

GREEN REVOLUTION AND SOCIAL CHANGE IN SUBAK SUSUAN, KARANGASEM, BALI

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ABSTRACT

This study aims to determine the social changes in Subak Susuan Karangasem Bali as a result of the implementation of green revolution (revolusi hijau). The method used observation, in-depth interviews equipped with interview guides, recording devices, cameras and stationery. Sampling is done by purposive or direct appointment to a person who is considered to know and be directly involved in the event.

The results show that the green revolution has degraded various types of local rice seeds and simultaneously marginalizes local wisdom resulting in social change. Agricultural homogeneity, which in turn has diminished farming culture, professional social organization such as *sekaa numbeg*, *sekaa manyi*, *sekaa metekap* began to decrease and patron client bond is getting worse. The government is advised to pay attention to the values of local wisdom that guides the life of farming in Subak Susuan.

Keywords: green revolution, local wisdom, farming culture, *sekaa*, degradation, patron client.

INTRODUCTION

Agricultural changes have occurred many times in history, regardless of whether people call them "revolutions" or not. There are changes in agricultural equipment, crop rotation, irrigation systems, soil fertility management systems, and so on. All that happens in human efforts to increase food production. The effort can be slow or fast. The quick nature is described as a "revolution", a change in a relatively short time of explosion of innovation that is widely adopted. It concerns not only with the quantitative increase of agricultural production but also the qualitative transformation of the production system.

The green revolution can be seen in two different ways though they can be in relation with one another. From an ecological perspective, new superior rice (*padi unggul baru* or

PUB) causes a change in the pattern of crop rotation which in turn affects the biological balance, especially the predator-prey relationship of plant pests. The explosion of brown planthopper is one example. On the other hand, in the context of societal change, it is possible to discuss the extent of the role of the green revolution in the process of overall socio-economic transformation. The green revolution has created rural dynamics with all its impacts interacting with other major change impacts such as industrialization, the growth of the service sector, especially communications, and urbanization. This is the feature of the twentieth century agricultural revolution, which distinguishes it from previous centuries.

The increasing price of food in the global market have had a direct impact on the high price of food in Indonesia. The country once known as an agrarian one, even once a rice exporting country, is now facing a food crisis (*krisi pangan*). Even Soeharto, the president, received an award from the Food and Agricultural Organization (FAO) as the Father of Development (*Bapak Pembangunan*) for being able to realize rice self-sufficiency.

Bad connotation are often addressed when assessing what is commonly known as natural farming, organic farming, sustainable agriculture, or various other titles. The social construction of its ancient, subsistent, traditional, antimodern, and incapable of answering the problem of food sufficiency for many people, has been said to be a single truth. Due to the reason of maximization of production for food security, the agricultural industrialization program commonly known as the green revolution is enforced around the world. National government regimes, especially in third world countries, world bodies, and international regimes, such as food industry and business/commerce, become proponents of the program's success. The green revolution of the volume one (intensification volumes of agriculture with hybrid seed and chemical intake) which continues with the green revolution of volume two --agricultural intensification with transgenic seeds and chemical intake - has been successful until now.

The structural and systematic uniformity program has marginalized subsistent farmers, and successfully uniformed the minds of many people, including subak (irrigation system) Susuan, in Karangasem, Bali. The natural farming practices of subsistent farmers by James C. Scott are nothing more than peripheral stories. While the intensive chemical practices of his devotees and affirmed by his regime are believed to be a panacea for the realization of food security. Conventional farming is increasingly marginalized, even farming culture among farmers faded as it did in subak Susuan Karangasem. This is highlighted in cultural studies that should be given a advocacy (Barker, 2005: 6-7; Barker, 2014: 52).

Originating from the background above, the problem of this study is how far the social changes do in subak Susuan Karangasem as a result of the implementation of the green revolution program? In the following descriptions it is tried to be analyzed using an interdisciplinary approach in hopes of getting results closer to reality.

RESEARCH METHODS

Methodologically, this research is packed into qualitative descriptive research using cultural studies' approach. This is a tradition developed in the study of socio-cultural sciences that essentially depart from what humans observe in their social environment (Moleong, 2003: 2-3). Data collection is done through participative observation, in-depth interviews with actors directly involved in the event, and also through documentation. Observations were made at the farmers' residence in subak Susuan Karangasem. Selection of key informants plays an important role to get informants who deserve to be interviewed through purposive sampling technique. Snowball sampling technique is also used to determine the sample (Bungin, 2008: 54).

The main instrument in the study is the researcher himself, completed with interview guides, recording devices, cameras, and other stationery as needed in the field. This model of analysis is called an interactive model borrowed from Huberman and Miles (in Endraswara, 2003: 215) consisting of three stages (1) data reduction, (2) data display, and (3) drawing conclusions through descriptions and verifications.

DISCUSSION

When rice cultivation is still determined by the farmers themselves, they always make a comparison between what is experienced in the present and in the period before the introduction of 'government' rice known as superior varieties with anti-rice pest (varietas unggul tahan wereng or VUTW). A big change is experienced by farmers in Subak Susuan Karangasem in terms of freedom to grow rice in rice fields. They are not free to plant the types of rice that they must do. The introduction of the use of improved varieties by the government, has led to genetic erosion. The genetic heterogeneity of local rice is increasingly lost, replaced by a number of superior varieties that must be planted uniformly. This is an evidence that agricultural development is one example of how the discourse, knowledge, and reproduction of power takes place through top-down implementation without involving local farmers in the

planning process. The farming community of subak Susuan Karangasem has been degraded in developing a resource management strategy for their survival of life.

The application of the green revolution seems to be in line with the principle of decentralization of development, which has been widely demanded by society. Although regional autonomy has been implemented since 2001, the distribution of development has not been optimal yet. Development gaps still occur, especially between villages and cities. The indication is the movement of population to look for work to the city is still ongoing as happened among family of farmers in subak Susuan Karangasem.

On the basis of that, the green revolution is in accordance with the conditions of employment that lack of education. More than half of the labor force has only primary school education or less and the majority live in rural areas. The green revolution seems to be in line with the triple track strategy initiated by President Soesilo Bambang Yudhoyono a few time ago. The substance of the triple track strategy is pro-job, pro-poor, and pro-growth.

The green revolution has been "icon" of agricultural development in the early seventies to the eighties. The green revolution is regarded as a "savior" for the agricultural sector, especially in developing countries that are characterized by low productivity, long life, low growth, and minimal farmer welfare.

Since the 1990s, such a green revolution movement has experienced a turning point. Sharp criticism and anti-green revolutionary movement then emerged. The costs to be paid by this green revolution program are the loss of local institutions, the loss of biodiversity, the deterioration of soil quality, and the deterioration of the overall quality of the environment. The green revolution has succeeded in dramatically increasing productivity and agricultural production, but has failed to improve farmers' welfare and agricultural independence. This is the biggest cost to pay because agriculture in Indonesia has become highly dependent on the world's agricultural industry from seeds, fertilizers, pesticides, to agricultural machinery. Since then the independence of farmers is lost because it is no longer able to produce itself to the basic input.

If people want to live healthy, food security must be maintained and the hegemony behind these chemical uses are important to be criticized. Hegemony has castrated and enslaved the peasants so that their ideology is the ideology of resistance (a counter-hegemony) in order to achieve the liberation of the peasants from the trap of dependence and the helplessness of the systematized global structural hegemony. The principle of natural agriculture is not a matter of anti-chemicals, but aspire to realize the autonomy,

independence, and sovereignty of the eco-friendly peasants. The practice of life reflected in totality and hard work are clear evidence that farmers have contributed greatly to the resistance movement against the green revolution regime. It is also a restoration of cultivated agriculture with its long-neglected and marginalized values and wisdom in the farmer community. The green revolution has marginalized local varieties that should be retained. To the extent that society is merely a "sales object," food security and sovereignty will vanish. Farming culture that integrates with nature shifts into an exploitative relationship between man and nature and the marginalization of one man's gender over another sex (female).

Confiscation of food management by corporations under neoliberal care destroys the life of the farmers. Knowledge of farming and spiritual values in farming, displaced by a market economy that utilizes all natural resources as a commercial commodity.

CONCLUSIONS AND SUGESTION

The process of transfer of agricultural technology creates social conflict between subak farmers in Susuan and the local government. The green revolution led to the faded rights of farmers in determining, planting, maintaining, processing, and storing rice crops with their chosen technology. This occurs when the state (government) takes over the rights to the production of farmers through a green revolution program that has marginalized the role of professional social organizations such as sekaa numbeg, sekaa metekap, sekaa manyi, sekaa mejukut, associated with farming culture so that there is social change in subak farming communities in Susuan, Karangasem.

In implementing the green revolution program in subak Susuan Karangasem, the government should use a bottom-up participatory approach so that it does not create a counter-hegemony. To preserve the natural environment and agriculture it is recommended to the government to reduce the use of chemical fertilizers and excessive pesticides.

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