Shifting Food Culture and Space: Narrative of Communities Living in Tributary Rivers of Ilocos Sur and Ilocos Norte, Philippines

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Abstract

Eating patterns and food choices of people evolve alongside the transition of any inhabited space. Taking this as a premise, this paper elucidates the effects and consequences of the spatial shift from rural to urban and biodiversity loss which is currently re-shaping the food culture and food system of Barangay Caowayan, Burgos, La Union, Barangay Sawat, Tagudin, Ilocos Sur, and Barangay Elizabeth, Dingras, Ilocos Norte, Philippines. A qualitative research on food culture and space, this paper utilized participatory tools: community maps and reflexive sheet, specifically, meta-cards. This paper takes on the foodscape lens and applied the narrative approach in discussing how and why the food culture and food system of these barangays are shifting which become problematic frames on spatial rooting and socio-cultural identity of these communities.

Keywords: Food, Foodscape, Space, River, Philippines

Introduction

Food and eating is a naturally occurring habit of individuals and groups of people which is necessary for survival. Mintz and Du Bois (2002) said that food is a system wherein "eating is perhaps the most essential of all human activities and one with which much of social life is entwined." The value of food as a basic need and process became a preoccupation in anthropological and sociological research. Taking food as a purview of study has grown from identifying taxonomies and typologies of food uses and values of eating to that of examining how food and its systems evolve. As a grounding for research, food and eating are understood as a point of departure for understanding socio-cultural identities because "like all languages and other socially acquired group habits, food systems dramatically demonstrate the interspecific variability of humankind" (Mintz, 1985). Therefore, food and eating are not only a material habit, but it is also existential conduct that determines cultural identity.

Food is directly linked to the space, place, and location of people's inhabitation. Linking space to food, or foodscape as a purview, "denotes spatially arranged artifacts in our

surroundings" that bring about possibilities in "understanding complex social systems" (Mikkelson, 2011). Food, as part of a social system, and as contextualized in foodscapes, explores "food and meals in our environment and their potential interactions with humans" (Mikkelson, 2011). Space plays a vital role in the food selection and choices of individuals. Zeng et al. (2014) said that "geographical ecology, farming traditions and local culture shape the tastes of different places, so eating habits vary from place to place, and food becomes an important characteristic of locality." Food availability and preference is rooted in space which becomes the "center of [individuals and groups of people's] self-definition" (Mintz, 1985).

People tend to inhabit places where food is accessible. Anthropological studies note that early human habitats can be traced in "river valleys [which] are superior habitats for civilization" (Freilich, 1967). Individuals and groups of people tend to choose the river area as a space for inhabitation because river water is not only used for drinking but also for growing food crops. The river also serves as "critical connectors across communities" (Jordan et al., 2017). Linked directly for survival and proliferation of social groups, rivers, as the space and site for social habitation, is attributable to the perceived notion that this body of water can provide the basic needs to enable survival and proliferation of a community.

Food and eating are not static because spaces are bound to change. Taking it from the foodscape lens, the food system is dynamic which may be consequential to uneven distribution and access to food (Brembeck & Johannson, 2010 cited in Mikkelson, 2011). Observable in the Philippines, the spatial transition from rural/agricultural to that of urban/industrial affected, "economic and cultural forces [to] break traditional space limits and reconstruct the space and local construction methods and organizational forms on a larger scale" (Zheng et al., 2014). When spaces transition, economic modes of production also change which influences food choices and selection because "local food culture…moves with translocal production from its food region" (Zheng et al, 2014).

Change in food choice can now be seen in the rural/agricultural areas in the Philippines, specifically, in communities by the river areas. Compounded by two main forces: 1) natural - biodiversity alterations that result in excessive river swelling, and, 2) the Philippine National Development Plan that adheres greatly to urban/industrial goals, rural communities now experience massive food insecurity, the consequence of the problematic shift of food culture and system.

Problematic food supply in the Philippines

Alarmed by global hunger, Food and Agriculture Organization - United Nations (FAO, et al.) implemented a food policy to address this problem by implementing food security. Defined as a "situation that exists when all people at all times have physical, social and economic access to sufficient, safe and nutritious food to meet dietary needs and food preferences for an active and healthy life" (Lawrence & McMichael, 2012), food security, as a policy, appears to be equitable for all. But alongside the implementation of such policy, the

FAO-UN implemented stabilization of food production and consumption to supply to all member countries. A closer examination of how it is currently in place shows a clear delegation of the role as food producers to Third World countries which is "equated to the supply of food from world 'granaries' via transnational corporations… [which has effected] substantial portion of the Global South who has become food dependent" (Lawrence & McMichael, 2012). Lawrence and Mc Michael further explained that "globalization has effected accumulation by dispossession [that] operates through general mechanisms of structural adjustment, which devalue and privatize assets across the global south, as well as through particular mechanisms of displacement of peasant agriculture, as a world of agriculture emerges" (2012). Through varied local, national and international policies on food, the Philippines is not exempted from this. Cororaton and Corong (2009) said that albeit agricultural reforms, "over the past two decades, the Philippines has undergone dramatic structural changes as agriculture's share of the gross domestic product declined, resulting in the country's switch from being a net exporter to a net importer of agricultural products". This has resulted in expensive food prices placing poor families at a disadvantage.

The FAO-UN's policy on food and how it is implemented in the Philippines creates unequal spatial relations between the rural and that of the urban. The rural/agricultural areas are pressured to supply for the cities. Though this may appear more promising for the rural areas, poor farmers with small plots of agricultural land are forced to practice mono-crop farming. Subsistence farming then takes a backseat to reach the quota for food supply. As a consequence, the farmer is forced to purchase food for his/her family outside his community. Purchasing food necessitates money, therefore, the farmer takes on additional work in the city to be able to purchase food for the family. Rural communities become subsumed into the "new food circuits because of a larger global project" wherein "agricultural areas [and that of rural spaces] take in the distinctiveness of these food regimes [that] lay on the instrumental role of food in securing global hegemony" (Lawrence & McMichael, 2012).

Such globalized food policy, as implemented in the Philippines, is not the only culprit. Food scarcity in the Philippines is made severe because of biodiversity loss. Rural/agricultural areas find it more difficult to mass-produce food due to the alterations in land compositions. Water, which is necessary for irrigation and balance in the ecosystem, is now polluted which affects the quality of food. Difficulty in producing food attributable to biodiversity loss is further compounded by the Philippine urban economic production shift. Many agricultural land areas are now transformed into housing spaces, roads, commercial complexes, and the like. Such spatial transition effected economic modes of production and practice with dire consequences for rural communities who are effaced with the dilemma: whether to remain in their current economic mode of production or to shift to that of the urban. But what ceases to exist is the problem of food. Further, as part of its construction, the urban space has to produce new relations of production that naturalize the dichotomy between old and new, past and

present, to enable the legitimization of urban practice. Meaning, what is rural should transition to that of the urban to achieve the urban goals.

Therefore, when space transitions, eating patterns and food choices evolve along with the new culture and lifestyle. With such spatial transition, as an imposition of geopolitical ordering, a new food culture and system begins in the rural spaces. Such is the narrative of the three rural Barangays located by tributary rivers that deftly shows the consequences of shifting space, food culture and system.

Space, food culture and food system

Contextualizing space and food, this study takes from the foodscape lens from a mezz-level which "refers to how food is produced, purchased, or obtained, and prepared and consumed, and the relationship between food and individuals of the community" (Johnston & Kendrick, 2009). Studies on food taken from the lens of foodscape "is well suited to express people's views and ideas of their surrounding food environments and how they should be…implicates the multiple informative historic and contemporary personal, social, political, cultural and economic forces that inform how people think about and use (or eschew) food in various spaces they inhabit" (Adema, 2009 cited in Mikkelson, 2011). As such, foodscape enables understanding of social systems by examining the food system and culture in a community. This lens examines food and space as inextricably linked that discursively constitutes a community's identity. Therefore, how people and communities define and assign concepts to food is also vital in the study of foodscape because it constitutes cultural ideas and how food relates to specific places and people (Johnston et al., 2009).

Space, as the container and site of social life, is established and arranged not merely based on its physicality and tangibility because how space is constructed reflects a series of knowledge. Space "consists of a whole body of work that composes and constitutes the enmeshing of economic production, modes of thinking and social practice" (Lefebvre, 1996). Harvey (1993) explains that the "shaping of space is the shaping of a social system" that produces a spatial schema wherein "cultural conditioning, group learning, and individual learning are involved in the formation." Further elaborating on the idea that an individual, social group or community make sense of their space based on the following categories: (Harvey, 1993)

- Organic space - the kind of spatial experience which appears to be genetically transmitted and, hence biologically determined (i.e., instinctive spatial orientation, instinctive territoriality, etc.)
- Perceptual space – involves the neurological synthesis of all kinds of sense experience (i.e., optical, tactual, acoustic and kinaesthetic)

- Abstract or symbolic - experiencing space vicariously through the interpretation of symbolic representations which have no spatial dimensions

Individuals and groups of people make-up their spatial memory based on their organic, perceptual and abstract construction of their space. Attributable to space is the kind of food culture proliferating in the place. Defined as "practices, attitudes and beliefs, as well as the networks and institutions surrounding the production, distribution, and consumption of food" (Britany, 2018), food culture is dependent on the space and place of inhabitation. The space, in its tangibility, is the site where food can be produced, in turn, becomes a determining factor for food selection and consumption.

In a rural space, food culture is shaped by what the land and other natural spaces can produce. In the case of communities alongside tributary rivers, food sources do not only come from the land but also the body of water. Mintz said that "food choices are related in some ways to availability and food preference is close to the center of their self-definition" (1985). Spatial practice on food and eating is highly dependent on what the land and water can provide that shapes their spatial memory. The food culture in particular spaces mutually informs the food system that encompasses the processes and stages of "growing, harvesting, packing, processing, transforming, marketing, consuming and disposing of food" (FAO et al., 2018). Locating the food system in the rural space, specifically, communities inhabiting areas by the tributary rivers, the process of eating involves subsistence farming and fishing, and what is farmed and caught from the bodies of water, are cooked and consumed by the communities. Embedded in the spatial memory of these kinds of communities is a food culture and food system based on what they plant and catch from the bodies of water.

Foodscapes are not fixed but are antecedent to the shift and transition of space which effects change in food systems and culture. Mutually informing each other, evolution or shift of space effects re-construction of food production and consumption. These changes are consequential to the re-embedding of a new spatial memory that "modify or extend the nature of the mental map or the spatial form as recorded by the image" because it may fade, and, parts of the spatial image which are not reinforced may very quickly disappear" (Harvey, 1993). The community's memory of their space and what they consume may be replaced by a new one because of a new set of social practices that will proliferate in the space. Moreover, constant exchange with other spaces may also impact a modification of an individual's current social practice in their own space.

In the context of this study, communities living by the tributary rivers are now being re-shaped because of the massive urbanization of neighbouring towns. Because residents of these communities constantly engage in these urban spaces, there is a tendency for them to attempt at aiming for urban goals. As their food culture and food system evolves, this may become the beginning points of embedding a re-constructed food culture and system in their areas. And, because food is knitted within the parlance of economic modes of production, the

rural communities will eventually modify their modes of production that will re-shape their social practice. Constant engagement and exchange of the rural communities with that of the urban may effect the breaking of traditional "economic and cultural forces" because of the blurring of boundaries of spatial limits that can result in the reconstruction of the traditional space's "local construction methods and organizational forms on a larger scale" that includes food culture and system (Zeng et al., 2014). Harvey points out that "social space is not only variable from individual to individual and from group to group; it is also variable over time" (1993). Thus, as more spaces transition to that of urban mode, rural communities, such as that living by tributary rivers, may be forced to change economically and socially, affecting greatly their food culture and food system.

There is nothing wrong with spatial transition, nor economic, cultural and social practice shifts, but what should be remembered is that space is not exactly neutral. Certain spatial goals are the beginning points of the construct of space that aims to achieve an agenda that imposes a kind of economic and political practice. Lefebvre points out that how space is fixed, arranged and built "plays a role at all levels in the relations of production and property… the organization of labour and productive forces, 'superstructures' and representations (ideologies)" (Lefebvre, 1996).

Such spatial goals purport the shaping of the foodscape. Because foodscape also "involves elements of materiality and ideology and are contested spaces where actors struggle to define the terrain of political action" (Johnston, 2009), when space and its spatial goals change, there is no assurance that all individuals will have equal access in economic engagement and production. Struggle in the transitioning space will happen because space contains "active properties that are selected as principles of construction of the social space [with] different kinds of power or capital that are currently in the different field" (Bourdieu, 1985). New spatial goals are implicit in the shaping of a new foodscape that establishes itself as the new capital, "the prestige, reputation, etc… which are perceived and recognized as legitimate" (1985). The economic mode becomes enmeshed with that of the cultural because the food will not be merely rendered as something that is consumed but it will become a concept that is associated with income.

Food selection, production and consumption are discursively constituted in space, thus, when space and spatial goals become that of the urban, the "common sense frames legitimate good taste as universal" (Baumann & Johnston, 2012) which becomes connotative to an urban way of life. In a way, the capital of the rural (economic and cultural --inclusive of their food culture and food system) may diminish because urban goals are inking their way into the rural space's social and economic life. The old modes of production, such as food culture and system, are becoming illegitimate because it is being replaced with urban ways. In such re-construction of economic mode that influences greatly the way people practice food culture and system, a community may be placed at risk. Zeng et al. (2014) note that a space that is transitioning is effaced with difficult food culture and system because of "the danger that

localization is likely to be lost or redefined, or its communication with different cultures can lead to changes in content and structure, which is not conducive."

Approach and method

Barangays Caowayan, Elizabeth and Sawat were previously identified from the flood hazard maps[i] as among the flood-prone barangays in Ilocos Region and La Union Province, Philippines, and located in tributary river areas. These Barangays are surrounded by urbanizing areas in La Union, Ilocos Norte and Ilocos Sur and currently practice subsistence farming. Permission to conduct the study was sought from their respective local Municipal Officials and Barangay leaders. Focus group discussion, using participatory tools: community maps and reflexive sheets, specifically, meta-cards were conducted to 15-20 adults from each Barangays.

For the community maps, the participants from Barangays Caowayan, Elizabeth and Sawat were asked to draw their community maps and were asked to narrate about their everyday life in their communities. Stories they narrated include source of livelihood, everyday chores, and coping mechanisms for food during a typhoon and rainy seasons. What emanated from their stories were their focal concerns on food and their plans to shift from subsistence farming to production. Discussion through meta-cards then was conducted to further probe their stories which elucidated their communities' food system and food culture.

The narrative approach was used to make sense of the data to extrapolate the "sequence and consequence" and to enable organization, connection and evaluation of the gathered data (Reisman, 2005). Thematic analysis was used to "create conceptual groupings" to emphasize the stories re-told by the participants (2005).

Narrative of the rural communities

Overview of the barangays

Located in the Northern Luzon area of the Philippines, Barangays Caowayan, Sawat, and Elizabeth are primarily rural areas. Located in the innermost areas of La Union, Ilocos Norte and Sur, and, surrounded by neighbouring towns that are massively urbanizing, these barangays are primarily into subsistence farming. Some of the residents are into small-scale agricultural production but they cannot compete with other neighbouring barangays who can produce large quantities of agricultural produce. To augment income, some residents of the barangay are into small-scale agricultural production. Many of the adults from these barangays are employed in formal and informal work in the neighbouring urban towns.

All three barangays are sites of upstream tributary rivers (Barangays Caowayan and Elizabeth), and delta tributary rivers (Barangay Sawat). These barangays have a population of below 1000. During typhoon and rainy seasons, these barangays experience massive flooding due to river swelling; and, in the case of Barangay Sawat, water from the South China Sea reaches their houses.

Barangay Caowayan, Burgos, La Union is positioned in the upstream tributary of the Naguilian River. Residents of Barangay Caowayan own most of the land area. Agricultural produce is limited to rice, corn and vegetables for subsistence. Excess vegetables, rice and corn are mostly sold by the women on the main road. Tiger grass is also prolific in this Barangay which is dried by the residents and sold as raw materials to nearby barangays to be made into brooms. The tributary river provides food (i.e., fish, snails, shrimps, etc.) for daily consumption, irrigation, laundry and cleaning their houses. The tributary river is also used for drinking. Many of the residents are employed in the nearby towns, while some work as tricycle and jeepney drivers. River swelling, which occurs during the rainy season, tends to flood the barangay. Please refer to Figure 1. Barangay Caowayan below.

Figure 1 Barangay Caowayan
Note: Left, Barangay Caowayan. Right, Houses in Barangay Caowayan. Right, Farm areas of Barangay Caowayan. Encircled in red are the houses of the barangay residents. Yellow circles are the tributary river.
Source: Google Map, (2018)

Barangay Elizabeth, Dingras, Ilocos Norte is in the area of the upstream, tributary of Laoag River. The residents of this barangay are local migrants who are mostly tenant farmers. The agricultural produce of the barangay is rice and corn that are usually sold in the market. Lowland vegetables are usually produced for subsistence while the excess is sold in the market. Fish, shrimps, among others, come from the tributary which is mostly consumed by the barangay residents. The residents also use the water from the tributary for irrigation, cleaning and bathing animals, and, household chores such as laundry. To augment income, most of the residents are employed as laborers in the nearby towns. Flooding occurs due to river swelling during a typhoon and rainy season. Please refer to Figure 2. Barangay Elizabeth in the next page.

Figure 2 Barangay Elizabeth
Note: Yellow circles are the tributary river and its path. Right, the Center Space of Barangay Elizabeth
Source: Google Map (2018)

Barangay Sawat, Tagudin, Ilocos Sur is a space located in the tributary of the Amburayan River. Barangay Sawat is a delta area or a community surrounded by two tributary flows from the Amburayan River and the South China Sea. Most of the barangay residents own the land which produces calamansi from the numerous farms. Rice and other vegetables are also produced in the barangay for subsistence, while the excess is sold in the nearby market. Barangay Sawat residents also get fish and shrimps from the tributary rivers, as well as other seafood from the South China Sea. To augment income, most of the residents work as laborers in the nearby towns. Flooding occurs due to river swelling, and, made severe by the water flow from the South China Sea. Please refer to Figure 3. Barangay Sawat below.

Figure 3 Barangay Sawat
Note: Encircled in red is Barangay Sawat located in the middle. Yellow circles are the tributary river and the river path. The green circle is the South China Sea.
Source: Google Maps (2018)

Common among the three Barangays is that most of the residents are composed of adults above 50 years old and young children. The residents said that most of the individuals aged mid 20's to late 40's tend to move to the other towns because of work. Most of the residents are in labor work while others are employed in formal and informal work in the nearby towns. Daycare centers are available in the three barangays but children who are in their primary and secondary education have to go to the public schools in the nearby towns.

Their space, food culture and system

The lives of these rural communities circumvent on the natural spaces. Reliant to the natural spaces (land and tributary rivers), these communities are deeply rooted in their space. Most of the residents of Barangays Caowayan, Sawat and Elizabeth are born and raised in these spaces. The economic and socio-cultural lifestyle of these residents are intrinsically linked to the land and river. Residents of the three Barangays say that the main sources of food come from the tributary rivers and the land. Many of them say that everyday life in their respective barangays involves gathering food from the land and from the tributary rivers which are prepared for cooking during meals. Food, as a basic necessity for surviving, shaped the way these communities move in their space. Farming and fishing, as a basic skill of these residents, have shaped their food culture. Please refer to Figure 4. Community Maps of the Three Barangays below. Table 1. Summary of their Sources of Food and Primary Livelihood in the page to follow.

Figure 4 Community maps of the three Barangays
Note: Community Maps of Barangay Caowayan (Left), Barangay Elizabeth (Middle), and Barangay Sawat (Right). Encircled in red are identified as sources of food.

Table 1 Summary of sources of food and primary livelihood of the Barangays

	River tributary and other body of water	**Primary livelihood**		
Barangay		**Land**	**Water**	
Barangay Caowayan, Burgos, La Union	Upstream Naguilian River	-rice -corn -vegetables -farm animals	-fish -snails -shrimps	Farming, fishing, supplying tiger grass to neighboring barangays, men are laborers in nearby barangays, women are maids, vegetable sellers, etc.
Barangay Elizabeth, Dingras, Ilocos Norte	Upstream Laoag River	-rice -corn -vegetables -farm animals	-fish -snails -shrimps	Farming, fishing, men are contractual laborers in the neighboring barangays, women are maids and laundrywomen in neighboring barangays
Barangay Sawat, Tagudin, Ilocos Sur	Delta Amburayan River and the South China Sea	-rice -corn -vegetables -farm animals	-fish -shrimps	Farming, fishing, supplying and selling calamansi, income from family members who work in the city

The food culture of the rural communities is synchronized with the natural spaces. They say that many of them developed additional skills to explore food options. In Barangay Elizabeth, residents narrate that they have learned how to gather, process and eat different types of mushrooms growing naturally in their area. Barangay Caowayan residents gather, clean and cook snails to supplement dietary needs. Residents of Barangay Sawat learned techniques how to catch fish and shrimps when the tributary rivers swell. When there is flooding in their areas, the residents rely greatly on what they can get from the tributary rivers and stored vegetables

and rice. All of them say that food is not exactly scarce even during the rainy and typhoon seasons, but they lack canned goods, noodles and other processed foods which they believe are kinds of food that are necessary for their daily consumption.

The food sources of these Barangays also play a major role in providing income for these residents. To augment income for purchasing other types of food and for paying city services (i.e., electricity, etc.), transportation and schooling expenses of their children, the residents of these communities sell the extra vegetables and fish on nearby roads or in the central markets. Barangay Caowayan residents supply dried tiger grass to neighbouring barangays to be made into brooms. All of the residents said that the income they get from selling is not enough because they cannot supply in bulk.

Though food is abundant in their space, coupled with other uses for what the land can provide, the residents of these rural communities believe that they are poor. They say that life in their space is difficult and challenging. They believe that their lifestyle is backward as compared to that of the neighbouring urban towns. Even with the abundance of food (from the land and tributary rivers), these barangay residents say that they experience a lack of food. They explain that they cannot afford other food supplies, such as canned goods and other preserved foods.

Their perceived "lack of food" is grounded on the belief that what they eat on a daily basis is limited to what is available in their land and river tributary. They say that they need to work in the neighbouring urban areas so they can purchase food sold in the market. Thus, their perceived notions of poverty are not only anchored on the perception of lack of food but are attributable to the power to purchase food sold in the neighbouring urban areas.

Shifting space, food culture and system

Residents of these rural communities have frequent engagement in the neighbouring urban towns for selling their products and as employees in formal and informal work. The barangay residents say that it is easier for them to work in the urban towns because they get paid which enables them to purchase other food and services. Primary to tertiary education is not available in their barangays, thus, most of the schooling children and youth attend school in the neighbouring urban towns.

Constant engagement in the urban spaces exposed these barangay residents to a different kind of life. According to them, they are already planning to shift from subsistence farming to agricultural production. Barangay Elizabeth plans to produce more lowland vegetables to supply and sell in the market, Barangay Sawat wants to develop their calamansi farms while Barangay Caowayan wants to focus on drying tiger grass and develop skills for broom-making.

The newfound need to shift to agricultural production and entrepreneurship is, by and large, re-shaping their food culture. Rural areas tend to be situated in the battle between "farm versus food system focus… wherein rural areas focus on farming but are drawn into commodity

production, being the first link in increasingly complex food value chains" (Lang & Barling, 2012). Residents of the rural communities explain that the practice of producing food to supply to the urban areas is perceived as more prolific because subsistence farming is tiring and costly for them. Their plans to shift to agricultural production, through mono-crop farming, they say, is easier because producing multiple crops entail varied farming approaches. Hinged on their new vision towards agricultural production, "appropriation of agricultural resources for capitalist consumption relations is realized through an expanding foundation of human impoverishment and displacement and the marginalization of agrarian/food cultures" (2012).

Subsistence farming, as part of their food system, will eventually change because they need to focus on producing food for income. Given the adjustment necessary to adapt to agricultural production, food preparation and eating will transition. Rural communities are experiencing marginalization because their food culture is deemed as un-useful and inappropriate in an urbanizing and globalizing country because of new demands for metropolitan food consumption. Labour for agricultural production demands time, thus, food preference of the rural communities will have to shift and will alter their communities' food system, from the traditional and simple (farm/catch, produce, consume) to that of a long and complex food system (farm/catch, produce, derive income, consume). Given that they lack skills in agricultural technology and entrepreneurship, income is not an assurance to be able to purchase sufficient food for their families.

Food culture and system shift in the rural communities are made severe by the effects and consequences of biodiversity loss. Lang and Barling note that the reliance of rural communities for food and other uses is also diminishing because of "strong evidence showing the biodiversity loss from modern farming systems, the water stress from undue reliance on irrigation, the implications of exponential growth in animal production, etc." (2012) that impress upon them the need to find another food culture. Because these rural communities' water supply does not come from main rivers, (Barangay Caowayan - from Naguilian River; Barangay Elizabeth - from Laoag River; Barangay Sawat - from Amburayan River), the waters that run in their community are more polluted. Even if these barangays care for their river tributaries, communities in the upland main river areas may not exactly practice the same. Thus, the dirt and other sediments from the main rivers flow into their areas, diminishes the quality of water which may hinder large agricultural produce. Moreover, unpredictable flooding, due to river swelling, may also impede production. In a way, food that may be produced in these land areas may be of low quality in the future. Given such conditions, farming subsistence as food culture and system of these communities may be erased because the land cannot produce enough food to eat for the community residents in the future.

Shifting identity of food and communities

In their current food system and food culture, these communities have a coherent conception of the materiality and ideology of food. Represented by fish, vegetables, and other provisions from the land and tributary rivers, the materiality of food is very much connected to consumption and provision of nutritional needs. But, in the advent of the transition from subsistence to production, the meaning of food as a concept will evolve. Food's materiality will now become associated with conceptions of commodity because what these communities will get from the land and river tributaries will be allotted for selling. As such, food's ideological concepts will be hinged on income. Re-formatting food as a commodity becomes a problematic frame of reference. Unfounded is the associative concepts of food that pertain to sustenance, nourishment, and the like. Food, as a basic need then is now replaced by associative concepts of commodity and income.

Because food is taken from the land and river tributaries, and, both natural spaces are useful for these barangays, these communities may be forced to maximize their natural spaces to meet the demands of the market. Currently, these rural communities have a strong mutual relationship with their tributary rivers and land. The participants say that because the land and tributary rivers provide food for their daily consumption, they make sure that these natural spaces are cared for and maintained. They say that though threatened by flooding and other possible natural disasters in their areas, the benefits they get from both tributary rivers and land outweighs all these natural threats. Figure 5 below and Table 2 on the next page provide a summary of perceived benefits and threats identified by the Barangay residents on the following page.

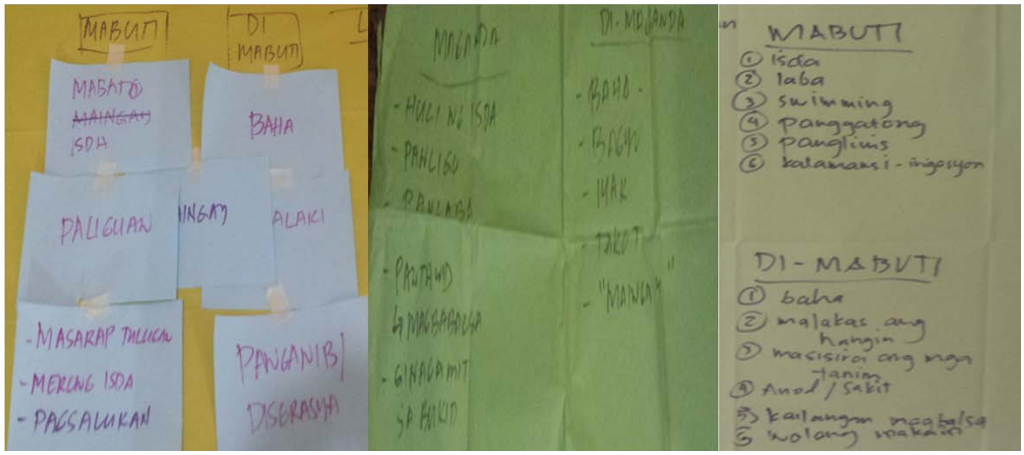

Figure 5 Meta-cards[ii] of the Benefits and Threats of the Tributary Rivers
Note: Left, Meta-Cards of Barangay Caowayan. Middle, Meta-cards of Barangay Elizabeth. Right, Meta-cards of Barangay Sawat.

Table 2 Summary of benefits and threats of the tributary rivers

Barangay	Benefits	Threats
Caowayan	• *Mabato [English translation-rocky*] - they use the rocks as foundation in their houses and for making pathways • Bathing • For sleeping near the tributary river area • Water for household chores • Fish, snails, shrimps, etc. for food	flooding
Elizabeth	• fish, among others, for consumption • irrigation • crossing to the other barangays • everyday household chores • bathing	flooding
Sawat	• irrigation for calamansi trees • fish, among others, for consumption • water household chores • bathing and swimming	flooding

Upon taking into the urban food culture, a new spatial schema will also be practiced. Natural spaces, such as land and bodies of water, will be relegated to the role and identity of utility which will be accounted for its usefulness and serviceability. Given the biodiversity loss, these communities may not exactly produce huge quantities of vegetables, fruits, fish and shrimps. Another consequence faced by these communities is the competition in agriculture which will occur at varying levels: 1) between neighbours in a single community, 2) between other barangays or communities, and, 3) other provinces and regions at the national level. As such, any of the three levels of struggle and competition may be more detrimental for these communities because of the imperative to produce in larger quantities.

Conclusions

The route towards food insecurity of rural communities

The shift in the foodscape of these rural communities, enmeshed with their new economic goals, is consequential to food insecurity. Though these rural communities have abundant natural food supply now, biodiversity loss and unpredictable climate place them in a vulnerable position wherein production is difficult to predict. Further, given the limitations in their current skills, what may be magnified in the future is economic displacement, and struggle in their own rural spaces. McMichael (2005) explains that the geopolitical ordering of national and international food policy presents “new circuits [which] relentlessly displace small farmers

into an expanding circuit of casual labour." Economic revolution in the global and national contexts forces these rural communities to re-appropriate their land and water for production. This, in turn, will modify their food culture identity because of the pressing need to become fully engaged in the new food system.

When space and food culture and system change, the social practice of the rural communities will slowly diminish and will become exchanged with the new one. A new spatial schema will be in the spatial memory of these rural communities which may be a route towards food insecurity of these rural communities. The transition from rural food culture and system to that of the urban forces the rural areas to move away from the original conception of food, which is for sustenance, to perceiving it as a utility that can be used for economic competition. In such a shift of material and ideological meaning of food, natural spaces (i.e., tributary river, land, etc.) will be relegated as a utility. Thus, there may be a severing of relations between natural spaces and the communities because they will be left with no choice but to maximize these spaces for more income.

The shift in foodscape then becomes a discursive constitution of legitimizing the urban food culture. The food culture and system of these rural communities will become part of the hegemonized culture of food which entails nutrient transition and re-socialization of the stomach to become conformal to the new modes of production. This actualizes food insecurity among these communities, whose basic need for eating now entails purchasing, in which, there is no assurance of the power to purchase.

Engulfed in a spatial battle for food, these rural communities may find themselves in a space, with their ambiguous food culture and food system identity. And, in this narrative, food is not a matter of survival in space… but a matter of struggle in space.

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[i] Flood hazard maps were constructed by the Phil-LiDAR (Light Detection and Ranging) technology of the University of the Philippines Baguio LiDAR-DOST Team headed by Dr. Chelo Pascua. The project's goal is to monitor risk and hazards of communities living beside tributary rivers.

[ii] In the Meta-cards: Mabuti [in English, good]; Di-Mabuti [in English, not good); Maganda [as a direct translation, means beautiful. Based on the usage and context of the participants, this word means mabuti or good).