

# Socio-Economy and Natural Resources Management in the South Pacific: An Interdisciplinary Analysis

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## ■研究調査レビュー

## Socio-Economy and Natural Resources Management in the South Pacific: An Interdisciplinary Analysis

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### Introduction

The paper aims to discuss an interdisciplinary approach to socio-economic change and natural resources management in Fiji from the viewpoints of reflexivity. Reflexivity means circular relationships between causes and effects, which are both bidirectional. Giddens (1990) applied the theme to the change of society with the notion of "reflexive modernity". He argues that society is becoming increasingly more self-aware, and hence reflexive over time. Most of the developing countries have experienced colonialism and they are now under the massive impact of commercialization and globalization. The historical process is producing uneven mixture of tradition and modernity. This so called "uneven modernity" spreads into every corner of the economic and social life of the local people. Figure 1 shows the basic concept of the approach.

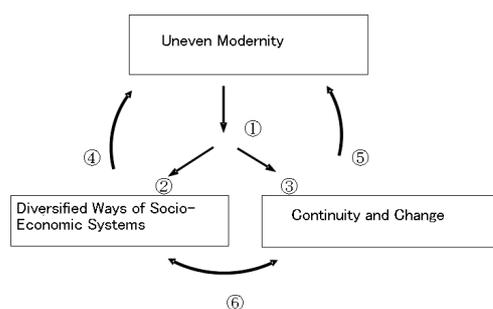


Figure 1 Concept of Uneven modernity

The subsistence societies are under the drastic change, especially in their management of natural resources such as land, sea, and aquatic resources. We have been conducting research in Fijian villages to clarify how the local people are utilizing their natural resources. Fijian village people are relatively successful in blending monetary and non-monetary economy based on their cultural resources (Powell 1998). Tanner (2007) argues that their land utilization system of rights is a set of communal and individual rights, which brings around the balanced society and economy. On the surface, the cultural resources are limited to their indigenous elements such as *tabu*, which means cultural prohibitions in general, and ceremony of *grog*, where people have local drink made from dried plant for socialization and strengthening their tie. However, imported elements such as Methodist's teaching also played an important role to nurture individualism based on the communal solidarity (Brisson 2007). As monetary economy penetrates in the villages, the economic and sociological interaction of the village with the outer world is becoming more important. In Fiji, villagers continue to keep their strong tie even after they leave their village to work

outside. Some of this *galala* people, which literally means “free people”, come back to spend their rest of life after retirement (Overton 1993). Thus, the subsistence villages in Fiji are under process of change, which is based on the mixture of indigenous and imported cultural resources. And the changing process itself reflexively influences the “uneven modernity”. The loop continues to form their socio-economic life, which influences the management of natural resources.

**Proposed approach and data**

If the discussion above is applicable, we need to come up with a dynamic and multidisciplinary approach to natural resources management. Socio-economic and ecological perspective of natural resources management is necessary for the actual implementation of policies such as Marine Protected Area (Teh 2009). It is also important to develop time-saving and costless methods, for most of the developing countries lack in funds. Some of the emerging challenges are Rapid Survey Technique on socio-economic indicators (Namudu and Pickering 2006) and Community Based-Monitoring (Leopold 2009). However, there have not yet been completed useful and scientific methods for the balanced natural resources management with a long term vision. The goal of our research project is to elaborate a multi-disciplinary method which can contribute to the actual policy making for the balanced development of nature and human beings.

We are now gathering data in a traditional Fijian village on the utilization of *kaikoso*

clam which is one of the most important sources of income as well as common daily food. Figure 2 shows the location of Fiji and the research village A.

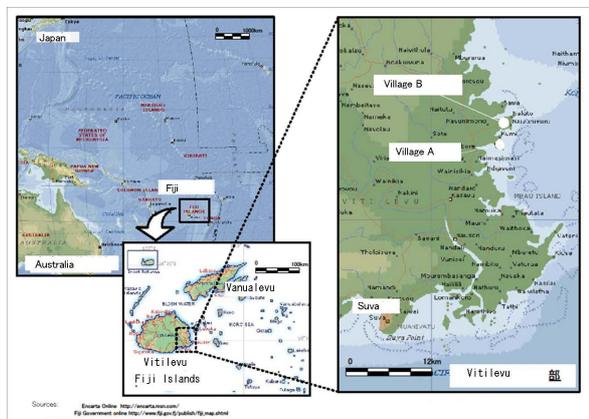
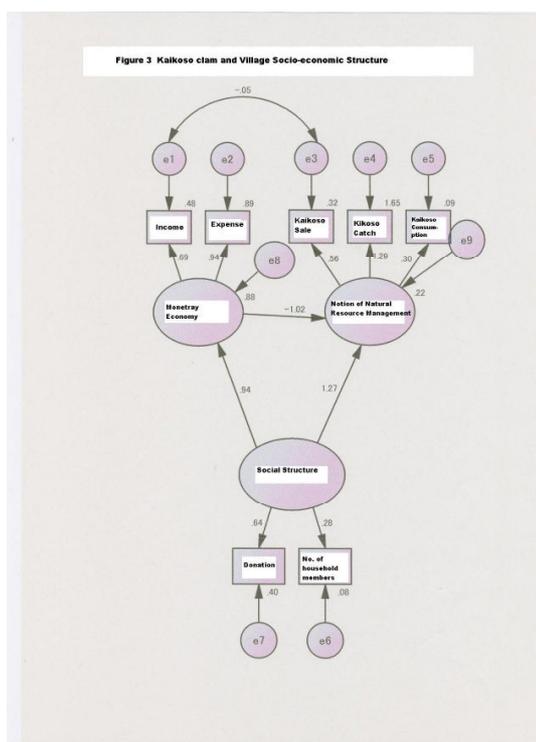


Figure 2 Location of research site



We have already finished household survey on their family structure, income, expense and various survey items regarding *kaikoso* such as amount of catch, consumption, sale, and give-away in 2009 and 2010. By adding some more data we will make a socio-economic model. One of

our major models is Structural Equation Modeling (SEM). SEM is a statistical technique for testing and estimating causal relations using a combination of statistical data and qualitative causal assumptions. Our tentative statistical data are the survey items above, and qualitative causal assumptions are “social structure”, “monetary economy”, and “notion of natural resource management”. We will especially analyze what factors are more decisive in the amount of *kaikoso* catch and standard of living in the village. Figure 3 shows the tentative result of the model.

### Expected results

Firstly, we can elaborate a simple SEM model by finishing the data gathering and modeling, which can contribute to policy making. For example, some villages can just simply expand government financial support for the poor in order to stop the over-catch of *kaikoso*. Other villages can simply strengthen the traditional prohibition rule or *tabu* with or without help of outer elements such as government, NGO, or their network with the local people. Secondly, we will be able to understand the complex development process of socio-economic change and natural resources management in a reflexive way by comparing some villages with deferent economic development levels. In other words, we will come to understand the reflexive chain of “uneven modernity”

### Conclusion

Finally, we make some suggestions for the interdisciplinary field research by a group, whose themes have something to do with

socio-economic change and natural resource management.

- Field research should be long term and intensive, especially in the foreign countries.
- Specific methodologies should be shared by co-researchers of different academic disciplines.
- Researchers need to develop some simple technique which can be understood by different field of academism.
- Suggestions for policy making could be kept in mind of the researchers.

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