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INVESTING IN RURAL HOUSEHOLDS THROUGH COMMUNITY PROMOTERS

THE HAKU WIÑAY/NOA JAYATAI PROGRAMME IN PERU

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INVESTING IN RURAL HOUSEHOLDS THROUGH COMMUNITY PROMOTERS

THE HAKU WIÑAY/NOA JAYATAI PROGRAMME IN PERU

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Abstract

Haku Wiñay/Noa Jayatai ("Let's grow together" in the Quechua and Shipibo-Conibo languages respectively) is one of the few government programmes that work with poor rural households in subsistence agriculture. Through implementing community projects composed of training and technical assistance packages aimed at improving production techniques, as well as household organzation and financial inclusion, the programme seeks economic inclusion of these households by improving their access to markets. Training packages are implemented by local promoters called Yachachiqs ("The one who knows and teaches"), who are selected and hired by the community for a three-year period to develop community-based projects funded by the government's Cooperation Fund for Social Development (FONCODES). This study seeks to provide further knowledge about how programme developed human capital, complementing existing literature on the programme impacts. Data were collected via structured interviews with key informants, mainly Yachachiqs, from the two poorest regions in Peru, Cajamarca and Huancavelica. Major findings are that, even though Yachachiqs are known and selected by the community to implement the community projects, it takes significant effort, time and resources for Yachachiqs to be viewed as trustworthy by programme participants and thus guarantee their participation in the programme. Also, although some positive economic impacts are reported by interviewees, the major improvements valued by programme participants is household organization and healthy practices such as hand washing and water boiling, as well as the installation of safe cookstoves. Income increases, as reported by interviewees and other studies, come mainly from higher yields and lower costs of production. Key features that guarantee the success of the programme are the active participation of the community in the design and implementation of the community projects, as well as the simplicity and low cost of development techniques transferred by Yachachiqs.

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Acknowledgements

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Finally, it would not have been possible to prepare the report without the participation of 18 Yachachiqs that shared their knowledge about the programme, as well as the contributions of two Presidents of two Community Implementation Committees of Chota and the President of the Cuy Producers Association of Chota.

Abbreviations and acronyms

AHCI	Agriculture Human Capital Investment
ASTI	Agricultural Science and Technology Indicator
BCRP	Central Reserve Bank of Peru
CAF	Development Bank of Latin America
CFI	FAO Investment Centre
CGIAR	Consultative Group on International Agricultural Research
ETC Andes	Ecology, Technology and Culture Association in Los Andes
FAO	Food and Agriculture Organization of the United Nations
FAOSTAT	Food and Agriculture Organization Corporate Statistical Database
FONCODES	Cooperation Fund for Social Development
GDP	Gross domestic product
GRADE	Group of Analysis for Development
HCI	Human Capital Index
HW/NJ	Haku Wiñay/Noa Jayatai
ICT	*Information and Communication Technology*
IFAD	International Fund of Agricultural Development
IFI	International Financing Institution
IFPRI	International Food Policy Research Institute
INEI	National Institute of Statistics and Informatics
IRB	Institutional Review Board
JUT	Jefe de Unidad Territorial (Head of Territorial Unit)
MARENASS	Natural Resources Management in the Southern Sierra programme
MEF	Ministry of Economy and Finance
MIDIS	Ministry of Development and Social Inclusion
MINAGRI	Ministry of Agrarian Development and Irrigation
NE	Núcleo Ejecutor (Community Implementation Committee)
NEC	Núcleo Ejecutor Central (Centralized Implementation Committee)
PIM	CGIAR Research Programme on Policies, Institutions, and Markets
PPP	Purchasing power parity
PRODERM	Rural Microregions Development Project
SINEACE	National System of Education Quality Certification


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Introduction

Sustainable agricultural productivity, food security and poverty reduction remain top-line goals of governments and development institutions around the world. Progress is under threat from a variety of crises, including climate change and public health emergencies and their associated economic shocks. Along with a growing population and increased demand for agricultural goods for food, fuel and fibre, these concerns necessitate investments in agriculture, rural infrastructure, natural resource management and climate resilience.

Agricultural investments often emphasize physical and financial capital of farming households – for example, land, fertilizers or credit. However, agriculture human capital investment (AHCI) is crucial for spurring innovation, farm management decisions and empowering smallholders. Human capital is an economic term which encompasses assets that increase individual productivity, such as education and health. For the purposes of this study, human capital is defined as the stock of habits, knowledge, social and personality attributes (including creativity) embodied in the ability to perform labour so as to produce economic value (Goldin, 2016). Human capital allows people to effectively utilize other types of capital. For example, farmers' education and knowledge influences their ability to make decisions, adopt new technologies, evaluate risks and manage farm resources.

As part of a global study on promising AHCI initiatives, this case study presents evidence from the programme Haku Wiñay/Noa Jayatai in Peru, commissioned by the Food and Agriculture Organization (FAO) and led by the International Food Policy Research Institute (IFPRI) with support from the CGIAR Research Programme on Policies, Institutions, and Markets (PIM), examines opportunities for both public and private investment in human capital in agriculture. This study aims to fill knowledge gaps about promising investments in programmes that develop agriculture human capital, particularly across different target groups such as smallholders, women and youth.

Upon extensive evaluation using a literature review and expert input, case studies were selected according to the following criteria documentation of impact; scalability, replicability and institutionalization; inclusion and

empowerment; holistic integration; and sustainability. Nine case studies were selected across geographies and across a typology developed for agriculture human capital. The selection process involved a series of workshops during which technical experts discussed potential cases, case study selection and case study teams. This case study deepens our insights about investing in low-income rural farming households' human capital through with local promoters and community-based projects in order to promote working access to markets.

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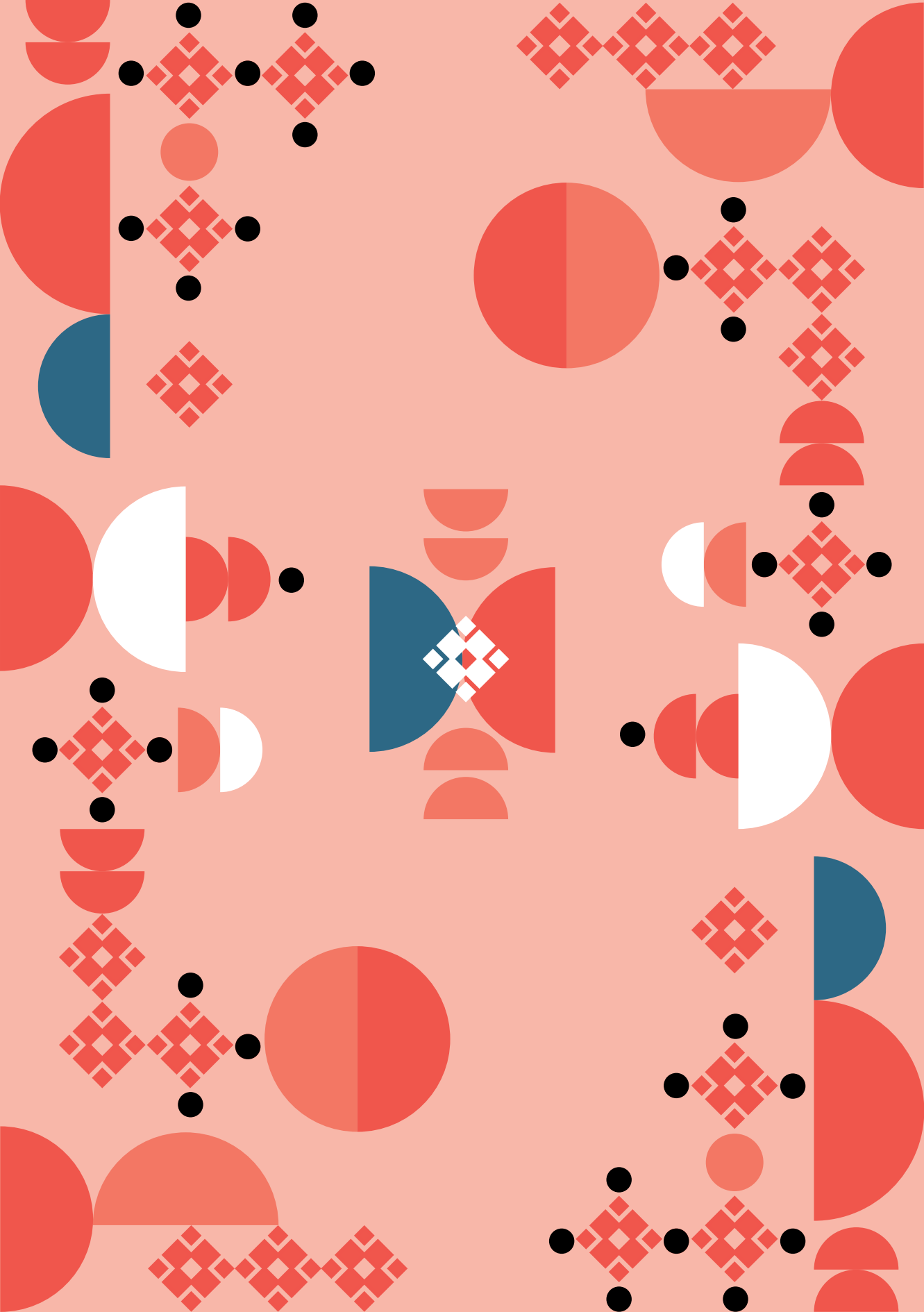

Chapter 1
Background

After twenty-five years of continuous and sustained economic growth, Peru was considered among the most prominent performers in Latin America in terms of macroeconomic stability and solid fiscal and monetary policies (World Bank Group, 2017). The average economic growth rate of Peru between 2001 and 2017 was 5 percent, second only to Panama in Latin America. The rapid economic growth driven by capital accumulation and favourable mineral prices led to a higher internal demand for services, which comprised 60 percent of the GDP in 2019 (BCRP, 2020). In this context, poverty rates dropped from 56 percent in 2005 to 21 percent in 2018 (INEI, 2020a).

Besides the high economic growth rates shown over the last 20 years, the country's wealth and services remain highly centralized around the capital city, Lima. More than one-third of the population lives in Lima, and more than 80 percent of the population in Peru lives in urban areas (INEI, 2018a). Urbanisation imposes great challenges not only for urban areas that must provide basic services to a growing population, but also for rural areas experiencing outmigration, imposing difficulties for food production and provision to cities. Although poverty rates in urban and rural areas dropped significantly over the last 20 years, important gaps persist. Urban poverty dropped from about 25 percent in 2008 to almost 15 percent in 2018, whereas in rural areas poverty dropped from 61 percent in 2007 to 41 percent in 2018 (INEI, 2020a).

Reported disadvantage in rural areas became clear when social indicators were compared to urban areas. Undernourishment of children under five years old in rural areas was 24 percent in 2019, compared to 8 percent in urban areas (MIDIS, 2019). Incidence of anaemia in children between 6 and 36 months was also higher in rural areas compared to urban settings (49 percent vs. 37 percent). These two conditions heavily affect cognitive performance in adulthood. Also, pregnancy amongst young women between 15 and 19 years old is 21 percent in rural areas, compared to 7 percent in urban areas, significantly reducing women's potential accessed to higher education. Moreover, almost 25 percent of rural households access water from a source different than the

public system, which is of lower quality and increases the probability of gastrointestinal diseases. This compares to only 5 percent in urban areas (MIDIS, 2019). Also, about 56 percent of the rural households do not have access to public sewage. Only 33 percent of rural households have access to the full package of basic public services with water, sewage, electricity and phone, compared to 85 percent in urban areas (MIDIS, 2019).

Agriculture is the most important economic activity in rural areas. More than 79 percent of the rural population were employed in agriculture in 2017 (INEI, 2018b). Agriculture has contributed about 7 percent of the GDP over the last 10 years, with a growth rate of 3 percent in 2019. Most of the sector's recent success is from high-productivity large farms along the coast of Peru, which produce most of the agricultural exports such as asparagus, avocados, berries, grapes and mangoes. However, most of the food consumed in Peru is produced by small family farms, cultivating less than 5 hectares with limited technical assistance and limited access to innovative production technologies (MINAGRI, 2015). Several factors contributed to the fragmentation and capital deficiency of traditional farms, including the land reform in the 1960s, the economic crisis in the 1980s and the discontinuation of agricultural extension services and the closure of the Agricultural Bank in the 1990s (FAO and CAF, undated).

In this context, the Cooperation Fund for Social Development (FONCODES) was created by the Peruvian Government in 1991 to develop small-scale infrastructure in rural areas with the participation of communities. Later, during the 2000s, several programmes were implemented by FONCODES to provide technical assistance to small farmers. Most of them were funded by international organizations such as the International Fund of Agricultural Development (IFAD), obtaining positive results. In the 2010s, the government started funding programmes aiming at improving human capital in agriculture, directed to small farmers (Haku Wiñay/Noa Jatai) and medium-sized farmers (Agrorural). In 2012, FONCODES and Haku Wiñay were assigned as part of the newly created Ministry of Development and Social Inclusion (MIDIS) to implement the fourth pillar (Economic Inclusion of working-age population) of the National Development and Social Inclusion Strategy (MIDIS, 2014)

Table 1

Key agricultural, human capital and enabling environment indicators in Peru

Indicator category	Indicator name	Latest year data available	Indicator value
General	Total population	2019	32 510 453
	Rural population (percent of total population)	2017	21
	Poverty headcount ratio at USD 1,90 (percent)	2018	2
	Rural poverty rate (percent) (139 PPP Constant 2017 USD per month poverty line)	2018	42
	Rural households with access to water system (percent)	2019	74
	Rural households with access to the sewage system (percent)	2019	44
	Prevalence of undernourishment (percent)	2017	9
	Anaemia prevalence among children between 6 and 36 months	2019	40.31
	Number of smallholder/family farmers (farms that mostly use family workers and have limited access to irrigation and certified seeds)	2015	2 156 833
	Farms with 5 ha or less (percent)	2012	79
	Population employed in agriculture (percent)	2018	26
Enabling environment: Educational attainment	Human Capital Index (HCI) score	2020	0.61
	HCI Ratio (richest / poorest 20 percent)	2020	1.41
	Expected years of school, male and females	2018	13
	Learning-adjusted Years of School	2019	8.6
	Primary completion rate, total	2018	96
	Literacy rate, adult total (percent of people ages 15 and above)	2018	94
Enabling environment: Funding	National agricultural research expenditure data as share of agricultural GDP (ASTI)	2013	0.03
	Agriculture expenditure (percent of total government spending)	2020	3
Enabling environment: ICT-related indicators	Mobile cellular subscriptions (per 100 people)	2018	131
	Secure internet servers (per 1 MM people)	2019	384
	Access of electricity (percent of population)	2018	95
Enabling environment: Policies	Has a National Family Agriculture Strategy Has a National Agricultural Policy Document Has a National Agricultural Investment Plan		Yes Yes No

SOURCE: World Bank, 2020; IFPRI, 2020; FAO, 2020; INEI, 2020a; MINAGRI, 2015; MIDIS, 2019; INEI, 2018c.

NOTE: Poverty headcount ratio indicates the percent of the population living on less than USD 1.90 per person per day in 2011 PPP. Rural poverty rate (139 PPP Constant 2017 USD per month poverty line) indicates the percent of rural population living on less than $139 per person per month in 2011 PPP. Agriculture expenditure indicator comes from FAOSTAT's Government Expenditure data (share of total outlays). Mobile cellular subscriptions are defined as "all mobile subscriptions divided by the country's population and multiplied by 100."

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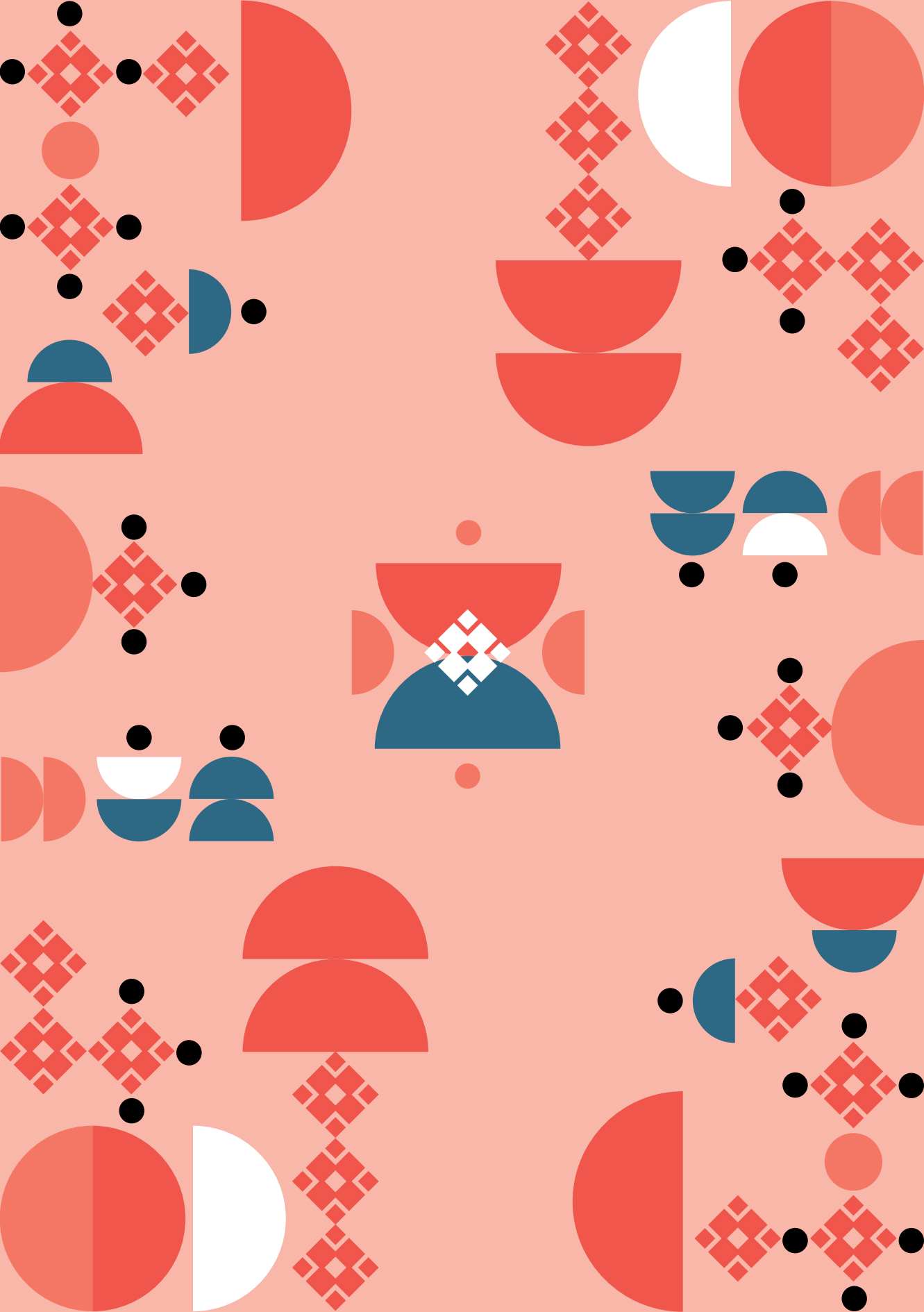

Chapter 2
Overview of the case study

ORIGINS OF THE PROGRAMME

Haku Wiñay/Noa Jayatai, which means "Let's grow together" in the Quechua and Shipibo-Conibo languages respectively, emerged from the integration of learning experiences from several prior publicly and privately implemented programmes aiming to support low and medium-income farms with technical assistance and production inputs. These programmes were mostly located in the rural areas of the Peruvian Andes. Some of the programmes that inspired Haku Wiñay/Noa Jayatai are the Rural Microregions Development Project (PRODERM), Natural Resources Management in the Southern Sierra programme (MARENASS), the Puno-Cusco Corridor programme, the Southern Sierra programme, the Productive Sierra programme, and the Mi Chacra Productiva (My Productive Farm) pilot, amongst others (Escobal, 2012). All these programmes were funded by international organizations such as the European Economic Commission, IFAD and the World Bank, with the exception of Mi Chacra Productiva, which was funded by the Peruvian government and implemented by the nongovernmental organization Swisscontact.

The Mi Chacra Productiva pilot introduced technologies and techniques, such as the production of organic fertilizers or guinea pig breeding, to help families to improve their income from agricultural production. Originally, the Peruvian government invested PEN 10 million (USD 3.9 million) to include 6 592 households into the pilot (World Economic Forum and Schwab Foundation for Social Entrepreneurship, 2013). Seventy percent of the households involved were also families participating in the government's conditional cash transfer programme, Juntos. The pilot showed improvements in production and household income, and expansion was recommended (Escobal and Ponce, 2016a; World Economic Forum and Schwab Foundation for Social Entrepreneurship, 2013). With the creation of MIDIS in 2011, all government social programmes migrated to the newly created Ministry, including FONCODES, which was in charge of the expansion of the Mi Chacra Productiva pilot. Thus, in 2012 FONCODES created Mi Chacra Emprendedora (My Entrepreneurial Farm) and implemented the programme first in five districts with the aid of FAO and the Action Against Hunger humanitarian organization, and later in nine additional districts with public funding. In 2013, the Ministry of Economy and Finance (MEF) increased the budget of Mi Chacra Emprendedor,

now called Haku Wiñay/Noa Jayatai, extending the programme to five regions. Later, in 2014, MEF created the Results-Based-Budget Programme "Access to Markets of Rural Households in Subsistence Economies – Haku Wiñay/Noa Jayatai," (HW/NJ) formally incorporating the programme into the national budget. Figure 1 shows the timeline.

By the end of 2013, HW/NJ registered 24 046 households covered in 51 districts, while in July 2020, the programme recorded 122 804 active households covered in 286 districts. Also, by July 2020, the number of households that completed (graduated from) the programme was 120 430. Figure 2 shows the number of households and districts covered between 2014 and 2020.

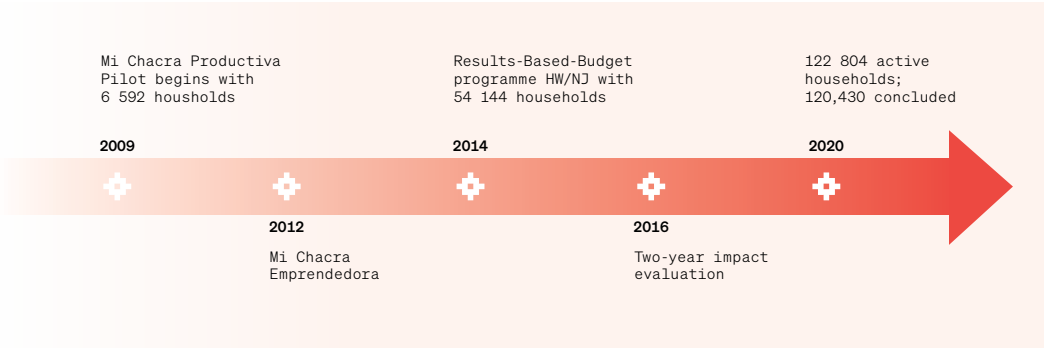

Figure 1
Timeline of the programme Haku Wiñay/Noa Jayatai (HW/NJ)

SOURCE: Authors.

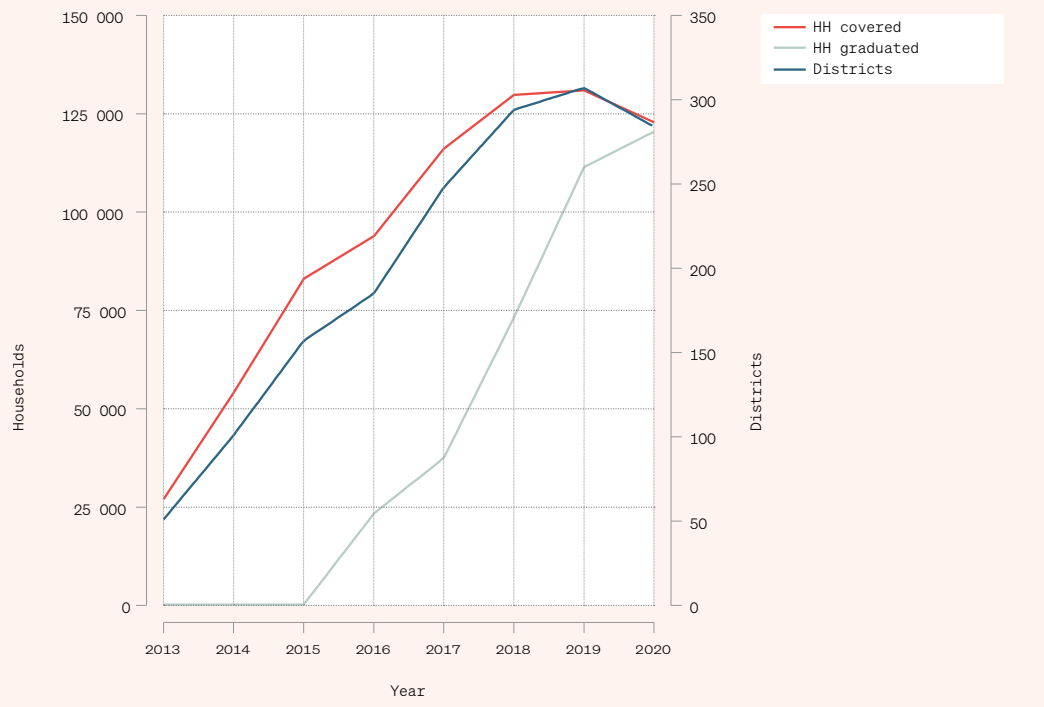

Figure 2
Households(HH) and districts covered, and graduated households of Haku Wiñay/Noa Jayatai, 2013-2020

SOURCE: Authors' representation based on programme administrative records, 2020.

THE HAKU WIÑAY/NOA JAYATAI PROGRAMME

HW/NJ provides technical assistance to low-income rural households to develop the productive and entrepreneurial skills of subsistence and small agricultural households in rural Peru. The programme identifies the main problem to be addressed as "Rural households in subsistence economy with limited opportunities to access to markets", as shown in the programme problem tree in Figure 3.

The programme provides a three-year intervention for agricultural households, in which "packages" formed by household and productive assets, production inputs and skills development are provided. Also, the programme provides start-up funding to develop business initiatives among groups of farmers selected through an open competition organized by the community. In that sense, HW/NJ is composed of two outputs and four components (MEF, 2019):

Output 1: Rural households in subsistence economy receive technical assistance and training to develop productive skills:

- **Component 1.1:** Improve farming production systems by providing technical assistance to implement simple, low-cost technology innovations.
- **Component 1.2:** Develop and maintain healthy housing, such as safe cookstoves, water and solid waste management, vegetable gardens, and a barn for small animals.

Output 2: Rural populations in subsistence economy receive technical assistance, training, and basic assets to develop rural businesses:

- **Component 2.1:** Promote inclusive rural businesses by helping farmers organize into business associations, prepare business plans and pursue grants by participating in government competitive funding programmes.
- **Component 2.2:** Build financial capacity by helping to develop savings plans and basic accounting skills.

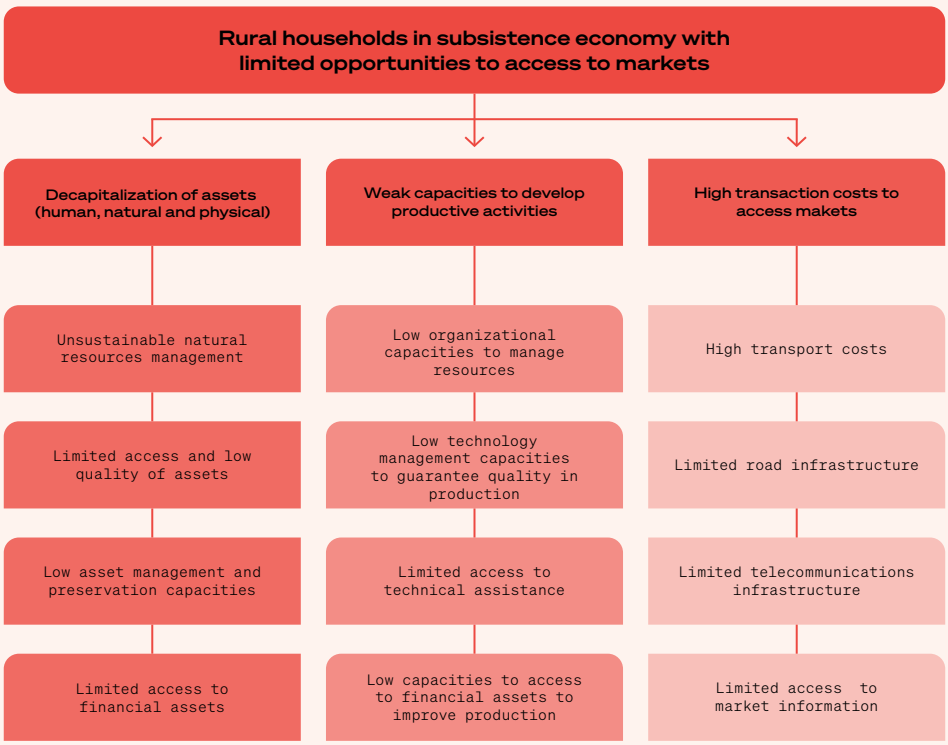

Figure 3
Haku Wiñay/Noa Jayatai Problem Tree

SOURCE: MEF, 2019.

Technical assistance and training are provided by Yachachiqs ("the one who knows and teaches" in Quechua) who are members of the community or surrounding towns and are selected by the community to provide technical assistance and training to other farmers and community members. All training sessions are developed based on a learning-by-doing approach. In that sense, the type of training that Yachachiqs provide to programme participants can be classified by the FAO-IFPRI typology (2021) as "informal farmer-to-farmer" training through both experience or "learning-by-doing" and with media and training meetings and workshops (Figure 4).

With respect to **Output 1**, for Component 1.1, farmers apply the techniques learned in their fields, mostly related to irrigation methods, seed management, organic fertilizer application and small livestock breeding (mostly guinea pigs or *cuyes* in Spanish). Regarding Component 1.2, Yachachiqs provide assistance to household members to organize the dwelling and promote healthy practices among family members such as hand washing, healthy cooking, establishing a separate place for animals, playground for children and relaxation areas for adults (samanawasi), and installation of a safe cookstoves that reduce indoor pollution and use less wood. These activities are developed during the first two years of the programme.

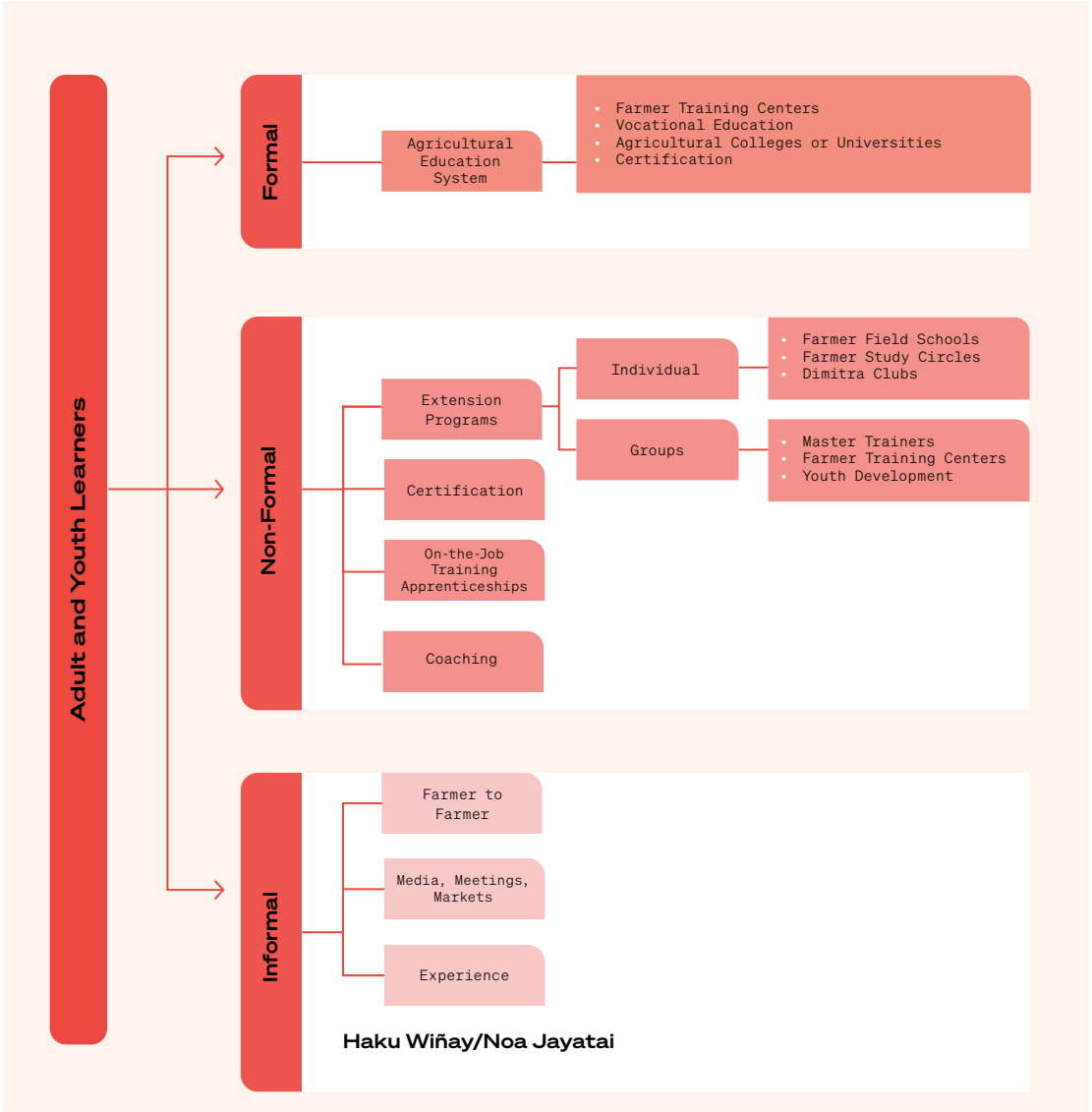

Figure 4
Typology of agriculture human capital investment delivery methods

SOURCE: FAO and IFPRI, 2021.

Regarding **Output 2**, at the end of Year 2, the programme provides start-up grant funding for rural businesses. Interested community members may form a group and prepare a business plan to apply for the grant. Plans are selected in a public competition organized by the community. Component 2.1 refers to the technical assistance that interested farmers receive to prepare the business plans and promote farmers' associations. Component 2.2 provides technical assistance and training to those groups that received the grants. Training includes basic business finances, commercial services (certification, formalization) and market integration.

By the end of 2018, 18 241 rural businesses participated in the community public competition, and 36 percent were selected and received funding from FONCODES. Most of the initiatives presented and selected correspond to small livestock production (mostly guinea pigs), followed by initiatives related to services for the community, including cocoa and coffee post-harvest services, community veterinary services and even restaurants and hairdressing services. Figure 5 presents the distribution of rural initiatives.

Average funding received by the selected initiative is USD 3 216. Forestry initiatives are the most expensive initiatives (about USD 4 200) while handicrafts are the least expensive (about USD 2 900). The project cost is co-funded by FONCODES and group members. On average, group members funded 35 percent of the total cost of the projects. Table 2 shows the average cost of rural businesses projects by type of project.

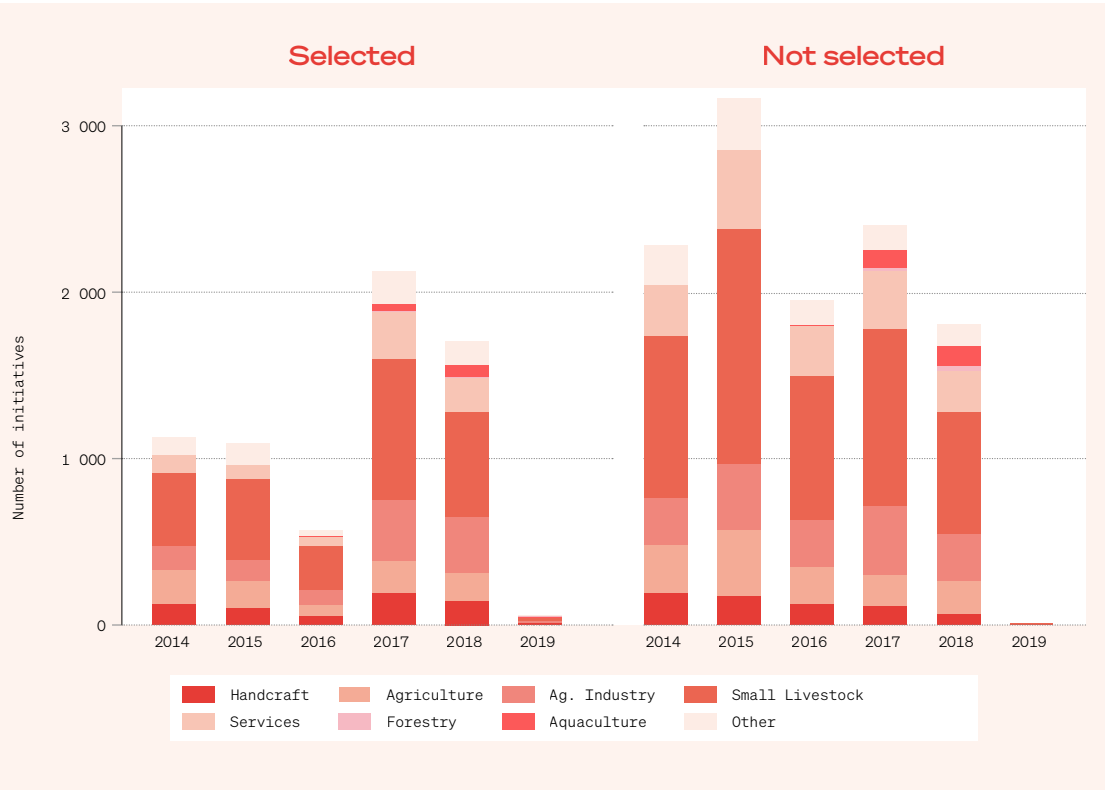

Figure 5
Number of rural businesses initiatives by selection status and type of business

SOURCE: Authors' representation based on programme administrative records, 2020.

Table 2
Average cost of rural businesses initiatives co-funded by FONCODES and group participants (*USD*)

Type of initiative	Amount funded by FONCODES	Amount funded by group members	Total amount
Handicraft	2 771.8	795.2	2 916.2
Agriculture	2 634.3	1 960.5	3 325.9
Ag. Industry	2 873.9	1 457.1	3 186.4
Small Livestock	2 786.5	1 447.7	3 140.5
Services	2 917.0	1 281.7	3 349.4
Forestry	3 739.0	2 619.7	4 254.0
Aquaculture	3 411.5	1 416.6	3 098.8
Other	2 779.3	2 469.0	3 604.0
Total	2 805.8	1 535.8	3 216.8

SOURCE: Authors' summary based on programme administrative records, 2020.

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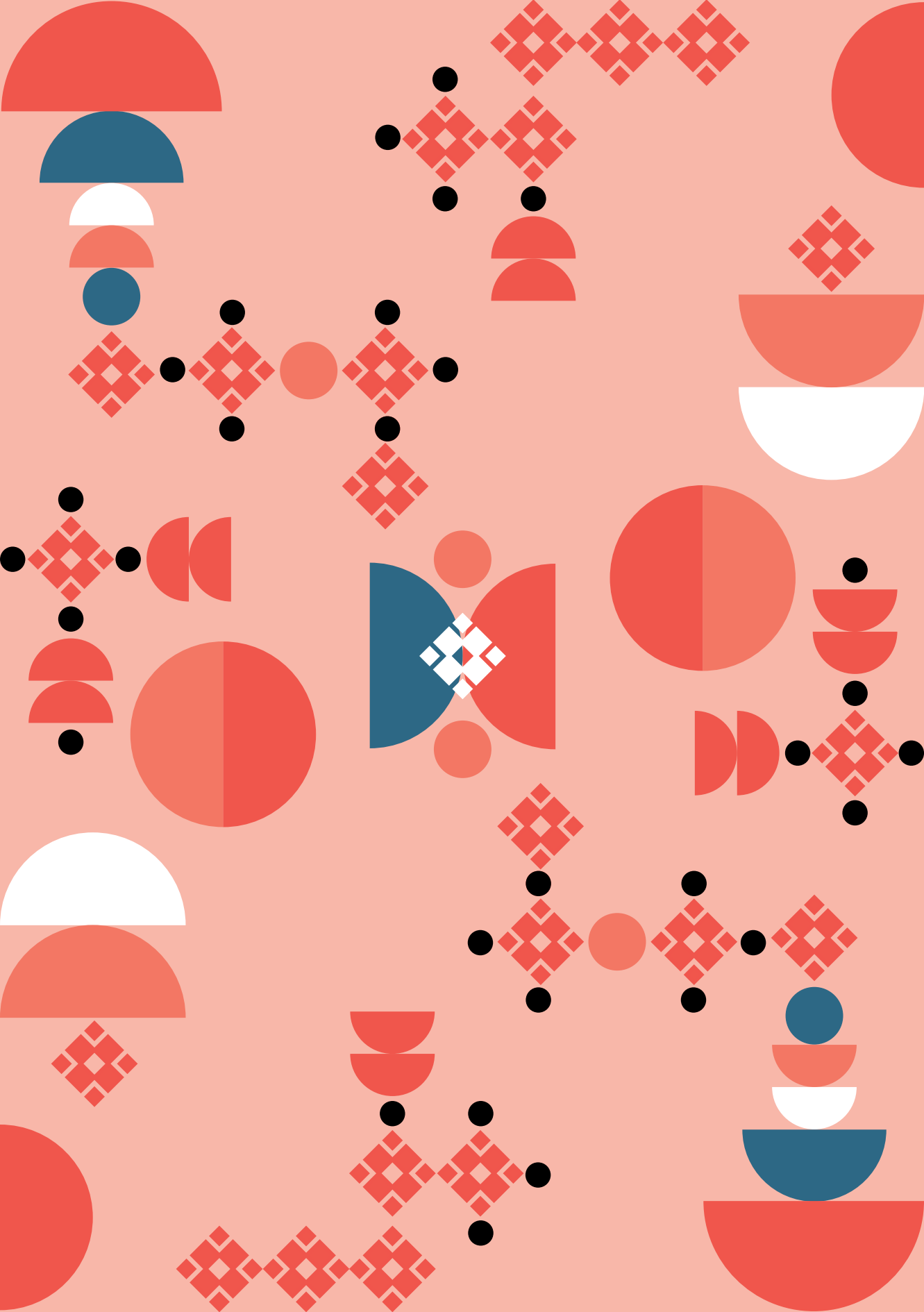

Chapter 3
Details of the case study

TARGET POPULATION

The target population of the programme was geographically identified based on household characteristics, especially land tenancy, as well as district-level poverty rates using the following criteria:

- Towns and villages located within Agricultural Registration Areas of the 2012 Agricultural Census with an average land possession of 1.3 ha;
- Towns and villages located in districts with more than 40 percent monetary poverty rate, based on the District Poverty Map of 2013; and
- Towns and villages located in indigenous communities.

These three criteria yielded a total number of 11 191 towns and villages with 533 962 households considered eligible. Distribution of villages/towns and households, as well as the characteristics of the target population of the programme are presented in the Annex.

IMPLEMENTATION

The programme is implemented by FONCODES through Community Implementation Committees (NE), which are community organizations created solely to implement the projects approved for each community. Each NE covers about 100 households. Public funds are allocated to the programme based on the projected expenses corresponding to the programmed tasks for the following year. FONCODES and NEs sign agreements where all tasks for each year are specified, as well as the rules under which the budget will be spent. A participatory diagnostic is conducted by FONCODES with the NEs, where the necessities of the community, and therefore, the type of projects that will be implemented, are identified. Once the projects for the community are designed, all tasks and the budget that will be assigned to the community are identified. Projects for each community last for three years. A coordinator of the NE conducts the implementation of the projects, and Yachachiqs are hired by the NE. In that sense, communities not only design but also manage the projects.

FONCODES provides the funding for project implementation, technical assistance to NE officials (president, treasurer, accountant) and Yachachiqs, and oversees the expenditures.

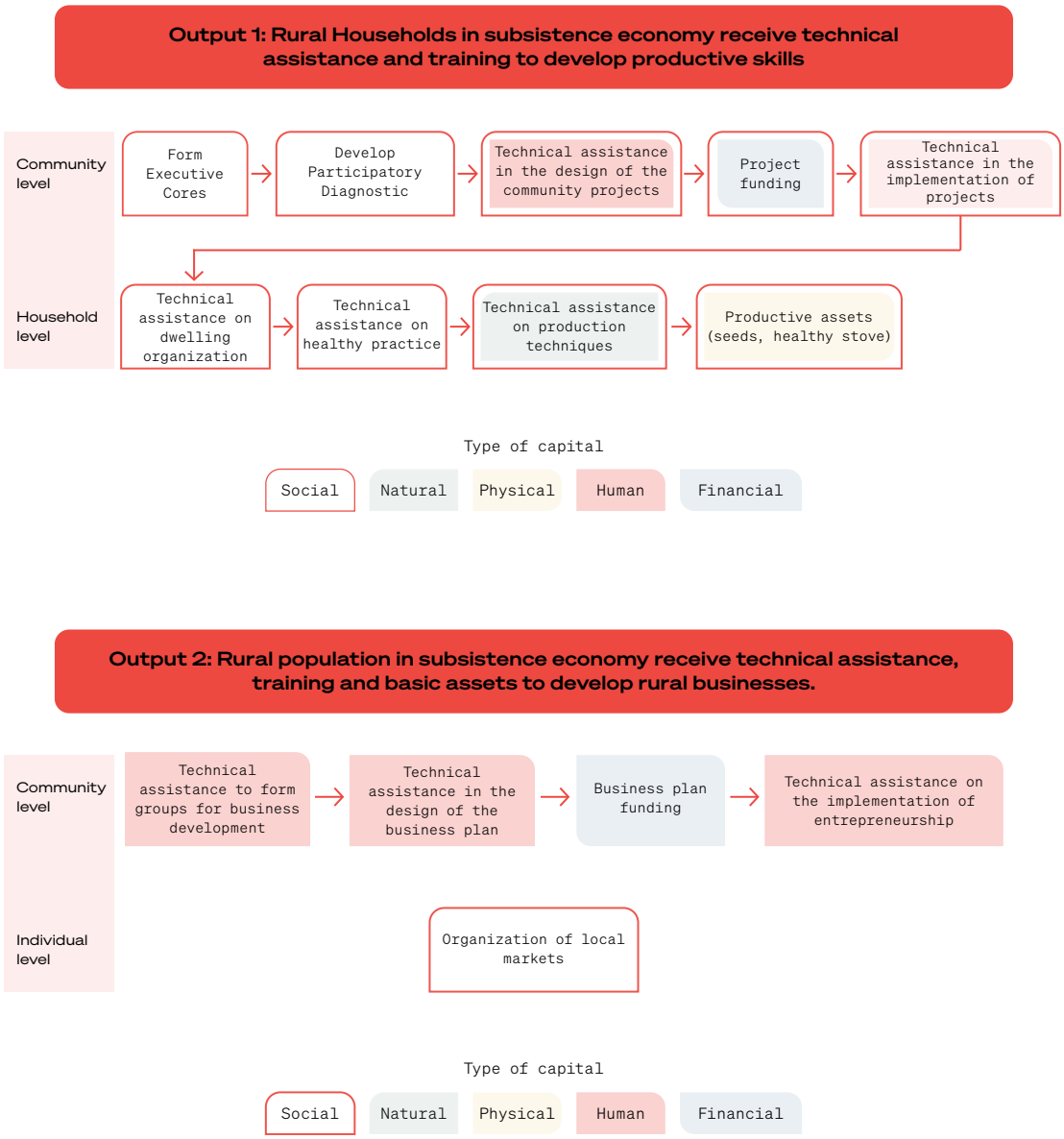

Figure 6
Outputs and activities of Haku Wiñay/Noa Jayatai

SOURCE: Authors' elaboration based on MEF, 2019.

SERVICE MODEL AND FUNDING

Activities for each output are presented in Figure 6.

All community projects implemented by the NE are funded by the national government through the programme. Nevertheless, regional governments, municipalities and private institutions can contribute with additional funding to the community projects. Between 2012 and 2020, the Peruvian government invested USD 444 260 434 (constant 2017) and provided technical assistance to 242 773 households, with an average cost of USD 1 830 (constant 2017) per household per year.

YACHACHIQ SELECTION AND TRAINING

Yachachiqs are selected through an open public process by the NE. The Terms of Reference are published on the FONCODES' website with the details about the communities that will be served by the Yachachiq and the requirements. The profile according to the Terms of Reference includes the following features:

a. Knowledge of local low-cost productive technologies
b. Experience in agricultural extension in rural areas
c. Experience in farmer-to-farmer technical assistance
d. Be able to empathize with other farmers
e. Speak the local language
f. Basic knowledge of using electronic devices and information systems

Yachachiqs receive training about techniques and methods from FONCODES personnel on irrigation techniques (drip or sprinkler irrigation), vegetable garden installation, pasture production, organic fertilizer production, Andean crops and commercial agriculture planning. These criteria are considered for the Yachachiq official certification regulated by the National System of Education Quality Certification (SINEACE). Only two institutions, FONCODES and ProSynergy, can provide Yachachiq certification. Although it is not required for Yachachiqs to be certified, it is important for them to receive the certification given that local markets of Yachachiqs are developing due to the programme. Thus, those Yachachiqs with credentials and certifications have a greater chance to be hired by a NE once the programme is over in a given community.

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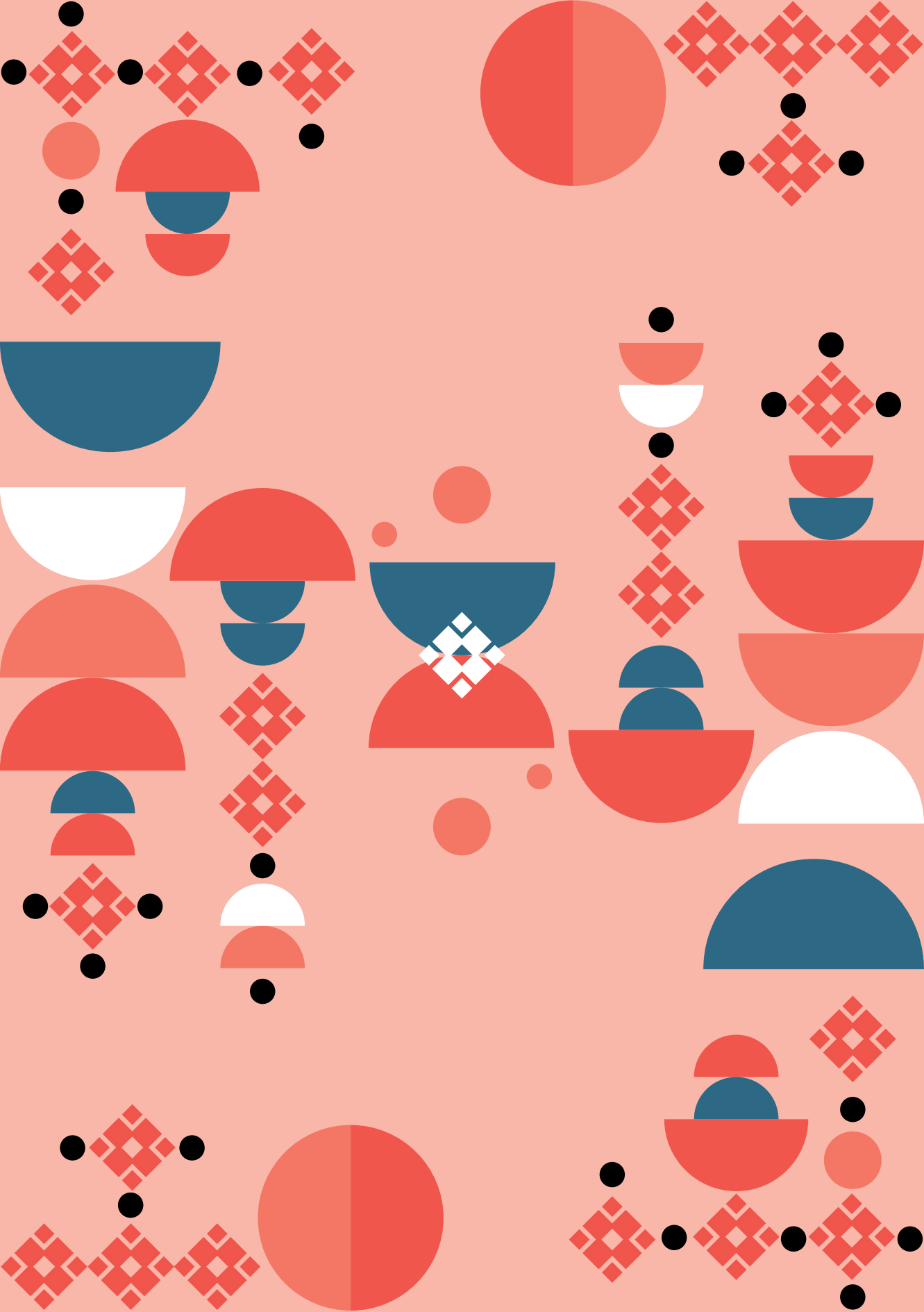

Chapter 4
Case study methodology

Given the extensive range of initiatives and programmes which incorporate aspects of human capital development in their approach to agricultural development, it is difficult to comprehensively assess these types of investments across similar models (farmer field schools, for example) or even in a single country. However, using case studies can facilitate a deep understanding of the complexity of an initiative which seeks to develop human capital and elucidate the processes and phenomena in a given context (Baxter and Jack, 2008). This case study incorporates secondary data sources and primary qualitative data to elucidate the opportunities and challenges a particular programme faced in developing human capital amongst family farmers in a given context.

Data sources

Two types of data were used in this study, from a variety of sources. We relied on various secondary data sources and collected primary qualitative data.

Literature review and collation of secondary data sources

Nine studies on Haku Wiñay were undertaken between 2014 and 2019. These studies describe, how various aspects of the programme work and programme benefits with different levels of scientific rigor. Escobal and Ponce (2016) reported the results of an impact evaluation of the programme two years after the programme started (2013-2015) based on a randomized controlled trial. This is the most rigorous study on the programme. Other studies evaluated the programmes' processes (APOYO, 2018; Diez and Correa, 2016), while other studies provide analysis of different aspects of the programme (Espinoza and Wiggins, 2016; ETC Andes, 2016; Gamarra, Febres and Cavalcanti, undated; Gutierrez Carbajal, 2019).

For the Background section of this study, general demographic human capital indicators for Peru were extracted from a variety of secondary data sources to contextualize the project environment. Demographic indicators, information and communication technology (ICT) and educational attainment indicators were compiled from The World Bank Open Data site and Human Capital Index (World Bank, 2018, 2020). Agricultural research investment indicators were compiled from the Agricultural Science and Technology

Indicators (ASTI) database, which houses datasets on agricultural research expenditures and human resource capacity in low- and middle-income countries (IFPRI, 2020). Information on agriculture expenditures was also downloaded from FAOSTAT (FAO, 2020). Poverty indicators were obtained from the National Institute of Statistics and Informatics – INEI (INEI, 2018d, 2020a, 2020b). Other statistics about access to basic services and social indicators are drawn from the statistics web portal of MIDIS (MIDIS, 2019).

Lastly, HW/NJ holds records of the number of households participating in the programme since its inception, as well as the types of small agricultural enterprises that have been supported. These data were used to provide a general description of the programme. However, it was not possible to access information on their results.

Primary qualitative data collection

Due to COVID-19 pandemic restrictions on in-person data collection, all interviews and focus group discussions were conducted remotely using virtual meeting software (mostly Google Meet) or by phone.

Key informant interviews

Semi-structured interviews were conducted with key informants from academia (1), personnel from FONCODES in Lima (1), personnel from FONCODES on the selected locations for the case studies (two Territorial Chiefs (JUT) and four NE Coordinators), Presidents of NE (2), Presidents of Producers Associations (former programme participants) (1) and Yachachiqs (24).

Telephone focus group discussions with Yachachiqs

In these sessions, questions about the programme were posed to two or three Yachachiqs simultaneously to initiate a brief discussion about the methods that they use to perform their tasks, as well as the benefits and potential improvements of the programme based on Yachachiqs' perceptions. Comparing with key informant interviews, group sessions allowed Yachachiqs to compare each other's responses and provide more information about the context and how they are addressing the specific local problems and target population needs. No participants were physically together for the sessions.

All interviews and interview guidelines were prepared by the case study team with technical support of IFPRI. Contact numbers of interview participants in Cajamarca and Huancavelica were provided by FONCODES. Alexandra Arca and Rodrigo Salcedo directly called all participants and informed consent forms were obtained before the interview started. All interviews were recorded, and transcriptions were safely encoded and saved in a password-protected file managed by IFPRI. Confidentiality of participants was guaranteed.

Selection of cases

The programme targets the poorest populations in rural areas. We thus selected the locations of the case studies based on poverty rates and number of participants. First, we chose the regions with the highest poverty rates in 2019: Ayacucho, Cajamarca, Huancavelica and Puno presented the highest monetary poverty rates, with a lower band of 34.4 percent and upper band of 39.4 percent (INEI, 2020a).

Secondly, we analysed the number of participants of Haku Wiñay between 2017 and 2020. Tables in the Annex present the distribution of participants among regions, as well as poverty rates for all regions. The tables also present the number of rural districts with more than 60 percent of the

population in poverty, based on the unsatisfied basic needs index (NBI in Spanish), or monetary poverty rates.

The regions of Cajamarca and Huancavelica had the highest monetary poverty rates in Peru and the highest number of participants between 2017 and 2020. The two regions covered 20 percent of all participants of the programme between those years. It is important to note that those regions also showed a large number of districts with more than 60 percent of the population considered poor, based on the unsatisfied basic needs index or monetary poverty rates.

Furthermore, the two regions are geographically and culturally very different: Cajamarca is located in the northern Andean region of Peru, in the middle of the northern economic corridor that connects the northern Amazon and Coastal regions, with a majority Spanish-speaking population and with a high presence of the mining industry (Cajamarca is the major gold producer in Peru), while Huancavelica is located in the central-south Andean region of Peru, only connected with Huancayo, the largest city in the central Andes, and with more than 70 percent of Quechua-speaking population. Therefore, for the study we selected initiatives developed in the regions of Cajamarca and Huancavelica.

Figure 7

Map of Peru, Regions of Cajamarca and Huancavelica

SOURCE: UN Geospatial (https://www.un.org/Depts/Cartographic/map/profile/peru.pdf).

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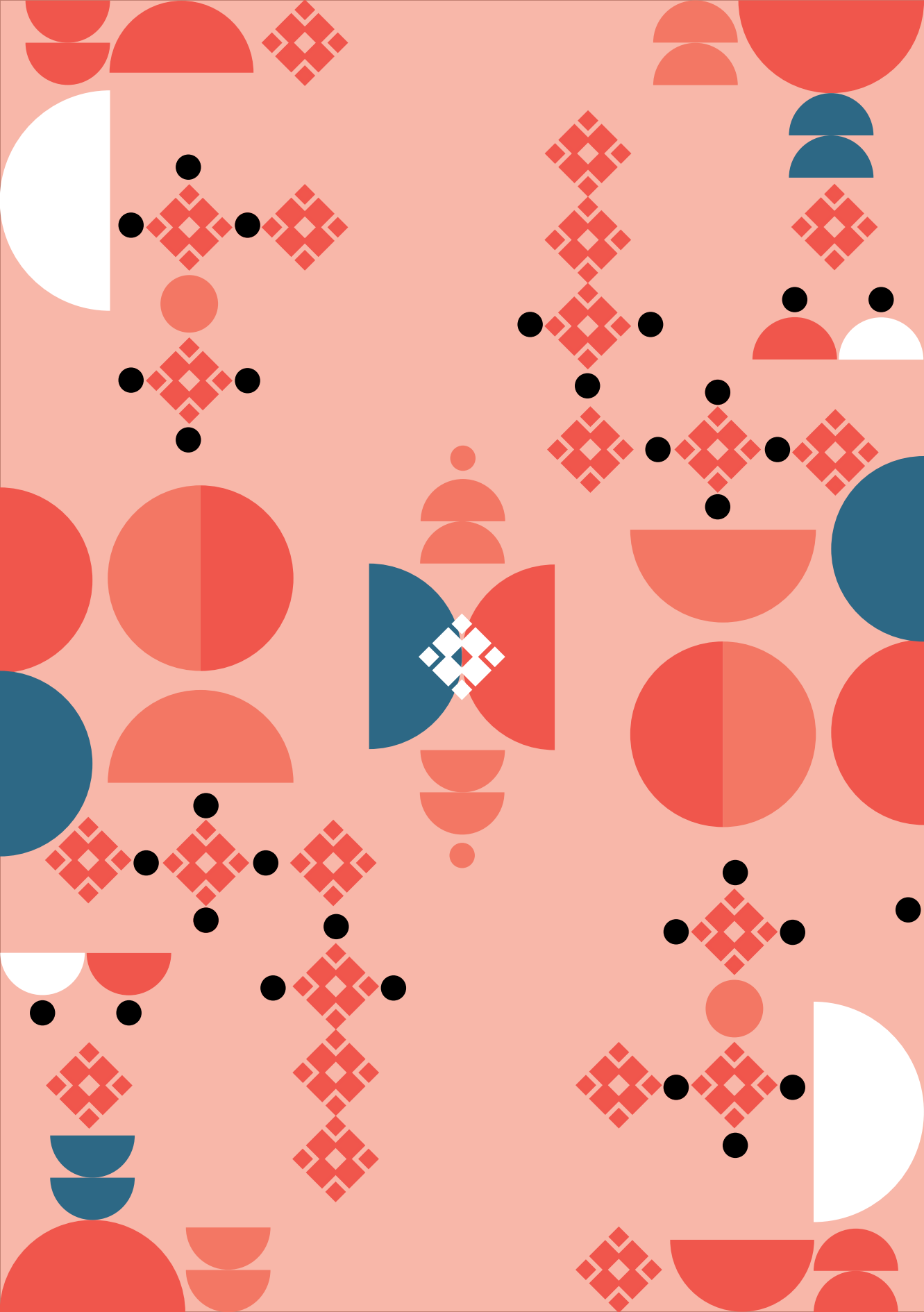


Chapter 5
Evidence base for success of the case study in human capital development

GOALS, OUTCOMES, OUTPUTS OF THE PROGRAMME

The goal of the programme is "Rural households in subsistence economies can access markets". This goal is concerned with the family income generation processes. In that sense, the theory of change is based on the premise that training and technical assistance will help to build the necessary capacities in rural households, such as asset management and organizational and productive capacities, to improve their access to markets.

The indicators of the goal, outputs and activities are presented in Table 3.

Results reported in previous studies

Benites (2015) conducted an impact evaluation of the programme one year after the programme's start, while Escobal and Ponce (2016) conducted an impact evaluation at the second year of the programme. The studies investigated the impact of Haku Wiñay on the welfare of participant households, and the local processes of resource allocation taking place while the project was conducted. Both studies showed similar findings.

Among the major findings, the agricultural income and income from livestock significantly increased (8 percent) for participant households (Escobal and Ponce, 2016b). Significantly higher incomes were reported by participant households for agricultural income (USD 265) and livestock (USD 167). The authors also found a less significant but positive impact on non-agricultural self-employed income (trade, services, handicrafts, etc.). Also, significantly negative incomes were reported on salaried agricultural workers from participant households, which might imply that households relied more on self-employed income from agriculture (Escobal and Ponce, 2016b). Finally, a significantly higher percentage of participating households perceived that family health and nutrition had improved since the baseline year, presumably due to technical assistance on dwelling organization and healthy practices.

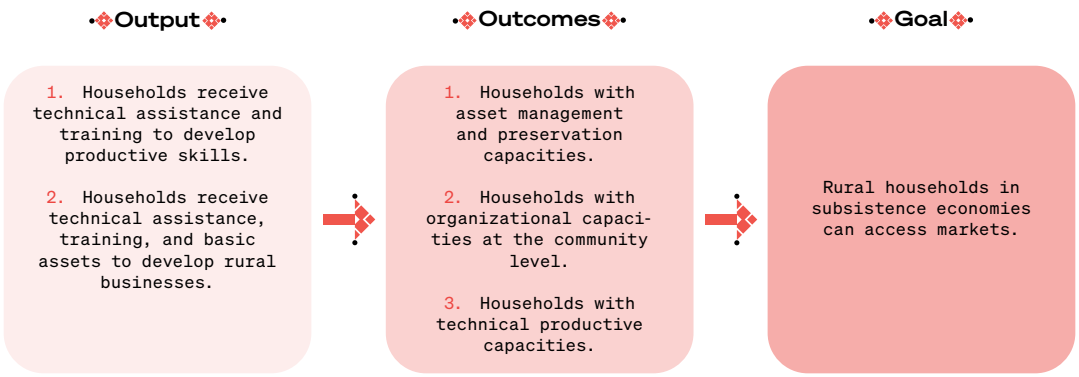


Figure 8
Theory of change of initiative

SOURCE: MEF, 2019.

Table 3
Objectives and indicators of the programme

Objectives	Indicators
Goal	
Rural households in subsistence economies can access markets.	· Percentage change in total value of agricultural production sold. · Percentage of households with higher total value of agricultural production devoted to self-consumption.
Outputs	
Output 1: Rural households in subsistence economy receive technical assistance and training to develop productive skills.	· Number of households that received technical assistance and training on production technologies. · Percentage of households that, after the second year, keep using the acquired technologies. · Percentage of households that expanded by themselves the technologies acquired after the second year.
Output 2: Rural populations in subsistence economy receive technical assistance, training, and basic assets to develop rural businesses.	· Number of rural businesses implemented. · Percentage of operative rural businesses after the third year of the programme.
Activities	
Output 1: · 1.1 Organization of NE. · 1.2 Capacity building to improve the productive activity of family farming and the sustainable use of the forest and its biodiversity.	· Number of NE created. · Number of households that participate in productive training. · Number of households that receive technical assistance in health practices. · Number of households that receive technical assistance in dwelling organization. · Number of households that receive production assets (irrigation equipment, safe stove).
Output 2: · 2.1 Technical assistance to groups interested in starting a rural business. · 2.2 Technical assistance to implement rural businesses. · 2.3 Promotion of local markets.	· Number of interested groups that receive technical assistance. · Number of rural businesses that receive technical assistance. · Number of local markets promoted.

SOURCE: Authors.

Diez and Correa (2016) studied how the processes of HW/NJ are understood and accepted by participants of the programme and analysed whether social, cultural or political factors influence the participation and performance of households in the programme. They reported that the programme was highly valued by communities, programme users and even non-users, mainly due to its results on capacity building on productive techniques and household improvement. They also reported that communities perceived that the programme "is present where no one else is". Another finding was related to communities' perceptions about the positive effects of the programme on the dynamics of the local economy and the demand of local technicians that pursued tertiary education, particularly Yachachiqs, to provide technical assistance and training to the community. In other words, the programme promotes the development of local Yachachiqs and agricultural extension markets. Finally, they found that non-participants have implemented the same household recommendations and agricultural practices that the programme provided to participants, but with their own resources.

Results reported in interviews

Key informant interviews and telephone focus group discussions provided information about:

- Profile of a Yachachiq
- Training methods
- Technologies transferred and skills developed in programme participants
- Challenges of the programme

PROFILE OF A YACHACHIQ

Most of the interviewed Yachachiqs were men between 40 and 50 years old, but women and younger Yachachiqs also participated in the sessions. Even though the majority come from surrounding districts, some of them are from other regions. Yet, all Yachachiqs live in the community during the duration of the programme.

"Most Yachachiqs have secondary studies and have received formal education in agricultural techniques. However, their knowledge comes mainly from the experience of working hand in hand with farmers"

(Yachachiq, Cajamarca).

All informants mentioned that the Yachachiq must be a person capable, in the first place, of building trust with participant families. Even though many Yachachiqs come from the same or surrounding communities, they still must prove their trustworthiness, especially because programme participants "open the doors of their home" to Yachachiqs. In that sense, Yachachiqs not only have to be able to transfer knowledge about technologies and household healthy practices, but also understand the major needs of families on production technologies and, in general, livelihood strategies. Several Yachachiqs stated that household improvements, especially the installation of safe cookstoves,are key to build trust with programme participants: "Its installation generates less pollution and involves less firewood consumption. According to several

informants, the positive impact of the kitchens makes it easier for participants to establish a trust relationship with Yachachiqs"

During the sessions, the Yachachiq listed some of the essential qualities to carry out their task: patience, kindness, imagination, and innovation in the way techniques are transferred. Most of the participating families had worked in agriculture for generations, and have been applying these techniques for centuries. The technologies that the Yachachiq teach are improved versions of these very same techniques. In Huancavelica, speaking Quechua is also perceived as a strong asset for a Yachachiq, given that Quechua is the mother tongue of most of the participants of the programme. Being able to transmit technical knowledge in the native language is key to ensure capacity building.

"The Yachachiq is not the one who commands but is the one who teaches with practice."
(Yachachiq from an NE of Huancavelica)

TRAINING METHODS

Based on the information gathered through interviews and telephone focus groups, the most important method Yachachiqs use for training is 'learning-by-doing', in which they apply the techniques in the field with farmers. They also organize sessions and use media for training. Rural field schools are organized where rural community members can gather to receive instruction.

The Yachachiq meet with a farmer, or a small group of farmers to demonstrate the techniques during their home visits. Then the farmers propose, a set of techniques to be improved and often arrange to test two or more chosen techniques (traditional and new) with the Yachachiq. In light of the results, they decide which techniques work best. The Yachachiq work side by side with the beneficiaries throughout this process.

Yachachiqs also make handmade posters, distribute pamphlets, or show pictures or videos of other programme participants working or using the new technologies. Experience exchange between different NE are also organized, where users from NE visit other NE to learn the promoted techniques. When a technology is successfully applied in a household, neighbouring families and villages will be keener to adopt it, which Yachachiqs use to advantage as a teaching tool.

"Human capital development is done daily. If we don't develop human capital, if we don't develop abilities, behaviours, attitudes towards a new way of living; shifting it to a more tidy, clean, entrepreneurial [way of living], we won't achieve anything. Our work is a joint effort"
(JUT)

TECHNOLOGIES TRANSFERRED AND SKILLS DEVELOPED IN PROGRAMME PARTICIPANTS

Agriculture enhancing techniques

Programme participants learn the importance of diversifying crops and seeds. Initially participants receive improved seeds from other regions and are taught how to use them to enhance agricultural production. They are encouraged to use organic fungicides and fertilizers, such as through worm farming. Farmers also learn to improve their watering systems, and to install geomembrane-based reservoirs to capture rainwater to address the lack of water in the area. Sprinkler irrigation is considered a smarter way to use scarce water resources.

Increase in small animal breeding capabilities

Among the main improvements in guinea pig production is to reorganize the space to separate animals to grow them safely and reduce the risk of getting diseases. Corrals were also built to protect the animals from adverse weather conditions, and techniques for the production of nutritious feed for guinea pigs, such as *alfalfa* (lucerne), were taught.

In view of the results, some farmers in Cajamarca organized guinea pig producer associations, now formally registered, and whose members pay a regular contribution and are compliant with safety guidelines. In addition, the population began to use masks to ensure the safe handling of guinea pigs. According to some interviewees, this made it easier for the families to adopt health measures to protect them from COVID-19.

Farmers are also taught how to vaccinate and assure sanitary conditions for their animals. According to Yachachiqs from Huancavelica, some farmers would pay outside technicians to apply flu vaccines to their hens and chickens, spending a considerable amount of money (they are paid per shot). Having learnt how to do this themselves has improved their family economy.

Crops for family consumption and animal feeding

Families learned how to diversify their vegetable intake. Families can commercialize the surplus, thus earning money from the sales. In the production process, farmers are taught to use biofertilizers from organic solid waste generated at home. They are also taught to grow some crops using hydroponics. This is especially useful for dry times. Farmers have learned to grow crops with little water to feed their small animals, such as guinea pigs or chickens.

Healthy households

The learning process highlights the importance of a healthy household. By installing safer stoves with less smoke, spaces become redistributed and the house is reorganized, reducing the risk of respiratory and gastrointestinal diseases. In addition, families are provided with a supply of safe water and learn the importance of a diverse and nutritious diet.

Stoves improvement is one of the key technologies that is implemented during the program. It saves cooking time, requires less firewood and generates less smoke in the household. Most of the interviewees agree that its installation contributes to strengthen the ties between the participants of the programme and the Yachachiq. As families see improved kitchens as a quick and effective solution, they will be more likely to welcome training from the Yachachiq.

"We cannot separate the human component to the technical one (...) Farmers, especially those from the Andes, may not be accustomed to speaking in formal settings. After centuries of being marginalized and excluded, having someone accompany them, providing additional support can be helpful. This is highly gratifying for them"
(Coordinator)

FONCODES finds that home improvement techniques are an effective introductory strategy rather than a core programme activity. Nevertheless, program participants are highly appreciative of these activities.

Financial education and entrepreneurship

Groups of three to four programme participants will gather and develop a rural business plan. If the plan is selected, FONCODES will provide funding for the group up to USD 3 000. Group members will also get technical assistance and financial education. For instance, the guinea pig producers' association of Chota started as a small entrepreneurship.
According to interviewees, this component has the potential to build or strenghthen partnerships with neighbouring communities. Programme participants also learn to use a savings account. Some of them already have one in Banco de la Nación, the Peruvian National Bank.

CHALLENGES OF THE PROGRAMME

Scarce resources for Yachachiqs

Several Yachachiqs mentioned that they do not receive enough support from FONCODES. Although they appreciate the training from FONCODES, it is hard for them to continue working for the project if few production inputs are provided for training. For instance, despite the fact that the participants received seeds to carry out the techniques learned from the Yachachiq, the interviewees pointed out that these were not enough, to the point that some participants lost interest.

"Our biggest achievement is that we have formed an association...This is something we have learned: to work as a microenterprise. To work as a microenterprise formed by both communities we have got to build trust. If we don't, who will defend your community? We work as a formal enterprise."
(Guinea Pig Grower Association President)

Although Yachachiqs are paid (the average monthly salary of a Yachachiq is USD 428 plus transportation and per diem when they travel to other villages), interviewees mentioned that this is not enough for them. Some Yachachiqs from Huancavelica said they did not have insurance, which could lead them to abandon the programme.

Inadequate project design

According to some interviewees, some projects implemented by the NE are based on former projects designed for other NEs without a further consideration of the population's needs or the communities' conditions. This finding is also presented by Diez and Correa (2016). Nevertheless, community members are supposed to participate in the design and selection process.

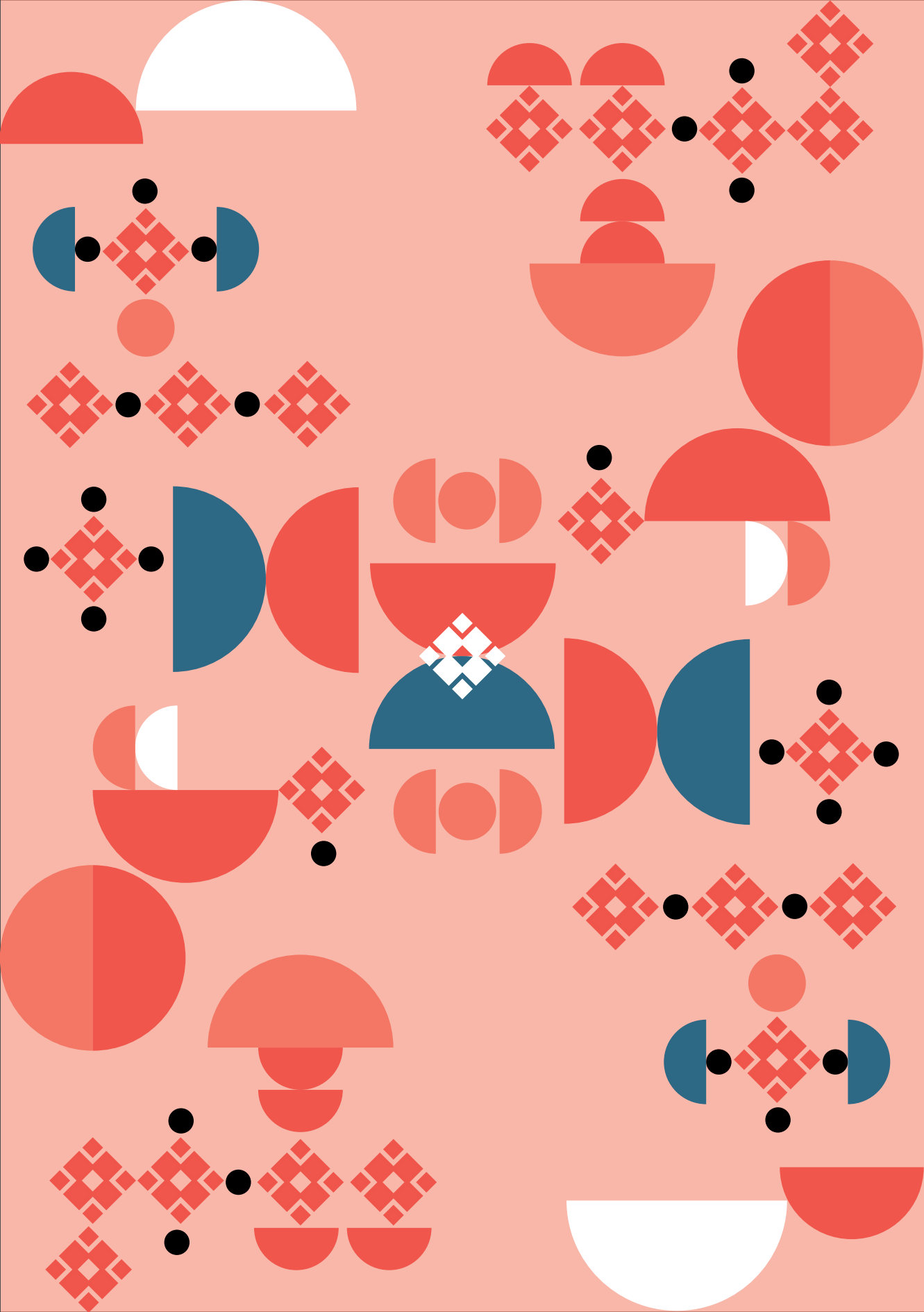
Culture of dependency in programme participants

Several interviewees mentioned that some programme participants expect to receive inputs and economic resources. When Yachachiqs explain to farmers that, although the programme provides some basic inputs, the main objective of the programme is to provide farmers and household members with training and technical assistance on several techniques that will improve their quality of life, many refuse to participate. Yachachiqs must convince them to attend the training and apply the household improvements.

This situation is worse in Cajamarca, which is a mining region. The relationship between mining companies and the population has not been easy. In recent decades, several social and environmental conflicts have sparked in the region due to mining activities. Consequently, mining companies tend to provide goods and financial resources to the population in order to alleviate tensions, yet without investing in technical assistance. In that sense, the programme has encountered resistance from the participants due the fact that they expect goods and monetary aid, in addition to training.

Limited access to markets

Programme participants value the techniques learned and, according to the interviewees, recognize an improvement in production after the second year. However, selling their produce remains difficult for farmers. Although local agricultural fairs are key to improving sales, they are not enough. Some Yachachiq mentioned that farmers feel frustration at the unfeasibility of selling their product, with some of them even disengaging from the new technologies as a way to avoid wasting time or money.



Chapter 6
Analysis of the case study and recommendations

Both the reviewed literature and the interviews suggest that the programme in significant demand by poor rural households. The techniques transferred to programme participants through Yachachiqs are valued by small farmers and household members. All interviewees noted that the main change achieved in the population is an improvement in their quality of life, either by the consumption of healthier food, access to safer water and less polluted indoor environment or the increase in agricultural production and sales. These features make the programme successful in that the target population feels that the programme is generating some improvements in their lives. In that sense, Output 1 seems to fulfil the expectations of programme participants. This perception is aligned to the findings presented in Benites (2015), Diez and Correa (2016) and Escobal and Ponce (2016).

Nevertheless, this is not the case for Output 2. As Escobal and Ponce (2016) argue, the sustainability of the rural businesses implemented with the funding and technical assistance provided by the programme is not guaranteed. Several hypotheses exist, including differences in the "entrepreneurial spirit" of group members and the type of bonds of group members, with those that have family ties showing better results (Diez and Correa, 2016). From the interviews, it is not possible to provide solid arguments about the achievement of this output of the programme. Most of Yachachiqs focused on the results of Output 1 and barely mentioned that results obtained through technical assistance and training in Output 2.

Key features that support the success of the programme (at least of Output 1) are:

a. The involvement of the community in the design and implementation of the programme (although in some cases, community projects do not reflect the needs of the population, as some Yachachiqs argued in the interviews, as well as presented by Diez and Correa (2016));

b. The ability of overcoming bureaucracy through the execution of projects by NE to guarantee quick and agile implementation of community projects. As Escobal and Ponce (2016) mention, this is key to

c. The possibility of obtaining almost immediate results from the installation of cookstoves and household organization, which facilitates the work of Yachachiqs in order to guarantee the attendance of programme participants to training sessions and, in general, open participants' household doors to Yachachiqs

d. Using easy-to-put into practice techniques, such as improving irrigation techniques using geomembrane-based reservoirs or the production and application of organic fertilizers. These practices are perceived as natural by programme participants, and also, as mentioned by several Yachachiqs, programme participants perceived a reduction of production costs

e. The perception that, in general, the programme contributes to a positive impact in their quality of life, even if improvements in income are insignificant. Learning about new techniques and household improvements significantly contribute to participants' self-esteem.

A major drawback of the programme that, if not addressed in a timely manner, would significantly put it at risk, are the conditions under which Yachachiqs perform their duties. As mentioned by Diez and Correa (2016) as well as shown in the interviews, Yachachiqs' monthly salaries do not correspond to the level of responsibilities that Yachachiqs assume in the field. "Yachachiq's salaries are not the same for everyone. They depend on the project. And the salary is not that much that compensates [our effort]. (...) I, for instance, have had to buy myself a motorcycle. I pay for my own gas. Sometimes I spend more than I earn", indicated one Yachachiq woman from Huancavelica. Moreover, in many cases they need to face extreme situations putting their safety at risk and, according to many interviewees, with no health insurance. "Worker's health and wellbeing has to be addressed... sometimes we are sent to extreme locations and you'll have to analyse the pros and cons. This is because, even when I want to work for the people, the programme participants, I also have to think of myself" said another Yachachiq woman.

Also, it is necessary to guarantee proper and effective training for Yachachiqs. Some of them have practical, technical or academic knowledge on the technologies shared with programme participants. However, some technologies involve a different set of skills (the installation of stoves, for example, requires working with concrete) and Yachachiqs should be able to receive specific training. A Yachachiq internship or exchange programme could strengthen existing capabilities.

They should also be provided with proper tools, so that they do not have to buy or rent them. A suggestion given by Yachachiqs is that the programme have a set of tools to provide to Yachachiqs for the duration of the contract.

Another feature of the programme that needs to be addressed is the timeline of community projects. Projects are implemented for three years, and during the first two years, participant households receive training from Yachachiqs on agricultural techniques, home improvements and solid waste management, whereas in the last year and a half, some community members are supported to develop rural businesses. After three years, the community project is closed and the programme no longer has any information about the continued application of the techniques learned. Without a systematic follow-up

process, it is not possible to determine whether the techniques learned are sustainable. According to a Huancavelican Yachachiq, "[Follow-up] should be up to four to five years. This way you could practically go alongside, step by step, with the user. Nowadays [the project] ends in three years. Two of these years are only focused on the enterprises, and enterprises only. This triggers desertion in some [programme participants that have not been selected for entrepreneurships]".

This study focused on two regions from the Andes: Cajamarca and Huancavelica, the poorest regions in Peru. However, the programme is also carried out in the regions of the Amazon basin. Although no interviews were conducted with Yachachiqs in this area, some authors provide evidence that the model is not successful in the Amazon and that several adjustments need to be made to the programme to achieve acceptance among Amazon communities (Diez and Correa, 2016). One major limitation is accessibility, which significantly raises implementation costs. Also, new technologies need to be developed to adapt the programme to participants' needs in this situation.

Finally, as mentioned by all interviewees, institutional coordination is key for the success of the programme. HW/NJ provides basic production techniques and home improvements to support small farm household members to organize their daily activities and improve the use of the limited assets households possess. Programme actions will contribute to the generation of excess production that could be sold in local markets and potentially access to more and healthier food. Nevertheless, after the programme leaves the community, no other programmes will continue the work, nor provide the "next step" techniques required by farm households in order to consolidate household economics and guarantee sustainable income sources. Better cordination with the Ministry of Agriculture and Ministry of Production is fundamental to continue with the learning process and the achieve access to markets and rural households' sustainable development.

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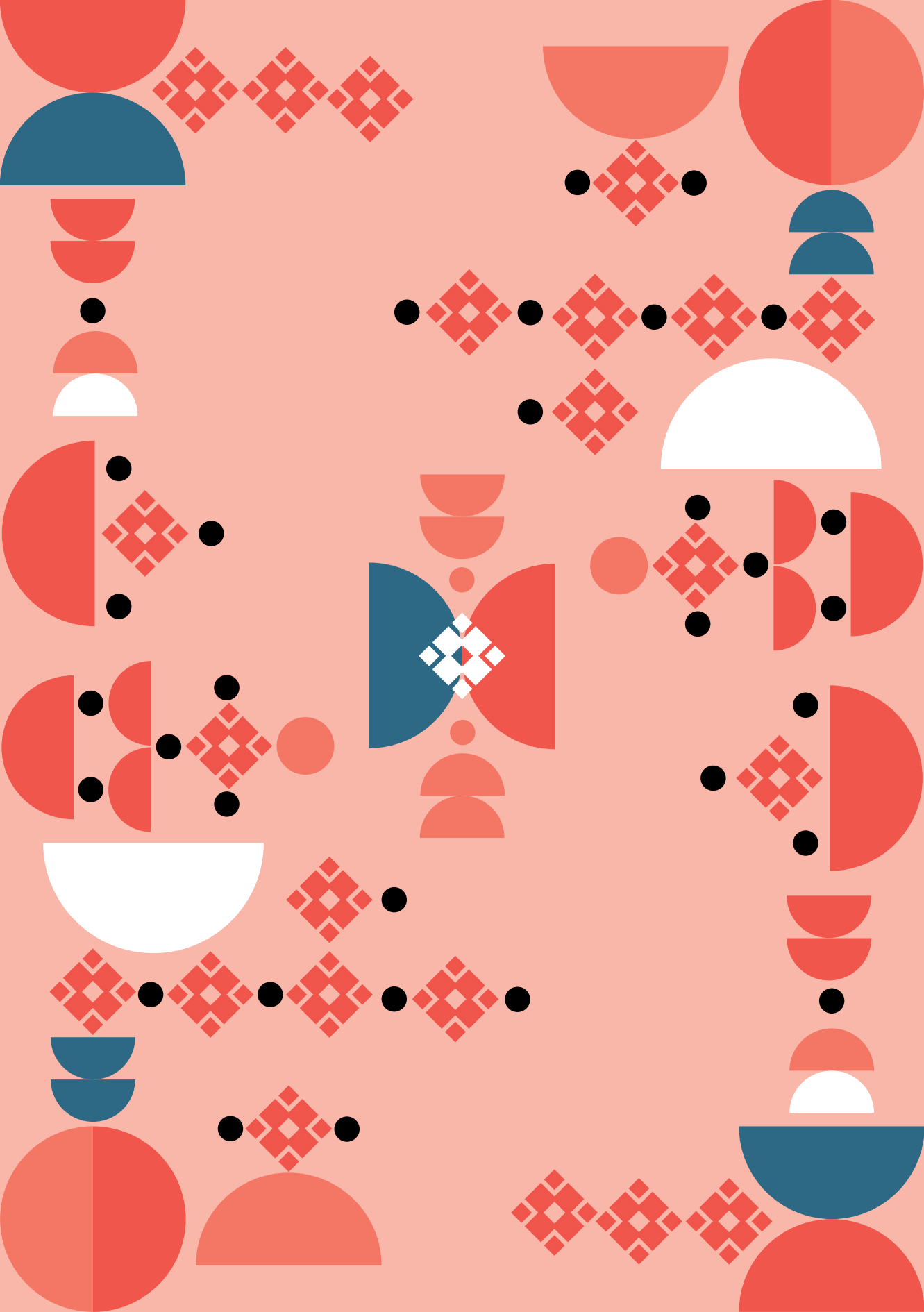

References

APOYO. 2018. Evaluación de diseño y ejecución presupuestal del Programa Presupuestal 0118 "Acceso a hogares rurales con economías de subsistencia a mercados locales". MEF. https://www.mef.gob.pe/contenidos/presu_publ/ppr/eval_indep/2018_inf_final_EDEP_PP0118_0121.pdf.

Baxter, P. & Jack, S. 2008. Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report,* 13(4): 544–559. (also available at http://www.nova.edu/ssss/QR/QR13-4/baxter.pdf).

BCRP. 2020. Series anuales. In: *Series anuales* [online]. https://estadisticas.bcrp.gob.pe/estadisticas/series/anuales.

Benites, S. 2015. Informe de evaluación: Evaluación de impacto del programa Haku Wiñay: A un año de intervención. https://socialprotection.org/es/discover/publications/evaluaci%C3%B3n-de-impacto-del-programa-haku-wi%C3%B1ay-un-a%C3%B1o-de-intervenci%C3%B3n.

Davis, K., Gammelgaard, J., Preissing, J., Gilbert, R., and Ngwenya, N. 2021 Investing in Farmers: Agriculture Human Capital Investment Strategies. FAO, Rome.

Diez, A. & Correa, N. 2016. Informe de evaluación: Desarrollo productivo y pobreza rural. Implementación y efectos del programa Haku Wiñay.

Escobal, J. 2012. *Estudio comparativo de intervenciones para el desarrollo rural en la Sierra sur del Perú.* Primera edición edition. Lima, Perú, GRADE Grupo de Análisis para el Desarrollo. 160 pp.

Escobal, J. & Ponce, C., eds. 2016a. *Combinando protección social con generación de oportunidades económicas: una evaluación de los avances del Programa Haku Wiñay.* Lima, Perú, GRADE Grupo de Análisis para el Desarrollo. 193 pp.

Escobal, J. & Ponce, C., eds. 2016b. *Combinando protección social con generación de oportunidades económicas: una evaluación de los avances del Programa Haku Wiñay.* Lima, Perú, GRADE Grupo de Análisis para el Desarrollo. 193 pp.

Espinoza, Á. & Wiggins, S. 2016. La articulación entre programas de desarrollo agropecuario y protección social: Estudio de caso en Perú. FAO. http://www.fao.org/3/a-i5418s.pdf.

ETC Andes. 2016. Estudio de sistematizaci[ón de la experiencia de ejecución de proyectos "Haku Wiñay/Noa Jayatai". http://www.foncodes.gob.pe/haku/pdfFiles/Estudio.pdf.

FAO and CAF. Undated. Perú, *Nota de Análisis Sectorial: Agricultura y Desarrollo Rural.* Rome, FAO (available at: http://www.fao.org/3/a-ak169s.pdf).

FAO. 2020. Government Expenditure. In: *FAOSTAT* [online]. [Cited 18 August 2020]. http://www.fao.org/faostat/en.

FAO & CAF. undated. Perú, Nota de Análisis Sectorial: Agricultura y Desarrollo Rural. Rome, FAO. (also available at http://www.fao.org/3/a-ak169s.pdf).

Gamarra, N., Febres, M. & Cavalcanti, J. undated. *Mejorando la estrategia para la articulación de pequeños productores en el ámbito rural con el mercado: el caso de Haku Wiñay en la provincia de Huancabamba, región Piura*. Universidad del Pacífico. (Masters Degree in Social Investement).

Goldin, C. D. 2016. Human Capital. In C. Diebolt & M. Haupert, eds. *Handbook of Cliometrics*, pp. 55–86. Heidelberg, Germany, Springer Verlag. (also available at https://dash.harvard.edu/handle/1/34309590).

Gutierrez Carbajal, R. 2019. *Factores de éxito y factores limitantes del programa de producción familiar Haku Wiñay: El caso del proyecto desarrollado en el distrito de San Miguel,Provincia de La Mar - Ayacucho, período 2015-2017.* Pontificia Univerisdad Católica del Perú. (Ms.A.)

IFPRI. 2020. *Data download* [online]. [Cited 18 August 2020]. https://www.asti.cgiar.org/data.

INEI. 2018a. *Perú: Perfil sociodemográfico. Informe Nacional, Censos Nacionales 2017.* INEI. (also available at https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1539/libro.pdf).

INEI. 2018b. *Perú: Participación de la población en la actividad económica 2018.* Lima, INEI. (also available at https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1676/libro.pdf).

INEI. 2018c. Perú: Evolución de los indicadores de empleo e ingresos por departamento, 2007-2018. Lima, INEI. (also available at https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1678/libro.pdf).

INEI. 2018d. *Mapa de necesidades básicas insatisfechas (NBI): 1993, 2007, 2017.* Lima, INEI. (also available at https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1588/).

INEI. 2020a. *Evolución de la pobreza monetaria 2008-2019: Informe técnico.* Lima, INEI. (also available at https://www.inei.gob.pe/media/cifras_de_pobreza/informe_pobreza2019.pdf).

INEI. 2020b. *Mapa de pobreza monetaria provincial y distrital 2018.* Lima, INEI. (also available at https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1718/Libro.pdf).

MEF. 2019. Programa Presupuestal 0118 - Haku Wiñay. MEF.

MIDIS. 2014. *Estrategia Nacional de Desarrollo e Inclusión Social "Incluir para Crecer".* MIDIS.

MIDIS. 2019. Redinforma. Lima, MIDIS. (also available at http://sdv.midis.gob.pe/RedInforma/).

MINAGRI. 2015. Estrategia Nacional de Agricultura Familiar 2015-2021. Lima, MINAGRI. (also available at https://www.agrorural.gob.pe/wp-content/uploads/2016/02/enaf.pdf).

World Bank. 2018. The Human Capital Project. Washington, DC, The World Bank.

World Bank. 2020. World Bank Open Data | Data. In: World Bank Open Data [online]. [Cited 18 August 2020]. https://data.worldbank.org/.

World Bank Group. 2017. Peru - Systematic Country Diagnostic. No. 112694. Washington, DC, World Bank Group. (also available at http://documents.worldbank.org/curated/en/919181490109288624/Peru-Systematic-Country-Diagnostic).

World Economic Forum & Schwab Foundation for Social Entrepreneurship. 2013. Breaking the Binary: Policy Guide to Scaling Social Innovation. Schwab Foundation for Social Entrepreneurship. https://www.weforum.org/reports/breaking-binary-policy-guide-scaling-social-innovation-2013.


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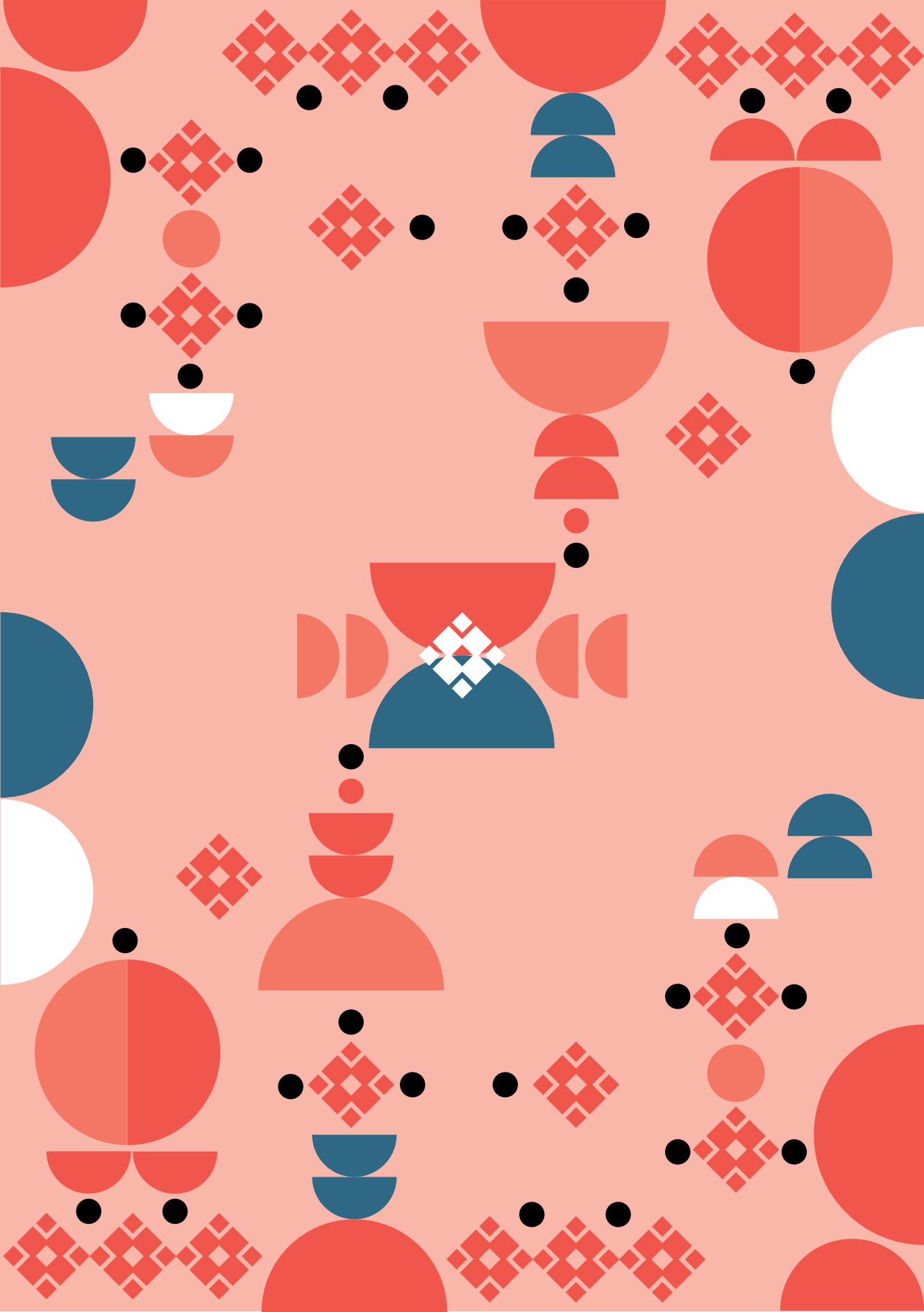

Annex

Table A1
Distribution of the target population of the programme

Territorial Units	Target Population		
Region	**Town/Village**	**Households**	**Poor households**
Abancay	427	35 924	27 577
Arequipa	58	6 450	3 689
Ayacucho	524	43 593	29 294
Cajamarca	1 879	142 053	87 635
Cerro de Pasco	126	10 850	6 849
Chachapoyas	381	31 161	18 688
Chiclayo	294	23 643	12 013
Chimbote	95	8 185	3 212
Cusco	779	56 813	37 590
Huancavelica	511	39 962	31 320
Huancayo	237	20 905	9 943
Huaraz	451	32 292	12 494
Huánuco	719	54 938	39 621
Ica	7	571	221
Iquitos	373	29 175	19 190
La Merced	387	28 806	10 388
Lima	246	23 616	7 111
Madre de Dios	2	111	28
Moquegua	28	3 504	1 409
Piura	832	73 879	43 045
Pucallpa	167	10 978	3 679
Puno	1 317	96 280	63 118
Tacna	12	1 080	572
Tarapoto	582	54 890	26 212
Trujillo	756	58 171	39 058
Tumbes	1	41	8
Total	11 191	887 871	533 962

SOURCE: MEF, 2019.

Table A2
Target population characteristics

Region	% of the population with at least 1 NBI[1]	Average ages	% Population under 14 years old	% Population who has not completed primary school	% Illiterate population over 15 years olds	% Population with no health insurance	% Employed population working in agriculture	% of towns/villages without access to the water system	% of towns/villages without access to public sewage	% of towns/villages without electricity
Amazonas	0.98	19.3	0.50	0.13	0.08	0.49	0.82	56.19	32.03	94.65
Áncash	0.97	25.3	0.41	0.13	0.22	0.62	0.79	47.25	88.10	58.40
Apurímac	0.96	27.5	0.40	0.10	0.17	0.50	0.81	83.39	78.79	39.41
Arequipa	0.94	27.3	0.39	0.17	0.17	0.33	0.51	24.73	86.32	67.96
Ayacucho	0.95	25.2	0.37	0.15	0.12	0.55	0.76	78.14	64.01	68.40
Cajamarca	0.97	25.1	0.40	0.15	0.14	0.50	0.90	37.55	51.03	87.73
Cusco	0.97	24.7	0.41	0.15	0.14	0.40	0.78	58.09	67.43	63.91
Huancavelica	0.97	23.7	0.43	0.13	0.14	0.50	0.80	75.39	84.69	45.86
Huánuco	0.94	24.0	0.40	0.18	0.14	0.52	0.90	78.39	51.46	86.16
Junín	0.96	22.8	0.41	0.13	0.08	0.66	0.86	80.22	41.37	74.68
La Libertad	0.98	24.5	0.42	0.16	0.15	0.57	0.80	55.24	81.54	85.67
Lambayeque	0.97	24.1	0.43	0.11	0.17	0.54	0.77	49.65	66.09	97.50
Loreto	0.99	21.6	0.46	0.16	0.07	0.47	0.81	59.27	76.77	52.53
Pasco	0.67	26.7	0.32	0.10	0.07	0.74	0.67	82.10	77.75	71.85
Piura	0.96	25.4	0.40	0.15	0.14	0.61	0.81	68.72	82.97	20.39
Puno	0.94	29.0	0.33	0.10	0.11	0.75	0.77	66.11	87.47	78.42
San Martín	0.97	23.0	0.41	0.17	0.07	0.64	0.87	47.92	77.57	52.99
Ucayali	0.99	22.1	0.44	0.17	0.08	0.48	0.83	65.89	29.27	84.97

SOURCE: MEF, 2019.

[1] **NBI** stands for Non-satisfied Basic Needs and is an indicator of non-monetary poverty. **NBI 1** is a dummy variable for inadequate housing.

Table A3
Poverty rates and number of participants by region

Region	Poverty rate: LB[2]	Poverty rate: UB[2]	Number of rural districts with more than 60 percent poverty	Percent	Number of participant households 2017-2019	Percent
Cajamarca	34.4	39.4	95	19.2	18 475	11.5
Huancavelica	34.4	39.4	29	5.8	13 552	8.4
Ayacucho	34.4	39.4	43	8.7	12 658	7.8
Puno	34.4	39.4	44	8.9	11 083	6.9
Huánuco	28.3	32.7	30	6.0	12 408	7.7
Loreto	28.3	32.7	31	6.3	9 353	5.8
Amazonas	28.3	32.7	24	4.8	7 229	4.5
Apurímac	28.3	32.7	22	4.4	6 748	4.2
Pasco	28.3	32.7	5	1.0	2 940	1.8
La Libertad	21.9	25.3	28	5.6	10 193	6.3
Piura	21.9	25.3	15	3.0	8 880	5.5
San Martín	21.9	25.3	16	3.2	8 066	5.0
Cusco	21.9	25.3	24	4.8	7 839	4.9
Junín	21.9	25.3	14	2.8	7 254	4.5
Áncash	12	14.6	42	8.5	6 873	4.3
Lima	12	14.6	11	2.2	5 116	3.2
Ucayali	12	14.6	7	1.4	4 110	2.5
Tacna	12	14.6	0	0.0	2 944	1.8
Arequipa	12	14.6	8	1.6	2 083	1.3
Moquegua	12	14.6	1	0.2	1 600	1.0
Lambayeque	12	14.6	2	0.4	849	0.5
Madre de Dios	12	14.6	2	0.4	640	0.4
Tumbes	12	14.6	0	0.0	0	0.0
Ica	1,3	3.9	3	0.6	399	0.2
Total		20.2	496		161 292	100

SOURCE: MEF, 2019.

[2] **LB/UB** stand for Lower Barrier/Upper Barrier (of poverty) respectivly.

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Investing in farmers – or agriculture human capital – is crucial to addressing challenges in our global agri-food systems, from sustainably feeding the world's growing population with food that is safe, healthy and nutritious to finding innovative solutions for more resilient and climate-smart agriculture. A global study carried out by the FAO Investment Centre and the International Food Policy Research Institute, with support from the CGIAR Research Program on Policies, Institutions, and Markets (PIM) and the FAO Research and Extension Unit, looks at agriculture human capital investments, from trends to promising initiatives that develop agriculture human capital, especially of small-scale producers, women and youth.

One of the nine featured case studies is Peru's Haku Wiñay/Noa Jayatai programme. Meaning 'let's grow together' in Quechua and Shipibo-Conibo, respectively, the programme provides technical assistance and training packages to low-income rural agricultural households to develop their productive and entrepreneurial skills for better market access. The projects are designed by the communities, with local promoters known as *Yachachiqs* providing technical assistance and training to other farmers and community members. This case study provides an overview of the programme, looking at what works well and why and providing some recommendations for overcoming drawbacks and challenges.

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