

Case Study: Sekem & Ebda

Sarah Keil

Purpose: “Sustainable development towards a future where every human being can unfold his individual potential; where mankind lives together in social forms reflecting human dignity; and where all economic activity is conducted in accordance with ecological and ethical principles.”

Design Trait: Network

Innovative Practice: Economy of Love Based Network Design

Key Facts

SEKEM and EBDA

	SEKEM is a holistic development organisation focused on sustainable agriculture, education, and social initiatives based on biodynamic principles.	Egyptian Biodynamic Association (EBDA) supports Egyptian farmers in their transition to biodynamic agriculture.
Established:	1977	1994
Location:	Al Salam City, Egypt	Al Salam City, Egypt
Founder:	Dr. Ibrahim Abouleish	Dr. Ibrahim Abouleish
Ownership:	Holding	Association
Legal Form:	Egyptian Joint Stock Company	Association
Employees/ Members:	2.003 (2023)	103 (2024)
Homepage:	https://sekem.com/en/index/	https://ebda.earth/

SEKEM EUROPE

Supports *SEKEM*'s goal by processing *SEKEM*'s products made from biodynamic ingredients.

Established: 2006
Location: Goslar
Founder: Dr. Ibrahim Abouleish
Ownership: Limited Liability Company (GmbH)
Legal Form: Limited Liability Company (GmbH)

Purpose, Business Model & Objectives

Purpose: “Sustainable development towards a future where every human being can unfold his individual potential; where mankind lives together in social forms reflecting human dignity; and where all economic activity is conducted in accordance with ecological and ethical principles.”

Founded in 1977 by Dr. Ibrahim Abouleish, the *SEKEM* Initiative arose from a vision to transform the desert into fertile land. In pursuit of this idea, Dr. Ibrahim Abouleish dug the first wells on untouched desert soil near Cairo in 1977 to revitalise the soil with biodynamic agriculture.

Biodynamic agriculture

“Biodynamic farming is a holistic, ecological and ethical approach to farming and gardening that dates back to 1924 and evolved ever since. Going beyond the organic standard, through holistic management practices biodynamic farming focuses on reinforcing the interaction between soil, plants, animals, and humans in an environmentally friendly and regenerative way. In this way, the farm becomes a unique living organism in which each part nurtures the other: humans, plants, animals, and soil strive together” (Demeter 2025).

From this foundation grew a network of companies and educational institutions such as Heliopolis University, a vocational training centre, and a school with all levels of education. The Egyptian Biodynamic Agriculture Association (*EBDA*), founded by *SEKEM* in 1994, forms a central part of this network. The *EBDA* was established to

support Egyptian farmers in transitioning from conventional to biodynamic agriculture, with the goal of promoting rural development and sustainability. This central task continues *SEKEM*'s commitment to fostering organic and biodynamic agriculture.

Although the *EBDA* operates independently, it is based on *SEKEM*'s core values and continues its vision in close collaboration with *SEKEM*. The *EBDA* plays a key role in *SEKEM*'s network, as it serves as an agricultural foundation, providing training, research, and advice to farmers across Egypt. It promotes sustainable practices aligned with *SEKEM*'s vision, focusing on the ecological principles of both organic and biodynamic agriculture. While organic farming emphasises ecological processes and biodiversity, biodynamic agriculture takes a broader holistic approach, viewing soil fertility, plant growth, and livestock care as an interconnected system. The collaboration lays the foundation for *SEKEM*'s closed value chain, ensures that the network's agricultural, social and educational initiatives are aligned, and puts the biodynamic principles that form the foundation of *SEKEM*'s holistic development approach into practice.

This interconnection can further be seen in the fact that the farmers who are under contract with *SEKEM* are accompanied and certified by the *EBDA*. Thus, the *EBDA* acts as a bridge between the farmers and *SEKEM*, ensuring that the farmers meet the high ecological standards that are essential for *SEKEM*'s mission and its products. The scale of this network is reflected in the significant trade volumes it facilitates, as *SEKEM*'s ecosystem connects numerous agricultural suppliers, processing units, and distribution channels that move large quantities of biodynamic products both locally and internationally, generating a net profit of EGP 40,266,243 in 2023. Moreover, *SEKEM* and the *EBDA* were jointly awarded a prize for sustainable business practices, recognising their commitment to regenerative agriculture and environmental stewardship in Egypt, further underlining their close cooperation.

SEKEM Europe, a subsidiary of *SEKEM* founded in 2005 and based in Germany, also plays a central role in this network. It serves both as a conduit for sustainable Egyptian products to Europe and as an ambassador for the values and initiatives promoted by *SEKEM* and the *EBDA*. In addition to economic activities, *SEKEM* has maintained close cultural ties with Germany for over 40 years. In collaboration with the support association *SEKEM Friends Germany e.V.*, *SEKEM* conducts social and development-oriented projects to foster intercultural understanding between Egypt and Germany.

This interconnectedness between *SEKEM*, the *EBDA* and *SEKEM Europe* clearly shows that the work of the farmers and their sustainable farming methods are one of the core purposes of this network. Without the *EBDA* and its support for the farmers, the realisation of *SEKEM*'s vision would be less attainable. Likewise, *SEKEM Europe*

implements this vision and ensures that ecological and social responsibility extends beyond Egypt.

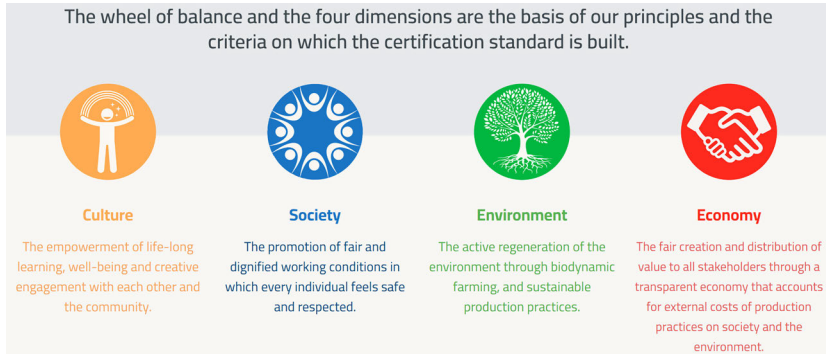
Insights into the Economy of Love Based Network Design

The special feature and uniqueness of the network structures lie above all in the diversity of the stakeholders with whom the *EBDA* is in contact, as well as in the special nature of the relationship with the farmers. A key expression of these relationships is the Economy of Love Reporting Standard which was initiated by the *EBDA* and based on the values of *SEKEM*. The standard was adopted by *SEKEM* and all its members in all areas and is now intended to be spread globally. Justus Harm, Co-Executive Director of *EBDA*, who was interviewed for this case study, emphasises: “The standard is inspired by *SEKEM*, by the work that the *SEKEM* initiative has done.”

The Standard encompasses four dimensions, which are considered and implemented in a holistic approach: Economic, ecological, social, and cultural. The economic dimension is about fair and transparent value creation and distribution to all stakeholders. For example, income from CO₂ credits is distributed equally among all farmers regardless of who has sold how many. Additionally, farmers practising biodynamic agriculture receive credits for innovative practices through the Economy of Love. The ecological dimension refers to the active regeneration of the world through biodynamic farming methods. For instance, by using compost, organic fertilisers and biodynamic preparations, as well as crop rotation, the soil is continuously vitalised and enriched with nutrients. In this way, *SEKEM* has managed to transform parts of the desert into fertile land. The social dimension focuses on fair working conditions that promote the well-being of employees and create better jobs. Employees are provided with health and social insurance, and various tools, such as the Roundtable, are used to engage in dialogue with employees, ensuring that their opinions and concerns are heard and integrated into decision-making processes. The cultural dimension focuses on collective development, promoting education, well-being, and creative collaboration within *SEKEM* and the wider community. This is fostered through educational institutions like the *SEKEM* School and Heliopolis University, alongside initiatives in music, theatre, arts, and research. Justus Harm states:

“We believe that through a transparent economic system, responsible consumers and producers can actively protect nature and ensure that every person across the supply chain is fairly compensated and protected from exploitation.”

Figure 1: The Four Dimensions of the Economy of Love



Source: Economy of Love, 2025.

Through the Economy of Love Standard, *SEKEM* and the *EBDA* enable farmers to transition from conventional to biodynamic, regenerative farming. This shift not only supports ecological sustainability but also drives community development, ensuring that farmers are rewarded for their work and that they contribute to the well-being of the broader society. To date, the initiative has supported over 10,000 farmers and converted more than 40,000 acres of land. Mohamed Seddik, an Egyptian farmer, aptly summarises the Economy of Love Standard with the following words:

“Economy of Love means that I understand your challenges and you understand mine, so that we can support each other with love and respect.”

This holistic approach makes it possible to unite the values of *SEKEM* and *EBDA* in one standard and to spread the vision nationally and internationally among farmers and other companies. In this way, the values underpinning these relationships are now visible through the Standard.

Another integral element of *SEKEM*'s holistic approach are the CO₂ credits, known as “Whole System Credits”. Land use change, primarily due to conventional agriculture, is a leading cause of biodiversity loss. However, biodiversity is one of the nine planetary boundaries and therefore essential for ecosystems and human life. To address this challenge, the *EBDA* actively supports farmers in transitioning to biodynamic farming, helping them implement sustainable agricultural practices. Through methods such as reforestation, composting, carbon storage in soil, and renewable energy use, farmers can bind more CO₂ while enhancing soil fertility and ecosystem health. Recognising the importance of this transition, the *EBDA* continuously works to provide the best possible support to individual farmers and farmers' associations. This includes a wide range of services, all aimed at helping

the 16,368 farmers within the *EBDA* network meet the standards for organic and biodynamic certification. Justus Harm highlights the significance of this work:

“We have been active for 30 years, supporting companies and farms that work biodynamically in Egypt with training, consultancy, learning materials, access to market, various farm inputs, etc., in order to prepare them for the organic and Demeter market, so to speak, and to support the marketing of the farmers' products.”

Through the **Whole System Credits**, the *EBDA* acknowledges and rewards farmers for their dedication to biodynamic agriculture, ensuring that their efforts in regenerative farming and CO₂ reduction are both valued and financially supported. The credits measure CO₂ savings from biodynamic farming, allowing farmers to earn and sell credits on the CO₂ certificate market. According to *SEKEM*, this approach offers a valuable contribution to society. These credits acknowledge farmers' environmental efforts while promoting a comprehensive strategy that encompasses biodiversity, soil health, and sustainable land stewardship. Aligned with the core values of the Economy of Love – transparency and accountability across the value chain – this certification system helps ensure that every aspect of the process is both measurable and meaningful.

To ensure equality and to avoid disparities caused by uneven sales of individual certificates, the Whole System Credits of all participating farmers are pooled into a collective fund. The income from the sale of these certificates is then distributed fairly among all farmers. Additionally, a “solidarity buffer” is implemented, reserving 20% of each issued credit as a safeguard. This buffer mitigates risks for the entire farming community, covering losses if a farmer cannot continue cultivating sustainably the following year. These mechanisms enhance fairness, reduce risks, and foster resilience, reinforcing the holistic nature of the Economy of Love.

How the Economy of Love Based Network Design Enables Regenerative and Distributive Dynamics

Due to the Economy of Love Based Network Design the following potentials arise for achieving the regenerative and distributive purpose:

Deep Understanding and Trust

Transparency, a central criterion of the Economy of Love, serves as a foundation for fostering deep understanding and trust within the network. A key tool in achieving this is the Impact Trace Tool, which allows buyers to trace the entire value chain of a

product by simply scanning a QR code. Consumers can see exactly who produced the products and what contributions the farmers make with their biodynamic cultivation. The tool further highlights externalised costs, such as environmental degradation or CO₂ emissions, making the real price of a product transparent and showing the wider influence of consumer choices on both society and the planet. By using the Impact Trace Tool, a link is also established between the various stakeholders within the value chain of a particular product. Justus Harm summarises the tool as follows:

“The Impact Trace Tool connects the various stakeholders who are involved in the value chain, so to speak, in the value creation of a particular product, and mainly also familiarises end customers with what impact they actually have.”

In addition, the purchase of Whole System Credits enhances this trust. Companies that purchase the credits receive a code that shows exactly which farmer they have purchased the certificate from. In this way, companies know exactly which farmers they are supporting and what direct impact they are having on the environment and local farming practices.

By enabling such transparency and connection, the Economy of Love promotes a shared understanding and trust among consumers, producers, and all other stakeholders, laying the groundwork for a more sustainable and responsible economy.

Holistic Sustainable Development

The Economy of Love network fosters a holistic approach that not only promotes farmers' transition to biodynamic agriculture, but also positively impacts their local communities by reducing water consumption, lowering CO₂ emissions and supporting sustainable land use. A central component of this holistic system is the distributive design of the Whole System Credits, which provide farmers with an additional source of income. This strengthens their economic stability and incentivises them to continue pursuing sustainable agricultural practices. The EBDA has now decided that, with this additional source of income, farmers are no longer allowed to sell their products at premium prices, which was previously necessary due to the higher production costs in organic farming. Instead, they must now offer their products at more affordable prices, ensuring that more people have access to healthy organic products. This creates a sustainable and balanced economic model that promotes long-term, equitable development.

Improvement of Biodynamic Agricultural Methods

The improvement of biodynamic agricultural methods is deeply rooted in a culture of collaboration and shared learning. This sense of togetherness is actively fostered

through tools that connect farmers and stakeholders across the value chain. One such tool is the Participatory Guarantee System (PGS), a widely used approach across the organic movement and by organisations like the World Fair Trade Organisation as a credible alternative to third-party certification. This system not only ensures transparency but also integrates peer-to-peer support and assessment, allowing farmers to actively participate in verifying organic standards. However, despite its growing adoption, PGS is not yet officially recognised as a certification system in all countries. Even so, it provides a valuable platform where farmers can share their experiences, exchange knowledge, and collaboratively develop their practices, creating a supportive network of continuous learning and growth.

Roundtable meetings further exemplify this spirit of collaboration. These regular gatherings bring farmers, companies, and other stakeholders together to discuss challenges, brainstorm solutions, and co-create innovative approaches. Such discussions not only strengthen community bonds but also lead to advancements in biodynamic and regenerative farming methods.

The Impact Trace Tool adds another layer to this interconnected approach by linking stakeholders throughout the value chain. By scanning a QR code, buyers can trace a product's journey, understand farmers' contributions, and see the broader impact of their choices. This shared visibility strengthens accountability and cooperation among all involved.

Dissemination

The extensive network, which includes wide range of stakeholders, offers the opportunity to distribute the shared values and strategies of *SEKEM* and the *EBDA*. The dissemination of these takes place in a variety of ways. Particularly noteworthy is the cooperation with previously conventional associations that want to support their members in the transition to more sustainable business practices. Through this cooperation, knowledge can be passed on and existing structures can be changed. The Economy of Love approach has also inspired international interest, with *SEKEM*'s model now being adopted in several countries. Partnerships with countries such as India, Tunisia and Italy are helping local farmers adopt sustainable practices inspired by *SEKEM*'s model. These diverse and inclusive approaches foster intensive and collaborative partnerships, driving the development and implementation of more sustainable practices and further establishing the Economy of Love.

Challenges Arising from Designing Network around the Economy of Love

Sensitisation for Biodynamic Agriculture

One challenge is to educate and sensitise farmers to the values and principles of *SEKEM* and the *EBDA*. For many farmers, conventional farming has been the norm for generations. Consequently, they often remain unaware of the social and sustainable benefits arising from the principles of the *SEKEM* initiative and the Economy of Love. It is therefore necessary to inform farmers about the positive impact that organic and biodynamic farming methods can have on their businesses, economic existence, and the environment.

Measurement of the Whole Credit System

Implementing an effective Whole Credit System presents a challenge, as it requires a robust local governance structure supported by partners with expertise in accurate and reliable CO₂ storage calculation. However, a stable local governance structure is not always provided. In addition, local validation and verification bodies are essential to ensure compliance with the established standards. This complex and resource-intensive process demands both technical expertise and close cooperation among various stakeholders.

Intensive Information and Support

While close cooperation with farmers is vital for the initiative's success and expansion, it is also highly time-consuming and resource-intensive. Nearly 70 agricultural engineers at *SEKEM* work to support farmers in implementing and maintaining sustainable practices. This support involves regular visits, consultations, training sessions, and phone support, ensuring compliance with certification standards. Justus Harm emphasises:

“So at the moment, I have 69 agricultural engineers, so to speak advisors, full-time employees in the association, who are spread throughout the country and whose main task is to advise the farmers, organise training and fulfil all the wishes that the farmers have.”

Interactions with Other Design Traits

Governance Design

As its name implies, the *EBDA* is an association and therefore belongs to its members, the farmers. This structure gives the farmers a central role in the association's decision-making processes. Annually, members come together for a general assembly to vote on important matters and elect the board of directors. This elected board then takes over the management of the organisation as it appoints the executive director to run the operational side of the business.

Another feature of the *EBDA*'s associative structure is its interactive, flat governance system, which gives farmers a high degree of participation. As members of the association, farmers have voting rights, allowing them to actively contribute to decisions. Stakeholder meetings, for instance, always include farmers or their representatives, ensuring direct interaction with other members. This flat hierarchy promotes dialogue and direct interaction between members, empowering farmers to actively contribute their opinions and needs, thus playing a key role in shaping the association's development.

The *EBDA*'s participatory nature is further enhanced by the regular Roundtable discussions, which foster connections both among farmers and between farmers and companies. These meetings allow all parties to openly share their challenges, perspectives, and needs while working together to find solutions and offer mutual support. This approach fosters equitable cooperation that respects everyone's interests and builds sustainable, long-term partnerships.

Finance Design

The *EBDA*'s financial resources stem from several sources. In addition to income from the cooperation with Demeter and Demeter licenses, the new source of income from the Whole System Credits is particularly important. Approximately 15 percent of the revenue from the sale of these certificates goes directly to the association. These funds are used to cover the *EBDA*'s constantly growing costs for the recruitment of new consultants, the organisation of further training courses, the creation of learning materials and the further development of the certification processes. Membership fees from farmers constitute another source of income, although the *EBDA* keeps these low to minimise the financial burden on farmers. Overall, these various sources of income help the *EBDA* to expand its activities and continuously pursue its mission to promote biodynamic agriculture and sustainable practices.

Recommendations for Adopting an Economy of Love Based Network Design

Flexibility

A central element of the *EBDA* is its flexible cooperation with a diverse network of stakeholders. Their systemic approach means that they do not stick rigidly to fixed partners but instead dynamically assess who can help on the respective path. This flexibility enables the *EBDA* to constantly optimise cooperation and ensure that all parties involved receive the best possible support to achieve common goals. Justus Harm describes this flexibility as follows:

“We always look at who can help us or who wants to help us along the way and who we can support on their individual path.”

Continuous Improvement

SEKEM and the *EBDA* foster a culture of continuous improvement through their collaborative structure. Regular Roundtables and open communication among stakeholders provide a platform for exchanging knowledge, sharing experiences, and jointly developing innovative solutions.

Cultivating Togetherness

SEKEM promotes a strong sense of community by fostering education, cultural initiatives, and creative collaboration that benefit everyone involved by enabling collective growth and cultural development. This holistic approach strengthens connections within the organisation and the wider community, creating a shared foundation for sustainable progress.

Inspiring Redesign Beyond the Business

Systemic change is the focus of *SEKEM* and the *EBDA*'S mission. The aim is to fundamentally transform the agricultural sector and to further train and educate both consumers and farmers in rethinking agriculture and nutrition. Agriculture plays a particularly important role in this transformation because an estimated 23% of total anthropogenic greenhouse gas emissions (2007–2016) derive from Agriculture, Forestry and Other Land Use (AFOLU) (IPCC 2019: p.6). However, by transitioning to a regenerative-biodynamic agriculture, part of the problem can become part of the

solution, as it can make a significant contribution to protecting the environment. Justus Harm emphasises:

“If we change to regenerative-ecological agriculture, then agriculture is part of the solution and part of the system change.”

Through the Economy of Love Standard and Whole System Credits, *EBDA* farmers are making substantial contributions to CO₂ sequestration in soil, water storage, and ecosystem strengthening in terms of biodiversity, resilience, and soil fertility. By switching to organic and biodynamic farming, they are strengthening essential ecosystem services, which in turn benefit both the local community and the farmers themselves.

Agriculture and related sectors employ a significant portion of the global workforce. Successfully transforming this sector sustainably and driving rapid change could lead to systemic change far beyond Egypt. The *EBDA* model is already being observed and replicated in other countries, where organisations seek to apply similar principles to enhance sustainability in their agricultural systems. Such a transformation would not only revolutionise agriculture but also fundamentally reshape our economy and way of life, fostering a more sustainable and just society.

For this change to take place, sustainable agriculture must emerge as a lucrative business that farmers perceive as financially attractive. This necessitates that the transition to sustainable farming practices offers not only ecological advantages but also tangible economic benefits to farmers. As sustainable farming demonstrates its financial viability, it will likely attract an increasing number of farmers to join the transition.

References

Interview

with Justus Harm, Co-Executive Director EBDA (2/06/2024, 1:00h).

Homepage

EBDA (2025): The Egyptian Biodynamic Association – Promoting Sustainable Agriculture since 1994, <https://ebda.earth/>, [Accessed 7 March 2024].

SEKEM (2025): Sustainable Development since 1977, <https://sekem.com/en/index/>, [Accessed 1 March 2024].

Other Sources

Demeter (2025): Biodynamic Approach and Principles, <https://demeter.net/biodynamics/biodynamic-approach/>, [Accessed 24 April 2025].

Economy of Love (2025): <https://www.economyoflove.net/>, [Accessed 5 March 2024].

IFOAM Organics International (2025): Participatory Guarantee Systems (PGS), <https://www.ifoam.bio/our-work/how/standards-certification/participatory-guarantee-systems>, [Accessed 17 February 2025].

IPCC (2019): Climate Change and Land – An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems, <https://www.ipcc.ch/site/assets/uploads/2019/11/SRCCL-Full-Report-Compiled-191128.pdf>, [Accessed 22 April 2025].