

# SUSTAINABLE FOOD SYSTEMS FOR FOOD SECURITY

Need for combination of local and global approaches

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### Chapter 6

### Valuing the roles of women in food security through a gender lens: a cross-cutting analysis in Senegal and Nicaragua

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Food security and nutrition (FSN) is a key issue in rural areas in the Global South, where the majority of the world's undernourished people live (FAO et al., 2020). Gender equality and women's empowerment are one of the major Sustainable Development Goals for 2030 because women are newly recognized as key players to combat malnutrition in all its forms, from food production to consumption (DG DEVCO et al., 2019; FAO, European Union, 2017). While many studies underline the need to enhance nutrition and food security, few of them highlight the role of women in improving the FSN of their families. Women diversify diets and maintain skills and traditional knowledge by preparing meals that are nutritious, safe and culturally relevant (Keatinge et al., 2011) and which also preserve biodiversity (CDB, 2015). Recognizing the role of women in FSN is crucial, but at the same time, it should be also considered as one part of all the other activities they perform.

FSN is often assessed according to the availability of farm production and its measurement, based on indicators that are mostly conceived for the household level (such as the Household Food Insecurity Access Scale). But these metrics ignore the individual situations of household members. Moreover, many studies consider that the nuclear family and the farm overlap: the head of the household, usually a male, is thus the decision maker (De Iulio et al., 2015). However, those types of metrics are simplistic (Gastellu, 1980), as most farm households have other income-generating activities that can also be multi-situated (Fréguin-Gresh et al., 2015). In addition, household members usually play different roles in terms of FSN (Coates et al., 2018). Thus, few studies document the role of gender in farming and food systems (Guétat-Bernard and Ndami, 2019; Stephens et al., 2018), probably because the contribution of women in the households' activity portfolio are mostly (and incorrectly) confined to the domestic

economy. However, women contribute substantially to food-related activities, even if they do not always have the power to make decisions or to take action.

This chapter, based on two case studies, aims to answer several questions: What roles do women play in ensuring access to food for their households? How are these roles maintained and reconfigured over time? Given that relations of domination historically shape gender relations, how do women negotiate spaces for action or recognition?

This chapter analyses the results of two projects undertaken between 2015 and 2019 in Senegal and in Nicaragua. The projects examined the roles of women in FSN and the functioning of 'the kitchen', as a particular economic and political space. The first section gives the scientific positioning that guides the comparison, the second part outlines the analytical framework that underpin the comparison of the projects' findings and the third section then gives contextualized evidence of gender inequalities related to the underestimation of their importance in household FSN.

### >> Reconsidering women's contributions to household FSN

This positioning connects three elements: 1) the recognition of women's work in the two interrelated productive spaces (especially the farm) and domestic spaces; 2) 'the kitchen', as a place of power and knowledge; and 3) the tensions, for women, between assigned roles and their search for autonomy or resistance.

#### Recognizing the invisibility of women's work

In family farming, work is not founded on labour relations, but on an obligation structured by kinship and marriage alliances (Barthez, 1984). These family bonds link the family to its farm heritage and resources (Ancey and Fréguin-Gresh, 2015). Moreover, as shown by the feminist intersectional perspective of connected categories such as age, gender, social status and birth order (Crenshaw, 1989), household members are unequal. Each individual depends on the institutions that structure each society, especially the family, while connecting with other hierarchies such as the position of the household in the society (family with or without land, formal or informal rights and status linked to ethnicity).

Throughout the history of men's domination of women, labour and access to resources have always been socio-gendered. The analysis of women's contributions to productive spaces needs to be repositioned within specific sociohistorical and cultural matrices. The reasons for this permanent blindness to gender were enunciated by the materialist feminist research, which calls for the denunciation of gender asymmetries, the invisibility of women's roles in domestic production (Delphy, 1970), and the connection of productive and domestic spaces. Agricultural modernization, coupled with capitalism and patriarchy (Delphy, 1970), defined the so-called rural development. This 'rural development' in the Global South was accompanied by the reproduction of the 'domestication' of women's work, women being considered as helpers to men (Perrot, 1998), and the exclusion of

women in decision-making. As a result, domestic tasks that are not shared within the household to accumulate goods are disregarded (Hillenkamp, 2013) because they are non-market activities, since only the market creates value according to the capitalistic vision.

### The kitchen: a place of power and oppression of women

In most societies, when performed day after day and passed on through the generations, such caretaking gestures become second nature for women (Tronto, 2009). The ambiguity of caretaking is that such tasks result from the socially constructed gender roles in which caretaking is mainly assumed by women: caretaking is prescribed, normative and imposed (Brugère, 2010). This situation also reflects what women wish to provide for their family: an act of giving, forged by upbringing and socialization. Women are expected to cook with attention, love and pleasure (Guétat-Bernard and Sébastia, 2022). This socialization puts a priority on relationships (Pulcini, 2012) and for this reason, it is precious for families and for the whole society, as it ties women to finding ways to ensure household FSN. It is also discriminatory to women, whose time is spent on tasks for which they receive no economic recognition and little social visibility, especially since women often bear the mental burden of organizing domestic tasks.

Among the spaces of caretaking, the kitchen is the heart of food issues: it is a political space that reveals the way women are assigned to the home (Tillion, 1966), as well as where games of power within the home, and more precisely the kitchen, play out (Guétat-Bernard and Saussey, 2014; Mathieu, 1991). The kitchen is an essential space where food enters for meal preparation and comes out to feed the household. Observed cooking practices thus reflect an environment that is both ecological (itself affected by the consequences of productive choices) and cultural (what is permitted or prohibited), as well as a political and religious ideology. These practices also translate the strategies of individuals in the context of the socioeconomic and political environment in which they evolve.

### The kitchen: a place where women can express their skills, know-how, creativity and resistance

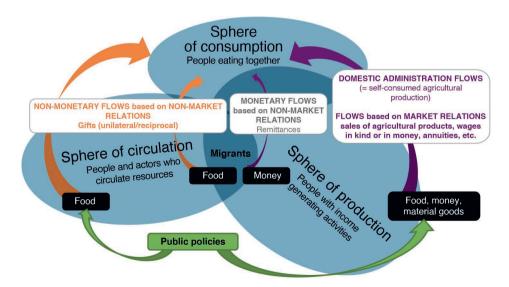
Reversing the stigmas of being in the kitchen, women take on their role by defending an ethic of both responsibility and rights (Larrère, 2012). The kitchen can also be considered as a place of resistance, as it is a marker of cultural identity and the expression of women's creativity. It is in the kitchen that women can invent recipes and apply the traditional knowledge, know-how and skills that give them social recognition (Counihan and Siniscalchi, 2014). Food is then reconsidered in relationship to the self and the world: in the kitchen, women demonstrate inventiveness that may be seen as a form of self-expression and as a way of communicating to their guests (Begin, 2017). Cooking is something that connects people and creates social ties, a practice that can ensure recognition of one's individuality.

### → Analytical framework of gender relations in household FSN

The studies carried out in Senegal and in Nicaragua are based on a holistic, systemic and multidisciplinary approach of FSN. With their own specific methodology summarized below in Figures 6.1 and 6.2 (Clavel et al., 2018; Fréguin-Gresh et al., 2019), both situate the spaces and flows that structure family food systems at the heart of their analytical framework.

### Analysing the food supply strategies of multi-situated families in Nicaragua

The case study in Nicaragua is based on the analysis of food supply strategies of multi-localized farm households, in a context of increasing migration. The framework (Figure 6.1) shows the connections among three spheres (Gastellu, 1980): 1) domestic spaces, formed around the kitchen (sphere of consumption), which include individuals who eat together, considering that some members eat outside home or that others, who are not necessarily family members, may eat meals with the family; 2) productive spaces (sphere of production), which refer to the economic activities of family members and the flows of food and money they generate and which supply the kitchen. These productive spaces extend beyond the boundaries of the farm and those defined by the economic activities of a household in the strict sense of the term; they cover the activities of migrants and their related remittances; and 3) circulation spaces (sphere of circulation), in which different streams of food and resources occur: remittances, food aid, bartering, gifts, etc.

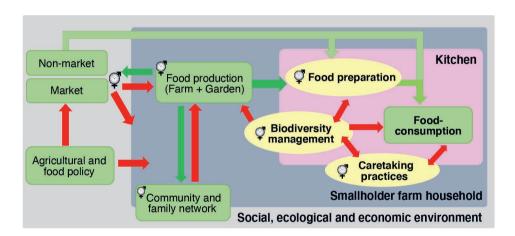


**Figure 6.1.** Analytical framework of the household food supply in Nicaragua (conception: Fréguin-Gresh, Cortès, Bannoviez-Urrutia and Guétat-Bernard).

Based on a household survey and semi-structured interviews, the methodology consisted in positioning each individual, including women, within those interconnected spaces. The nature, intensity and direction of flows depended on the relationships inside and outside the household, and on those formed with the institutional environment in which the family evolves. Those relationships are considered in terms of domestic administration, monetary or non-monetary relations, and market or non-market relations, in line with the work of Polanyi (Polanyi, 1983).

### An approach centred on women's work in domestic and agricultural spaces in Senegal

The case study in Senegal aimed to understand the impacts of rice intensification on agricultural biodiversity and food quality. In line with the expectations of a local NGO,<sup>9</sup> the challenge was to design a transdisciplinary approach using agronomy, social anthropology and nutrition sciences. The aim of the survey was to document women's practices and knowledge, and to clarify the impacts of agricultural changes on the nutritional quality of food. The analytical framework considers streams of money, food and labour in three interconnected spaces: 1) the kitchen; 2) the farm; and 3) the socioecological space (Figure 6.2).



**Figure 6.2.** Gendered analytical framework of the household food supply used for family farming in Senegal.

The green, blue and pink boxes represent the three spaces of the food system and arrows represent the flows (green for food and red for influence flow including monetary). The orange boxes represent the main components of the food system and the yellow ovals represent the components in which women are more closely involved. The clock symbol highlights components that require time.

<sup>9.</sup> The study drew on the expertise and facilitation of the Senegalese NGO ENDA, which develops agroecological gardening activities with women as well as links with maternal and child health centres.

## >> Women's work and gender inequality in agriculture and food systems in Nicaragua and Senegal

#### Agricultural and environmental contexts

Contextualization of the case studies reveals specific gender relations forged by a highly constrained environment and a sexual division of labour that disadvantages women. Both study regions are subject to climate and natural resource constraints that have shaped their agricultural and sociocultural dynamics.

The study region in Nicaragua is situated in the north-eastern part of the dry corridor of Central America. It is exposed to high climate variability and regularly affected by climate events. The topography influences agriculture: the alluvial plain is cultivated year round (maize, beans), while the bed of the Rio Negro, which marks the border with Honduras, can only be cultivated (sesame, watermelon) in the dry season when the waters recede. The interfluves are used as pasture for cattle ranching. In the mountains located in the north-east, the climate is more favourable and enables up to three cropping seasons per year (maize, sorghum, beans), but the rugged topography limits yields. Consequently, family farming has developed there in restrictive conditions that limit food availability, especially since gathering, fishing and hunting activities are hampered by deforestation.

The study region in Senegal is the middle valley of the Senegal River, at the heart of the Sahel. The vast floodplain, consisting of the riverbed, known as the *waalo*, is largely fed by the seasonal flooding of the river. In the *waalo*, families practice flood recession agriculture, fishing and livestock farming. Agriculture was disrupted by the dams built in the 1980s, a pressure that was subsequently accentuated from 2010 onwards by the National Programme for Rice Self-sufficiency (PNAR), which transformed the alluvial plain into a network of rice plots. Flood recession sorghum, as well as cowpeas and maize using varieties adapted to the flood recession crop system, are becoming rare, despite the cultural attachment of people to these crops. The people generally know the nutritional contribution of sorghum. But, with the advent of the PNAR, only rice cultivation gives people access to crop and marketing facilities. Thus, men and women are obliged to work in rice plots, and rice has become the main cereal in diets. Restricting the river's flow and level has also resulted in the disappearance of fish and has limited transhumant livestock farming.

### Women's contributions to productive spaces lacks visibility

In Nicaragua, women usually do not work in the fields (except during harvesting or occasional tasks) or in the pastures, since cattle ranching is a symbol of social status for men. Women are often barred from inheritance (Fernández-Poncela, 1999), and so dedicate themselves to domestic production: tasks of daily life and caretaking, backyard livestock farming, and on farm processing of agricultural products, which are sold in the neighbourhood or on local markets. Selling raw materials (sesame, cereals, beans and milk) is restricted to men, who also decide how farm labour is organized. Non-farm diversification is essential to meet the needs of the family, since farm production is

insufficient. Men are therefore also agricultural wage earners and women may run a shop from their window. Like landless farmers, they also collect calabash gourds (*jicaro*) to extract their seeds to make beverages (Banoviez-Urrutia, 2016). Finally, men and women may migrate. Migration has steadily increased over time (Carte et al., 2018). Men and women leave to work temporarily or more permanently in the neighbouring countries or internationally, depending on their resources (Trousselle, 2019).

In Senegal, women work in the fields and pastures, as helpers to men. They may also work with other women to cultivate common gardens that are allocated to them (by men) in order to diversify production. All products grown supply kitchens and markets. As in Nicaragua, the women process and sell farm products, such as the traditional condiment *nététou* made from fermented and crushed seeds of the African locust bean tree (*Parkia biglobosa*). Men cultivate rice (with women taking part in weeding and harvesting), practice pastoralism and are responsible for selling raw products (rice, onions and tomato). The organization of women's work is subject to the availability of men who can migrate temporarily or permanently, a long-standing practice in the region. Women do not migrate, except when they marry due to the tradition of patrilocal residence.

#### Cooking, skills and know-how of women in securing the family diet

In Nicaragua, diet is limited to staple foods, grown on the family farm: maize (and sorghum) used to make tortillas and other dishes (nacatamal, güirila, cebada) or beverages (pinol, pinolillo, cebada); rice, which is produced elsewhere or imported, is mixed with red kidney beans, which are often the only source of protein, used to make gallo pinto, the national dish. Other foods are consumed occasionally: dairy products, other animal products (eggs, meat, fish), and cultivated fruits and vegetables, which are either farmed or purchased. The families acknowledge that diet has improved over time. However, they have noted an upward trend in food prices, which is a risk factor for food insecurity. Food vulnerability and nutritional deficiencies are more pronounced in women, even though they play a decisive role in coping strategies to tackle household FSN (Marselles, 2011). Women have also continued to invent recipes and strategies to compensate for food shortages. They thus organize food bartering with their extended families and neighbours, even over long distances. Food bartering concerns festive dishes, but also staple foods. It is facilitated by multi-localization of family members. Food bartering is important in improving diets and helping to maintain social ties.

In Senegal, diet is based on traditional dishes made with sorghum, the emblematic culinary heritage of the region, combined with vegetables and seeds produced and/or gathered in the waalo. The women grow squash (dédé doudé) for their seeds (beref/podé), yellow-fleshed pumpkins (diayedjé), cowpeas (niebe), browntop millet, a wild grass with seeds (pagguri), and black rice (sarna or maro balléo). Families eat fish, either fresh or dried and wild fruits: water lily fruits (tabbé), for their seeds (ndayri) and bulbs (dayeedji), desert date fruits (Balatines aegyptiaca), which have high nutritional value and multiple other uses. Women usually process raw products to prepare those dishes. Traditional food from the waalo represents nutritional diversity and is a marker of identity. Families have a cultural, dietary and aesthetic attachment to

flood recession sorghum. Their diet has nevertheless deteriorated with the reduction in fishing, livestock farming and vegetable production. The replacement of sorghum by rice and wheat (white bread) has contributed to that deterioration by the loss of fibre and important nutrients. It is also suspected to contribute to the increase in chronic diseases (Crenn et al., 2015). In short, women's knowledge ensures a diverse diet. Women hold most of the knowledge related to seed conservation and recipes, which are often kept for special occasions and seasonal rites. Because sorghum is becoming scarce, its price is now double the price of rice, and certain families sell it when they suffer food shortages. Some recipes are linked to the identity of the waalo, such as dishes made with ground squash or pumpkin seeds or broken sorghum (niri), along with milk or dried fish. Women expressed some pride in maintaining this food heritage through transmission to their daughters. Individual and family memories value the *waalo* as a nourishing space and time, one of family gatherings during sowing and harvesting. Nowadays, farming the waalo is becoming increasingly difficult, as the plots not used for rice are farther and farther away from homes. Wild fruit gathering is neglected due to a lack of resources and especially time (domestic tasks, irrigation of rice paddies and market gardens).

### Migration and agricultural change as spaces of resistance and creativity for women

Migration has a mixed impact on family diets in Nicaragua. The expansion of the circulation spaces continuously reconfigures the social organization of families and the socio-gendered distribution of labour within households. When men migrate, their absence means that economic activities are delegated to other men, with the migrant continuing to make decisions from abroad. In some cases, the women take over decision-making and take on activities that are usually restricted to men, deciding how to allocate the money sent by men for everyday spending and deploy off-farm activities. These changes are reinforced when women migrate. Since remittances are higher than local wages, female migrants become the breadwinners for their households, acquiring new economic and symbolic power. Women's remittances are crucial for FSN, but also for children's education and personal spending, sometimes with consumerist overspending to compensate for missing loved ones. Female migration is socially accepted and justified, even at the cost of the suffering caused by absence and the disruption of family organization. Women are only able to migrate thanks to intra- and intergenerational solidarity with other women. Households with at least one migrant member can improve their FSN. This improvement is both quantitative and qualitative, in particular with the introduction of new recipes or exotic foods, although these may not always be well accepted locally and not necessarily contribute to a balanced diet. At the same time, remittances introduce changes in consumption habits, such as purchases of ultra-processed foods sold locally at low cost. Such products contribute to the dual burden of malnutrition. But this transition cannot be blamed solely on migration, since it results from factors including a longstanding dependence on food imports (Fréguin-Gresh and Cortès, 2021).

In Senegal, the transformation of the *waalo* is cited as the main reason for abandoning sorghum production. Women combine labour in rice paddies and in increasingly

reduced diversification spaces (as narrow banks of the river) to compensate for the decline of sorghum in the diet. The main women's innovations consist in vegetable cultivation by developing irrigated gardens. Modes of sociability are also evolving with the difficulty of settling near flood recession fields, when services are all concentrated in villages, and with the unavailability of child and adolescent workers, who are now in school. Despite the increase in rice production, the lean season (April to July) remains critical: this is a constant concern for women. They describe a change of status in terms of working the land, shifting from a situation in which they are recognized for their skills and knowledge, to one of helpers in rice cropping under the supervision of men. Wives, even when they are head of the farm (widows), suffer from a denial of recognition in the collective structure of water management and thus are not involved in decision-making about water management in rice farming. The community gardens are new initiatives by women's groups, which receive no technical support from the state but do receive some financial and technical support from NGOs. These irrigated gardens have an essential role in food diversity. Women sell some of these new varieties of fruits and vegetables on local markets, but organic vegetables are mainly self-consumed, as they do not fetch higher prices on the markets. Sometimes women grow conventional products for the market and keep the 'non-poisonous' products (as they describe them) for their family. The local markets are nevertheless a new source of own money, albeit a very marginal one. These gardens provide access to vegetables that were previously overlooked, which is a source of pride for women. However, land provided by men is not always of good quality and may be too far away. These gardens for women are also places of solidarity between neighbours or within the family. Thus, if a woman is unable to work, another will take on her work, and the favour will be returned. Likewise, the division of vegetable production between wives in charge of meals is done fairly. These rules governing daily cooperation between women and shared planning, to provide appetizing dishes every day, can be jeopardized by tension between co-wives. In this case, the quantity, quality and aesthetics of food become a factor of competition.

#### >> Conclusion

The two case studies took a systemic approach to FSN that places the kitchen at the core of food strategies and connects domestic and productive spaces on different scales (individual, household, family, location, and region, as well as migration spaces in the case of Nicaragua). Although the projects were specific, despite the different contexts, they both considered FSN as a complex issue, whose multiple dimensions (social relations, agro-biodiversity, identity and sensory dimensions) are embedded and interconnected.

The centrality of the kitchen in the analysis, as a strong methodological option, made it possible to at least partially deconstruct the conventional units used to study FSN that are problematic. Indeed, the household covers very different anthropological realities depending on the history and the culture of the people studied, and ignores inequalities between individuals. The results highlight certain unconsidered and overlooked aspects of women's roles in FSN, such as the contribution to incomes of

off-farm economic activities that can be located in different places, the importance of food circulations based on social relationships between extended families and communities, the disregard of feminine activities, and the constraints women face to exercise their roles. Regardless of who is responsible for family access to meals, food circulation and preparation are organized by women. The kitchen is a fundamental space for socialization and knowledge exchange. The tasks conducted there are various, complex and time-consuming, yet the key role played by women is still not recognized as essential, sometimes even in the eyes of women themselves.

Consistent with the way knowledge and practices of dominated subjects are belittled, ignorance and discrediting of women's food-related knowledge and practices are similar in nature to the (post-) colonial relations pursued by contemporary development policies. Asymmetries of power continue to deny women's rights (especially to land) and fail to acknowledge women's expertise in food, agriculture and the environment. Although certain policies make women's empowerment central to guaranteeing FSN (as is the case of the Zero Hunger programme in Nicaragua), such policies are nevertheless still limited to domestic production, without any real paradigm shift. However, our research shows disruptive effects (in roles, know-how, etc.) on the already fragile balances involved in efforts to ensure FNS by women; these disruptions tend to increase the food and social vulnerability of women and their families.

The long history of patriarchy in many societies explains the hierarchy of activities between those that are socioculturally dedicated to women and those dedicated to men. But, it is the continuous discrediting of women's food-related knowledge in the name of FSN that women come up against. Although the projects did not focus on social movements, they do highlight the existing spaces of low-noise resistance that need to be acknowledged and understood when implementing development programmes. Women do play a central role in food systems but have poor access to resources and reduced power to assume these roles. Thus, interdisciplinary and contextualized research analysing the issues at stake in domestic spaces produce results that are crucial in guiding public policies. It is essential to pay attention to women's voices, and to understand how they approach food issues, in order to implement the actions they deem relevant.

### >> Acknowledgements

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