

## RURAL LANDSCAPE AND FAMILY FARMING IN RIO DE JANEIRO STATE

PAISAGEM RURAL E AGRICULTURA FAMILIAR NO ESTADO DO RIO DE JANEIRO

PAISAJE RURAL Y AGRICULTURA FAMILIAR EN EL ESTADO DE RÍO DE JANEIRO

### ABSTRACT

**Introduction:** The transformations in the rural space, in the rural landscapes, result from the growing urbanization and the proliferation of non-agricultural activities in the rural environment. The rural space increasingly houses non-agricultural activities that value areas with natural aspects and that refer to the changes taking place in the field, which, in addition to being the place of agricultural production, is transformed into a space, in which innumerable non-agricultural activities are carried out, configuring a hybrid between the rural and the urban. **Objective:** to understand the rural landscape resulting from the practice of family farming in the state of Rio de Janeiro, as well as to analyze the transformations in the rural landscape due to the growing urbanization and the proliferation of non-agricultural activities in the rural environment. **Results:** It appears that, in Rio de Janeiro, the transformations in the rural space and its landscapes, such as the practice of rural tourism and the dissemination of non-agricultural jobs, are associated with the intense urbanization process that can be presented in a with five axes, which are present in more densely populated areas and basically correspond to landscapes associated with mountain and coastal areas. **Conclusion:** the rural space of Rio de Janeiro is transformed due to the enhancement of its natural aspects, its landscapes, and the maintenance of family agricultural production becomes important for the dissemination of the image of the rural and natural space, and the strength of its agriculture is found in its diversity of production. this productive diversity reinforces the diverse rural landscapes found in the state of Rio de Janeiro.

**Keywords:** Rural space, Rural Landscape, Rio de Janeiro, Family Farming.

### RESUMO

**Introdução:** As transformações no espaço rural, nas paisagens rurais, decorrem da crescente urbanização e da proliferação das atividades não agrícolas no meio rural. O espaço rural abriga, cada vez mais, atividades não agrícolas que, valorizam as áreas com aspectos naturais e que remetem às mudanças em curso no campo, que, além de ser o local da produção agropecuária, transforma-se em um espaço, no qual inúmeras atividades não agrícolas são efetuadas, configurando um hibridismo entre o rural e o urbano. **Objetivo:** compreender a paisagem rural resultante da prática da agricultura familiar no estado do Rio de Janeiro, bem como analisar as transformações na paisagem rural devido à crescente urbanização e à proliferação das atividades não agrícolas no meio rural. **Resultados:** Constatam-se que, em território fluminense, as transformações no espaço rural e em suas paisagens, como a prática do turismo rural e a disseminação de empregos não agrícolas, encontram-se associadas ao intenso processo de urbanização que pode ser apresentado em forma de cinco eixos, que estão presentes em áreas mais densamente povoadas e correspondem basicamente a paisagens associadas as áreas de serra e litorânea. **Conclusão:** o espaço rural fluminense se transforma em decorrência da valorização de seus aspectos naturais, das suas paisagens, e da manutenção da produção agrícola familiar se torna importante para a disseminação da imagem do espaço rural e natural, e a força da sua agricultura se encontra na sua diversidade de produção essa diversidade produtiva reforça as diversas paisagens rurais encontradas no estado do Rio de Janeiro.

**Palavras-chave:** Espaço rural, Paisagem Rural, Rio de Janeiro, Agricultura Familiar.

### RESUMEN

**Introducción:** Las transformaciones en el espacio rural y por ende en los paisajes rurales, resultan de la creciente urbanización y la proliferación de actividades no agrícolas en el medio rural. El espacio rural alberga cada vez más actividades no

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DOI: 10.12957/geouerj.2022.51496

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Recebido em: 12 maio 2021

Aceito em: 21 dez. 2021



agrícolas que valoran áreas con aspectos naturales y que hacen referencia a los cambios que se están produciendo en el campo, que además de ser el lugar de producción agrícola, se transforma en un espacio, en el que se realizan innumerables actividades agrícolas, configurando un híbrido entre lo rural y lo urbano. **Objetivo:** comprender el paisaje rural resultante de la práctica de la agricultura familiar en el estado de Río de Janeiro, así como analizar las transformaciones en el paisaje rural debido a la creciente urbanización y la proliferación de actividades no agrícolas en el medio rural. **Resultados:** Parece que, en Río de Janeiro, las transformaciones en el espacio rural y sus paisajes, como la práctica del turismo rural y la difusión de empleos no agrícolas, están asociadas al intenso proceso de urbanización que se puede presentar en cinco ejes, los cuales están presentes en áreas más densamente pobladas y corresponden básicamente a paisajes asociados a zonas montañosas y costeras. **Conclusión:** el espacio rural de Río de Janeiro se transforma debido a la valorización de sus aspectos naturales, sus paisajes, y el mantenimiento de la producción agrícola familiar se vuelve importante para la difusión de la imagen del espacio rural y natural, y la fuerza de la agricultura se encuentra en su diversidad de producción. Esta diversidad productiva refuerza los diversos paisajes rurales que se encuentran en el estado de Río de Janeiro.

**Palabras-clave:** espacio rural, paisaje rural, Río de Janeiro, agricultura familiar.



## INTRODUCTION

Changes in the rural space — in rural landscapes — stem from the increasing urbanization and spread of non-farming activities within it. Areas most affected by these changes are those where family farming output prevails, as it happens in Rio de Janeiro state. Increasingly, the countryside in Brazil turns out to be where activities such as manufacturing and tourism-associated services take place. Such services value areas where natural aspects stand out; by doing so, they reveal the nature of changes taking place in the countryside, which, in addition to being the place of farming production, is where numerous non-farming activities happen. An example is the work of caretakers, day laborers, gardeners, etc. All are part of a hybridism between the rural and the urban.

Given the spread of leisure areas, tourism activities deserve some highlight. With this study, we attempt to understand the rural landscape resulting from current family farming in Rio de Janeiro state, as well as to analyze changes in the rural landscape due to the increasing urbanization and proliferation of non-farming activities there. In other words, we aim at understanding the rural landscapes resulting from the current practice of family farming in Rio de Janeiro.

### Rural space and family farming

The analysis of current changes in the countryside becomes fundamental. The countryside not only performs traditional functions as a reference of activity permanence and supply of work force and raw materials to the city; it also consumes products from the city and increasingly receives non-farming activities such as industrial output, services associated with tourism activities that value areas with natural aspects and reveal the changes in progress. Besides being where farming production takes place, the countryside turns out to be where numerous non-farming labor activities occur. Examples include caretakers, day laborers, gardeners, etc.

The rural space has become strongly characterized by the technique and capital content, represented by agro-industry and agribusiness, both corresponding to the agricultural production space stemmed from the green revolution, modernization, and agriculture industrialization. As Elias (2003, p. 50) says, “the spread of global agribusiness explains in part the expansion of technical, scientific and informational environments and the urbanization of different areas of the country [Brazil].”

On the other hand, family farming output’s space is marked as well by non-farming activities that add value to the natural and historical heritage. They play the role of an alternative production to the agribusiness



dominant model, which is aimed to build new agroecological and sustainable bases to encourage flows of city people who want tranquility and quality of life, whether as tourists or inhabitants.

There are new relationships between the countryside and the city. Both have new qualities that leave a strong mark in the landscape. In addition to farming production and industrialization, the new activities should be identified to characterize the countryside and its relations with the city. The presence of a huge diversity of activities stems from the action of small farmers, who contribute significantly to food production and outline creatively survival strategies. There are many social individuals as well, such as large landowners, small landowners, partners, wage earners, itinerant workers, landless people and their struggle for land. With their work, all of them materialize a diversity of objects, elements, and situations in the rural space that turn the countryside into a quite complex place.

Added to such complexity of situations is the presence of people from the city in the countryside who often perform activities that are not exactly farming. It is so due to the technological development represented by the improvement and expansion of communication ways as roads, transportation means, and telephony. The rural space becomes more complex because, in addition to farming activities, it started to be the place for non-farming activities too. Thus, we have new territorialities, which make up new ruralities and urbanities.

If there is a movement to unify the urban and the rural by the capitalist logic, there are many manifestations of resistance to this allegedly homogenizing equalization as well. Such manifestations translate the countryside families' survival strategies, especially of the poorest ones and/or of the ones impoverished by the integration movement abovementioned, when they sought to maintain or (re)build their territorial identities. Such scenario puts us in front of a complex process of space heterogenization integrated by the unequal logic of the capitalist development, in which economic, political, cultural, and symbolic dimensions interact.

One points out the need to go beyond the census data limits and tie the functions that the rural territory fulfills in the economic, ecological, social, institutional and cultural sectors, among others. Thus, that definition has to cover the existence of various ruralities.

Among the aspects of the process of building a new rurality, it stands out the rebirth of the rural resulting from the making of a contemporary rurality driven, especially, by the growing valuing of the countryside. These aspects make a new meaning to understand the rural space. Such rurality is discussed in terms of socioeconomic and demographic changes, as well as of cultural matters bias and representation.

A starting point is the premise that the rural does not cease to exist; instead, the presence of urbanities, meaning material and immaterial manifestations with an innovative character in rural areas, transforms the rural relevantly. The result comes in form of areas of higher density, outside of which manifestations would



be punctual. Urbanities would be built by a huge range of material manifestations (improvement of infrastructure and media, new forms of leisure, second residence, tourism, industries, etc.) and immaterial (values, fashion, security, customs, and habits disseminated by the media).

As Jean (2007) says, we witness the rebirth of the rural and its various functions. Thus, when we speak of the rural and of continuous changes, we are necessarily saying of an urbanization process (non-farming occupations, consumption expansion, accessibility); we are largely identifying leisure spaces, industrial production and “processes of symbolic values making” (REIS, 2001, p. 7). Therefore, the main transformations are greater urbanization, *cosmopolitismo dos comportamentos* (urban and rural behaviors in the countryside), and an intense relationship with labor markets. We agree with Reis (2001, p. 12):

It seems plain that changes in rural settings and the greater territorialization of socioeconomic practices bear a more intense relationship between socioeconomic practices, whether with public policies or external agents (who follow these policies). This double opening of the rural space (the one brought to it by external agents who seek it according to new interests and new profitability; the one resulting from the very metamorphosis of originally local agents) is certainly the great novelty feature for what there comes. It remains, therefore, to continue to observe how openness and change make new changes.

Thus, two ways of understanding the matter stand out. On the one hand, the farming output benefited by credit lines, aimed at the foreign market above all and integrated to international companies, has expanded and occupied large land areas (an imposed form of managing production and food commercialization on a global scale). After all, as Achkar et al. (2007) state, rural territories were incorporated into a technical division of labor that resulted in the concentration of land and the implementation of monocultures, with the intensive use of soil, water resources, and genetic resources, as well as with loss of biodiversity, homogenization of rural landscapes, and disregarding of local agrifood systems. On the other hand, in addition to modern and integrated production to global markets, there is a significant presence of family-based farming output in the rural space.

Among non-farming activities in the countryside, tourism deserves some highlight due to leisure areas proliferation. These “new” activities have required more and more people to sustain tourism activities expansion in the rural space. This way, those family members released from the farming activity routine had the opportunity to fill job vacancies generated by the expansion of rural tourism and of industrial activities.

In fact, we should take into account that the rural space is not only a farming one. It cuts ties deliberately and explicitly with two elements secularly associated with the rural. Now, its main function is no longer necessarily to produce food, the same way the predominant activity goes beyond farming. It reinforced, then, the notion of rural space hybridism. The non-farming dimension increases; often, it happens in association with the notion of heritage, including the landscape renaturalization. The preservation and protection of nature are emphasized, the same way value is put on the search for local landscape’s authenticity elements,



on the conservation and protection of historical and cultural heritage, and on the evoking of memory and identity elements. This way, there is a landscape commodification, with the consequent expansion of tourism and leisure activities. Such rural is one of the geographical space dimensions apprehensible in its relations with the urban by means of ruralities, urbanities, and multiple territorialities. We agree with Berque (2004) regarding new possibilities of landscape analysis: landscape may be seen as a “brand” meaning a civilization, a society, a “matrix”, since it represents the interaction between physical environment and society.

May (2008), in her study on the rural landscape value in small coastal towns around the English Channel, points out the growing interest of visitors in geomorphologic attributes as visitation places. Such interest reflects on the cultural, symbolic and scientific dimensions of these attractions and on the need for their conservation and accessibility as well as for monitoring of natural risks. Zgłobicki and Baran-Zgłobicka (2013) point out as well that the growing tourist interest in rural landscapes of the province of Lubelskie, southeastern Poland, is due to the search for the aesthetic values of the landscape, especially nature and cultural aspects.

By evaluating traditional agro-silvo-pastoral systems, Sala (2009) says these agrarian spaces, especially around the Mediterranean basin, have been a preferred destination for rural tourism in Europe. According to her, the small family-based property adds texture and diversity to the landscape, which results in a greater diversity of crops and soil conservation. Nevertheless, land transformations and the simplification of cultivation forms with crops’ rapid mechanization ended up in an increase in surface runoff, in biodiversity loss, in the spread of undesirable plant species by the abandonment of lots, and in general decrease in aesthetic potential of landscape and land areas. Thus, the definition of geomorphic locations and of conservation areas in traditional rural spaces becomes a fundamental task as for protection and promotion of these areas as potential and sustainable destinations for rural vilegiatura (summer season). It articulates different levels of interest in the enjoyment of these landscapes.

This way, the landscape and the rural landscape may be understood and analyzed as both a brand and a matrix. Landscape is a fundamental concept in geographical interpretation; it is a representation of various forms expressing footsteps left by society. If so, then it is appropriate to consider characteristics present in Rio de Janeiro state, where the metropolitan region concentrates population, services, and material and immaterial production massively. It would function as a concentrated region (Santos; Silveira, 2001, p. 140) at the state level and as a growing territorial division of labor in Brazil’s interior (over previous divisions), particularly in the form of axes (Davidovich, 1999; Christmas, 2004; Rua, 2011), which are called “axes of higher density of urbanities.”

Numerous activities stand out in the rural space. There are farming activities as production of raw material for industry and of food, there is the presence of rural workers settlements and camps, and there are non-farming activities (localization of industries, search for areas with preserved nature for the construction



of residences, hotels, and pousadas). A consequence comes as a need for work force and as a possibility for local resident farmers to increase their household income. The growth of these non-farming activities relates to the implementation, by public authorities, of transport and communication infrastructure, which has made possible the flow of people, goods, information, and capital.

Most part of the changes corresponds to the rural space not incorporated into agribusiness production and that, for the most part, corresponds to family farming output in small properties. In this space not incorporated into the hegemonic model, we find rural landscapes demanded by tourism. There is preservation of nature in such areas, which can become leisure ones: country homely places for weekend stay, hotels and pousadas, which attract urban populations and provide employment to small farmers, who have the chance to work in activities other than farming.

In such spaces, agroecological and alternative practices are encouraged over traditional ways of production employed in medium-sized and large properties. These places correspond to the rural space revalued due to its most preserved landscape and that turns out to be a commodity consumable by general populations, especially the urban ones. Relations between the countryside and the city change: the latter subordinates the former; but both remain integrated as a consumption space. The same way, it remains those spaces of family-based farming production, despite changes stemming from the diversity and presence of numerous elements (industries, services, and city people enjoying themselves or living in a second residence) that associate farming and non-farming activities. Decapitalized small farmers are left with the alternative of seeking other income sources in non-farming activities. Thus, we aim to analyze rural landscapes resulting from the practice of family farming in Rio de Janeiro state territory, above all in eight government regions.

### **Rural landscape and family farming**

We emphasize the always-necessary effort to understand transformations that the concept of landscape presents. Disciplinary meanings that have been attributed to the notion of landscape, agrarian landscape, and rural landscape — the conceptual polysemy — have increasingly gained importance in the debate agenda. The core of the discussion is in an attempt to break with the conceptual polysemy that the landscape discussion turned out to be, seeking to elucidate and build a solid disciplinary basis through the conceptual and methodological axioms that sustain our science.

European Union perspectives and interventions within the rural world reflect a transition: from an agricultural concept focused on farming and aimed at farmers and their organizations to a post-agricultural conception based on the valorization of new activities as an essential support to renew the rural world and make it viable. This rural world accompanies the development of the urban population interest in countryside



areas. Oriented towards the territory and the rural population as a whole, the urban population configures new opportunities to safeguard, value and enjoy heritage, as demonstrated by several programs and initiatives, especially in the last decade, through paradigmatic examples between places, routes and networks.

By recognizing the strategic importance of the rural world and its increasing complexity and diversity, new policies have, as structuring axes, not only the understanding of landscapes specificity and their resource potential, but also the priority attributed to the concepts of sustainability and partnership. The major aim is to reconcile farming practice with environmental and landscape concerns, to preserve and to value landscapes and cultural heritage diversity; at the same time, it means to find new functions/uses for rural territories compatible with these guiding principles.

Simultaneously, recent European guidelines regarding rural world development — the transition from a model guided by the agricultural sector towards a model centered on the rural society and on the fashioning of rural landscapes — are accompanied by a growing valorization of rural actors' participation in policies' definition and management. In its plurality of expressions and representations through (natural and cultural) heritage, the rural configures an unavoidable matrix of what should be the inclusion of landscapes and populations in sustainable development aims.

Despite their apparent stability and firmness, rural territories are constantly changing, in diverse rhythms and intensities and according to a very variable range of factors and interests. By highlighting that territories are not frozen, Gillardot (1997) exemplifies with cases of brutal transformations such as those in Europe's viticulture regions in late nineteenth century (with the *Phylloxera* attack crisis) and those lasting several decades, as in many southern countries.

In southern countries, particularly in Brazil, the intensity of land incorporation into agriculture, intensive in capital and technology, has caused accelerated and profound changes in landscapes. In contemporary farms based on monoculture and commodity production, men gave place to machines. Technical objects filled the countryside, while the countryside was emptied of people. Places of living were abandoned. Empty homes have turned into old ruined houses. Backyards and gardens have given way to crops such as soybeans and other products demanded by the market. Small productive properties lost their profit value to be incorporated by large farms or be sold to serve as secondary residence. Small rural nuclei lose their functions, while resident population (made up mostly by the elderly) sees decrease in services sector and gradual or even accelerated changes in places of living.

Just as society is constantly transforming, the landscape changes too. Each new form of work, each new territorial configuration changes not only landscape forms, but also the ways of understanding them. As Santos (2008, p. 74) said,



The landscape does not appear at once, but by additions, substitutions. In the past, the logic guiding the making of an object was the production logic at the time. A landscape is writing over writing; it is a set of objects of different ages; it is an inheritance of many different moments. In each historical moment, the ways of doing are different, human work becomes increasingly complex, requiring changes corresponding to innovations. Through new techniques, we see the replacing of one work form by another, of one territorial configuration by another. That is why understanding the geographical fact depends so much on knowing the technical systems.

Therefore, the landscape is the heritage of many different moments as well. After all, it does not come into being at once, but by a set of creations and deconstructions, subtractions and additions. One may grasp the landscape as the result of the sensible relationship of people with their perceived and experienced surrounding environment. This way, one may say the landscape is an element of territorial affinity and identity, besides being a manifestation of the many places of the geographical space.

Transformations taking place in the rural space are evident in the landscape dynamics, where they are materialized. The rural landscape changes over time due to socioeconomic conditions underlying the new ways of producing, working and living in the countryside. It was Chaléard and Charvet (2004) who wrote that farmers, in addition to producing foodstuffs, produce farming landscapes. In their own words,

Les paysanneries asiatiques ont créé de magnifiques paysages de rizières; celles des Andes ou de différentes montagnes méditerranéennes ont équipé des versants entiers de terrasses. Les paysages de bocage, avec leurs haies et leur habitat dispersé, et les paysages d'openfield, avec leurs champs ouverts et leur habitat groupé en villages, se partagent les campagnes de l'Europe du Nord-Ouest. Ces éléments sont bien perçus comme étant d'origine anthropique, ce qui leur confère parfois aujourd'hui une valeur patrimoniale. Mais bien d'autres aspects de paysages souvent considérés comme "naturels" ont également une origine anthropique. Ainsi est-ce le cas de prairies de fond de vallées ou de certains pâturages d'altitude situés à la limite supérieure de la forêt. Ces prairies et pâturages correspondent à des espaces qui, à l'origine, étaient solvants des espaces boisés et qui furent défrichés à des époques plus ou moins anciennes pour le besoin de l'élevage. Aujourd'hui, alors que ces espaces ne sont plus véritablement indispensables à la production agricole, la conservation en tant que paysage "ouverts": on aide financièrement les agriculteurs afin de les maintenir et de les entretenir.

This way, the ancient scenario of a bucolic life in the countryside, a life of daily work with plants and animals, becomes a dynamic space that is useful to production and to global exchanges, besides being subject to numerous modifications, because it is extremely susceptible to capital and technology. In its territorialization process, agribusiness takes control over areas that already have a territorial configuration and, then, adapts them to its needs. For instance, an agribusiness characteristic is the intensive use of mechanical work instead of human labor and animal force. Represented by an extensive range of machinery and equipment (plows, sprayers, tractors, roçadeiras (mechanical weeding devices), harvesters, utility vehicles, irrigation equipment, etc.), mechanization reduces working time and increases output. Chemical and mechanical innovations have caused major changes in agricultural production; biotechnology, with advances in genetic engineering, has had a great evolutionary leap, participating in the industrial process on a large scale. The hybrid seed — the enhanced seed made in laboratory through genetic engineering — was not just



a sign of agriculture modernization, but also an industrialized input used largely in the process of changing agriculture technical base.

Given the current scenario, one of the main guidelines for technological research in agriculture was to make artificial input. Manufactured on an industrial scale, it made possible to replace part of natural input and, thus, to provide greater control over plants and animals biological cycle; it was possible to make it not only a little less vulnerable, but also — and consequently — able to respond more positively to new forms of production, distribution, and consumption. In addition, there is the use of less fertile soils by making them useful and through intensive occupation of territories previously disregarded as useful for such activities (ELIAS, 2003). This change in the technical base is what allowed agribusiness vertiginous expansion in areas seen before as inadequate, it is what drove family farmers and rural workers out of the countryside. A result of such process is perhaps the deepest transformation in rural areas landscape. As Brandão (2007, p. 58) states,

The almost absolute landscape standardization and the collapse of biodiversity and of a corresponding sociodiversity: here is the multiple, yet so uniform, landscape of this illusory extreme socialization of natural spaces. To make land to produce in excess — the technological myth of productivity —, so many individuals and groups of people are removed from the previous landscapes, as for the land itself it is subdued: made flat, empty of what is not empty spaces of production, exhausted with natural resources and impregnated with the chemicals of agribusiness.

Indeed, when Milton Santos (2004, p. 63) states that the space is made up by an “inseparable, solidary and contradictory set, of objects system and actions system, considered not in isolation, but as the only framework in which history takes place”, it means the rural space is constituted by a set of forms and processes as well. Such a set results in socially produced landscapes through the remarkable presence of culture and technique. It puts into evidence the presence of material and symbolic elements, of multiple temporalities, which attribute identity traces to the place that give it unity too.

By taking cultural geography as starting point, Carl Sauer began the study of the concept of landscape in his work *The Morphology of the Landscape* (1925). He presented a definition of geographical landscape as resulting from the culture action in the natural landscape over time. “The cultural landscape is fashioned from a natural landscape by a culture group. Culture is the agent, the natural area is the medium, the cultural landscape the result” (SAUER, 1925/1998, p. 59). The natural landscape offers resources with which culture agents build the cultural landscape. The landscape, then, contains physical and cultural elements in which human action, progressively, becomes the morphological element of greatest importance because it is more relevant to the formation of different landscapes.

Correa and Rosendahl (1998) understand the landscape in different dimensions. The first dimension is morphological; it relates to the set of forms that compose it. Sauer (1925/1998) developed this approach as



well. He adopted a phenomenological view of science and proposed, as scientific research method, the identification and ordering of a group of phenomena (visible forms of space in this study) and the analysis of their relationships. The second dimension is functional; it deals with the role each part plays in the whole. The third dimension is symbolic; it evidences values, beliefs, myths and utopias in the culture group that (re)builds/built landscapes. This symbolism contained in landscapes, in line with the author, attributes complexity to the concept. On the one hand, the researcher has to keep objectivity in mind to represent reality as it is; on the other hand, the attempt to ensure such objectivity may cause researchers to miss much of the meaning landscapes contain. There is a risk: the research turning out to be a simple landscape description, since it may lack the researching agent's own interpretations.

In fact, as Cosgrove (1989/1998, p. 98) says, landscape is a "way of 'seeing', a way of composing and harmonizing the outside world in a 'scene', in a visual unit". The author proposes in this regard a renewed cultural geography, which sees landscape as a cultural text and recognizes that a text has several dimensions and is opened to different simultaneous and equally valid readings.

Claval (1999, p. 24) sees the landscape as a key document to understand cultures, for it bears cultural marks and serves culture as a matrix. This author says that such "mark man imposes on the landscape [is] that forms the fundamental subject of all research." For him, the cultural landscape is the expression of man's action in his environment, his choices, and his production techniques. Therefore, it is necessary to make a meticulous analysis of the landscape, considering its signs and symbols to identify human groups' visions, values and dominant ideology.

Sometimes, however, this landscape ceases to be just an expression of social life and begins to have its own specific value. It gains an aesthetic dimension or founds the identity of the group that humanizes it. To Claval (1999), landscapes are made of elements of different ages in which sentimental values are invested, because "the past coexists with the present" (1999, p. 309); which means, identity is partially elaborated from the landscape in a way.

A category present in Brazilian rural space and seen as an expressive one refers to family farmers. In their process of reproduction and survival, they have presented characteristics such as part-time work due to the decrease in working hours favored by the incorporation of production technologies and the consequent release of family members to perform farming and non-farming activities as a means of supplementing household income. Among other factors, this phenomenon, which is called pluriactivity, was expanded due to the reassessment of the rural world with activities linked to industrial and service sectors, which began to hire people from units of family farming output.



Only after the publication of a FAO/INCRA study (1994) is that family farming effectively entered the debate on rural development in Brazil and in public policies aimed at the sector. As Elesbão (2007, p. 63) points out, “there is a growing recognition in government agencies that family farming is of fundamental importance in its development [in Brazil agriculture development].” It is an understanding shared by Buainain (2006, p. 22), to whom Brazilian family farming is extremely diverse and “the 1990s was characterized by a profound restructuring of the national agribusiness [...] but with family farming spread throughout the national territory and being the main job source in rural [spaces of] Brazil.” As Buainain wrote, the presence of family farming varies depending on the country region; but “in all regions, more than a third of the establishments were classified as family ones” (p. 27). It is worth mentioning that in 2006, for the first time, agricultural census made available official statistics on family farming. In this sense, France et al. (2009, p. 38) consider that, by putting

the Family Farming Law in the official statistics produced by the Agricultural Census 2006, IBGE and MDA contribute relevantly to the identification and characterization of a social sector whose economic and social importance is a subject that the state recognizes increasingly, [and that is] informed by a historical background of social struggles and academic debates.

Buainain and Fonseca (2011) consider that family farming was a successful “invention” and “innovation” from the 1990s and that academy played an important role in them. It was spread through studies that family farming is defined by the use of work force, the size of the property, the direction of the works, and the income. There is always a common feature: if families own their production means, families themselves are the ones to perform farming work with them. These family farmers help building rural landscapes with a great diversity in Brazilian territory; but, to a greater or lesser extent, they present, among other changes in the rural space, rural tourism practices and non-farming jobs spread, which are associated with urbanization process in recent past decades.

By taking into account the analysis of natural components making up rural landscapes, it is understood that the hierarchical spatial approach of its attributes makes possible to measure interrelations between elements of the same thematic class belonging to different *níveis escalares* (different levels in cartographic representation scalars) (CAVALCANTI, CORRÊA, 2008). This treatment is particularly interesting when it is necessary to correlate components with spatial expression within certain categories, such as geomorphological ones, even though they belong to diverse morphological quantities. Thus, by the thematic cartography of landscape physical components, one can achieve levels of detail such as those related to the knowledge of rural landscapes geodiversity potential without losing typological coherence.

Even though, one realizes that facing the hierarchical matter as for the indication of rural landscapes physical attributes is a complex task. Traditional models focus on genetic aspects and are not the common approximations when it comes to functional analysis. Such analysis lacks a coherent selection of variables to

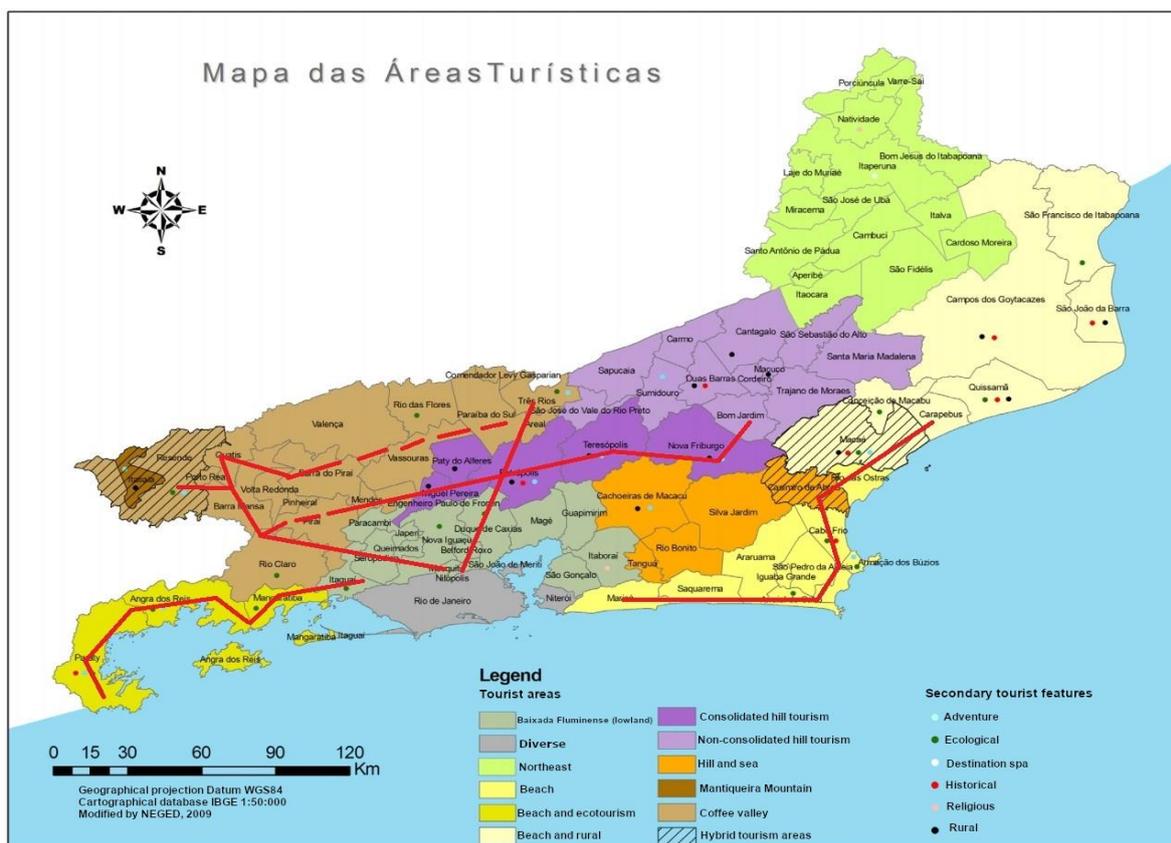


assess geodiversity, conservation and environmental transformation attributes. Moreover, it seems to be an essential role the one of the environmental monitoring by using temporal sequencing of processes.

### Rural landscapes in Rio de Janeiro state

In Rio de Janeiro state territory, changes in the rural space and its landscapes, as the presence of rural tourism and non-farming jobs opportunities, relate to an intense urbanization process. This process may be presented in five axes, as shown in the following map, emphasizing the state tourist areas. The map depicts main and secondary areas. Axes appear in more densely populated areas and correspond to landscapes associated with hilly and coastal areas.

Figure 1. Tourist areas



Source: adapted from *Caderno de turismo do estado do Rio de Janeiro: passaporte para o desenvolvimento do Estado* [João Carlos Gomes, ed.], Rio de Janeiro, Fecomércio, 2010; RUA, J. As crises vividas pelo estado do Rio de Janeiro e a emergência de novas territorialidades em áreas rurais". In: MARAFON, Glauco José et al. (Eds.). *Abordagens teórico-metodológicas em geografia agrícola*, Rio de Janeiro, EdUERJ, 2007, pp. 271–98.

The axes have the following characteristics.



— Costa Verde axis. This axis goes from Rio de Janeiro metropolitan region towards Angra dos Reis and Paraty and to Grande Isle bay area, where it stands out tourist activities that have caused transformations due to the strong interest in beach, historical and ecological tourism. The region has large reserves of Atlantic forest, numerous islands (as Grande Isle) and colonial period cities like Paraty. In much of the territory, there are environmental protection areas, which inhibit farming activities. The intense occupation by large luxury hotels and condomínios<sup>1</sup> (gated communities) has led to a level of real estate speculation that caused the local farming families expelling from their own land. They are left to enter the urban labor market or to work with extractive activities, such as banana and heart of palm cultivation — under guidance of government technicians from EMATER and IBAMA<sup>2</sup> —, or to seek labor in hotels and condomínios. Forests, production areas and historical heritage are a strong mark in the rural landscape, which is associated with the main tourist practices developed in the area.

— Costa do Sol axis. It goes from Rio de Janeiro metropolitan region towards Cabo Frio, Búzios and Macaé, the region of coastal lowland, where tourism plays a relevant role as a development factor. There is a relevant growth of mass tourism towards the state north coast, causing intense urbanization and proliferation of second homes. The consequences include land fractionation and farming activities ceasing on behalf of allotments and condomínios. The presence of Petrobras in Macaé represents — as Rua's (2002, p. 48) says — “an overwhelming real estate speculation with deep marks of socio-spatial segregation.” Beaches predominate in the landscape; but the landscape is marked by salt pans and family farming output as well.

— Hill top axis. This is an urbanization axis. Its main features are Nova Friburgo, Petrópolis and Teresópolis municipalities (RUA, 2002). It is an area marked by horticultural and flowers cultivation aimed to meet demands in Rio de Janeiro metropolitan region. There is a traditional and significant industrial center, above all of underwear fashion, besides numerous summer sites, second residence houses, farm hotels, pousadas and spas. All establishments search to relate to natural aspects. Besides, the area offers an alternative tourism place to the beach tourism in coastal areas such as Costa Verde and Costa do Sol. There is an intense family-based farming production, centered on small properties, on household labor and on low mechanization levels. Most often dependent highly on intermediaries who control the output commercialization process, family farmers grow lettuce, broccoli, cauliflower, tomato, etc. and end up having low income for their farming output. To supplement household income, family members enter the non-farming labor market by performing gardening, property caretaking and housekeeping activities, besides being hired as workers by city companies operating in the region. The hill top axis area produces organics and

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<sup>1</sup> In this article, the word *condomínio* means condominium but in the sense of a restricted countryside land portion aimed at the building of houses, instead of apartment buildings (TN).

<sup>2</sup> EMATER is a public Brazilian company aimed at giving technical support to the rural world as to meet needs and demands regarding agriculture, farming and supplying, among other activities. IBAMA is the Brazilian institute aimed at managing environment and renewable natural resources (TN).



hydroponics as well, aimed at a consumer market restricted to the southern part of Rio de Janeiro city. In the hilly region, one notices the remarkable presence of landscapes related to contemporary rural tourism and in harmony with family farming output. It stands out landscapes associated with farming production, olericulture, flowers cultivation and fruits growing, besides nature elements such as woods, waterfalls, etc.

— The axis encompassing the territory of middle Paraíba Valley and Centro Sul Fluminense regions contributes to the *hortigranjeiros* output (vegetables, fruits, eggs, chicken meat, etc.) aimed at supplying Rio de Janeiro metropolitan region population, in addition to dairy farming output. Another mark in its landscape is the activity related to coffee, including the old large farmhouses. Although local authorities felt encouraged enough to organize the Coffee Valley Festival, it does not mean they interacted with family farmers, who continue to seek extra income in industry jobs in the region. Many companies dealing with metal-mechanical sector is operating there.

— The axis corresponds to Rio de Janeiro north and northwest. Given the distance from the metropolitan area, these areas present strong rural characteristics, above all milk, sugarcane, coffee, and fruits production. Such characteristics, however, are changing due to the presence of Petrobras (and its royalties), since the company provides jobs for farming family's members in those regions. Still, the landscape in such axis is strongly marked by rural activities as plant cultivation and dairy cattle raising.

## FINAL REMARKS

In Rio de Janeiro state's territory and rural area, an intense urbanization process has caused profound socio-spatial changes. We highlight contemporary rural tourism activities, rural landscape appreciation and maintenance (even increase) of family farmers' output (Seabra, 2004). The state has a significant participation in the farming output commercialization due to its supplying centers, in Rio de Janeiro city, and to its supermarket and distribution chains, especially of vegetables, whose output increased in recent years as in the hilly region. The proliferation of these activities makes possible to family farmers to work in non-farming activities and, consequently, to increase their income. This process, however, occurs in areas of urbanization axes and near Rio de Janeiro metropolitan region; in far away areas, family farmers still depend on farming income and have trouble carrying out their activities. Thus, the value attributed to natural aspects (landscapes) and to the maintenance of family farming output changes Rio de Janeiro rural space; this means the spread the idea of rural as a nature space becomes central. After all, farming strength lies in the diversity of production; and such diversity reinforces Rio de Janeiro state many rural landscapes.



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