**Vanilla assisted natural reforestation and social impact project.**

**Restorative supply chains, verification and social equity.**

**Background: The issue**

* Many landscapes have been converted into commodity monoculture production with a devastating impact on biodiversity and social equity. Agricultural expansion often pushes back the area covered by standing forests, while degraded land remains unutilised. Indonesia has between 6-11 million Ha of degraded forest. (Indonesian Ministry of Environment & Forestry est. 24 million Ha of rainforest was destroyed 1990-2015. USDA Foreign Agriculture Service website ‘PSD online’)
* Deforestation is the second largest cause of climate change. “Halting and beginning to reverse the destruction of the world’s forests for agriculture is the cheapest, quickest and most equitable option to stabilise the climate and buy time for a just transition to a low-carbon economy.” **(**Roe S et al -2017)
* However, “political and corporate commitments are failing to translate into measurable results on the ground”. (Greenpeace -Moment of Truth)
* Supply chains are often long and obscure, reducing influence: “As a derivatives buyer, we are many links in the chain away from the original source of palm oil and kernel oil...” Johnson & Johnson
* Whilst “good for the economy”, the benefits of industrial agriculture tend to favour wealthy individuals and companies with poor distribution of the benefits.
* Current concepts for landscape protection and restoration can be limited in their impact and not scalable. For example, it is hard to get finance and investment in conservation since it relies on philanthropy, grants and carbon finance or PES (Payments for Environmental Services). [It can even be an industry in itself, for itself and run by speculators.] These are not always sustainable financial models.
* If a piece of land is ‘protected’, not only are the local people kept out and left out, but what is the model for the rest of the landscape? It doesn’t make sense to guard relatively small areas to keep them ‘safe’ and not have a model for the rest of the land.
* On a positive note, there is a trend for standards and certification schemes to encourage and incentivise protection and restoration. Many companies, traders and brands, are investing because they see the business case for doing so. The entire cocoa sector is “moving beyond” NGO-led standards and certification, managing its own initiatives. The World Cocoa Foundation is an example. However, this might be characterised as being supply chain or farmer based versus an integrated landscape management approach.
* There is a movement also for taking a landscape approach and a jurisdictional approach, achieving sustainable development through integrated landscape management.
* “Agroforestry systems like shade coffee, cocoa and tea, and multi-story annual-perennial systems, preserve both agricultural diversity and biodiversity, while improving the food security, resilience, and livelihoods of farmers and their neighbours in cities and downstream.” (The Little Sustainable Landscapes Book -Global Canopy Programme et al.)

**Background: other elements**

* “Certification processes have typically not been driving change. Verifying ‘no harm’ is not the same as being restorative -the ethics can be disassociated from change.” Dr. Paul Jepson, Oxford University. They can sometimes also be ‘marketing’ oriented, focussing on providing simple or simplistic brand assurance.
* Where the focus has been on FairTrade or organic the bulk of the damage might have been done by the time the certifiers get to the farm. These can greatly reduce the [negative] environmental impact and increase the social benefits, but they don’t recover the ecosystems lost to farming.
* “NGOs, brands and eco-pundits often focus too much on certification, overshadowing the important mechanisms and processes that may or may not lead to a seal on pack – the organizing, empowering and training of farmers.” Chris Wille, Founder Rainforest Alliance
* The carbon credit system is not always productive in itself and offsets a damage elsewhere. It is manged by distant corporations, and the local and indigenous people are often the last to benefit. There is an opportunity for greater democratisation of the carbon market so that farmers, especially smallholders, can access carbon market benefits. At the same time, farmers should be mitigating their own contribution to climate change, mainly by not deforesting and burning, and getting help in adapting to climate change.

**Reaching scale and changing the approach**

* Rainforest damage by industrial farming and monoculture can be countered with diversified agroforestry, which we want to show is a viable alternative, and even more profitable and socially equitable than palm oil production, logging and mining, whilst helping to restore ecosystem services for the future.
* By taking a landscape and community led approach we want to be at for forefront of restorative supply chains which empower local and indigenous people and which are not limited by external funding and control.
* By growing vanilla as an anchor cash crop as part of an agroforestry model the economic revival of poverty-bound rural communities and the ecological restoration of degraded lands in Indonesia can go hand in hand.
* We want to be more ambitious than Fair Trade by help people to be successful on their own and not have NGO’s set prices for them.
* This project reduces tensions from competing actors and objectives since there are symbiotic and synergistic effects of forest restoration, agricultural productivity and livelihoods, beneficial to both communities and the government. It can act as a counter to the typical story of palm oil mono-culture, drained peatlands, fires and forest destruction.
* “There is an opportunity to change the narrative -it’s not about being just a green or ethical consumer, but an engaged consumer. Not certifying supply chains but changing complex networks into quality networks. I.e. taking a jurisdictional approach and buying from landscapes that are demonstrating restoration.” Dr. Paul Jepson
* A landscape approach can take a 30 year horizon to develop a future landscape and what this should look like; people with quality agricultural work, not plantation labourers. Restored tree cover, with an understanding of the configuration of roads and towns. Government jurisdictions can set up a land use development plan.

**Research**

* Our first focus is a robust and studied approach to confirm the environmental benefits, improved livelihoods, positive impacts and that there are no perverse consequences.
* We are working with Oxford University School of Zoology (Dr. Peter Long) to determine the research methodology.
* There are five Said Business School MBA students looking at the economics of our approach, and a number of Oxford University Geography Dept and Environmental Change Institute students studying various aspects of the project. We also hope to collaborate with local Indonesian universities.

**Shortening the supply chain**

* For a number of reasons, the price of natural vanilla has been very volatile in the past, ranging typically form £50-650 USD per kilo. Previously, when the global price dropped to $40 many farmers ceased to grow vanilla and destroyed their crops since they were receiving only as much as $0.70 per kilo. Even at $20 per kilo they could have survived and still made a profit. This was before access to the internet. There is an opportunity to use technology to ensure that farmers get a better share of the final price. Farmers can show buyers the price they should be getting.

**Our concept:**

No damage to Restorative

Monoculture (and palm-oil) to Polyculture

Philanthropy & grants to Sustainable financial model

Western led to Local focus

Corporation led to Democratisation, (including of

carbon trading)

Big business emphasis to Community focus

Not scalable (low reach) to Scalable concepts

Expensive certification to Cheaper semi-automation using

innovation & technology. (E.g. GIS, satellites, block-chain, photography)

Single site / farm focus to Landscapes, jurisdictions and

boundaries

**Benefits of vanilla farming in the rainforest**

* Low capital entry point
* Farmers new to the crop can learn how to manage it. (Often it is women.)
* Safer than working in palm oil (peril from snakes)
* High value output per hectare
* Supports mycorrhiza and pioneering plant regrowth
* Less prone to cyclone damage
* Less intensive and without chemical inputs, fertilisers and herbicides
* Environmentally more sustainable
* Lower input costs
* Lower labour costs -does not need artificial staking etc
* Less prone to disease than monoculture
* Doesn’t have a large land footprint. Can exist with other diversified crops and income streams
* High value, small and light to transport

**Forest polyculture -example of other crops which can co-exist with vanilla. Having a balance of subsistence and marketable crops:**

Fish, peppercorn, cashew, Ficus trees, essential oils, subsistence food, timber / firewood, rubber.

Better intervention, plant vanilla 5 years and also high value timber trees.

**Certification**

* It will be important to provide assurance.
* We are in an exciting period for certification as new projects and methodologies address key issues and develop improved systems to verify & measure supply chain impacts, livelihoods & social impact, ecosystem services & forest regeneration.
* Certification is costly and time consuming and there is an opportunity to be at the forefront of technical innovation to support data capture through semi-automation and farmer inputs, such as through GIS, satellite technology, smart-phone photography and block-chain.
* Mixed commodity and quality small scale farming can use remote sensing and the uploading of photos to create digital landscapes and make verification cheaper.
* Key elements are
  + Multi-stakeholder consultations to agree on what sustainability looks like in practice
  + Developing best management practices to achieve the desired outcomes
  + Codifying those into standards, using the standards to assess farms and training needs
  + Developing and delivering training and technical assistance
  + Using the standards to agree metrics for measuring progress.
* Certification is one of a number of benefits to farmers. While Fairtrade focuses the attention on higher prices, the sustainability standards, primarily the Rainforest Alliance, bring more important advantages to farmers, including often increased productivity and crop quality, farm level cost control, efficiencies and synergies, improved farm management, worker health and safety, natural resource conservation, and farmer pride and confidence.
* Standards can be extremely valuable for farmers, whether or not they seek certification, and whilst it can be costly, smallholders can organize into groups and greatly reduce the cost. For example, communities, since land concessions in Indonesia might be community based.
* Vanilla will be one of several crops in any landscape and the need to ‘verify’ or accredit entire landscapes might be a more practical approach. There are some initiatives looking at this and the vanilla project can play a role in furthering them.
* Sustainable Agriculture Network and RA programs were co-developed by farmers to serve farmers. The standard-setters have been challenged to prove that their programs are making a real difference, and research abounds. There are good efforts underway to reduce the cost and bureaucracy of certification, but more needs to be done. NGOs are looking at other ways to provide supply chain assurance. See, for example, the [Accountability Framework.](https://www.rainforest-alliance.org/articles/q-a-accounability-framework)
* Rewilding and pioneering projects have a role to play in developing this process.

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<https://www.empathysustainability.com/forest-vanilla-project> Project with I. Made Setiawan

Input from Chris Wille, Founder of the Rainforest Alliance.

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