

Plenary Session II

Local Wisdom, Ecology and Climate Change

The Dialectics of Scientific and Local Knowledge in Response Farming to Climate Change:

The Case of “Science Field Shops” among Rice Farmers in Indramayu

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Farmers are good observers of their own habitat. *Ilmu titèn* (observable-memorable science) and *pranata mangsa* (Javanese cosmology) are the products of Javanese farmers' meticulous observations and experiences over time. Those products have been marginalized since the introduction of the Green Revolution technological package, though some groups of farmers have preserved “local science” as a basis for their cultivation practices. In recent decades, farmers have had to struggle to survive because of ongoing, unusual risks in their environment. The reality of global warming, the increasing variability of climate, and the occurrence of extreme events caused by climate change have created unexpected consequences and challenges to their conventional ways of cultivating crops. Could they rely on their “science” and conventional ways of farming to cope with these risks?

A number of rice farmers in Indramayu Regency, West Java, argue that they have to reinterpret their local cosmology and reconsider their practices in their struggles to cope with these unusual risks. They admit that the introduction of “agrometeorological learning” by a Dutch agrometeorologist in collaboration with Indonesian anthropologists from Universitas Indonesia through “Science Field Shops” (2010–2014) has helped them significantly in developing their “response farming to climate change”. The “Science Field Shop” is an arena in which farmers carry out their own daily rainfall measurements and agrometeorological analysis, and discuss their findings monthly with fellow farmers and scientists. This presentation will examine farmers' agrometeorological learning as a case of continuous dialectics between scientific and local knowledge, as well as dialogues between farmers and scientists/scholars as a means of assisting farmers in improving their anticipation capability and decision making. Neither science nor local knowledge alone can help farmers anticipate the increasing uncertainties of weather conditions in recent and future planting seasons.

Some Notes on Local Wisdom in Spring Water Management in the Rural Area

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Water is an essential need for human life. Water which is needed by the people come from a variety of sources, such as rainwater, surface water and groundwater with it's advantages and disadvantages. Based on it's sustainability and quality, groundwater offer some advantages compared to other water sources. Groundwater can naturally come to the ground surface as springs or seepage. With the emergence of groundwater to ground surface, it makes easier for people to use it. Rural communities have used groundwater which comes out as springs by applying appropriate technology combining with local wisdom. The communities do not just using the spring, but they also managing the spring based on local and traditional knowledge. The location where the springs come out are well maintained and well protected from pollution. The use of water from springs are considered by the priority of water needs of the local communities. Domestic use is places as first priority. In the mean while, in distributing water from springs to the consumer, the principle of fairness and togetherness are also considered. The network of water distribution using pipe is designed based on appropriate technology done by the local community. The maintainance of the distribution system is the responsible of the local communities. All those management of spring has a main goal i.e. the sustainability of the spring itself as well as it's useage. Local knowledge and local wisdom in spring management are the characteristics of rural communities in the environment management.

Keywords: Water use, springs, local knowledge, environmental management, sustainability

**Returning to *Adat*,
A struggle to decolonize discriminatory categorization**

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Building on recent engagement with what I may call “the project of returning”, which started with a training workshop in Sungai Utik of Kapuas Hulu in West Kalimantan to provide opportunity for a group of youth to return and experience a call to defend their customary land, I will make presentation about a case of struggle over discriminatory categorization that rooted in colonial and post-colonial agrarian politics. What I plan to talk is the implication of the Constitutional Court ruling number 35/PUU-X/2012 that ruled that customary forest (*hutan adat*) is no longer part of the state owned forest, but part of the forest subject to rights (*hutan hak*). The ruling fundamentally undo the existing discriminatory categorization that invalidates the position of *masyarakat hokum adat* as the owner of their lands and territories. My talk will elucidates the ways in which the Alliance of Indigenous Peoples of Indonesia's Archipelago (AMAN) and its supporters have insistently launched campaign to make the existence of *masyarakat adat* visible and their rights respected, including by submitting a judicial review to test the constitutionality of some articles of the Forestry Law 41/1999, which categorize customary forests under state owned forest. The Constitutional Court Ruling is a landmark event that opens up the possibility for changing the trajectory of systemic agrarian conflicts, which are chronic and pervasive in the Indonesian archipelago.

At the same time, it also provides an opportunity to us to discuss what Walter D. Manolo (2000, 2007) calls “(de)colonality”. “For those whom colonial legacies are real (i.e. they hurt), that they are more (logically, historically, and emotionally) inclined than others to theorize the past in terms of coloniality” (Manolo 2000: 115). Coloniality is different from colonialism that denotes a political and economic relation in which the sovereignty of a nation or a people rests on the power of another nation. Coloniality refers beyond the strict limits of colonial administrations to long-standing patterns of power that emerged as a result of colonialism, but that define knowledge production, political economic structure, cultural production, etc., included property relation and categorization.

I will end my talk by reworking the concept of “acts of citizenship” introduce by Engin F. Isin (2009) and making an argument that the Ruling provides an opportunity to fix the citizenship status of Indonesian *masyarakat adat* as rights-bearing subjects, which would be an active popular move.

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