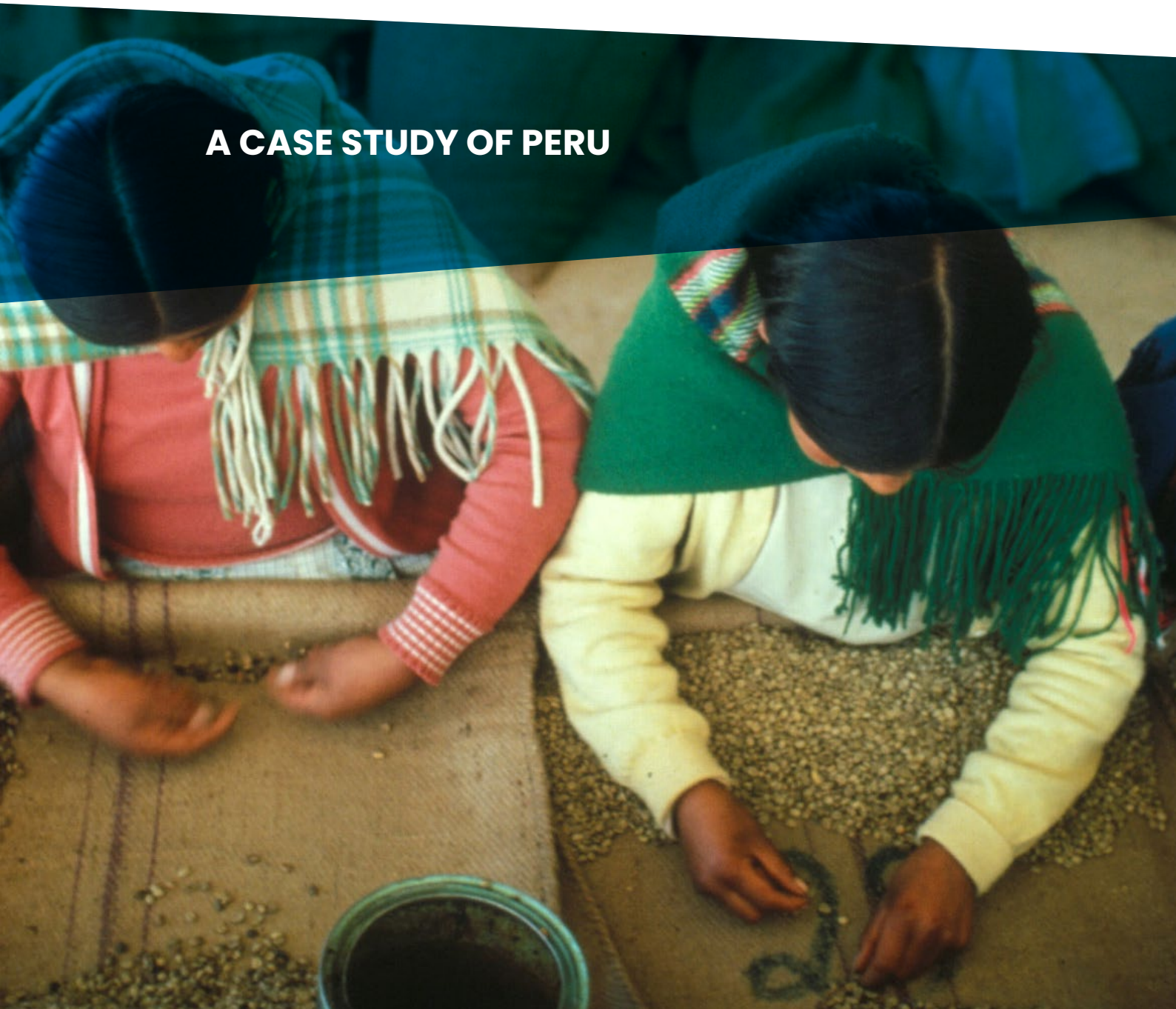
Food and Agriculture Organization of the United Nations

LEVERAGING SOCIAL PROTECTION AND ECONOMIC INCLUSION INTERVENTIONS FOR AGRIFOOD SYSTEM TRANSFORMATION

A CASE STUDY OF PERU



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A CASE STUDY OF PERU

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Contents

FIGURES

TABLES

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Abbreviations and acronyms

CIRAD	Agricultural Research Center for International Development
EC	Executive Core
EU	European Union
FONCODES	Social Development Cooperation Fund
GDP	gross domestic product
GHG	greenhouse gas
HW/NJ	Haku Wiñay / Noa Jayatai programme
INEI	National Institute of Statistics and Informatics
JUNTOS	National Direct Support Programme for the Poorest
MIDAGRI	Ministry of Agricultural Development and Irrigation
MIDIS	Ministry of Social Development and Inclusion
PEN	Peru nuevo sol
PNDIS	National Policy for Social Development and Inclusion
PPP	purchasing power parity

Introduction

This case study is one of five undertaken by the Food and Agriculture Organization of the United Nations (FAO) and the Department of Science and Technology/National Research Foundation Centre of Excellence in Food Security (CoE-FS) at the University of the Western Cape, South Africa. These studies aim to understand the role of social protection programmes' design, outcomes and impacts on food system transformation. The overall purpose is to elaborate a theory of change that links social protection to food system transformation. These results will inform the development of a conceptual framework for FAO.

The above-mentioned country case studies explore the various links between social protection and the expected outcomes of an inclusive and sustainable food system: (i) improving food security and nutrition; (ii) providing adequate livelihoods for farmers and food producers; and (iii) contributing to environmental sustainability. These reports aim to provide context-specific evidence and draw lessons from the interaction and the effects that social protection interventions may have on the food systems.

To meet this objective, the study of Peru focuses on the analysis of two public policy interventions and their interaction with the food systems' elements, actors, and outcomes. The first intervention refers to the National Direct Support Programme for the Poorest (JUNTOS), a conditional cash transfer programme implemented in 2005 to break the intergenerational transmission of poverty by providing the rural vulnerable population with access to essential goods and services. The second intervention is Haku Wiñay/Noa Jayatai (HW/NJ), a programme launched in 2012 to promote the economic inclusion of vulnerable groups in rural areas. The study analyses the interaction between these programmes from a food system perspective.[1]

This study's methodology consisted of desk work, complemented by expert interviews. The first stage covered a literature review and data analysis on the current state of social protection and economic inclusion policies and programmes in Peru. This included the revision of the report on *Catalysing the sustainable and inclusive transformation of food systems* jointly elaborated by the Government of Peru, FAO, the European Union (EU) and French Agricultural Research Centre for International Development (CIRAD) (MIDAGRI, FAO, EU and CIRAD, 2021).[2] The second stage consisted

1 The other studies considered other social protection programme categories: a national payment for environmental services programme in Bangladesh; a national home-grown school feeding programme in Kenya; a national public works programme in South Africa; and a national social insurance scheme in Tunisia.

2 Since 2020, the European Union, FAO and CIRAD have established a partnership with governments and stakeholders to initiate a large-scale assessment and consultation on food systems in more than 50 countries, as a first step towards transforming them. This initiative gathers global and country-level evidence and knowledge in support of the transition to more sustainable food systems, centred on four core goals: food security, nutrition and health; inclusive economic growth; territorial development and equity; and the environment (FAO, EU and CIRAD, 2021).

of key informant interviews with four country experts in social policy and rural development.

This report is divided into four sections. The first section presents an overview of the social and economic situation in Peru, including a brief review of the state of poverty and food security. The second section introduces the general notion of food systems, its elements and links, and discusses Peru's food system challenges. The third section introduces the JUNTOS and HW/NJ programmes and discusses their relationship with these challenges. The last section presents the concluding remarks on the potential role that social protection and economic inclusion policies and programmes can have in promoting the transformation of the food system in Peru.

1. Economic and social outlook

1.1 Economy and territory

Peru is an upper-middle-income country located in the west of South America, with a population of 33 million. It ranks sixth among the economies of Latin America and the Caribbean, with a gross domestic product (GDP) per capita of almost USD 12 000 (purchasing power parity, PPP) (World Bank, 2022a). Half of its population are women, 80 percent are urban, 45 percent are employed, and 26 percent are Indigenous Peoples[3] (INEI, 2022a; Ministry of Culture, 2022).

Peru's economy grew steadily during the first two decades of the century, only to be interrupted by the effects of the COVID-19 pandemic. Between 2000 and 2019, the GDP expanded at an annual average rate of 4.8 percent (INEI, 2022b). In 2020, the GDP decreased by 11 percent, because of the economic disruptions in production, employment, and trade, caused by the public health measures introduced to mitigate the spread of the COVID-19 pandemic (INEI, 2021a).

Data from the National Institute of Statistics and Informatics (INEI) (INEI, 2018 and 2022b) show that Peru's economy is dominated by the service sector. This sector represents 61 percent of the GDP and employs approximately 60 percent of the economically active population. The industrial sector accounts for 32 percent of the economy and employs 16 percent of the occupied population. Agriculture represents 7 percent of the economy and 24 percent of total employment. While agriculture's share in the GDP is low, it is key for the rural economy as three out of four economically active people in rural areas work there.

The informal sector in Peru is highly relevant to the economy. According to data from INEI (2022c and 2022d), one-fifth of the GDP comes from that sector. Employment in informal activities accounts for 72 percent of total employment, with sharp differences between sectors: informal employment is highest in agriculture (96 percent) and lowest in services (64 percent).

In terms of territory, Peru's mountainous relief of the Andes produces a varied topography that gives rise to diverse climates, landscapes, and ecosystems. The country is divided into three natural regions: the Coast, the Andes and the Amazon (Figure 1). The coast covers 12 percent of the territory and concentrates 58 percent of the population. It consists of a narrow and long strip parallel to the Pacific Ocean, characterised by flat geography, low altitude and an arid climate. The Andean region

3 It refers to the population aged 12 years or above who self-identifies with one of the distinct Indigenous Peoples in the country.

Figure 1. Natural regions of Peru

Source:
Ministry of Agricultural Development and Irrigation (MIDAGRI). 2023. *Regiones naturales del Perú [Natural regions of Peru]*. Lima, MIDAGRI. Cited 15 March 2023. https://www.midagri.gob.pe/portal/images/minag/rrnn_mapa8regionnat.jpg, modified to United Nations map geodata, version 2020.

represents 28 percent of the territory, concentrates 28 percent of the population, and is characterised by a mountainous landscape with high plateaus and valleys. The Amazon covers most of the territory (60 percent), is home to 14 percent of the population, and is characterised by tropical vegetation and forested mountains (MIDAGRI, 2022). Forests cover almost 60 percent of the national territory and are primarily concentrated in the Amazon. The rich biodiversity in the Peruvian Amazon situates Peru in the top ten countries with the highest biological diversity in the world (FAO, EU and CIRAD, 2021).

1.2 Poverty, food security and nutrition

Almost 10 million Peruvians lived in poverty in 2020, a number that fell to 8.6 million in 2021. This is equivalent to 25.9 percent of the total population living in households whose per capita income is below the national poverty line. Economic inequality has declined in the last two decades but remains high, as in many Latin American countries (World Bank, 2022a). The Gini coefficient reached 0.46 in 2020, the same level as the regional average (ECLAC, 2022).

Poverty is considerably higher in rural areas, where about 40 percent of the population lives in poverty, compared to 22 percent in urban areas (Table 1). Elevated poverty levels in rural areas mean that the share of the rural population in total poverty is close to 30 percent.

Poverty rates vary by geographic region and ethnic origin. The poverty rate in the Andean region is slightly higher than 32 percent, followed by 22 percent on the coast and 26 percent in the Amazon. Also, poverty is higher among Indigenous Peoples than in the non-Indigenous population.[4] According to the INEI (2022e), poverty is significantly higher among the self-identified Indigenous population (31 percent) compared to the population self-identified white (24 percent) or mestizo (22 percent). Similarly, poverty is more elevated among people who speak an Indigenous Peoples' language than those who speak Spanish (32 percent versus 24 percent).

Table 1. Evolution of poverty in Peru by area, 2010–2021

National poverty headcount rates, percentages

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
National	**30.8**	**27.8**	**25.8**	**23.9**	**22.7**	**21.8**	**20.7**	**21.7**	**20.5**	**20.2**	**30.1**	**25.9**
Geographic area												
Urban	20.0	18.0	16.6	16.1	15.3	14.5	13.9	15.1	14.4	14.6	26.0	22.3
Rural	61.0	56.1	53.0	48.0	46.0	45.2	43.8	44.4	42.1	40.8	45.7	39.7
Natural region												
Coast	19.8	17.8	16.5	15.7	14.3	13.8	12.8	14.4	13.5	13.8	25.9	22.1
Andes	45.2	41.5	38.5	34.7	33.8	32.5	31.7	31.6	30.4	29.3	37.4	32.5
Amazon	39.8	35.2	32.5	31.2	30.4	28.9	27.4	28.6	26.5	25.8	31.0	26.4

Source:
National Institute of Statistics and Informatics (INEI). 2022e. Evolución de la pobreza monetaria 2010-2021. Informe Técnico [Evolution of monetary poverty 2010-2021. Technical report]. Lima, INEI. https://cdn.www.gob.pe/uploads/document/file/3288636/Informe%20T%C3%A9cnico.pdf?v=1655994670

4 Peru uses two criteria to categorise its population according to ethnic origin. It considers individuals› self-identification with a specific ethnic group (native origin, African descent, mestizo, or white) or individuals› language learned in childhood (such as Spanish, Quechua, Aymara, or Amazonian native languages).

In 2021, 4.1 percent of the population (i.e. 1.3 million people) was extremely poor.[5] Extreme poverty showed similar patterns to total poverty: it is higher in rural than in urban areas (12 percent versus 2 percent) and higher in the Andes than on the coast (8 percent versus 2 percent).

Poverty significantly increased as a result of the COVID-19 pandemic. Roughly 2.6 million additional people fell into poverty between 2019 and 2021, as total poverty went from 20.2 percent to 25.6 percent. Similarly, extreme poverty increased from 2.9 percent to 4.1 percent in that period. Although poverty and extreme poverty remained high in rural areas of the Amazon and the Andes, the most significant increases in incidence were observed in the urban areas and the coast after the pandemic.

In the 2019–2021 triennium, 8 percent of the population suffered undernourishment and 51 percent from moderate or severe food insecurity (FAO, IFAD, UNICEF, WFP and WHO, 2022). This means that 2.7 and 16.6 million people, respectively, experienced hunger and food insecurity. Current levels represent a 12 percent and 8 percent increase compared to the pre-COVID-19 pandemic levels of the 2017–2019 triennium.

Child undernutrition have significantly reduced in the last two decades. Between 2000 and 2019, stunting dropped from 31 percent to 12 percent, underweight from 5 percent to 2 percent, and wasting from 1 percent to 0.4 percent (UNICEF, WHO and World Bank, 2021). This progress in the fight against malnutrition diverges from the current trends in overweight and obesity. Child overweight has remained at around 8 percent in the last decade, whereas adult overweight has increased from 45 percent to 56 percent between 2000 and 2016.

5 The extreme poverty rate in Peru was 5.8 percent in 2020, according to the World Bank's international poverty line of USD 2.15 a day (2017 PPP).

2. Food system challenges

Food systems are extensive networks made up of everything – and everybody – involved in producing, storing, packing, processing, distributing, marketing, consuming and disposing of food, including the social, political, economic, legal and environmental systems (FAO, IFAD, UNICEF, WFP and WHO, 2021). At the core of the food system lie three elements: food supply chains, food environments and consumer behaviour. The interaction between these elements plays a fundamental role in delivering affordable, safe, and sustainable diets, and ultimately has impacts on the food system outcomes, including food security and nutrition, health, livelihoods, social or territorial equity,[6] and environmental sustainability (see Figure 2). External factors or drivers such as economic shocks, conflict, climate variability, sociodemographic changes and institutional frameworks also influence these outcomes.

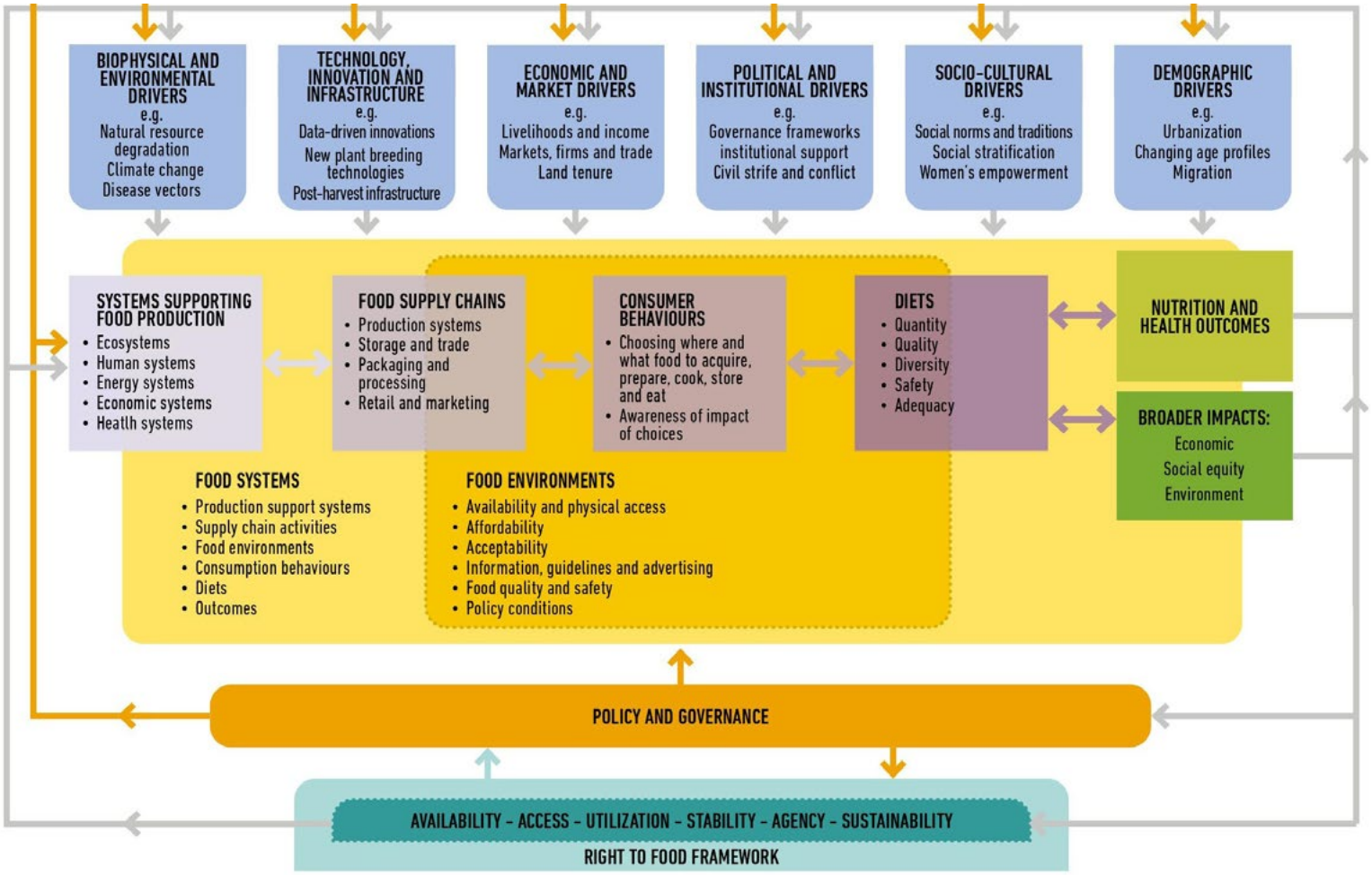
Understanding the complex interactions between the drivers, elements, and outcomes is central for food system transformation. It is also essential to recognize the potential synergies and trade-offs occurring within the food system and between it and other systems –such as the environmental, health and social protection systems. The analysis presented below thus adopts a food system approach aiming at providing an integrated perspective of the Peruvian food system and identifying policy entry points for a food system transformation.

2.1. The food system in Peru

Peru's food system falls into the "informal and expanding" category according to the food system classification proposed by Marshall *et al.* (2021). Broadly, this category is predominantly characterised by higher input use and yields than in a rural and traditional food system. Medium and large production units are in the initial stages of development. In addition, modern food supply chains are primarily associated with producing, processing, and distributing grains and other dry foods. The fresh food chain remains mostly traditional because of the lack of infrastructure and cold chains. Processed foods are available in urban and rural areas. Supermarket and fastfood chains are expanding rapidly and are accessible to middle-income consumers. Animal-source food, fruits and vegetables come predominantly from informal markets (FSD, 2022).

6 The joint FAO, CIRAD, EU Food Systems Assessment initiative includes a territorial dimension in the core food systems goals. This dimension refers to the food system's contribution to stability and equity among the system actors, through balanced power distribution and territorial development. For more details, see David-Benz *et al.*, 2022.

Figure 2. Sustainable food system framework



Source:
High-Level Panel of Experts (HLPE). 2020. Food security and nutrition: building a global narrative towards 2030. A report by the High-Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. HLPE Report No. 15. Rome, FAO. https://www.fao.org/3/ca9731en/ca9731en.pdf

The UN Food Systems Summit, held on 23 September 2021 in New York, United States of America, opened an opportunity to reflect on the role of food systems transformation in improving food security and nutrition, living conditions and environmental sustainability. Leveraging this opportunity, the Government of Peru conducted a comprehensive analysis of its food system to identify challenges and policy entry points. The Ministry of Agricultural Development and Irrigation (MIDAGRI), with the support of FAO, the European Union, and CIRAD (MIDAGRI, FAO, EU and CIRAD, 2021), identified four challenges: (1) smallholder farmers' low productivity and limited market access; (2) high rates of malnutrition and food insecurity; (3) increasing vulnerability of areas with high biodiversity; and (4) the food system's weak governance and low inclusiveness. The following subsections summarise the main findings of this report.

2.1.1. Smallholder farmers face low productivity and limited market access

Peru's agricultural sector is characterized by a highly asymmetric structure. On the one hand, many small-scale producers with low productivity levels face significant barriers to accessing product and financial markets and produce principally for the domestic market. On the other, a small number of large producers exert considerable market power in the food supply chain and produce predominately for the foreign market.

According to the latest National Agricultural Census, more than 95 percent of the 2.2 million farms in the country are run by subsistence family farmers. Thus, most of the agricultural activity is developed in small units of production: almost 70 percent of the production units have less than 3 hectares and concentrate on 16 percent of the total agricultural land. In contrast, 2 percent of production units have 50 hectares or more and concentrate 39 percent of farmland.

Smallholder farmers typically operate in low-productivity systems and have limited access to markets, which translates into low profitability and household income. The leading causes of the low profitability of agricultural production in Peru are the elevated levels of land fragmentation, lack of property rights, and limited associativity between farmers. Many producers report difficulties in selling, renting, or using their properties as collateral because of the legal framework established under the agrarian reform of 1969 or the lack of a title to land. They also report limited access to financial markets and technical assistance and high dependence on weather conditions (e.g. beginning and duration of the rainy season).

As a result, low productivity typically translates into low income and exclusion. MIDAGRI, FAO, European Union and CIRAD (2021) report that almost 75 percent of family farmers do not generate sufficient revenue to pay for a basket of essential goods. FAO (2023) estimates that the poverty rate is considerably higher among agricultural producers (more than 40 percent) than among workers in other agrifood system sectors, such as food processing and non-food agricultural manufacturing (approximately 10 percent), which usually employ the population in urban and semi-urban areas.

2.1.2. High rates of malnutrition and food insecurity

Access to healthy diets varies across the territory because of high poverty levels and the rapid expansion of the food industry, especially in urban areas. Poverty limits access to nutrient-dense food because these diets tend to be more expensive. FAO, the International Fund for Agricultural Development (IFAD), the United Nations Children's Fund (UNICEF), the World Food Programme (WFP) and the World Health Organization (WHO) (2023) report that a healthy diet (i.e. a diet that provides sufficient calories and nutrients and involves food intake from various food groups) is unaffordable to 26 percent of the population in Peru.[7]

In addition, the production and distribution of traditional and local foods compete with a food industry with greater distribution and marketing capacity. The sector has better transportation and storage infrastructure, which allows it to reach a large part of the territory with relatively low prices, mainly in urban areas.

Poverty, inequality, and the rapid expansion of supermarkets have contributed to changes in diets that favour the consumption of energy-dense food over nutrient-rich food that is generally produced locally. As a result, food security and nutrition have been affected differently in rural and urban populations. Anaemia and undernutrition are more frequent in rural areas, while overweight and obesity are more prevalent among adults in urban areas.

2.1.3. Increasing vulnerability of areas of high biodiversity

How food systems operate in Peru threatens the environmental sustainability of the Amazonian and marine ecosystems. Agricultural activities generate 80 percent of the country's deforestation, estimated at 120 000 hectares annually (Ministry of Environment, 2021). Changes in forest coverage resulting from these activities contribute considerably to climate change. In particular, MIDAGRI estimates that agriculture's share of total greenhouse gas (GHG) emissions exceeds 50 percent.

Similarly, marine overexploitation has pushed fish stocks to historic low levels, especially of species such as the Pacific jack mackerel. The fish losses may alter the marine flora, which contributes to carbon sequestration, further exacerbating GHG emissions.

The overexploitation of natural resources also threatens farmers, fishers, and the Indigenous Peoples' livelihoods because their economic activities heavily rely on the Amazon. It is estimated the livelihoods of more than 50 Indigenous Peoples depend on the forest. Thus, the deterioration or depletion of natural resources may significantly impact the living conditions of these populations.

7 The estimated cost of a healthy diet in Peru is USD 3.33 (2021 PPP) per person per day. At this unit cost, the monthly food expenditure of a four-member family is equivalent to roughly 70 percent of the minimum wage.

2.1.4. Weak governance and low inclusivity

Peru lacks an institutional framework that facilitates and promotes the participation of all the actors and territories involved in the food system. According to MIDAGRI, FAO, European Union and CIRAD (2021), almost 80 percent of family farming operates in places with high or medium productive potential. However, economic opportunities in these areas are not leveraged because of the absence of public or private investment.

Much of the public spending allocated to the agricultural sector is concentrated in already developed areas (i.e. the coast) and, to a lesser extent, assigned to lagging territories with economic growth potential (i.e. the Andean and the Amazon regions). Limited investment in public goods and services further limits the private sector's investment in places where high-value-added local food could be grown.

It is essential to recognise that many of these problems are already affected or addressed by existing public interventions. Thus, establishing a clear governance framework that enhances and strengthen coordination between sectors and government levels could help align incentives for sustainable food systems.

Social protection is among the many public policy tools influencing food system actors, elements, and drivers. Given its institutional structure, population and territorial coverage, and financial scale, social protection could contribute to articulating policies and programmes that may impact one or more of the food systems' core goals. Moreover, social protection may be essential in stimulating positive synergies between these goals.

The following section analyses the case of a cash transfer programme (JUNTOS) and its interaction with an economic inclusion programme (HW/NJ), as well as their interaction with the food systems' core outcomes. Together, these interventions are directly associated with the food system goals as they address poverty, food insecurity, nutrition, and economic inclusion of the most vulnerable populations.

Table 2. Characteristics of the main MIDIS programmes, 2021–2022[a]

Programme name	Strategic pillar[b]	Programme classification	Beneficiaries, 2021	Budget, 2022 (millions)
National Programme CUNA MAS	I, II	In-kind transfer and social services	Over 60 000 children and 115 000 families	PEN[c] 478 (USD 123.1)
School Feeding National Programme, Qali Warma	II, III	School feeding	4 million children	PEN 1 990.4 (USD 512.4)
National Direct Support Programme for the Poorest, JUNTOS	I, II, III	Conditional cash transfer	Over 670 000 households and over 10 000 students	PEN 957.3 (USD 246.5)
National Programme Social Development Cooperation Fund, FONCODES (includes HW/NJ)	IV	Skills development and entrepreneurship	Over 50 000 households Over 1 500 rural businesses	PEN 297.8 (USD 76.7)
Action Platforms for Social Inclusion National Programme, PAIS	IV	Public services in remote areas	Over 3 million services	PEN 64.1 (USD 16.5)
Non-contributory Pension to People with Severe Disabilities Living in Poverty National Programme, CONTIGO	IV	Non-contributory social pension	Over 74 000 individuals	PEN 151.3 (USD 39)
Solidary Assistance National Programme, PENSION65	V	Non-contributory social pension	Over 568 000 individuals	PEN 938.1 (USD 241.5)

Notes:

[a] The list excludes the emergency interventions implemented by MIDIS in response to the COVID-19 pandemic. Figures in local currency were converted to USD using the average annual nominal exchange rate of 3.88 PEN/USD for 2021, as reported by the Central Reserve Bank of Peru.

[b] The strategic pillars correspond to the following categories: (I) Child nutrition (0–3 years); (II) Early childhood development (0–5 years); (III) Childhood and adolescence development (6–17 years); (IV) Economic inclusion (18– 64 years); and (V) Protection of the elderly (over 65 years).

[c] PEN = Peru nuevo sol

Source:

Author's own elaboration using information from **MIDIS.** 2021a. Revista MIDIS. Balance 2021. [MIDIS Magazine. Balance 2021]. Lima. Cited 17 November 2022. gob.pe/institucion/midis/informes-publicaciones/2725613-revista-midis-balance-2021; **MIDIS.** 2022a. Plan Operativo Institucional Anual 2022. Modificado. Versión 01 [Annual Institutional Operating Plan 2022. Adjusted. Version 01]. Lima. Cited 17 November 2022. cdn.www.gob.pe/uploads/document/file/3242913/RM_077_2022MIDIS_completo.pdf.pdf?v=1654807571; **MIDIS.** 2022b. Evaluación de Resultados del Plan Estratégico Institucional (PEI) y Plan Operativo Institucional (POI). Periodo 2021 [Results Evaluation of the Institutional Strategic Plan (PEI) and Institutional Operational Plan (POI). Period 2021]. Lima. Cited 17 November 2022. cdn.www.gob.pe/uploads/document/file/3165857/Evaluaci%C3%B3n%20de%20Resultados%20PEI%20-%20POI%202021%2025.05.2022%20F%20.pdf.pdf?v=1653952978

3. Social protection and economic inclusion

Peru has made considerable progress in establishing an institutional framework that promotes poverty and inequality reduction and economic inclusion through expanding economic and social opportunities for vulnerable groups, especially in rural areas. In 2011, the country created the Ministry of Social Development and Inclusion (MIDIS) to guide its national social inclusion policy. In 2013, MIDIS released the National Strategy for Development and Social Inclusion "Inclusion for Growth" (ENDIS), which later became the National Policy for Social Development and Inclusion (PNDIS) that has remained in place since 2016.

The PNDIS is a milestone in Peru's social policy because it established a coherent set of norms, objectives and interventions framing national policies designed to reduce poverty, inequalities, vulnerabilities, and social risks. The PNDIS focuses on rural areas, where the population typically faces extreme deprivation and exclusion regarding income, health, education, and access to assets and infrastructure. This policy adopts a life cycle approach to assist vulnerable groups according to individual and family needs in different periods. Its goals and actions are structured in five strategic objectives or pillars (MIDIS, 2016): (I) Child nutrition; (II) Early childhood development; (III) Childhood and adolescence development; (IV) Economic inclusion; and (V) Protection of the elderly. Each pillar is associated with one or more MIDIS interventions.

Thus, MIDIS is responsible for implementing interventions under the PNDIS, as well as coordinating and articulating the activities involving the distinct government levels (national, provincial, local) and sectors (health, education, labour, agriculture, and environment). Table 2 lists the programmes under MIDIS' control, their strategic pillar, the number of beneficiaries, and the annual budget for 2022.

Organising the interventions in complementary pillars has the objective of contributing to the coherent implementation of the social development and economic inclusion policy and programmes. The CUNA MAS, Qali Warma, and JUNTOS programmes support child and adolescent development in poor and extremely poor families. The CUNA MAS programme provides caring and education services to families with children between 6 and 36 months old. Qali Warma, the National School Feeding Programme, delivers meals to children aged three years or older who attend elementary schools and to Indigenous Peoples' adolescents from the Amazon who attend secondary school. The JUNTOS programme complements these interventions by providing cash transfers to households, conditional on complying with their members' health checkups and school attendance.

The Social Development Cooperation Fund (FONCODES) and PAIS support sustainable livelihoods and access to goods and services for adults who face economic and social

inequalities in rural areas. The FONCODES programme transfers productive assets, skills, and technology to enhance household and business productivity and improves community infrastructure and household access to public goods and services. Most of FONCODES' technical assistance is delivered through the HW/NJ programme, which represents almost 85 percent of FONCODES' annual budget. Similarly, PAIS utilises mobile units to facilitate access to social services, such as enrolment and registration in social development programmes, medical services, public service payments and other services to families that live in remote areas. Finally, PENSION65 and CONTIGO are non-contributory social pensions aimed at ensuring social and economic floors for the elderly and disabled individuals living in poverty.

The policy's focus on vulnerable groups translates into high social protection coverage, especially in rural areas. According to the World Bank, in 2019, 67 percent of the population in Peru was covered by one or more of the social protection programme broad categories – social assistance, social insurance and labour market programmes (World Bank, 2022b). This rate was higher in rural areas, reaching almost 90 percent of the population. The high coverage is partly explained by the significant investment in social assistance programmes: Peru allocated 1.4 percent of its GDP to social assistance programmes in 2018 (World Bank, 2018). Half of these funds were delivered through JUNTOS, Qali Warma and PENSION65.

The rest of the section analyses the cases of the JUNTOS and HW/NJ programmes in more detail. It first introduces the programmes and then discusses their main outcomes and impacts. As mentioned above, the rationale for choosing these programmes is that they can be linked directly to specific food systems' actors, activities and outcomes and could therefore shed light on actual or potential synergies and trade-offs between these outcomes and interventions.

3.1 The JUNTOS programme

The JUNTOS programme aims at reducing intergenerational poverty transmission by providing conditional cash transfers and improving access to health, nutrition, and education for vulnerable populations. The programme targets rural households with pregnant mothers, children and adolescents who have not completed high school or are under 19 years of age and live in poverty.

The selection of the households depends on their socioeconomic characteristics. The evaluation considers families, using a proxy means test that determines households' eligibility according to the criteria established in the Household Targeting System. This process has been relatively successful in capturing poor and extremely poor families. According to the World Bank (2018), more than 80 percent of JUNTOS beneficiaries are at the bottom 40 percent of the per-capita income distribution. In addition, the JUNTOS programme also targets Indigenous Peoples' communities in the Amazon region.

The programme has a solid institutional structure that includes a legal framework and a strategic plan. The programme was implemented in 2005 under the supervision of the Presidency of the Council of Ministers. In 2011, JUNTOS was reallocated to the newly created MIDIS. This change facilitated the provision of regular financial resources to the programme since 2012.

Household mothers receive a transfer of PEN 200 (USD 51) every two months, conditional upon complying with health and nutrition checkups and school-age children's attendance at school. In early 2021, JUNTOS underwent changes that included eliminating geographic targeting,[8] increasing coverage, and modifying the conditions and the amount of transfers according to the different population groups. Table 3 presents the new conditions and transfer amounts approved as of 2021.

Table 3. JUNTOS programme: updated scheme of transfers and conditions, 2021

Type of transfer	Transfer amount	Beneficiaries	Conditions
Basic transfer	PEN[a] 100 (USD 26) per month per household	Households with pregnant women, children, adolescents and/or young people that have not completed secondary school or are under 19 years of age	Attendance to health and education services
Early childhood transfer	PEN 50 (USD 13) per month per household	Pregnant women registered during the first quarter of pregnancy	Attendance to health service appointments
		Children between 0 to 35 months of age registered within the first 30 days of birth	
		Children between 36 to 59 months of age registered within the first 30 days of birth	Enrolment and attendance in preschool education
Secondary school transfer (lower level)	PEN 50 (USD 13) / month per student	Students in the first two years of secondary school	Enrolment and attendance of at least 80 percent
Secondary school transfer (upper level)	PEN 80 (USD 21) / month per student	Students in the last three years of secondary school	Enrolment and attendance of at least 80 percent

[a] PEN = Peru nuevo sol

Source:

Adapted from **MIDIS.** 2021b. *Resumen Ejecutivo, Plan Operativo y Presupuesto. Año Fiscal 2022. Unidad Ejecutora 005 JUNTOS [Executive Summary, Operating Plan and Budget. Fiscal Year 2022. Executing Unit 005 JUNTOS]*. Lima. Cited 17 November 2022. cdn.www.gob.pe/uploads/document/file/3838816/Modificaci%C3%B3n%20del%20Plan%20Operativo%20y%20Presupuesto%20Institucional%202022%20%28Versi%C3%B3n%203%29.pdf

8 The JUNTOS programme eliminated the geographic criterion for targeting purposes. This criterion limited the selection of households to districts with poverty rates above 40 percent.

Since 2011, the programme has benefited 700 000 families on average annually, corresponding to approximately 3.5 million people, or 10 percent of Peru's total population (ECLAC, 2022). In 2021, the programme benefited more than 660 000 households (MIDIS, 2021a).

3.2 The Haku Wiñay / Noa Jayatai programme

The HW/NJ[9] programme is part of FONCODES' investment portfolio that promotes the economic inclusion of extremely poor rural communities and families by enhancing their autonomy through favouring access to income-generating activities, assets, markets and capacity development. This goal is aligned with the initial stage defined in Peru's Economic Inclusion Guidelines (MIDIS, 2021c), which prioritises the delivery of productive assets, public goods and training in rural territories with high levels of inequality and limited access to assets.

The programme was initially created to help JUNTOS beneficiaries "graduate" by ensuring they could continue receiving economic support once they were ineligible for cash transfers. This idea, however, was abandoned early in programme implementation because of the logistical challenges it posed and the inequality concerns it raised among community members. Currently, HW/NJ benefits communities and households regardless of their participation in JUNTOS.

The programme's theory of change establishes that poor individuals and communities in rural areas can gradually improve their productivity and livelihoods if they have access to a series of essential public and private goods and services. For this purpose, the programme considers a series of articulated interventions grouped into four broad outputs:

1. **Household production systems enhancement.** The programme covers the delivery of productive assets, technical assistance, and training in poor or vulnerable rural districts where agriculture is the main economic activity. The support includes the provision of assets such as irrigation systems and small-scale technology, investment in public infrastructure (roads, electricity, telecommunications), and training on production diversification, agricultural practices, soil conservation, and associativity, among other things. In 2013, the programme estimated that there were 530 000 eligible households.

2. **Housing and healthy habits improvements.** The programme considers several interventions to improve living conditions and reduce risks of gastrointestinal and

9 *Haku Wiñay* and *Noa Jayatai* mean "we will grow" in the native languages Quechua and Shipibo, respectively. The programme is known as Haku Wiñay in the Andes, and Noa Jayatai in the Amazon.

respiratory infections. This includes replacing fuelwood stoves with more efficient and healthier alternatives, increasing access to water from safe sources (water treatment), promoting the adoption of food safety practices, facilitating solid waste disposal, and bedroom separation.

3. **Rural business development.** The programme provides technical assistance, capacity development and funding to households interested in developing a business plan. Funds are allocated through an open competition organised and supervised by the community and the programme's staff. Salcedo and Zimmermann (2021) report that initiatives typically encompass activities linked to small animal breeding, processing of agricultural products, crafts, and community services (post-harvest assistance, veterinary services, restaurants, etc.). Each business receives a USD 3 200 grant on average, ranging from USD 2 900 to USD 4 200 for crafts and forestry projects, respectively.

4. **Financial literacy**. The programme provides training to improve financial management and savings skills among organisations with a business.

These components are gradually implemented over three years, the maximum period a household can benefit from the programme. Each year is linked with the following three stages: implementation, appropriation and consolidation. The first two stages are executed simultaneously during the first two years and consist of technical assistance, capacity development, housing improvements, and follow-up visits to promote the adoption of modern technologies and the use of skills. The last stage is completed in the final year, and it consists of providing technical assistance to individuals or household organisations that plan to operate a business funded by the programme.

A central characteristic of HW/NJ's approach is the engagement of local community members in the decision-making process. Each community creates a community organisation that is legally established and typically groups around 100 households. This organisation called the Executive Core (EC), supports members in assessing technical and financial needs to formulate and implement the programme and decide on the principal areas of intervention at the local level. It is also responsible for managing the funds allocated by FONCODES to the community and for coordinating the recruitment, selection, hiring and monitoring of the experts who will assist the households and communities in the field. These experts, locally known as *yachachiqs*,[10] coordinate and implement the knowledge, technology, and asset transfer activities to beneficiaries according to each programme component.

In mid-2020, the programme reported more than 122 000 active households distributed across three hundred districts and a similar number of families that completed or "graduated" from the programme (Salcedo and Zimmermann, 2021). In 2021, HW/

10 Quechua language for "those who know and teach".

NJ reached more than 50 000 additional rural households in 18 departments and provided technical assistance, training, and productive assets for an equivalent of PEN 233.5 million (USD 60.1 million) (MIDIS, 2021a).

3.3 Effects of the JUNTOS and Haku Wiñay/Noa Jayatai programmes

This subsection presents evidence on the individual and combined effects of JUNTOS and HW/NJ on several outcomes, emphasising the analysis of their linkages with the food system outcomes. The evidence presented here summarises the literature review of quantitative and qualitative evaluations and information obtained from the key informant interviews.

3.3.1 Evidence on JUNTOS

Evidence of the effects of JUNTOS on several well-being indicators is abundant, especially relating to income, consumption and poverty. Perova and Vakis (2012) report that household income increased by 43 percent and that consumption of food and non-food products increased by 15 percent and 65 percent, respectively, five years after the programme was implemented. As a result, the poverty rate fell 14 percentage points among participant households. They also present other improvements in health and education. Children under six years of age were more likely to receive medical checkups and attend school in beneficiary households than in non-beneficiary households. Similarly, Gaentzsch (2020) shows evidence that JUNTOS increased the probability of enrolling and finishing primary school. However, he did not find any effect of the programme on developing learning skills such as language or mathematics.

Food security and nutrition are particularly relevant because they are the principal link between JUNTOS and the food system outcomes. Herrera and Cozzubo (2016) present a synthesis of the programme's impacts during its first decade of operation. The results highlight the programme's contribution to food security and consumption, as well as the nutritional status of women and children, through improved incomes, diets and health. Likewise, Pérez-Lu *et al.* (2017) found that the programme reduced malnutrition by preventing low weight in mothers and anaemia in children under six years of age. At the district level, the study also showed that obesity rates in mothers and malnutrition rates in children were lower compared to untreated districts.

Other studies provide evidence related to other socioeconomic indicators. For instance, Zegarra (2015) found positive impacts of JUNTOS on own food production between 2007 and 2009. He also shows gender gaps in livestock production. In male-headed households, guinea pigs, beef, and chicken breeding increased, whereas in female-headed families chicken- and pork-rearing declined. Herrera and Cozzubo's (2016)

literature review presents mixed effects of the programme on women: JUNTOS led to greater empowerment of women, although at the same time, it increased intimate partner violence.

3.3.2 Evidence on Haku Wiñay/Noa Jayatai

Asencio (2021) presents a comprehensive literature review of the results and impacts of HW/NJ on several economic and social indicators. For instance, the author notes that the programme improved households' food security and consumption through own food production.

A recent evaluation conducted by PRISMA (2020) provides interesting insights into the programme's results among the population whose participation in the programme began in 2016. The beneficiaries were equally divided into men and women (49 percent versus 51 percent); half concluded only primary school, and almost one-quarter were illiterate. Families faced limited access to public services such as drinking water and sanitation, and solid waste disposal. Participants reported carrying out agriculture (98 percent) and livestock activities (85 percent) and allocating 29 percent and 16 percent of their respective production to own consumption. Less than half received benefits from social assistance programmes (JUNTOS – 37 percent; PENSION65 – 6 percent; CUNA MAS – 3 percent). This ex-post evaluation also provided relevant information on the heterogeneity of the outcomes across natural regions. Three-quarters of the participants were located in the Andes, and one-quarter in the Amazon. Regarding the adoption of technologies, improved kitchens, vegetable gardens, small animal breeding, water treatment and organic fertilisers were more commonly introduced in the Andes. In the Amazon, small-scale irrigation schemes, crops and legumes production, water treatment and small animal breeding were engaged with the most. The study further showed that the majority (55 percent) of the participants in HW/NJ perceived that their living standards had improved because of the programme. Yet, this result differed significantly between the Andes (59 percent) and the Amazon (39 percent).

Other studies analysed the potential causes of the differentiated effects between natural regions. Asensio (2021a) reports that some authors associated the difference in results with household and community characteristics, such as differences in EC local performance and in Indigenous Peoples' traditional production systems. The EC model emerged three decades ago to initially support the implementation of local development projects and programmes in rural communities of the Andes. Thus, researchers believe that the long tradition of accumulated knowledge of programme management and execution through community organisations and *yachachiqs* helped explain the better outcomes in the Andes than in the Amazon. Moreover, Diez and Correa (2016) and MIDIS (2018) indicate that the programme's underperformance in the Amazon is strongly linked to asymmetries between the production systems considered by the programme design and the production methods traditionally adopted by the

Indigenous Peoples. Some of these barriers included the difficulty of adapting and using the technologies delivered by the programme and reproducing the EC and *yachachiq* model in these communities effectively.

The HW/NJ programme does not explicitly consider a gender approach in its design. However, Asensio (2021a and 2021b) reports impacts on several socioeconomic indicators among participating women. For instance, the programme enhanced women's empowerment because of their engagement in new activities beyond the gender roles and their active participation in the community decision-making process, primarily through their involvement in the EC activities. Women also engaged more frequently in HW/NJ activities the more dynamic the local economy was. This result seems to be associated with opportunity cost differences between women and men. In more dynamic territories, women took the lead in enrolling in HW/NJ's training and capacity-building activities on behalf of the household. At the same time, men allocated their time to other, more profitable economic activities. In lesser-developed rural territories, men engaged more directly in HW/NJ activities, reducing women's participation in the programme. Evidence also points out women's higher participation in rural businesses and higher personal satisfaction in regions where the programme operates. However, the evidence also suggests unintended adverse effects regarding increased violence towards women in those regions. Similarly, Ponce and Escobal (2019) found unintended impacts of the programme on adolescents' time allocation. Girls between 14 and 17 years of age increased their time allocated to domestic chores (cooking, cleaning, caring, etc.) and reduced their time allocated to study because of intra-household tasks and time reallocation, especially from mothers.

Agricultural practices constitute the main linkages between HW/NJ and environmental aspects. These practices included soil analysis and restoration, land rotation, irrigation and water management, efficient and sustainable use of organic and inorganic fertilisers and agrochemicals, and measures for pest control. However, PRISMA (2020) reports that the adoption of these practices has been generally low, particularly in the Amazon.

Finally, the programme shows positive impacts on financial literacy and technology adoption. Evidence indicates that the intervention increased household savings and use of and trust in formal banking system services. In addition, the positive opinion among the community members about the installation of improved kitchens was central to stimulating the adoption of other home and productive technologies delivered by the programme.

3.3.3 Combined effects of the JUNTOS and Haku Wiñay/Noa Jayatai programmes

Studies focusing on the synergies of simultaneous participation in JUNTOS and HW/NJ programmes are scarce. However, existing literature reveals positive compounding

effects. A study conducted by UNIANDES, IFAD and FAO (2020) shows that JUNTOS households that participated in HW/NJ improved incomes and technology adoption compared to households that participated only in JUNTOS. The annual average income of families in communities that received both programmes increased by 30 percent, equivalent to an additional PEN 1 480 (USD 850 PPP), compared to households in communities that received JUNTOS alone. However, these effects show high variability: total income in households in the top quartile of income increased by PEN 2 400 (USD 1 380 PPP), whereas income change was not statistically significant in the bottom quartile. Similarly, beneficiaries of both programmes were more likely to adopt more productive agricultural technologies. Households participating in both programmes increased their own food production and use of organic fertiliser by 11 percent and 32 percent, respectively, and increased the use of overhead irrigation by more than 20 percent, as well as the use of sheds for guinea pig breeding (23 percent).

Escobal, Ponce and Paz (2016) report similar results from an impact evaluation they conducted two years after the introduction of HW/NJ. Their assessment showed positive impacts on agricultural income and production for 2013 and 2015. Total income of families participating in both programmes increased by almost 8 percent – equivalent to an additional PEN 910 (USD 320), compared to the total income of families that received only JUNTOS. This increment was primarily driven by surges in self-employment income sources from agricultural (crop and livestock) and non-agricultural activities (services, crafts, marketing). They also found that incomes from waged agricultural activities declined, suggesting that HW/NJ motivated the reallocation of household time from the labour market towards their production unit.

Higher farm incomes were associated with improvements in production and access to markets. The programme increased the vegetable and root production and sales and expanded the rearing of animals (guinea pigs), animal products (eggs) and pasture. Moreover, compounding effects were higher among household organisations that received funds for business development and operation. Evidence suggests entrepreneurship raised total income by expanding production, yields and market access.

Income changes translated into changes in food consumption patterns. Households participating in both programmes reported consuming more frequently cereals, roots, animal- and plant-sourced proteins, and vegetables rich in micronutrients than households in the control group. Treated households also reported higher diet diversification indices and lower food expenditures, likely associated with greater food production for own consumption.

Qualitative indicators also supported these improvements in income and well-being levels. Two out of three households declared that family and community incomes improved in the two years of operation of the programme. Similarly, families mentioned improved living conditions due to adopting technologies and healthy practices.

Table 4 summarises the main findings regarding the relationship between the JUNTOS, HW/NJ and specific food systems' actors, elements and outcomes. As expected, most of the programme's economic and social effects are clustered around food security, nutrition and livelihood outcomes. To a lesser extent, there are effects related to the territorial balance outcome associated with the way HW/NJ operates in different regions. Further, the connection between the programmes and environmental outcomes is virtually absent. However, this finding seems to be more a result of a lack of evidence than an actual disconnection between the programmes' components and the environmental aspects.

Overall, these results highlight the central role that these programmes have played in improving rural welfare, especially when the interventions are combined. This is the case with improvements in household income, food security and consumption, agricultural production and marketing, and business revenues.

Table 4. JUNTOS and Haku Wiñay/Noa Jayatai effects by food system actor

Link to food systems			
Actors	**Elements**	**Outcomes**	**Programme effect* increased (+) /decreased (-)**
Rural households	Food environment and consumption	Food security and nutrition	J: income and consumption (+); food security (+); own food production (+)
Rural women	Food value chain, food environment and consumption	Food security and nutrition Livelihoods	J: malnutrition (-); empowerment (+); domestic violence (+) C: empowerment (+); entrepreneurship (+); domestic violence (+)
Rural children and adolescents	Food value chain, food environment and consumption	Food security and nutrition	J: malnutrition (-) C: domestic work (+); studying (-)
Small-scale farmers	Food value chain, food environment and consumption	Food security and nutrition Livelihoods Environmental sustainability Territorial balance	H: disparities between the Andes and the Amazon (+) C: food consumption, diet diversity, and food security (+); food expenditure (-); agricultural production and incomes (+); adoption of household and productive technologies (+); income inequality between beneficiaries (+), self-employment in farm and non-farm activities (+); waged labour in agriculture (-)
Community-based organisation with a rural business	Food and non-food agriculture manufacturing value chain, and food environment	Livelihoods Environmental sustainability Territorial balance	C: revenues (+); production of vegetables and roots and animals and animal products (+); market access (+); use of financial services (+)

* Legend: J: JUNTOS; H: HW/NJ; C: combined effect of JUNTOS and HW/NJ

Source:
Author's own elaboration.

4. Concluding remarks

Between 2010 and 2019, Peru made remarkable progress in reducing poverty and promoting the economic inclusion of the most vulnerable populations. This was possible partly because it positioned social and economic inclusion issues among the top priorities of its policy agenda. Since the creation of the Ministry of Social Development and Economic Inclusion in 2011, Peru has continued building institutions, implementing plans and programmes, and allocating human and financial resources to promote the social and economic development of vulnerable and poor individuals, groups, and territories. The National Development and Social Inclusion Policy is part of the effort towards formulating and implementing coherent and articulated interventions and investments to address the multiple socioeconomic barriers that cause vulnerability and exclusion throughout the population's life cycle.

However, global and domestic economic factors and the COVID-19 pandemic threaten the progress made so far and the country's long-term development. In just one year, the COVID-19 pandemic increased poverty rates from 20 percent to 30 percent between 2019 and 2020. Furthermore, the way the food systems function in Peru imposes additional challenges to poor and vulnerable families that depend on agrifood activities for food security, health, livelihoods and a safe environment. Some examples are the high poverty rates in rural areas, the economic and social exclusion of small-scale farmers, and the deterioration of natural resources because of human activities such as expanding agriculture.

The data and information presented in this study provide encouraging evidence of the positive effects that social protection and economic inclusion programmes can have to help tackle old and new development challenges. The results from JUNTOS and HW/NJ show that they can contribute to improving food security, nutrition, production and productivity, women's empowerment, and entrepreneurship. Existing evidence, although limited, suggests that combined interventions can produce multiplier effects.

Challenges remain to be addressed to enhance the role of social protection and economic inclusion policies and programmes in simultaneously promoting the sustainable development of vulnerable groups and food systems. Some of the areas that could be improved are the following:

Strengthening complementarities between interventions. Combining interventions may boost the positive impacts of individual programmes. However, synergies require coordination among the multiple actors that formulate and implement the interventions at all government levels. First, coordination within the MIDIS itself must improve to ensure that households can benefit from more effectively articulated programmes. For instance, the MIDIS could seek to link HW/NJ small-scale producers with Qali Warma

or other initiatives aimed at increasing vulnerable groups' economic and physical access to nutritious and diverse diets through public food procurement schemes. Also, MIDIS could seek to generate synergies with ongoing initiatives by providing financial or technical support. An example is the community kitchens (*ollas communes*), a community-based social protection scheme to improve physical and economic access to food for vulnerable and low-income families. Indeed, MIDIS has taken steps to support the operation of these kitchens trough the provision of technical assistance and training for the kitchens' managers (MIDIS, 2021a).

Second, exploring additional synergies with initiatives from other Ministries, local governments, and agencies is essential. Participants in JUNTOS and HW/NJ can benefit from the coherent articulation of these programmes with initiatives carried out, for instance, by the Ministry of Agricultural Development and Irrigation, the Ministry of Economy and Finance, and the Ministry of Environment. This could enhance household farm and non-farm productivity and incomes and promote the adoption of environmentally sustainable practices.

The effective articulation of policies and programmes calls for the explicit inclusion of objectives in areas beyond each ministry's scope. It must be recognised that existing social protection interventions do not generally consider economic inclusion or environmental goals. This is because social protection programmes, especially cash transfer programmes, typically limit their scope to addressing the vulnerable population's most urgent needs: alleviating poverty and improving food security and nutrition. Likewise, agricultural development programmes usually ignore potential synergies with other social and environmental objectives. For instance, they often exclude smallholder farmers who experience several economic and financial constraints and live in poverty or neglect the negative impacts that agricultural production may have on natural resources or the environment.

Strengthening the territorial development approach. The flexible approach adopted by HW/NJ has allowed community members to actively participate in the programme's implementation and operation in local territories, thus enhancing the development of rural communities. However, the programme has generated heterogeneous effects across natural regions. Several evaluations emphasise the need for HW/NJ to adapt further the technical assistance methodologies and technologies to the conditions prevailing in the Amazon. The programme design must incorporate cultural and economic particularities that influence the Indigenous Peoples' financial and association strategies, natural resource management practices, and local market dynamics in order to generate more significant impacts in the Amazon.

Recognising and addressing potential or actual unintended effects. The programme design must consider unintended consequences that negatively affect food system actors or outcomes. The evidence points out that interventions may have positive impacts on empowering women. However, this may also increase the domestic violence

suffered by them represent an extra burden for girls that replace their mothers in domestic chores. Also, interventions that aim to increase agricultural production must consider potential environmental impacts, such as soil contamination or degradation, overexploitation of water aquifers, deforestation, and biodiversity loss.

Evidence-based policy and programme formulation and implementation. Future research must focus on issues where knowledge gaps are more needed. This includes expanding the evidence on the synergies and trade-offs between JUNTOS, HW/NJ and interventions from MIDIS or other ministries and their impacts on several food system outcomes. It is also crucial to understand the role of these programmes in promoting income generation beyond agricultural activities, in advancing women's empowerment and the inclusion of Indigenous Peoples, and in improving the management of natural resources. It is central that social and economic inclusion policies mainstream gender and intercultural aspects in their design and implementation process. To meet this objective will be necessary to generate disaggregated data and solid evidence on gender and Indigenous Peoples aspects to adapt interventions to their contexts and needs.

Finally, the transformation of food systems demands a coordinated approach that involves many actors, planning and coordination, and resource mobilization, among other things. While social protection and other social policies can contribute and may have an essential role in transforming food systems, they need to be seen as part of a system and not as the only solution for enhancing synergies between food systems outcomes.

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