

# GENDER INEQUALITIES IN INCLUSIVE INNOVATION OF RAINBOW TROUT PRODUCTION, ESTADO DE MÉXICO

Sara Sepúlveda-Hernández<sup>1</sup>, Ivonne Vizcarra-Bordi<sup>2\*</sup>, Sergio Moctezuma-Pérez<sup>2</sup>, David García-Mondragón<sup>2</sup>, William Gómez-Demetrio<sup>2</sup>

<sup>1</sup>Coordinación de Desarrollo Agropecuario, Valle de Bravo, Estado de México.

<sup>2</sup>Universidad Autónoma del Estado de México.

\*Corresponding author: ivbordi@yahoo.com.mx

## ABSTRACT

This article is a reflection from the stance of feminist economics of rupture on the implications of the inclusive innovation approach and on gender relationships inside rainbow trout production units (*Oncorhynchus mykiss*) (RTPUs) in Estado de México. It is centered on the masculine institutionalized view of producers on women's work. The contradictions of inclusive innovation in gender inequality fields which affect women directly are analyzed from this point of view. Through semi-structured interviews carried out with producers, institutional public workers and academics, and direct observation, the following questions were answered: How do men construct the social value of women's work in the RTPUs? What is the participation of women in technical-practical processes to develop innovations? With the interiorized heteronormativity in technical learning processes and in economic-productive decision making, women lose relevance as creative protagonists of the innovation that could translate into improving the efficiency of RTPUs. The patriarchal ideology dominating gender relations in production aquaculture activities makes the role of women into a subordinate heteronormative category which excludes them from innovation projects. The conclusion presents the need to have a new approach of feminist inclusive innovation by placing sustainable living as the focus.

**Keywords:** aquaculture, exclusion, feminine work, masculine narratives, sustainable living.

## INTRODUCTION

In Mexico, aquaculture represents an important sector of food production for national consumption and exports, and at the same time is a local economic activity that contributes to overcoming poverty, primarily in rural zones (Betanzo-Torres *et al.*, 2019). In Estado de México, aquaculture production of trout is carried out in rural, family or small-scale production units, where men and women perform various activities in the management of their farms. Although this activity has been positioned in the national market, in the last decade it has faced diverse biotechnological, environmental and financial problems that require institutional intervention and specialized technical innovation (García-Mondragón *et al.*, 2013). With the purpose of improving the living conditions of producing families, the state policies have opted for designing productive programs and projects following an inclusive philosophy, which attempts to reduce the gaps of social inequality manifested in the rural territories (Sepúlveda *et al.*, 2021). Inclusive innovation brings together both aspirations; however, this theoretical-practical approach has its own limitations since it emerges from heteronormative schemes that have interiorized and normalized gender inequalities accumulated in these production systems (Ferraro and Shippee, 2009). In fact, there are several critical studies among which Young's (2000) stands out, which points to some restrictions in the approach in terms of deliberating democratic

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participation *a priori*, which gives rise to processes of exclusion of certain populations considered subordinate or in conditions of vulnerability that adjust to intersectional forms from which oppression and exclusion are experienced, such as gender, class and ethnicity (Hernández-Artigas, 2018). In the case of aquaculture, it is relevant to retake three of the categories of economic-feminist analysis to understand how inequalities are produced in this activity: woman (gender), multiplicity (class), and production of dualist gender relations (ethnicity).

In the Latin American region, there is suspicion about practices of inclusive innovation and their conceptualization, as well as the intentionality of institutions that participate in the implementation of this inference, because it would seem that there is a “need” to advance an agenda of inclusion in the shortest time possible to solve gender problems that demand social justice, both in regional and in local economies. There are contradictions in this convergence: innovation and inclusion are precisely denoted in that the first is based on developmental interests and the second pursues emancipating objectives of the oppressed populations that experience social inequalities produced in these development models (Martínez - Palacios, 2017).

When the concept of inclusive innovation is addressed, there is the idea about a social problem that must have an emancipating transformation as necessary condition, and not an adaptation “inside”. It also refers to any change or improvement that allows access to quality goods, opportunities for sustainable subsistence, and of significant reach for a population that is excluded; and which, at the same time, entails that the users themselves work as participative agents in the innovative processes (Prahalad and Mashelkar, 2010; Foster and Heeks, 2013). However, it ignores the structures that originate conditions of gender inequality, such as those cultural pre-assignments that have been naturalized in societies of patriarchal domination and which have been the main complaints of feminism: women’s work that is free of charge due to affectivity and solidarity, and the informality in which women are placed that turns them into participants and not workers (Martínez - Palacios, 2018).

This refers to a political and power field where the norms that regulate participation are configured and institutionalized and, from this derives the importance of learning how the domination matrix of the participative *habitus* operates in the development of innovations (Martínez – Palacios, 2017). This concept developed by Bourdieu, allows understanding the dynamic processes that constitute schemes of thinking, feeling, acting and participating associated to a social position in a specific context (Martínez-García, 2017). Therefore, while the inequalities persist and sometimes deepen, the intentions of inclusive innovation in terms of deliberation and participation, will be left at the mercy of those who have higher educational level, better financial income, and of those who control the codes of rational discourse. In order not to fall into undesirable consequences such as producing inequalities, innovation should not be foreign to the emancipating intentions of gender, race, ethnicity, language, age and class (Martínez- Palacios, 2017).

Because of this, the entire proposal of innovation that seeks inclusion must resort to the feminine perspective, otherwise, it will be doomed to produce schemes of exclusion,

discrimination or oppression, which were the ethical and ontological ethnic principles on which the proposal of inclusion was based (Carosio, 2017). One of the most representative examples of this contradiction can be seen in aquaculture activities, generally masculinized (López–Martínez, 2013; Saldaña *et al.*, 2016). The feminist reflection presented here has the objective of pointing out the implications of the approach of inclusive innovation in gender relations between and within rainbow trout production units (*Oncorhynchus mykiss*) (RTPUs) in Estado de México. It is focused on a hypothesis formulated from the heteronormative masculine narratives of producers and public workers on the work of women who are part of the economically active population in these units: gender inequalities that have accumulated through social processes in the rural environment are not under the surface, since they have become heteronormative in activities that are falsely assigned to the masculine gender, such as those implicated in aquaculture. This is how the proposal of implementing practices under the approach of inclusive innovation that only takes into account what is seen on the surface of social inequalities, without delving into those of gender, is doomed to fail.

This formulation emerged from the results of a research project originally directed towards 12 trout producers and five public workers and academics involved in the aquaculture sector, which collaborated as key informants since they are linked to trout production in RTPUs. It should be mentioned that all the producers interviewed were men, since they were the owners of the RTPUs, and as for the public workers–academics, oddly enough the five assigned to innovation projects in these RTPUs were also men.

For a new interpretation of the results presented in the original study, emphasis was made in the analysis of feminist economics of rupture, through a critical deconstructive exam that allowed showing the complex character of the various power relations experienced by men and women, addressing not only issues of gender relations and sexuality in production, but also of a particular economic-social situation in the presence of inclusive innovation (Vidal, 2006). The reinterpretation explored in this exercise retakes three categories of the approach of feminist economics of rupture (women, multiplicity and gender relations in production) and three fields of action of inclusive innovation (learning, relevant women and men actors and relationships).

For this purpose the study is divided into four parts: a theoretical review of the social value of productive work of women from an approach of feminist economics of rupture; women in aquaculture and in processes of inclusive innovation; valuation of women's work in the RTPUs from the masculine point of view; and retaking the discussion of *Innovation with a new auspicious feminist focus: sustainable living*.

## THEORETICAL FRAMEWORK

### Theoretical approaches on the social valuation of feminine productive work and innovation

Since the last century, from the decade of the 1960s, capitalist globalization with its dominion on the global economic environment gave rise to important scientific advances, technological development and innovations (La Rosa, 2016). At the same time, new

subjectivities were intertwined within the social context to interpret the realities of the globalized world and the perspective of gender relations to determine the economic participation of men and women (Carrasco, 2017; Carmona, 2019; Romano, 2019).

The feminist perspective has been strengthened through epistemic deterministic and reductionist ruptures of concepts and ideas that did not allow advancing towards social visibility and modifying the traditional mandates of femininity and masculinity (Vizcarra and Rincón, 2017). In this context an episteme was generated with new forms of femininity and in relation to the economic and cultural activity, from a political discourse of gender equality and with the challenges of equity and inclusion of women in the scientific, labor and political world (Lamas, 2016a; Carrasco, 2017; Romano, 2019).

Specifically in the labor world, the development of innovations acquired a competitive character, causing specialization of the workforce and production processes through technologies, efficiency of processes, optimization of resources and creation of products and services of increasingly better quality (La Rosa, 2016). However, this type of competitive innovation rather than an opportunity in countries such as Mexico turned into a weakness, because achieving competitiveness in the capitalist logic of the global market requires strong investments of natural, human, economic resources, among others, and which the small production systems that prevail in the country hardly have (Villa, Hormecheas and Robledo, 2017).

The economic and competitive dynamization of territories in Mexico, both urban and rural, make evident the need for new schemes of innovation or technological management, as survival strategy for productive organizations (Arocena and Sutz, 2013; Amaro-Rosales and De Gortari-Rabiela, 2016). In addition, it is a priority to address social problems that have been postponed of welfare, human development, environmental sustainability, and social inclusion of groups, among them of women, which have historically been limited by the power pattern exerted in the patriarchal, capitalist and androcentric system (Brunet and Santamaría, 2016).

This system attempts to legitimize through the discourse of “inclusion” the participation of women in the same logic of the capitalist patriarchal model of paid work. On the one hand, social exclusion is perpetuated by making believe that women are included because they are part of the working class and their organizations, instead of considering their own vindications (Carrasco, 2017). On the other, it has been confirmed that women are not absent from the economy and sometimes take on paid jobs at the same time as unpaid jobs, and have independent structures such as the culture of life reproduction and good living. Although Delphy (1982) had already pointed out that exclusion should be analyzed from the nature of the jobs performed by women, wrong interpretations can result by explaining it only based on relationships of production and the world of value (Carrasco, 2017).

Exclusion goes beyond discourses about work and its exchange value. For example, some feminist studies wager on defending women who develop creative capacities as potential to generate innovation to improve their living conditions and those of their households, based on their corporality and interiorized experience from interpersonal relationships

and in relation to non-human nature (water, forest, land plants, animals, air, fire and ether) (Vizcarra and Rincón, 2015). From this point of view, innovating implies learning processes, where people in organizations or groups acquire, generate or take advantage of understandings, knowledge and abilities that place them in a place of possession, differentiation and privilege, and therefore it is important to make visible the place of possession to understand inclusion (Arocena and Sutz, 2013; Estebanéz *et al.*, 2016).

Now, in order to speak of inclusion of women in economic and innovation processes we must start from some feminist principles: denaturalization of women's work to free them from sex role assignments; breaking with the dichotomies that structure social order and, being aware of social asymmetries in which women are subsumed because they belong to a minority in power, clarifying that this minority is in terms of projection of power (Miranda, 2014; Lamas, 2016b). This allows advancing in the de-structuring of the patriarchal social order and the reproduction of their *habitus* (Ramallo-Hernandez, 2011). Therefore, possibilities open to take the marginalization that women have experienced out of history and which has limited their right to participate in the diagnosis of problems to be addressed, in the design, planning, implementation, and even the evaluation of innovative solutions proposed in and for their life environments (Foster *et al.*, 2014; Amaro-Rosales and De Gortari-Rabiela, 2016).

Certainly, battles are waged in innovation processes where a gender alert is constantly activated, due to the hierarchies and asymmetries that accompany these processes (Espino, 2010; Almeida and Freire, 2014). It is an alert that is detonated through time because the exclusions mutate throughout different times and societies, and therefore, the manifestations of struggle and resistance of several feminisms continue seeking to overthrow the patriarchal structures that do not allow substantial changes in the lives of women despite their creativity and innovation (Gabbert *et al.*, 2019).

Among these movements, feminist economics is placed against classical economics when analyzing the gender relations in production as a hermeneutical mechanism, placing emphasis in the epistemology that breaks traditional schemes of naturalization from the set of instrumentalist categories such as capital and work which generate gender inequalities (Butler, 2007; Carrasco, 2017).

### **Women's work and innovation processes seen from feminist economics**

Studies about competitive innovation are generally conducted by orthodox or neoclassical economics, with an androcentric and positivist bias centered on objectivity, logical consistency of individual achievement, abstraction, disdain of emotionality, and in the rigor of data robustness. All of these are considered constructs of gender relations in production associated to masculinity and patriarchy (Estebanéz *et al.*, 2016). On the other hand, feminist economics is a thought current within economics that integrally incorporates the study of gender relations in production and helps to explain the differences between men and women (Sánchez, 2015; Brunet and Santamaría, 2016).

In this sense, it can be said that the difference between classical economics and feminist economics lies in the techniques and the narrative that they use. With androcentric

inclination, orthodox economics recognizes the productive activities or work for the market which generate an economic compensation or salary, while since the 1960s feminist economics grants importance to statistically invisible themes or those considered externalities, among them production for life maintenance, reproductive work, unpaid family or domestic work carried out primarily by women (Quiroga, 2014; Sánchez, 2015; Brunet and Santamaría, 2016).

As for feminist economics, women take on relevance as economic agents, and in their social interactions they are related to subjectivity, connection, intuitive understanding, cooperation, qualitative analysis, concretion, emotionality and nature, associated to the weakness and softness assigned to femininity (Espino, 2010).

By the decade of the 1990s, these narratives allowed establishing a conceptual framework about work based on the production/reproduction dichotomy (Carrasco, 2017). From this, certain themes intertwined which were debated in the feminist movements that sought to deconstruct gender inequalities, such as diversity, differences and complexity of feminine work based on productive dimensions and the public sphere, reproductive and the domestic-family sphere, as well as functions of capitalist markets based on exploitation (Sánchez, 2015; Macías-González, 2016).

Since then, feminist economics has privileged the study of the role of women in economic processes, occupational segregation, salary differentiation between women and men, different loads of work, and violence. To a lesser degree, problems related to new work opportunities for women are addressed from the perspective of women, since the themes of class inequality (Macías-González, 2016), discrimination from race and ethnicity, and differentiation between the urban and the rural spheres (Ordoñez, 2018), still prevail.

Delving into the study of feminine work in productive/reproductive activities situated in sectors of masculine domination such as aquaculture (Cruz and Acosta, 2011), is required based on the practice of the immediacy of life, the *habitus*, because it brings us closer to understanding how the dominant discourse naturalizes and standardizes the work of rural women, so that their work is made invisible in projects of social and productive innovation.

### **Women in aquaculture and inclusive innovation**

In the last two decades, governments in Mexico have promoted the development of activities in artisanal fishing and aquaculture with a double purpose: to cover the nutritional contribution in the presence of problems of insufficient animal protein, and as a survival strategy for families in situation of poverty, where food security is an urgent theme to attend to (Ortega *et al.*, 2016; FAO, 2018).

Women have been incorporated into these activities. According to the Food and Agriculture Organization of the United Nations (FAO, 2018), 14% of the total people devoted to aquaculture are women, although segmented by the naturalization of certain roles that have traditionally been associated to the sex. This has caused biological characteristics and gender relations in production to become important, so as to assign the tasks that require less effort to women, preventing them from performing tasks that imply roughness or

a high physical load, and from those that handle some automatization of the processes (Sifuentes, 2018).

From the viewpoint of the *habitus* defined by schemes structured by pre-existing sociocultural conditions that denote appreciation and action (Martínez-García, 2017), of who does what in the activities of aquaculture and based on these schemes, practices of social reproduction are interiorized, in which women participate, in addition to those assigned to their domestic roles. Thus, for example, the study by Vázquez (2014) shows how some activities developed by women become heteronormative in the production processes by connecting with the sphere of care after the capture of fish, such as: cleaning, processing and trading at the farm or in restaurants. Likewise, the administration jobs in offices tend to be associated to feminine spheres, because of the care for “numbers”. Despite these jobs, aquaculture production has tended to be masculinized, primarily because the men are devoted to tasks with greater visibility, such as the construction of infrastructure and tending to processes of breeding and fattening of the species farmed. As a result of the paradigm of feminism and the studies of gender relations in production that evidence the horizontal occupational segregation of women compared to men (Carrasco, 2016), since the decade of the 1990s women’s work has been undergoing a transformation in aquaculture, the same as in other masculinized productive sectors (Nieto, 2016). Among the changes observed, there are those of organizational type, where women’s insertion and development have been allowed (Estebanéz *et al.*, 2016). However, there are few studies about the participation of women in the processes, in work satisfaction, learning and economic sustainability, as well as on the difficulties in performing the job due to conditions in gender relations in production (Isla-Esquivel *et al.*, 2011).

### **Inclusive innovation**

From the initial conceptualization of inclusive innovation, a patriarchal androcentric bias is observed in spite of political discourses of inclusion of the disadvantaged or the most left behind, as is the case of rural women. González-Ramos (2014) has observed that the changes that have taken place in recent years in social practices for the inclusion of women have been caused more by external and structural factors, rather than by the transformation of the masculinized culture in productive activities. As a result of the discourse of merit and the justifications of the *statu quo*, the social exclusion of women is still tolerated.

According to Ferraro and Shippee (2009), the accumulation of gender inequalities happens from the simple fact of being born a woman in societies where her sex is devalued and objectivized. Thus, they are included from the structures of social order that they dominate; all the dimensions of heteronormative oppression that produce systematic exclusion, such as unpaid domestic work, care for production means, and institutional invisibilization of the role of women in social wellbeing.

In the generalized discourse of inclusive innovation, it is evident that equality of opportunities is required for the participation of all people and that the importance of women’s inclusion in productive activities should be addressed, both inside the aquaculture

production units (APUs) and in the communities where they are settled (Pansera and Owen, 2018).

It is evident that innovative processes require for all the members of the organization in the APUs to appropriate the sense of changes and improvements (Foster and Heeks, 2013). Under this perspective, each member of the organization ought to feel integrated to the project from his or her own individuality and respecting his or her own differences and diversities. In a framework of group or family coherence, it must be understood that the participation of each person is valuable as a member of a collective that conducts diverse tasks within the same process (De la Varga and Reyes, 2014).

To the extent that the innovation process is internalized by women and men participants, feasible conditions of the *habitus* will be created because cooperative and democratic work implies sharing arguments from their personal posture, which makes it possible to contrast ideas and generate significant learning (Sampedro and Díaz, 2016). Without a doubt, innovation requires reflection about the action of deep changes and substantial improvements during the process, to identify relevant aspects, continue planning based on resistances and external conditions that intervene, in order to manage changes (Pérez, 1998).

In this study, the principal women and men actors in the inclusive innovations of the APUs are everyone in the organization without distinction (Sampedro and Díaz, 2016), under the supervision and support of a woman or man leader who directly promotes changes, defines the sense of the goals, generates group commitment, helps analyze the implementation, plans changes, suggests resources, respects diversity of rhythms and styles of people to readjust participation processes (Dosi *et al.*, 1994).

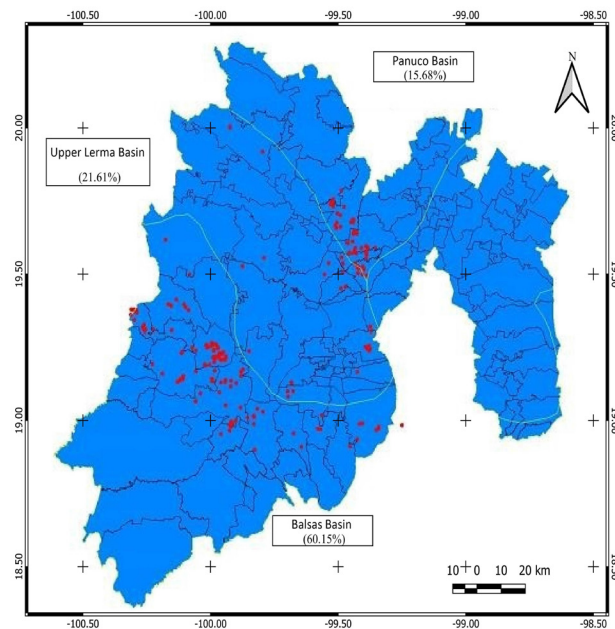
When inclusive innovation places people in the center, objectivizing of the development and economist (competition and growth) approaches is transcended and subjective fields are manifested, by considering the motivations and emotions of the people involved. This implies social challenges to change ideas and the productive and daily practices, and entails managing emotions such as anxiety over uncertainty and exhaustion from team work and all the efforts required (Dosi *et al.*, 1994), as well as the satisfaction of personal realizations and technological improvements in the APUs that produce social wellbeing.

## METHODOLOGY

As part of the exercise of reinterpreting the study's results prior to the qualitative cut (2019-21) (Sepúlveda *et al.*, 2021), the narratives obtained from 12 semi-structured interviews conducted with producers from rainbow trout production units (RTPUs) who participated in the study, are taken up again. These RTPUs are located in three hydrological basins that cross Estado de México (Balsas, Alto Lerma and Pánuco) (Figure 1), which have been classified by size and organization into four types: rural entrepreneurial, family organized, family individual and small artisanal (García-Mondragón, 2011). Three producers were interviewed for each type of TPU.

The interviews covered learning for the training of social capital, relevant actors, and relationships that are presented as conditions for inclusive innovation (Sepúlveda *et al.*, 2021). In addition, they included a section of questions about numerous aspects of the





Source: self elaboration.

**Figure 1.** Location map of the RTPUs in the Estado de México.

daily life of men and women, which highlight the work that women develop and their participation in innovation processes, among other aspects. Together with the interviews, direct observation allowed understanding the diversity of forms of organization for trout production, which have not yet been documented in their classification, primarily because there are different territorial dynamics where producers and their families develop innovation in processes, products, organization, commercialization, and offer of ecotourism services (Sepúlveda *et al.*, 2021).

## RESULTS

Estado de México has physiographic and climatological conditions that favor breeding rainbow trout (*Oncorhynchus mykiss*) and even without coastal waters, this segment has an outstanding economic national presence due to its high levels of production, covering around 32.4% of the total national production (CONAPESCA, 2019).

The Rainbow Trout Production Units (RTPUs) are classified into four categories: rural entrepreneurial, family organized, family individual and small-scale artisanal (García-Mondragón, 2011); this classification allowed measuring the spaces, differentiating intensive and semi-intensive management, describing social dynamics and productive practices, as well as organizational styles. In general, these RTPUs are distributed indistinctly in territories from the three hydrological basins of the state (Alto Lerma, Pánuco and Balsas), which is why each type of unit cannot be attributable to a territory. The aquaculture that is developed in the RTPUs is focused on the production of species of

easy management which constitute part of the demand from the regional and national market (García-Mondragón *et al.*, 2013; Ortega *et al.*, 2016). Each RTPU has its respective organization and division of labor, where aquatic production and social reproduction is articulated.

### **Work in the RTPUs**

In the farms adult and young men work, to whom “rough” jobs are designated, while women and children “help” in certain tasks, which are not paid since they are included in the dimension of the obligation of care based on the simple fact of being a woman. The “help” from women consists in: cleaning ponds, selecting fish by size and age, feeding, capture, evisceration, processing and preparation for sale to the public in restaurants; this work is permanent in intensive workdays linked to the domestic units and to responsibilities of family care. This allows understanding that inside the RTPUs women participate substantially within a family environment dominated by patriarchal ideology, although it should be recognized that they lead the activity in the gastronomic space.

It is characteristic that in the north of the state, on the Alto Lerma and Río Pánuco basins, the RTPUs are devoted primarily to breeding, production and commercialization of trout in restaurants, in addition to complementing their income by offering ecotourism services. Meanwhile, in the Río Balsas basin, the RTPUs are focused more on selling the production at the farm or supplying fish to restaurants located in tourism zones such as “La Marquesa” near Mexico City and Valle de Bravo, Estado de México.

Aquaculture activities have a temporality of higher workload that responds to the development cycles of the species and to the market demand. In the three basins in the state, specifically in the RTPUs of individual, family organized and small-scale artisanal type, the fish farmers are devoted additionally to other agriculture and livestock activities or temporal jobs in the cities nearest to their RTPUs, to complement the income and offset the household expenditures.

In a certain way, the degree of development and the technical-productive activities and relationships with the social, economic and environmental surroundings define the specific processes of the organization and feminine participation in the work of the four groups of production units. Without ceasing to fulfill all the domestic activities assigned to traditional gender roles, the subjective perceptions of men about women’s participation in the RTPUs tend to normalize the dominating discourse on the recognition of the contribution of their work in the management of the units, without their demands being felt and interiorized in these discourses.

For example, they mention that women exert the power of choice and opt for tasks that do not require intense physical effort, with this being a decision of their own, which is why they do not believe that it is discriminatory. In fact, they maintain that the jobs that require more finesse or more care such as preparation, placement and presentation of products for their sale are of feminine specialization. Likewise, producers do not consider that there is exclusion of women because they are taken into account in various activities inside the farms. They often make decisions of a daily nature, which keeps the

farms and restaurants healthy (clean). In addition, they recognize that the places where women perform their best job are in the kitchen and in customer service.

Despite this recognition, in the field observation, it was seen that women hardly leave their homes or production units to come together and participate in training events or to organize community activities. In this regard, some producers consider that it is not acceptable in their social groups (family or community) for women to attend these events (conferences, congresses, trainings) where mostly men participate. It is also not allowed for women to perform jobs that are exclusive to men, such as security and night control of the facilities, because they are activities that place at risk their integrity.

This type of control and segregation of feminine work extended to the field of the inclusive innovation directed at the RTPUs is analyzed based on an hermeneutical exercise of the feminist economics of rupture.

#### **Feminization of aquaculture and its contradictions with innovation in the RTPUs**

Next, the heteronormative narratives for each of the three categories of this theoretical perspective proposed by Carrasco (2017) are exhibited: women, multiplicity, and gender relations in production. These allow, at the same time, to analyze the dimensions of inclusive innovation which generates social inequalities in each epistemic rupture: learning processes, relevant women and men actors, and relationships. It should be mentioned that this schematic exercise allows the interpretation of narratives of the *habitus* in the inclusion of women in the innovation practices to improve the RTPUs.

#### **Women**

Among its postures, feminist economics of rupture suggests that division of labor is linked to the nuclear heterosexual family consolidated in a heteronormative way, and therefore dismisses the experience of women given by conditions such as being single mothers, single women, lesbians, women who live in extended families, in rural zones, indigenous, poor, among other forms. Therefore, in this reflection, the category of Women includes all of them (Carrasco, 2017).

The words by the producer Jerónimo (55 years old) from a RTPU of family individual type: “They are very good at keeping the farm facilities clean and managing the restaurant business... their cooking always attracts clients”, lead us to reflect in the three dimensions of inclusive innovation that can produce elements of feminization.

- Learning processes: According to the patriarchal capitalist system, learning takes place in order to obtain knowledge and innovate and to add change value to the products and the services offered by the RTPUs. A logic that differs from women’s posture, whose interest is to learn about how to take care of human and nonhuman life (Sánchez, 2015). It is looking at the entirety of the economic system from a different point of view regarding market processes, and establishing innovation for sustainable living as analytical focus and political arena, making the connection between feminist economics and ecological economics (Espino, 2010; Herrero, 2013).

- Relevant women and men actors: Women are constructed outside the monetary system and political economics. Therefore, they disappear as economic agents (Delphy, 1982), although beyond remuneration, women are defined as actors due to their sex/gender condition, through other processes of valuation and recognition from what is socially necessary for innovations to be feasible (Gabbert *et al.*, 2019).
- Relationships: In contrast to the discourse of men, which does not establish a commitment on feminine inclusion, women in the political arena of inclusive innovation, state the value of their relationships and prioritize people's interdependency but also eco-dependency (Herrero, 2013).

### Multiplicity

According to Carrasco (2017), in this category women increasingly take on paid jobs at the same time as unpaid jobs. There is a description of a double workday, double presence or multi-presence. The sexual division of labor is revealed as a phenomenon that endures within the classical format: man that provides in the public sphere/woman that takes care in the household. The model corresponds to the unitary masculine presence and a double feminine presence in the market and the household.

The narrative from Don Paco (61 years old), producer of a family-organized TPU: "Without them, the farms do not function... <support> in diverse tasks to get ahead, they are treasurers and they show organization, and when we cannot go to negotiate something, they take our place. They understand the whole production process, from breeding to selling, and that's why they are active in the trout fairs"... "They do not have any time left to become involved in government programs", opens the opportunity to recognize women in the Units, based on the dimensions of innovation.

- Learning processes. The recognition of multiple jobs of women justifies experiences of discrimination and oppression in other spheres of social recognition (Isla-Esquivel *et al.*, 2011). They do not participate in the training for production processes, or in the financial management of aquaculture farms. However, multiplicity generates feminine creativity to get ahead in all the tasks, constantly developing innovations, which are easily observed in the management of their restaurants (Martínez- Palacios, 2018).
- Relevant women and men actors: Women as actors are described in one of the four areas of representation: i) interaction between people as a precondition to their care, ii) work of material nature such as domestic work and work in the RTPUs, iii) mental work to organize, supervise and plan in the household, and iv) being available with their presence. However, multiplicity becomes integral and essential to sustain the *habitus* (Ramallo-Hernández, 2011) and life in the RTPUs.
- Relationships: In the household and in the RTPUs there are affective relationships. When women deal with clients an objective relationship is not produced with a consumer (object), but rather they establish subjective relationships with a subject-person who has needs and multiple desires, the same as them (Vizcarra and Rincón 2017).

### Gender relations in production

This category uses the relations built from the consolidation of a dichotomous production/reproduction, market/home, paid work/domestic work, capitalism/patriarchy, class exploitation/gender oppression approach.

The producer Germán (48 years old), who runs a RTPU of rural-entrepreneurial type, states that women “should not make important decisions about the farm because they are not the owners... that is why they do not participate in important positions within our organizations... In addition, they do not have the strength to perform many tasks that require more physical effort”... “It is not acceptable that go around doing men’s things”. Under these precepts, the following feminist proposals are articulated in each of the dimensions of inclusive innovation.

- Learning processes: In general, the producer with leadership is the figure who generates innovation. Patriarchal pacts are reinforced in it, by concentrating the circulating information and in the relationships established with other masculine economic and government agents subscribed in the dimensions of innovation (Sepúlveda *et al.*, 2021). Knowledge is a mechanism of power that reproduces inequalities, although producing innovations with this scheme requires hidden relationships, among them with women, who assume the responsibilities of care, for producer leaders to disengage from having to solve the basic needs to reach levels of learning (Gabbert *et al.*, 2019).
- Relevant women and men actors: If the leadership or representation of RTPUs is taken as indicator of the glass roof, women do not participate in democratic processes and important decision making in productive development (Young, 2000). Another habitual way of reflecting this dominating relationship is that women are absent from the administration councils of the TPUs. In terms of the “sticky floor”, women maintain relationships trapped in those tasks considered traditionally to be feminine such as trade, health, education and domestic employment, mostly in key care sectors.
- Relationships: There are institutionalized gender relations in production, naturalized by producers and accepted by some women because they have still not found ways of acting to change the gender production relationships such as learning between all, women and men. In each RTPU the way in which power and submission relations are constructed is different, and what is important is that women become empowered by keeping relationships and groups amongst themselves to change gradually.

In sum, the approach of inclusive innovation in trout production, by trying to visualize women’s work in the production units, recreates the theoretical-practical foundations sustained by a patriarchy aligned to capitalism, despite the conditions of poverty and social inequality that the production units or farms could experience.

### DISCUSSION

In the sphere of capitalist economics and facing the current global scarcities and contingencies, it is increasingly suggested whether other worlds are possible, particularly

if the criteria of justice are reconsidered from the viewpoint of women, overcoming the market criteria. In this sense, it is wise to question if it is worth it to learn, have knowledge and innovate to compete in markets, when facing an ecological, social reproduction and care crisis (Pérez, 2014; Herrero, 2013). The reflections about innovation in the RTPUs, and not only in their productive practices but also in those schemes where daily life is reproduced and in the field of subjectivities (perceptions, appreciations and representations), can be considered as a starting point to open the debate about how economic development in those masculinized activities across inclusive innovation policies are a platform for gender inequalities, exclusion, discrimination and exploitation of feminine work, placing sustainable living in constant tension.

In this reflection the participation of women in innovation processes in the RTPUs is discussed, analyzing women's work as a focal point for violation of rights, placing emphasis in the circumstances for learning and what it should be like, with women considered as relevant actors, as well as the relationships that happen and those that should happen.

Approaching innovation from feminist economics of rupture is a political proposal that suggests the need to capitalize innovation in an analytical level, which means: content, origin, aims and as instrument to articulate the proposal of women's inclusion in their multi-activity or in the multi-presence and immersed in gender relations in production. In this reflection it is possible to conceptualize and take an ethical posture, attempting for the economic practice of the RTPUs to address work and innovation of women from the perspective of feminist economics of rupture.

The posture defended is the analysis of work and the opportunities of innovation for women in the RTPUs as a structural problem, and not attempting for the daily reproduction of life to integrate women into the capitalist system, but rather seeking liberation for all, including men.

A historical patriarchal relationship shows up in the RTPUs where the father is the provider and has expressions of non-recognition of the reproductive work. It is enough to see the power relationships where men producers are the ones who direct the tasks, make the important decisions, and also make payments or pay salaries to those who collaborate in the farms. However, the reproductive work is sustained on women's shoulders without being socially recognized or remunerated.

From the viewpoint of liberal feminism proposed by Blanco (2017), today's capitalism is a source of opportunities for feminine participation; however, this is debatable because capitalism has in fact allowed advances to achieve the incursion of women into labor, but it is a capitalism adapted to social problems which gives concessions and maintains the oppression system. In the case of women, in the right to employment in the RTPUs, it is not that capitalism is really preoccupied with the inclusion of women, but rather that it is threatened by social feminist struggles and adapts to continue surviving<sup>3</sup>.

Innovation environments require motivations and synergies, that is, an added value that comes from relationships between people. Training is needed through learning processes for the resolution of problems with the goal of applying, exchanging, seeking and creating functional knowledge (Moctezuma, 2016). Creativity, imagination and curiosity are

required to innovate, in addition to other factors such as: group support and incentives for innovation; freedom of thought and action of people, including open-mindedness with relation to the person's own beliefs; access to knowledge, to information, and tolerance towards failures (Arocena and Sutz, 2009; Bueno, 2014).

When reviewing the access of women to learning activities for training that allows developing innovations in the RTPUs, situations of disadvantage are made visible; however, there is evidence of women's potential regarding the development of ideas for tourism, cultural attractions, culinary traditions, services and traditional knowledge about local products, to cite some examples, and normally in small-scale activities that women perform and which can be potentiated even more (Oedl-Wieser, 2020).

The formation of explicit knowledge is present in the RTPUs through trainings and these are generally for men, although the tacit understandings are established by systematizing lessons and teachings in the practices executed by people. This type of experiences makes up the tacit knowledge of women, and then they tend to share them increasing the coverage and influence, when they relate to other people. In innovation environments, relations in production and management take place, and it is notorious that in RTPUs no matter their typology, size or market, gender has a marked presence based on social organization, with certain work culture and operational objectives that include the creation of knowledge, procedures, products and new services; women present power limits to be able to elaborate proposals for innovation that influence the context, making their effectiveness more difficult. Women are relevant actors for the RTPUs, and in their diversity they have different interests, paths and aims. In general terms, women are relevant actors because in addition to performing multi-activities it is they who promote sustainable living; therefore, it is necessary to recognize the place they occupy and to make visible their contribution in the economic activity of the RTPUs, in the localities, regions and even in the country. They preserve their forms of survival which go beyond economic aspects; they work to attain quality of life, with the intention of "living well", they grow their own food, and produce and give services to the community. However, sometimes they are only recognized as family members of the producer (wives) or people who "help", even when they are in charge of breeding the trout, working in the agricultural fields, trading and performing a good part of administrative functions.

The masculine narratives of scarce recognition regarding the work of women and their entrepreneurship not only make implicitly invisible the survival strategies of the RTPUs, but also compromise their potential development. An example of this is their participation in ecotourism activities in the units and attention in the restaurants; these activities are an extension of their agrarian tasks and of the reproductive work that they carry out daily. In these activities they show not only the entrepreneurial capacity of women, but also that the potential for development of rural zones related to local production is detonated through their work (Monllor, 2013). If this were to be recognized, policies with an innovation approach would accept the feminist perspective as a transversal axis of inclusion.

This means that work relationships in the RTPUs are also social and gender-based, by including sustainable living as part of the routine practices which strengthen the RTPUs,

the community cohesion and the sustainability of broader territories, by not compromising the deterioration of the resources that sustain life. On the one hand, women develop connections and networks of proximity to create territorial cohesion, and in addition they have the ability to detect and solve daily problems through pragmatism; this same condition allows management in the public sphere, although in accordance with the local characteristics and for the benefit of their communities. On the other hand, the interaction between members of the rural community and the establishment of networks and associations helps to develop social capital (Monllor, 2013).

Likewise, when the women work in the RTPUs and perform various tasks that are mostly considered appropriate for men and which correspond to biotechnology of the crop and cleaning of the facilities. When this happens, it is considered a transgression of gender stereotypes and therefore a factor of change is provoked that acts as a demonstration effect for other women (Silba, 2015). Somehow they earn authority within and outside the family sphere, spatial mobility increases, there is opportunity to improve the economic ability, increase their self-esteem and their empowerment, and most importantly, a process of change takes place in gender relations with an impact both inside the organization and at the community and territory level.

## CONCLUSIONS

The RTPUs are not isolated productive organizations; they exist within a socioeconomic and political context that experiences moments of contingency and exception due to ecological precariousness and the crisis of social reproduction. At the beginning, the reality requires changes starting with generating transition policies that are at the service of life. The transition policies that are capable of achieving a systemic change and moving through the change require the participation of citizens; in order for the crisis of social reproduction not to go unnoticed, the change must be systemic with a decrease in the society of accumulation and, therefore, with a frontal rupture against the heteropatriarchal capitalist economic system.

The masculine view of feminine work is a reflection of this capitalist system, whose institutions of technological innovation, companies with corporate power, government instances and heteropatriarchal households, seem hermetic in face of the eminent change, perhaps radical, to give rise to new forms of social inclusion. Small-scale enterprises as *habitus* of the RTPUs can be the beginning of a movement with transformative power, since feminine work moves towards the benefit of families and the community's wellbeing, and pluralizes the economics rooted in the territory.

Feminist economics of rupture points towards a readjustment of productive processes. This implies that any process based on inclusive innovation (learning, recognition of relevant work of women and men actors, and their relationships) ought to take responsibility both of the reorganization of the emancipating work of men and women; it should also understand the collective processes to value sustainable living without compromising the environmental surroundings.



## NOTAS

<sup>3</sup>Constitutes a type of heterosexual patriarchy and at the same time generates the conditions of possibility for its criticism, making the relationships of personal or direct relationships go backwards (Pérez, 2014).

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