



事業計画書作成支援

国税庁主催

有機酒類活用セミナー

有機生産と有機JAS認証は、最適なアプローチなのか？



Organic Production and Certification

Is this the best approach for you?



Session structure

Introduction.

- **Definitions** (EU, USDA, biodynamics, sustainable), legislation, and 3rd party certification
- **Context:** Why organic? History and motivations
- **Consumers:** segmentation, motivation, willingness to pay (WTP)
- **Retailers:** current and future priorities in the green/sustainability space
- **Producers:** organic agriculture and production. Comparing wine and sake

Summary and closing thoughts

Q and A



Caveat:

'In comparison to organic tea (and some other organic beverages, such as milk), organic wine might be seen as a case study of failed new category creation.'

Jones and Grandjean (2018)

Definitions: *raw materials e.g. rice, grapes*

Organic agricultural products (crops, livestock)

- Restricted/banned use of synthetic additions (fertilisers, pesticides, GMOs)
- Some listed synthetic products usually allowed e.g. vaccines, pheromones
- Some listed toxic organic products may be banned e.g. arsenic.
- Some toxic organic products may be permitted but only in controlled amounts e.g. elemental sulfur, copper sulfate.
- May be other requirements e.g. minimizing wildlife depletion (EU)
- Processes for review and update.

Some specific legislative definitions

- Specifics vary by country, but mutual recognition of standards is common.
- **USDA** 7CFR part 205, National Organic Program (NOP) 'The National List'
- **EU** Regulation 2018/848 (current version 2023)
- **Biodynamics**: International Standards for use of Demeter, Biodynamic and related trademarks (October 2022).

Definitions: *processed products e.g. sake, wine*

Organically produced processed food and beverage products

- Raw materials must be organic, and...
- Processes, processing agents and other ingredients forbidden unless explicitly listed (EU, USDA, Demeter)
- Requirements to separate organic from non-organic products and additives

Some specific legislative definitions (continued)

- Main point of difference is in use of SO₂ in wine (US versus EU). Sake is free!
- **EU, USDA:** Wine gets special treatment (EU, US). Beer (and sake) covered by generic legislation for processed products.
- **Demeter:** Covers specific processed products, including beer and spirits in detail, but not sake. 'Demeter grains' permitted in beer, but not koji (yet?).

Definitions: Philosophical Questions

- Is organic the same as '*natural*'?
- Is organic the same as '*sustainable*'?

(If they are different, then what are the differences?)



Context: Why Organic?

Altruistic concern for

- environment (pollution, harm to plants and animals)
- human health (consumers, producers, future)

Business motives

- Respond to consumer needs (brand engagement, need for trust, via retail)
- Opportunities to reduce costs (possibly), build trust (possibly)
- Legal compliance?

Also

- Sustainability in general (especially family run businesses)
- Precautionary principle
- Ideology/belonging/identity (e.g. anthroposophy)





Context: Origins, pioneers

- Widespread pre-industrial knowledge and techniques for operating in equilibrium.
- 1900s-1920s: western studies of pre-agricultural farming in Bengal (Albert Howard), and China, Japan and Korea (F.H King)
- 1924 Rudolf Steiner Agriculture Course
- 1930s-1940s: experiments in Germany (Erhard Bartsch), Switzerland and USA (Ehrenfried Pfeiffer), England (Lady Eve Balfour, Walter James 4th Baron Northbourne), Australia (Genoni Brothers), Japan (Masanobu Fukuoka)
- 1939 Betteshanger School and Conference on Biodynamic Farming
- 1946 The Soil Association (UK)
- 1972 IFOAM International Federation of Organic Agricultural Movements (JOAA was early member)



Context: pioneer texts

- 1938 *Biodynamic Farming and Gardening* (Ehrenfried Pfeiffer)
- 1940 *Look to the Land* (Lord Northbourne)
- 1940 *An Agricultural Testament* (Albert Howard)
- 1943 *The Living Soil* (Lady Eve Balfour)
- 1958 *Agriculture Course* (Rudolf Steiner/George Adams)
- 1975 *One Straw Revolution* (Masanobu Fukuoka), English translation 1978



Context: early industrialization

- 1600s-1800s: crop rotation, new crops and selective breeding, seed drilling, improvements in ploughing, large scale land conversion including drainage and irrigation
-
- 1800s: fertilisers (beyond manure), including sodium nitrate (N), guano (NPK), potash (K, from burned trees), superphosphate (P, from coprolite fossils)
 - Late 1800s: Agricultural Colleges, formal scientific education, research.
 - Late 1800s: oidium (S), downy mildew (Bordeaux mixture)
 - Late 1800s: steam traction engines provide adaptable power source

All still mainly 'organic' ...but...

- 2000BCE elemental sulfur used as fungicide in Sumeria
- 1500s-1800s limited use of arsenic, salt, mercury, copper, lead
- Concerns about unsustainable nutrient depletion, soil structure damage



Context: modern synthetic fertilisers, pesticides

- Late 1800s-early 1900s: discovery, isolation and synthesis of many new chemicals, increasing understanding of production and uses, but not yet mainstream use.
- 1913: First industrial-scale production of Ammonia (N) by BASF, Germany
- 1939: DDT insecticidal properties proven
- 1940s-1960s mainstream production and distribution of industrial fertilisers and pesticides described as 'The Green Revolution' (William Gaud, USAID, 1968)
- 1970s – present, ongoing research and innovation to improve effectiveness and safety.

Context: origins of modern sustainability

1962

Silent Spring
(Rachel Carson)

1961

UN Codex Alimentarius
collects international
standards for food
production and labelling

1990

US Organic Foods Production
Act (OFPA) authorizes
National Organic Program
(NOP)

1991

EEC 2092/91
defines organic farming and
labelling (but not wine)

1987

UN Brundtland Commission,
reports findings and
recommendations in 'Our
Common Future'. Defines
'sustainable'.

2006

EC 1907/2006 Registration,
Evaluation, Authorisation
and Restriction of Chemicals
(REACH)

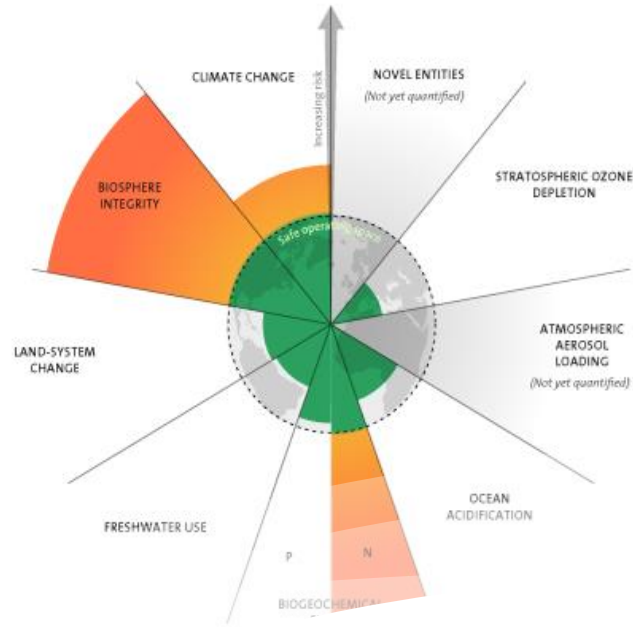
2001

UN Stockholm Convention
on Persistent Organic
Pollutants (POPs)

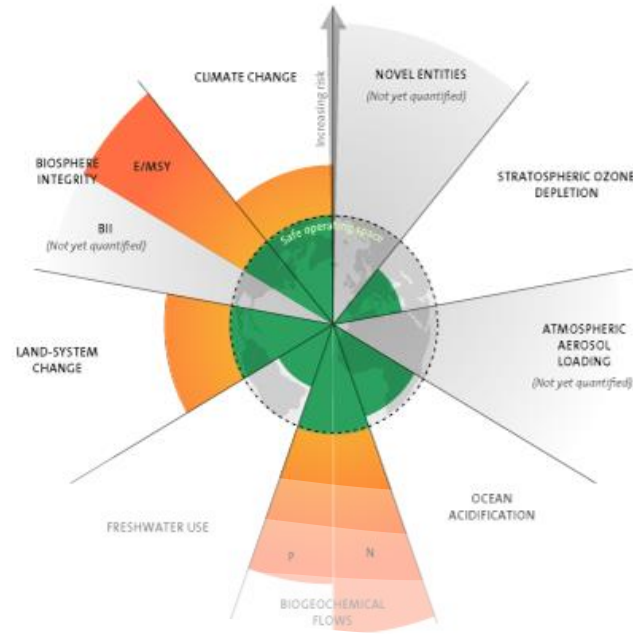
2012

EU 203/2012 defines organic
wine.
EU 126/2012 US-EU mutual
recognition of equivalence
(excludes wine)

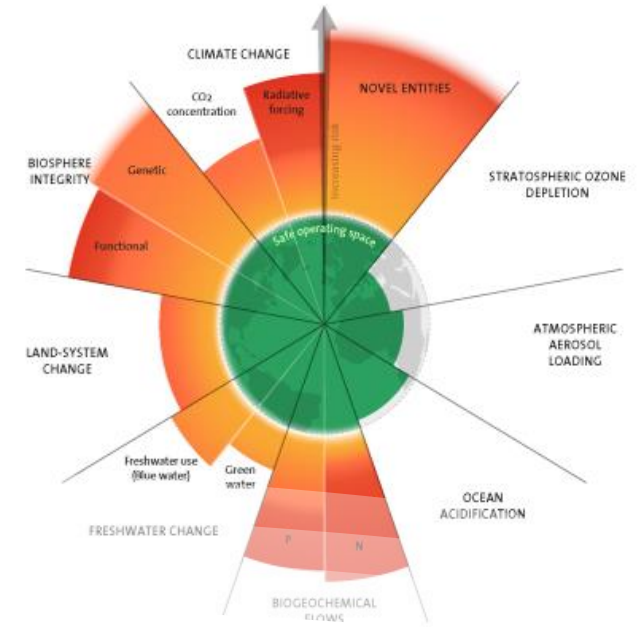
2009



2015



2023



Credit: Azote for Stockholm Resilience Centre (Stockholmresilience.org)

Context: Planetary Boundaries

Context: UN Sustainable Development Goals

Credit:

UN Department of Economic and Social Affairs

[Sdgs.org/goals](https://sdgs.org/goals)



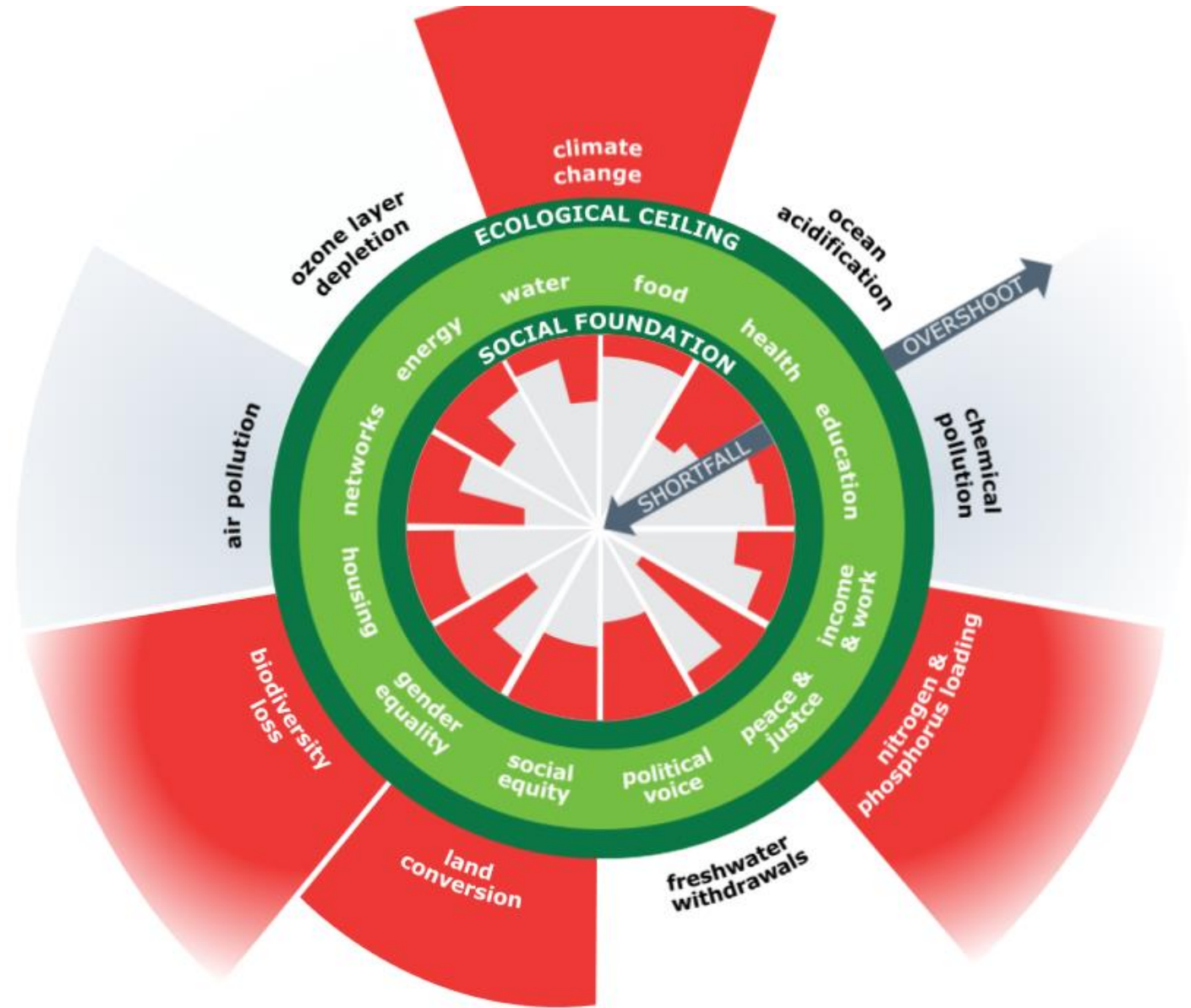
Context: doughnut economics

Credit:

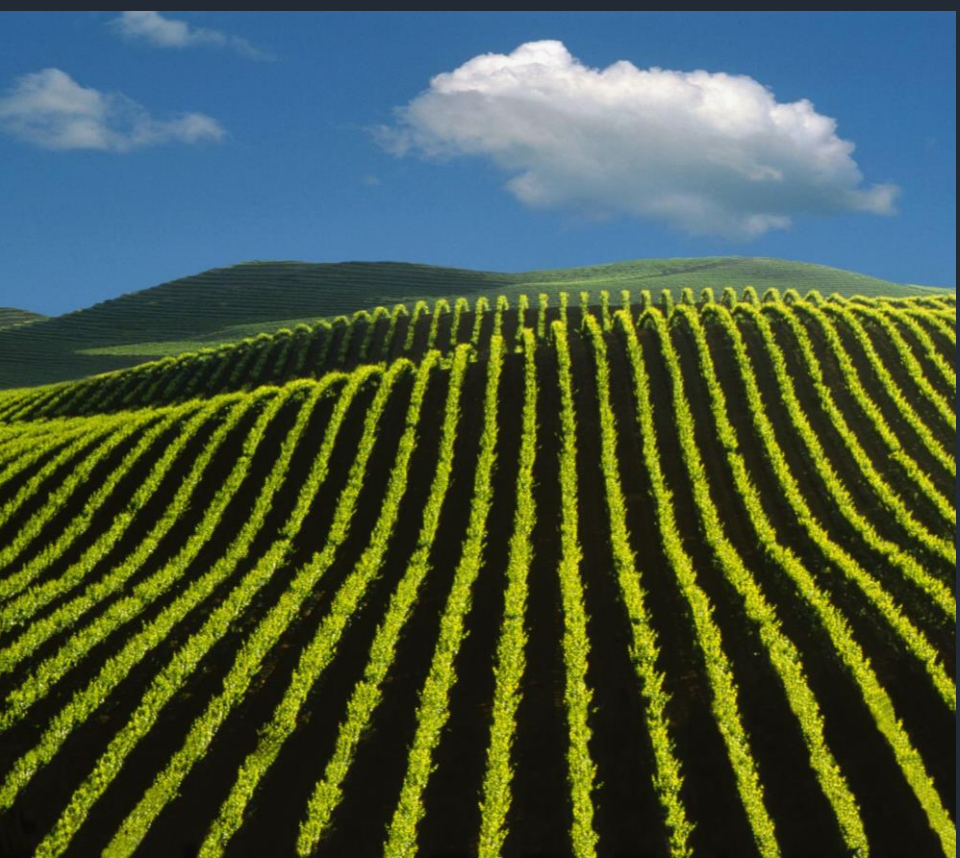
Kate Raworth (2012, 2017)

Doughnut economics action lab

(doughnuteconomics.org)



Context: wine pioneers, influencers



- 1950s: Weingut Sander (Pfalz)
- 1970s: Nikolaihof (Wachau), Dom. Eugene Meyer, Dom. Pierre Frick (Alsace), Seddlescombe (UK), Cotturi (California)
- 1980s: Dom. Lapierre (Beaujolais), Frey Vineyards, Fetzer (California), Coulée de Serrant (Nicholas Joly), Domaine Huet (Loire), Domaine Leroy, Domaine Leflaive, DRC (Bourgogne), Badia a Coltibuono (Toscana), Albet i Noya, Torres (Spain)
- 1980s Vintage Roots (UK), Kermit Lynch, Whole Foods (USA)
- 1990s: Chapoutier (Rhône), Zind Humbrecht, Marcel Deiss (Alsace)
- ...and now, even...
- 2018: Ch Latour (following Pontet Canet, Smith Haut Lafitte)



Wine consumers: organic sales trends

- Organic wine grew 5%+ CAGR in 2017-2022 when non-organic wine flat or declining. Projected to double in next decade, outgrowing non-organic. (IWSR 2023)
- However, organic wine market is just 3% of global wine sales, despite 6% of global vineyards being certified organic.
- Established consumer trends include increasing 'connection to sustainability' (UK, USA), and 'less but better' (IWSR 2023)
- France, Germany, Italy and USA leading markets. (Spain a major producer and exporter but not consumer of organic wine).

(IWSR 2023, Moscovici et al 2022, Chi et al 2021, Boncinelli et al 2021, Szolnoki and Hauck 2019, Jorge et al 2019, Jones and Grandjean 2019, 2017), Sarabia-Andreu and Sarabia-Sanchez 2017)



Organic wine consumers: patterns and behavioural influences

- Traditional producer country markets typically more willing to pay more for 'eco friendly' (expected attribute), 'healthier' 'tastier' (not consistently expected attributes)
- Organic typically appeals more to younger, wealthier, more educated, higher-involvement segment. Not necessarily correlated with their purchase behaviour and motivations for vegetables, meat (especially if motivated by expectations of product taste or personal health)
- ...But also 12-30% segment of high-eco customer segments identified to behave differently in Italy, USA ('LOHAS'), Japan and Germany. Different route into category than converting wine drinkers.
- Motivations vary. E.g. 'altruistic' (environment, animal welfare) leads in Germany, but 'perceived consumer health, and positive impact of independent certification on product trust leading factors in China.
- 'Generation X' negative image of organic wine identified in several markets.
- 'Attribute non attendance'. Paradox of customer more likely to chose the organic option when customer does not notice that it is labelled organic. Also availability heuristic when other information confuses.

(IWSR 2023, Moscovici et al 2022, Chi et al 2021, Boncinelli et al 2021, Szolnoki and Hauck 2019, Jorge et al 2019, Jones and Grandjean 2019, 2017), Sarabia-Andreu and Sarabia-Sanchez 2017)



Wine retailers

Some examples of pro-organic retailer priorities:

- The Wine Society: Sustainability Plan (UK)
- Systembolaget: Responsibility and Sustainability Initiatives (Sweden)
- Whole Foods: Environmental Stewardship (USA/multinational)
- LCBO: Spirit of Sustainability (Ontario, Canada)

Common themes are:

- Organic products is one part of wider sustainability, together with carbon footprint (packaging, supply chain), environmental impact (resource use, waste, circular economy) and social sustainability (diversity, inclusion, fairness).
- Openness to various certification standards (including sustainable)
- Increasing focus on reducing 'schedule 3' Greenhouse Gases (GHGs).
- Customer health not mentioned, no claim (pretence?) that organic is healthier

An aerial photograph of a vineyard on a hillside. The rows of grapevines are lush green and arranged in neat, parallel lines that follow the contours of the slope. The ground between the rows is a mix of brown soil and dry leaves. In the background, the hillside becomes more densely forested with a darker green canopy.

Producers: global trends

- Certified organic vineyard area CAGR of 13% over last 15 years
-Or from about 2% to about 6% of total.
- Three leading countries account for 34% of global vineyards, but over 75% of global organic vineyards
- These are Italy, France and Spain (each with 12-15% now certified Organic).
- Austria also 14% certified organic
- Non-European Countries (especially New Zealand, Australia, South Africa) more likely to adopt 'sustainable', achieving more complete industry adoption. E.g. 96% of New Zealand vineyard area and 90% of wine volume is certified SWNZ

EU tighter REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) legislation likely to impact. Currently being debated following European Green Deal 2020 –watch this space.



Producer stories

Chateau Pontet Canet (Bordeaux)

- Mediocre wines in 1970s, 80s
- ‘everyone’s favourite super second story’ (Jane Anson, Inside Bordeaux, 2020)
- Alfred Tesseron mid 1990s personal vision of ecological approach to vineyard management. 1994 ‘renaissance’ vintage. Biodynamic since 2010.
- Price increase (release price doubled 2005 to 2009)
- Quality increased (regularly scores similar to the best of Bordeaux)

Emiliana Organic vineyards (Chile)

- How to change? Get help!
- 1998 ISO 14001 Ecological Management, achieved 2001, first organic wines 2003
- Demeter 2006
- ...then TuvSud (Carbon Neutral accounting and strategy), vegan and now (2023) ‘Certified regenerative organic’

...Fetzer/Bonterra (California), Felton Road (New Zealand), Planeta (Italy), Chapoutier, de Montille, Zind Humbrecht (France), Brundlmayer, Nikolaihof (Austria), Cullen (Australia)...

Organic sake/rice versus organic wine/grapes

Sake challenges

- Rice supply chain (versus estate grapes)
- Rice farming and irrigation water control
- Hot humid climate during growing season –pest and disease pressure?
- High nutrient requirements for rice
- No local biodynamic certification or specific recognition of sake (?)

Sake strengths:

- Japan highly trusted by consumers and businesses, and has recognized organic standards
- Junmai, and no need for SO₂ preservative/microbicide
- No negative image legacy (unlike wine)
- Husk removal and polishing versus use of grapeskin (effect on residues)



Summary

Organic production is part of a wider consumer and regulatory trend towards sustainability.

It is one of several methods to achieve to other ends (not an end in itself). Consider sustainability/regeneration, GHGs...

Evolving national laws and certifications, but tendency is towards equivalency (or at least mutual recognition)

'Organic' covers processing (brewing) as well as farming.

Increasingly, the most prestigious wine producers are organic.

...however...

Signals from consumer demand and willingness to pay (WTP) are mixed

It is not always simple to practice and to comply with certifications, auditing and labelling requirements



Final thoughts

- Organic, biodynamic or regenerative/sustainable?
- Clarify your motives and priorities (financial, ethical)
- Adapt messaging to target market (China, Germany)
- Demeter Japan?