Bridging the gap between nutrition and agriculture in Chile

An assessment of capacity within agricultural extension and advisory services
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This report was prepared by the Latin American Network for Rural Extension Services (RELASER) as a contribution to the *Global capacity needs assessment methodology – Integrating nutrition objectives into agricultural extension and advisory services programmes and policies*, with inputs from the Food and Agriculture Organization of the United Nations (FAO) and the Global Forum for Rural Advisory Services (GFRAS). We thank Lorena Romero and Lorena Rodríguez for leading this study and Francisco Aguirre for his support.

Sincere thanks to all the respondents who participated in this study.

Lastly, acknowledgements are extended to Joëlle Zeitouny and Ruobin Wu for technical inputs, Andrew Morris for editing, Valentina Gaffi for layout and Bianca Carlesi and Chiara Deligia for communication support.
ABBREVIATIONS AND ACRONYMS

AFC  Agricultura Familiar Campesina (Family Farming)
ASOF  Asociación de Ferias Libres (Food Markets Association)
CESFAM  Centros de Salud Familiar (Primary Family Health Care Centers)
CODEMA  Corporación Observatorio del Mercado Alimentario (Food Market Observatory Corporation)
CORFO  Corporación de Fomento de la Producción (Production Development Corporation, led by the Ministry of Economy, Development and Tourism)
EAS  extension and rural advisory services
INDAP  Instituto de Desarrollo Agropecuario (Agricultural Development Institute, dependent of the Ministry of Agriculture)
JUNAEB  Junta Nacional de Auxilio Escolar y Becas (National Board of School Aid and Scholarships, dependent of the Ministry of Education)
Mideso  Ministerio de Desarrollo Social y Familia (Ministry of Social Development and Family)
Minagri  Ministerio de Agricultura (Ministry of Agriculture)
Mineduc  Ministerio de Educacion (Ministry of Education)
Minsal  Ministerio de Salud (Ministry of Health)
NSA  nutrition-sensitive agriculture
ODEPA  Oficina de Estudios y Políticas Agrarias (Office of Agricultural Studies and Policies, dependent of the Ministry of Agriculture)
PACAM  Programa de Alimentación Complementaria del Adulto Mayor (Senior Supplemental Feeding Programme, led by the Ministry of Health)
PAE  Programa de Alimentación Escolar (School Feeding Programme, operated by JUNAEB of the Ministry of Education)
PNAC  Programa Nacional de Alimentación Complementaria, (National Supplementary Feeding Programme, led by the Ministry of Health)
Prodesal  Programa de Desarrollo (Local Development Programme, operated by INDAP of the Ministry of Agriculture)
EXECUTIVE SUMMARY

Between August and December 2019, the Capacity needs assessment for integrating nutrition objectives into agricultural extension and advisory services programmes and policies study was carried out in Chile. It was funded by the Food and Agriculture Organization of the United Nations (FAO), managed by the Global Forum for Rural Advisory Services (GFRAS) and implemented by the Latin American Network for Rural Extension Services (RELASER) and four other networks globally.

The study’s Global Capacity Needs Assessment (GCNA) methodology aims to understand learning gaps, needs and obstacles to integrating nutrition-related objectives into agricultural programmes and policies.

The GCNA methodology that was used in the five networks participating in the study comprises the following steps:

1. evaluation of the nutrition context at the national level;
2. stakeholder mapping;
3. organizational capacity evaluation;
4. individual capacity evaluation;
5. synthesis of results;
6. validation workshop; and
7. production of the final report.

Regarding Step 1, there is enough national and international information to confirm that the main health problems in Chile are overweight and obesity. These issues affect all demographics but there is higher prevalence in groups of greater social vulnerability. This is linked to lifestyle, which in turn is related to unhealthy eating environments in Chile.

There are public policies and programmes that address the nutritional problem described above, like the intersectoral National Food and Nutrition Policy; the Law on Food Labelling and Advertising, which is a structural policy for improving food environments; and the Elige Vivir Sano (Choose to Live Healthy) system, which is an intersectoral strategy to tackle unhealthy lifestyles. On top of this, the nascent National Rural Development Policy may enable the development and progress of nutrition-sensitive agriculture (NSA) to be monitored through the social welfare and environmental sustainability components for rural territories.

For Step 2, the mapping of stakeholders linked to food consumption, nutrition and extension does not just cover the health sector. It also encompasses agriculture, education and academia, economics, social development and family, production, processing, commercialization and marketing – i.e. any party able to take action to address this problem. So far, these sectors have not been particularly well coordinated in this respect.

In the academic sector, there are various avenues of research in the field of food consumption and nutrition, which do not necessarily respond to a holistic vision of the food system. There is plenty of research, but it is dispersed and has less of a transdisciplinary approach.
To enable detailed evaluation, when selecting the programmes to be assessed in Step 3, consideration was given to their links to extension services, nutritional interventions and sustainable production. The selected programmes were:

- the Ministry of Health (Minsal) Complementary Feeding programme (PNAC) and the Health Controls programme;
- the Ministry of Education (Mineduc) School Feeding programme (PAE), through the National Board of School Aid and Scholarships (JUNAEB);
- the Ministry of Social Development and Family (Mideso) Self-Consumption programme;
- and the Ministry of Agriculture (Minagri) Local Development Programme (Prodesal).

Nutrition can be identified as part of the core mandates of the selected programmes run by Minsal, Mineduc and Mideso. In the case of Minagri and the Agricultural Development Institute (INDAP), Prodesal indirectly connects with NSA through an objective related to sustainable production.

In most of the selected programmes, there is not sufficient financing to develop the planned actions in the required terms and times. When it comes to human resources, the PAE and Self-Consumption programme have serious staff deficiencies, which affects the delivery of services to beneficiaries. In addition, the human resources involved in rolling out the five programmes do not generally have the training required to address problems from a food systems perspective.

The offer available from the programmes analysed severely lacks intersectoral coordination and territorial relevance, thus missing the opportunity for collaboration and complementarity between sectors from a comprehensive food system perspective. In addition, these programmes do not present cultural or territorial relevance (rural, urban, geographical), instead remaining highly centralized and homogeneous, applied to the whole country.

The main recommendation based on these findings is to seize the opportunity presented by the Choose to Live Healthy system to move forward with an effective intersectoral approach to healthy eating. Its vision of the food system may be the best opportunity for NSA. This system should lead coordination work by monitoring all programmes, arranging dialogue, ensuring complementarity, taking a transdisciplinary approach, promoting efficient use of resources, and adding public value. At this point, a gradual shift is required to achieve balance between the two forms of agriculture that coexist in the country: one that is highly globalized, as the leading fruit exporter in the southern hemisphere, and the other oriented towards domestic consumption, the focus of which has not been sustainable agriculture or NSA.

The conclusion highlights suggestions for improvement of the evaluation methodology. In general, this methodology is relevant to and useful for the study's objectives, and the suggestions are simply made to achieve greater flexibility when analysing the prioritized programmes.
1 INTRODUCTION

This is the final report of the Chilean arm of the *Capacity needs assessment for integrating nutrition objectives into agricultural/extension and advisory services programmes and policies study* funded by FAO and carried out in five networks, members of GFRAS, the institution responsible for the study’s implementation. In Chile, this work was implemented by RELASER from August to December 2019.

The general objective of this study was to identify opportunities for and challenges to the integration of nutrition-related objectives into agricultural extension and advisory services programmes.

The deliverables from this study are:
- a. a methodology to assess the needs in the country;
- b. this pilot report on Chile;
- c. a consultation workshop to discuss and review the results of the pilot work;
- d. contributions and proposals validated at a final workshop; and
- e. a final report, including the results of the overall process.

This report describes the pilot testing of the GCNA in Chile, describing the different steps in detail. The results of the needs assessment are then presented, including an analysis of the enabling environment based on the nutritional and political context of the country and the stakeholder mapping. Later, a shortlist of prioritized institutions is analysed and the various programmes are presented at the organizational and individual level. Here, the aim is to determine gaps in the inclusion of nutrition content in extension services. We then present the conclusions, encompassing the main results and recommendations of our work. Finally, there are suggestions for improving the evaluation methodology.
2 METHODOLOGY

The overall approach of this work is based on the GCNA methodology, which aims to understand learning gaps, needs and obstacles to integrating nutrition-related objectives into agricultural programmes and policies.

This methodology explores all opportunities and challenges for integrating nutrition into agricultural extension and advisory services, and identifies the capacity needs of extension and advisory services (EAS) providers at the organizational and political levels liable to integrate nutrition into their regular tasks and responsibilities.

The GCNA methodology applied comprises the following steps:

**STEP 1.** Evaluation of the nutrition context at the national level, to understand this context and the nutrition-related problems encountered in the country under study.

**STEP 2.** Stakeholder mapping. This aimed to understand, at a general level, the role of the different parties directly and indirectly involved in addressing nutrition. The stakeholder mapping process involved:
- a meeting with the FAO regional office at the beginning of this work, to validate and complete the initial list of interest groups;
- interviews with representatives from institutions linked with nutrition: these were used as the main source of information, providing us with detailed and up-to-date context;
- consultation with the interviewees, who were asked about the existence of other stakeholders.

**STEP 3.** Evaluation of the organizational capacity of a shortlist of organizations involved in agricultural EAS or who carry out nutritional interventions, or organizations where there is potential for collaboration to promote NSA. This involved a detailed assessment of their mandates, the programmes developed, the clients served, the services delivered and the resources available.

**STEP 4.** Evaluation of individual capacity to understand the needs of the operators involved in agricultural EAS, the demands they face in terms of nutrition, and their technical and functional knowledge related to the promotion of nutrition.

**STEP 5.** Synthesis of the results obtained during the previous steps.

**STEP 6.** Validation workshop at the country level, attended by representatives of the institutions and programmes within the EAS system, to present the main findings of the study and actively participate in generating proposals based on the findings presented.

**STEP 7.** Production of the final report, presenting the results and validated proposals obtained during the study, along with suggestions to improve the GCNA methodology.

The study was implemented in one selected country in each of the five regional GFRAS networks.

Nutrition and extension policies, laws and programmes were analysed in the Chilean context: nutrition with national coverage (urban-rural) and extension with only rural coverage.
3.1 Enabling-environment level
3.1.1 Country nutrition context
In Chile, obesity is a widespread condition in different groups of the population:

- In 2016, 34.67 percent of children below the age of six under control of the public health system were overweight or obese (Minsal, 2017a).

- Every year, the National Board of School Aid and Scholarships (JUNAEB) prepares a nutrition map based on surveys of children and youth who attend public or subsidized schools (accounting for over 90 percent of all schoolchildren); the results are shown in Figure 1 (JUNAEB, 2018).

Figure 1 shows that the highest level of obesity arises in fifth grade at 27.7 percent, and the lowest is in middle school (around 14 years old) at 14.7 percent.

This study also indicates differences between obesity levels according to territory, showing that in preschool, kindergarten and first grade, obesity levels are higher in rural territories, with differences of 1.1-1.7 percent compared to non-rural territories. The rate of obesity in fifth-grade children in rural territories is 5 percent higher than in urban territories (JUNAEB, 2018).

The prevalence of excess weight in the national health survey of 2017 corresponds to 74.2 percent of the adult population (overweight 39.8 percent and obesity 31.2 percent). Morbid obesity stands at 3.2 percent and underweight people account for 1.3 percent. Overweight and obesity were highest among adults ages 50-64, (43.6 percent and 38.1 percent respectively) (MINSAL, 2017b).

Furthermore, the highest prevalence of obesity is found in the southern part of the country: in decreasing order, we have the Aysén region (15.26 percent), then Los Lagos (14.98 percent), and finally Los Ríos (13.95 percent). Other forms of malnutrition such as stunting or micronutrient...
deficiencies are not currently a public health problem (due to long-established implementation of public policies), with the exception of Vitamin D deficiency, which has only recently been detected (MINSAL, 2017b).

**SITUATION OF AGRICULTURAL PRODUCTION AND FOOD CONSUMPTION**

Agricultural activity in the country is carried out in geographic areas where agro ecological conditions are varied and excellent for production. Among the crops grown, cereals such as wheat, corn, oats and rice predominate, as well as potatoes. In addition, a wide variety of vegetables are grown on an area of close to 70 000 hectares, according to Chile’s National Statistics Institute (cited in ODEPA, 2014).

Chile is one of the main fruit exporters in the southern hemisphere, as well as the world leader for table grapes and the second-largest exporter of blueberries and cherries in the world (ODEPA, 2019a), with a total export value of USD 18 billion for 2018, generating employment for 800 000 people (Radio Agricultura, 2019).

As stated by ODEPA:

Meat production in Chile is led by poultry, which is highly integrated and concentrated by a small number of producers. Pork production ranks second, with 40 percent of production destined for export. Third is bovine production, oriented mainly towards the domestic market and highly prevalent, since there are more than 120 000 producers (ODEPA, 2019b).

Approximately 90 percent of all honey production, mainly honey species from the Chilean native forest, is exported to markets in the European Union and United States, making it the main primary livestock product exported by Chile (ODEPA, 2019c).

An analysis of the type of producers, production systems and of the destination of production indicates that there are two types of agriculture. One is export-oriented, meets all the food safety and quality requirements of the destination markets, and is led by medium-sized to large farms and agricultural companies. The other is focused on domestic consumers, producing potatoes and vegetables, with a high contribution from family farming. One way for the latter to strengthen and develop a sustainable production system could be agroecology.

According to the national food consumption survey *Encuesta Nacional de Consumo Alimentario 2010-2011*, when it comes to the food consumption and dietary characteristics of Chileans, compliance with the recommendations set out in Minsal's Dietary Guidelines for the Chilean Population varies across the country. For fruit, 52 percent of Chileans comply with Minsal's guidelines, 25 percent for legumes, 23 percent for dairy and 17 percent for fish. (Minsal, 2013).

The survey establishes that only 5 percent of the population has a healthy diet, 87 percent require changes to their diets, and 8 percent have an unhealthy diet. The northern, southern and urban sectors, as well as the mid income socio economic level, have a higher proportion of less-healthy diets (Minsal, 2013).

Additionally, the survey shows obesity is concentrated in women and people with low incomes. An inverse association is observed between educational and income level and excess weight.

The country has been facing a severe drought since 2008, with heavy consequences for agriculture, especially for livestock and fruit production (Santibañez, 2016). Nevertheless, domestic production has not been affected for the moment.

**POLICY CONTEXT INFLUENCING NUTRITION OUTCOMES**

The review of nutrition-associated policies and extension systems establishes the following:

*Minsal’s National Food and Nutrition Policy* aims to improve Chileans’ health and quality of life through food and nutrition, providing a framework for the development of regulations, strategies, plans, programmes and projects in the field (Minsal, 2017c).
This policy has eight components that specify the areas that need to generate progress at the national level:

1. Humanizing nutrition and promoting the right to adequate food.
2. Strengthening food and nutrition security related to availability, access, food use and stability.
3. Improving the configuration of food environments and systems.
4. Promoting healthy eating.
5. Strengthening nutritional support at different levels of health care.
6. Monitoring food and nutrition and evaluating public policies.
7. Promoting citizen participation and control.
8. Deepening intersectionality and health in all policies.

Component 1 proposes to move towards an approach that safeguards the right to be free from hunger and to have a nutritious, healthy, safe and culturally acceptable diet.

Component 2 indicates the need to promote initiatives aimed at reducing barriers to accessing food from a perspective of equity and social protection. It identifies the need for measures that strengthen social security mechanisms to ensure food at different stages of life – especially for people in poverty or extreme poverty –, that improve people’s access to food promoted in guidelines, that strengthen emergency food supply mechanisms, and that protect breastfeeding.

Component 3 addresses the importance of working from a perspective of food environments, considering that food decisions will not depend only on individuals but will be strongly determined by the environment and beyond. Food environments are defined by the following situations (FAO, 2016):

- organizational (educational establishments, workplaces);
- domestic (home);
- supply (fairs, markets, others);
- catering (restaurants, kiosks, among others); and
- public roads.

Component 4 aims to improve food for the population and the spaces in which people develop by addressing physical, environmental, social, cultural and institutional dimensions. It highlights proposals to strengthen the role of municipalities as strategic stakeholders in conjunction with the community, as well as the creation of new health promotion strategies aimed at educational establishments, workplaces and restaurants. Additionally, it proposes that the government should promote adequate messaging on food matters for the population, which requires the development of campaigns and social marketing strategies. There is special focus on the proposal to value food heritage and promote home cooking and food typical of local cultures. People should recognize healthy foods from among traditional food and items local to their area.

Component 5 proposes the development of culturally relevant, humanized nutritional care and the design of new programmes or redesign of existing food programmes to meet the needs of the population’s epidemiological profile. There should be an intersectoral and health approach to all policies, with emphasis on the most vulnerable groups.

Component 6 proposes the development of a system capable of monitoring the population’s nutritional status served in the public and private sector.

Component 7 recommends utilizing the citizens’ capacity to influence health decisions, design, implementation, policy evaluation, plans, programmes and projects related to the recovery, rehabilitation and prevention of diseases as well as promotion of health, including decisions related to the use and investment of public resources.

Component 8 raises the need to intensify intersectoral and health approaches in all policies, and proposes that food interventions should be designed, implemented and evaluated intersectionally.
This policy does not make specific proposals associated with rural territories and their populations, and the action plan has not yet been elaborated. Hence, there are no programmes or projects so far. There are potential links with EAS in most areas covered by these components, which can be navigated via the Choose to Live Healthy system.

**THE NATIONAL RURAL DEVELOPMENT POLICY 2014-2024**

This policy (Gobierno de Chile, 2014) considers these specific areas, strategic fields and objectives:

1. Social welfare of the rural population.
2. Economic opportunities in the rural territory.
3. Environmental sustainability of the rural territory.
4. Culture and rural identity.
5. Rural development policy governance.

In the context of multiple activities, Field 2 above raises the need to promote industrialization to consolidate agri-food sectors with regard to the subjects in this GCNA. Additionally, it suggests promoting local stakeholders to develop complementary specialized and diversified economic activities that consider sustainable and appropriate use of the territory's capacity, as well as generating socio-economic, cultural and environmental benefits.

This policy does not explicitly or implicitly mention the importance of nutrition for the rural population to promote NSA or the role of extension services in this area.

The laws associated with this topic are presented in the *Plataforma de Seguridad Alimentaria y Nutricional* (SAN), 2020.

**LAWS**

**DECREE NO. 977.** Approving health regulations for food, via Minsal in 1999

This regulation lays down the sanitary conditions to which the production, import, processing, packaging, storage, distribution and sale of food for human use must adhere. It is to protect the health and nutrition of the population and to ensure the supply of healthy and safe products. It applies to natural or legal entities related to or that intervene in the mentioned processes, establishments, transport and distribution.

**DECREE NO. 83.** The creation of the Chilean Food Safety and Quality Agency presidential advisory commission in 2005, via Minsal; Minagri; Ministry of Economy, Development and Tourism; Ministry General Secretariat of the Presidency; and Ministry of Foreign Affairs

The Chilean Food Safety and Quality Agency is responsible for proposing national food safety and quality policies, coordinating national food safety policies, monitoring Chile's foreign policy on food safety and considering improvements to current legislation, as well as proposing laws and monitoring food security.

**LAW NO. 20.606.** Regulating the nutritional composition of food and its advertising, via Minsal in 2012

This law chiefly aims to regulate two areas. First, truthful labelling of food products regarding several factors that can affect diet quality, such as levels of fats, sugar and salt. Secondly, it regulates and, in some cases, prohibits advertising on food products, mainly aimed at children under 14 years old.

**LAW NO. 20.670.** Creation of the Choose to Live Healthy system via Mideso in 2013

This regulation established the Choose to Live Healthy system as a model for managing policies, plans and programmes prepared and implemented by different State agencies. It aimed to contribute to the development of healthy habits and lifestyles, and to prevent and decrease risk factors and behaviours associated with non-communicable diseases. In this context, the main purpose of this system is to articulate a public offering aimed at creating healthy environments that facilitate healthy eating and physical activity.
ARTICLE 9 OF LAW 20.670 establishes that the Choose to Live Healthy system can use information instruments, including surveys carried out by public bodies, to monitor unhealthy habits or lifestyles and risk factors or behaviours associated with non-communicable diseases among the population. In this sense, one of the functions of the system is to prepare and systematize the information necessary to implement public food consumption policies.

LAW NO. 20.869. Food advertising, via Minsal in 2015
This law prohibits advertising that induces consumption of food high in calories, fats, sugars, salt or other ingredients that, via the graphic presentation, symbols or characters used, addresses children under the age of 14. Additionally, it restricts the schedule during which advertisements can be broadcast. It also prohibits the free delivery of such foods to children under 14 years old and all advertisements for breast milk food substitutes.

PROGRAMMES
The Ministry of Health (Minsal) has programmes regarding food supplementation and fortification that date from the last century. These programmes have undergone significant adjustments over time, adapting to changes in population. Current programmes also target specific populations: children, pregnant women, seniors and high-risk groups (Riumalló et al., 2004). The following programmes are related to the nutrition of children and seniors:

a) Programa Nacional de Alimentación Complementaria or the National Supplementary Feeding Programme (PNAC), started in 1954 and still running. It aims to maintain and improve access to healthy and safe food, as well as maintain and improve the nutritional status of pregnant women, breastfeeding mothers, children under six years of age, extremely premature babies and people under 25 years of age with metabolic diseases.

b) Programa de Alimentación Complementaria del Adulto Mayor or the Senior Supplemental Feeding Programme (PACAM) started in 2001. This programme distributes food fortified with micronutrients to seniors in primary care facilities of the National Health Services System (SNSS).

The Healthy Life and Obesity Programme is geared towards Chileans between 6 and 65 years old who are at risk of developing diabetes mellitus or cardiovascular diseases. It aims to control overweight and obesity and improve metabolic profiles and physical conditions. It consists of a multi-professional treatment of obesity via a nutritionist, psychologist and physical education teacher. The programme operates in a variety of locations, such as a community headquarters, schools or health centres.

The Ministry of Education (Mineduc), through JUNAEB, runs essential nutrition programmes. Since 1964, PAE has provided daily meals (breakfasts, lunches, snacks and dinners, as appropriate) to students in vulnerable conditions, at municipal and private subsidized educational establishments in the country, from preschool to high school (Mideso. 2016a).

Since 2016, there has been the Healthy Schools for Learning programme. This seeks to solve the problems of a sedentary lifestyle, obesity, oral hygiene and overweight in children at subsidized schools from preschool to eighth grade. This is done through the implementation of intra-school and extra-school activities that promote healthy lifestyles.

The Ministry of Social Development and Family (Mideso) has run the Chile Grows With You programme since 2009. Its mission is to accompany, protect and support all children and their families through an integrated system with universal social interventions and other differentiated benefits for vulnerable children.

The Choose to Live Healthy system aims to generate healthy habits and lifestyles, prevent and decrease the risk factors and behaviours associated with non-transmittable diseases arising from unhealthy habits and lifestyles.
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The Ministry of Agriculture (Minagri), through INDAP, is the only public institution that works with family farming. The main tools for this work are extension, credit and investment subsidies. It is a decentralized service and its goal is to promote economic, social and technological development for smallholder farmers.

As indicated by the methodology, the effective coordination between these programmes will be reviewed in detail, although it is possible to say that coordination is almost non-existent between ministries.

3.1.2 Stakeholder mapping
Table 1 shows the matrix of stakeholders along with a summary.

<table>
<thead>
<tr>
<th>No</th>
<th>Stakeholders relevant for nutrition or with potential to promote nutrition</th>
<th>Key roles related to nutrition</th>
<th>Geographical approach</th>
<th>Type of clients served</th>
<th>Delivery mechanisms used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Minsal</td>
<td>Protect the population’s health by promoting healthy eating habits and ensuring the consumption of clean and good nutritional quality foods</td>
<td>The whole country</td>
<td>Seniors</td>
<td>PACAM: health centres</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Children under the age of 6, pregnant and breastfeeding women, extremely premature infants, and individuals under 18 years of age with metabolic diseases</td>
<td>PNAC: health centres</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>People who are overweight or obese, to prevent diabetes and high blood pressure</td>
<td>Choose to Live Healthy system (six-month accompaniment): health centres</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Communes according to the results of the community health promotion index</td>
<td>Health promotion plans for the “healthy communes, municipalities and communities programme”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pregnant women, children under 6, teenagers and seniors</td>
<td>Health Controls programme</td>
</tr>
<tr>
<td>2</td>
<td>Mineduc/JUNAEB</td>
<td>Contribute to equal opportunities within the educational system through the timely delivery of goods and/or services for students in a condition of social, economic, psychological and/or biological disadvantage</td>
<td>The whole country</td>
<td>Students in vulnerable conditions from free municipal schools and subsidized schools</td>
<td>PAE: free municipal schools and subsidized schools</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The whole country</td>
<td>Children from prekindergarten to eighth grade</td>
</tr>
<tr>
<td>No</td>
<td>Stakeholders relevant for nutrition or with potential to promote nutrition</td>
<td>Key roles related to nutrition</td>
<td>Geographical approach</td>
<td>Type of clients served</td>
<td>Delivery mechanisms used</td>
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<tr>
<td>3</td>
<td>Mideso/Choose to Live Healthy system</td>
<td>Promote healthy habits and lifestyles to enhance people’s quality of life and well-being</td>
<td>The whole country</td>
<td>Population with unhealthy lifestyle habits</td>
<td>Plans and programmes between different ministries to report, educate and encourage factors and behaviours of risk related to non-communicable diseases</td>
</tr>
<tr>
<td></td>
<td>Mideso/Self-Consumption programme</td>
<td>Contribute to the increased availability of healthy food for participating families through education and self-provision in order to complement dietary needs and improve living conditions</td>
<td>The whole country</td>
<td>Families, prioritizing people who participate in the Chile seguridades y oportunidades (Chile securities and opportunities) subsystem</td>
<td>Municipalities</td>
</tr>
<tr>
<td>4</td>
<td>Minagri/INDAP/agricultural extension programmes</td>
<td>Promote the economic, social and technological development of small agricultural producers and family farmers to contribute to raising their entrepreneurial, organizational and commercial capacity and their integration into the rural development process, while at the same time optimizing the use of productive resources</td>
<td>The whole country</td>
<td>Small agricultural producers and family farmers</td>
<td>Agricultural extension agents: Prodesal; the technical assistance service programme; the Investment Development Programme; the Family Farmer Hands Certification programme; network of shops from the Rural World programme (INDAP. 2019)</td>
</tr>
<tr>
<td></td>
<td>Minagri/Foundation for Agricultural Innovation</td>
<td>Promote, articulate and support initiatives of people and entities that contribute to improving the living conditions of farmers in all regions of the national territory to foster a culture of innovation in the agricultural, agri-food and forestry sector</td>
<td>The whole country</td>
<td>Farmers, agricultural enterprises, teaching institutions and agricultural research</td>
<td>Media/information and communications technology (ICT), call for programmes and projects oriented for research centres and companies related to the food and forestry systems</td>
</tr>
<tr>
<td>No</td>
<td>Stakeholders relevant for nutrition or with potential to promote nutrition</td>
<td>Key roles related to nutrition</td>
<td>Geographical approach</td>
<td>Type of clients served</td>
<td>Delivery mechanisms used</td>
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</tr>
</tbody>
</table>
|    | Minagri/Office of Agricultural Studies and Politics (ODEPA)              | • Provide regional, national and international information for the various stakeholders involved in agricultural and forestry activities  
• Conduct studies of the agricultural and forestry realities, detect the problems and emergencies that affect it, evaluate and propose solutions | The whole country | Farmers, agricultural enterprises, teaching institutions and agricultural research | Media/ICT, call for projects from consulting firms, universities and research centres |
|    | Minagri/National Institute of Agricultural Research                     | • Generate and transfer knowledge and strategic technologies on a global scale to produce innovation and improve the competitiveness of the agri-food sector  
• Investigate contributing to people’s healthy food consumption | The whole country | Farmers, agricultural enterprises, teaching institutions and agricultural research. | Agricultural extension agents, media/ICT |
| 5  | Ministry of Economy, Development and Tourism/Corporation for the Promotion of Production (CORFO)/Agency for Sustainability and Climate Change | Encourage the inclusion of climate change and sustainable dimensions in the private sector and territories | The whole country | Companies in strategic sectors, dealers and food suppliers for schools | • Technology centres, strategic technology consortiums and programmes  
• Strategic processing food programmes; the programme to transform food |
<p>| 6  | Ministries of Health; Agriculture; Economy, Development and Tourism; Foreign Affairs; and General Secretariat of the Presidency/Chilean Agency for Food Safety and Quality | Articulate and coordinate the National Food Safety and Quality System with the productive promotion, research and development, and innovation systems | The whole country | General population | Interministerial coordination |</p>
<table>
<thead>
<tr>
<th>No</th>
<th>Stakeholders relevant for nutrition or with potential to promote nutrition</th>
<th>Key roles related to nutrition</th>
<th>Geographical approach</th>
<th>Type of clients served</th>
<th>Delivery mechanisms used</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Association of fresh fruit and vegetable markets/the Chilean association of free fair organizations (ASOF)</td>
<td>Association that brings together small vegetable and food traders usually operating in city neighbourhoods</td>
<td>The whole country</td>
<td>101 local markets</td>
<td>Union representation, improvement of local markets, shortening of marketing chain, improving vegetable production, education to trade intermediaries and consumers</td>
</tr>
</tbody>
</table>
| 8  | Inter-American Institute for Cooperation on Agriculture | • Encourage, promote and support Member States’ efforts to achieve agricultural development and rural well-being through international technical cooperation of excellence  
• Develop initiatives to improve availability and accessibility of food and sustainable production | Hemispherical coverage | Governments | International public goods through triangular cooperation and south-south cooperation. |
| 9  | Food Market Observatory Corporation (CODEMA) | Promote the circulation of and access to healthy food through traditional agro-fishing food channels, facilitating meetings between stakeholders and dissemination of relevant information | The whole country | • Small producers, artisanal fishers, consumers  
• Locally or communally based farmers’ operatives | Agricultural extension agents, communication media/ICT |
### Bridging the gap between nutrition and agriculture in Chile

<table>
<thead>
<tr>
<th>No</th>
<th>Stakeholders relevant for nutrition or with potential to promote nutrition</th>
<th>Key roles related to nutrition</th>
<th>Geographical approach</th>
<th>Type of clients served</th>
<th>Delivery mechanisms used</th>
</tr>
</thead>
</table>
| 10 | Institute of Nutrition and Food Technology, University of Chile           | Contribute to the achievement of optimal food consumption and nutrition for the Chilean and Latin American population through basic and applied research, undergraduate and graduate teaching, extension, and clinical and technical assistance. Its main work was originally research on child malnutrition, which was a serious health problem in the country. Later, it took on the study of nutrition as its main programmatic challenge. It provides permanent technical support to State agencies in the definition and implementation of nutrition and food consumption programmes. | The whole country | • Nutrition and agronomy professionals  
• Community | Food and nutrition research, teaching and community interventions |
| 11 | 35 universities with training in the fields of nutrition and agronomy     | Training and research in nutrition and agricultural production | The whole country | Nutrition and agronomy professionals | Undergraduate and postgraduate training, research in food and nutrition |
| 12 | Food and Drinks Chile, A.G. (AB Chile)                                   | Promote development and growth of industry, and contribute to the sustainable progress of the country | The whole country | Promote development and growth of industry, and contribute to the sustainable progress of the country | Union representation |
| 13 | Association of Food Companies of Chile (Chilealimentos)                  | Promote development and protection of associates’ activities and defend their interests, in Chile or abroad | The whole country | Food companies | Union representation of food processing companies and machinery and equipment companies related to food processing |

**SOURCE:** Adapted from contents from the web pages of Chilean institutions.
3.2 Organizational level

3.2.1 Organizations selected for detailed organizational evaluation

As indicated in the cross-sectional methodology, at the beginning of Step 3 and after the stakeholder mapping, a shortlist was developed identifying the institutions selected for detailed evaluation. When selecting the institutions, their link with the three themes that form part of NSA were considered, namely: extension services, nutritional interventions and sustainable production. Table 2 shows the selected organizations.

3.2.2 Mandates of selected organizations

When evaluating the selected institutions’ organizational capacity, we began with an analysis of their institutional mandates and their relationship with nutrition via their vision, mission, objectives or functions. Where the institutional mandates were related to nutrition, details were provided on how and at what level this is indicated. This was done via the review of secondary information and supplemented with interviews, presented in Table 3.

<table>
<thead>
<tr>
<th>No</th>
<th>Nutrition-related stakeholders</th>
<th>Extension agriculture services</th>
<th>Nutritional intervention</th>
<th>Sustainable production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mineduec/ JUNAEB</td>
<td>X</td>
<td>X</td>
<td>_</td>
</tr>
<tr>
<td>2</td>
<td>Mideso/ Choose to Live Healthy system</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3</td>
<td>Minsal / Health Controls and PNAC</td>
<td>_</td>
<td>X</td>
<td>_</td>
</tr>
<tr>
<td>4</td>
<td>Minagri / INDAP and Prodesal</td>
<td>X</td>
<td>_</td>
<td>X</td>
</tr>
</tbody>
</table>

SOURCE: Authors’ own elaboration.
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Programmes from institutions including the Ministries of Health, Education, and Social Development and Family.

In the case of Minagri, INDAP is the main stakeholder in charge of the technical assistance and investments for smallholder farmers. Prodesal is the main technical assistance programme in the country, dating back to 1997 and with national coverage. It is mainly implemented via the municipalities to which INDAP transfers resources through an annual collaboration agreement (INDAP, 2018).

For Prodesal, the main goal is to increase sustainable production, but without a clear relationship with nutrition. According to an interview with the national manager of this programme, they worry about focalizing the programme on an NSA approach.

### 3.2.3 Specific nutrition programmes implemented

Details of the selected institutions’ nutrition programmes and the resources invested are presented in Table 4.

<table>
<thead>
<tr>
<th>No</th>
<th>Nutrition-related stakeholders</th>
<th>Has a nutrition-related organizational mandate?</th>
<th>How the mandate is expressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mineduc/JUNAEB</td>
<td>Yes</td>
<td>JUNAEB aims to contribute to equal opportunities within the educational system through the timely delivery of goods and/or services to students in a condition of social, economic, psychological and/or biological disadvantage. The service is the delivery of healthy, varied and nutritious school meals that allow for the physical and mental development of students, favouring and stimulating the concentration and learning necessary for academic success.</td>
</tr>
<tr>
<td>2</td>
<td>Mideso</td>
<td>Yes</td>
<td>The Choose to Live Healthy system’s objective is to promote healthy habits and lifestyles and to improve the quality of life and well-being of people through various programmes, plans and initiatives.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>The support for the Self-Consumption programme aims to increase the availability of healthy foods for participating families through education and self-provision, to complement food needs and improve living conditions.</td>
</tr>
<tr>
<td>3</td>
<td>Minsal/ Health Controls and PNAC</td>
<td>Yes</td>
<td>The Health Controls programmes include all activities aimed at the prevention, detection and timely treatment of diseases, in addition to the accompaniment and education of children and their families. It works to achieve adequate development and growth. The food programmes aim to contribute to the expression of maximum growth and development potential and prevent non-communicable diseases. (Gobierno de Chile, 2020).</td>
</tr>
<tr>
<td>4</td>
<td>Minagri / INDAP and Prodesal</td>
<td>Partially</td>
<td>which has the greatest coverage – are aimed at small agricultural producers, farmers and their families to improve their production systems and help them achieve higher levels of production (for self-consumption and/or sales) and productivity, in the context of the development of social capital and sustainability (INDAP, 2018).</td>
</tr>
</tbody>
</table>

**SOURCE:** Authors’ own elaboration.
<table>
<thead>
<tr>
<th>No</th>
<th>Programmes</th>
<th>Type/category of clients served</th>
<th>Number of beneficiaries per year</th>
<th>Resources (thousands USD per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Minsal’s Health Control programme: Performs an evaluation of a child’s integral development and growth, which includes evaluation of nutritional status, weight and height, as well as the evolution of psychosocial development with a review of social, emotional, language and motor progress (Gobierno de Chile, 2020a)</td>
<td>Pregnant women, children under 6 years old</td>
<td>1 000 000</td>
<td>No specific data</td>
</tr>
<tr>
<td>2</td>
<td>Minsal’s PNAC: Free delivery to SNSS primary care centres of milk and food for children under 6 years old and pregnant women</td>
<td>Pregnant women, children under 6 years old</td>
<td>1 000 000</td>
<td>62 882 (2019)</td>
</tr>
<tr>
<td>3</td>
<td>Minsal’s PAE via JUNAEB: A daily ration of complementary and differentiated food per student, consisting of breakfast, lunch and/or dinner. This covers about one-third of the nutritional needs of elementary and middle school students per day and 45-50% of preschool requirements. At household level, 100% of students’ daily requirement are provided to beneficiary students.</td>
<td>Students in vulnerable conditions within subsidized municipal and private educational establishments from preschool to high school</td>
<td>From 1 854 389 beneficiaries a year (Mideso, 2016a).</td>
<td>693 070 (2016)</td>
</tr>
</tbody>
</table>

1 Data provided by informant in interview
2 Cost included in the “per capita” amount calculated according to the population assigned to health centres and communes. Data by activity is not available since per capita includes healthy child examinations by a nurse, nutritional consultation by a nutritionist, health and nutritional examinations of pregnant women and nutritional consultations for children with growth disorders.
3 Data provided by key informant in interview
4 ibid.
5 795 CLP to 1 Dollar on 22 November 2019
As can be seen above, the programmes differ in terms of components, services delivered, coverage and value of service per unit (family or beneficiary), which makes comparisons less relevant. However, it should be mentioned that even with the differences indicated, all these programmes have central guidelines that are implemented in the communes and managed through the municipalities.

3.2.4 Investments to address nutrition

Table 5 presents a qualitative analysis, based on interviews and summarized using the matrix suggested by the methodology with regard to the availability of resources and key obstacles to fulfilling the mandate defined in each programme.
### TABLE 5: AVAILABILITY OF RESOURCES ACCORDING TO PROGRAMMES AND KEY ISSUES

<table>
<thead>
<tr>
<th>No</th>
<th>Financing of nutritional interventions</th>
<th>Programmes</th>
<th>Response rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Inadequate</td>
</tr>
<tr>
<td>1</td>
<td>Amount of funds</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Is financing adequate for nutritional interventions in your organization?</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>PAE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family support programme for self-consumption</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Health Controls programme</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>PNAC</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Prodesal</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Timely access</td>
<td></td>
<td>Not available</td>
</tr>
<tr>
<td></td>
<td>Are funds to organize nutritional interventions available when necessary?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PAE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-consumption</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Health Control</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>PNAC</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Prodesal</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>Sustainability of the financing</td>
<td></td>
<td>Highly fluctuating and unreliable</td>
</tr>
<tr>
<td></td>
<td>Is financing regular, with little fluctuation over the years?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PAE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-consumption</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Health Control</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>PNAC</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Prodesal</td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

**SOURCE:** Authors’ own elaboration.

The PAE delivers services to students through concession holders that respond to public calls for tender for the defined territorial units. This programme is rated as having inadequate funding due to the low budget allocated to each food serving and the low number of nutritionists (1 for 70 establishments) (interview with a JUNAEB professional).

According to the tender rules, the nutritionists, must perform multiple tasks:
- didactic counselling and communicating with students;
- participation in meetings with representatives to publicize the benefits and strengths of the programme;
- communicating with student unions, to become involved in educational strategies; and
- proposals for pilot projects and new methodologies for food consumption education and school gardens.
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The same rules also state that each nutritionist must make a minimum of two annual visits per awarded educational establishment which, in view of the requirements, may not be enough. According to background information obtained through interviews, the complementary actions required by the rules are only carried out in a sample of establishments and have low impact.

In an evaluation of the PAE programme (ClioDinamica Consulting, 2013), the parents of the beneficiary students indicated the importance of holding talks to raise awareness among children about food consumption and health issues to achieve greater impacts and to promote education about the benefits of healthy eating.

Regarding the Self-Consumption programme, the issues of insufficient funds and the lack of timely access lie in two factors:
1. the low amount allocated for investments in productive systems that range between USD 704 to USD 1 426, depending on the area; and
2. the delay in the allocation of investments to beneficiaries, pushing the nine-month implementation period of the programme to 12 months.

Looking at the Health Controls programme, it appears to be insufficient per capita to cover all primary care needs, especially those related to promotion and prevention actions, which are some of the aspects being requested. More basic actions are now covered, but they are not all necessarily covered at the frequency or time required for each consultation. Not all children who need to be assessed by a nutritionist can do so, because preference is given to those with severe problems. New proposals include an increase in funds per beneficiary to improve attention for the beneficiaries assigned to each primary care facility.

Prodesal benefits from adequate funding for interventions, and funds are available to organize interventions when necessary. It is important to clarify that the incorporation of nutritional content is not a funding issue, but rather an objective among policy makers to widen the view from a production system perspective to a food system approach.

The sustainability of financing for the five programmes analysed is fairly stable, with little fluctuation from year to year, or even subject to an upward trend.

3.2.5 Human resources deployed to address nutrition

Human resources information on the five programmes analysed is not easily available from public access sources. The information presented in the table below therefore relates mainly to human resources directly associated with nutrition or extension interventions for families or beneficiaries:

<table>
<thead>
<tr>
<th>Programme</th>
<th>Type/category of personnel/level</th>
<th>Role</th>
<th>Number of employees</th>
<th>% of female staff</th>
<th>Jurisdiction/coverage of the area</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAE</td>
<td>PAE manager (on site)</td>
<td>Monitor the programme in the establishment</td>
<td>No data</td>
<td>No data</td>
<td>1 per educational establishment (8,857 establishments)</td>
</tr>
<tr>
<td></td>
<td>Nutritionist in educational establishments</td>
<td>Provide technical support for PAE operational management activities</td>
<td>No data</td>
<td>No data</td>
<td>1 for every 70 establishments</td>
</tr>
</tbody>
</table>
## Capacity needs assessment

<table>
<thead>
<tr>
<th>Programme</th>
<th>Type/category of personnel/level</th>
<th>Role</th>
<th>Number of employees</th>
<th>% of female staff</th>
<th>Jurisdiction/ coverage of the area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-consumption</td>
<td>Technical assistant specialized in production</td>
<td>Review of implementation proposals; induction and accompaniment of implementing parties; evaluation with families and reporting</td>
<td>53 professionals</td>
<td>62% (engineers, agronomist and nutritionists)</td>
<td>Given that technical assistance is provided to municipal teams, we can estimate an average of 5.8 communes per professional</td>
</tr>
<tr>
<td></td>
<td>Technical assistant specialized in nutrition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Controls</td>
<td>Professional nurse and nutritionist</td>
<td>Perform nutritional checks, provide nutritional indications and refer to other professionals if necessary</td>
<td>No data</td>
<td>No data</td>
<td>At family health centres (CESFAM) professionals are assigned by territory and assigned population</td>
</tr>
<tr>
<td>PNAC</td>
<td>Professional nutritionist</td>
<td>Supervise the programme and keep records and reports</td>
<td>1 per CESFAM (for this task)</td>
<td>Higher proportion of women (no exact data)</td>
<td>1 per educational establishment (for this function)</td>
</tr>
<tr>
<td>Prodesal</td>
<td>Extension team coordinator</td>
<td>Ensure the technical management of the planning and intervention process of the community operating unit and maintain relationships with other stakeholders in the territory</td>
<td>1 500</td>
<td>45%</td>
<td>The community operating unit is a grouping of a variable number of users organized according to their interests, productive vocation, identity, social and productive/commercial interrelations</td>
</tr>
</tbody>
</table>

**Professionals of agroforestry, social sciences or other disciplines related to the needs of small-scale agricultural producers, farmers and their families**

- To develop the contents and design, then apply and advise on the extension methodologies useful for the transfer of capacities

**Agroforestry science technicians or other professions linked to the needs of small-scale agricultural producers, farmers and their families**

- To apply the extension methodologies that are useful for the transfer of capacities, to provide technical advice to all members of the operating unit, and technical follow-up after the deployment of investments and the use of working capital

**SOURCE:** FAO format and content from the web pages of Chilean institutions, plus interviews with representatives of the institutions.
According to our interviews, there are insufficient human resources related to the PAE, Self-Consumption, Health Controls and PNAC programmes. This determines the low density and coverage of nutrition in the food consumption promotional and educational activities in the territories, and results in the need to prioritize nutritionist consultations for the most critical cases. For its part, Prodesal serves smallholder farmers through individual activities (visits) and associative activities (field days, tours and workshops) that address technical management issues concerning the farmers' crops, but not addressing NSA-related content. Work with this form of sustainable agriculture content is limited to extension activities. Individual visits are generally described by the participants as insufficient, as is the attention or support given to farmers for certain procedures, such as sanitary solutions for food processing.

### 3.2.6 Organizational challenges in addressing nutrition

One challenge repeatedly mentioned by stakeholders in the system is the institutional linkage, because the selected programmes either do not relate to each other or are only weakly related and do not share common purposes and objectives – even when they are working in the same territories, and even though most of them are implemented by local governments/municipalities.

A further challenge is a lack of targeting of the programmes and beneficiaries, a lack of guidelines relating to the problem of nutrition and the absence of a culture of collaborative innovation.

Another challenge mentioned is how agricultural extension programmes are mainly aimed at surplus production (without considering supply for self-consumption) and the importance of developing sustainable agricultural production, which incorporates consumer demands. Minagri programmes currently care more about promoting agricultural systems that generate surpluses than production that meets the food needs of rural families – with vegetables, for example. One exception is the subsidized support for egg production, the main goal of which is to increase egg consumption in rural families.

In addition, there is a need to formalize and certify the safety of production by family farm agriculture (known as AFC). This also includes the importance of associating with others when responding to public procurement programmes, product revaluation and AFC as a main supplier in traditional channels (fairs, wholesalers, etc.).

### 3.2.7 Partnerships

For the five selected programmes, the existing partnerships are presented in Table 7.
# TABLE 7: ARTICULATION FOR THE IMPLEMENTATION OF NUTRITIONAL INTERVENTIONS

<table>
<thead>
<tr>
<th>No</th>
<th>Organization</th>
<th>Name of partner organization</th>
<th>Partnership purpose</th>
<th>Challenges faced by the partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PAE</td>
<td>Prodesal</td>
<td>JUNAEB’s local purchase policy for Prodesal farmers (INDAP. 2017) Concession holders will be required to pay a local purchase fee, equivalent to: • 5.25% of the annual total invoiced (approx. 15% of food expenses); • 3.5% of the annual total invoiced if the purchase is made in lagging areas (approx. 10% of food expenses); and • intermediate percentage when it comes to a mixed purchase from non-lagging and lagging areas</td>
<td>• Increase support for Prodesal farmers to become JUNAEB suppliers. • Problems with payment terms and prices from concession holders to suppliers • Supply of local agriculture must meet safety standards</td>
</tr>
<tr>
<td>2</td>
<td>Self-consumption</td>
<td>Municipalities</td>
<td>Self-Consumption programme management</td>
<td>Reduce turnover of municipal teams that share roles with other programmes</td>
</tr>
<tr>
<td></td>
<td>Prodesal</td>
<td>Capacity transfer between field technicians of both programmes</td>
<td>Strengthen capacity transfer between technical teams</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Entrepreneurship programme</td>
<td>People or families who graduate from the Self-Consumption programme are then linked to the Entrepreneurship programme</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CESFAM nutritionists</td>
<td>In charge of individual sessions with families on the ground in some communes</td>
<td>Greater linkage of CESFAM nutritionists with Self-Consumption programme</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minsal</td>
<td>Nutritionists of the Choose to Live Healthy system collaborate in food sessions and coordinate programme actions at the regional level</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Regional universities</td>
<td>Agreements for demonstration centres or for the participation of students in related careers</td>
<td>Expand coverage and consider regional realities</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Health Controls</td>
<td>Municipalities</td>
<td>Implementation managers</td>
<td>Identify new needs for increased promotion and prevention actions at the territorial level</td>
</tr>
<tr>
<td>4</td>
<td>PNAC</td>
<td>Municipalities</td>
<td>Implementation managers</td>
<td>Assessments for making changes</td>
</tr>
<tr>
<td>5</td>
<td>Prodesal</td>
<td>Municipalities</td>
<td>Manage the programme</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PAE</td>
<td>See row 2</td>
<td>See row 2</td>
<td></td>
</tr>
</tbody>
</table>

**SOURCE:** FAO format and content from the web pages of Chilean institutions, plus interviews with representatives of the institutions.
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The information presented in Table 7 shows that currently there are linkages between programmes that perform nutritional interventions, but these are not sufficient according to the people interviewed. Considering the likelihood that at least some of the families or beneficiaries served by Minagri’s Prodesal and Minsal’s Health Controls programme and PNAC are the same, the three programmes have little to no link. All these programmes managed by local governments in the territories highlight the missed opportunity for a “dedicated space” in which to focus interventions from systems and food consumption environments and to link primary production with nutrition and food consumption.

3.3 Individual level
3.3.1 Technical and functional capabilities
As regards the training of professionals involved in these interventions, a significant portion of the interviewees indicated that:
1. professionals in the agricultural sector either do not have training or are poorly trained in the field of nutrition, and any training is focused on agricultural production and non-food systems; and
2. professionals in the area of nutrition do not have training or are poorly trained in food consumption systems or agricultural production, focusing mainly on clinical nutrition or community food services.

The above is partially confirmed by an analysis of the curricula of the four main higher education institutions working in agronomic sciences and nutrition in the country, shown in Table 8.

<table>
<thead>
<tr>
<th>Course</th>
<th>University</th>
<th>Training on offer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronomy</td>
<td>Pontifical Catholic University of Chile</td>
<td>No signature area or curricular activities related to agricultural extension or nutrition</td>
</tr>
<tr>
<td></td>
<td>University of Chile</td>
<td>No signature area or curricular activities related to agricultural extension or nutrition</td>
</tr>
<tr>
<td></td>
<td>Pontifical Catholic University of Valparaiso</td>
<td>Rural development subject. No signature area or curricular activities related to agricultural extension or nutrition</td>
</tr>
<tr>
<td></td>
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<td>Elective signature area on agricultural extension and no curricular activities in nutrition</td>
</tr>
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<td>Nutrition</td>
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<tr>
<td></td>
<td></td>
<td>• education, behaviour and health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• communication and education in food and nutrition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• planning of educational programmes</td>
</tr>
<tr>
<td></td>
<td>University of Concepcion</td>
<td>Group food education subject</td>
</tr>
<tr>
<td></td>
<td>La Frontera University</td>
<td>Subjects:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• community nutrition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• health and food programme</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• food quality management</td>
</tr>
<tr>
<td></td>
<td>Valparaiso University</td>
<td>Subjects:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• design of educational interventions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• community nutritional intervention</td>
</tr>
</tbody>
</table>

SOURCE: Authors’ own elaboration.
Some key statements from interviewees on the programmes under study:

- "Professionals from the agricultural sector do not come with training in nutrition."
- "There is a lack of nutrition and food subjects among agronomists. Nutritionists do not understand the functions in the field of agricultural extension programmes."
- "If you choose to incorporate the issue of nutrition in the Prodesal service, which is not the case presently, the advisory teams do not have those skills. You would have to diversify the team or incorporate new skills over time."

INDAP hires almost 1 500 extensionists through the Prodesal programme. In 2017, it started a capability certification system that consists of three units:

1. basic cross-functional capabilities;
2. cross-functional capabilities associated with the territory;
3. specific technical capabilities.

To date, progress been made in the certification of basic cross-functional capabilities, which are mandatory and standardized for all INDAP extensionists (INDAP, 2017b). This does not include nutrition-sensitive extension capabilities. Furthermore, it was not possible to identify previous training in this area.

Taking into account that almost 50 percent of family farming households included in the Prodesal programme have income below the poverty line, Prodesal nutrition-sensitive extensionists need to change the focus from production systems to food systems, with emphasis on diversification for self-consumption and on the nutritional value of food.
4 CONCLUSIONS

4.1 Main results
There is enough national and international information to show that one of the main health problems in Chile is overweight and obesity. Although it affects all demographics within the population, there is higher prevalence in groups of greater vulnerability (biological, social, economic, gender). Overweight and obesity are linked to lifestyles, but these in turn are strongly conditioned by food consumption environments and social determinants.

In Chile, there are public policies and programmes addressing the population's nutritional problems. Among those that stand out are the Food and Nutrition Policy and its intersectoral vision and construction; the law on labelling and advertising, which aims to improve food consumption environments and also has intersectoral implications; individual multidisciplinary programmes for the prevention and control of overweight and obesity in primary health care; and Mideso's Choose to Live Healthy system, which aspires to coordinate all sectoral actions to promote healthy lifestyles and which recently launched the Zero Obesity Strategy. However, none of these initiatives has a relevant agricultural development component, although this tends to be systemic and confirms that the problem requires a multisectoral approach.

Similarly, the agricultural sector has programmes (such as INDAP’s Prodesal) which allocate resources to small-scale agricultural producers. However, they do not include components linked to nutrition, missing a good opportunity to improve the programmes’ value.

In this same sector, the National Rural Development Policy, currently under development, proposes an area devoted to social welfare and another to environmental sustainability of the rural territory, both of which should include a nutrition component among their objectives.

In the analysis of State policies and programmes that respond to the concept of NSA, Mideso’s Self-Consumption programme stands out in particular, as it is the only one that integrates this concept via its objectives and actions. However, it has very low coverage and therefore low national impact. With this programme, it has proved relevant to have staff linked to the areas of nutrition and agriculture, and especially to nutrition-sensitive extension.

While there are public stakeholders aware of the need for improved interaction as well as various existing sectoral policies and programmes, these do not communicate with one another, missing the opportunity to add public value.

In other sectors, such as academia, there are avenues of research in the field of food consumption and nutrition, but they do not necessarily respond to needs on the ground. Their holistic view of the food system is far-reaching but has little transdisciplinary focus.

The stakeholder mapping in this study also includes the private sector. On one hand, small-scale producers and marketers, on the other hand agriculture and fisheries, grouped together within CODEMA and ASOF, which currently markets 60 percent of all fruit and vegetables consumed in the country (Entrevista a informante clave, 2019). The mapping also includes food processors, who have received State support to develop healthier and safer food through a food transformation initiative, along with other initiatives, through CORFO.

After an exhaustive review, a number of programmes were selected for a detailed evaluation to establish their relationship with the concept of NSA and specifically extension services, nutritional interventions and sustainable production. The selected programmes were the Minsal’s Health Controls programme and PNAC; Mineduc’s PAE through JUNAEB; Mideso’s Self-Consumption programme; and Minagri’s Prodesal. The findings demonstrate that the programmes of the Ministries of Health, Social Development and Family, and Education include...
nutrition objectives as part of their core mandates, but not those of Minagri and INDAP. The latter connect indirectly with NSA through an objective related to sustainable production. In practice, however, this does not translate into concrete actions in the field of nutrition.

In terms of the resources available for the selected programmes, financing is generally insufficient to develop all the planned actions at the required times. However, this does not seem to be the reason why the programmes have little to no integration, which appears instead to be due to a lack of inclusive vision. Information about the human resources involved in the five selected programmes is not available from public access sources. However, according to the data analysed, accompanied by background interviews, the PAE and Self-Consumption programmes have serious staff deficiencies affecting the delivery of services to beneficiaries. In addition, and in general for the five programmes, the human resources involved in interventions, both in nutrition and agricultural production and extension, do not have the training required to address problems from the approach of food consumption systems.

The range of programmes analysed demonstrate a deep gap, not only in intersectoral coordination and territorial relevance, but also a lack of vision regarding these needs. It is not only a matter of dialogue and knowledge, but also a question of reflecting on the integrative view put forward by agriculture for nutrition. A lack of territorial and cultural relevance is also notable, giving the programmes a highly centralized and homogeneous character that does not account for the country reality.
5.1 Programme scope
All the programmes described, including those that were not examined in depth in this review, present an opportunity to improve their objectives and actions within the framework of agriculture for nutrition, whether through integrating the country’s context of health and productivity; or by considering scientific evidence like the relevance of food consumption environments and environmental sustainability; or through the recommendations of international organizations, which call for more systemic models of food-nutritional intervention and agricultural production, but with cultural and geographic relevance.

5.2 Intersectoral reach
Although the different stakeholders are interested in intersectoral and inter-programme relationships, these aspirations are not institutional and are therefore unstable and vulnerable to change. The Choose to Live Healthy system represents an opportunity to move towards an effective intersectoral and transdisciplinary approach, as it is defined as a management model consisting of policies, plans and programmes developed and implemented by different State agencies. Its aim is to contribute to the development of healthy habits and lifestyles to prevent and reduce the risk factors and behaviours associated with non-communicable diseases. According to that definition, it may provide the best niche within agriculture for nutrition to be effective, adding public value to current and future policies and programmes. It is logical in terms of structure and the population, allows for the improvement of food consumption environments, and can even address the determinants of social health.

In this area, academia can play a variety of roles – from the training of professionals and technicians with a transdisciplinary perspective, to research projects in action that can provide a link between the country’s needs with university work on territorial extension. It can promote the adaptation of policies and programmes to different geographical realities and address the urban-rural situation that is lacking in programme scope.

5.3 Specific recommendations

LOCAL DEVELOPMENT PROGRAMME
Incorporate NSA in a decisive and explicit way, seizing the opportunity created by a programme that is reformulating both its objectives, activities and goals, and following the experience acquired in extension work by other countries in the region.

SCHOOL FEEDING PROGRAMME
Incorporate actions to increase the participation of local smallholder farmers, especially those producing vegetables, fruit, legumes and small livestock, in the public purchasing processes of JUNAEB. This requires the strengthening of organizational capacity (associations) and training to achieve the objectives required by the PAE tenders.
SELF-CONSUMPTION PROGRAMME
In this programme, the main recommendation is its evaluation and eventual expansion, which requires a significant increase in budget and resources.

NATIONAL SUPPLEMENTARY FEEDING PROGRAMME AND HEALTH CONTROLS
These programmes have traditionally been linked to primary health care but are completely disconnected from other sectors. Their success and high user satisfaction constitute an opportunity to link to programmes in other sectors, such as the Self-Consumption programme.

To summarize the above, despite the vision and coordination gap found, there is a wide range of opportunities and excellent willingness to change, both among key stakeholders and in their institutions. When it comes to State interventions to tackle overweight and obesity and to improve agricultural productivity, there is a desire to incorporate objectives and actions from agriculture and nutrition into a more systematic model.
REFERENCES


Gobierno de Chile. 2020. Chile Crece Contigo (Chile Grows With You), Fortalecimiento del Control de Salud. Santiago. www.crecécontigo.gob.cl/beneficios/fortalecimiento-del-control-de-salud-del-nino-o-nina/


www.minsal.cl/portal/url/item/94a33f151f11a574e04001011f0131dd.pdf

Annex 1. Comments on the methodology and suggestions for improvement

As part of this study, we were asked to provide suggestions to improve the methodology, based on the piloting, the final workshop and the analysis made by the implementing team. These suggestions are set out for each step in the methodology.

Step 1. Context mapping of nutrition at the national level

Defining the context of nutrition in Chile at the beginning of the study was useful and pertinent. It helped to clarify the problem and made for a good starting point.

Regarding tools, this context was established through an analysis of secondary information obtained from digital platforms, which was subsequently validated and complemented during the workshop.

To understand how nutrition is articulated in the policy space, we first reviewed the literature available on digital platforms and in documents. Nevertheless, the most relevant information enabling us to flesh out this context was obtained through interviews with key stakeholders. They provided updated visions and reported on developing processes (for example, the reformulation of the main extension programme for smallholders, whose final deliverable will be available in 2020).

A feasible suggestion is to add questions to identify the existence of territorial public food policies in rural areas, since the National Rural Development Policy, currently under development, is not linked with the 2017 National Nutrition and Food Policy.

FIGURE A1.1 NUTRITION AND AGRICULTURE-RELATED CONCEPTS

SOURCE: Authors’ own elaboration.
Other suggestions are to synthesize the concepts and definitions under which the different institutions address nutrition. Most of the institutions do not recognize NSA but have components that consider nutrition.

**Step 2. Stakeholder mapping**
The mapping of the various stakeholders directly or indirectly involved in nutrition is useful and pertinent to this work.

**Step 3. Organizational capacity assessment**
The proposal to perform a detailed analysis of a shortlist of organizations and the parameters for their selection was validated and shared. They were assessed on their participation in agricultural EAS and nutritional interventions, and organizations where there is potential for collaboration to promote NSA were highlighted.

For this step and the next, it was more complicated to implement the cross-sectional methodology and at the same time account for the findings. Although most of the suggested matrices were completed, they fail to fully account for the main need to incorporate nutrition content into the programmes analysed.

**FIGURE A1.2 STAKEHOLDERS’ MAPPING**

NOTE: Acronyms in the figure
ACHIPIA: Agencia Chilena para la Inocuidad y Calidad Alimentaria (Chilean Agency for Food Safety and Quality)
ASCC: Agencia de Sustentabilidad y Cambio Climático (Sustainability and Climate Change Agency)
CORFO: Corporación de Fomento de la Producción (Production Development Corporation, led by the Ministry of Economy, Development and Tourism)
IICA: Instituto Interamericano de Cooperación para la Agricultura (Inter-American Institute for Cooperation on Agriculture)
INDAP: Instituto de Desarrollo Agropecuario (Agricultural Development Institute, dependent of the Ministry of Agriculture)
INIA: Instituto de Investigación Agropecuaria (Agricultural Research Institute)
JUNAEB: Junta Nacional de Auxilio Escolar y Becas (National Board of School Aid and Scholarships, dependent of the Ministry of Education)
FIA: Fondo Innovación Agropecuario (Agricultural Innovation Fund)
FOSIS: Fondo de Solidaridad e Inversión Social (Solidarity and Social Investment Fund)
ODEPA: Oficina de Estudios y Políticas Agrarias (Office of Agricultural Studies and Policies, dependent of the Ministry of Agriculture)
 SOURCE: Authors’ own elaboration.
One proposal is for the methodology to suggest a “menu” of topics to be investigated (for example, mandates, programmes developed, clients served, services delivered, resources available, linkages). These would be developed, to a greater or lesser extent, according to prevalence and relevance.

Though most of the programmes analysed have insufficient economic or human resources, those interviewed transversely indicated that the main capacity gap is a lack of linkage between the programmes. Based on this, another suggestion is to present the information in a more descriptive way and – considering that it is important the five studies be comparable – limit the use of matrices and instead develop the content based on the “guiding questions” currently available in the methodology.

**Step 4. Individual capacity assessment**
The methodology proposes a level of detail of information that is almost impossible to access, and its relevance and usefulness are not certain. In this study, the findings revealed training deficiencies widespread at all levels of the organization and in most of the detailed topics. Use of the matrices was therefore considered irrelevant when detailing that information. As in Step 3, we propose the use of guiding questions to provide a framework for the analysis and, based on the results, present the information either descriptively or in matrices.

**Step 5. Synthesis of results**
The results obtained during implementation of Steps 1 to 4 were summarized, highlighting the main findings and, based on that, putting forward recommendations. There are no suggestions on this point.

**Step 6. Validation workshop**
The workshop is considered to be of great importance and relevance, so there are no suggestions on this point.

**Annex 2. Synthesis workshop 1 (pretesting)**
This pretesting involved activities in the field and a workshop held on 25 September 2019. The goal was to validate the output from steps 1 and 2 (context and stakeholder mapping), with professionals from the innovation system and FAO representatives.

Representatives of the most important institutions or organizations linked to nutrition and extension services were invited to the workshop. Eleven people attended the workshop on the day.

| **TABLE A2.1** SYNTHESIS WORKSHOP 1 PROGRAMME |
|-----------------|--------------------------------------------------|
| **Theme**       | **Activity**                                     |
| Welcome and introduction | • Presentation of participants  
• Presentation of the work context |
| Activity I | • Methodology and deliverables  
• Main findings from Step 1 of the work (context and nutrition policies in Chile)  
• Questions to discuss with participants:  
  1) Does Chile have agricultural policies that include nutrition?  
  2) Does Chile have policies that promote food diversity in rural populations? |
| Activity II | • Stakeholder mapping of the nutrition system  
• Work group to discuss and validate the stakeholder map and the priority given to stakeholders |
| Workshop closure | Main results and next tasks |

**SOURCE:** Authors' own elaboration.
Annex 3. Final validation workshop
The final validation workshop of the study was held on Friday, 8 November 2019. The objectives were to:
• Present the main findings of the study
• Generate proposals in a participatory manner, based on the findings presented.

Representatives of the most important institutions or organizations linked to nutrition and extension services were invited to the workshop. 15 people attended the workshop on the day.

Results of the final workshop
Activity I was a presentation of general aspects of the study (the objectives, steps and methodological instruments) and the stakeholder mapping. These were updated according to the results of the pretesting workshop.

Then, as indicated in the cross-sectional methodology, a shortlist of institutions was presented for a detailed evaluation. When selecting the institutions, consideration was given to their link with the three themes that form part of NSA: extension services, nutritional interventions and sustainable production, as can be seen in Table A3.1.

The main findings regarding the institutions and programmes analysed are presented in Figures A3.1 and A3.2.

<table>
<thead>
<tr>
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<th>Theme</th>
<th>Activity</th>
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</thead>
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<tr>
<td>10.00–10.15</td>
<td>Welcome and introduction</td>
<td>• Introduction of participants&lt;br&gt;• Presentation of the work context</td>
</tr>
<tr>
<td>10.15–10.35</td>
<td>Activity I</td>
<td>• Presentation of general aspects of the study, objectives, steps and methodological instruments&lt;br&gt;• Main findings, selection criteria and characteristics of the prioritized programmes</td>
</tr>
<tr>
<td>10.35–11.10</td>
<td>Activity II</td>
<td>Context comments.  &lt;br&gt;• Approach from nutrition (Lorena Rodriguez, School of Public Health, University of Chile) &lt;br&gt;• Approach from extension services and agricultural advice (Francisco Aguirre, RELASER)</td>
</tr>
<tr>
<td>11.10–11.25</td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>11.25–12.00</td>
<td>Activity III</td>
<td>Participatory analysis based on work with cards and group discussion</td>
</tr>
<tr>
<td>12.00–12.30</td>
<td>Activity IV</td>
<td>• Synthesis of the information presented by the attendees&lt;br&gt;• Preliminary conclusions of the study</td>
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**SOURCE:** Authors’ own elaboration.
### TABLE A3.2 INSTITUTIONS SELECTED FOR DETAILED EVALUATION

<table>
<thead>
<tr>
<th>No.</th>
<th>Stakeholders related to nutrition</th>
<th>Extension services</th>
<th>Nutrition interventions</th>
<th>Sustainable production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mineduc/ JUNAEB</td>
<td>X</td>
<td>X</td>
<td>–</td>
</tr>
<tr>
<td>2</td>
<td>Mideso/ Choose to Live Healthy system</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3</td>
<td>Minsal</td>
<td>–</td>
<td>X</td>
<td>–</td>
</tr>
<tr>
<td>4</td>
<td>Minagri/ INDAP/ agricultural extension programmes</td>
<td>X</td>
<td>–</td>
<td>X</td>
</tr>
</tbody>
</table>

**SOURCE:** Authors’ own elaboration.

### FIGURE A3.1 ORGANIZATIONAL CAPACITY ASSESSMENT 1

- **Ministry of Education/JUNAEB/School Feeding Programme**
  Contribute to equal opportunities within the educational system through the timely delivery of goods and/or services

- **Ministry of Social Development and Family/ Choose to Live Healthy system**
  Promote healthy habits and lifestyles to enhance people’s quality of life and well-being

- **Self-Consumption Programme**
  Contribute to the increased availability of healthy food through education and self-provision

- **Ministry of Health/ National Complementary Feeding Programme**
  Sustain and enhance access to safety and healthy food

- **Health Control Programme**
  Promote and monitor growth, development and health status

- **Ministry of Agriculture / Agricultural Development Institute/ Local Development Programme**
  Improve production systems and achieve higher levels of production and/or productivity, in the context of social capital and sustainable development

**SOURCE:** Authors’ own elaboration.
In Activity II, comments were made on context from a nutritional viewpoint. Specialist Lorena Rodríguez from the School of Public Health at the University of Chile analysed the epidemiological situation (obesity, food consumption, territorial differences), the complexity of the problem (social and commercial determinants, food environments), the approach (territorial, intersectoral, transdisciplinary relevance, health in all policies), and the sectoral public policies of the institutions analysed.

From an agricultural EAS viewpoint, Francisco Aguirre of RELASER presented analyses of public policies, extension services, extension capabilities, opportunities at territorial/local level, food production and public procurement.

In Activity III, a participatory analysis was carried out in which each attendee answered the following guiding question. What are the gaps and opportunities to integrate nutrition objectives into other programmes, specifically agricultural EAS? A synthesis of the information collected is presented below.

**Gaps**

One of the gaps repeatedly mentioned by the attendees is the **lack of institutional linkage**. This is based on the fact that the selected programmes do not relate to each other and do not share common purposes and objectives, even when they intervene in the same territories and, for the most part, are implemented by local governments. In addition, this point includes the **lack of focus on programmes and beneficiaries**. There are no guidelines relating to the problem, there is no culture of collaborative innovation and there is a need to make the issue more visible to the parties involved. Finally, it was pointed out that **extension services do not have a strategy to incorporate nutrition**.

The State and the private sector could tackle nutrition at the territorial level more effectively and more efficiently through institutional linkage. The impact of the extension work cannot be more widely felt unless it is linked up to other institutions.
Education on healthy eating is another of the most frequently mentioned gaps: this relates to awareness raising on the importance of agriculture for nutrition and food, and on access to healthy food for all. It has become clear that extension staff do not have the knowledge required to address the problem and, like most institutions and consumers, they do not understand that food consumption is not the same as nutrition – thus providing an opportunity for “nutritional education”.

The third gap indicated is related to agricultural production. It is important for the country to maintain a solid agricultural export sector, but at the same time it must strengthen its medium-scale and family agriculture oriented around clean and quality food production, destined for domestic markets and aligned with the country’s nutrition strategy. It is recommended that emphasis and investment be directed to three strategic lines: agroecological production, short supply chains and institutional markets. In this area, extension must fulfil a fundamental role.

**Opportunities**

Among the opportunities mentioned are: coordination and complementarity between public and private entities; the existence of public policies that can address these issues; and the possibility that there are specific programmes with interministerial and interdisciplinary components, involving different public and private actors. As mentioned above, one alternative would be to consider the National Rural Development Policy.

One change of approach could be to incorporate the issue of nutrition with the presence of extension teams in the territories, and to learn from experiences in extension. Community education in healthy food and organic production could also be an opportunity. In the case of the latter, the possibility of linking with the Ministry of the Environment was brought up.

Another opportunity is to strengthen healthy eating, to deliver knowledge on the damage junk food causes to one's health, and to utilize social phenomena in Chile that can provide greater analysis and raise civil society interest in learning about food issues.

The possibility of collecting information from rural territories and sharing that information in participatory events and discussions – such as workshops – is also another opportunity. Along the same lines, the government could establish research priorities for universities, and thesis students should be able to cross-check data.

**Preliminary conclusions and next steps**

One of the first conclusions is to state that the workshop's objective was achieved: proposals were generated in a participative way, and they were based on the findings presented and gathered from the stakeholders involved. This allowed for greater relevance and feasibility.

As stated, it is interesting to note that in the stakeholders’ opinion (also reflected in the interviews), the main gap is not of resources (although this is also an issue) but of linkage between institutions and programmes that are deployed in bounded territories and that mostly depend on the municipalities. The challenge is to define common objectives, goals and complementary actions.