World Vegetable Center

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Veggies 4 Planet & People

IKEA Foundation

SNV

VEGGIES 4 PLANET & PEOPLE IN KENYA AND ETHIOPIA

AMEA, World Vegetable Center and SNV, 2024

EXECUTIVE SUMMARY

Between 2020 and 2025, World Vegetable Center (WorldVeg) and SNV are implementing the Veggies for Planet & People (V4P&P) program in Ethiopia and Kenya. This case study delves into V4P&P's Vegetable Business Network (VBN) model to evaluate its overall effectiveness, success factors, and challenges. The VBN model is based on iCRA's Agribusiness Cluster Approach (ABC).

By December 2023, 219 VBNs had been established: 80 in Ethiopia and 139 in Kenya. In Kenya, 73% of the VBN members are women and 27% are youth, including women. In Ethiopia, the VBNs constitute 33% women and 49% youth. In Kenya the program is on track for regenerative agriculture and jobs creation and in Ethiopia the program is on track for sales of produce and jobs creation.

IN ETHIOPIA

over 22,000 kg of different veggies were delivered by VBNs from three woredas, resulting in revenues of USD 3,569,372 between July 2022 and June 2023

IN KENYA

linkages have been made to both formal and informal markets. This has translated to a revenue of USD 3,100,929 between July 2022 and June 2023

To achieve these results, the program employed different interventions. These include capacity development for VBNs, mentoring, and linking youth to service providers such as finance, input suppliers and traders, support in marketing, linking to similar youth networks and platforms for mutual learning and support.

Access to finance was a crucial part of V4P&P's strategy, which combines encouraging VBN members to integrate Village Saving and Loans Associations (VSLAs) into the VBN structure and linking VBNs to financial institutions or equipment service providers who have inbuilt debt facilities within their sales models.

The mixed KPI results underscore the need for continuous refinement of data collection methodologies, tailoring interventions to local contexts, defining roles within the value chain, strengthening market linkages, and embracing digital solutions for sustainable agricultural development.

The V4P&P project is convinced that the sustainability of the results is intricately woven into its design, implementation and exit strategy. Central to the program are a) empowerment and capacity building of the VBN coaches b) transformation of these coaches from mere facilitators to independent (business) service providers c) forging partnerships with local institutions, agribusinesses, and government agencies to further bolster these commercial ventures and d) embedding service costs to a mixed model of partners' investments and payment by farmers.

Regarding the scalability of interventions, V4P&P believes the VBN approach can serve as a model for replicability across different regions and crops. However, the project found it challenging sometimes to convince farmers to change from more traditional practices to agroecological ones. Farmers are transitioning to regenerative agricultural practices slowly. Also, scaling adoption of these practices remains a significant challenge due to a variety of factors that will be explored in this case study.

BACKGROUND

The Veggies 4 Planet & People (V4P&P) is a five-year project (July 2020 – June 2025) implemented by the World Vegetable Center (WorldVeg) and SNV. This €7 million project, funded by the IKEA Foundation, seeks to create jobs and income in the vegetable sector in Ethiopia and Kenya, particularly for youth and women, and to improve environmental and human health through the safe production of vegetables.

Youth and women are particularly affected by unemployment as they have fewer resources to start their own business and have fewer opportunities to be self-employed in agriculture or elsewhere. Unemployment perpetuates the problem of poverty. Vegetable production, processing, and marketing offer potential opportunities that are especially attractive to youth, as production requires only small amounts of land, is technology-focused, and high profits can be obtained in a relatively short period of time. Including these groups in vegetable value chains is therefore an opportunity to enhance nutrition and to create jobs and income at the same time.

V4P&P engages 'business coaches' to to develop new and strengthen existing Vegetable Business Networks (VBNs). These networks collaborate on collective efforts in rural areas within a radius of 120 km of Nairobi, Kisumu or Addis Ababa. The business coaches play a pivotal role in guiding the networks by providing access to information, facilitating business development services (BDS), linking them to input and output markets, and acting as liaisons with local governments[1].

Based on the focus and goals presented, the project has four main intervention areas:

1

Identification, assessment, and strengthening of VBNs

2

Promotion of the use of regenerative and circular technologies in vegetable production

3

Building strong commercial vegetable seed systems

4

Using media and influencing policies to promote regenerative vegetable production, marketing and consumption

By mid-2024, the project aims to have reached 4,000 women and youth in market activities designed to improve their livelihoods and diets through 200 established VBNs (120 in Kenya and 80 in Ethiopia). This case study evaluates the overall effectiveness of the VBN model and identifies the key success factors and challenges in implementing it. The findings provide insights for learning, scaling up, and replication, contributing to the enhancement of sustainable agricultural practices and the improvement of the vegetable business model across diverse agricultural contexts.

[1] *Coaches in Ethiopia belong to the local extension system*

STRATEGY

The program is carried out over five years, following the timeline below:

YEAR 1

ACTIVITY:
design and roll-out of training modules, reflection year

YEAR 2

ACTIVITY:
Mobilisation of groups, training, mentorship and coaching

YEAR 3

ACTIVITY:
Implementation and Mid-term review

YEAR 4

ACTIVITY:
Implementation

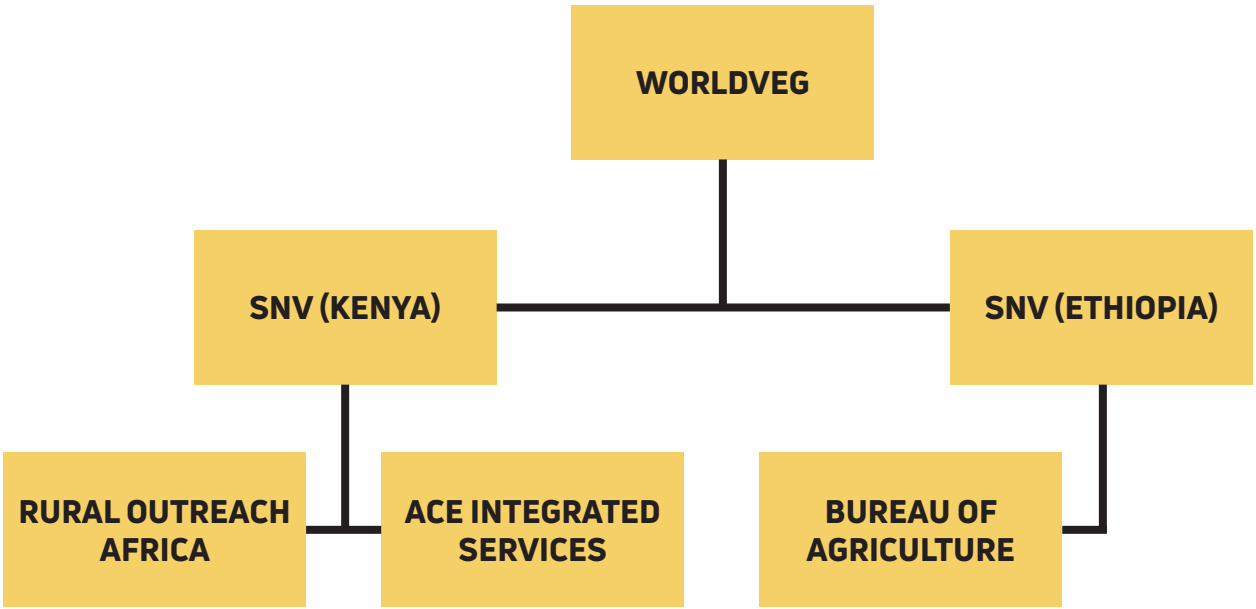
YEAR 5

ACTIVITY:
Phasing out and exit

The project also implements monitoring, evaluation, and learning feedback mechanisms throughout the five years to bolster the outcomes. It strives to enhance the capacity of partners in circular technologies and business development, as well as to conduct targeted analysis of the value chains to understand the drivers within the food systems and further refine the interventions, ensuring their effectiveness.

PARTNERS

The main partners in V4P&P are WorldVeg, SNV, and local governments. The project further subcontracted local capacity builders such as Rural Outreach Africa, Ace Intergrated Services and partners with various national and local government agencies, research institutions and private sector players, harnessing their vast experience and networks to support grassroot groups to implement the project.



SNV is an implementing partner responsible for training and mentoring VBN coaches, and for capacity building and developing linkages with different VBN actors such as the government and private sector. They are also responsible for scaling regenerative technologies which have already been tested and are ready for rolling out. Local governments and other local capacity building organisations roles were essential to recruit the beneficiary groups into the project. ODI conducts food system research in Kisumu (Kenya) and in Adama (Ethiopia), focusing on the food environment and food safety. CABI is another research partner of V4P&P in both countries, and it has been generating evidence pertinent to integrated pest and disease management.

WorldVeg has been providing technical and strategic leadership, training trainers, as well as regularly monitoring and evaluating for the purpose of learning, documentation and continuously improving the program. WorldVeg has also been conducting participatory on-farm and on-station experiments to enhance innovation in farmers' agricultural practices.

BENEFICIARIES

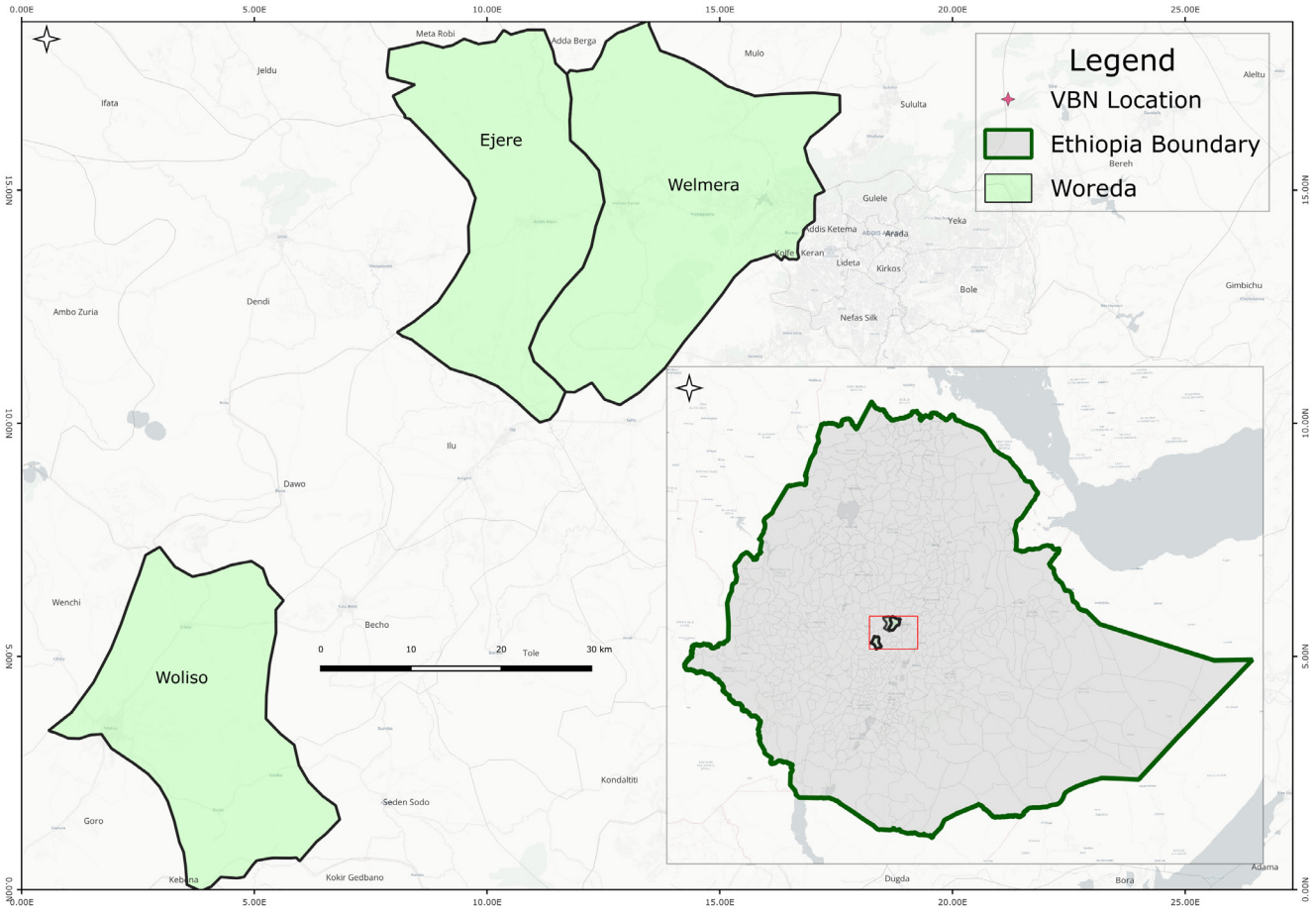
The project targets groups of young people and women to transition to regenerative agriculture practices and technologies, as well as produce and sell a diverse range of vegetables, particularly 'Traditional African Vegetables' (TAVs). This requires training and other forms of capacity development, mentoring and linking youth to service providers such as finance, input suppliers and traders. It also aims to strengthen vegetable value chains by supporting existing groups (or establishing new ones where they do not exist) as VBNs aimed at linking farmers to consumers through vegetable traders built on stable business relationships aimed at quality and fairness. The role of women and youth in these groups is promoted as part of the project.

By December 2023, 219 VBNs had been established (80 in Ethiopia and 139 in Kenya). In terms of membership in Kenya, 73% of the VBN members are women, while 27% are youth including women. In Ethiopia, the VBNs constitute 33% women and 49% youth.

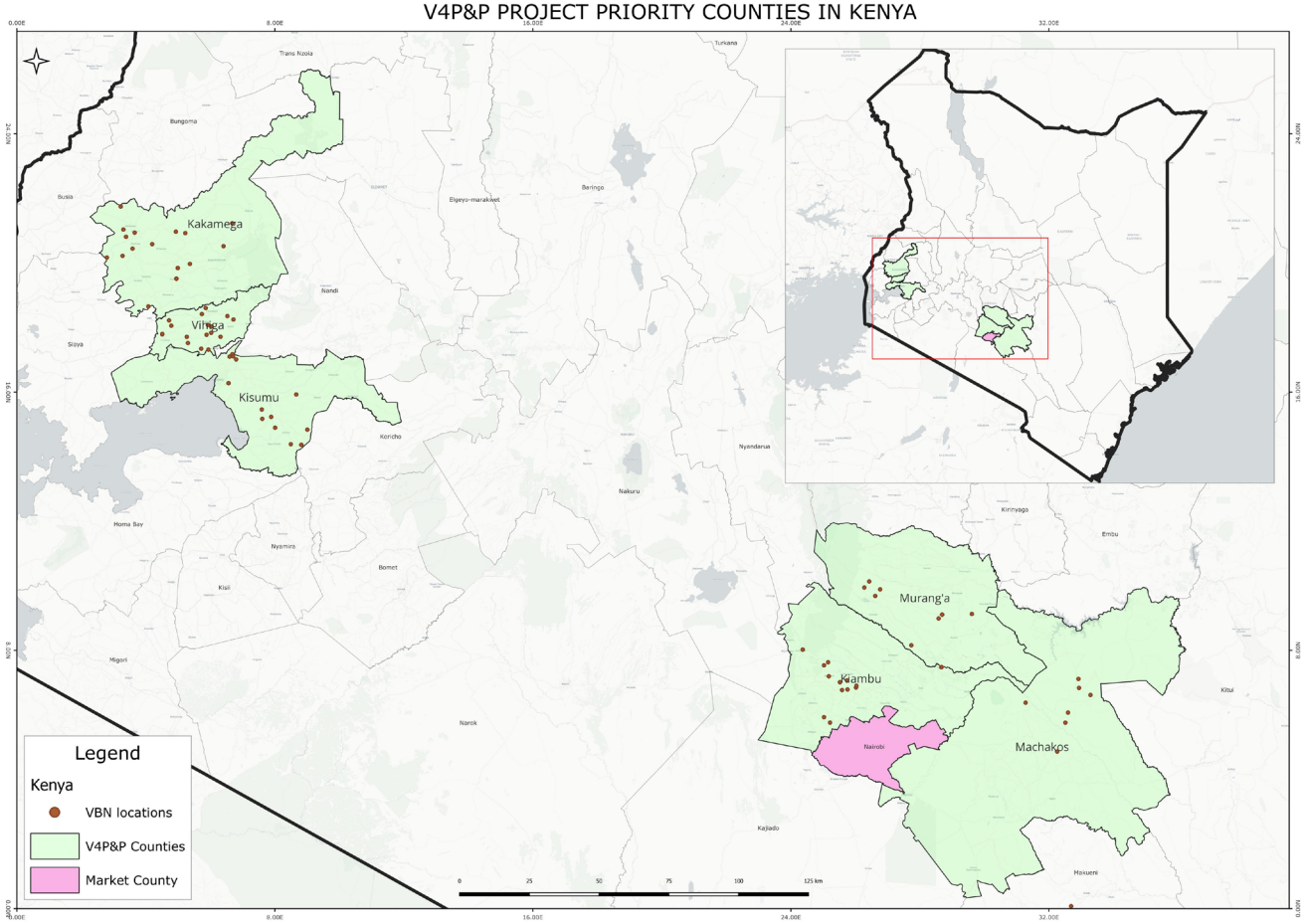
COUNTRIES	**VBNS**	**WOMEN MEMBERSHIP**	**YOUTH MEMBERSHIP** (incl. women)
Ethiopia	80	33%	49%
Kenya	139	73%	27%

AREAS OF INTERVENTION

V4P&P PROJECT PRIORITY WOREDAS IN ETHIOPIA



V4P&P PROJECT PRIORITY COUNTIES IN KENYA



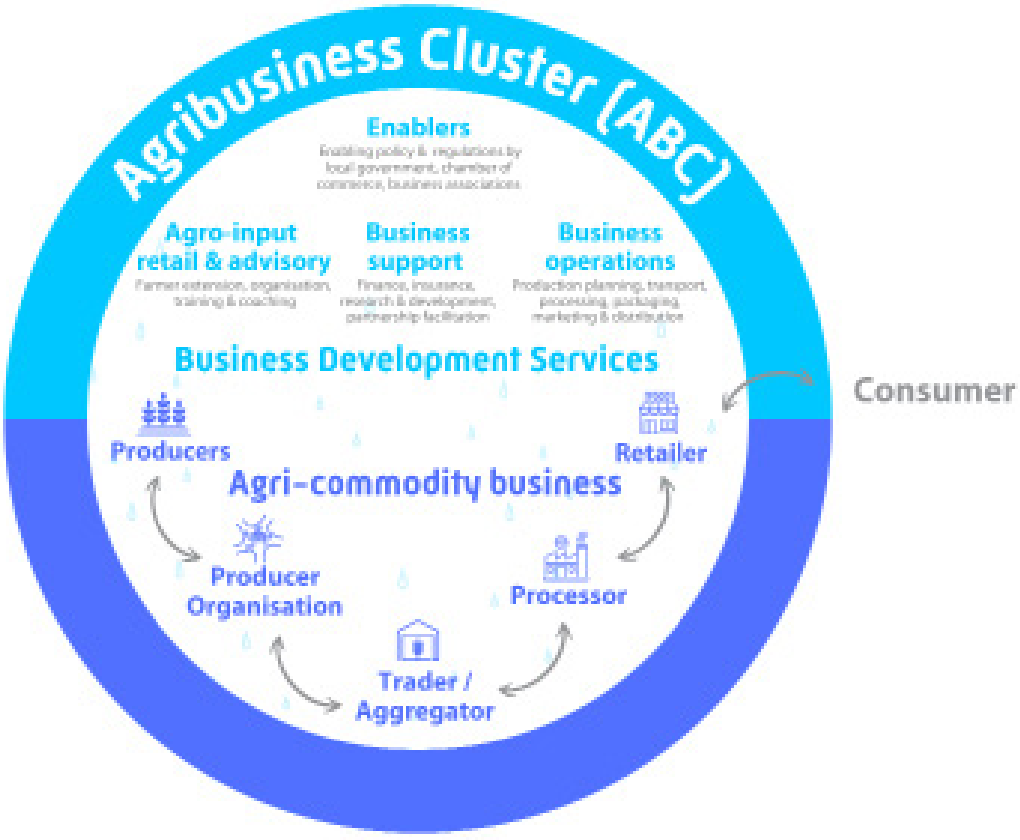
With regards to access to finance, there has been a growing need for financial access for working capital and asset investment among VBN members. The first strategy was to encourage VBN members to integrate Village Saving and Loans Associations (VSLAs) into the VBN structure. In Ethiopia, for example, 63 VBNs have started VSLAs and saved ETB 227,661 ($4,216). The members use the savings to jointly procure agricultural inputs.

The second approach is to link VBNs to financial institutions or equipment service providers who have inbuilt debt facilities within their sales models. In Kenya, several financial institutions like Agricultural Finance Corporation (AFC), Equity Bank, Cooperative Bank and Muungano microfinance have been approached to explore collaborations with the project for debt financing for assets. Collateral such as land title deeds, pay slips, and bank records are the major limiting factors for most women and youth to access the finance required to grow their enterprises.

The exit phase (year 5) focuses on coaches becoming independent business service providers, paid by VBNs. This will be enhanced by mentoring of coaches on sustaining, expanding and improving their services.

BDS DESIGN AND DELIVERY

BDS was designed based on iCRA's Agribusiness Cluster (ABC) approach, in which clusters are considered to be business relationships within the supply chain and the service providers that support these supply chain actors, as shown in the diagram below.



The ABC approach informed the concept adopted by the project to develop VBNs. The aim was to better understand the ABC approach and identify similarities and differences in the implementation of the VBN approach and to see if the ABC approach might offer ideas for the way forward in the V4P&P project. Noting the differences in the vegetables sector, V4P&P adapted the ABC approach, tailored it for the sector, and integrated it to the VBN model. While the ABC approach is centred around a strong aggregator and processor, most VBNs miss such a strong component, because vegetables are seldomly processed. Instead, vegetables, particularly leafy vegetable, are traded in fresh form and need to reach the consumer within the shortest time possible to avoid spoilage. As such, the VBN model includes markets and retailers, and possibly consumer organizations.

The project then organized various training of trainers (ToT) sessions for coaches, VBN leaders and members on topics such as: Business planning and marketing, Vegetable seed production, entrepreneurship development, Refresher training on regenerative technologies and good agronomic practices, farm economics and financial management, vegetable marketing, soil and water management, Integrated Pest Management, vegetable seed systems, post-harvest management and value addition. In Kenya, the training of coaches in Good Agricultural Practices (GAP), regenerative agriculture, business skills and group dynamics was conducted and two local capacity builders (ACE Integrated Services and Rural Outreach Africa) were contracted on an annual basis to ensure cascading training to VBN members. In Ethiopia, SNV directly implements the training of coaches with support from the Bureau of Agriculture.

However, the differing needs of the beneficiaries required tailored training. VBNs were operating at different levels which called for specific interventions. An initial scoping study and baseline study identified these needs and informed the project design. With time, various adjustments were made, according to evolving needs. For example, the increased adoption of regenerative agriculture and demand for safely produced vegetables has led to the need to create and link VBNs to organic markets.

In summary, the project employed different interventions, including training and other forms of capacity development, mentoring, and linking youth to service providers such as finance, input suppliers and traders, support in marketing, linking to similar youth networks and platforms for mutual learning and support. The aim was to improve vegetable production by introducing new technologies to restore, maintain or improve the health of the soil, reduce production costs, reduce post-harvest losses, and enhance product quality through the application of good agricultural and post-harvest practices.

RESULTS

The project has three tangible Key Performance Indicators (KPIs) that are monitored regularly.
The indicators are:

I Producers will make the transition to regenerative agriculture: at least five regenerative practices are to be applied on 0.15 hectares (ha) per producer, for a total of 600 ha

II Total value of vegetables sold (USD/ year) by producers participating in the VBNs. The target is $9,240,000

III Number of jobs created for women or youth participating in VBNs. The target is 4000 jobs

By March 2024, the project reported the following progress on indicators.

KPIS IN KENYA & ETHIOPIA

KPI	DEFINITION	COUNTRY	TARGET	ACHIEVEMENT	% PROJECT ACHIEVEMENT
INDICATOR 1: Producers making the transition to regenerative agriculture (total ha under regenerative production	Land for vegetable production whereby at least five regenerative practices have been applied.	Kenya	400ha	319	80%
		Ethiopia	200ha	251	125%
INDICATOR 2: Total value of vegetables sold (USD/ year) by producers participating in the VBNs	Volume multiplied by price per volume for each type of vegetable, for all producers participating in VBNs.	Kenya	6,120,000 USD	3,100,929	51%
		Ethiopia	3,120,000 USD	3,569,372	114%
INDICATOR 3: Number of jobs created for women or youth participating in VBNs.	Youth and women who have found new profitable employment through business opportunities created in the VBNs that are supported by the project.	Kenya	2,400 jobs	39,235	1635%
		Ethiopia	1,600jobs	44,734	2796%

These results are satisfactory to V4P&P, who note that the results demonstrate varied outcomes across the three key indicators within the program. Firstly, regarding **INDICATOR 1**, the quality of data emerged as a significant challenge both in Kenya and in Ethiopia. Initial difficulties stemmed from measuring indicators and setting thresholds in a consistent way. The enumerators, who were either VBN coaches or lead farmers within the VBNs, were not proficient data collectors and struggled with this, which was compounded by the ambitious targets in areas that were less familiar with agroecological practices. To illustrate the latter, there were some agroecological practices, such as crop rotation, agroforestry, mulching and intercropping, that were deemed as traditional practices by the farmers. While these were successfully implemented by the farmers, they did not report it as agroecological technologies to the enumerators. It was also difficult to attribute a technology to a land size, due to the small sizes of land allocated to vegetable production. Moreover, data collection methods were ad hoc, leading to misunderstandings in the first year. However, WorldVeg have reviewed the indicator to rectify instances of underreporting.

While data collection approaches were similar in both countries, business coaches collecting the data in Ethiopia were more successful, because they were qualified development agents employed by the local governments, whereas most business coaches in Kenya had no prior formal training.

INDICATOR 2 highlighted differences in the production scale between countries, influencing sales volumes, with Ethiopia showing relatively greater success due to larger landholdings per capita. Underreporting in Kenya also contributed to the lower percentage reached so far.

Finally, **INDICATOR 3** revealed a lesson in job definition, emphasizing the importance of qualifying roles within the value chain. This realization prompted a shift towards prioritizing full-time positions for greater job quality and sustainability. Moving forward, V4P&P wants to leverage these insights to refine data collection methodologies and tailor interventions to local contexts.

More broadly, all the VBNs are using their networks to address access to crucial production information, facilitation of BDS, and links to input and output markets. For V4P&P, establishing and maintaining strong market linkages remains a vital aspect of strengthening VBNs and ensuring their continuous transition to regenerative food systems. Therefore, in Ethiopia, VBNs have been linked to markets in woreda offices, restaurants, and cafes in addition to niche markets in Addis Ababa. Over 22,000 kg of different vegetables were delivered by VBNs from the three woredas, resulting in a revenue of 518,160 ETB (USD 9,470) from July 2022 to June 2023. In Kenya, linkages have been made to both formal and informal markets. This has translated to a revenue of USD 1,233,645 for July 2022 to June 2023.

However, VBN members are still skeptical of formal markets. They cite challenges, such as delayed payments, strict quality standards and logistical costs to deliver the produce to the off-takers. Informal markets such as Ruiru, City Park, Kiambu, Marikiti, Wangige and Kikuyu (all in Nairobi) continue to attract the bulk of the VBN's produce in the central region. In Western Kenya, the bulk of the produce ends up in Kakamega and Kisumu wet markets.

The project has established a good working partnership with three digital platforms in Kenya: Kyosk (formerly KwikBasket), Greenspoon and Tawi Fresh who are all interested in direct engagements with farmers. Kyosk is a digital platform committed to the mission of empowering smallholder farmers through technology by addressing challenges on access to fair markets and minimizing post-harvest losses. To date, Kyosk has contracted 6 VBNs in Kiambu to supply them with Kale and Nightshade. Greenspoon is a business-to-customer platform offering a diverse range of fresh organic produce. Six farmer groups (VBNs) namely Gituamba Organic, Kiangima Blessed VBN, Giachumi Afya Bora, Uprising Youth, Giachumi Afya Bora, Blessed Women VBN and Gitiha Organics have been profiled and their produce tested to onboard them as organic vegetable suppliers.

Tawi Fresh is a new digital marketplace solution that directly connects farmers across Kenya with

commercial buyers, offering high-quality fresh produce at a fair, transparent and stable market price. It also offers farmers with access to credit facilities. The project is currently in discussions with Tawi Fresh to pilot 20 aggregation points in Kiambu for their produce from the potential 41 VBNs in Kiambu.

LIAISON WITH LOCAL GOVERNMENTS

In both countries, the project has been working closely with local government, county government, County Business Incubation Hubs and other producer organizations' fora in order to leverage the collective bargaining power of the private sector. Among the notable achievements has been the facilitation of the development of agroecology policies in some counties. County governments have supplemented the project's efforts by distributing vegetable seeds to the VBNs. Local governments have seen the potential and market viability of the vegetable value chain and have shown a willingness to help the project set up localized aggregation points with the VBNs and other project actors to encourage commercialization.

MONITORING SYSTEM

A (close to) real-time monitoring system was introduced to track project implementation and collect baseline indicators. The system uses a smartphone and tablet-based application (Akvo Flow). Project staff and business coaches are equipped with this tool while project staff collect data at each interaction with project beneficiaries (at least once a month). Data includes pictures, challenges encountered, new opportunities, and volumes of vegetables produced or traded. GPS coordinates are automatically collected and help to ensure that staff have actually visited a project beneficiary, thereby improving the quality and truthfulness of the data.

The project also conducts a randomized control trial for impact assessment and periodic evaluations on selected project components with the aim to generate evidence and inform policy decision-makers. The focus is on scalable interventions contributing to productivity, jobs, and income for which there is a lack of evidence for impact. Impact evaluations of selected project components are done internally in collaboration with partners to collect and interpret the data.

SUSTAINABILITY AND SCALABILITY

SUSTAINABILITY

WorldVeg and SNV are convinced that the sustainability of the V4P&P results is intricately woven into its design, implementation, and exit strategy. Central to it the empowerment and capacity building of the VBN coaches, who serve as the linchpin for continued agricultural development beyond the project's lifespan.
As the project progresses, VBN coaches undergo a transformation from mere facilitators to independent business service providers, leveraging their acquired skills and networks to support farmers. This transition is facilitated by encouraging them to assume entrepreneurial roles, such as agricultural consultants, trainers, or suppliers of sustainable farming inputs. The mapping of coaches based on their expertise ensures targeted training, enhancing their capacity to offer specialized services to farmers and agricultural organizations. Moreover, some VBN coaches venture into value addition activities, such as processing and packaging agricultural products, tapping into niche markets for higher returns. These initiatives not only generate income for farmers but also contribute to the resilience of the VBNs. Importantly, partnerships with local institutions, agribusinesses, and government agencies further bolster these commercial ventures, ensuring their longevity and fostering economic resilience post-project. Therefore, service costs are expected to be covered by a mixed model of partners' investments

and payment by farmers.
In Kenya, for example, the transition of VBN coaches into producers or trainers, is coupled with the adoption of the VBN model by new partners, underscoring the project's exit strategy for sustainability. Despite challenges such as volatile farmer payments, the project's mixed funding model and the existing coaching culture, there is a robust foundation for continued success. Similarly, in Ethiopia, the project's sustainability is linked to the creation of a conducive enabling environment, substantial investments in local capacities, and the cultivation of a coaching culture. Through extensive training programs and the creation of a BDS ecosystem, the project expects to foster lasting outcomes.
Sustainability requires mainstreaming the project interventions into the strategic planning and routine operations of the Ministry of Agriculture. Therefore, sustained engagement and coordinated efforts are required. To this end, the project should compile and disseminate policy briefs and other communication materials. It is also vital to find ways for farmers to get preferential market and premium prices for agro-ecologically produced vegetables so that they will be incentivized to sustain their regenerative production activities.
In essence, the sustainability of the V4P&P project hinges on the empowerment of VBN coaches, the cultivation of partnerships, and the creation of conducive enabling environments, ensuring continued agricultural development and economic resilience long after the project concludes. V4P&P is a market driven initiative, aimed at strengthening (preferably) existing groups by building capacity and creating linkages. Therefore, the VBNs received technical support, and created businesses are likely to continue after the project ends. The exit phase (year 5) is designed to focus on better functioning VBNs. That is, more involvement of public and private sector, decent jobs within the value chains, and better governance of VBN. Having the VBN members able to pay the coaches would represent a bonus in the exit phase. In addition to that, the exit strategy in Ethiopia also builds on the continued strong interest and engagement of the woreda agricultural offices.

SCALABILITY AND REPLICABILITY

Field interactions with project farmers almost always highlight their strong interest in regenerative agriculture and agroecological practices for reasons of soil and human health. Several field visits and research reports indicate the same. However, there are currently issues with scaling and replicating the agroecological practices (a key indicator of the project). WorldVeg does not rule out the scalability potential, but recognizes it is an uphill battle.
Firstly, traditional practices tend to be cheaper in the short term, especially if farmers rely on subsidized inputs and synthetic pesticides, which have been proven to be effective and cheaper. Agroecology requires upfront investments and there is a struggle to find strong markets where consumers are willing to pay a premium for the benefits. Secondly, there is a great barrier to scaling regenerative agriculture, which is the lack of biomass and limited access to regenerative inputs. The market for such inputs is at its infancy and large-scale farmers find it difficult to scale-out such practices into large areas of land. In the case of Ethiopia, VBN members complain that agroecological inputs are expensive and sometimes difficult to access (for example, importing biopesticide is not allowed for open field production). Finally, government policies and infrastructure often favor large-scale, conventional agriculture, making it harder for smaller agroecological farms to compete.
To make agroecology practices more scalable, a multi-pronged approach is needed. On the farmer side, the focus should be on reducing risk and increasing potential rewards. This involves showcasing successful agroecological farms, providing training and support, and potentially offering financial incentives to offset initial investment costs. This will require the efforts of various stakeholders for this shift to happen. In this sense, the project has contributed to systems change. V4P&P have for example, been involved in the development of agroecology policies at county level and have influenced regional governments of Ethiopia to invest in large-scale production of vermicompost.
An enabling environment should also be created. This requires policy and market changes. Agro-ecology-friendly policies would create a level playing field with conventional agriculture. At the moment, Kenya is on the forefront of developing an agroecology policy and strategy. Already, some counties,

such as Murang'a, have already established a policy and strategy. A strong market base should also be developed to connect farmers with consumers who value agroecological produce and are willing to pay a premium. Consumer awareness of the benefits of safe agro-ecologically produced products will also be critical in ensuring the success of this practice.

Furthermore, the project's emphasis on regenerative agriculture techniques is highly desirable to be transferred to other environmental initiatives. Regenerative agriculture not only leads to healthier soil, improved crop yields, and reduced chemical usage but also enhances carbon sequestration and ecosystem restoration. These benefits can be harnessed in projects aimed at land restoration, reforestation, or even in urban farming initiatives. The regenerative practices, such as crop rotation, cover cropping, and reduced tillage, can be adopted and tailored to suit different environments and ecosystems, contributing to broader ecological restoration efforts. Hence, the replicability of this project's approach extends beyond just the vegetable industry, serving as a template for sustainable practices in diverse fields, all of which can contribute to a more resilient and regenerative planet.

Irrespective of the challenges with replicating and scaling regenerative agriculture / agroecological practices, there is significant potential for replicability in various other areas of V4P&P. The establishment of effective VBNs in the agricultural sector can serve as a model for replicability across different regions and crops. The collaborative approach employed in this project, where farmers, distributors, and other stakeholders work together to optimize the supply chain and distribution, can be applied to other agricultural sectors, promoting efficient resource allocation, reducing waste, and ensuring fair compensation for all parties involved. This model can be adapted to the cultivation of different crops and even extend to other sectors beyond agriculture, encouraging cross-industry collaboration to achieve sustainability goals.

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