

Title: The Communicative Dialectic of Environmental Discourse: A Critical Discourse Analysis of Opinion Columns about the 2006 Guimaras Oil Spill in Selected Broadsheets in the Philippines

Authors: Jan Michael Alexandre C Bernadas (University of the Philippines Manila) and Jaime Manuel Flores (Ateneo de Manila University)

Abstract:

The island of Guimaras will never be the same after August 11, 2006. It all happened when M/T Solar I (a marine vessel owned by Sunshine Marine Development Corporation and contracted by Petron Corporation), while carrying two million liters of bunker fuel, sank in the Guimaras Strait (Fernandez, 2006), located at the Western Visayas region of the Philippines. The sinking of M/T Solar I, marked as the biggest oil spill in the Philippines, has damaged more than 200 kilometers of coastline (Espina, 2006). The oil spill has imposed a great deal of burden among fishermen and marine ecology, not just in Guimaras, but also in the nearby rural areas.

This study explores how contested knowledge production about the August 11, 2006 Guimaras oil spill is constructed in selected editorial columns of major broadsheets in the Philippines. In order to understand how contested knowledge production is manifested in the selected editorial columns in three major broadsheets, this research uses a qualitative approach, particularly the textual analysis technique. This study found that contested knowledge production about the oil spill can be manifested, at the surface level, in the use of direct citation of knowledge sources. The dominant discourse about the oil spill has focused on issues of accountability and responsibility as constructed by corporations, government officials, and environmental activists. It is interesting to note that contested knowledge production, at the deep level, can be characterized by a form of dialectic. Implications include theoretical and methodological issues in the study of environmental communication.

**Cfp:** EuroSEAS Conference 2010  
**Panel:** Environmental Change, Uncertainty and the Adaptation of Local Knowledge Systems

**Abstract by:** Judith Ehlert  
Center for Development Research (ZEF A), University of Bonn, Germany  
[judith.ehlert@uni-bonn.de](mailto:judith.ehlert@uni-bonn.de)

## **ABSTRACT**

### **The Adaptation of Local Knowledge Systems to Changing Water Environments in the Mekong Delta The Case of Wild Capture Fishery in Can Tho City, Vietnam**

The Mekong Delta is a vibrant waterscape nurturing local agri- and aquaculture, with an increasingly important share of market production. Furthermore, industrialization is growing throughout the region. Pushed by human interventions, the Mekong Delta is undergoing an enormous transformation, impacting, among others, on the quality and accessibility of water resources. The decrease of wild fish, which is the main source of subsistence especially for landless people during the flood season, represents one example of the changing water environments.

The paper focuses on landless people's adaptation to the decrease of natural fish resources from a knowledge perspective. Their traditional fishery knowledge becomes a strategic resource in the pursuit of livelihood security. However, this knowledge is challenged by 'new' science-based models of floodplain aquaculture. The paper presents an empirically-grounded<sup>1</sup> theoretical discussion on the actors' steering mechanisms of local knowledge flows as well as on the knowledge interface of traditional fishing practices and externally-promoted aquaculture. Against the background of decreasing water resources accessibility for landless people, the paper assesses the actual societal relevance of such local knowledge systems. Based on the experience of the author, it also aims at discussing the challenges of empirical research on local knowledge – a concept which is difficult to grasp due to its characteristic feature of the 'obvious'.

---

<sup>1</sup> The paper is based on a one-year PhD field research conducted in the Mekong Delta in 2008/09, as part of the WISDOM-project ([www.wisdom.caf.dlr.de](http://www.wisdom.caf.dlr.de)); the research has been funded by the BMBF (Federal Ministry for Education and Research, Germany).

## Cassava landrace diversity and toxicity in relation to environmental degradation and food security in the Moluccas

Roy Ellen, University of Kent  
Hermien Soselisa, Pattimura University, Ambon

We report on a project comparing local knowledge of cassava diversity in two Moluccan populations, one on Seram and the second on Kei Kecil. As a crop, cassava is well-adapted to low rainfall conditions but a consequence of this is higher toxicity levels in landraces suitable for dry areas. This is an increasing issue with environmental degradation in the islands studied, in relation to nutritional stress and global warming. The high rainfall mixed swiddening site on Seram (Nuaulu) yielded a smaller numbers of landraces, less complex systems of management knowledge and few high toxicity landraces. The Kei Kecil data yielded a more complex system of management knowledge, and a larger number of landraces, of which at least 50 percent were of high toxicity. This appears to be linked to an agricultural regime more focussed on cassava, drier soils and base vegetation cover of shrubby secondary regrowth. Despite this, there is little evidence of health problems, compared say to Java and sites outside Indonesia where cassava toxicity is a major hazard. This suggests that local diets, knowledge systems and techniques for post-harvest processing provide an adequate buffer.

# Climate Change Implications on everyday life in Toineke Village / West Timor – An Empirical Contribution to the Theory of the World Risk Society

Anna-Katharina Hornidge, Fabian Scholtes

The consequences of climate change affect humanity worldwide. In Eastern Indonesia, the climate change projections expect an increase in the intensity of tropical hurricanes (at a 2-4°C temperature rise of the ocean surface 10-20%, IPCC, 2007b: 479) while at the same time a decrease in the frequency of occurrence. It is the aim of this paper to take Ulrich Beck's conceptual thoughts on the World Risk Society and discuss these based on an empirical case study of Toineke village in West Timor, Indonesia, a village highly affected by consequences of global climate change. In Toineke village, global climate change is not a discursively constructed topic, but instead is regularly experienced by the local population. Consequently the local population identifies strategies of how to cope with (short-term) and adapt to (long-term) the changed conditions. The changed conditions nevertheless most centrally mean that there is an immense increase in uncertainty, insecurity and a lack of safety for the local population, increasing the pressure on the social and economic system. In order to deal with this state of constant change, knowledge becomes absolutely crucial, as indicated by the data. The missing projections which would reliably predict the climate change consequences for Toineke nevertheless weaken substantially the ability of the population of Toineke to act appropriately. In this paper and based on the empirical case of Toineke, Beck's thoughts on the 'growth of ignorance' in the global science system, mainly being located in countries which belong to the main contributors to climate change which additionally weakens the ability of the population of Toineke to act are discussed. The growth of ignorance under at the same time changing climatic situations and the lack of providing 'side effect regions' such as Eastern Indonesia with reliable climate change projections, contributes to the local population of Toineke (a) choosing provisional arrangements for short-term coping as well as (b) heavily relying on their local knowledge of how to cope with extreme weather conditions. Consequently, traditional local knowledge is activated to compensate for the shortcomings of the global science systems.

The paper is an explorative paper based on qualitative empirical field research in July 2009.

## **Abstract**

Submitted to Panel „Environmental Change, Uncertainty, and the Adaptation of Local Knowledge Systems” – EUROSEAS 2010

### **Building resilience with people: Coping with the uncertainties**

By Irendra Radjawali

Leibniz Center for Tropical Marine Ecology – Bremen

Fahrenheitstrasse 6, Bremen 28359, Germany

E-mail : [irendra.radjawali@zmt-bremen.de](mailto:irendra.radjawali@zmt-bremen.de)

Phone : +49 421 23800 63

**Keywords:** resilience, reef fishery, Spermonde Archipelago Indonesia, uncertainties, agent-based model, role-playing game

Reef fishery is one of the important livelihoods which provide incomes for most of the small-island communities in Indonesia. Through the literature research supported with the ethnographical research as well as participatory research it is identified that the reef area of Spermonde Archipelago in South Sulawesi, Indonesia has been one of the main suppliers for the Asian (world) biggest live reef food fish (LRFF) market in Hong Kong since middle of 80's bringing to some extent the significant income to the society. However, this development is also followed by the emergence of destructive fishing practices, in the LRF fishery case, it is the use of cyanide to intoxicate the fish in order to be easily caught and transported. This practice leads to the overexploitation and the depletion of the “highly-valued” fish as groupers and humphead wrasse, bringing them to the vulnerable level to extinction and threaten the whole reef ecosystem as reef becomes vulnerable to the death.

Reef fishery in Spermonde Archipelago operates through the patron-client structure known as “*punggawa-sawi*” which can also be regarded as the “adaptation strategy” to their exposure to the dynamic monsoon climate. There are different types of “adaptive capacity” among communities. For those who have more capital, then during the west monsoon (the “bad” weather with high waves), they forage to further fishing ground(s) which give them less risks from the weather turbulence. On the other hand, those who don't have enough capital depend on the debt system operate through the patron-client relation. The local communities face different type of uncertainties, i.e. the weather, the fish stocks, and the changing environment due to different type of fishing. Within this regard, this paper will elaborate to what extent the concept of resilience, as described as the capacity to absorb shocks while maintaining function (Folke et.al. 2002) and the degree to which the system can build and increase the capacity for learning and adaptation (Carpenter et.al. 2001), can be grounded and examined by the local communities practices in the context of changing environment, particularly in reef fishery. This paper argues that coping with three different type of knowledge related uncertainties (unpredictability, incomplete knowledge and multiple knowledge frames) as described by Brugnach et.al. (2008) can be done through the development of role-playing game and agent-based modelling and simulation which has potential to give insights to increase the resilience. This paper presents the exercise of role-playing game and agent-based modelling and simulation involving reef fishery communities in Spermonde Archipelago, Indonesia towards the resilient social-ecological reef fishery system.

## Adaptation to Climate Change and the Knowledge-power Nexus: the Case of Northern Yunnan

Maximilian Mayer, [maximilian.mayer@uni-bonn.de](mailto:maximilian.mayer@uni-bonn.de)

Center for Global Studies, Bonn University

Based on my 2009 field research in Yunnan Province (PRC), I challenge some common notions of the scientific discourse on climate adaptation. Focusing on different knowledge systems, for instance global, national, and local levels, my empirical findings from three villages, county and provincial government point to three crucial aspects: First, speaking about knowledge without relating *knowledge to power* misses the most basic insights from science and technology studies. Second, the need to “contextualize” adaptation concepts and respective strategies is widely accepted. Contrary to prevailing treatments, what I mean by that is to conceptualize climate change as one variable of broader patterns of socio-economic-technical changes, which are mediated and enforced by complex institutional settings. Third, depending on which societal scale we analyze, knowledge-power nexus and, consequently, *uncertainties* have a different quality, are composed of different discourses and properties, and unevenly effect involved actors. To put it differently, my case study illustrates that knowledge and adaptation in climate policy is foremost a question of asymmetries. What for one level might be a legitimate measure (e.g. building a big dam) represents for other actors an existential threat. Uncertainty in this sense is not so much caused by changes in natural environment itself, but results rather out of preexisting economic and political power constellations such as top-down economic planning from the capital, influence of energy companies or new crops introduced by local governments. I argue, thus, that we need to be more explicit about the political dimensions of “vulnerability”, “resilience”, and “adaptation” to climate change both in terms of theoretical concepts as well as in terms of empirical research.

## What Makes Social System Resilient? Searching the Property of Social Resilience from the Cases of Two Coastal Communities in Indonesia

Rio Deswandi  
Leibniz Center for Tropical Marine Ecology  
Fahrenheitstrasse 6, 28359 Bremen  
Germany  
E-mail: rio@uni-bremen.de

### Abstract

This paper analyses prominent property for social resilience in the face of livelihood uncertainty by comparing coping strategy performed by two coastal communities situated at two different geographical areas. In both areas, livelihood system was shaped by environmental change and uncertainty. At the western and eastern parts of Indonesia, field researches were carried out from May to August 2007 and May to November 2008, respectively. In-depth interview, participant observation, fishing simulation, and some techniques in participatory method were employed to collect and validate data from wide-range of research's informants. Differed mostly in social and ecological properties, coastal community in the western part of Indonesia coped by diversification of income-generating activities, while other relied on social network to ensure both successfulness of income-generating activities and insurance during hard periods. However, the state of livelihood security of both communities was determined by their level of access to livelihood assets (constituted by social, cultural, biological, physical, and political properties). Accordingly, local institutions played crucial role in determining social resilience (as partly determined by livelihood security) by managing the distribution and allocation of livelihood assets. However, at the same time, institutions needed to be resilient as they were constantly challenged by erratic social-ecological systems. Institutional adaptability to erratic environments in order to maintain their function to support community's coping strategy became a crucial property. Nonetheless the capacity of local institutions to enhance social resilience in both communities, their impacts on ecological resilience remained contradictive. The interaction between social and ecological resiliencies needs further investigation.

**Keywords;** coping strategy, social resilience, livelihood security, environmental change and uncertainty, institutional adaptability, coastal community, Indonesia

## **Proposal for panel presentation: Living with the fire risk**

### **Peatland fires and local people in Central Kalimantan, Indonesia**

– Anthropological perspectives –

Viola Schreer

The proposed panel presentation will discuss emic perspectives on the fire risk in Indonesia's peatlands. The extensive, recurrent peat fires in the last decades do not only threaten the sustainability of local livelihoods. Burning peat and peat forest also has social, economical and environmental impact of concern on a global scale, including high CO<sub>2</sub> emissions, acrid smoke and haze, and loss of critical carbon sinks and biodiversity. Based on an anthropological fieldwork in communities surrounding the tropical peat-swamp forest of Sebangau in Central Kalimantan Province in 2009, the presentation will address how the affected people perceive, mitigate and cope with the recurrent fires in their environment. On what premises do they built their perception of fire? Which local knowledge (*kearifan lokal*) has been developed to manage the fire risk? How are these strategies embedded into the local *adat*? And what constraints do people face in their mitigating and coping practices? The case study will thus discuss issues that so far have attracted only little interest in the ongoing debate and therewith provide a differentiated insight into the fire risk.