PUAF 689I: Complex Social-Ecological Systems, Environmental Policy, and Sustainable Development in Indonesia will run in-country from December 31, 2015 - January 21, 2016, traveling to Bali, Sumatra, and Java

Faculty Director and Assistant Directors
Tom Hilde (thilde@umd.edu), Director and Professor
Matt Regan (mrgregan@gmail.com), Assistant Director
Aria Remondi (agremondi@gmail.com), Assistant Director

This course focuses on the systemic interconnections between Indonesia’s environmental problems and development issues and strategies, such as Indonesia’s decentralization policy, the growth of oil palm plantations, deforestation and REDD+, the well-being of indigenous and other local peoples, habitat destruction, and carbon emissions from forest loss and burning. We pay special attention to indigenous systems and what they can teach us about sustainability and consider climate policy and conflict centered on development and environmental issues. The course will run for roughly three weeks, centering on three destinations – Bali, Sumatra, and Java – where we will: study the complex adaptive subak system of rice terraces and water temples in Bali; examine deforestation problems and conservation efforts and hike in rainforest in Sumatra; visit marine habitat on the island of Pulau Weh (Sabang), and hear presentations from and engage in discussions with government officials, academics, and NGO representatives in Jakarta and Bogor, Java. Students should be fully prepared for uncomfortable conditions at times (e.g., jungle and urban heat, rain, mud, insects) and semi-formal meetings at other times, as well as pre-meeting research on the people, issues, and policies discussed.

Itinerary Overview

- **3 pre-trip class meetings at UMD: TBA**
- **Bali (Ubud, subaks and villages):** We fly into Denpasar, Bali and stay in Ubud – the cultural center of Bali – from which we will explore the 1000+-year-old subak system guided by the leading experts on the system. The subak network is a complex adaptive social-ecological system of rice farming, cooperative irrigation and pest control, communal law, water temple networks, and deliberative democratic decision-making. The system is interwoven throughout Bali’s rich and complex religious beliefs and cultural practices, showing resilience over time in the face of various exogenous and endogenous threats. We will investigate the question of what qualities render the subak system sustainable, resilient, and adaptive. The subak system was awarded UNESCO World Heritage status in 2012. We will visit some of Bali’s spectacular temples and take in the rich cultural life of this unique volcano-dotted island.

- **North Sumatra (Bukit Lawang, Gunung Leuser):** From Bali, we fly to Medan in North Sumatra province and travel by bus to Bukit Lawang. From Bukit we go on a two-day trek in the primary rainforest and UNESCO World Heritage site of the Gunung Leuser Ecosystem studying the ecology, abundant wildlife, and local agricultural and cultural practices. We stay one night in the jungle. The region is home to 176 species of mammals, including Sumatran tigers, sun bears, clouded leopards, elephants, orangutans, the rare Sumatran rhino, and several species of monkeys. It is the only place on Earth where orangutans, elephants, rhinos and tigers co-exist. It is also home to hundreds of bird species and over 200 species of reptiles and amphibians. We will explore the problem of the rapid expansion of oil palm plantations across the Sumatran landscape, the accompanying problem of elevated carbon emissions, and the threats posed to the environment, local livelihoods, and wildlife habitat as well as alternatives for reducing
poverty. We will visit an orangutan research center, agroforestry projects, and local villages, and will meet with local officials, conservationists, and indigenous peoples.

- **Aceh (Banda Aceh, Pulau Weh):** From Medan, we travel overland to the province of Aceh and the beautiful Andaman Sea island of Pulau Weh (AKA Sabang) at the northernmost tip of Sumatra. There we will study the indigenous, centuries-old *panglima laot* system of marine and coral reef management, talking with panglima laot fishermen. We will also have an opportunity to explore the reefs themselves. We will also discuss the Aceh conflict and the effects of the 2004 tsunami as well as post-conflict and post-disaster reconstruction efforts.

- **Java (Jakarta and Bogor):** We then go to Jakarta and Bogor on the island of Java for a series of meetings on the topics investigated during the previous part of the trip, focusing on climate change adaptation and sustainable development, Indonesia’s national decentralization policy and the advantages and problems it presents, persistent corruption and policy implementation obstacles, and this diverse and fascinating country’s great hope and promise for the future. The schedule of meetings is not yet set for our January 2016 trip but will be similar to previous course trips. Our group has met with Indonesia’s chief climate change negotiator; renowned researchers at the distinguished Center for International Forestry Research (CIFOR) in Bogor; the director of Indonesia’s REDD+ agency; the directors of leading NGOs; the indigenous peoples’ rights organization; and the President of Indonesia’s lead environmental advisor and former Minister of the Environment, who we visited in Indonesia’s equivalent of the White House West Wing; among others. There are likely new meetings this year. We return to the US from Jakarta.

- **1 post-trip class meeting at UMD: TBA**
Course Requirements

Students will attend three pre-departure meetings and one post-trip class meeting and actively participate in discussions on the readings, the majority of which should be completed prior to departure. While in Indonesia, students will participate in lecture-discussions and site visits and keep a substantive daily journal about their experiences and reflections.

After returning to the US, students will do additional readings and research for the completion of the papers. One post-trip meeting will be held. For pre-trip meetings, we will have participant introductions, analysis of assigned pre-trip readings, and discussion of course trip logistics. At the post-trip meeting, we will discuss lessons learned and experiences from the trip, plus paper topics.

- **Personal journal (15%)**
- **Blog posts (25%)** in the form of brief analytical articles for a general audience that tie your experience to policy issues. These will be assigned on the trip.
- **Course participation**, including Twitter (20%). Full participation in discussions and meetings.
- **Final research paper (40% - 25 pages)** addresses a specific problem/issue related to course themes and to each student’s academic and professional interests. Students may employ quantitative or qualitative methods and/or normative argument as they evaluate policy options and recommend the best options for addressing that problem/issue.

Course packet and pre-trip preparation

- Prior to the trip, we will hand out a course packet with full details on what to bring (clothes, supplies, travel gear, academic material, etc.); the complete itinerary (including addresses of hotels); basic maps of our travel sites; emergency and health information; and a brief glossary of Bahasa Indonesia words and expressions.
- Pre-trip preparation will include receiving travel insurance via UMD Education Abroad; a visit to the UMD clinic or your personal doctor for any necessary immunizations; and refilling any prescriptions you may need on the trip.
- You will need a passport that is valid for at least six months after our date of arrival in Indonesia. For US citizens and some other nationalities, we will receive the Visa on Arrival in the country. Some nationalities may require visas in advance of traveling to Indonesia.
**Possible Speakers/Meetings**

**Emil Salim** was Senior Adviser on environmental and sustainable development issues to the previous President of Indonesia, Susilo Bambang Yudhoyono. Prof. Salim is perhaps the best-known and most influential environmental thinker in Indonesia. He is also environmental policy and economics professor emeritus at the University of Indonesia. He was previously Indonesia’s Minister of the Environment from the late 1970s to the mid-1990s, essentially creating the environmental policy framework of Indonesia. He also previously served as Minister of Communication. He was one of the team of economists trained at UC Berkeley, known as the “Berkeley Mafia,” who shaped Indonesia’s economic landscape during the transition period from President Sukarno to President Suharto in the late 1960s and early 1970s.

**Heru Prasetyo** is the Head of the National REDD+ Agency. Previously, he has been member of the National REDD+ Task Force since 2010. His responsibilities included chairing the global REDD+ Partnership and developing the national framework on climate change mitigation in forestry, agricultural sectors and natural resources. He has also been Deputy of Planning and International Relations of the President’s Special Delivery Unit for Development Monitoring and Oversight (UKP4) and Secretary of the National Committee of the Post-2015 Development Agenda.

**Wayan Windia** is one of the top scholars in the world on the Balinese rice terrace, water temple, and subak systems who will guide us through the intricacies of this stunning, complex adaptive system that blankets much of the island. Pak Wayan is a professor at Udayana University, Bali. He is a good friend of the renowned anthropologist Steve Lansing, who introduced me to him. Lansing, with the help of Wayan and others, uncovered the complexity and resilience of the Balinese water temple system subsequent to its near collapse in the 1970s after the introduction of Green Revolution rice cultivation and a program of export commodity rice production. The Balinese returned to their traditional practices and native rice and the resilient system recovered to some extent. The rice terraces are more than just stunningly beautiful. They constitute a vast, interconnected economic and social-ecological system on the island with deep roots in Balinese cosmology and ritual. In July 2013, the rice and irrigation subak system was designated a UNESCO World Heritage site. Pak Wayan is an expert on the subaks, the democratic farmers' collectives that manage the landscape and the complex irrigation system of sacred water that flows through the island.
D.A. Wiwik Dharmiasih is also an expert on the subaks who will be another of our guides in our studies of the subak system. She is a central figure in the creation of the subaks as a UNESCO World Heritage site. Wiwik is Director of the International Relations Program at Udayana University, Bali. She has also worked at the Institute of Peace and Conflict Studies in New Delhi, India.

Abetnego Tarigan is Executive Director of WALHI, the largest environmental NGO in Indonesia, and former director of Sawit Watch. Both NGOs focus on the problem of environmental and socioeconomic damage caused by the oil palm plantation industry and other environmental threats. Their work involves many issues, including the protection of clean and abundant water resources and advancing the cause of human rights. We will meet with him at CIFOR in Bogor, West Java.

Steve Rhee is the Ford Foundation’s natural resource governance and sustainable development point person for SE Asia. He works particularly on advancing community-based natural resource policies and strategies that help the rural poor and other marginalized peoples. Having lived in Indonesia for over 15 years, he knows the country well and is known as a savvy and candid observer of the country, particularly regarding decentralization policy, poverty, governance / corruption, and environmental management. He previously worked at the US State Department. We’ll meet with Steve in Jakarta at the Foundation’s offices.

Prof. Ani Mardiastuti will meet with our group in Bogor, Java. She is Professor in the Department of Forest Resources Conservation and Ecotourism Faculty of Forestry, Bogor Agricultural University, and is Chairwoman of Birdlife Indonesia (Burung Indonesia). She has been a lead consultant to the government on CITES and on trafficking in wild animals.
Agus Purnomo was Indonesia’s chief climate change negotiator for many years and Special Advisor to the President on Climate Change and Head of Secretariat of the National Council on Climate Change. Mr. Purnomo was formerly Executive Director, Indonesian Forum for the Environment; Executive Director of Pelangi Indonesia, a policy research institution for sustainable development in Jakarta; and Executive Director for the WWF where he worked on conservation and sustainable development issues. Mr Purnomo was also previously Secretary General of Transparency International-Indonesia.

Teddy Lesmana is a researcher at the Economic Research Center of the Indonesian Institute of Sciences (LIPI), Indonesia’s largest research institute. He focuses on environmental policy, particularly agroecology and agricultural climate change adaptation. He is a former MA student at the University of Maryland School of Public Policy and Conservation Biology program. The photo shows Teddy greeting former President Yudhoyono of Indonesia.

Abdon Nababan is Secretary General of AMAN (Aliansi Masyarakat Adat Nusantara – the Indigenous Peoples Alliance of the Archipelago), an organization of indigenous peoples that comprises 1025 indigenous communities and more than 30 indigenous organizations. He is the leading representative of indigenous peoples’ interests in Indonesia, focused particularly on land tenure and REDD+.

Mina Susana Setra is Deputy Secretary General for Institutional Building, Information-Communication & Resource Mobilization, AMAN. She comes from the Dayak people. She negotiates indigenous peoples’ issues in international treaties such as the UNFCCC framework.
Rukka Sombolinggi is the International Advocacy Coordinator of AMAN. She belongs to the Toraja people of the central part of Sulawesi. She produced “Standing Strong on the Tsunami Ruins” in April 2005, a film documentary about Indigenous communities affected by the tsunami in Aceh.

Christine Padoch is an anthropologist and current Director of the Forests and Livelihoods Programme at CIFOR in Bogor, Java. She has spent more than 35 years carrying out research on smallholder patterns of forest management, agriculture, and agroforestry in the humid tropics, principally in Amazonia and Southeast Asia. She came to CIFOR from the New York Botanical Garden where she was the Matthew Calbraith Perry Curator of Economic Botany. She has become an intellectual leader in the field of cultural ecology through writings that now extend over a period of 25 years. Her work on the sequential use of tropical forests has had major influence both elsewhere in the neo-tropics and more recently also in Asia. We will spend a day at CIFOR discussing a range of issues regarding the forests, biodiversity, agriculture, and climate change.

Elizabeth Linda Yuliani is a researcher in the Adaptive Co-Management Programme at CIFOR. She has also worked at the ASEAN Secretariat. She is co-author of the book, Learning to Adapt: Managing Forests Together in Indonesia.

Daniel Murdiyarso is a senior scientist at the Center for International Forestry Research (CIFOR). Dr Murdiyarso played an extensive role in the Nobel Peace Prize-winning IPCC when he was a Convening Lead Author of the IPCC Third Assessment Report and the IPCC Special Report on Land-use, Land-use Change and Forestry. He served as Deputy Minister of Environment for two years, during which he was also the National Focal Point of the UNFCCC and the Convention on Biological Diversity.
Farhan Helmy was Manager at the Indonesia Climate Change Center (ICCC). He was also Secretary of the Mitigation Working Group at the National Council on Climate Change (DNPI). He is also a leading negotiator of the Indonesian delegation to the United Nations Framework Convention on Climate Change (UNFCCC) on mitigation issues. He is a natural resource scientist and environmental policy analyst, with special interests and experience in forestry governance, land use and spatial dynamics, low carbon growth strategies, disaster risk reduction, risk assessment and environmental vulnerability mapping, and the use of open-source based tools. He has also worked at UNEP.

Panglima Laot leaders. Panglima Laot is a local indigenous system of marine management in Aceh, Sumatra. This multi-village system of fishermen sets catch limits, monitors reef health, and makes decisions that develop into local customary law (adat). We’ll meet with two leaders on the island of Pulau Weh in Aceh Province.

Hasjim Djalal is a law of the sea expert and Senior Advisor to the Indonesian Minister for Maritime Affairs and Fisheries & Indonesian Naval Chief of Staff. He is former Indonesian Ambassador to Germany, Canada, and the UN.

Desi Kusumadewi is Indonesia Director of the RSPO (Roundtable for Sustainable Palm Oil), which is a non-profit organization and certification scheme devoted to making all oil palm production sustainable. Prior to her work with the RSPO, Desi spent 6 years working for Lyman Agro, an oil palm plantation company. She received her degree in Agricultural Social Economics from Bogor Agricultural University and her Master’s in Environmental and Energy Management study at the University of Twente.
Chakra Widia, founder of the Tri Hita Karana Foundation, has devoted himself to developing sustainable agriculture and technology across Indonesia, from tsunami-ravaged Aceh, to the rice fields of Bali, where he has pioneered an effective organic intensification system for nutritious, heritage red rice. Chakra’s knowledge and skills range from appropriate technology and permaculture design, training and project management to consultancy for international NGOs.

Sawah Bali is an NGO operating in Bali that seeks to help restore best land use practices for the health of the farmer and the ecosystem along with elevating the farmer’s economic well-being. As an alternative approach to UNESCO World Heritage status to conserving the subaks, Sawah Bali borrows from the Vermont Land Trust model. We meet with Phiphi Kaplan, the founder, and distinguished members of the group, including Chakra Widia and Wayan Dedik Rachman.

Orangutan Health Project, led by Ivona Foitova, is the first orangutan research project to investigate the special behavior and ecological conditions necessary to maintain health in wild orangutans. In addition, OHP is the only on-going and long-term orangutan health research project being conducted in the world at this time. This is partly due to the complexity of self-medicating behaviors of the orangutan and the astonishing variety of flora in the rainforest, which also entails geographical and seasonal variations.

Muhammad Chatib Basri is Minister of Finance of Indonesia. He was formerly Chairman of the Investment Coordinating Board of the Republic of Indonesia and Vice Chairman of the National Economic Committee of the President of the Republic of Indonesia; Professor of Economics, University of Indonesia; Special Adviser to the former Finance Minister of Indonesia (Sri Mulyani Indrawati, now a World Bank deputy); and a member of the Regional Advisory Group of the IMF. He has also served as Special Adviser to the Finance Minister of Thailand.

Nurdiana Darus is Executive Director of IPOP (Indonesia Palm Oil Pledge), working on the Zero Deforestation Supply Chain, as declared during the Global Climate Summit 2014 in New York. Previous to her current role at IPOP Management, Ms. Darus was the Deputy of Technology, Systems, and Monitoring of the National REDD+ Agency of the Republic of Indonesia.

Noer Fauzi, Director at Sayogyo Institute for Indonesian Agrarian Studies. PhD in Environmental Science, Policy and Management from University of California, Berkeley. He is also Samdhana Institute Fellow
and Lecturer on Agrarian Politics and Movements at the Department of Communication Science, and Community Development at Bogor Agriculture University. He serves as a founding member and a member of the advisory committee of the National Consortium for Agrarian Reform. His expertise covers political ecology, agrarian studies, natural resource management, land and tenure reform policies, and rural social movements.

**Amanda Katili-Niode**, Head of the Secretariat of Indonesia's Council on Climate Change (DNPI) and Chair of Omar Niode Foundation, a nonprofit organization in Indonesia that focuses on agriculture, food, and culinary arts.

**Peter Kanowski** was Deputy Director General of CIFOR until 2014. He is a former professor of forestry at Australian National University. His roles comprise academic and professional leadership; research and teaching focused on forest and environmental policy, and on sustainability; and policy learning and development, and community engagement, associated with forest-related issues.

**Nur Masripatin** is Director General of Climate Change at the Ministry of Environment and Forestry. She has engaged in climate change negotiations and has been the REDD+ Lead Negotiator in UNFCCC meetings for several years. Dr. Masripatin was previously the Coordinator of the ASEAN Regional Knowledge Network on Forest and Climate Change (ARKN-FCC), and the Coordinator of Safeguards Information System (SIS-REDD+) development in Indonesia.

**Moira Moeliono** is Senior Associate at CIFOR. Early work with the Ford Foundation led to a keen interest in community management of forest resources. Having a conventional forestry background, her further education focused on social aspects of resource uses. At CIFOR, she is involved in issues of adaptive collaborative management of forest resources, decentralization, tenure, and climate change policy issues.

**Sandra Moniaga**, commissioner at the Human Rights Commission. She has co-developed and led several local and national NGOs (WALHI, LBBT Pontianak, ELSAM, ICEL, PtPPMA Papua, HuMa, Epistema Institute) focusing on rights-based and poor-oriented policy advocacy, legal resource development, democratization of law reform, and knowledge management.

**Jacob Phelps** is a scientist in CIFOR’s Forest Governance Portfolio. He has broad research interests, including related to forest sector law enforcement, the illegal wildlife/timber trade, and the design of Payment for Ecosystem Services schemes. Prior to joining CIFOR, he was based in Thailand, where he conducted research on region's illegal botanical trade. He holds a Ph.D. in Biology from the National University of Singapore, and completed his M.Phil. in Geography at the University of Cambridge and his B.S. in Environmental Science and Management at Michigan State University.

**Romain Pirard** is an environmental and development economist at CIFOR specializing in deforestation issues. Romain has worked for French research centers (CIRAD, CERDI) on forest policies. He has also worked with international organizations (World Bank, IUCN) and IDDRI. He joined CIFOR (Center for International Forestry Research) on November 2013. His current research topics include market-based instruments for the environment, economic assessments, and the links between agriculture and deforestation.

**Dede Rohadi** is a scientist at FORDA (Forest Research and Development Agency, Ministry of Forestry, Indonesia) who is currently visiting at CIFOR. He has been actively involved in various research activities,
with expertise on policy and institutional research themes, in particular as related to community-based timber plantations.

**William Sabandar** is Head of Renewable Energy Task Force at the Ministry of Energy and Mineral Resources (focusing particularly on biofuels). Prior to this position, Dr. Sabandar was appointed by the President of the Republic of Indonesia as the Deputy for Operations of REDD+ Agency, Chief Assistant to the Head of the Indonesian President’s Delivery Unit for Development Monitoring and Oversight (UKP4) and the Chief Operating Officer of the National Task Force on REDD+.

**Gede Sedana** is the Dean of Agriculture at Dwijendra University. He is an expert in the area of agriculture, social development and agribusiness, and a leading researcher on community development in Bali’s traditional agricultural practices.

**Satya S. Tripathi** heads UNORCID, a UN System Office established by the UNSG in November 2011 to support the pioneering work pertaining to conservation of forests and preservation of peat-land and bio-diversity in Indonesia. As the UN Recovery Coordinator for Aceh and Nias (2006-09), Mr. Tripathi coordinated the international support to tsunami and post-conflict recovery, facilitating the $7.2 Billion recovery process effectively. A lawyer and economist by training, Mr. Tripathi has served in leadership roles in India and with the UN in Europe, Asia and Africa in the fields of democratic governance, rule of law, climate change mitigation and sustainable development.

**Andrew Wardell**, Director of the Forests and Governance Program at CIFOR, overseeing a portfolio of research projects including the Global Comparative Study on REDD+. Prior to taking up this position he was Regional Director for the Clinton Climate Initiative-Forestry in the Asia-Pacific region supporting the development of seven REDD+ projects in Indonesia and Cambodia. He works on multi-level governance.
Course Readings (to be updated Fall 2015)

Books

Required:

Recommended:
- Resosudarmo. Politics & Economics of Indonesia’s Natural Resources. ISAS 2005.

Articles/Reports

Required:


**Recommended:**


EIA. *Above the Law: Corruption, Collusion, Nepotism and the Fate of Indonesia’s Forests*. 2003.


