



Food systems and COVID-19 in Latin America and the Caribbean

The Hand-in-Hand Initiative for the transformation of food systems

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1. Editorial



Since the latter half of the last decade, due to an economic cooldown, reaching the 2030 Sustainable Development Goals (SDGs) has become increasingly difficult for Latin America and the Caribbean. If these obstacles made the finish line seem farther away, the COVID-19 outbreak made the region lose years of progress.

The Hand-in-Hand Initiative (HiH) of the Food and Agriculture Organization of the United Nations (FAO) was developed to get back on track and encourage achieving the SDGs, especially SDG 1 (to eradicate poverty), 2 (putting an end to hunger and all forms of malnutrition), and 10 (reduce inequality within and among countries).

Led by the countries themselves, the Hand-in-Hand Initiative gathers evidence to optimize and guide investment according to agricultural potential, productive efficiency, and poverty levels. This allows to promote investments with high socio-economic impacts on poor territories that show great potential, but low efficiency, or to incentivize social-protection or productive transformation policies in areas with high levels of poverty and low agricultural potential.

The Initiative's goal is to work closely with countries in the search for resource efficiency and for investors or donors that can help speed-up agricultural transformation and sustainable agri-food and rural development through evidence-based recommendations that point to where resources can yield the most socio-economic benefits. The interviews at the end of this bulletin, which give an account of the implementation of this initiative, are proof of that.



2. Key messages



- The COVID-19 pandemic arrived to Latin America and the Caribbean when it was going through a hard economic and social time and only worsened equity perspectives for the region's population for the 2020-2021 period.
- The pandemic plunged the region into the worst economic and social crisis in decades – with 22 million more poor people and 14 more million suffering from hunger.
- Economic recovery will not be achieved in the short-term. The crisis' social effects and the structural issues that plague the region have become more acute and will persist for several years.
- The HiH Initiative seeks to speed-up agricultural transformation and sustainable rural development in order to eradicate poverty (SDG 1), put an end to hunger and all forms of malnutrition (SDG 2), and reduce inequality within and among countries (SDG 10).
- The Initiative's diagnostic process begins with a tool based on the analysis of new technologies, statistical georeferenced data, and econometrical analyses. It was devised to help countries' make evidence-based territorial-agricultural investment decisions.
- The methodology's results allow to obtain micro-territorial maps, and then to propose an investment program suited to the social contexts and needs of each territory, placing a special emphasis on the poorer farmers that have agricultural growth opportunities.
- This tool allows to prioritize according to three key factors: how necessary is the intervention (expressed in poverty levels), how much agricultural potential (expressed in income), and what's the region's productive efficiency.



3. A poorer and hungrier region after the pandemic



The COVID-19 pandemic arrived to Latin America and the Caribbean when social and economic progress was clearly lagging – food security and economic indicators were either stuck or going backwards. In other words, the pandemic showed up in the region at a bad time and only made things worse, becoming the ultimate cause for the greatest social and economic crisis in decades (FAO and ECLAC, 2020a).

Hence, the pandemic has jeopardized meeting many of the SDGs in the region. It won't be easy to eradicate poverty, put an end to hunger, and reduce inequalities by year 2030.

When analyzing the territorial impacts of the crisis, it's clear it has struck urban areas the hardest (ECLAC, 2021a), and thus social-protection and economic recovery measures have targeted cities, its inhabitants and economic activities (FAO and ECLAC, 2020b).

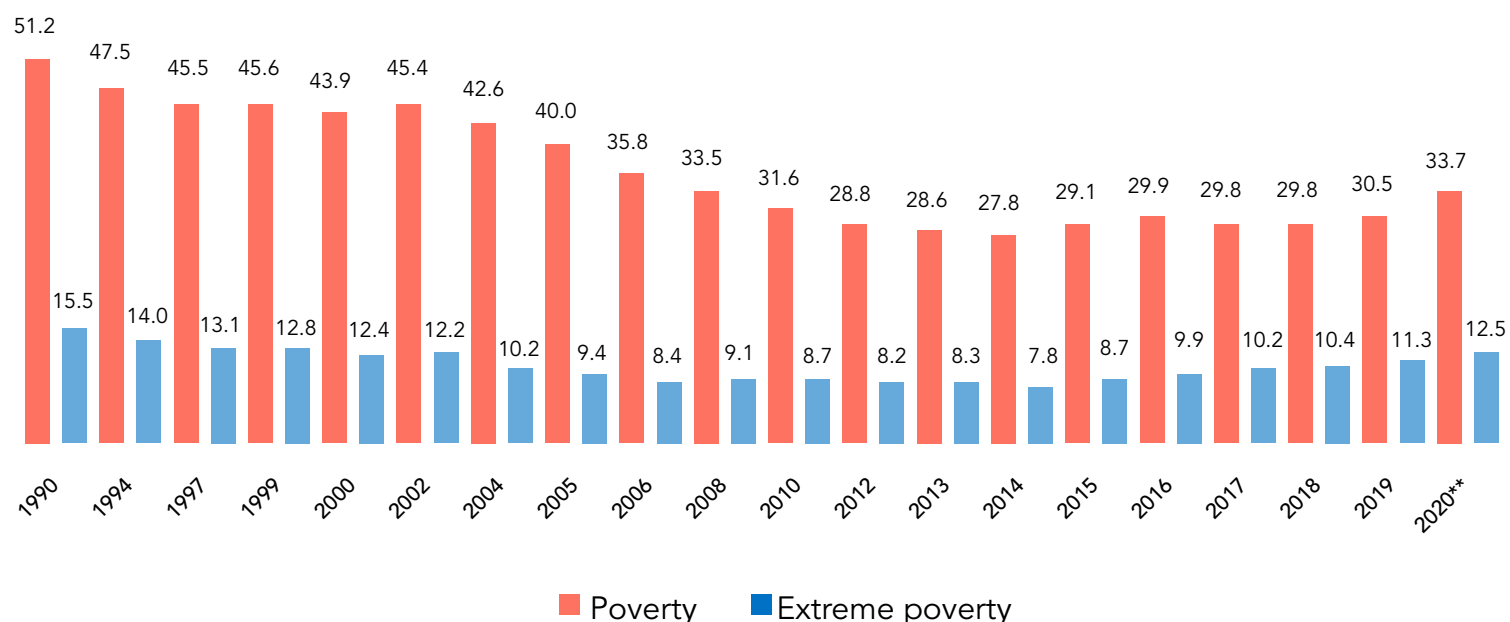
Nonetheless, the existent gaps between rural and urban areas are still significant – recovery and transformational policies cannot ignore rurality if the goal is to overcome the current crisis.

3.1. Increase in poverty

Between 2015 and 2019, the poverty levels in Latin America and Caribbean were on the rise. Poverty and extreme poverty reached their lowest rates in 2014, 27.8 and 7.8 percent, respectively. Since then, poverty in all its forms has been increasing, reaching in 2019 rates of poverty and extreme poverty of 30.5 and 11.3 percent, respectively (ECLAC, 2021a).

Poverty is estimated to reach 33.7 percent and extreme poverty 12.5 percent by 2020. This means that the number of poor people will be 209 million by the end of that year, 22 million more than in 2019. Of those people suffering poverty, 78 million do so in extreme poverty, 8 million more than in 2019 (ECLAC, 2021b).

Figure 1. People suffering poverty and extreme poverty in Latin America* (in percent), 1990-2020.



* Weighted average of the following countries: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela (Bolivarian Republic of).

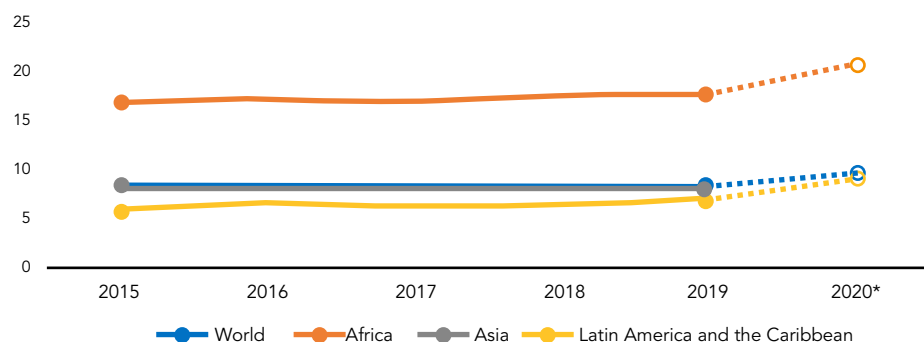
** 2020 data are estimates made by the Economic Commission for Latin America and the Caribbean (ECLAC).

Source: Prepared by the authors on the base of ECLAC, 2021b.

3.2. Increase in hunger

According to the latest report on food insecurity in Latin America and the Caribbean (FAO *et al.*, 2021), hunger increased all over the world in 2020. 14 million people more than in 2019 suffered hunger in the region, an increase of 2 percentage points, reaching 9.1 percent. Latin America and the Caribbean now is, after Africa, (with a prevalence of 21 percent) the second region most affected by hunger in the world.

Figure 2. Prevalence of undernourishment in the world and its regions (in percent), 2015-2020.

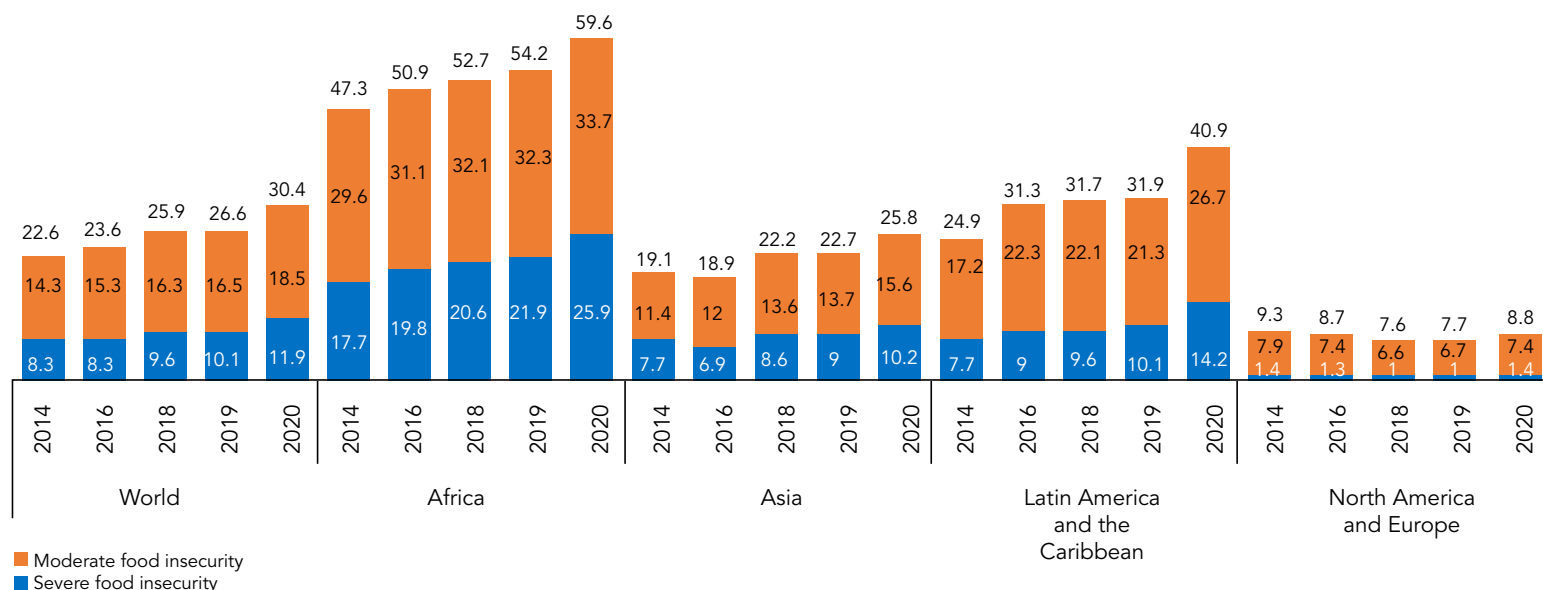


* Percentage of the population whose habitual food consumption is insufficient to provide the dietary energy levels that are required to maintain a normal active and healthy life.
Source: Prepared by the authors on the base of FAO *et al.*, 2021.

World averages of moderate and severe food insecurity have slightly increased in the last six years, now affecting a third of the world's population. After the onset of the pandemic, in 2019 and 2020, the sharpest increases were in Latin America and the Caribbean (9 percent), Africa (5.4 percent), and Asia (3.1 percent).

In 2020, 41 percent of the population of Latin America and the Caribbean suffered either moderate or severe food insecurity, of which 14 percent were affected by severe food insecurity. The most affected sub-region was the Caribbean, where the prevalence of moderate and severe food insecurity was 71.3 percent, that is almost three quarters of that sub-region's population. Almost half of the people affected by food insecurity in the Caribbean suffered severe food insecurity (39 percent). In the other sub-regions, South America and Central America, severe food insecurity affected 13 and 11 percent of its population, respectively.

Figure 3. Prevalence of moderate and severe food insecurity in the world and its regions (in percent), 2014-2020.



Source: Prepared by the authors on the base of FAO *et al.*, 2021.

3.3. Slowdown in Sustainable Development Goals 1 and 2

The increase in poverty and hunger brought about by the pandemic not only had consequences during the last year, but will also affect the future. This is an especially concerning fact with regards to the SDGs subscribed by the Member States of the United Nations in 2015, in particular for eradicating poverty (SDG 1), and putting an end to hunger and all forms of malnutrition (SDG 2) by year 2030.

If even before the pandemic hit the region, meeting SDG 1 required more economic growth and reducing inequality at a greater rate than in the last years, the current situation has only made the task of eradicating extreme poverty harder by year 2030. The poverty rates reached in 2020 mean the region's achievements have regressed 20 years. Of the 16 countries of the region with available information, 9 will not meet SDG 1 in their rural areas by 2030 unless they significantly increase their efforts to reduce poverty (FAO, 2018).

All the same, some of the policies put forth to mitigate the effects of the pandemic, such as conditional cash transfers, might help cover income gaps and thus help overcome poverty and extreme poverty, making feasible meeting SDG 1 (ECLAC, 2021b).

SDG 2 will also not be met by 2030 unless more bold measures are put into place to speed-up progress, especially pertaining inequality in access to food. The COVID-19 pandemic has deepened the discouraging tendencies present before the crisis.

According to estimations that take into account the potential effects of the pandemic, after the maximum reached in 2020, by 2030 hunger in the region will gradually go down, but still will reach numbers even higher than those of 2019. This is so because, along the pandemic's impact on the prevalence of all forms of malnutrition, the inter-generational effects of malnutrition and its subsequent impacts on productivity also have to be considered (FAO *et al.*, 2021).

3.4. Territorial impacts of the COVID-19 pandemic

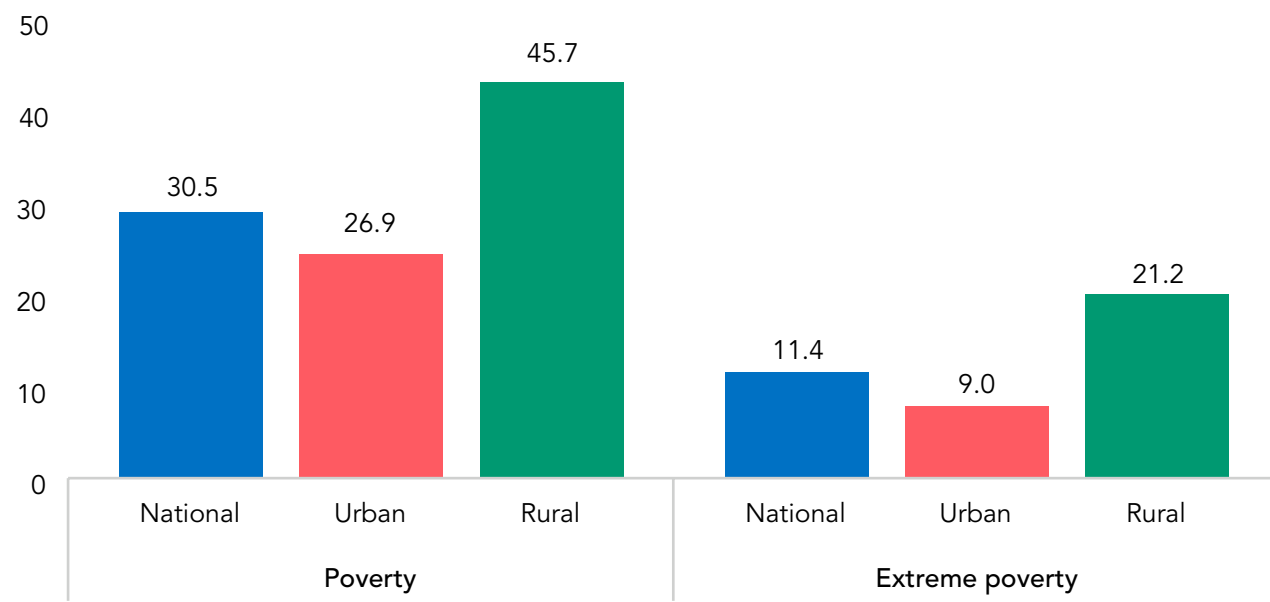
It isn't easy to calculate the territorial impacts of the pandemic, but the important multi-dimensional gaps between urban and rural areas in terms of social services coverage must be considered.

These gaps lend credence to the fact that to be born in a rural area of Latin America and the Caribbean is synonymous with lesser possibilities of development (FAO, 2018). Hence, rural inhabitants have, on average, less tools than urban residents to face crises.

In regards to monetary poverty, between 1990 and 2014 Latin America and the Caribbean was successful in reducing poverty both in urban and rural areas. Nevertheless, in 2012 the region began to stagnate and since 2014 to experience rising levels of poverty and extreme poverty.

According to the latest data, 1 of 2 inhabitants of rural areas is poor, while in urban areas the ratio is 1 of 4. In terms of extreme poverty, the rural area rate more than doubles the urban rate (9 and 21.2 percent, respectively).

Figure 4. People suffering poverty and extreme poverty according to geographical area (in percent) in Latin America, 2019.



Source: ECLAC, 2021c.



4. The Hand-in-Hand Initiative for the transformation of food systems and a sustainable rural development



4.1. Micro-region typology

Launched by the FAO in 2019, the Hand-in-Hand Initiative seeks to contribute to the eradication of poverty (SDG 1), put an end to hunger (SDG 2), and end inequality (SDG 10) through high socio-economic impact investments on territories with high farming, forestry, and aquatic potential.

This initiative looks to articulate a series of actors and make them take an active part in the identification and mobilization of economic opportunities to promote a sustainable and holistic territorial agricultural development, and maximize the results of local public policies.

Countries with high levels of poverty or climate vulnerability can request the FAO's technical assistance. As of now, six Latin-American and Caribbean countries take part in the Initiative – Ecuador, El Salvador, Guatemala, Haiti, Honduras, and Peru.

The Hand-in-Hand Initiative is a part of the FAO's mission, whose 2022-2031 strategic framework supports the 2030 Agenda promoting transformation to reach more efficient, inclusive, resilient, and sustainable agri-food systems (FAO, 2021a). According to this logic, the objective is to promote productivity and net rent of agricultural households in the short term, as well as environmental and social sustainability in the long term.

More concretely, the FAO applies four inter-sectoral or transversal “accelerants” in order to provide a flexible, adaptable to the government's needs, assistance: 1) technology, 2) innovation, 3) data, and 4) supplements (governance, human capital, and institutions).

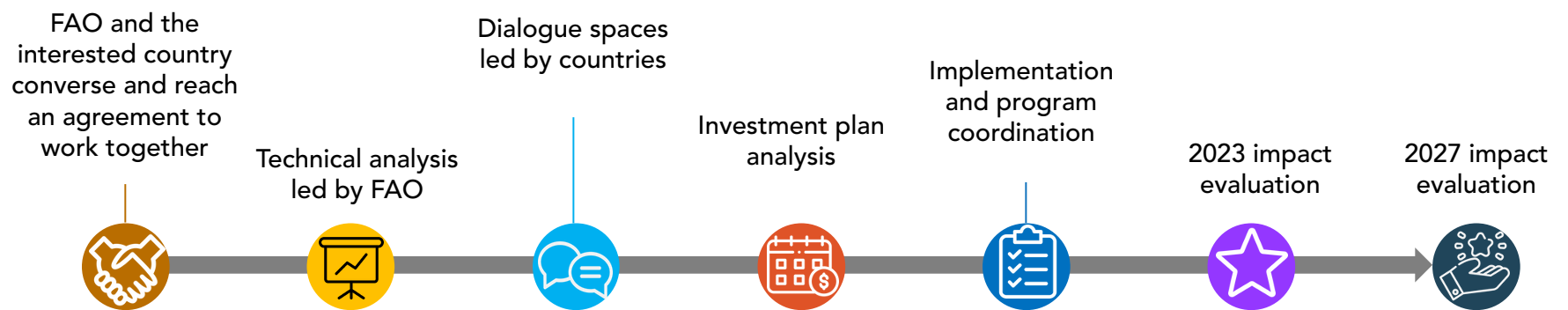
In order to meet rentability and sustainability goals, the HiH's programmatic interventions possesses an analytical tool to single out territories according to their potential, based on the analysis of economical, statistical and geospatial information. This allows to prioritize rural territories and to assign resources more efficiently. Thus, this methodology has two main foci:

1. it employs an econometrical model with the countries data to create typologies used to prioritize poor territories with high agricultural potential; and
2. it emphasizes the design of investment plans, in order to, by means of a coupling strategy, link the demand of territorial investments and the actors with the resources to finance them.

4.2. ¿How is HiH implemented?

According to the general guidelines set by FAO, the roadmap considers the following milestones:

1. **Handshake:** a policy dialogue between the FAO and the country, which materializes in a signed declaration of interest by the interested government.
2. **Technical analysis led by FAO and national workgroups:** based on econometrical models to typify territories according to three factors: poverty levels, agricultural potential, and productive efficiency, as well as early discussions about potential investments.
3. **Dialogue spaces led by the countries and co-led by FAO:** this a multi-lateral space of discussion about investment plans and how to finance them comprised by donors, international and local financial institutions, agencies of the United Nations, national government, local governments, the private sector, civil society, agricultural producers and associations, and research institutes, among others.
4. **Investment program analysis:** here territorial prioritizations, gaps, bottlenecks, and investment plans, among other things, are assessed.
5. **Implementation and program coordination:** execution of the investment plan.

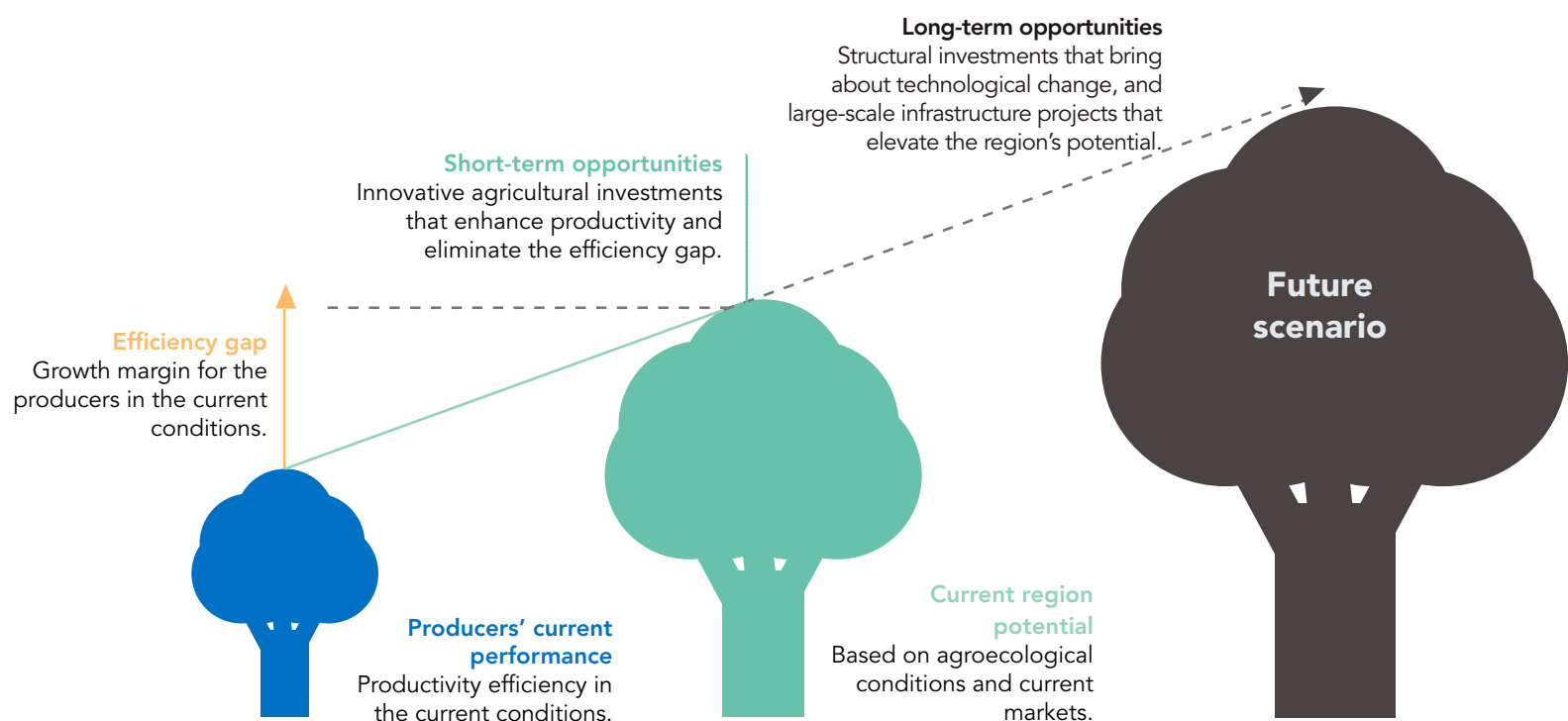


With the aim to generate an information framework for decision-making, one of the HiH Initiative stages is devoted to technical analysis, in which the micro-region typology is one of the main products.

Given the structural limitations and the heterogeneity of rural populations, it is impossible to have one solution for every problem. At the same time, not every investment is equal and the benefits obtained per dollar spent vary according to the territories and value-chains prioritized. To decide in which territory to focus, the Hand-in-Hand Initiative developed a typology that allows to identify areas with unfulfilled agricultural potential and high levels of poverty, calculating the growth margin (or the absence of it) of a given producer in a determined area.

In short, this approach allows to classify territories according to their characteristics, and to build a tool to guide the type of investment needed in each territory or region.

Figure 6. Framework for action in areas with high agricultural potential, low efficiency, and high levels of poverty.



Source: Prepared by the authors on the base of FAO, 2021b.

Once the territories have been prioritized, HiH focuses on finding the main bottlenecks to later identify investments that not only will have a better return per dollar spent, but that will also be key to reduce poverty and hunger efficiently. This is the how a portfolio of strategic investments with high territorial impact is obtained, which later on is discussed with decision-makers who manage resources, such as governments, donors, international and private financial institutions), interested in developing it.

2022 CHALLENGES

In 2021, the countries that implemented the HiH Initiative in Latin America and the Caribbean already have prioritized maps, complete with a territorial classification. The challenges for 2022 are to:

1. Provide technical assistance to the formulation of plans, programs, and investment projects, as well as to prioritized chains.
2. Follow up the implementation and mobilization of resources (public and private) in the prioritized territories and chains.
3. Strengthen national technical capabilities to formulate micro-regional typologies, territory and chain prioritizations, and investment plans.
4. Assist the design and implementation of investment attraction platforms in the agri-business sector, employing tools such as business intelligence and economic incentives, in each type of territory.



5. Different strategies for different territories: the cases of Ecuador and Guatemala



The HiH Initiative in Ecuador

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General Coordinator of National Agricultural Information
Ministry of Agriculture and Livestock (MAG)



Could you briefly tell us how the FAO and the government of Ecuador reached an agreement?

In 2021, the FAO and the Ministry of Agriculture and Livestock of Ecuador signed an instrument of cooperation called Identification and promotion of investments for the economic recovery post COVID-19 and the agricultural transformation in Hand-in-Hand territories, made up by three components: i) a methodological model adapted to the countries conditions in order to identify territorial typologies; ii) investment plans; and iii) matchmaking.

This past November we signed a bilateral memorandum of understanding with the objective of consolidating, developing, and describe minutely processes and cooperation milestones to strengthen the territorial planning capabilities and assist in the identification and formulation of investment plans or projects that fall under the principles and processes of the Hand-in-Hand Initiative and the national government.



What made HiH attractive for your country? How does the initiative complement your government's work plan?

The stochastic frontier approach is a tool that allows to identify local potential and the efficiency levels needed to build typologies based on three factors: poverty, efficiency, and agricultural potential. This tool also allows an econometric exploration of the set local agroecology and economic conditions, to identify events that affect agricultural production (weather, prices, etc.), the investment and production decisions, and how the technological innovations that a farmer makes generates more or less income and production.

The Initiative in Ecuador is conceived as a mechanism to create synergies with planification guidelines of the agricultural sector. It provides valuable information assets to prioritize the territories that present high levels of poverty and high potential for the development of agriculture. Also, it helps design interventions, plans, and projects to improve productivity and agricultural production.

How have the Ministry and the FAO coordinated?

Hand-in-Hand has promoted coordination between both institutions thanks to more than 50 periodical meetings of the MAG's initiative committee and national and international experts from the FAO. In the first stage of work, in these meetings we undertook the analysis and selection of variables and devised territorial typologies at a national level. These typologies were later shared within the ministry with the objective to provide a valuable information asset for the planification process or lines of actions needed to realize by the ministry's different sub-secretaries and organizations.

It is worth mentioning that the results are also a planification tool for local governments, especially for the economic/productive aspect of their development plans and territorial ordinance. They will allow greater focalization and reaching the local and national development goals in the productive field.

When developing the maps, what was the main challenge?

One of the main difficulties we faced to apply HiH's methodology was the availability of information. Given that the model's approach seeks to estimate agricultural potential and efficiency, measured in earnings or income, its very important having price and cost disaggregated data in order to determine high potential areas, where expected earnings/income can be profitable. In this sense, the information collected by surveys does not always take into account the continual updating, due to the dynamic productive cycles of crops, of the cost structure of the agricultural sector.

Also, adapting the model's stochastic frontiers to the country is a challenge because of the availability of information, and the inclusion of variables and indicators that allow to characterize the bio-physical and socio-economic conditions.

Now that you have the maps, how do you intend to use them to attract investment?

Maps allows us to holistically understand every economic opportunity, and, thusly, to improve focalization and to adapt policy interventions, innovation, finance, public and private investment, and institutional reform. The results obtained allow to identify areas according to different investment and intervention ends, such as: agro-productive promotion, agricultural innovation, and non-productive interventions.

For example, in those areas classified as having high/average levels of poverty, high potential and low efficiency, the following productive factors can be promoted: market access, technical assistance, and irrigation infrastructure, among others.

Do you have any recommendation for countries looking to join the Initiative and implement it successfully?

The basis for a successful implementation is the availability and quality of information a country has. It's important that, before the implementation of the HiH Initiative, available information be assessed. If the information is not available, experts should help establish a baseline for its implementation and updating. This is the way a country can evaluate the Initiative and improve it.

Without a doubt, success is a byproduct of commitment and following the milestones. That is when decision makers and economic and geographic experts of each country can link up and facilitate coordinated work with the Initiative's own experts, setting clear objectives that allow to use the tools earmarked by the needs, priorities and axis of the national agricultural policy.

The HiH Initiative in Guatemala

Adonay Cajas

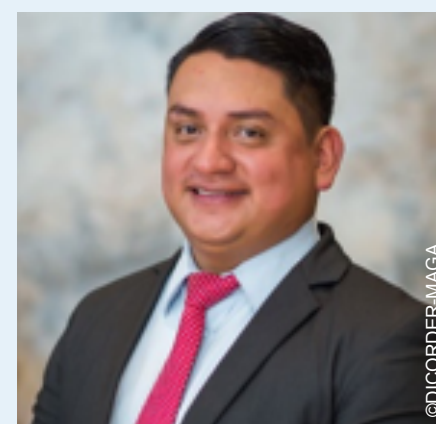
Director of Regional Coordination and Rural Extension (DICORER)
Ministry of Agriculture, Livestock and Nutrition (MAGA)

Could you briefly tell us how the FAO and the government of Guatemala reached an agreement?

The Ministry of Agriculture, Livestock and Nutrition (MAGA) has a history of FAO support. Now, the Hand-in-Hand Initiative is a strategic opportunity for MAGA that will allow to establish a rural development agenda in Guatemala in the face of COVID-19 and climate change, as well as outline investment priorities that can contribute to diminish calamities like rural poverty, child malnutrition, and reduce other inequalities, by identifying and executing actions in every region of the country where productive potential exists. After an exchange of letters in which Guatemala, through MAGA, expressed its interest in taking part in HiH, participation was ultimately confirmed and we managed to shake hands with FAO and agree to work together.

What made HiH attractive for your country? How does the initiative complement your government's work plan?

The global contingencies associated to COVID-19 and climate change have outlined important challenges to meet the SDGs and motivated countries to



further engage, be more creative, innovative, and to adapt to the changing scenarios. The HiH Initiative is an important strategy – it can accelerate agricultural transformation and produce a rural development that fosters sustainable food systems. The past two years MAGA has worked in its Strategic Institutional Plan (PEI), focusing on seven strategic axes: production, markets, organization, infrastructure, regulation and phytosanitary and zoo sanitary surveillance, access and food availability, and institutional strengthening, all which timely complements the HiH Initiative in order to establish an agenda of rural development for Guatemala.

How have the Ministry and the FAO coordinated?

Coordination has been effective and satisfactory. It began with a technical analysis of the statistical and geospatial information available in the country, which allowed to form two work teams: one focused in identifying potential agro-chains in two regions of the country heavily impacted by tropical storms Eta and Iota in November 2020, localized in the north and northeast of Guatemala: the Adjacency Zone and the Polochic Valley. The second team focused on gathering information to formulate typology maps and ranking territories according to its attractiveness for investors. Thanks to both teams we obtained important results: the prioritization of the cacao and cardamom agro-chains in the Adjacency Zone and the Polochic Valley, and typology maps and territorial rankings based on potential, efficiency, poverty, and chronic malnutrition.

When developing the maps, what was the main challenge?

With each new initiative comes a barrier to overcome in order to gain trust and credibility of the entities that may participate in any process. It was also challenging having up to date and available information with some territorial specificity. At the onset, we reached various actors and asked them to participate and help, managing to involve institutions such as the National Institute of Statistics, the General Planification Secretary, the National Institute of Seismology, Vulcanology, Meteorology and Hydrology; the MAGA and its specialized dependent entities, think tanks, and associations of producers. After seeing the results of the prioritization of agro-chains, typology maps, and the territorial rural investment ranking, participants of this process are now convinced of the importance of their input.

Now that you have the maps, how do you intend to use them to attract investment?

Typology maps are critical to determine rural investment priorities. This will lead us to develop a socially more profitable investment portfolio, and thus the 2022-2032 Rural Investment Prioritization Plan for Guatemala. The maps also help have strategic information for the development plans for rural territories, as well for decision making. We plan that the methodology developed in conjunction with FAO, within the HiH frame, becomes the planification and decision-making instrument for the Cabinet of Integral Rural Development of the country, for which we train and transfer knowledge to government employees.

Do you have any recommendation for countries looking to join the Initiative and implement it successfully?

Some of the recommendations MAGA can make to other countries looking to take up the challenge and join the Initiative are:

- Mapping key actors to generate up to date and available statistical and geospatial information.
- Raise awareness among potential participants.
- To establish or identify the governmental space that permits decision-making and the prioritization of investments and their financing.
- Mapping actors to financially leverage prioritized investments and their respective socialization strategies.
- A dashboard of indicators and monitoring mechanisms during the whole process, from the formulation of typology maps to the execution of investments.

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FAO and ECLAC. 2022. *Food systems and COVID-19 in Latin America and the Caribbean – The Hand-in-Hand Initiative for the transformation of food systems*. Bulletin No. 20. Santiago. <https://doi.org/10.4060/cb8178en>