

Learning to run a business: transforming charcoal production of family farmers in Santa Catarina, Brazil

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Abstract: Charcoal production is an important source of income for many family farmers along the coastal region of the Santa Catarina State, Southern Brazil. However, the activity is considered illegal, and farmers depend on middlemen to bring the product into the market. To change this situation, a participatory action-research project was set up with the purpose of developing farmer's entrepreneurship. In order to achieve this goal, the main activities of the Project consisted on the creation of a brand, the design of a charcoal package and the organization of a farmers association. All these activities have been accomplished so far as a result of a social learning process expressing purposeful concerted action towards entrepreneurship.

Keywords: entrepreneurship, concerted action, social learning

Introduction: the problematic-situation

Charcoal production is a key source of income for many family farmers of the Mata Atlântica rainforest region in Santa Catarina State, Southern Brazil. As an example, in some communities of the coastal Florianópolis region charcoal production represents almost all the cash income for a large proportion of family farmers (Uller-Gómez & Gartner, 2008). However, in this region a combination of elements, including legal restrictions on the use of native tree species as raw material and lack of technical assistance to farmers, is resulting in the abandonment of the activity by many farmers. Furthermore, because they do not comply with all environmental regulations, charcoal producing farmers not only work clandestinely, but are also replacing native forests by eucalyptus plantations.

Although unrecognized by governmental agencies, the production of charcoal can be considered one of the most important issues for family farming in the region, due its social, environmental and economic impacts on the lives of a large number of families. In addition to the difficulties associated to the production of wood and its carbonization, farmers receive low prices for the produced charcoal. Because the activity is considered illegal and the commercialization is intermediate by middlemen, farmers remain in a vulnerable position within the production system. The pervasiveness of this marketing practice, and the difficulty to change it, might be the result of the mental models farmers are trapped in, which keep them from seeing alternatives to legalize the charcoal production and to change the commercialization process.

This might be also the result, however, of the tacit models underpinning local rural extension. Although the extension service in Santa Catarina has been considered a model for the whole country, its technicians are still unable to help the farmers to make a profit from their forests. As has been discussed by Röling (1992), the conventional linear model of agricultural technology development and utilization is pervasive, and "hard" scientists make decisions and give advice on the basis of their "social science" insights. Based on this model farmers are not considered as experimenters and technology developers, and the possibility to see them as entrepreneurs is to-

tally ignored. As a further consequence of this mental model, farmers are the “hidden part” of the charcoal production chain: for them it was reserved the “dirty work”.

Therefore, in this complex problematic situation the concern was to set up a researching system aiming to facilitate the organization of local groups of farmers to improve their situation as charcoal producers beyond the production of raw material and utilization of new carbonization technologies: the purpose was to work with them to develop their capacity as entrepreneurs. An important issue to be dealt with was the necessary shift of perspective of rural extension from seeing farmers solely as passive receptors and users of technology to seeing them as innovative entrepreneurs.

To facilitate this process and drawing upon a systems perspective, a participatory action research was carried out with the purpose of creating the necessary circumstances for the emergence of entrepreneurship of family farmers charcoal producers.

The researching system and its methodology

Aiming at improving the local charcoal producing problem-situation through systemic change, a R&D project started in 2009 led to the distinction of a problem-determined system consisting of four articulated lines of action, namely the legalization of the properties; the design of production systems to produce the raw material (firewood); the improvement of the carbonization facilities; and the development of a fair marketing scheme. Among the purposes of this system, one was to create the circumstances for developing farmer’s capacity to establish themselves as entrepreneurs, making them independent of the middlemen to put their product into the market.

An action-research approach was adopted and a series of activities were carried out with a consistent participation of the farmers and their families. Methods and techniques included, among others, interviews, workshops, field data collection, SWOT analysis (Geifuls, 2005).

The study site

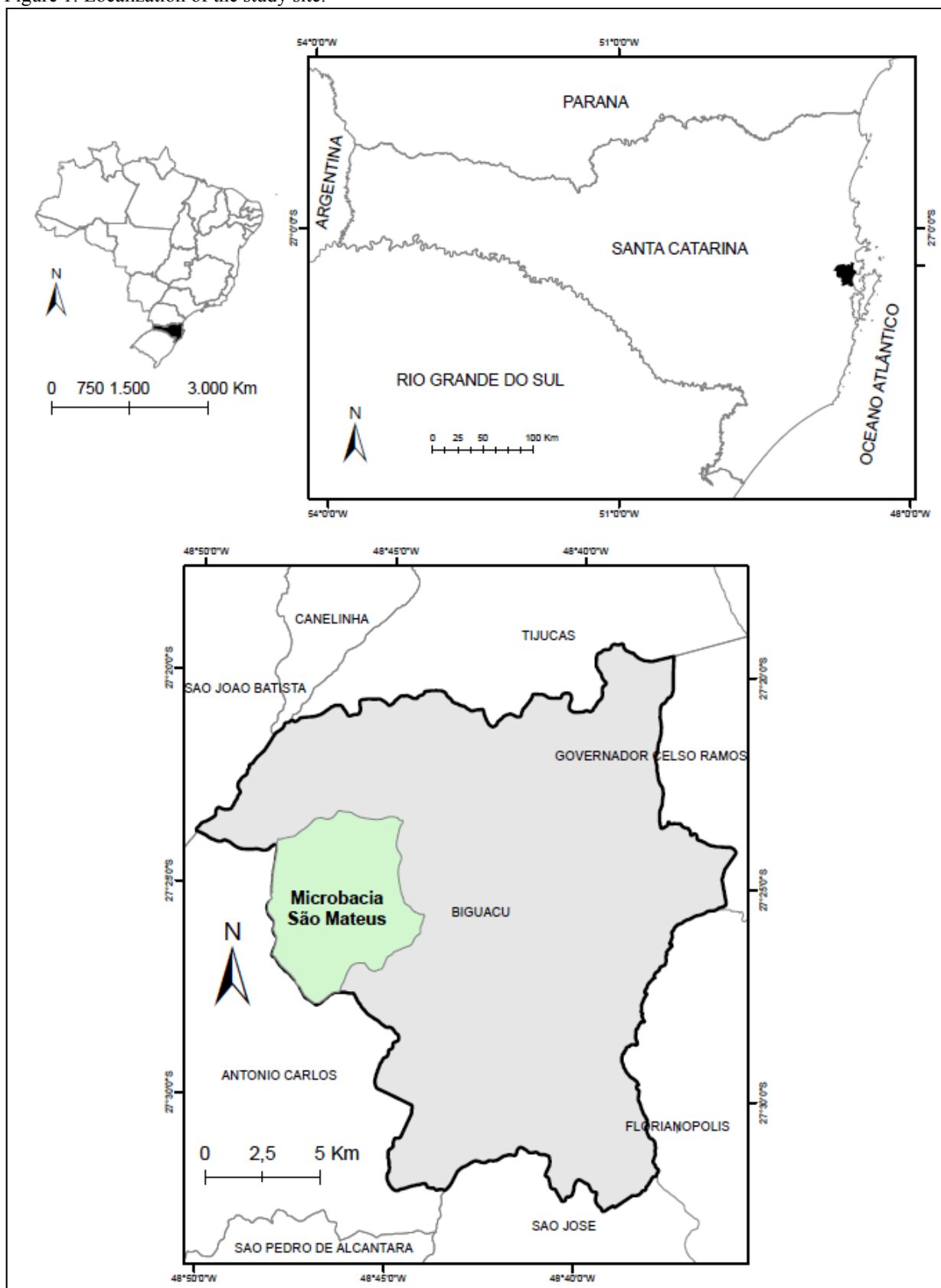
The research was carried out in São Mateus, a rural community in the municipality of Biguaçu, located 35 km far from Florianópolis, the capital of Santa Catarina State (figure 1).

The interest in the problem-situation was triggered by the striking contradiction between the official data indicating that there is no charcoal production in the region, and the data presented in the study of Uller-Gómez & Gartner (2008), which reported that 35% of the family farmers were involved in the activity. A few visits to the community not only confirmed the prevalence of the production but also suggested that charcoal represents the main source of income for many families. A full description of the farming system in the community can be read in Bauer (2012).

In the region, charcoal has been produced by smallholders, targeting mostly the domestic consumption and the local market. Nevertheless, charcoal production in the region is more than an activity directed to the market: it is part of a wider land use system where farming and forestry are intimately linked in an interdependency ruled by the farmers according to their needs.

The region is located within the “Mata Atlântica” and has been subject to environmental regulations that limit conversion of forests to other land uses. In practice, such restriction prohibited the continuation of slash-and-burn, a traditional agricultural system practiced in the region and in the São Mateus community. In the last decade, instead of allowing fallow areas to grow as secondary forests, farmers have replaced them with tree plantations, mainly with exotic species like Eucalyptus, which are not the subject of environmental regulations.

Figure 1: Localization of the study site.



The project

The *Projeto Nosso Carvão* [Our Charcoal Project] is a participatory action research case study started in 2009 as an initiative of researchers from the Laboratory of Ecology and Management of Forest Ecosystems, at the Federal University of Santa Catarina (UFSC) in southern Brazil. The

goal of the project was to improve the problem-situation of local charcoal production, involving the farmers in a learning process to run their activity as a business, becoming self-sufficient in all steps of the production chain.

Therefore, a key concern was to raise awareness of the necessity to work in concerted rather than in parallel action, though not always this was possible due a lack of understanding of how to do this or due other constraints (resources, time, etc). This was also difficult because many of its assumptions have not been made explicit among the project members.

The first contacts with the São Mateus community occurred during the work of Uller-Gómez & Gartner (2008). As the visits to the farmers continued, some familiarity to the farmers opened the first opportunities to talk about charcoal production, a subject they avoided as the activity was done illegally and consequent fines by environmental agencies were becoming frequent.

The first attempts to set up a participatory project to improve the situation failed to get the involvement of local and regional governmental agencies. Then it was decided to start working directly with the farmers, gaining their confidence and desire to get involved in the project. Acceptance of other stakeholders, including governmental agencies came gradually, as the first results of the project appeared, particularly the knowledge on the traditional charcoal production.

Social transformative learning and entrepreneurship: some achievements

The key aspect to be presented and discussed here is the process of facilitating the emergence of entrepreneurship among the charcoal producers, and the achievements obtained so far. One of the main issues challenging the project was how to design the process of enabling collective learning towards innovation and entrepreneurship, since most of the research on social learning is concerned with natural resource management and policy (as in Maarleveld & Dangbégnon, 1999; Ison & Watson, 2007). In order to foster this process of collective learning towards innovation and entrepreneurship three lines of action were defined: the creation of a brand, the design of a charcoal package and the organization of a farmer's association.

Local charcoal producers were historically dependent on middlemen to bring their product into the market. For the farmers, their presence was a necessary and natural link within the charcoal production chain. It was therefore necessary to break with this vicious cycle, bringing the charcoal producers out of the mental models they were apparently trapped in, which possibly were hindering them to view alternative ways of producing and marketing charcoal. Therefore, a whole range of activities were set up with the purpose of developing a different and fair marketing scheme. This marketing scheme was built around the idea of creating a brand for the charcoal produced by family farmers, as a way to convey to consumers the distinctive characteristics of the production site, of the charcoal production process and of the product itself. The farmers decided to name their product *Nosso Carvão* (Our Charcoal) manifesting, at the same time, their sense of ownership and their intention to send to consumers a message that their product is a quality local produce, distinct from other brands.

The enactment of what can be conceived as a system to achieve a fair marketing scheme included also the development of a distinctive charcoal package as a way to encapsulate the idea of bringing to the market a unique product. The development of this package involved the participation of students on Design (from UFSC), who participated in meetings to discuss the creation of a concept for the brand and the package. The first layout was brought to the farmers and other meetings were held to discuss the incorporation of their suggestions, until a final design was agreed. The charcoal package can be seen, therefore, as a concrete outcome of a collaborative process resulting from the engagement of several key stakeholders. Furthermore, for the charcoal producers who up to then feared producing an illegal product, the creation of the brand together with the

adoption of the package allowed the emergence of a strong sense of identity, and the recovery of their self-esteem. The first packs of legalized charcoals reached the local market by November 2013, achieving a price twice as high as the usual. To our view, these two marketing measures worked as a positive (re-enforcing) feedback loop, and were useful to actively build stakeholding in the process of becoming independent of middlemen.

But certainly the main achievement of the whole process of transforming the situation of these charcoal producers, enabling them to learn how to run their own business, bringing them out of illegality and given them an identity, was the creation of an association to structure the whole charcoal production process and its marketing. The *Associação Valor da Roça* (The Value of the Farm Association) is clearly the result of the stakeholder's effort to develop a "shared platform for decision making and action", what for Ison (2010) is an important implication for how social learning is understood, fostered and researched from the perspective of an interactive second-order approach. The institutional (re)arrangement that has been triggered through this process of bringing into life a farmer's association is an improvement in the situation through changes in understandings and in practices.

The still dominant model of the local official rural extension is based on a first-order tradition (Ison & Russel, 2000), and therefore the reframing of certain common extension practices that happened during the project like the facilitation of innovative entrepreneurship instead of concentrating on the transfer of existing technologies can be seen as another important achievement of the project. At least during and through the participation in the project, local rural extension changed its view and way of acting from problem solving to situation improving. This might be considered an example of a contextual rural extension, in the sense that it has evidenced "greater coherence with the expressed needs of the day-to-day lives of the people involved" (Ison & Russel, 2000). Although entering the project only in its third year, the official rural extension service has played an active role in facilitating and supporting the development of entrepreneurship, which was essential to trigger stakeholder participation, a necessary condition to the emergence of social learning.

Despite the project has not developed or adopted any sort of metrics to objectively measure social learning, an increase in the dynamic interaction among the farmers directly involved in the R&D project has been noticed, leading to the (re)construction of meaning and identity as has been discussed, which seems to be an important dynamic mechanism through which social learning occurs. Beyond these evidences at an individual level, it was also observed that changes in understandings of the involved stakeholders have spread or diffused to other farmers of the wider communities of practice (as defined by Wenger, 1988) to which they belong. An evidence of that was the development of the *The Book of Norms*, a series of rules to be followed by the farmers to comply with the goals of the association related to the strength of their Brand. Each month, one of the farmers is visited by the others to check the compliance to the rules and to discuss further improvements of the activity. This new form of meeting, never done before by the farmers, seems to help building their feeling of belonging to the group. Therefore, we assume that the resulting collective entrepreneurship of family farmers producing charcoal is an outcome of a social learning process in a context of constrained environmental resources. There is no doubt that the behavior of participating stakeholders expresses a purposeful concerted action.

Although less discussed in the literature on social learning, leadership of individual stakeholders revealed to play a relevant role in fostering social interactions among actors within the researched social networks. For Bawden (2010), the emergence of leadership is a key aspect of an effective learning community. Snyder & Wenger (2010), discussing the communities-of-practice approach, also acknowledged that leadership by an effective community coordinator is a key success factor to cultivate learning systems. Indeed, in the course of the project it could be observed that beyond the importance and the affirmation of already existing leadership, the process of facilitating con-

certed action towards entrepreneurship fostered the emergence of new leadership practices. Leadership revealed to be important not only for stakeholders taking responsibility for the system they were structuring but also in the process of sharing among stakeholders “knowledge gleaned in practice”.

Transforming the situation through social learning: some critical issues

A very important issue in this action research project was how to design a research practice to foster social learning considering the different backgrounds of the involved researchers, the amplitude of their previous experiences in dealing with messy situations and their little awareness or knowledge about systemic thinking as a way to facilitate the transformation of the situation of concern. Furthermore, at the time the project was set up, it did not refer explicitly to such issues as social learning or entrepreneurship. This thinking has been introduced and became an issue of concern only as the project unfolded. To some extent it was necessary to create an institutional context for stakeholder’s social learning, and also the team project was engaged in a social learning experience regarding their research issues. We recognize that there was initially a lack of awareness that a social learning process was under development, which might have delayed the achievement of some project goals. However, we believe that this might have opened up new spaces for collective team learning.

Therefore, as has been the case in many other projects, a critical issue was how to foster purposefully the conditions for social learning among the involved stakeholders. To achieve concerted action is not only a challenge for them, but also for project team members acquainted to work in parallel according to their expertise.

A further critical issue that deserves attention is clearly to distinguish between simply participation from concerted action resulting from a social learning process. As been discussed by Reed et al. (2010), although there is strong evidence that participatory processes may foster and facilitate social learning it cannot be assumed that participation inevitably implies that social learning takes place. Nevertheless, we have observed that the emergence of entrepreneurship demanded the active participation of stakeholders and changes in their behavior. It is therefore crucial to create the circumstances for people to express their stakeholding in the situation what can be facilitated through practices such diverse as conversations and seminars.

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