



Impact Measurement Case Study

PT EAST-WEST SEED INDONESIA



LOCATION:
Indonesia



EAST-WEST SEED
CAP PANAH MERAH

Target Beneficiaries:
Smallholder farmers

This publication is part of a series of case studies on BCTA Impact Measurement Services (BIMS), a Business Call to Action (BCTA) initiative that demonstrates how inclusive businesses can measure and apply impact data.

BIMS provides 21 participating BCTA member companies with technical expertise and technology to design and implement survey-based data collection for assessing social and environmental as well as operational performance. BIMS is implemented by BCTA with support from implementing providers Arthify and Echo Mobile.

Sector: Agriculture

Business model: PT East-West Seed Indonesia (EWINDO), is a joint venture company between East West Seed and Enza Zaden that produces and markets vegetable seeds to smallholder farmers in Indonesia. It also provides extension and training services to farmers to help them increase their yields and income. With a focus on research and innovation in hybrid seed technology, EWINDO breeds crop varieties that are suited for tropical environment and meet farmers' needs.

THE OBJECTIVE

To guide decision-making by its regional managers, better understand their customers' needs and behaviors, and assess issues related to EWINDO products and services faced by the farmers, EWINDO engaged BCTA's Impact Measurement Services (BIMS). EWINDO also intends to use the social impact data to better price their products and efficiently allocate field staff regionally.

THE PROCESS

1 ASSESSING READINESS

EWINDO is a mature business with advanced readiness for measuring impact. The company actively collects new data to better meet farmers' needs and improve their yields and income. It has the capacity to extensively collect and map farmers' needs on a regular basis.



Data from the survey indicates that:

69% of farmers earned less than USD12.50 per day in 2017;

84% received training from EWINDO;

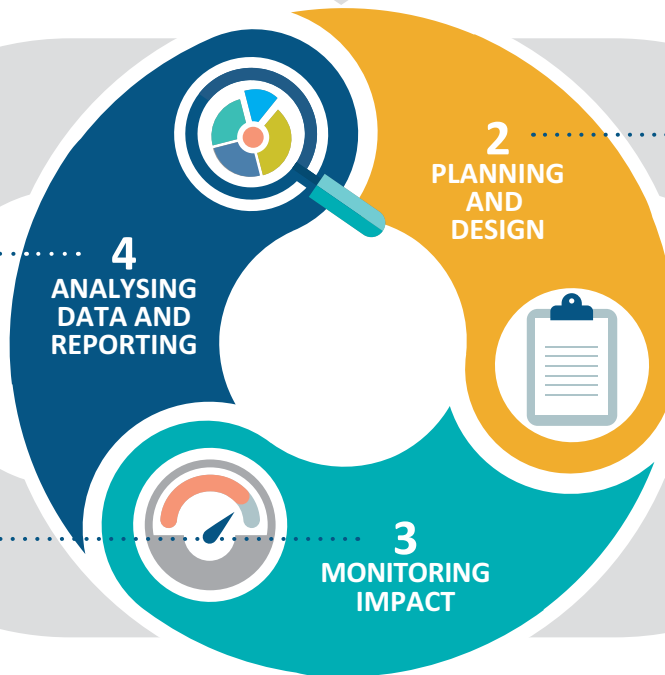
81% are satisfied with EWINDO seeds; and

60% of unsatisfied farmers identify 'plant disease' as their biggest problem.

EWINDO developed a detailed farmer's questionnaire to carry out survey work in six regions. In Sumatra, 418 farmers were surveyed. Data collection on other islands is ongoing; to date, nearly 270 additional farmers have been surveyed.

Key social impact metrics covered in the farmer survey included:

- 1 farmers' income levels and asset ownership
- 2 issues faced by farmers with EWINDO seeds; and
- 3 training and usability of mobile-based information dissemination (e.g. SMS, App) to farmers.



RESULTS

EWINDO now is using the impact data collected through BIMS to: (i) identify and remedy issues with its seeds, (ii) further develop the use of mobile technology for training and information dissemination; and (iii) assist farmers to get better prices for their vegetables by sharing market prices with them directly.

About EWINDO

EWINDO was established in 1990, and currently is the country's first integrated vegetable seed company to produce vegetable seeds through plant breeding. EWINDO primarily develops and supports the local, cutting-edge seed industry to produce high quality vegetable seeds. EWINDO works with professionals who are experienced in the area of plant breeding and seed science to develop healthy seeds with high genetic purity and good germination. EWINDO produces, processes, packages and markets its seeds to Indonesian farmers under the brand CAP PANAHA MERAH.

EWINDO's vision statement is: "We believe in high quality vegetable seeds for better living" and its mission is to: "Provide high quality seeds to increase farmer income and promote vegetable consumption."

To date, EWINDO has produced more than 150 quality seed varieties which receive good responses from the market and customers. EWINDO has gained a certificate from the Certification Institution on the Quality System of Food and Horticulture Plants Seed, ISO 9001:2008 and is accredited by the International Seed Testing Association.



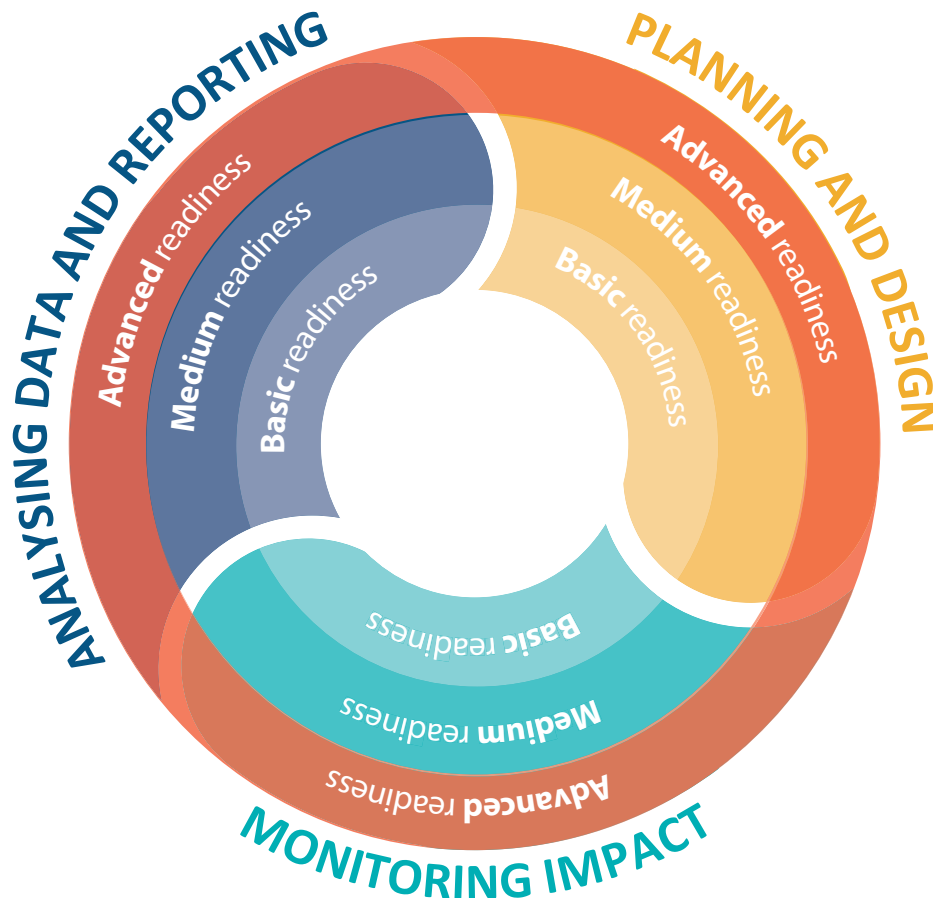
Step 1: Assessing readiness

Effective impact measurement¹ begins with **determining the reason for measuring impact.**

A wide variety of tools are available for businesses to measure, manage and report on their social and environmental impact. Approaches range from those generating quick feedback to those requiring a longer timeframe to prove systemic impact. BCTA believes it is important for companies to choose the right approach that meets their business needs given the available resources.

Assessing the company's readiness for impact measurement is a critical first step in determining what impact data to collect, how to collect it and how to use it for business development and social and environmental performance. In assessing a company's readiness to measure its impact, BCTA considers its maturity stage and capacity, which is determined based on the company's clarity of purpose, data driven culture, and resources available for data monitoring and collection.

In the footsteps of its parent entity, EWINDO is a **mature business** that is pursuing consistent growth, in terms of its operational scale and the scope of its products and services. In 2016, EWINDO embarked on a five year strategic plan called G.R.O.W. (Granular, Robust, One Team and Win) aimed at *"a more detailed mapping of its farmer-customers in order to serve them better (Granular) and improving its internal systems (Robust), which will result in growing its market size and share (Win)."* Internally, this strategy focuses on developing a work-force that is purpose-driven, caring, and results oriented. Externally, it actively engages with its farmer clients to assess their needs and well-being. Also, EWINDO has strong data-centric systems in place that not only track operational and financial indicators, but also facilitate outreach and communication activities of the company. Given its data-driven focus on improving farmers' lives, EWINDO has **advanced readiness** to measure its impact (see figure below).



¹ In this case study, 'impact measurement' refers to the measurement of social, economic and environmental performance of inclusive business.

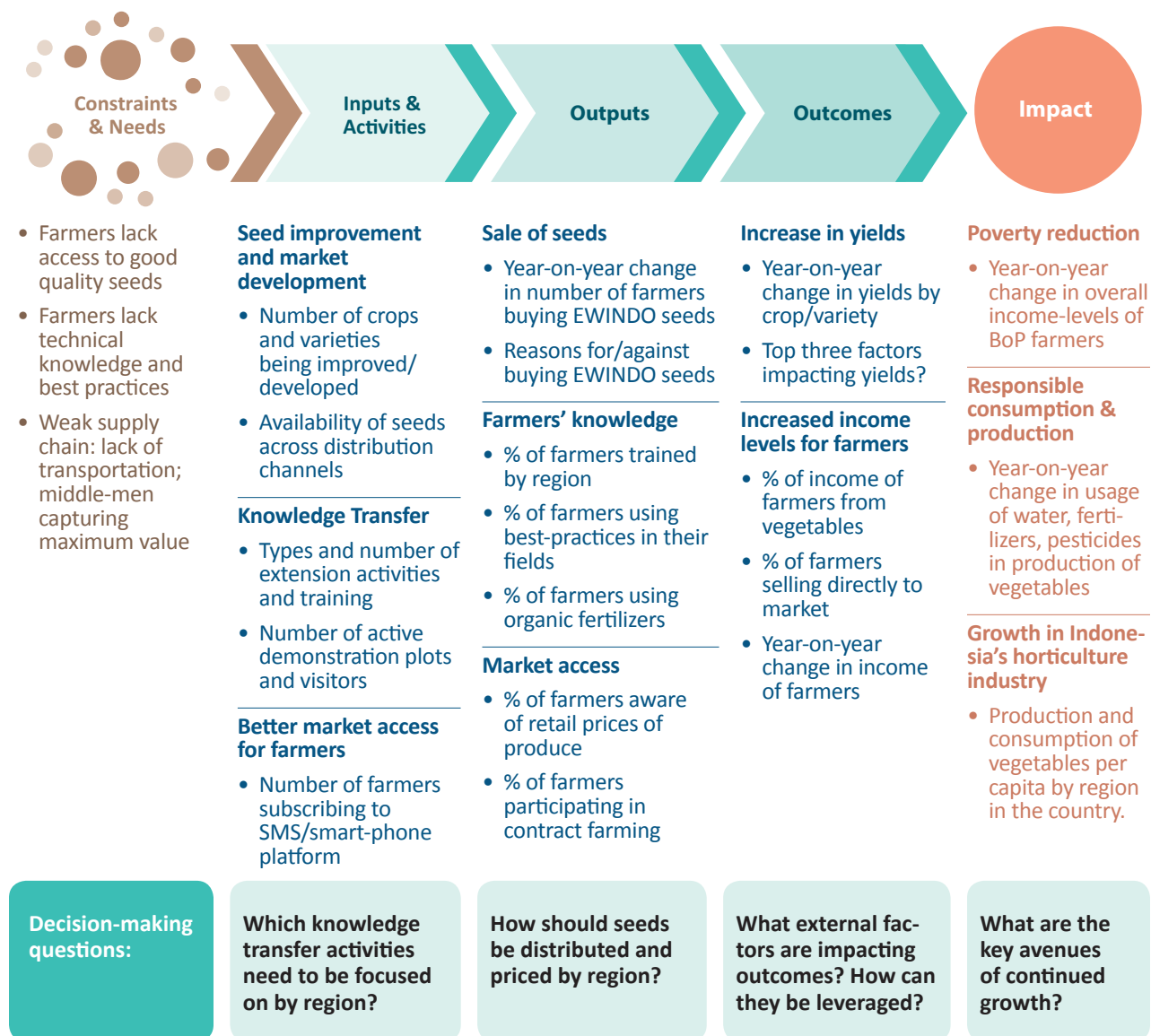
Step 2: Planning & design

The planning step involves developing an Impact Value Chain² that links business goals, strategies and operations to outcomes and impact related to the Sustainable Development Goals (SDGs)³. The Impact Value Chain is the basis for developing impact metrics and indicators that address the needs of companies.

The Impact Value Chain guides companies in determining what to measure and where to collect data by mapping business goals, strategies and oper-

ations against outcomes related to the SDGs. As part of its G.R.O.W. strategy, EWINDO participated in BIMS to gather baseline data about its farmers across regions and correlate its ground level inputs and activities. This data is expected to assist EWINDO regional managers in making operational decisions such as product pricing and field-staff assignments, and also to provide reference benchmarks to assess the changes in farmers' yields and incomes over time.

EWINDO's Impact Value Chain



2 The Impact Value Chain integrates multiple approaches such as the theory of change, results chain, logframe and business value chains.
 3 Adopted in September 2015 by all United Nations member states, the SDGs are a set of 17 global goals and 169 targets related to key development issues facing society today. Countries aim to achieve them by 2030.



Step 3: Monitoring impact

To monitor impact, BIMS recommends that companies collect data on their operations as well as social and environmental performance on an ongoing basis. Businesses can assess data from primary and secondary sources such as invoices, inventory, customer registrations, market-research reports, social media, surveys and polls.

Identifying sources of data is critical for developing data-collection plans using the Impact Value Chain. Many companies already have data that can be used for impact measurement. BIMS suggests that companies should first determine if they can analyse the data they already have. Only if this is not possible should they plan on collecting new data.

EWINDO has well-established enterprise resource planning (ERP) systems to manage its business activities and to actively track operational data related to its extension work, staff-engagement, and the competitive marketplace. As part of its recent five year strategy, G.R.O.W., it is gathering data around three key areas to better understand and inform its future growth:

1. Granular: a more detailed mapping of its farmer-customers in order to serve them better
2. One Team: assessing and building a work culture that is purposeful, caring and results-driven
3. Win: connecting with the downstream market by examining and looking for insights across the complete value chain, all the way to the end-consumer of vegetables

EWINDO participated in the BIMS project to focus on the *granular* mapping of their farmer-customers. It recognized that to make farmers successful, it

had to go beyond providing quality seeds, to (i) understanding and improving farmers' knowledge of farming techniques, and (ii) influencing externalities such as distribution channels and pricing across the supply chain.

Survey implementation

On completion of the first draft of the Impact Value Chain, EWINDO organized a week-long brainstorming and training session with nearly 25 field managers and higher management to develop and roll-out a country-wide survey of farmers. Survey questions were developed by the participants to understand farmers' socio-economic conditions, knowledge and practices, and decision-making processes related to their engagement with EWINDO. The farmer survey was then piloted in the field using smart phones, and the data from the pilot testing was used to update and refine the survey questions during the training session itself.

In order to collect representative data on a larger scale, EWINDO decided to sample farmers only by region, because regional variations take into account seasonality and local externalities that impacted farmers' yields and incomes. At the time of writing this case study, EWINDO had surveyed nearly 700 farmers across six regions, with a significant sample size (though not randomized) of 418 farmers on the island of Sumatra. EWINDO will continue to collect data across all regions where it works to ensure that a substantial number of farmers are surveyed in each region to generate representative and usable statistics.

Step 4: Analysing data and reporting

While the purpose and usability of impact data can vary for each inclusive businesses, in general the results of impact measurement can be used to answer one or more of the following questions:

1. Who is being impacted?
2. How are they being impacted?
3. What are the drivers contributing to or limiting this impact?
4. How can this impact be scaled up and linked to the SDGs?

Who is being impacted?

EWINDO's clients are mainly smallholder farmers. At an aggregate level, the BIMS survey data showed that vegetable farming was the primary source of income for 84 percent of farmers across six regions, even though nearly half did not own the land they were using for cultivation.

Using the Progress out of Poverty Index (PPI) for Indonesia, 47 percent of farmers were estimated to have daily income levels below USD 2.50 based on 2005 purchasing power parity. On a self-reported income question, 69 percent conveyed having incomes below USD 12.50 per day in 2017. In terms of education, 48 percent had education levels above secondary level, while only 25 percent reported having primary level or no education. In terms of gender, agriculture tends to be male dominated, and the majority of vegetable producers are men.

How are they being impacted?

EWINDO primarily impacts farmers through (i) the seeds it sells to them, (ii) the training it provides as part of its outreach and extension activities, and (iii) the downstream support it provides to farmers to generate demand and get a better price for their produce.

In terms of the seeds they buy, more than 70 percent of surveyed farmers indicated they were 'satisfied or very satisfied' with the quality of EWINDO seeds and the resulting harvest from the seeds. Of the farmers who were 'not satisfied', 60 percent mentioned plant disease as the most significant issue they faced.

In terms of training, 88 percent of farmers surveyed reported having been trained by seed, fertilizer and pesticide companies, or the government. Nearly all of these farmers had direct contact with EWINDO staff, and 84 percent mentioned receiving training from EWINDO. Trainings covered a range of topics, with cultivation and crop-protection being the most prevalent.

EWINDO also collected data on the post-harvest activities of farmers, and sought input on the kind of information that farmers would find useful, and would like to receive over SMS or other by other means. EWINDO intends to use this data⁴ to improve its extension work and better connect farmers to the downstream market, all the way to the end-consumer.

What are the drivers contributing to or limiting this impact?

EWINDO realizes that there are many externalities, most outside its control, that impact the crop yields and income levels of the farmers. In order to understand these externalities, EWINDO collected data on farmers' education levels, their motivations for cultivating certain crops, financing and costing of various farming activities, and usage of resources such as water, fertilizers and pesticides.

A cross-tab analysis of farmers' education and mechanization showed that farmers with higher levels of education are more likely to use machines, instead of manually preparing the land. This validated EWINDO's focus on enhancing farmers' knowledge in order to impact their farming practice.

Other useful questions that the survey helped to answer were: farmers' sources of financing; expenses across the different phases of production; and sales channels farmers engage with to get their produce to market. EWINDO expects to use this information to provide more customized support to farmers throughout their production cycles.

How can this impact be scaled up and linked to the SDGs?

The main objective of BIMS is to support inclusive businesses in adopting impact measurement practices that help them to plan, monitor and deliver on their intended social and environmental impact – and contribute to achieving the SDGs.

Using the Impact Value Chain, EWINDO identified the following SDGs to be in line with its intended impact:



SDG 1 NO POVERTY

84 percent of surveyed farmers report vegetable farming as their primary source of income. EWINDO helps these smallholder farmers increase their productivity, income and resilience to climate change.

SDG 2 ZERO HUNGER

EWINDO impacts food security, nutrition, and health across Indonesia by literally “seeding” the horticulture industry of the country.

SDG 12 SUSTAINABLE CONSUMPTION & PRODUCTION

Promoting and supporting increases in vegetable consumption and production, and training farmers on better usage of resources such as water through drip-irrigation, and shifting from field crops to alternate crops during periods of drought.

SDG 4 QUALITY EDUCATION

Promoting lifelong education and work-skills through knowledge transfer to farmers on better farming practices.

Lessons learned from EWINDO's impact measurement

Impact measurement is essential for an inclusive business' growth strategy

For an inclusive business, the BoP is an integral part of the value chain – who in the case of EWINDO are its farmer-customers. EWINDO clearly identified the need to understand and map its farmers as part of its G.R.O.W. strategy which combines actions and deliverables that are internal and external to the company. Impact measurement is essential to all parts of this strategy. First of all, it helps EWINDO provide better services to its farmer-customers. Secondly, impact measurement can motivate its staff by showing how they create positive impact on farmers' lives. Finally, measuring impact on an ongoing basis helps nurturing a sustainable horticulture industry.

Leadership and staff engagement at the field level make impact measurement actionable and meaningful

EWINDO participated in the BIMS project with active support and engagement from its management, and direct involvement with field staff. While this required significant time and monetary resources, it was seen as an investment in line with its overall 5-year plan. The impact measurement activities became a tool for training and communication with field staff; the baseline data being gathered on farmers will provide an actionable feedback loop to drive future decision-making. One immediate indicator for

action that the baseline data identified was related to the post-harvest component of the supply chain (i.e. 'where do farmers sell their harvest products') and how it adversely impacted farmers' incomes.

The data shows that farmers mostly sold their fresh produce to traders (middleman in the supply chain). EWINDO will continue providing quality seeds to support farmers producing more vegetables with good resistance towards particular pests and diseases while disseminating market prices to encourage farmers going directly to the market.

Disaggregated data that is contextual to a given geography or market segment is more effective and actionable.

While aggregated data is important for gaining a macro-perspective and for reporting purposes, granularity is critical for decision making and taking action to meet the needs of BoP beneficiaries. In EWINDO's case, it is important to map farmers' differing needs and behaviors; their varying levels of knowledge and technology; the production systems and climates they work with; and the market access and opportunities they can tap into for growth in different regions. After finishing the initial round of data collection, EWINDO learnt that the actual value of impact measurement lies in the details. Therefore, the company is planning to collect more data across regions to conduct more comparative data analysis.

Business Call to Action (BCtA) aims to accelerate progress towards the Sustainable Development Goals (SDGs) by challenging companies to develop inclusive business models that engage people at the base of the economic pyramid – people with less than USD10 per day in purchasing power parity (2015) – as consumers, producers, suppliers, distributors of goods and services, and their employees

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Ministry of Foreign Affairs of the Netherlands



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