Working towards regenerative and restorative agricultural value chains

Key learnings from OP2B member initiatives

op2b
one planet
business for biodiversity

Introduction

One Planet Business for Biodiversity (OP2B) is a unique cross-sectorial, action-oriented business coalition on biodiversity with a specific focus on agriculture. Founded in September 2019, the coalition is committed to transforming agricultural systems and catalyzing action to protect and restore cultivated and natural biodiversity. OP2B's work is organised around three pillars: regenerative agriculture, biodiverse product portfolios, and high value natural ecosystems.

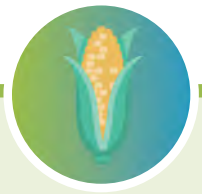
In the last decade, OP2B members have acted to support change of agricultural practices on the ground and across their supply chains. The organization has documented these efforts over the last two years through preparing 60 case studies of member company pilot projects and initiatives — constituting the basis of this publication.

The 60 cases cover all three of OP2B's pillars, while involving different geographies (from North America to Africa and Asia) as well as different parts of the agricultural value chain (including fruits and vegetables, cereals, coffee, coconut and cocoa, dairy and palm oil).

The cases were developed to understand the context, objectives, challenges, and successes of each company's pilot or initiative. Structured interviews were used to confirm OP2B member company observations and prepare a synthesis of the key findings that appear in this document. The first aim of the case documentation is to help companies that might be planning to launch their own pilot projects on biodiversity regeneration in the agriculture space. The second is to highlight policy levers that, if actioned, would enable companies to accelerate and scale up their efforts to realise a more biodiverse and regenerative agricultural system.

The case studies can be found at https://op2b.org/

The 3 pillars of action of OP2B



Pillar 1:

Scaling up regenerative agriculture

Scaling up alternative farming practices that will leverage the power of plants to keep carbon in the soil (carbon sequestration), increase the capacity of soils to hold water, enhance the resilience of their crops, support the livelihoods of their farmers, and regain the nutrient density of food while decreasing reliance on synthetic inputs.

Pillar 2:

Developing product portfolios to boost cultivated biodiversity and increase the resilience of the food and agriculture models

Increasing the number of ingredients sourced so we are less reliant on just a handful of crops, further developing provenance-based and local sourcing, and expanding the genetic variety of crops grown to regain food diversity and localized biodiversity specificity in agriculture as a powerful lever to protect and nurture biodiversity.

Pillar 3:

Eliminating deforestation, enhancing the management, restoration and protection of high value natural ecosystems

Defining specific actions within the value chains of OP2B members that can protect and restore the world's most biodiversity-rich and fragile ecosystems, including grasslands, wetlands and forests.

Based on the cases, underlying drivers of success can be viewed through the lenses of people, place, money, time and governance.

The report is arranged around this framework as a device to draw together the different stories and changes on the ground.

People

Covers the key lessons learned by OP2B member companies in working with farmers, and also their insights into partnerships and engagement with supply chain actors and local communities.

Place

Addresses the insights of OP2B member companies concerning the local and regional nature of regenerative agriculture and biodiversity and ecosystem interventions.

Money

Distils OP2B member learnings about income trade-offs from farmers' perspectives, as well as how financial tools and incentives can help farmers start, maintain, and secure transitions.

Time

Examines OP2B member understanding of the timeframes required for making a discernible impact and creating sustainable change.

Governance

Synthesizes the points made most often by OP2B members about changes in agricultural incentives and public sector practices that would enable companies to more rapidly and effectively scale their initiatives.

People

Farmers must be at the heart of the transformation of our agricultural systems. Yet the current context does not equip them as it should. Biodiversity is not integrated in most agricultural frameworks, despite increasing momentum on carbon sequestration and other climate actions, and there is still a global need to raise awareness and expertise on regenerative practices.

All successful OP2B initiatives therefore emphasize farmer training as a necessary action step. This often means dedicating staff with agronomy and change management expertise to work locally on a project. Most companies also build collaborations with non-governmental organizations, universities and/or agricultural extension services.

*For its Margarita dairy farming initiative in Mexico, Danone works with farmer cooperatives to deliver 20 hours of training to individual farmers, followed up with one-to-one support. The training, which includes everything from entrepreneurial skills to animal health and welfare, is delivered through an ecosystem of trainers and vets.**

While training is essential, the primary driver that many farmers rely on is peer-to-peer exchanges of practical insights and innovative practices. **Building on this, a key success factor for many initiatives is to identify "early adopters"** within the farming community, train them, and help them to diversify the value streams of their farms (e.g., new crops or clients). The early adopters then become leaders and educators of other farmers.

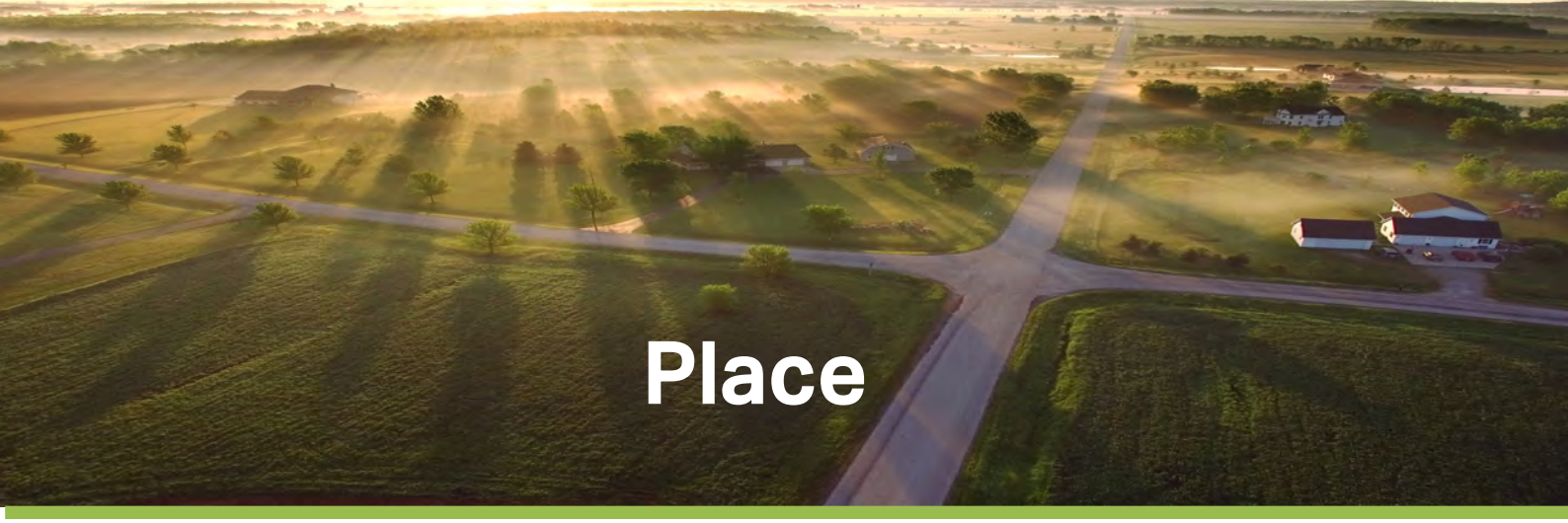
OP2B member company Invivo has launched a project in France to build markets for linseed and lupin as crops that can limit soil degradation, while also providing alternative feed and food production for farmers' commercial repertoires. Invivo works with selected farmer cooperatives in its network for this project; each cooperative has followed the strategy of identifying early adopters from among its membership to join the initiative.

At the farm level, what can be referred to as 'value chains' are above all human relationships (sometimes personal relationships — a buyer may be a member of the farmer's family). Many OP2B companies also emphasize the need to understanding the relationships involved in particular value chains, as a key element to drive change.

For its European vegetable farming project, Nestlé has been working through a network of suppliers in different countries to introduce soil regeneration mechanisms into quality standards and pricing contracts. It was learnt that all of the vegetable processors it had chosen for the project would easily understand the new sustainability criteria it was proposing. It learned that in many cases, Nestlé representatives needed to go onsite to explain and discuss with suppliers what the company wanted to achieve and how to achieve this. Another case where engagement along the value chain was critical was in Arla Food's The Bee Road in the UK.

** We are only able to cite a handful of cases from the 60 reports in this synthesis document.*

Please ask OP2B for other examples from member companies.



Place

Farming is place specific, with ecosystem properties that may differ from field to field and farm to farm, let alone between regions. There's no escaping the local nature of ecosystems, and it is for this reason that many OP2B members follow a landscape approach that accounts for farms as part of a larger ecosystem area including farmed and non-farmed lands, watercourses etc.

Mars Inc. has joined forces with the Livelihoods Fund for Family Farming and other partners to spearhead a programme of resilient coconut farming on the island of Mindanao, the Philippines. To succeed, the partners had to tailor their regenerative solutions to the Mindanao landscape and commodity chains. Another example where the landscape approach was essential to project success was Unilever's Central Kalimantan palm oil programme.

Interventions tailored for place are also being undertaken by Jacobs Douwe Egberts (JDE) in its project to protect the forests of Bukit Barisan Seletan National Park while supporting farmer livelihoods in the area. JDE might be a coffee company, but it recognizes that in matters of regenerative agriculture, it is essential to look at the multiple crops that farmers grow and the growing conditions in the area, and consider coffee growing in this larger context.

Many OP2B members call attention to a local approach as essential for engaging farmers in the process of transforming agricultural systems. Only if they understand new practices for their farms and see the benefits for the land and their livelihoods, can farmers commit to the hard work of the biodiversity transition.

Barry Callebaut's project to regenerate the forest ecosystem in Cote d'Ivoire using a drone-seeding

approach might seem to be all about technological innovation in the service of developing large-scale carbon sinks. However, the company sees as equally important their engagement with local cocoa farmers to better understand cocoa tree shade management, and how reforestation can help them with managing the major risks of humidity and fungus growth. Another example where farmer engagement was a large part of project success was in DSM's micronutrient supplementation for dairy lifetime performance.

A local approach also contrasts with the one usually taken in agricultural science, which tends to favour the laboratory over field research and to focus on finding general solutions for increasing crop yields. Which crops and new techniques can deliver better soil health in this place and these conditions? How should precision farming be adapted for regenerative field monitoring and predictive modelling? **Field testing is necessary to answer questions like these, and to tailor interventions when a general solution will not work.**

A good example of the use of precision agriculture comes from McCain's Farms of the Future project to help European potato farmers adopt regenerative agriculture practices. McCain supported participating farmers to deploy a decision support system (DSS) testing tool to carry out connected probes on their fields. This tool enabled farmers to improve irrigation efficiency and use pesticides only when there was a risk of disease above a certain threshold.

OP2B member company Yara is first in class when it comes to laboratory research. Yet the company readily acknowledges the key role of field testing by farmers of the organic fertilizer pellets it has developed as part of The Nutrient Upcycling Alliance, a circular food economy initiative started in 2019 by Yara in partnership with waste management firm Veolia and the Ellen MacArthur Foundation.

Another example where predictive modelling was used to forecast impact on biomass production and plant species diversity was in Kering Mongolia sustainable cashmere project.

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Money

Most OP2B member initiatives depend on farmers acting as entrepreneurs, ready to experiment and take risks. There are necessarily financial issues involved.

A goal of many OP2B projects is to improve farmer livelihoods as an integral part of biodiversity efforts. Farmer livelihoods can be improved through crop diversification, better yields, and/or reduced operating expenses, among other means. Yet before these kinds of benefits are realised, farmers must invest in things like new equipment or seeds, while probably facing a temporary decrease in crop yields and farm income.

Recognizing these issues, many OP2B member companies have created or leveraged financial instruments and tools to ease the start of farmers' transitions, including preferential loans, insurance and equipment investment programs.

An important learning from the group is that finance is best treated as a series of mechanisms to help launch and then maintain and secure change.

- To **maintain** the transition, results-based finance may be needed.
- To **secure** the transition, some OP2B members recommend moving away from results-based finance and towards a model of rewarding ecosystem conservation. This is to avoid instituting perpetual restart systems in which what is new is valued at the expense of conserving what is already there (e.g., rewards for planting new trees, but not for maintaining established trees and woods), as well as to encourage farmers to adopt more sustainable funding sources such as carbon credits.

According to L'Occitane, one of the reasons for the success of its shea butter program in Burkina Faso is that it offers long term contracts based on premium prices for organic (wild) shea nuts to the women's supplying cooperatives. The program also provides 80% pre-payment so that participating cooperatives have the cash flow necessary for securing the nuts from harvesters. Beyond results-based finance, L'Occitane has assisted the cooperatives to set up a factory to become involved in processing that is focused in ecosystem conservation. This has helped broker agreements with local authorities to enable the harvesters to gather nuts in protected areas, while training the rest of the community in forest management and regenerative techniques. Another example where the importance of premium pricing was critical to program success is Symrise's sustainable vanilla project in Madagascar.

On a final note, most successful OP2B projects link actors' profit and purpose goals, for example, by focusing on companies' key commodities and addressing how to protect and develop the supply of these key commodities in degraded areas. Companies like L'Occitane and Barry Callebaut would say that ecosystem restoration guarantees both commodity supplies and sustainable profitability. Similarly, local communities are likely to do more for ecosystem conservation or restoration if they are able to maintain or even improve their livelihoods in the process.

Time

Perhaps the clearest learning of OP2B members from their projects is that agricultural transformation is a long-term process. A farm's transition doesn't happen in one go, but gradually, field after field. The relationships necessary to sustain transitions aren't transactional, they must be built up over time as collaborative partnerships. Financial mechanisms won't work if they are conceived as short-term fixes, they need to be maintained (multi-year contracts, guaranteed prices) and then adapted (green bonds, carbon credits) as incentive structures shift.

But how long is long term? More experienced OP2B members are working with a 10-year time frame. They are doing this because:

- It takes several years to establish trust, train early adopters, and enable local peer leaders to make headway.
- It takes at least 3-5 years from implementation of a project to establish whether it is succeeding in meeting goals such as improving soil quality or sustainably diversifying farmers' product portfolios— and longer to have measurable results for ecosystem restoration.
- The point is not only to demonstrate results, it is to see those results embedded in **farmers' practices and — crucially — changes in the agricultural value chain.** Securing a value chain transition is necessarily a long-term goal.

There is a paradox in this: OP2B members are eager to scale up their initiatives as quickly as possible. They know that there is little time to act in biodiversity and soil health terms. Yet change of this kind takes the time it takes — especially when companies are ahead of governments on biodiversity in agriculture.

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Governance

What would an environment look like that is conducive to scaling regenerative agriculture and biodiverse agricultural systems? **A systemic change requires systematic decisions, and hence adaptations in agricultural governance and the legitimation, support and incentives embedded in agricultural policies.** Although there are promising developments, nowhere in the world today is regenerative agriculture given strong backing in national policies and regulations.

Based on the case reports and interviews with OP2B member companies, the following are five main policy levers that governments could activate to enable and encourage agricultural system change:

1. **Shift government incentive systems so that they actively support farm transitions to regenerative agriculture, crop diversification, and ecosystem conservation** — including valuing and rewarding ecosystem services

2. **Pivot public funding** for agricultural research and development **from the laboratory to field experimentation** framed around local and regional geographies, and **towards new technologies and innovations to enable regenerative practices to succeed** in different soils, crops and geographies

3. **Favour scientifically based, common and coherent standards for all actors to report on biodiversity in agriculture**, as well as systems of data collection for baseline measures for this reporting (in many places, soils have not yet been mapped or assessed. Farmers need baseline measures to make it feasible for them to check for changes over time)

4. **Transform agricultural knowledge systems** through the systematic development of curricula on biodiversity and regenerative agriculture that is integrated into all agricultural instruction and designed for peer-peer learning all along farmers' lives

5. **Encourage consumer uptake of the products of regenerative agriculture** through (for example): conducting information campaigns around sustainable diets; educating the public on regenerative agriculture, crop diversity and ecosystem landscapes; educating them on sustainable fertilizers and pest management; reducing taxes on sustainable food (and raising them on unsustainable food); public procurement of the products of regenerative agriculture and ecosystem restoration.

This is to acknowledge the structural power underlying how governments fund and regulate our agricultural systems and communicate with citizens about the products and services of those systems. It is also to issue a call to action for systematic public-private collaboration to scale efforts to transform agricultural systems and protect and restore cultivated and natural biodiversity.

Conclusion

Through this report, OP2B aims to provide meaningful examples of corporate action set in a multi-stakeholder coalition of companies, NGOs, cooperatives and associations, and local and national authorities. The next stage from a corporate standpoint is for companies that are competitors to come together pre-competitively to reach scale in their industries and enable transitions across landscapes and supply chains.

This phase in the journey towards regenerative agriculture and more biodiverse agricultural systems will require clear-sighted vision and strategy on
the part of corporate leaders, as only a high level of commitment at the top can carry major shifts in corporate cultures and practices. Yet, a pre-competitive approach also offers perhaps the best (if not the only) means for companies to leverage the finance required for a systemic transition. Even the largest firms cannot finance this transition alone; only together can they present a convincing case for systemic change to institutional investors and public development banks.

OP2B member companies are already exploring how to act together pre-competitively to develop a common language and impact indicators for regenerative agriculture. A science-based approach is indeed necessary to measure the transition and report on progress. The agreement reached among OP2B member companies, some of which compete directly for market share, demonstrates that pre-competitive cooperation is achievable.

OP2B member companies are already exploring how to act together pre-competitively through their project to develop a common language and impact indicators for regenerative agriculture. A science-based approach like this is necessary to measure the transition and report on progress.