

Rice and its Multiple Identities: A Discursive Study of Paddy Cultivation in Nepal and Himalaya

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Abstract

This paper encounters the problem of the identity of rice and paddy farmers in Nepal and in the Himalayan region. It examines discursive practices in three different regimes of knowledge that constitute rice and paddy cultivation in Nepal and the Himalayas; mythological, socio-cultural, and Techno-political. For the analysis, it has brought descriptions of materials from the comprehensive compendium on 'Rice Sciences and Technology in Nepal', (2017). The compendium is the major source of materials or 'corpus of the statement' in relation to each of the domains of knowledge in paddy cultivation for analysis. The analysis exposes the meanings and identities of rice and paddy farmers and farmers' positions in each of the regimes. This paper argues that the contemporary discourse of rice/paddy cultivation is dominated by the techno-political regime of knowledge which has specific implications for the production of the identity of rice and paddy farmers. Furthermore, this mediation reproduces rice as a commodity to sell in the open market and paddy farmers as the passive recipients of the information and skills from the modern agriculture agencies like the state, scientists, media, and agro-companies. It utilizes Foucauldian Discourse Analysis (FDA) method while approaching the different domains of knowledge. The argument is based on the 'non-essentialist' theory within the anthropological framework of political ecology as proposed by a senior post-modern anthropologist Arturo Escobar.

Key words: Identity of rice, Position of paddy farmer, Political ecology, Discourse analysis, Nepal and Himalaya

Introduction

Conventional explanations of rice and paddy cultivation are mostly concentrated around agronomy, economics, and policy sciences. They focus on the area of paddy land and its productivity, the quantity of rice produced each year, and its distribution over the

population (Tripathi et al., 2019). So the major problem for these disciplines arises when there is no balance between the amount of food (here rice) produced each year and the amount of food required for the population. If the amount of rice produced is less than the food required to feed the population then there is a problem. Now, it requires activating all the applications of the sciences including agronomy, economics, sociology, and other policy sciences. It involves, doing calculations of the variety of seed and its potentiality to produce the amount of crop. This includes identifying the area of land available (required as well) and the various aspects of population dynamics and simulating them to reach a desired solution (Bhndari et al., 2017). The fundamental problem to be solved in this discourse is to ensure the minimum quantity of food/rice required to feed the population.

In the case of Nepal, to continue this discussion on the specific discourse on rice and paddy cultivation a bit further, the country is in a specific historical context. Once the rice-exporting country has ended up with a net rice-importing country since the last decade of the 20th century (Adhikari et al., 2021). However, rice is still the most important crop, and paddy cultivation is the most important economic activity in the country. The Ministry of Agriculture has mentioned that the country has been cultivating paddy in 1.55 million ha of land which is about 55% of the total cultivable area of the country and the largest area coverage compares to any other food crop (MoALD, 2019). The ministry also mentions that rice shares about 50% of the total calorie requirements supplied by the cereals and shares about 20% of the total GDP out of 27.5% of the total contribution of the agriculture sector (CDD, 2015). Besides the land coverage and share of rice on the food plate of the population, paddy has also been significant to maintain the country's economic status.

Furthermore, in a policy discussion Tripathi et al., (2019) have mentioned that even though 'more than two third of the country's population is dependent on rice farming and related enterprises for their livelihoods', the country's rice production is not sufficient to meet the national demand. They have shown that the present annual growth of paddy production is not sufficient to feed people throughout the year. The country imports about 1.5 million tons in a year (Tripathi et al., 2019). Now, the whole focus of the agencies is to meet the gap of 1.5 million tons each year which is about one-fourth of its production. And, the current production ratio of 3.0 t/ha has to rise to the ratio of 6.0 -7.0 t/ha by 2035 to meet the demand of the increasing population (Tripathi et al., 2019). Again, agronomists, economists, and policy scientists have already recommended various suggestions and

prescriptions to increase the country's paddy production. Some of the key prescriptions are; identifying paddy zones, adopting modern or mechanical technologies in planting and harvesting, and promoting a plant of new hybrid, drought/pest resistant, and aromatic paddy varieties (Bhandari et al., 2017).

While increasing political concern and discursive practices over the rice and paddy cultivation history has transformed into a new age of rice information. The specific characteristic of this age with nature is that there are multiple discourses in the play on the same natural 'entity' which has put the identity of 'essential nature' in crisis (Escobar, 2000). The other characters of this age are not just limited to language and discourse. The rapid advancement in biotechnology is another intervention that has already challenged the identity of nature as an essential entity. Similarly, the new pattern of food choice and food habits, commercialization of food products, and changing supply channels are also exerting impacts on the identity of rice and paddy farming.

However, the discussion does not mean that society has reached the level where everything comes out of the information as discussed in hermeneutics and far-right sociological literature. But what is important is that we are facing the challenge of rapid technological and societal change and a huge impact is there around us in the way we assume the essential model of nature including paddy seed and plants. So the question arises; what about the different meanings of rice and its value in different cultures/communities over time? What about the changing role of paddy farmers, do they remain the same? What about the recent technological disruptions in the last few decades and their immense implications to redefine the roles of the conventional actors and their relations in paddy cultivation? This paper goes beyond the frameworks of conventional disciplines and tries to answer the questions.

Theory and methods

There is a fundamental shift in the classical understanding of the essential character of nature with the beginning of the 21st century. There is an unprecedented ontological and epistemological transformation. Escobar (2000) argues that two key historical reasons have unsettled the long understanding of the essential nature of nature and brought out the problem of nature's crisis. (1) Throughout history, 'nature is always constructed by our meaning-giving and discursive processes so that what we perceive as natural is also cultural and social, said differently, nature is simultaneously real, collective, and discursive-

fact, power, and discourse –and needs to be naturalized, socialized, and deconstructed accordingly’. (2) With molecular techno-science from recombinant DNA to gene mapping and nanotechnology, in recent history, nature is getting artificially produced in many ways and our own beliefs in nature as untouched and independent are giving way. According to Arturo Escobar, a well-established post-modern anthropologist, this is a situation of the ideological breakdown of the essential nature of nature.

Escobar (2000) argues there is less attention to this crisis of nature’s essential nature. As a conceptual tool, he has reconceptualized this specific nature as the ‘non-essential’ nature to gauge this newly formed nature and revisit the human-environmental relation. Furthermore, he has also built a theory of anti-essential as a political dynamic of human-environment relations following the latest trend in the post-structural feminist, political, and critical race theories. The theory is still in the pre-mature stage. It assumes that ‘nature goes beyond the truism that nature is culturally constructed and socially produced, while fully acknowledging the biophysical basis of its constitution’. He has also outlined some models of non-essential nature such as; *organic*, *capitalist*, and *techno-scientific* from the historical perspective.

He defines political ecology as the ‘manifold articulation of history and biology and the cultural mediations through which such articulations are necessarily established’ (Blaser & Escobar, 2016). He further argues that in both non-modern and postmodern domains, we find nature and society absent conceptually, and the attempt to construct an analysis that does not rely on these categories has political and epistemological dimensions (Escobar, 2000). Therefore, the task of political ecology for Escobar (2000) is to outline and characterize these processes of articulation and its goal to suggest potential articulation realizable today and conducive to more just and sustainable social and ecological relations.

This paper utilizes this anti-essentialist political ecology framework proposed to explain the non-essential nature to understand and explain the rice/paddy cultivation in the Himalayan region of Nepal. It examines the discursive construction of rice/paddy cultivation as presented in the comprehensive compendium on ‘Rice Sciences and Technology in Nepal’, (2017) jointly prepared by the government and non-government authorities in Nepal. This is the first kind of work in the field covering the entire aspects of rice/paddy cultivation in Nepal. This study identifies three major domains of rice/paddy cultivation in the volume; *Vedic*, *Socio-cultural*, and *techno-political*. It examines

manifold practices of rice and paddy cultivation in each of these three different domains of knowledge. The method of analysis of the selected 'corpus of the statement' is based on Foucauldina Discourse analysis (FDA). More specifically, the following part of the paper analyses the articulation of rice/paddy cultivation in their differences and its subsequent implications on the production of different patterns of representation and the relation of paddy farmers to the other farm actors (Foucault, 2010). Before going to examine the discursive formation of rice and paddy cultivation, the following section presents a brief introduction of the rice volume which is archaeology of rice and paddy cultivation in Nepal and a main source of data for this discursive study.

Introduction to the Rice Volume

The rice volume called: Rice Science and Technology in Nepal: A Historical, Socio-cultural and Technical Compendium (2017) jointly prepared by CDD (GoN) and the Agronomy Society of Nepal (ASoN) is the main source of data taken for this study. It is the first and most comprehensive official endeavor to cover all aspects of paddy farming in Nepal (CDD & ASoN, 2017). The intended objective of this compendium is to bring the farmers' role in front for maintaining the genetic diversity of rice for centuries and its use by the past generations for improving rice production. The compendium is a huge volume of 977 pages. The compendium includes about 120 papers on rice and paddy cultivation in Nepal produced by independent authors in its main section. Out of them, 15 papers are written in the native Nepali language while all others are presented in English. The compendium is mainly divided into 5 chapters excluding a long series of preliminary sections that includes messages from a wide range of institutions and personalities related to Rice production and production of the discourse of Rice in Nepal.

The Ist chapter is on the historical, social, and cultural aspects of Rice in Nepal. There are 8 papers written in Nepali. This chapter is on the historical, social, and cultural aspects of rice in Nepal. Some of the papers in this chapter discuss the significance of rice in the Pre-ancient Vedic period and contemporary modern Nepali society. Others discuss the political history of rice cultivation and the various cultural and social significance of rice. A notable piece of paper in this section is by Hon. Late Satya Mohan Joshi, the renowned historian of Nepal. The IInd chapter of the compendium is the largest section that covers almost 2/3 of the whole compendium. There are 83 papers in this section. They are all written in English by the native rice scientists except one which is in Nepali language.

All of these papers discuss the technical aspects of rice cultivation in Nepal. The section articulates rice with various other aspects such as food and nutrition security, breeding and varietal development, mechanization, and soil/fertilizer/irrigation/crop protection. And other aspects included are climate change, harvesting, and marketing of rice.

The IIIrd chapter is on the policy arrangements, coordination, problems, and challenges of rice farming in Nepal. There are 7 papers in total and all are in English. Chapter 4 is miscellaneous which includes 14 various technical and non-technical papers and descriptions on rice in Nepal. Some of the papers in this section articulate rice with a community seed bank, the role of media in transforming rice technology, and various other institutional arrangements. While others have articulated rice with local knowledge and skills, including various packages from different regions of the country produced in the local knowledge system including folk songs, stories, and memoirs. Chapter Vth of the volume is a photo gallery related to rice science and its cultural dimensions of consumption.

Multiple regimes of rice and paddy cultivation

This study finds three major regimes of knowledge about rice and paddy cultivation in the Himalayan region as presented in the volume; “Rice Science and Technology in Nepal: A Historical, Socio-cultural and Technical Compendium”. The three major regimes of knowledge are; *mythological* (also termed Vedic or religious), *socio-cultural*, and *techno-political*. There are discourses related to each of the regimes existing in one way or another throughout the region. This section approaches each regime as the particular form of knowledge and practice which constructs a specific model of rice and its manifold articulations in its specific historical context (Escobar, 2000). Firstly, it sketches an outline of the mythological model of rice based on the analyses of mythological articulations of rice in Vedic literature. Secondly, it presents a socio-cultural model. It discusses the discourses on the general socio-cultural understandings and views on rice presented in the compendium in different articles, poems, and songs. And, thirdly, it presents the discursive model of techno-political rice. It examines the techno-political discourses presented in various modern technical and policy-related papers and discussions in the compendium.

One more point to mention here is that the mythological and socio-cultural discourses might sound similar. But, they are not similar and treated differently in the Himalayan communities. The Hindu concept of religion (or mythological representation of rice here) is related to the unique system of belief in a supernatural power that manifests in all living

and non-living entities of the cosmos will understand how religion and socio-cultural differ from each other. However, socio-cultural is related to the everyday practicalities of people about their socio-political, historical, and economic activities. The concluding section discusses the political implications of this differential mediation on the different models of rice and their implications on the production of the identity of rice and paddy farmers about other farm actors of the region.

Mythological model of rice

The mythological model of rice is a constitution of the mythological regime of knowledge. The regime is primarily based on Vedic literature, myths, and Hindu religious beliefs and practices. In the Hindu knowledge system or particularly in Hindu beliefs the whole universe is a divine manifestation. It is a perfect balance of the earth, atmosphere, and the celestial bodies and the living entities of the planet Earth (Jamison & Brereton, 2014). So, man's role in this context is to ensure this balance in every respect. In Vedic literature, it is called *dharma* (Kochhar, 2009). A Hindu/Vedic man is considered to ensure this *dharma* no matter which position s/he occupies. For instance, a farmer's *dharma* is to produce food and a King's *dharma* is to rule the country. Both of these agents have to perform their roles according to their *dharma* which would ultimately ensure balance, harmony, and peace in society. Furthermore, any person has his or her *dharma* which has to be maintained not just with other social fellow members but also with the natural world around; including land, rivers, soil, plants, animal, and others. In this context, the Vedic discourses have constituted a specific model of rice as a divine product and farming as a religious performance.

The early papers on the Vedic literature of the Rice compendium present the salient features of the mythological model of rice. The first paper of the first chapter of the volume by Pokharel and Sharma (2017) opens with a discussion of Rice and Rice cultivation in the Vedic ages. There are other discussions in Chapter IV and in the preliminary section of the compendium that articulate Vedic literature on rice/paddy farming. They provide a broad outline of the Vedic regime of knowledge about rice and paddy cultivation based on Vedic literature such as; Rigveda, Yasurveda, Atharbaveda, Upanisadha, Mahabharata, Manusmriti, and various other Hindu scriptures. While introducing the identity of rice in the Veda, Sharma, and Pokharel (2017) give a very clear model of mythological rice. They mention,

‘O Rice/s, you satisfy our hunger and you make us happy. So you also satisfy and make happy to our Gods, ... we take you with our clean and golden hands as the holy milk of the mother earth!’ (Pokharel & Sharma, 2017, P 9).

In this statement, several divine entities mediate the human rice relation. The divine entities explicitly mentioned are; Gods, the sun god, and mother earth. Similarly, in the mythical discourses, paddy cultivation is articulated with a wide range of divine processes. Again, Pokharel and Sharma (2017) mention ‘the sky and the earth jointly reinforce and protect our agriculture and give strength and power to the people’. This statement presents the farmers and farming (paddy) about the whole universe; the sky and the earth. The strength and power of the farmer are associated with the whole cosmic process that includes the heavenly (divine) bodies.

This analysis shows that the discourse of mythological rice prevalent in the Indo-subcontinent in general and in Nepal and the Himalayas in specific is a specific constitution of the divine model of rice. In this model, the rice is a sacred product produced with complex interaction rituals, mythical characters, and ultimately divine wishes. And it is supposed as an entity to ensure harmony and peace in human society and the universe. In individual level, the divine rice maintains bodily strength. On a social level, it is a means to maintain harmony by fulfilling their hunger. On the cosmic level, it is a product to appease gods and ancestors which is supposed to be delivered by various ritual sacrifices; such as *Vedic* fire sacrifices (Jamison & Brereton, 2014). The production of this model of rice in the Vedic literature is considered a Yagya religious sacrifice that goes with specific spiritual/divine observation. In this constitution, all of the agricultural activities -related to land, seed, irrigation, cultivation, and harvesting- are part of the Yagya.

Socio-cultural model of rice

The socio-cultural regime of knowledge is a dominant form of the regime in the traditional agrarian Nepali society. It is a local variant of the Himalayan society and has a specific association with its geography and politics. Going to the root, it has an association with the previous mythological regime of knowledge. However, it is a more practical adjustment with a specific emphasis on norms and values. It identifies rice as the most valued crop and the indicator of status.

There is a wide range of discussion on the socio-cultural model of rice in the rice volume. Such writings are mainly compiled in chapters 1 and 4 of the volume. Here

are some sample proverbs and folk songs in the examination from chapter 4. They help us to understand the formation of the socio-cultural model of rice prevalent in different communities across the Himalayan region in Nepal.

The following two folk songs present the identity of rice. They identify rice as the most valuable food/cereal crop and it is a symbol of prosperity and wisdom:

dhan pake niurinchha, kodo pake thado hunchha (the paddy pinnacle bends downward, while the millet goes up). (CDD and ASoN, 2017, P. 828)

muthi charera muri falaune (sow a handful of paddy seed and produce a quintal). (CDD and ASoN, 2017, P. 828)

The first proverb identifies rice as the most valuable among other cereal crops (here it is millet). The second one articulates rice or paddy cultivation with the situation of farm workers, and paddy farmers. In this formation, the human-paddy relation is mediated by social or cultural values and norms.

Further, the following samples of the discursive formation of paddy cultivation present a unique relationship with the social, cultural, and political dynamics of the society. Here are two folk songs for the examination. First is a song of the planting season from the western mountain; Jumla district in Karnali province. And, second is a harvest song from the central hill from; Syangja district. These songs articulate rice or paddy cultivation with differential gendered and power situations between different groups and regions of Nepali society:

ropa ropa ropnyeri haru aashad godauli (hello women, plant paddy seedling, we would weed in the month of Aasadh), *yek choti layeko maya pherikana chodaul* (once you fall in love, how could you break it after!). (CDD & A SoN, 2017, P. 828)

Magha ko jado aanadi chamre khayera katamla (would be able to face cold of the month of Magh eating anadi rice); *panhele dhan ko sagala chamal Nepal pathamla* (would send the good grain of Panhele to Kathmandu). (CDD and ASoN, 2017, P. 828)

The first one articulates paddy cultivation with labor and its gendered characteristics. It also articulates paddy cultivation with the emotional/existential relation between man and woman. The second one articulates rice with the differential power relation between

Kathmandu and the peripheries. The first part of the second song presents a specific nutritious variety of rice called *and is* best for the extreme cold of the winter season in the middle mountain of the country. While the second part articulates a local aromatic variety of rice (i.e. *Panhele*) as a special gift to the masters in Kathmandu. Articulating rice as a gift to the King/rulers in Kathmandu exposes the differential power relations between farmers and the rulers in Kathmandu.

This examination of the folk songs from different regions of the country shows that the socio-cultural model of rice is valuable in different respects. If there is any rice that has no value socially and politically it may have a crisis of identity. It will be simply an insignificant crop. And paddy farmers are the most important subject in this domain as they can produce and increase the quality of this valuable crop. Therefore, who produces the valuable rice, who needs the valuable rice, and who recognizes the value of the rice itself are key features to understanding the socio-cultural model of rice. The value of rice is a key political medium to maintain the balance between the ruler (king) and the ruled (farmers). So the value or value system is the key to mediating the human-paddy relation. The creativity of the farmers or paddy cultivators in this domain is the potential to upgrade the value of rice in the given environmental and social contexts.

Techno-political model of rice

The techno-political regime of knowledge is the latest phenomenon in the Himalayan region. Some of the specific characteristics of this regime are the artificialization and informationalization of nature and mediation of technology, information, and institutional mechanisms including state, research institutions, and private firms in human-environment relations. The regime, in the case of agriculture and rice farming, had begun to take shape with the beginning of modern farming in the middle of the 20th century. It was the time when a wide range of rice varieties was exchanged all across the globe (GRiSP, 2013). Here is an examination of the identity and the manifold articulations of rice and paddy cultivation in the techno-political regime.

There are large numbers of papers attributed to the techno-political model of the rice regime in the Rice Compendium. The techno-political discourses on rice presented in the compendium identify rice as the most commonly consumed food intake in Nepal and articulate the significance of paddy cultivation with economic outcomes and food security of the country (Sharma et al., 2019 and Tripathi et al., 2019). So the discourses

expand to the development of varieties that give more food including hybrid varieties, artificial inputs, various national and local level policies, and market issues. Similarly, the articulation of rice with the national economy, food security, overall governance, and national sovereignty is its special political aspect of the human-environment relation. Here are some rice discourses with their nutrient value taken from the compendium with the identity of rice:

“Until 2015, out of 95 notified rice varieties, 61 varieties are released and 34 varieties are registered. ...30 hybrid varieties of rice are registered for commercial cultivation..” (Dhungel & Acharya, 2017, P. 81)

“...rice contributes more than 50% of calorie requirement and more than 50% of calorie requirement”. (Dhungel & Acharya, 2017, P. 81)

“Rice has the highest protein and energy digestibility among cereals, ...partly because of its low dietary fiber and tannin content. Rice is a good source of thiamine, riboflavin, and niacin. Rice contains the highest level of selenium among the cereal grains, providing between 10 and 13 mg per 100g.” (Gautam & Dhungel, 2017, P. 126.)

The discourses presented above identify rice as a crop like other cereal crops with multiple varieties. The key aspect of the identity of rice is its specific nutrient quality. While examining the varietal differences and nutrient qualities demands a different set of operations and engagement of agronomists and bureaucrats which is sharply different from the rice in mythological and socio-cultural regimes. In the mythological regime, rice grain is considered as sacred as the entity that symbolizes god. While in a techno-political regime, the same rice grain is like a nutrient capsule produced by pharmaceutical companies. In the production of the discourse of techno-political rice, the most obvious actors involved are state agencies, scientists, private seed-producing companies, and marketing partners. Here are a few examples of rice discourses from the contemporary literature presented in the compendium:

“...to ensure the right to food for all, the governance system should remain functional and accountable.” (Dhungel & Acharya, 2017, P.83)

“In Nepal, rice being the main staple food crop, it has a crucial not only to ensure food but also to economic, social, cultural, and environmental services and

sovereignty of the country.” (Dhungel & Acharya, 2017, P. 83)

“When it comes to food security of the rural farmers it is the most important commodity in terms of livelihood and food.” (Dhungel & Acharya, 2017, P. 83)

The selected discourses presented here from the volume articulate rice with the broader socio-political contexts including governance, environment, and livelihood of the rural farmers. In addition, the discourse of the ‘right to food’ articulates rice with the state which subsumes the complexities of scientific experiments and extension of private firms, and global value within itself as a major actor to feed the annually growing number of people is highly significant to differentiate it from both of the previous domains (Shiva, 2016).

Furthermore, the articulation of rice with the rights and state has been accompanied by two specific implications about the paddy production of the country. One was to enhance the state’s control over the paddy farming process and another (actually associated with the first one) was to increase the role of scientists and other modern actors such as agriculture firms, extension workers, bureaucrats, and so on. One of the critical aspects of this articulation is that the role of the state and scientists and other private firms (like seed companies) over individual farmers is extremely influential. The role that farmers could play to utilize their indigenous skills and knowledge in paddy farming has very limited space in this regime. Second, the discourse of rights is such a tricky concept that it generalizes the problem of the rising demand for rice over the whole population and presented it as the problem of every individual in the country (Braidotti, 2011). However, this discursive formation of the techno-political rice and its articulation to the major actors; state, scientists, and farmer is a dominant mode of the post-20th century techno-political model of rice and paddy farming in the country (Sharma et al., 2019).

Conclusion

Examination of three domains of rice/paddy farming; mythological, socio-cultural, and techno-political prevalent in Nepali society in the previous section shows that there are multiple identities of rice and these identities have been produced in different historical/political contexts. To some extent, these different identities co-exist in Nepal and the Himalayan society. The ancient *Vedic* representation of rice as the sacred and divine product and paddy farming as the Yagya (religious rites) is still a dominant narrative in the religious domain and has a special place in the religious worship, rituals, and social and cultural

ceremonies, especially among the Hindu communities. Likewise, the traditional socio-cultural representation of rice as the most valued socio-cultural product has still retained importance in community debates and family conversations. However, none of these two identities is so much influential in the mainstream discourse of rice and paddy cultivation. It is only the model of techno-political rice and paddy cultivation that is one and the only dominant which is continuously produced and reproduced through state agencies, agro-companies, and agriculture scientists through media, reports, and discussions in Nepal and in the entire Himalayan region.

There are three specific implications of the production of the techno-political model of rice and paddy cultivation.

- A. First is about the identity of rice: In the contemporary techno-political regime of knowledge, the identity of rice is just a food item as other foods available in the market. The identity of rice as a divine entity or a symbol of power and prestige has been pushed away from mainstream socio-cultural practices.
- B. Second is the identity of the paddy farmer: In this regime, a farmer who works in the paddy field is just a laborer to get payment for his work. The owner of the farmland is no more working but is more like an investor. So the farmer is no more obliged to contribute to balancing the food distribution and maintaining harmony in society. This responsibility has shifted or negotiated with other stakeholders of modern society such as; land owners, state agencies, seed and fertilizer companies, rice processing companies, distributors, and others.
- C. Third and last one is the changing dynamics of the relations among the stakeholders: In this regime, the identity and the position of the paddy stakeholders may go change as there is a change in any technical and political dynamics of the regime. In the farmers' case, this is meant to have multiple identities of the farmers and negotiated positions in the relation between the stakeholders but the paddy farmer or cultivator has no longer a central position as it is in mythological and socio-cultural domains.

Conflicts of interest

The authors declare there is no conflict of interest.

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