) for the SLMP areas of Bhutan. Phase II: Rapid Natural Resource Assessment Along Land Cover and Land Use Gradients. Wang Chhu watershed, Biodiversity Baseline Survey of the Wang Chhu Watershed Integrated Biodiversity Survey of the Lower Wangchhu Watershed, Bhutan (200-1800m). World Bank, *Sustainable Land Management Project, Bhutan*. 23 May 2010.
- Gillison, A.N. (2010). Cairns Natural Spring Water. Plant Ecological Assessment of Lot 52 C19830 East Woree. Center for Biodiversity Management Report No. 2010.25.11. 2 December 2010.

PAPERS IN PRESS

- A.N. Gillison, M.M. Babu, A.C. Williams, T. Aziz, , G. Arendran, A. Baig, S. Bairagi, H. Kr. Baishya, P.J. Bora, P.K. Sharma, P.K. Dutta, C. Loma, R. Semwal, A. Sharma, P. Sharma. **Assessing linkages between land use and biodiversity: A case study from the Eastern Himalayas using low-cost, high-return survey technology** In: P.S. Low (ed.) '*Global Change and Sustainable Development: Asia-Pacific Perspectives*' Chapter 18. Cambridge University Press (accepted for publication 2009).

PAPERS IN PREPARATION OR SUBMITTED 2010

- Gillison, Andrew N., David E. Bignell, Kenneth R.W. Brewer, Stanley W. Buol, Erick C.M. Fernandes, David T. Jones, Douglas Sheil, Peter H. May, Allan D. Wat, Salatiel D. Araujo, Itamar C.L. Assumpção, Reginaldo Constantino, Eduardo G. Couto, Djarwadi, Kurniatun Hairiah, Paul Jepson, Agus P. Kartono, Ibnu Maryanto, Germano G. Neto, Raul J.V. Neto, Meine van Noordwijk, Paulo C. Nunes, Dalci M. de Oliveira, Elton A. Silveira, Martua H. Sinaga Francis-Xavier Susilo & Stephen A. Vosti. **Biodiversity indicators for tropical forests.** *Conservation Biology* (Re-submit Feb. 2011).
- Gillison, A.N., Asner, G.P., Fernandes, E.C., Sousa, D.L da Cruz E., Mafalacusser, J., Banze, A., Izidine, S., Fonseca, A.R. da, Pacate. Adding value to biodiversity: new approaches to integrated survey. (Re-submit to *Global Change Biology* Jan 2011).
- Brewer, K.R.W. & Gillison, A.N. An objective Bayesian interpretation of Fisher's *P*. Submitted to *The Mathematical Scientist* (Nov 2010).

ACADEMIC TEXT BOOKS UNDER CONTRACT 2010

- Gillison, A.N. **Vegetation Classification and Survey: with special reference to biodiversity management** (Wiley-Blackwell Publishing UK).

INVITED BOOK CHAPTER 2010

- Gillison, A.N. (2010) Plant Functional Types. Chapter 12 In: E. van der Maarel and J. Franklin (eds). *Vegetation Ecology* 2nd Edn. (Wiley-Blackwell, Publishing, U.K.)

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Recent photograph



Bhutanese ecologist Dorji Gyeltshen (left) and A.N. Gillison at Mt Jhomolhari Base camp (4,600m elevn) with flowering head of *Rheum nobile*, one of the world's unique megaherbs (collected at 5,000m elevation). Integrated biodiversity baseline survey of the Wang Chhu watershed, alpine section, Eastern Himalaya, Bhutan. An ongoing project funded by the World Bank. (2nd August 2009).