

Symmetries and Asymmetries in Collective Management: Comparing Effects on Resilience and Rural Development in Galician Common Lands and the Brazilian Extractive Reserves



ROSENI APARECIDA DE MOURA 

JOSÉ AMBRÓSIO FERREIRA-NETO 

M. MAR PÉREZ-FRA 

ANA ISABEL GARCÍA-ARIAS 

**Author affiliations can be found in the back matter of this article*

][ubiquity press

ABSTRACT

This study aims to comparatively analyse cases involving Galician common lands (MVMC) in Spain and the Extractive Reserves (RESEX) in Brazil, from the new perspective of community resilience in sustainable rural development. We studied the role of the state in legal transformations regarding land use and management to understand changes in access to and use of common resources, as well as to describe how relationships are established among user groups. The results are based on the analysis of 55 semi-structured interviews with people from seven communities with common lands in Spain and information gathered through Rapid Rural Appraisal (RRA) techniques and interviews at the Riozinho da Liberdade Extractive Reserve in Acre (Brazil). Field work for the study was done in May 2013, April to June 2014 and February 2015. The research uncovers the frailties and strengths of the main management patterns in each reality. The two cases are marked by strong state intervention to regulate conditions of use and the implementation of management models in these areas. In both, the perceived economic importance of natural resources as a source of revenue was also a common point, though tenure of these resources became effective in different ways. The importance of ensuring access to land as a way of maintaining the freedom and autonomy of the user group was also prominent in both cases and should be seen as a crucial factor for economic and social development. Finally, the normative and practical arrangements found in MVMCs and RESEX areas present a good strategy for rural development based on relationships among user groups and shared land management organization patterns.

CORRESPONDING AUTHOR:

Ana Isabel García-Arias

University of Santiago de Compostela, Spain

anaisabel.garcia@usc.es

KEYWORDS:

Resilience; Common lands; Access to land; Brazil; Spain; Sustainable development

TO CITE THIS ARTICLE:

de Moura, R. A., Ferreira-Neto, J. A., Pérez-Fra, M. M., & García-Arias, A. I. (2021). Symmetries and Asymmetries in Collective Management: Comparing Effects on Resilience and Rural Development in Galician Common Lands and the Brazilian Extractive Reserves. *International Journal of the Commons*, 15(1), pp. 35–49. DOI: <https://doi.org/10.5334/ijc.1055>

1. INTRODUCTION

This paper presents a comparative analysis of new perspectives for rural development in Spain and Brazil, based on study cases of Galician commons, known as the Montes Veciñais en Man Común (MVMC), in northwest Spain, and of Reservas Extrativistas (RESEX) in the Brazilian Amazon. These areas have models for organizing the ownership and use of common property. Conceptually, MVMCs are private legal entities belonging to a group of residents who live near these areas. RESEX lands, in contrast, are public domain areas. The Brazilian government grants use of these lands to the traditional populations and local deliberative councils develop specific regulations and management practices. We will compare dimensions of sustainability and resilience exploring similarities and differences in social arrangements around the use of natural resources, in this case, around the access to land.

We consider both areas rural spaces in transition (Oliveira-Baptista, 2006). The population living there could perceive new social demands and uses as a threat for the survival of their way of life. Diegues (1996a) draws attention to the Brazilian case, where apparently empty tropical forests are in fact, inhabited by indigenous, riverine, extractivist, artisanal fishing populations who are bearers of other cultures, of their own myths, and especially of relations with the natural world. That author describes how Brazilian legislation to establish the creation of parks and reserves foresees the transfer of the residents of these areas. This creates a series of ethical, social, economic, political and cultural problems, mainly because these areas were largely ecologically preserved by these cultures and their way of life. The establishment of national parks means increased restrictions on the use of natural resources and makes their survival unfeasible. Diegues points out that those responsible for creating Conservation Units perceive traditional populations as destructive to wildlife and have neglected the opportunity to incorporate them into the conservation project. Thus, even though indigenous populations are accepted in these areas, the limitations imposed on the use of traditional natural resources cause residents to voluntarily migrate to other areas. (Diegues, 1996a, Diegues 1996b). Many scholars acknowledge that the extraction of forest products in the Amazon as practiced over time by traditional populations (rubber tappers, riverine and indigenous) derives from 'a common forest use model, with a very low level of environmental disturbance to the ecosystem, and may be an interesting development alternative for the Amazon' (Diegues, 1996a).

However, although the relevance of traditional communities is recognized, recent studies such DURAMAZ project (Le Tourneau & Do Canto, 2019 a, b) showed that the

opposition between preservation of the environment and development has not been overcome anywhere, despite the promises of projects that should promote sustainable development. The results presented due to analysis of social, economic and environmental data showed that dynamics focusing on fostering economic sustainability are still timid and would need strong incentives, concluding that, in general, the environmental and economic dimensions predominate. Still considering these data, Le Tourneau & Do Canto (2019 a, b) establish that geographical remoteness is one of the aspects that characterized a large part of rural areas in the Amazon. Isolation considered in terms of transport time or distance to travel, and in terms of costs that families support to access some goods and services. The trajectories observed shows the passage from isolation to a connected world that imposes new relationships; simultaneously, synergies operate, generating positive changes that stimulate new dynamisms, but which can also generate disruptions in ways of life.

Galician communities deal with disturbances associated with land abandonment or the demand for new uses such as environmental protection, tourism, energy, or forestry. Lana and Iriarte-Goñi (2015) state that 'changes occurring in Spain during the second half of the twentieth century can be related to the transition from the traditional use of common lands, linked to an organic economy, to a post-industrial economy in which many of these uses (pasture, acorn, firewood, charcoal, hunting) declined, and new ones (recreational, tourism, urban ground, energy) emerged'. In addition, where agriculture has disappeared, abandonment constitutes a major environmental problem as fires become more severe (López-Iglesias et al., 2013).

Juergensmeyer and Wadley (1974) argued that the academic debate on common lands relates to the consolidation of 'common rights' by referring to transformation of feudalism in England. There, individual land ownership was virtually non-existent and common property, or at least use under common rules, was the rule. According to Thompson and Eichenberg, (1998), in the English context, the concept of 'common lands' was attributed to privately-owned lands and the right to use the resources was granted to the peasants by the landowner. According to local custom, they had the right to use the forests for pasture and to extract materials for construction and use in their dwellings. We emphasized two elements in this definition: the privilege of use instituted by custom and dependence on land resources.

Lana and Iriarte-Goñi (2015) highlight the distinction made by Schlager and Ostrom (1992) regarding property rights to develop a definition of 'common lands' that can be applied for analysing this regime of use in Spain. These authors look at the level of operation (access to resources

and their use) and the level of collective deliberation (management, exclusion, and alienation) to identify areas that could be defined as common. They consider common lands to be those in which local people have management, operational rights and exclusion rights. They also point out that much of the common land legally belongs to different levels of public administration, though some is recognized as a type of common private property. Thus, analysis of the different forms of common land use is linked to the discussion of the guarantee of user rights.

Governance has attracted much attention in the increasing literature on social-ecological systems. The collective management of natural resources has been studied thoroughly by Ostrom (1990) and other scholars (Armitage, 2008; Delgado-Serrano et al., 2017), giving rise to the concept of Community-Based Natural Resource Management (CBNRM). This concept focuses on the collective management of ecosystems to improve human well-being. It aims to devolve authority for ecosystem management to the local (community) level, thereby empowering communities to manage their own resources without permanently damaging, depleting or degrading them (Fabricius and Collins, 2007).

For this paper, the land is the central natural resource. Ownership or access to the land is a key concern for rural communities and their social and economic development.

In the context of sustainable development for rural areas, common management of natural resources has been an important factor for social (Fabricius and Collins, 2007) and environmental sustainability. Rural communities have co-evolved with ecological systems; they have developed strategies to deal with disturbances in access to natural resources and the maintenance of ecosystem functions (Scott, 2013; Delgado-Serrano et al., 2018) while enhancing their resilience as a community.

Here, we approached sustainable rural development systematically as an analytical category that combines economic, social and environmental dimensions with a view to the exploitation of natural resources. From this perspective, it involves articulated processes intended to introduce socioeconomic and environmental changes in rural areas. It seeks to improve the income, quality of life and well-being of rural populations. This includes expanding their capabilities and potential through permanent extension of substantive freedoms and access to education, health, security and individual civil rights, as well as articulation with the environment and with social and institutional structures. (Sen, 2000; Favareto, 2007; Schneider, 2011).

Community resilience has become a key concept for analysing change processes in rural areas (Wilson, 2012; Paniagua, 2013; Heijman et al., 2007; Scott, 2013;

Cheshire et al., 2015). It is used to explain how communities confront economic marginalization, depopulation, resource depletion and scarcity along with the effects of economic and ecological crisis on their quality of life and well-being.

Holling (1973) first introduced the concept of resilience in relation to how ecosystems responded to disturbances, but it rapidly extended to social and socio-ecological systems (Berkes, Colding and Folke, 2003; Davidson, 2010, Wilson, 2012). In a resilient socio-ecological system, disturbances can create opportunities for new approaches, innovation and development (Folke, 2006). This capacity for renewal, re-organization and development has been essential to the sustainability discourse (Folke, 2006, Paniagua, 2013; Marchese et al., 2018; Magis, 2010). However, unlike the emphasis on conservation and mitigation in sustainability (Lew et al., 2016), resilience thinking generally emphasizes adaptation to changes. Cinner and Barnes (2019) underline the relationships between resilience and transformation. Kelly et al. (2015) argue that sustainable development can be seen as one of many pathways that a community may follow and that a sustainable development trajectory would be the outcome of a resilient community which is also a multifunctional community (Cheshire et al., 2015). Resilience refers to nonlinear processes, heterogeneity, and spatial complexity, therefore being similar to the notion of 'strong sustainability' described by Wilson (2013).

Wilson (2012), refers to social resilience as 'the ability of groups or communities to cope with external stresses and disturbances because of social, political and environmental change', and it is characteristically non-linear. Community resilience would thus be social resilience understood at the local level, which Magis (2010) defines as 'the existence, development and engagement of community resources to thrive in a dynamic environment characterized by change, uncertainty, unpredictability and surprise'. Resilient communities intentionally develop personal and collective capacity to respond to change and influence it, to sustain and renew the community and to develop new trajectories for the future of the community.

Finally, Scott (2013) and others (MacKinnon & Derickson, 2013; Evans & Reid, 2015) call for incorporating resilience into the design of rural development policies that embed ecological concerns in rural development practices and emphasize the need for adaptive, networked governance that can deal simultaneously with new local and global path dependencies. Cinner and Barnes (2019), applying the concept of social resilience to the social-ecological networks, call for a reflection on how social differentiation, power dynamics, and politics shape the concept of resilience, as well the perceptions of what is considered and for whom, it is say, how resources are accessed.

Because the regions studied present many differences

in historical, productive and spatial configurations, this work contributes to the contemporary debate on rural development by looking at how collective use of land and natural resources contributes to community resilience. Thus, we discuss how these arrangements contribute to the capacity of communities to deal with disturbances coming from new demands for rural areas. Our driving question: How does the construction of specific normative, conceptual and practical arrangements affect a rural development involving realities permeated by the appropriation and use of common resources and a focus on environmental sustainability and social resilience?

2. THE STUDY AREAS

CBNRM is implemented under two approaches: those that emerge as donor-driven alternatives to top-down resource management strategies and those resulting from efforts by community members to create new political opportunities through which to regain control over resources (Delgado-Serrano et al., 2018).

The Brazilian case analysis exemplifies the first approach even if not all cases of extractive reserves in the Amazon, in the Acre State included, have a down-top origin (Almeida, 1996). The RESEX are a social and environmental protection framework created by the Brazilian Government in 2007. They are inhabited by social groups who are commonly

categorized as traditional based on the social, symbolic, and cultural ties that exist between individuals in the group and the territory in which they live. They establish rights and duties regarding natural resources for the traditional communities living there. Therefore, to large extent, the extractive groups in the Amazon live off the appropriation of natural resources under a common property regime.

The Galician case study exemplifies the second approach to CBNRM. Here, we are dealing with an ancient institution, as common land has been a feature of Galiza from time immemorial. Traditional management practices continued until the end of the Spanish Civil War, when the emerging dictatorship appropriated these lands and gave them a different use. A law passed in 1968 devolved them to the communities and new arrangements were put into force. (Cabana Iglesia, 2014).

To accomplish with our objectives, we studied and compared the MVMC form of common land management in the region of Galiza (northwest Spain) with the RESEX model in the state of Acre (Brazil). It is important to know that we studied some individual cases of MVMC and RESEX, to explore similarities and differences on the arrangements around common land access. Here, we present the general characteristics of the two regions for establishing the natural, social, economic and productive context.

2.1. GALIZA (SPAIN)

Galiza (*Figure 1*) is a region in north-western Spain with an

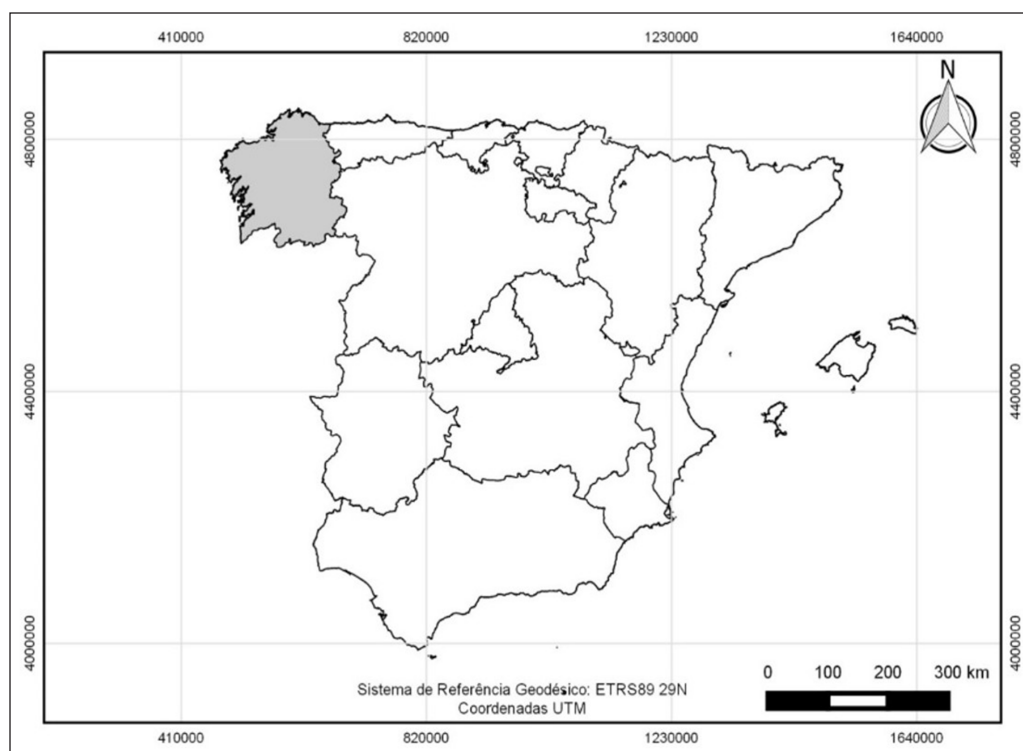


Figure 1 Galiza (Spain).

area of 29,574 km². The average altitude is 395 meters above sea level (m.a.s.l.), but in most of the Lugo and Ourense provinces, the altitude is over 600 m.a.s.l. The number of inhabitants was 2,701,743 in 2018, with a density of 93.6 inhabitants per km². Of that population, 52% are women, 48% are men and 24.9% of the total population is over 65 years of age.

The great majority of Galician municipalities, where 14.5% of the total population live and engage in different dynamics of land use, are characterized by a population density of 20.9 inhabitants per Km², on average and are considered rural areas. The exceptions lie along the Atlantic coastline, where most populated areas are concentrated reaching densities of 990.4 inhabitants per km² (IGE, 2019). The aging index (156.4) is high and the average age of the entire population is 47 years with an average life expectancy at birth greater than 83 years. In addition, the population is leaving rural areas and concentrating in county seats. Abandonment of rural areas leads to a lack of management in territories previously susceptible to agricultural and breeding activities (López Iglesias et al., 2013).

The most recent statistics, (IGE, 2019) indicate that around 14% of the total area is occupied by agrarian cultures, while permanent pastures occupy 15% and forests almost 61% of the total area. Additionally, 391,996.6 hectares, or 13.3% of the total area of Galiza, are under a Natural Protection regime. Agriculture represents 3.4% of Gross Value Added and 4.3% of employment in the Galician economy, which is very significant compared to other European countries. Galician agriculture specializes in animal production; together, agriculture and agro-processing industries constitute one of the most relevant value chains in Galiza, especially in inland territories.

Within a short time span, a significant number of farms have disappeared and now only 76,000 remain in Galiza. Heavy aging (one-third of farmers are over 55 years old) has accompanied the loss of agricultural employment. In extensive areas of rural Galiza, professional agriculture does not exist, and other activities have replaced agriculture in generating employment. The increasing amount of abandoned or forested land has important consequences for economic and environmental sustainability (López Iglesias et al. 2013). In addition, the scarcity of available land for the remaining farms in some parts of the territory –especially those specialised in cattle- limits their economic viability in a scenario of growing price volatility.

Common lands cover 23% of the Galician territory. They are legally constituted as MVMC Communities (CMVMC), a formula that protects the commons, historically rooted arrangements for organizing and managing these lands. The community owns the common lands, which are inalienable, and only people living there can use them.

These surfaces constitute an important resource for an important number of farms in need of land to sustain production, thereby ensuring their viability and the permanence of the population in the territory. Nowadays, the situation of the Galician's Commons is diverse from the productive, social and organizational point of view. They were the base of the traditional agrarian system in Galiza (Bouhier, 2001) but their appropriation by the State during the dictatorship in the 40s of the XXth century explain their major use nowadays: forestry production managed by the Administration through agreements with the communities (Fernández-Leiceaga et al., 2006). Few of them continue linked to cattle production, and a significant number were abandoned as other agrarian surfaces. However, new management styles linked to multifunctionality are beginning to emerge as recent works shows (Alló et al., 2016; Caballero, 2014; Cidrás et al., 2018; Marey-Perez et al., 2010; Copena, 2018).

2.2. RIOZINHO DA LIBERDADE (BRAZIL)

The Brazilian case study involves the Riozinho da Liberdade RESEX, which is located near the municipality of Cruzeiro do Sul in the state of Acre (*Figure 3*) but occupies an area shared by four municipalities (*Figure 2*). Cruzeiro do Sul, with an estimated population of over 88.376 people (IBGE, 2019), is the second-largest municipality in Acre. However, 86.4% of the RESEX area is in the municipality of Tarauacá.

The Riozinho da Liberdade RESEX is a social and natural protection system, as a protected area of sustainable use. Created in 2005 involves the preservation of the Amazon biome and the rights of local communities. It has 1,380 inhabitants, corresponding to 283 families, in an area of 325,602 ha.

Census data also shows that RESEX inhabitants engage in plant gathering, fishing and subsistence agriculture to sustain their families. This forest slash and burn system, known as Roça de Toco, is common throughout the agriculture of the entire Amazon region and much of Brazil. It is a millenary tradition used by indigenous populations, which was subsequently assimilated by colonizing populations. Scholars find similar models in other parts of the world, especially in tropical and subtropical forests. The Roça de Toco system involves family work and workday exchanges among residents. They grow manioc (also known as cassava or yucca), which is the most significant crop, along with corn, beans and some fruits such as banana or watermelon. The extractive activities are concentrated on fishing as well as collecting açai and buriti palm fruits.

Families find it difficult to sell extractive vegetable products, mainly due to the distance and high cost of transportation involved in accessing consumer markets. Sen (2000) argues that these restrictions on market

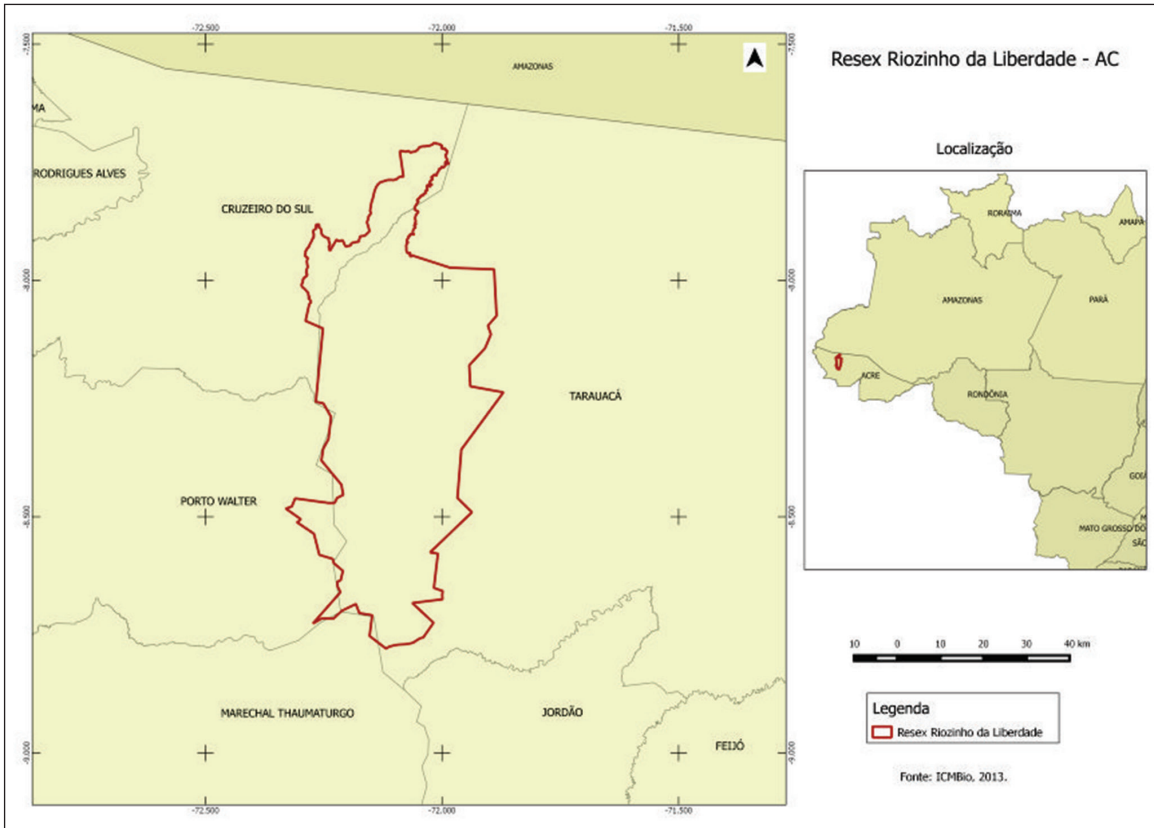


Figure 2 Location of the Riozinho da Liberdade RESEX and affected municipalities in Acre, Brazil AC, 2016.

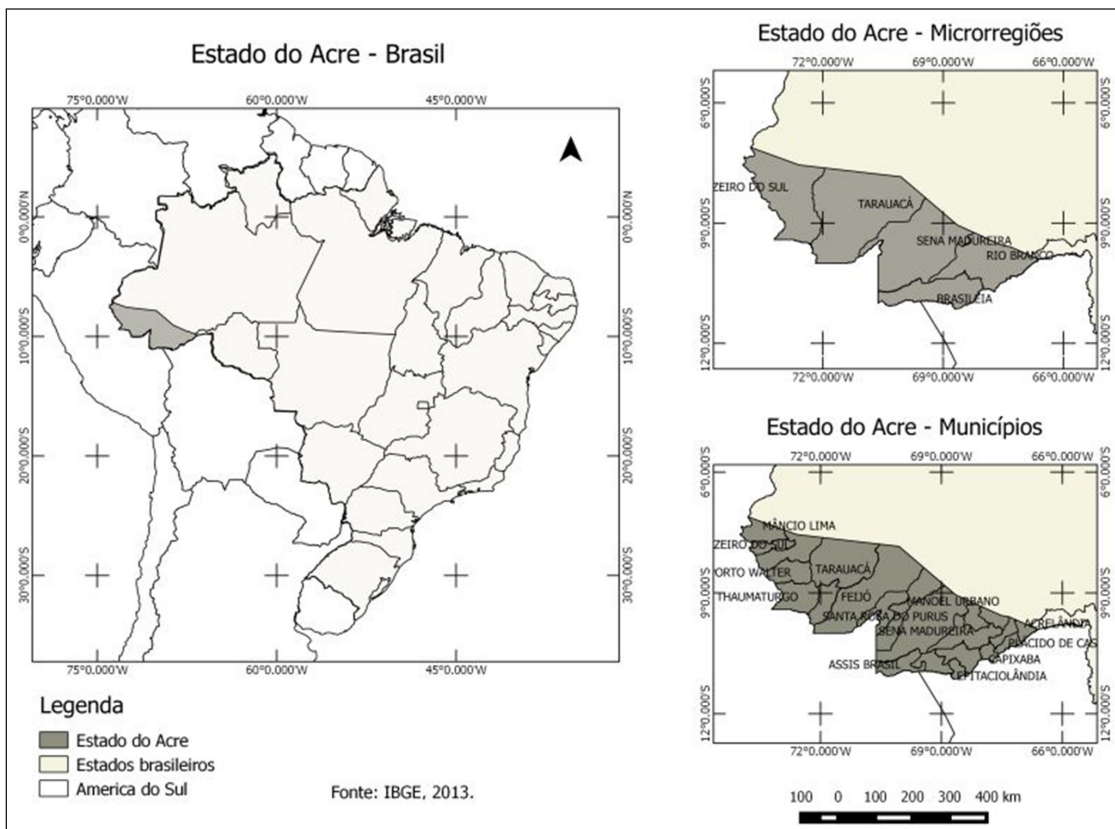


Figure 3 Location of Acre, Brazil.

relations constitute one of the most serious deprivations to individual freedom, by limiting the ability of these people to live off their own resources. According to that author, market mechanisms can expand income, wealth and economic opportunities. As such, they are an important element because they represent freedom of choice, which is fundamental to development.

It is important to say that 99.7% of the families that use these natural resources are living inside the RESEX area, which indicates strong economic and social dependence on the resources provided by this territory. Moreover, nearly 80.5% of the beneficiaries stated that they had learned to be ‘extractivists’ within their family context. This means that the knowledge and know-how involved in appropriating natural resources were learned and transmitted through family and neighbour relationships. This RESEX also has specific social groups that share management of natural resources, with their own peculiarities regarding the occupation and uses of space. Natural resources, productive processes and the social institutions created to manage the common space reinforce sociability in this territory.

3. METHODOLOGY

We analysed the Galician and Brazilian cases across five dimensions, in relation to the objective of arrangements: the role of the State, economic importance of natural resources, user flows, land use and appropriation, and environmental aspects presented in these two common land use arrangements which aim is giving “rights of use” of the territory to a specific group. The ‘development’ notion described in Sen (2000), with human wellbeing at the heart of the process, informed the analytical framework. We used the concepts of Granovetter (1983) and Elias

(1994, 2000) for analysis of the social networks built by the users of common land. The works of Ostrom (1990, 2013) and Diegues (1996a, 1996b) guided the analysis of access to natural resources and forms of appropriation. Finally, the discussion draws from work on community resilience by Wilson (2012, 2013) and Kelly et al. (2015).

The steps to compare the two realities were, first, we approach theoretically to norms that create or give legal coverage to the Brazilian reserves and to CMVMC, as well as to environmental legislation in both cases. Secondly, we analysed institutions acting in those areas, because understanding the role of institutions as mediators of social interaction and their influence in a community, is part of the process of evaluation. Finally, the interviews with users /beneficiaries of Brazilian extractive reserves and residents conforming the MVMC communities in Galiza aimed to identify social, environmental and economic aspects, as well as the form of territorial occupation, especially considering the occupation model, and the organization of space in both realities. We collected the same information in the two territories to facilitate comparison.

Data collection for the Galician case involved bibliographic research, accessing secondary data from official websites, participating in lectures and events related to MVMC and 55 semi-structured interviews, done from April to June of 2014, with the heads and other members of seven CMVMC in the province of Lugo, Galiza.

To select the MVMCs for the interviews, we recurred to the classification established by the Grupo dos Comúns (Fernández-Leiceaga et al. 2006), which identify different management situations in different economic and demographic contexts. **Table 1** shows the classification and the names of the municipalities and common land units chosen for this work. The first column lists different socio-economic situations that we could identify. Type 1

SOCIO-ECONOMIC CLASSIFICATION	MANAGEMENT CLASSIFICATION	MUNICIPALITIES	MVMC
Type 1 19 interviews	A) Indirect management	Folgoso do Courel	Froxan
	B) Direct management		Seceda
	C) Absence of management		Sobredo
Type 2 13 interviews	A) Indirect management	A Pastoriza	Saldaxe
	B) Direct management		Corvelle
	C) Absence of management		-
Type 3 13 interviews	A) Indirect management	Viveiro	San Roque
	B) Direct management		Buio
	C) Absence of management		-

Table 1 The MVMCs studied.

are communities where we found regressive demographic dynamics and low demographic densities with a high degree of elderliness; Type 2 are communities with a productive modernisation dynamics linked to cattle breeding specialization and demographic dynamics similar to Type 1; Type 3 are communities with high population densities and expansive demographic dynamics. The Grupo dos Comúns classify management styles in four groups that we resume in three: indirect management, generally by the forest administration; direct management by communities themselves; and absence of use and management. In two of the municipalities, the third management category has no example because abandonment was not detected. We conducted 10 in-deep interviews with technicians in the forestry and agriculture administration and with experts (University, MVMC Organization) to inform selection.

The data in the Riozinho da Liberdade RESEX was initially collected using Rapid Participatory Rural Appraisal (RPRA) techniques in May 2013. RPRA1 was applied in meetings at four strategic places within the RESEX, involving inhabitants of the communities around of Igarapé Grande, Forquilha, Periquito and Mauricio Mappes (*Table 2*). The dynamics used at the meetings contributed to reflections on how families use reserve resources.

In addition, 283 head of families -of 1328 living inside the RESEX area-responded to a structured questionnaire focusing on land use and conservation practices questions, availability of/access to public policy and amenities such as education and health, production, revenues, culture and social organization. To select the families, we used a data-base called 'Apoio ao Processo de Identificação das Famílias Beneficiárias e Diagnóstico Sócio Produtivo em Unidades de Conservação Federais', which was generated through an agreement between the Federal University of Viçosa and the Chico Mendes Institute for Biodiversity Conservation (ICMBIO). All data from this work is available at the ICMBIO.

In February 2015, we conducted semi-structured interviews with 30 residents of this protected area that aimed at a better understanding of their way of life, their relationship with the territory, how relationships are built

among natural resource users, and how natural resources are managed. This was the most important source of information. Four of the interviewed people among these 30, were institutional representatives from the Riozinho da Liberdade RESEX.

Finally, we extracted from interviews on both arrangements and from other cited sources, the information about economic, social, political-institutional, cultural, and natural dimensions. These dimensions correspond to the key factors affecting community resilience, which Kelly et al. (2015) identify based on the works of Ostrom (2008) and Wilson (2012). These key factors interplay to build resilient communities. We draw from the work of these authors to discuss how social arrangements for governing common lands in the two geographical and social realities contribute to community resilience and sustainable development.

4. RESULTS

As mentioned earlier, we collected information related to the economic importance of natural resources, user flows, land use and appropriation, and environmental aspects in two common land use arrangements: the Galician MVMCs and the Riozinho da Liberdade RESEX. At once, we explore the political and normative context wondering about the regulatory role of the State in mediating on the community arrangements to provide access to land. *Table 3* summarizes the dimensions analysed and the symmetries and asymmetries observed in relation to the two realities.

The first aspect to confront is the objective of the arrangements. In both cases, rights of use of the territory are accorded to a specific group, giving access to land for inhabitants in the area. Recognition of MVMCs or the establishment of RESEX involves actions that legitimize the right of a specific group to use the territory, though formal access is established in a differentiated way. In the case of MVMCs, common property was already historically legitimized from a, so-called, Germanic property system, instead of a roman property system. Germanic communities were historically nomadic and had a social arrangement

PLACE OF MEETING	COMMUNITIES	DATE	PARTICIPANTS
Igarapé grande	Igarapé Grande, Porto Rico, Novo Acre, Nova Olinda e Tristeza.	21/05/2013	38 adults 39 children
Boca do Igarapé Forquilha	União, Boca do Forquilha, Seringal Ceará.	22/05/2013	50 adults 24 children
Periquito/São Pedro	Periquito/São Pedro, Jurupari, São Francisco e Itajubá	23/05/2013	60 adults 30 children
Mauricio Mappes/Ponte	Mauricio Mappes, Morro da Pedra, Bom Futuro, Vai e Vem, Cavanhaque, Guarani, Monteiro, Porto Alegre, Esperança e Extrema	24/05/2013	75 adults

Table 2 Rapid Participatory Rural Appraisal (RPRA) meetings at Reserva Extrativista Riozinho da Liberdade RESEX.

DIMENSIONS	MVMC	RIOZINHO DA LIBERDADE RESEX
Objectives	“Rights of use” of the territory are accorded to a specific group.	
Policy and Institutions	The role of the State has been a key concern.	
Economic importance of natural resources (Economic Factors)	Natural resources have economic importance.	
	Natural resources are disputed.	
	No primary dependence on territorial resources	Primary dependence on territorial resources
User flow	Very variable due to legislation	Slightly variable due to the regulatory role of the state
Territory use	Dwellings are located near the common area; livestock activities; wind farms; transmission lines; planted forests; outsourcing of services to private companies.	Dwellings are within the limits of the common area; subsistence agriculture and livestock; plant and animal extractive activities and handcrafts.
Environmental aspects	Takes action regarding environmental issues	Emerge as environmental conservation policy proposals.

Table 3 Similarities and differences in social arrangements and use of natural resources in MVMCs and the Riozinho da Liberdade RESEX.

of land ownership by the entire clan. Members could enjoy some areas individually, but forests and pastures were used communally as a way of meeting collective needs. Agriculture (wheat, barley, rye, and vegetables) was a prominent economic activity. Roman communities, in contrast, were based on unequal social organization with a predominance of private property and strong class differentiation.

Political factors, as the role of the State, are another dimension to explore. In the Brazilian Extractive Reserves, a specific type of protected area was created in 1989 to safeguard the territory for traditional populations and their sustainable way of life. The formal and legal regime of common use came about through state intervention. In Galiza, regulation of the process to classify commons is nowadays only a question of recognizing that an area was historically constituted as an MVMC. In Brazil, the process has been more complex, since it involved constituting a new collective arrangement that entails issues such as national policy for the conservation of natural resources, land expropriation and other legal aspects. In both cases, governance structures legitimize and regulate the access to land for inhabitants of a certain territory, but the processes were different. In the past State intervention served to deprive population for their rights of use over land in Galiza (Cabana Iglesia, 2014). Unlike the position of the State in Galiza, in Brazil there is a policy of including populations in areas of common use. Thus, it is through the legitimization of the category called Sustainable Use Conservation Units that traditional populations that used natural resources as a way of life are recognized, thereby facilitating access to government programs with this legal recognition.

In the economic domain, both realities recognize the importance of natural resources in economic terms, though they are appropriated in different ways. In the

RESEX areas, the users themselves extract products through direct appropriation. In the MVMCs, the right to use natural resources can be transferred to third parties for indirect appropriation, as in the case of wood removal by private companies. In both cases, natural resources are disputed because of their economic value. MVMC users primarily want control of the land, with a view to obtaining monetary gains by leasing the common area, granting use of it to private companies or selling the wood. Meanwhile, RESEX lands guarantee the livelihood of the users as the space in which they collect and produce resources such as fruit, fish, agricultural products, and animals.

In the social domain, user flow matters in terms of the conditions for sustainability (Ostrom, 2009) and governance of commons (Dietz et al. 2003). Regulations, which can be formal and informal, impact directly on user flow conditions of the MVMCs and the RESEX. Formal regulations, norms and rules are implemented by the state or institutions already consolidated in the territories, which may interfere with traditional practices and customs regarding the appropriation of these spaces. Informal rules, however, stem from the daily life of the users and influence the local reality. User flow is very variable or slightly variable according to the rigor of these norms, whether formal or informal. In Galiza, flow is driven by the legislation itself, since MVMC user status derives from the fact that the individual resides in the vicinity of the communal area. This makes very variable the flow in theory, as there may be large fluctuations in the arrival and departure of residents. RESEX new users are restricted, however, because the Brazilian policy aims to ensure that the extractivist or traditional populations with ancestral ties to living in and from these lands remain as the beneficiaries. Thus, input flow is less intense there. Exit flows are regulated in both cases and allow for justified temporary departures, but

the right of use is forfeit after unjustified absence of more than one year. In both realities, entry of new users is more common than user exit and exclusion.

Regarding environmental aspects, MVMC have great territorial extension, which facilitates environmental services such as the conservation of springs, indigenous forest remnants, wildlife refuge, etc. Part of the territory studied is under the protection of Natura 2000 Network but in areas of indirect management, the State still maintain forest plantations for timber production, instead environmental purposes. Here, environmental uses related to leisure are emerging. In the Brazilian case, the extractive reserves were created within the scope of an Environmental Conservation Policy and have greater restrictions regarding the use of the territory.

5. DISCUSSION

The dimensions described before, correspond to some of the key domains affecting community resilience. We discuss how social arrangements for governing common lands in the two realities analysed here contribute to community resilience and sustainable development.

Political-institutional domains affect resilience in several ways. The division of power shapes how resources are accessed and employed in response to disturbances (Cinner and Barnes, 2019). Considering how important access to land is for community resilience, broader economic forces linked to the embeddedness of communities in global capitalism intensify pressures on the land and its users, especially when administrations and economic agents fail to recognise the historical rights these communities built and conquered (Bockstael and Berkes, 2017). Giving rural people rights to land use also implies the possibility of greater economic development for their communities, not only because the land is a means of obtaining economic and financial benefits, but also because common management of the resource reinforces the community.

In both cases, the power enforced by the State has been a key factor to give access to land at a certain historical moment. For the Galician case, the State had deprived communities from these surfaces, negatively affecting their possibilities of development at a certain moment, and facilitating rural exodus (Cabana et al, 2013; Fernández-Leiceaga et al., 2006). Then, the implemented policy was the disturbance against to what communities had to react. The devolution of land to communities happens after a long history of confrontation and fight. This devolution allows communities to decide about their own development model and management style (Cidrás et al, 2018, Alló and Loureiro, 2016). Marey-Pérez et al. (2010) argue that

the MVMCs can play an important role in the rural context because they are virtually the only large-scale rural areas in Galiza that allow for sustainable management and can embrace rural development policies.

This access to land due to State intervention is key to the resilience and sustainability of the benefited communities in the Brazilian RESEX. The RESEX also reflect innovation in the use of the land and its natural resources. Here, the established arrangements see communities as a tool to achieve environmental and social sustainability as Nieto-Romero et al. (2019) propose. The need to create an environmental strategy for the conservation of biodiversity influence strongly demands to establish protected areas in Brazil. Sawyer (2012) describes RESEX as part of a new development perspective in which the notion of sustainability involves more than just product revenue. Instead, the monetary component pertains to a range of activities that generate real benefits for the families involved, though they are invisible from a market point of view. Sawyer observes that the common use arrangement must refer to a specific group and seek to guarantee sufficient conditions for the reproduction of families and the productive unit itself. This changes the focus of environmental valuation, notably related to the opportunity cost to cover the social cost, which, in the end, also covers environmental conservation.

In the economic domain, these factors can act against or in benefit of resilience. Kelly et al. (2015) argue that economic forces linked to the embeddedness of communities into the global capitalist market can erode resilience and sustainability intensifying land use and natural resources depletion. Nevertheless, in both cases studied, by means of the legal recognition of commons, communities find ways to reinforce development and resilience. Lopes (2011) argues that MVMCs contribute to local development by configuring new income alternatives for users. Similarly, Sawyer (2012) identifies the Extractive Reserves as an instrument of sustainable development due to their capacity to involve communities in managing the use of natural resources. It is important to emphasize the multifunctionality of rural areas as another development approach. Transmission lines, wind farms, rural enterprises to develop hiking routes, concession of use to companies that offer the users a financial return on landscape value or even initiatives by the users themselves, occupy frequently MVMCs. In other words, they are finding new ways to interpret the rural context. Abramovay (2014) developed the perspective on such activities within the framework of sustainable rural development, which, among other functions, replaces the classical energy matrix with cleaner ones. In addition, MVMC resources revert to collective benefits such as village festivals or even contribute to the

maintenance of roads and other infrastructures. However, the demands of individuals in the Galician reality are different from those in the Brazilian extractive reserve. In Galiza, the financial benefit reverts to the community, due to legislative requirements. In the RESEX lands, natural resources, and the benefits they generate are appropriated in a more individualized way due to primary demand. Unlike the MVMCs, RESEX challenges involve a fight against social imbalances that are directly related to the absence of state institutions. In fact, the RESEX by the way of the local recognition of the economic activities developed by communities –natural resource use–, allows them the access to policy programs and social benefits that introduce financial resources in the area increasing the ability of communities to increase resilience.

Wilson (2012) states that well-developed economic, environmental, and social capital characterize resilient communities. Social factors are crucial to resilience, since they mediate the relationship between socio-economic and environmental factors (Kelly et al., 2015). They include levels of interaction between community members that signal the existence of adaptive capacity. In addition, Dietz et al. (2003) concluded that encouraging adaptation and change is a key requirement for robust governance of environmental resources as well. Cinner and Barnes (2019) establish six domains that would provide that adaptive capacity: the access to assets (i.e. health care, technical and financial...), flexibility, social organization, learning, socio-cognitive constructs (i.e. risk attitudes, personal experience...), and agency (i.e. people's free choice in responding to disturbances, including own perceptions about their ability to cope with). For both study cases, recent works have explored several of these factors. It is the case of local ecological knowledge in the Amazon Delta (Vogt et al., 2016), that reinforce their resilient capacity against climate change. In Galiza, Alló and Loureiro (2016) explore the development of the principles of collective action (congruence of rules or local knowledge...) to cope with the threat of wildfires.

Here, we focus on user flows and their interactions as an indicator of the capacity of the adaptive governance of communities to sustainable development. The dissymmetry found in relation to the users flows shows the importance of the State action on their conformation. In addition, it explains, in part, the different capacity of adaptation of each social reality. For MVMC, the devolution of lands to communities arrived quite late when the number of traditional users had down sharply. Nowadays, the transition to other uses and possibilities for rural development and their adaption capacity depends in part on this flexibility to include new residents in the governance structure of communities. In addition, these

new entrants can be a source of conflict with traditional residents due to the respect of informal norms (Marey et al. 2010). In the RESEX case, the lesser variability of user flows observed contribute to the cultural dimension of resilience by preserving local knowledge of traditional communities (Vogt et al. 2016) and traditions that contribute to environmental sustainability (Vogt et al, 2015).

Natural domain is key for resilience and influence individual actions with different expressions (Paniagua, 2013). Here, the access to land is the key factor to allow communities a better development based on the use of this natural asset. In addition, resilient communities may preserve their natural capital. Although RESEX represents an advance in Brazilian environmental legislation, this policy must develop to reach its primary objective of guaranteeing combined economic, political and social opportunities at the same time that environmental protection. Multiple obstacles must be overcome in converting services such as biodiversity maintenance, carbon storage and water cycling into cash flows that can support a population of 'forest keepers' in Brazil (Fearnside 2002). Among them is the challenge of converting forest environmental services into a stream of income centred on sustainable development in the Amazon. In MVMC some of the communities that regain the control of forest plantations try to develop management styles for environmental purposes and wildfire fight (Cidrás et al., 2018)

6. CONCLUSIONS

We saw like the construction of specific normative, conceptual and practical arrangements affect a rural development involving two realities permeated by the appropriation and use of common resources. We discussed some dimensions of community resilience in relation to these two realities.

The Riozinho da Liberdade RESEX and the Galician MVMC are spaces in transition. As Bockstael and Berkes (2017) stated, environmental governance in Brazil is in transition, with a growing debate between a socio-environmental approach and a preservation approach. New environmental policies that respect local communities and their collective management of natural resources reinforce their resilience and offer sustainable development opportunities. In Europe, MVMC face new demands to provide environmental services while traditional uses and users disappear. However, these community arrangements, offer new development opportunities for locals. Communities have some characteristics that can increase their resilience: a new and variable user flow that allows new members with new strengths and ideas, a law that regulates access

to these areas and their natural assets, new demands for these natural assets that can be transformed into a sustainable economic source. In both studied processes, the importance of the role of the State has been crucial.

By looking at the Galician MVMCs and the Brazilian RESEX lands, in this work we sought to demonstrate the importance of guaranteeing access to land, as it affects the freedom and autonomy of the user group. We highlighted enhancing the resilience and resistance of rural communities by strengthening their social capital and their own forms of community organization, use of the territory and appropriation of natural resources.

We also observed that the social and economic importance of natural resources directly influences the management of these territories. The beneficiaries of the Brazilian Riozinho da Liberdade RESEX live in and from the forest. This primary dependence – in which the common areas themselves constitute the factors of production, land, labour and capital – is evident in their relation to the environment and generates its own forms of appropriation and sociability. Galician users, who have historically always resided near the MVMCs but not within them, have formed a secondary dependence in relation to these territories.

NOTE

- 1 Participatory Rural Appraisal (PRA) describes a family of approaches and methods to enable local people to share, enhance and analyze their knowledge of life and conditions, to plan and to act (Chambers, 1994). The method used here -RPRA- is a methodology initially developed to intervene, in a planned way, especially in rural communities in Brazil, consisting of a combination of methods and techniques of participatory intervention that allows obtaining qualitative and quantitative information in a short period of time (Pereira, 1998).

ACKNOWLEDGEMENTS

The authors acknowledge the work of reviewers and their valuable contributions. The first author acknowledges the financial support given by the CAPES (Brazil).

COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR AFFILIATIONS

Roseni Aparecida de Moura  orcid.org/0000-0003-4653-1993
Universidade Federal do Tocantins-UFT, Brazil

José Ambrósio Ferreira-Neto  orcid.org/0000-0002-1173-4582
Universidade Federal de Viçosa (UFV), Brazil

M. Mar Pérez-Fra  orcid.org/0000-0002-5202-1706

University of Santiago de Compostela, Spain

Ana Isabel García-Arias  orcid.org/0000-0002-7440-0715

University of Santiago de Compostela, Spain

REFERENCES

- Abramovay, R.** (2014). Inovações para que se democratize o acesso à energia, sem ampliar as emissões. *Ambiente e Sociedade*, 17(3), 01–18. DOI: <https://doi.org/10.1590/S1414-753X2014000300002>
- Alló, M., & Loureiro, M. L.** (2016). Evaluating the fulfillment of the principles of collective action in practice: A case study from Galicia (NW Spain). *Forest Policy and Economics*, 73, 1–9. DOI: <https://doi.org/10.1016/j.forpol.2016.08.002>
- Almeida, M. W.** (1996). The management of conservation areas by traditional populations: the case of the Upper Juruá Extractive Reserve. *Traditional Peoples and Biodiversity Conservation in Large Tropical Landscapes* (pp. 137–158). Virginia: America Verde Publications.
- Armitage, D.** (2008). Governance and the commons in a multi-level world. *International Journal of the commons*, 2(1), 7–32. DOI: <https://doi.org/10.18352/ijc.28>
- Baptista, F. O.** (2006). O rural depois da agricultura. Desenvolvimento e território: Espaços rurais pós-agrícolas e novos lugares de turismo e lazer. Lisboa: M2-Artes Gráficas, Ltda, 85–105.
- Bockstael, E., & Berkes, F.** (2017). Using the capability approach to analyze contemporary environmental governance challenges in coastal Brazil. *International Journal of the Commons*, 11(2). DOI: <https://doi.org/10.18352/ijc.756>
- Bouhier, A.** (2001). Galicia: ensaio xeográfico de análise e interpretación dun vello complexo agrario. Consellería de Agricultura, Gandería e Política Agroalimentaria.
- Caballero, G.** (2014). Community-based forest management institutions in the Galician communal forests: A new institutional approach. *Forest Policy and Economics*, 50, 347–356. DOI: <https://doi.org/10.1016/j.forpol.2014.07.013>
- Cabana Iglesia, A.** (2014). Unha historia de desencontros entre Estado e veciñanza. A conflitividade arredor dos montes en man común. In P. Saavedra Fernández & R. Rodríguez González (Eds.), *A Terra en Galicia: pasado, presente e futuro* (pp. 212–230). Universidad Internacional Menéndez Pelayo.
- Chambers, R.** (1994). The origins and practice of participatory rural appraisal. *World development*, 22(7), 953–969. DOI: [https://doi.org/10.1016/0305-750X\(94\)90141-4](https://doi.org/10.1016/0305-750X(94)90141-4)
- Cheshire, L., Esparcia, J., & Shucksmith, M.** (2015). Community resilience, social capital and territorial governance. *Ager. Revista de Estudios sobre Despoblación y Desarrollo Rural*, 18, 7–38.
- Cidrás, D., Lois-González, R. C., & Valerià, P.** (2018). Rural Governance against Eucalyptus Expansion in Galicia (NW

- Iberian Peninsula). *Sustainability*, 10, 3396. DOI: <https://doi.org/10.3390/su10103396>
- Cinner, J. E., & Barnes, M. L.** (2019). Social dimensions of resilience in social-ecological systems. *One Earth*, 1(1), 51–56. DOI: <https://doi.org/10.1016/j.oneear.2019.08.003>
- Copena, D.** (2018). *Montes Veciñais en Man Común e Baldios: Unha análise comparativa das propiedades comunitarias de Galicia e Portugal*, 30. Sémata: Ciencias Sociais e Humanidades.
- Davidson, D. J.** (2010). The applicability of the concept of resilience to social systems: some sources of optimism and nagging doubts. *Society and Natural Resources*, 23(12), 1135–1149. DOI: <https://doi.org/10.1080/08941921003652940>
- Delgado-Serrano, M. M., Mistry, J., Matzdorf, B., & Leclerc, G.** (2017). Community-based management of environmental challenges in Latin America and the Caribbean. *Ecology and Society*, 22(1). DOI: <https://doi.org/10.5751/ES-08924-220104>
- Delgado-Serrano, M. M., Oteros-Rozas, E., Ruiz-Mallén, I., Calvo-Boyero, D., Ortiz-Guerrero, C. E., Escalante-Semerena, R. I., & Corbera, E.** (2018). Influence of community-based natural resource management strategies in the resilience of social-ecological systems. *Regional environmental change*, 18(2), 581–592. DOI: <https://doi.org/10.1007/s10113-017-1223-4>
- Diegues, A. C.** (1996a). *Mito moderno da natureza intocada*. São Paulo: HUCITEC.
- Diegues, C. A.** (1996b). As populações humanas em áreas naturais protegidas da Mata Atlântica. Centro de Culturas Marítimas, *Núcleo de Apoio à Pesquisa sobre Populações Humanas e Areas Umidas Brasileiras*, Universidade de São Paulo. Retrieved April 14, 2020 from <<http://nupaub.fflch.usp.br/sites/nupaub.fflch.usp.br/files/color/ConflitosnaMataAtlantica.pdf>>.
- Dietz, T., Ostrom, E., & Stern, P. C.** (2003). The struggle to govern the commons. *Science*, 302(5652), 1907–1912. DOI: <https://doi.org/10.1126/science.1091015>
- Elias, N.** (1994). *A sociedade dos indivíduos*. Jorge Zahar Ed.
- Elias, N., & Scotson, J. L.** (2000). Os estabelecidos e os outsiders: sociologia das relações de poder a partir de uma pequena comunidade. Tradução de Vera Ribeiro. Jorge Zahar Ed.
- Evans, B., & Reid, J.** (2015). Exhausted by resilience: Response to the commentaries. *Resilience*, 3(2), 154–159. DOI: <https://doi.org/10.1080/21693293.2015.1022991>
- Favareto, A.** (2007). *Paradigmas do desenvolvimento rural em questão*. Inglu: FAPESP.
- Fabricius, C., & Collins, S.** (2007). Community-based natural resource management: governing the commons. *Water Policy*, 9(S2), 83–97. DOI: <https://doi.org/10.2166/wp.2007.132>
- Fearnside, P. M.** (2002). Serviços ambientais como uso sustentável de recursos naturais na Amazônia. In Philip M. Fearnside. Instituto Nacional de Pesquisas da Amazônia (INPA) C.P. 478 9011-970.
- Fernández Leiceaga, X., Iglesias, E. L., Rodríguez, M. J., Rodríguez, B. B., Outeiriño, P. V., López, X. B., & Fernández, D. S.** (2006). Os montes veciñais en man común: o patrimonio silente. *Natureza, economía, identidade e democracia na Galicia rural*. Edicións Xerais de Galicia, Vigo.
- Folke, C., Colding, J., & Berkes, F.** (2003). Synthesis: building resilience and adaptive capacity in social-ecological systems. *Navigating social-ecological systems: Building resilience for complexity and change*, 9(1), 352–387. DOI: <https://doi.org/10.1017/CBO9780511541957.020>
- Folke, C.** (2006). Resilience: The emergence of a perspective for social-ecological systems analyses. *Global environmental change*, 16(3), 253–267. DOI: <https://doi.org/10.1016/j.gloenvcha.2006.04.002>
- Granovetter, M.** (1983). The strength of weak ties: A network theory revisited. *Sociological theory*, 201–233. DOI: <https://doi.org/10.2307/202051>
- Heijman, W., Hagelaar, G., & van der Heide, M.** (2007). Rural Resilience as a New Development Concept. In 100th Seminar, June 21–23, 2007, Novi Sad, Serbia and Montenegro (No. 162359). European Association of Agricultural Economists.
- Holling, C. S.** (1973). Resilience and stability of ecological systems. *Annual review of ecology and systematics*, 4(1), 1–23. DOI: <https://doi.org/10.1146/annurev.es.04.110173.000245>
- IGE. Panorama Rural Urbano.** (April, 2019) https://www.ige.eu/web/mostrar_seccion.jsp?idioma=gl&codigo=0701.
- IBGE, Instituto Brasileiro de Geografia e Estatística.** (2019, January). Estimativas de população. <https://cidades.ibge.gov.br/brasil/ac/cruzeiro-do-sul/panorama>.
- Juergensmeyer, J. C., & Wadley, J. B.** (1974). The common lands concept: a commons solution to a common environmental problem. *Nat. Resources J.*, 14, 361.
- Kelly, C., Ferrara, A., Wilson, G. A., Ripullone, F., Nolè, A., Harmer, N., & Salvati, L.** (2015). Community resilience and land degradation in forest and shrubland socio-ecological systems: Evidence from Gorgoglione, Basilicata, Italy. *Land use policy*, 46, 11–20. DOI: <https://doi.org/10.1016/j.landusepol.2015.01.026>
- Lana, J. M., & Iriarte-Goñi, I.** (2015). Commons and the legacy of the past. Regulation and uses of common lands in twentieth century Spain. *International Journal of the Commons*, 9(2), 510–532. DOI: <https://doi.org/10.18352/ijc.488>
- Le Tourneau, F. M., & Do Canto, O.** (2019a). *Amazônias brasileiras. Situações locais e evoluções Volume 1 Sínteses dos casos de estudo*.
- Le Tourneau, F. M., & Do Canto, O.** (2019b). *Amazônias brasileiras. Situações locais e evoluções Volume 2 Análises temáticas*.
- Lew, A. A., Ng, P. T., Ni, C. C., & Wu, T. C.** (2016). Community sustainability and resilience: Similarities, differences and indicators. *Tourism Geographies*, 18(1), 18–27. DOI: <https://doi.org/10.1080/14616688.2015.1122664>

- Lopes, J. R.** (2011, January 10–14). *Common Lands and Local Development in Northern Iberian Peninsula. Sustaining Commons: Sustaining Our Future, 13th Biennial Conference of the International Association for the Study of the Commons*, Hyderabad, India.
- López-Iglesias, E., Sineiro-García, F., & Lorenzana-Fernández, R.** (2013). Processes of farmland abandonment: land use change and structural adjustment in Galicia (Spain). In D. Ortiz-Miranda, A. Moragues-Faus & E. Arnalte-Alegre (Eds.), *Agriculture in Mediterranean Europe: between old and new paradigms* (pp. 91–120). Emerald Group Publishing. DOI: [https://doi.org/10.1108/S1057-1922\(2013\)0000019007](https://doi.org/10.1108/S1057-1922(2013)0000019007)
- MacKinnon, D., & Derickson, K. D.** (2013). From resilience to resourcefulness: A critique of resilience policy and activism. *Progress in Human Geography*, 37(2), 253–270. DOI: <https://doi.org/10.1177/0309132512454775>
- Magis, K.** (2010). Community resilience: An indicator of social sustainability. *Society and Natural Resources*, 23(5), 401–416. DOI: <https://doi.org/10.1080/08941920903305674>
- Marchese, D., Reynolds, E., Bates, M. E., Morgan, H., Clark, S. S., & Linkov, I.** (2018). Resilience and sustainability: Similarities and differences in environmental management applications. *Science of the total environment*, 613, 1275–1283. DOI: <https://doi.org/10.1016/j.scitotenv.2017.09.086>
- Pereira, J. R., & Little, P. E.** (1998). *Diagnóstico rápido participativo emancipador: a base para o desenvolvimento sustentável dos assentamentos da reforma agrária*. Viçosa-MG: Editora da UFV.
- Marey-Pérez, M., Gómez-Vázquez, I., & Díaz-Varela, E.** (2010). Different approaches to the social vision of communal land management: the case of Galicia (Spain). *Spanish Journal of Agricultural Research*, 3, 848–863. DOI: <https://doi.org/10.5424/sjar/2010083-1287>
- Nieto-Romero, M., Valente, S., Figueiredo, E., & Parra, C.** (2019). Historical commons as sites of transformation. A critical research agenda to study human and more-than-human communities. *Geoforum*, 107, 113–123. DOI: <https://doi.org/10.1016/j.geoforum.2019.10.004>
- Ostrom, E.** (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. New York: Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511807763>
- Ostrom, E.** (2008). Design principles of robust property-rights institutions: what have we learned.
- Ostrom, E.** (2009). A general framework for analyzing sustainability of social-ecological systems. *Science*, 325(5939), 419–422. DOI: <https://doi.org/10.1126/science.1172133>
- Ostrom, E.** (2013). *Comprender la diversidad institucional*. España: Editorial: KRK Ediciones.
- Paniagua, A.** (2013). Farmers in remote rural areas: The worth of permanence in the place. *Land Use Policy*, 35, 1–7. DOI: <https://doi.org/10.1016/j.landusepol.2013.04.017>
- Schlager, E., & Ostrom, E.** (1992). Property-rights regimes and natural resources: a conceptual analysis. *Land economics*, 249–262. DOI: <https://doi.org/10.2307/3146375>
- Sawyer, D.** (2012). Dramas of the Commons in Brazil. *Sustentabilidade em Debate*, 3(2), 257–274. DOI: <https://doi.org/10.18472/SustDeb.v2n1.2011.3926>
- Sen, A.** (2000). *Desenvolvimento como Liberdade*. Companhia das Letras.
- Schneider, S., & Escher, F. A.** (2011). Contribuição de Karl Polanyi para a sociologia do desenvolvimento rural. *Revista Sociologias*, 13(27), 180–219. DOI: <https://doi.org/10.1590/S1517-45222011000200008>
- Scott, M.** (2013). Resilience: a conceptual lens for rural studies? *Geography Compass*, 7(9), 597–610. DOI: <https://doi.org/10.1111/gec3.12066>
- Thompson, E. P., & Eicheberg, R.** (1998). *Costumes em comum*. Companhia das Letras.
- Wilson, G. A.** (2012). Community resilience, globalization, and transitional pathways of decision-making. *Geoforum*, 43(6), 1218–1231. DOI: <https://doi.org/10.1016/j.geoforum.2012.03.008>
- Wilson, G. A.** (2013). Community resilience, policy corridors and the policy challenge. *Land use policy*, 31, 298–310. DOI: <https://doi.org/10.1016/j.landusepol.2012.07.011>

TO CITE THIS ARTICLE:

de Moura, R. A., Ferreira-Neto, J. A., Pérez-Fra, M. M., & García-Arias, A. I. (2021). Symmetries and Asymmetries in Collective Management: Comparing Effects on Resilience and Rural Development in Galician Common Lands and the Brazilian Extractive Reserves. *International Journal of the Commons*, 15(1), pp. 35–49. DOI: <https://doi.org/10.5334/ijc.1055>

Submitted: 17 June 2020 Accepted: 14 November 2020 Published: 01 April 2021

COPYRIGHT:

© 2021 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See <http://creativecommons.org/licenses/by/4.0/>.

International Journal of the Commons is a peer-reviewed open access journal published by Ubiquity Press.

