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338.22(540)(091)Peter Simonič<sup>1</sup> (Slovenia)

## POLITICAL ECONOMY AND ECOLOGY OF SUGAR COOPERATIVES IN MAHARASHTRA

*Abstract:* Cooperatives were frequent and successful ways of organizing the sugarcane industry in Maharashtra. During Indian socialism, local self-organization was an important political and economic tool for development and against market egoism. Neoliberalism went in the opposite direction, toward the dismantling of the economy of the community and the privatization of resources and profits. A distant look over the 20<sup>th</sup> century reveals the interdependence of monocultural agronomics, nationalism and social stratification. In both cases respected society has failed to address the important dilemmas of environmental sustainability and health.

Analysis alone of the technological and economic factors of rural development is not enough to explain the success and setting of a certain industrial plant, but religion, kinship, political mythology and ideology are considered as well.

*Key words:* sugarcane, Marathi, Maharashtra, India, monoculture, communalism, neoliberalism, green revolution, health.

### Introduction

Indian anthropologists have contributed significantly to research of the past and present of agriculture (e.g. Appadurai 1989; Gadgil & Guha 1995; Gupta 2005). Their main emphasis was on the dependency of local farmers on national and global markets, whereby the methodology of small-scale and closed cultural setting of anthropological research became insufficient. Another important contribution addressed not just economic and social, but also environmental constraints of contemporary agriculture in the subcontinent. Environmental history and sustainability are important issues for those authors.

Through my research in economic, political and environmental anthropology, I also became increasingly interested in human or social economy, which became a central theme in many societies after the 2007 financial crisis. Nomadic capital, financialization and the disintegration of the social (welfare) state – the general decline of social responsibilities in favor of individual concentration of capital – were defined as cornerstones of the neoliberal mantra of economic growth, leaving a majority of the national and world population without a basic income and safety (e.g. Giraud 2006; Harvey 2005; Graeber 2011).

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A combination of agricultural studies and social economy has led me to the study of sugar cooperatives in Maharashtra. Sugar, like coffee or salt, is so obvious to our life that we rarely think about its production, distribution and consumption. The consumption of sugar has been increasing constantly for the last four hundred years, encouraging a constant enlargement of productive capacities. In 2011, world production reached 159,000 million tons of raw sugar, and the demand hit 161,000 million tons. World production of sugar will have risen to more than 209,000 million tons by 2020. Because of the large investment cycles of India and Brazil and because of probable health restrictions on consumption, it will by then have surpassed real demand (OECD 2011: 132). More than seventy percent of sugar in the world is of cane origin.<sup>2</sup> Among the most important cultivators of sugarcane and sugar exporters is Brazil, which determines world prices. Australia and Thailand come after Brazil in the export of cane sugar (OECD 2011: 12).

Industries connected to sugarcane, according to Mintz (1985), were capitalistic by the extent and organization of work. However, because of the mercantilist nature, they actually represent a transition from a feudal order to metropolitan capitalism. On the other hand, sugar is deeply inscribed in a symbolic net of humankind through the rudiment of welfare and sweetness of life (Mintz 1985: 16–18) – *dolce vita*.<sup>3</sup> Galloway (1989) connected capitalists' production of sugar with three institutions, which were surely note examples of "sweet life": plantations, slavery and the slave trade. Along with economic globalization, there was an increase in Indian farmers' dependency on merchants, powerful land owners and money lenders (Amine 1984: 89–95; Galloway 1989: 218–233). Profits in Europe were really promising (Broadberry & Gupta 2006).

There are approximately 45 million producers of sugar in India today. After textiles (cotton), the sugar industry is the second largest agricultural industry in India (Internet 1). India is the world's second largest producer of sugarcane, and all production is consumed domestically. Despite its colonial history, the Maharashtra sugar industry is now being framed mainly by subcontinental social conditions; local, national, federal, ethnic, caste or immediate environmental settings are more important to lives of Maharashtra farmers than sugar production in China or successful crops of sugarcane in, for example, Brazil. It is not the global market share of the sugar industry that influences today's production directly, but rather the indirect ideological frame of neoliberal governmentality wrapped in the language of private ownership and responsibilities, and the merits of GDP and global capital allocations (see Hardin 1968; Béteille 1986; Harvey 2005).

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<sup>2</sup> Production of sugar from sugar beets today represents twenty to thirty percent of world sugar production. The European Union is among the largest producers of beet sugar (the most powerful are France and Germany, and Russia ("Northern European sugar belt"). The European Union and Ukraine are also important as exporters of sugar (Internet 3). Sugar beet is technically not monoculture, because the culture is included in at least a five-year crop rotation.

<sup>3</sup> A sugarcane plant was recorded by Harold Conklin (2008 [1954]: 245–246) in the Philippines, where he was researching slash and burn agriculture. Cane was one of the crops planted on purged lands in a forest. Cane was also mentioned in the notes on horticulturists in the Amazon basin (Netting 1993: 45–46), etc.

Maharashtra is the third largest Indian state and the one with the highest GDP. The capital, Mumbai, is a financial center for all of India (Internet 4).<sup>4</sup> In this federal state they produce forty percent of the Indian sugarcane (Internet 1). Converted into money, the annual production of cane in Maharashtra is worth more than 400 million Euros.

In this article, the Maharashtra cooperative sugarcane industry is presented by a) some domestic economic and political relations, that have accompanied the cultivation of the plant for the last one hundred years; and b) influences of an “inert socio-economic model” on biophysical environment and human health.

## Socio-ideological foundations of rural Maharashtra

The foundations of “national consciousness” and later the ascent of the Marathi caste, was mostly a contribution of the Virkars sect that preached equality and brotherhood and introduced pride into Marathi language and culture. Virkars did not transform into a special caste, therefore the cohesion of a large Marathi caste was not questionable at that time (Pandit 1979: 426).<sup>5</sup>

Political mythology in Maharashtra is grounded in Chatrapatri Shivaji Maharaja, a founder of Maratha kingdom in the 17th century. He was a leader of the guerrilla resistance against the Mogul sultanate from Bijapur – a representative of a few hundred years dominance of Muslim dynasties. The cause for Chatrapatri’s resistance was taxes levied on the farmers.

While the British were assuming control of India in the 18th century the Marathi were expanding. In 1760 their kingdom measured one million square kilometers, which is a third of the Indian subcontinent. Because of their militancy and expansion, they created many enemies among other Hindu castes (ethnic groups) (Spear 1990: 58–60). Percival Spear – British historian and an official of colonial India in the 1940s – wrote of Shivaji’s Marathi:

*They were short and stocky, unhandsome in appearance but wiry and enduring, tenacious, enterprising, and persevering. They lived in a poor country, had few monuments of the past and little taste for the graces of life. Hitherto they had no history, but they had a sense of belonging which is one of the prerequisites of national feeling (Spear 1990: 58–59).*

A special feature of traditional Marathi caste structure was the absence of merchants and financiers. They mostly settled in larger towns during the 18th century, when

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<sup>4</sup> Officially Mumbai has around 20 million inhabitants (unofficially there are up to two million more), which makes it one of the five largest cities in the world. Due to the rapid population and economic growth of the subcontinent, Mumbai surely has the potential to exert a strong influence on the global community (alpha city).

<sup>5</sup> At the bottom of the social strata there were three castes of untouchables, among them the most numerous caste of Mahar. Since they were without any possessions, they searched for jobs wherever it was possible, including with the East Indian Company and its army. In this way, they were breaking free from the traditional relations of castes that they experienced in their home-villages and became the holders of the political emancipation of Marathi untouchables and Shudras (Pandit 1979).

they came on the invitation of the new Marathi rulers. This is the reason why Marathi commercial and financial bourgeoisie belongs to the same community which also controls other Indian states today (Spear 1990: 60).

British colonialism brought changes to socio-economic relations in Maharashtra: an implementation of class started to intervene with a caste system (through a new private ownership, global monetary economy, the introduction of western educational system etc.). Unequal development of capitalistic production in the area of today's India has led to the fact that caste system has not completely disappeared and it is specific for each federal state. Generalization of caste-class relationships for India as a whole is not possible. Because of national unity and caste-class interweaving in the time of British supremacy, the influence of Brahmins symbolically decreased among Marathi, though they still hold the most important positions in administration and in the private sector. They also lead the majority of intellectual and cultural life in Maharashtra (Pandit 1979: 425–427; Spear 1990: 58).

Marathi is the dominant language and is spoken by about 75 million people in Maharashtra and about 15 million elsewhere around the world. Along with the dominant Marathi ethno-caste, there are also the Mahar, Mang, Chambhar, Gurav, Lohar, Nhavi, Ramoshi castes (Appadurai 1984: 6) arranged in the Hindu caste system with the proclamation of Indian independence (see Gregorčič 2008; 2011: 9). Many of them are left without any possessions, so they have to sell their labor to Marathi.

Nationalism and Hinduism are the pillars of Maharati identity and political economy. This led to the establishment of the state of Maharashtra inside the Indian federal state on the 1st of May 1960. Applications of Hinduism and nationalism are different and dependent on real life circumstances; one should at least make a distinction between Brahman and folk versions (Phadke 1993: 1142). When Shivaji's kingdom was created, land and money were not equally owned. The British imposed imperial tax policy and state possession (Gadgil & Guha 1995: 38–39). A period before their arrival is being painted in a more beautiful light today, which is in tune with postcolonial collective orchestration (political mythology).

## The emergence of sugar cooperatives

During the movements for Indian independence after the World War II, the unification of small and middle agricultural manufacturers into cooperatives had wider and narrower political and economic implications. Regardless of Marathi national unity on the one hand and traditional social stratification of the countryside on the other, a common political block was formed at that time which resisted the urban elites – colonial landed estate owners and bureaucracies (Attwood & Baviskar in 1987: 47). Cooperatives offered a legal frame for the economic and political affirmation of the Marathi farmers. The development of the countryside was based on irrigation systems (wells and channels), hybrid seeds, chemical fertilizers and pesticides (“green revolution”). Maharashtra also became attractive for migrants from other parts of India because of the available water and lower population density (Conway 1997: 54–58).

The first cooperatives of sugarcane manufacturers had already appeared in 1933, immediately after the colonial protection of the industry in India. However, these cooper-

atives were in Uttar Pradesh and Andhra Pradesh provinces – eastwards from Maharashtra. The pioneer model of cooperatives did not survive. A much more successful model of a factory was the Pravaranagar Co-Operative Sugar Factory in Maharashtra. It was founded in 1948 and actually began to work in the season of 1950–1951 (Attwood & Baviskar in 1987).

The beginning of Maharashtra sugar cooperatives fit into the first developmental five-year plan for the independent India. The Indian government was led by Jawaharlal Nehru, the first Indian prime minister (1947–1964), and political successor of Mahatma Gandhi. Neoliberal evaluators and developers have criticized Nehru for the last twenty years for emphasizing the role of state too much, for following the example of socialist states like the USSR and Yugoslavia, and for the fact that economic development was not *fast* enough, etc. For Nehru the concept of Indian unity with the co-operation of all of the people of India was of the utmost importance (Guha 2010: 336).<sup>6</sup> Additionally, industrialization was supposed to be the only solution for endemic Indian poverty.

The mass-establishment of (sugar) cooperatives followed the foundation of an independent and socialist Maharashtra and India (Internet 2). Together with the enhancement of self-organized microeconomic legal subjects, there was also an empowerment of Delhi and its administration. Nehru namely supported local economic organizations, while at the same time feared a case of “an extremely narrow attitude”: in the name of (local) unity, cooperatives were weakening the role of State (Guha 2010: 335). Nehru therefore rejected total collectivization; cooperatives were just one of the methods for progress of the Indian state (Guha 2010: 338–339). Still the model became most important in preserving Marathi economic and cultural foundations — and in maintaining its caste/class relations in a different mode.

The matter of Marathi sugarcane cultivators and sugar producers cooperatives is not about collective possession, but about “voluntary associations” of people who, through their own work and capital investment, as well as through their physical possessions, are involved in the planning and receive the profits and other social benefits of cooperatives. They are based on the principles of *cooperation* and *redistribution* (comp. Kropotkin 1972 [1902]; Polanyi 2001 [1944]). It is an economic *network* (comp. Rapport & Overing 2000: 249–257) with particular political mythology and developmental ideology. Rare farmers in the area of a certain cooperative are not members (Banerjee et al. 2001).

There is another — practical — reason why, along with Indian independence, cooperative alliances of farmers were established, and why, for example, an oligarchy of large owners and financiers was not. Atwood and Baviskar (1987) realized that it was due to factories’ dependence on a sufficient and timely amount of crops. Numerous, disap-

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<sup>6</sup> Nehru, Brahman’s son, entered politics in the 1920s when he returned from studies at Cambridge University where he became interested in Marxism (Guha 2010: 336). Nehru’s India took an active part in the movement of nonaligned countries. During that period, the Communist Party under the leadership of Mao Tse-Tung took power in China and steered a different course.

pointed farmers could actually have reduced the amount of cane planted or instead produced “gur” (jaggery — traditional unrefined whole cane sugar), which is less appropriate for storage and transport. Large farmers would surely have been economically incapacitated in case of an usurpation of land and power. Even today, small producers together contribute around 50–60 percent of all sugarcane sent to factories (Fig. 1). They are strong only as a collective; their individual economic and political strength is weak and limited in an open market (comp. Netting 1993).

By ensuring the regular repurchase of cane, sugar cooperatives strengthened small farmers economically and politically. Cooperatives also benefited large farmers, because they could fill the positions in cooperative boards of directors and achieve influence in regional and national politics. But they were not able to perform as completely closed and distant elite, otherwise they might not be (re)elected in cooperative committees.

Some of the most important problems of contemporary Maratha cooperatives are related exactly to this disproportion of wealth and influence between small farmers on one side and large farms and factory managers on the other (Tupe 1992; Kulkarni 1993). Tupe and Kulkarni published their researches in a time of noticeable ideological and social shifts in India: from socialist to late capitalist etatism, when social differences became more acceptable again. The power of larger farmers — “sugar barons” (Gadgil & Guha 1995: 3) is now visible in wealth, political influence, nepotism and corruption. Today they tend to receive different rents from economically weaker small farmers who want to join cooperatives to keep and gain the social advantages brought by membership (cooperative schools, favorable loans, health care etc.). Dependencies and rents are also being established as a consequence of lowering the price of cane on the state level: pressure on prices exposes the vulnerability of smaller farmers, since they have to expand their fields or production or take a loan to survive, compete and stay in the game. The contemporary small farmers’ protests for higher prices of sugarcane are connected with wider Indian opposition against corruption and the reallocation and siphoning of social wealth to upper social strata and state administration (Jethmalani 2010; Pallavi 2012; Mishra 2012).

“Economic liberalization” accelerated after the elections in 1991, following the assassinations of prime ministers Indira Gandhi (1984) and her son Rajiv (1991). Anan Phadke (1993) noticed the mobilization of federal and district powers for a *struggle against communalism*. He perceived public resistance of the small farmers of sugar cooperatives near Kolhapur as being democratic and correct, proving the vitality of Marxism and the political left. Such protests are latent, sporadic and persistent (comp. Mishra 2012).

The pressure of interwoven financial and agro-genetic capital in the area of western Maharashtra (Satara and Kolhapur districts) is not as severe as in the districts of eastern Maharashtra, or at least I did not come across any statements or reports of this. During the last decade an enormous rise in suicides was recorded in eastern Maharashtra, which was explained by the inability of farmers, mostly producers of cotton, to pay debts or to keep autonomy with a selection of (indigenous) seeds (Mishra 2006; Meeta & Rajivlochan 2006). As we can also read from elsewhere around the world, statistically agricultural yields permanently increase and the prices of final products are also rising, however this does not benefit farmers.

Sugar cooperatives in western Maharashtra apparently still offer a kind of shield against the market exposure of small farmers, provide stable wages, various public ser-

vices and scientific support (state and private institutes of natural and social sciences). Co-op members' negotiating positions are stronger if they work together. The neoliberal paradigm on a global scale is not in favor of such localized communalism. Mumbai, very close global capitol surely encourages different spheres and strategies (comp. Ingold 2003).

Cooperatives in India were also established in other branches – e.g. in rice and pea production – however sugarcane cooperatives in Maharashtra (and milk cooperatives in Gujarat) were unique in their success (Attwood & Baviskar in 1987).<sup>7</sup>

Today sugarcane is the most important industrial plant of the federal state of Maharashtra. People also grow onion, peas, sorghum (Hin.: jowar) and millet (Hin.: bajri) for their own needs and only partly for sale. One can also find manufacturers of figs or flowers, as well as collectors of Indian nuts (Appadurai 1984: 6). As I had an opportunity to see, there is a growing cultivation of berries which can be sold more easily and at higher prices than cane.

## Science, technology and power

Near Satara and Kolhapur there are endless cane plantations, where occasionally one can spot factory chimneys, settlements, market places. Sugar factories have become the dominant factor of development in Maharashtra.

In the 1980s, Maharashtra possessed a quarter of all Indian sugar companies. Today, each factory out of almost 180 unites farmers from fifteen to one hundred villages. The number of people and occupations connected with cane is comparably high (Attwood & Baviskar 1987: 45; Internet 2). “There’s a lot of money in the sugar business” was a statement echoed by most of my sources from around Satara and Kolhapur.

Bigger private sugar companies had been established by the British since 1784. Protectionist colonial policy increased their number in India to almost 140 in the 1930s. Before Indian independence there were no cooperative factories in Maharashtra. By 1948 the first one had been founded in the Maharashtra district of Ahmednagar. This was the previously mentioned factory in Pravaranagar, which triggered a flood of new cooperative factories around Maharashtra, particularly under the influence of large farmers who were searching for bigger markets and compensation for the production of gur. The annual capacity of the factory in Pravaranagar was 450 tons, whereas today the average capacity of Maharashtra cooperative factories is approximately 2,500 tons and in some places as high as 7,000 tons of crashed crops annually. The number of private factories fell after 1950. There were 294 factories across India in 1973, and by 1981 there were already 367. Approximately half of them were privately owned. The number of cooperative factories was still increasing in the 1980s, also due to the takeover of private sugar factories.

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<sup>7</sup> Cooperatives are not the only kind of cooperation and solidarity of Maharashtra farmers. People take part in housekeeping tasks or in the gardens of extended families (ēkatra) or nuclear families (vibhakta). They contribute with their work and money to the preparation of large celebrations for family and relatives (marriages or funerals), people lend and borrow working cattle and agricultural equipment, women sell vegetables together, males dig wells together and they lend pumps to each other, families share water sources etc. (Appadurai 1984: 3–5).

The relative rareness of private sugar factories distinguishes Maharashtra from many other producers of sugar in the global south. A director of a cooperative factory is often more influential and respected than a state secretary (Attwood & Baviskar 1987: 47). In other words, being the head of a factory ensures a political career and strengthens the influence of the Marathi caste in federal government. (Attwood & Baviskar 1987; Tupe 1992).

This trend changed in the 1990s. In western Maharashtra the cooperative factories started to sell out due to “losses”, and they often ended up in the hands of representatives or managers of factories with the support of their kinship, political and financial networks (Pallavi 2012): according to Balkrishne D. Kulkarni (1993), fifty percent of the leaders of cooperative factories were related. Factories thus stood as a foundation of rural development and they proved a specific dependence of agriculture on industry, but later on they became an environment of increased social differences and nepotism. The reason for the bad reputation of cooperatives, as stated by a new generation of economic prophets, was a “blind state policy”, as well as a “lobby of cooperatives” that insisted on this model regardless of “poor business results” (Lalvani 2008: 32–33).

In the case of the establishment of cooperatives (from the 1950s onwards), like in the case of privatization (from the 1990s), a similar group of people remained at the top of the Marathi (sugarcane) hierarchy. The difference is just in the central criteria for the justification of the sugarcane industry and its human organization: from post-independence reciprocity and social multifunction of agriculture to neoliberal economic efficiency of private initiative and externalization of (social) expenses.

But new private owners are basically facing similar problems as the English before Indian independence: for factories to be efficient they need regular cane delivery, thus a sustainable agreement with numerous small local producers is inevitable. This will happen unless factory owners and large farmers buy off property (with loans), hire wage workers and quicken the disappearance of small farmers (comp. Araghi 1995; Thu 2009). In the already overcrowded urban centers this often leads to a complete devaluation of rural immigrants (comp. Davis 2006).

The Vasantdada Sugar Institute watches over the entire sugarcane production in Maharashtra. The 155 acre estate is in Manjari Budruk village near Pune (Poona) — some 250 kilometers eastwards from Mumbai.<sup>8</sup> The estate stands out from the rest of the region by its neatness. The Institute employs about 300 biologists, machinists, economists, agronomists, statisticians and other personnel that develop and sell new kinds of cane, fertilizers and pesticides. They make planting plans and irrigation schemes, award the best cooperative factories in the state of Maharashtra, monitor work in the sugar industry and research around the world, offer educational workshops, postgraduate studies and the like. The Institute also employs about 300 unskilled workers from the surrounding villages. According to sources, the Institute has strongly influenced the development of this area (Fig. 2).

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<sup>8</sup> The town of Pune was once a popular and peaceful destination for pensioners and intellectual elite. The importance of this educational center was compared with English Oxford by informants. Today the quality of life has changed dramatically because of intense immigration by people from the countryside. Many of them were not lucky enough to sell their land, but were exiled in the name of Indian modernization for the needs of corporations and State (infrastructural) projects.

It was founded by the prime minister of Maharashtra, Shri Vasantdada Patil, in 1975. After his death in 1986, its leadership was taken over by Sharad Pawar. Pawar is an important Marathi politician as well — he has been prime minister of Maharashtra three times. Since 2004 he has also been the Indian minister for agriculture and at the same time — until 2011 — the minister for consumption, diet and public distribution (Internet 5). During my stay at the Institute, Mr. Pawar was the president of its monitoring committee. The overlapping of Marathi politics, economy, social affairs and culture in connection to monoculture of sugarcane could hardly be any stronger.

I also managed to visit two factories, one of them — Ajinkyatara Sahakari Sakhar Karkhana near Satara (halfway south from Pune to Kolhapur) — in detail. After administrators finished the security interrogation, took personal data and found out why a European was interested in, according to their opinion, a completely unattractive spot for tourists, they kindly indulged my curiosity. They guided me around the factory estate, showed off testing cane plantations and explained the technology of planting. We discussed cooperative funds, favorable loans for members (particularly for women members), different member associations, educational support, transportation and other similar topics. They also told to me about the statue next to a driveway to the factory; it was set up to honor the still living Shrimant Chatrapati, a former minister for cooperatives in Maharashtra and founder of this factory in 1982. Likewise in the area of the other factory which I visited, I could take photographs in a neat garden next to the monument of a founder, which connects the factory to Marathi symbolism and mythology.

## **Sustainability of socio-economic model**

Analyses of sugar cooperatives in Maharashtra mainly emphasize their positive socio-economic effects: they accelerate rural development, increase incomes for a majority of farmers (real incomes have actually been reduced, because increased incomes/standards were soon followed by higher prices of other commodities). Cooperatives improve the ability of the population to obtain credit, encourage better road infrastructure and improve living conditions and domestic consumption. Due to mechanization they reduce the number of bulls and increase the number of milking cattle (cows, buffaloes and goats), improve access to water supply (with subsidized irrigation systems and the digging of wells) and encourage the development of educational systems (establishment of local schools). They offer possibilities for the development of supplementary agricultural manufacturing (craft, logistics, tourism etc.). Cooperatives also enable new jobs (in civil engineering, construction and maintenance of irrigation systems, testing lands, plant delivery, technological consultancy, service industries etc.), increase income through the lending of mechanization, strengthen the political affirmation of rural areas and increase the size of the agricultural proletariat (Tupe 1992; Kulkarni 1993). Maharashtra cooperatives have therefore promised faster economic development and social modernization,

but as we can see, have totally neglected environmental and health aspects of industrial agriculture.

Cane monoculture certainly has harmful consequences. Farmers pump water from rivers, wells, reservoirs or dams. Water is absolutely of key importance for all inhabitants of subtropical Maharashtra, particularly for villagers and farmers (Mishra 2006). Wells are most valuable if they are full during all twelve months (*bārāmāhi*) (Appadurai 1984: 3–9). After World War II, during the period of investment in bureaucratically managed water irrigation, they drained or ceased maintaining the majority of old village reservoirs (Gadgil & Guha 1995: 39).

Enormous consumption and the pollution of land and water for intensive agriculture will have long-term consequences. On one side is the constant depletion of the same mineral substances for permanent cane growing (and usage of fertilizers), and on the other side is a reduction of biological diversity, especially through continuous extensions of fields. The implementation of intensive industrial agriculture has changed the landscape.

Western Ghats are losing forests: people use firewood for powering some industrial crafts and for house heating, and they clear lands for the needs of the textile and sugar industries, for road construction, residences and tourist locations as well as for mining. Deforestation has become very alarming (Kurane & Samant 2010).

But Maharathi and Indian agricultural policy is still pushing for more intense irrigation and production (Chand 2009). Demographics and the traditional distribution of wealth play an important role here. Because of a quick and all present movement toward sugarcane monoculture and because of ever more dependent social, cultural and educational layers upon it, I see in this “an inert socio-economic structure”, similar to the process which was named by Clifford Geertz as *agricultural involution* (1963: 82): the sugarcane industry in Maharashtra is relatively fixed and rigid and it tends to upgrade the old with details (politics and science) or shifts from individualism to collectivism and back again, but does not really search for alternative — more sustainable or diversified solutions.

The dominant political, economic, linguistic and religious community of the Maratha has integrated and acculturated many nomads, horticulturalists and peasant communities. Many of them have lost their homeland, often because of large investment projects (dams) and deforestation. Gadgil & Guha (1995) labeled this dispersed group of Indian society “ecological refugees”, who represent cheap manpower – and are at the same time managed by dominant groups as a social problem. The loss of biological diversity is escorted by the loss of cultural diversity.

The importance of sugarcane is not visible only in the economics, sociology and ecology of rural Maharashtra, but also in everyday life: cane haulers and seasonal workers make their (provisional) residences from cane; they chew the stalks as a snack or as a dessert, feed cattle with the leaves, prepare fresh juice in urban streets, and people often drink sweet tea and use ever larger amounts of sugar in everyday nutrition.

Sugar causes eating disorders, obesity, tooth decay, cardio-vascular diseases, numerous cancerous conditions and type 2 diabetes. Researchers have found that almost 35 percent of the inhabitants who have settled in Southern Indian areas have diabetes and that the number of “patients” is rising to epidemic proportions, just as in other developed and developing industrial states. Diabetes prevails among those with higher incomes who work in sedentary jobs. In the case of women, diabetes is connected with obe-

sity (Ramachandran 1988; Shetty 2012). In materially weak and often deprived suburbs and the countryside people do not have problems with obesity, but with ensuring a sufficient amount of food (Gadgil & Guha 1995: 3), so they partially satisfy their hunger with “empty calories” of sugar.

Some states around the globe have decided to limit the sale of sugar. But there is a point where a question always appears as to whether the restrictions are really only intended to improve the health of the population or if they only fill the state treasury with new taxes (Strom 2012; Šulek 2013). The dilemma is the same as with cigarettes, fuel and other kinds of profits based on addiction.

As an alternative to sugar, there is a plant on the market called stevia that is primarily known to indigenous Paraguayans and Brazilians. Stevia is much sweeter than cane and beet root, is calorie free and actually reduces blood sugar. It remains to be seen how these changes in global and Indian markets and health policies will influence western Maharashtra.

## Political economy and nature

The social life of sugarcane in Maharashtra is the result of historical, administrative and biophysical conditions, such as the cultivation of plant species, establishment of both colonial and postcolonial economic and political territories, demographic and social policies, kinship, migrations, and management of cultural and natural heritage, nutrition, and discursive shifts in the global (political) economy.

The number of cooperatives in Maharashtra started to increase with the ascent of protectionism and state welfare after the Second World War. Indian, and in particular Maharashtra, political and economic emancipation was connected to the agricultural cooperatives which were the basis for the establishment of most of other public institutions. Cooperatives in the 1950's were not something new; they were the result of 19<sup>th</sup> century social struggles and protectionism in Europe. They represented a useful tool for the construction of the national economy of rural Maharashtra. Cooperatives in Maharashtra were always an important political and economic tool of empowerment of farmers and common good. Indian socialism was in favor of these local/regional initiatives, while on the other hand, the initiatives were designed to make the farmers subservient to the State.

Cooperatives have tried to connect two modernistic ideas: the idea of national self-sufficiency and self-organization and the idea of the market-directed economy of scale. Sugar cooperatives wanted to be internally egalitarian (democratic) and economically competitive to other social groups. Neoliberalism went in the opposite direction, to community deconstruction, indebtedness, privatization and greater externalization of costs. The cooperatives formed in Maharashtra in the last century tried to solve the political and economic dilemma of the 20th century, but this was only partly successful because of an inherited caste-class system and international economic pressures.

On the other side the sugar cooperatives still do not fulfill current environmental expectations. Marathi, just as many other (developing) industrialized nations, has disregarded the sustainability of their ecosystem and health.



**Fig. 1 Slashed and burned by small farmer before planting new crop, Kolhapur district, Dec. 2010 (foto Peter Simonič)**



**Fig. 2. Workers on Vasanda's testing field, Manjari Budruk, Dec. 2010 (foto Peter Simonič)**

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