

Caroline Talis
La Follette High School
Madison, Wisconsin, USA
Peru, Indigenous Malnutrition

Peru: Ancient Techniques for Contemporary Solutions

Peru is a country of 72 languages and dialects (“Language Data for Peru”). It is known for its beautiful Andean landscapes, where the capital of the Incan empire, Cuzco, can still be found. Tourists from across the world travel to Peru to get a glimpse of Machu Picchu, a feat of indigenous architecture dating to the 15th century, which is one of the seven wonders of the world. Yet, Peruvian indigenous communities presently are facing a growing malnutrition and food insecurity crisis that is not faced by non-indigenous Peruvians. By restoring bygone indigenous agricultural practices and biodiversity, rural communities in Peru, with global support, could work locally to address food shortages while revitalizing sustainable traditions that build connections to cultural heritage.

Introduction

Located in the tropics of South America, Peru is a country of diverse climate zones. The most important geographic regions are the Pacific coast, the Andes Mountains, and the Amazon rainforest (Torero and Escobal 8). A quarter of the 32,440,172 total population of Peru is indigenous, with the majority of the indigenous population of Peru living in the Andes and the Amazon rainforest (“Peru-The World Factbook”). The total population is 78.2% urbanized, with most cities located on the Pacific Coast. This diverse landscape is governed by a representative democracy nationally in the capital of Lima on the Pacific Coast with the aid of 25 regional governments to resolve local issues (“Peru-The World Factbook”).

Cities are places of economic opportunity. Meanwhile, in rural indigenous areas, much of the population is impoverished, complicating the delivery of basic human services such as healthcare. One in two indigenous communities is more than an hour away from the nearest health facility (Hernandez-Vásquez et al. 17). In the border of the Loreto region, the location of the largest population of indigenous Peruvians in the Amazon, communities are typically more than four hours away from the nearest health facility (Hernandez-Vásquez et al. 17).

Over a quarter of Peruvians work in the agricultural sector despite limited amounts of land available for agriculture, with only 13.3% of land used for this purpose (“Peru”). Agriculture is projected to grow 3.3% every year (“Peru-The World Factbook”). Peru’s main agricultural products are potatoes, rice, and plantains, yet 80-90% of food energy consumed in Peru comes from crops not native to the region (“Peru”). In 2021, Madai Urteaga Quispe, a doctoral candidate in Comparative Politics at Harvard, described agriculture in Peru as the “neglected sector” due to the declining income of local farmers and a shift toward large-scale farms on the coast rather than smallholders across the country, who are often indigenous.

Family size is usually larger in indigenous communities than in urban areas, ranging from four to five children (“Peruvian Culture”). Indigenous extended families are often close-knit because they belong to a common *ayllu* that shares the same land and community. To manage this land, many children have to leave school to farm. Family diets consist of protein from fish and game, and crops from gardens, such as garlic, onions, and rice (Rondoni 13). Local staples include potato and cassava, two crops that originated

in the Andes. Yet, this food intake is not guaranteed, and many indigenous families worry about food access.

Historical Context

Spanish conquistadors arrived in Peru in 1532, resulting in a loss of life, culture, and sovereignty for indigenous Peruvians. Spanish influence favored crops such as potatoes over ancient grains for various reasons, including the spiritual attributes indigenous people associated with these crops. Even after Peruvian independence in 1821, a divide existed between those who adopted Spanish culture and those who maintained indigenous traditions (Nelson 2). This is reflected in modernity, where those in the cities of Peru have easy access to food and economic advantages. Meanwhile, data from 2015, reported by Minority Rights, estimates malnutrition in children of indigenous Shawi communities in the Amazon may be as high as 56%, more than double the rate for non-indigenous children (“Peru: Hunger and Malnutrition”). Additional evidence of the divide can be found in the Quechua community of Ancash, where, based on a Food Insecurity Experience Scale survey, “food insecurity in the Peruvian Quechua population in Ancash was found to be 52.1% compared to Peru’s overall population which was 27.5%” (Motz 42). Even more alarming, a 2021 study found the Quisqui people in Huanac reported that 73% of their community worry about a lack of food (Zimmerer et al. 10).

Current Situation

Malnutrition, one of the major effects of food insecurity, leads to many negative health outcomes and conditions. Anemia, growth stunting, and other conditions are present in indigenous communities. Some experts have suggested that anemia is present in up to 70% of children in some Quechua communities (Motz 26). This is especially concerning when considering the lack of healthcare access in the most remote areas.

“Right now, we are zero, zero of food, we have no food. We have to buy from those who bring from the farms where it has not flooded because nearby it has completely flooded and has taken six months and totally, already destroyed all the *mashkis*,” said a 53-year-old Kukama Kukamiria man in 2021 (Lastra Landa and Grados Bueno 225).

Flooding is a major cause of indigenous food insecurity and malnutrition. Surveys of the Shawi community found that severe flash flooding annually between the months of September-October or March-April, that cover fields of plantain, cassava, peanut, or maize have the potential to reduce crop yields and force farmers to move to higher ground (Zavaleta et al. 15). The situation only grows worse as climate change progresses. In the Quisqui community, interviewees expressed concerns about unpredictable rainfall, weather extremes, and changing seasonality attributed to climate change (Zimmerer et al. 19). Indigenous people have noticed higher temperatures and more severe droughts and floods, associating these troubling weather patterns with a lack of food in almost all surveys.

Climate and weather are not the only factors that contribute to food insecurity. The indigenous communities of Peru face socioeconomic barriers as well. Due to the pandemic, 2021 food prices went up, making wages worth very little (Manzano Chura and Li). For this reason, indigenous people produce cash crops or engage in deforestation to make a living and afford to educate children. The Shawi report that cash crops, such as cocoa and coffee, were an important alternative source of income (Zavaleta et al. 20). However, to produce cash crops farmers cut down trees to make room for agricultural products. Sometimes, indigenous people sell trees to illegal logging enterprises (Zavaleta et al. 18). All of these

practices cause erosion, loss of soil nutrients, and other impacts that worsen floods and lower agricultural yields. In this manner, food insecurity is a driver of deforestation.

At the same time, predatory oil companies continue to extract resources from the Amazon with severe ecological consequences. Forests have been cleared for roads, and an estimated 3 million barrels of wastewater have been released into water sources (Rondoni 6). The result of this is lower yields, erosion, and contamination of food sources. Along with other causes, this creates a multifaceted problem.

Solutions

Important solutions are evident in these communities. Indigenous agricultural techniques, many of which were lost throughout colonization, provide environmental benefits that could ensure the food security of these communities. Ethnographic research through interviews and field observations in indigenous communities in Peru found evidence of a recovery of the traditional practice of mixed crops, or intercropping (Parraguez Vergara 10). Intercropping is the planting of two or more species in the same area, often in alternating rows (Parraguez Vergara et al. 10). Intercropping can fertilize the soil, provide natural pesticides, and retain water, all of which can increase yields and create more resilience to extreme weather. Surplus yields that are not eaten by the local community can be sold in markets (Parraguez-Vergara et al. 10).

In addition, raised fields, or fields that have been elevated through the transfer of earth, have been reconstructed based on archeological findings in the Lake Titicaca region. Among the many benefits of raised fields are the doubling of topsoil, natural drainage, and water conservation, barriers to pests, and an average production that is almost twice the average production in Peru (Erickson and Chandler 234, 240). The most astonishing part of this research is that this practice had been entirely forgotten and phased out in favor of Western agriculture (Erickson and Chandler 241). The potential ecological and community benefits of these practices could restore the Peruvian environment and provide food security.

Peruvian non-governmental organizations (NGOs), such as Proyecto Andino de Tecnologías Campesinas (PRATEC), have done work in “the recovery of memory” for these practices to refocus indigenous people in agricultural production (Quayle 7). This organization has long advocated for these solutions. PRATEC, however, has not been supported by the Peruvian government, dampening the organization’s efforts. Global partners could further support these efforts.

Rediscovering native crops and biodiversity adds to the benefits of looking backward in time for solutions. Native crops such as quinoa, kiwicha, tarwi, and kaniwa are rich in fiber, oils, macronutrients, and vitamins (Lakkala et al 6). Native to the Andean region, these crops are also highly adaptable to the unpredictable climate of the Andes and could offer nutritious quality to indigenous people and the whole country (Lakkala et al. 20). These plants have adapted to survive flooding seasons. Quinoa, a widely recognized superfood native to Peru, is beneficial because of its high tolerance to adverse climates and poor soils (Ruiz Carrasco et al. 7). “Quinoa is a family heritage; knowledge is acquired from the parents who have cultivated it since their childhood” (Ruiz Carrasco et al. 10). A small-scale study of the Awajún community found that “greater diversity was associated with higher intakes of dietary protein, fiber, iron, thiamin, riboflavin and vitamin A among women and children” (Roche et al. 463).

The Peruvian government has shown support for distributing nutrition to improve food security. However, the measures have fallen short by providing unfamiliar proteins and lacking cultural awareness (Zavaleta et al. “Indigenous Shawi Communities”). For example, in a survey of the Shawi community, it was found

that government food programs regularly provided rice, milk, and oil despite the fact that the preferred diet of people of the region is comprised of bushmeat, fish, plantain, and cassava (Zavaleta et al. “Indigenous Shawi Communities”). Further, the study found that some Shawi people were misclassified as “food secure” by government programs as a result of cultural misunderstanding of livestock practices because family livestock is rarely eaten (Zavaleta et al. “Indigenous Shawi Communities”).

Education programs that respect the indigenous languages and traditional diets will help in agricultural reform. Restoring traditional practices provides food sovereignty and reverses some of the losses from colonization (Quayle 1). These practices can be revived in communities through government support of PRATEC and initiatives without reliance on food imports. The ecological benefits of the practices adapt the food sector to weather extremes from climate change. The Peruvian government can support this initiative with limited cost because the practices require limited technology as they have existed for thousands of years. Peru’s significance to global health and climate provides it leverage in obtaining support from outside its borders. Organizations such as the World Bank, which provides funding to low and middle-income countries that are developing industries, could support funding if necessary. The project could pay for itself because yields could be exported, meeting global trends toward vegetarianism and healthy foods (Lakkala et al. 20).

Conclusion

Indigenous communities in Peru confront a dire reality: unjust food insecurity and malnutrition, which is destroying communities and natural resources vital to the planet. This crisis provides a unique opportunity to decolonize development and restore thousand-year-old sustainable agriculture that has been forgotten in modernity. Embracing these techniques would allow these communities to restore and develop their own culture and solve issues in their communities on their own terms, a luxury that has been stolen from them for hundreds of years.

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