Biosynthetics E-Learning Series Part 2:
Feedstock Sustainability Standards

Roundtable for Sustainable Biomaterials (RSB)

July 9, 2019 at 10:30 EDT/ 16:30 CEST (45 minutes)



Agenda

- Welcome
- Presentation by RSB
- Interactive part - Q&A
- Summary

Welcome to the Biosynthetics E-learning Series

Biosynthetics can play an important role in **replacing fossil-based resources** with renewable feedstock. At the same time, there are **various sustainability challenges** also associated with the use of renewable feedstock.

The Biosynthetics E-Learning Series will have a closer look at different **sustainability standards** which may provide solutions in order to transition and scale the uptake of more sustainable biosynthetics.

Introduction of today's guest speaker

Elena Schmidt
Standards Director

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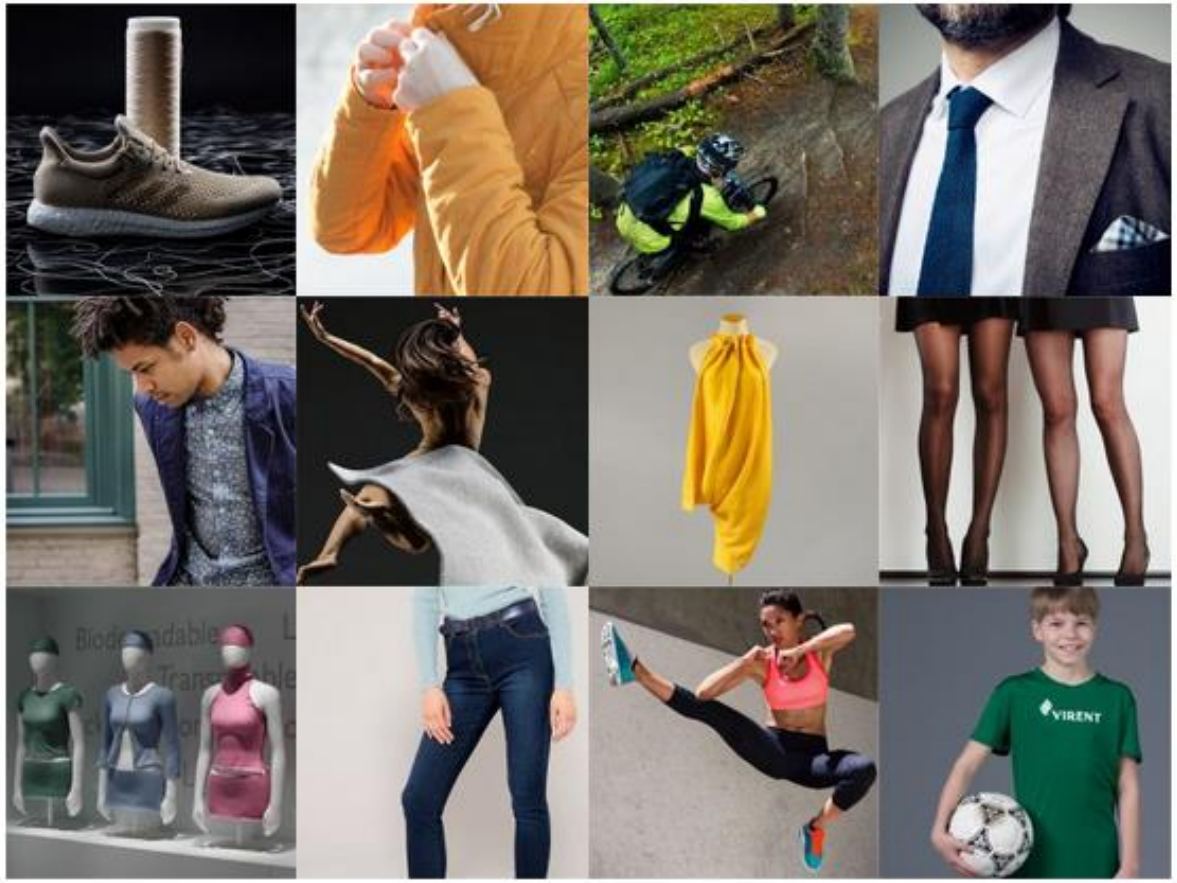
Learning More About YOU – Quick Polls



https://aboutbiosynthetics.org/

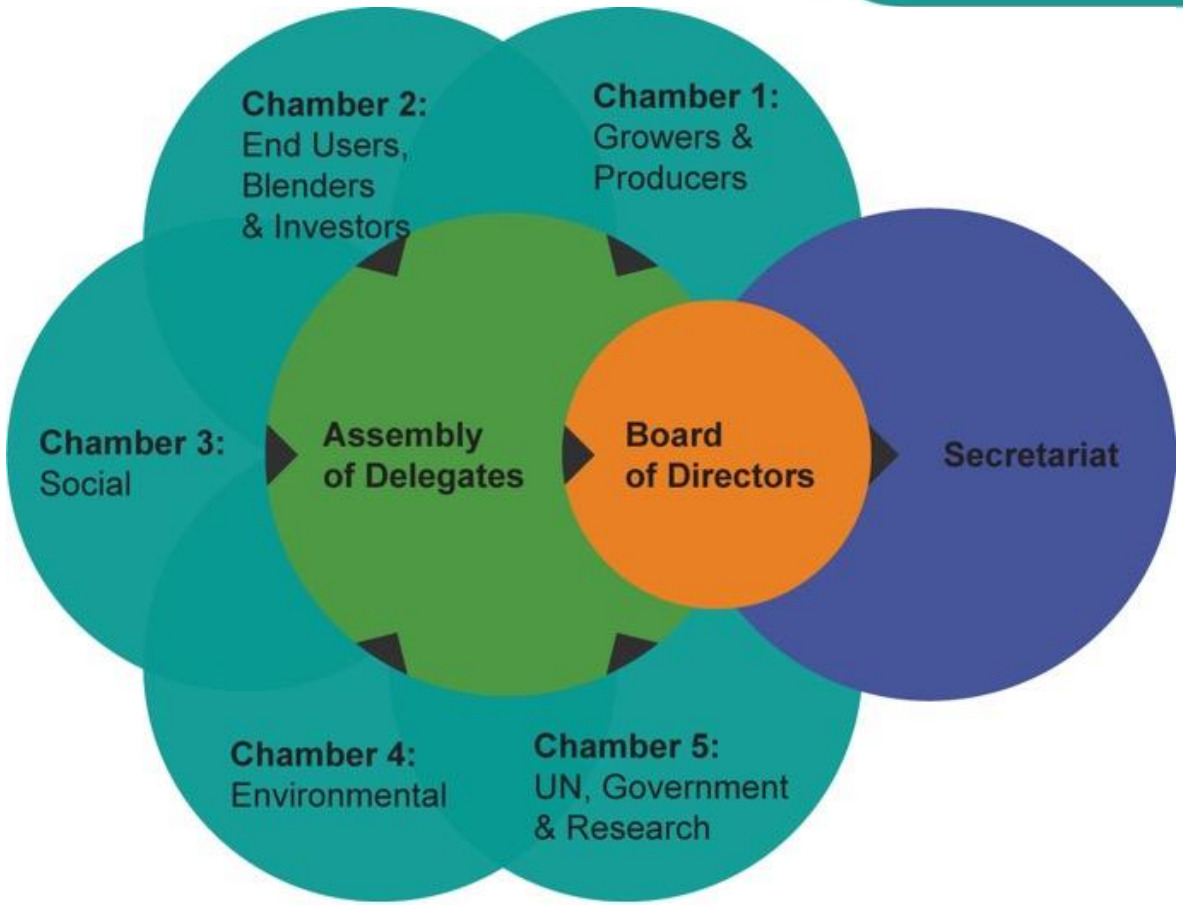
1. What type of company do you work for?
2. How would you assess your expertise with regard to feedstock sustainability standards for biosynthetics?
3. Is your company buying and/or selling biosynthetics?

RSB: An Introduction

Elena Schmidt | **Standards Director** | Roundtable on Sustainable Biomaterials

MEMBER GOVERNANCE

83	Members
32	Countries
5	Chambers
15	Chamber Delegates



Our Member Community

1	Committed to food security, rural development and protection of ecosystems
2	Developed and approved the 12 principles and the most **robust** standards for Advanced Fuels and Advanced Products
3	Actively drive the bioeconomy through innovation & business partnerships
4	Committed to solving social and environmental issues
5	Working to achieve the UN Sustainable Development goals

Principle 1
Legality

Principle 2
Planning, Monitoring & Continuous Improvement

Principle 3
Greenhouse Gas Emissions

Principle 4
Human & Labour Rights

Principle 5
Rural and Social Development

Principle 6
Local Food Security

Principle 7
Conservation

Principle 8
Soil

Principle 9
Water

Principle 10
Air Quality

Principle 11
Use of Technology, Inputs & Management of Waste

Principle 12
Land Rights

MEMBERS
At a glance

Why Get Sustainability Right?

Benefits

- Risk management
- Operational efficiencies
- Security of supply
- Credibility
- Differentiation from competitors
- Market opportunities

The Sustainability Journey

1. Compliance

- Regulations
- Market access

2. Improvement

- Identify & manage risks
- Apply best practice across supply chain

3. Leadership

- Understanding new issues
- Engaging consumers and supply chain
- Learning from industry
- Influencing debates /policy

CERTIFICATION OF ADVANCED PRODUCTS

RSB's Approach for Advanced Products
A vision for a sustainable economy

Create Impact Globally

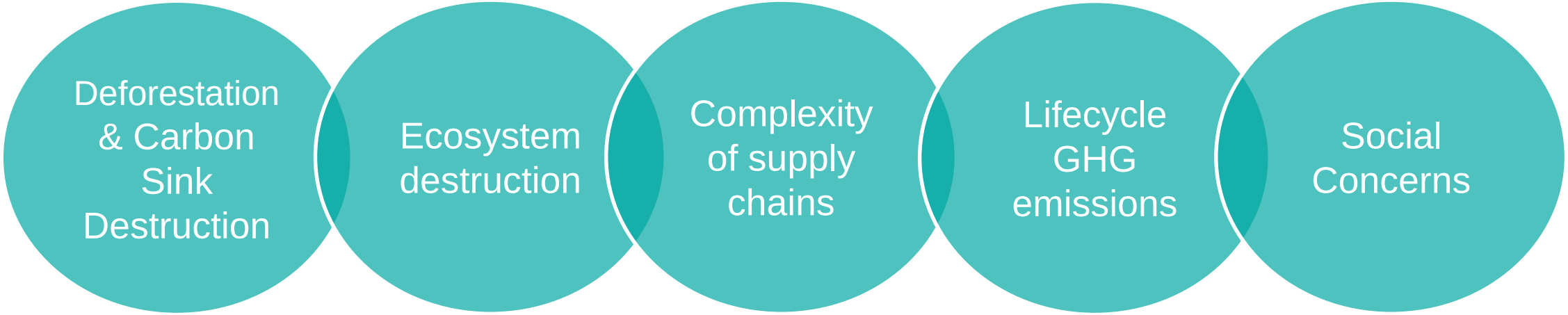
Provide practical solutions

Support Circularity

Support business to make more sustainable choices

Apply RSB criteria for non-energy products

Risks for Advanced Products



What is an Advanced Product?

Non-Energy

- **Bio-based** → agricultural, forestry, marine or aquatic feedstocks, including production residues and end-of-life products
- **Recycled Carbon** → CO2 from exhaust gases, end-of-life plastics, end-of-life tyres, other fossil carbon waste or residue streams
- **Bio-based and/or Recycled Carbon process in combination with virgin fossil resources** → Either of the above

Why Are Advanced Products Important?

Crucial building blocks of a sustainable economy

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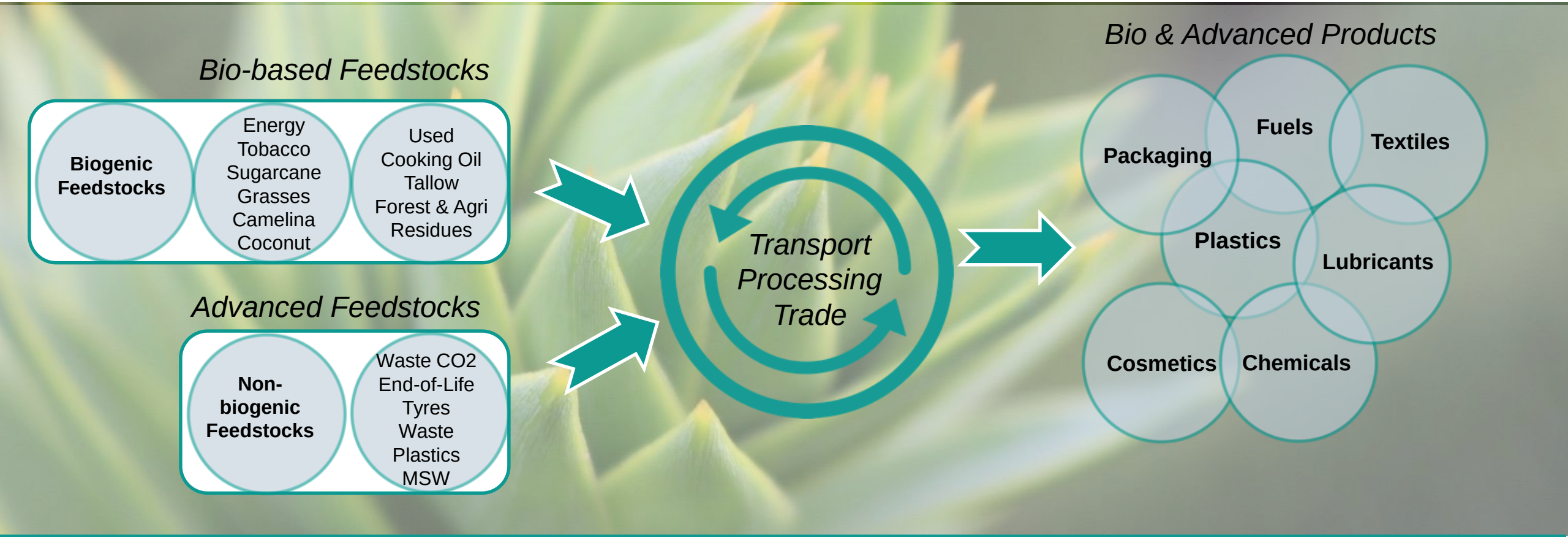
But can these products fulfil their promises?

RSB Certification

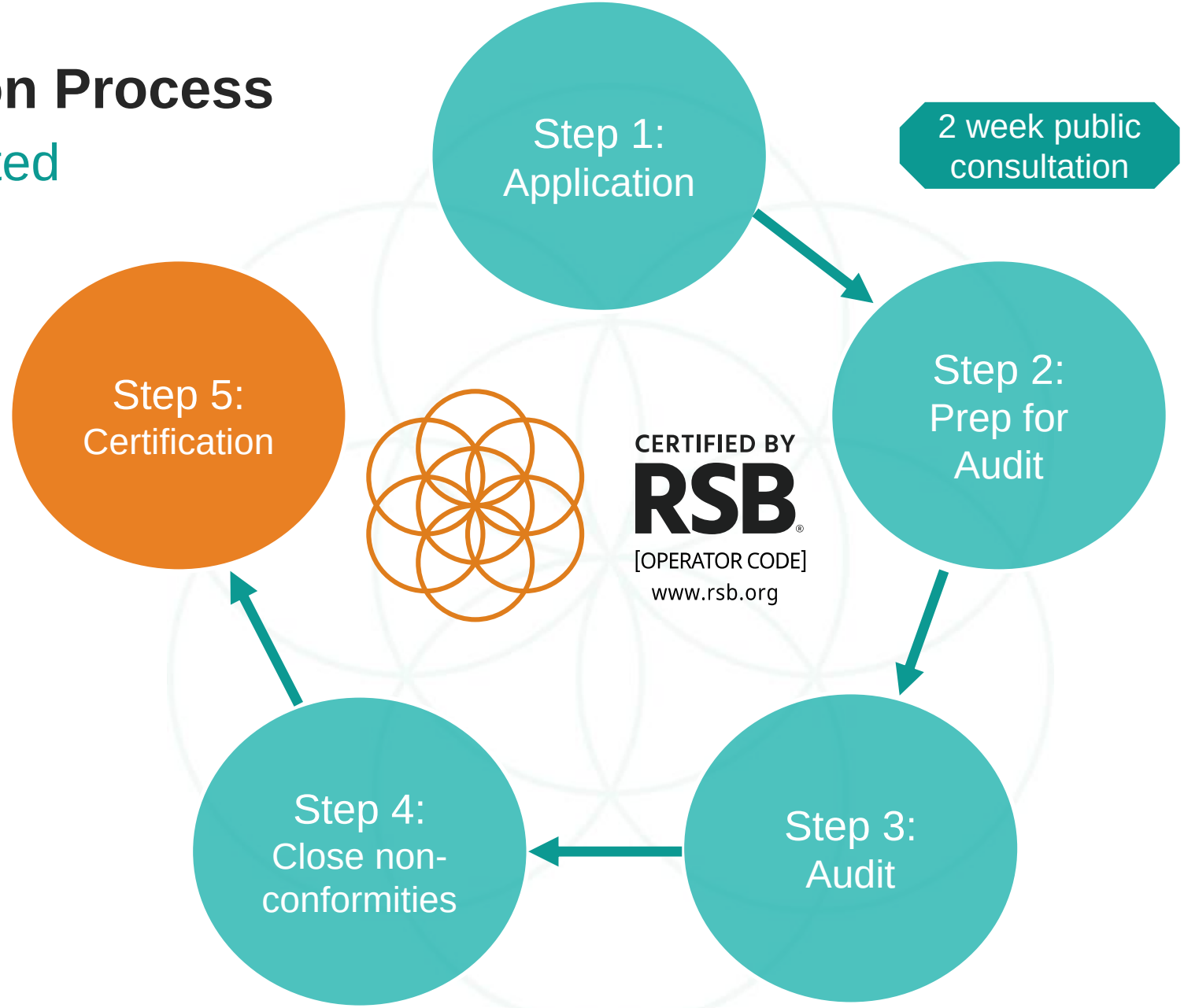
Feedstock & product agnostic



full supply chain certification

Certification Process

Getting Started



Who Is Involved

Certification Role Players

TRACEABILITY OPTIONS

- **Identity Preserved:** Do not mix batches from different origins
- **Product Segregation:** Do not mix certified and not certified batches
- **Mass Balance**: Physical mixing is allowed, but keep separate records of certified and not certified material
- **Book & Claim:** Allows the separation of the claim from the material

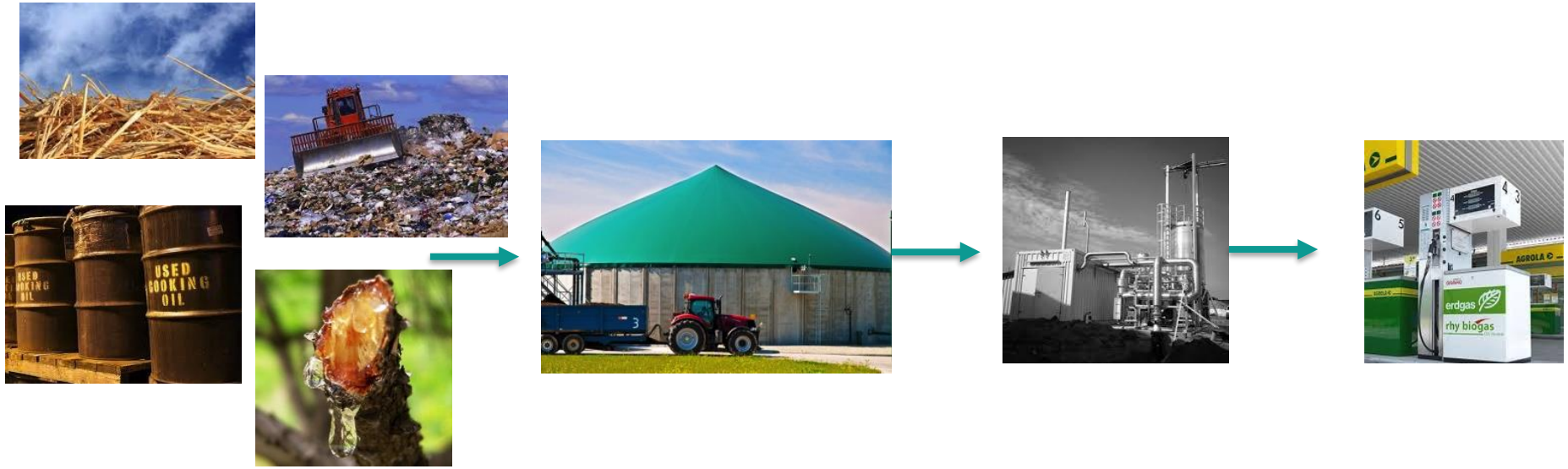
Chain of Custody

Crop-based Supply Chains

Certification from field to the final product

Chain of Custody

Residue-based Supply Chains



Risk-based sampling:

- Traceability
- Eligibility
- GHG = 0
- Specific sustainability criteria apply

RSB Standard for Advanced Products

Powerful claims for cutting edge organisations

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SMART SUSTAINABILITY IN PROJECT DESIGN

HOW TO BE SMART

Making the right choices from Day 1

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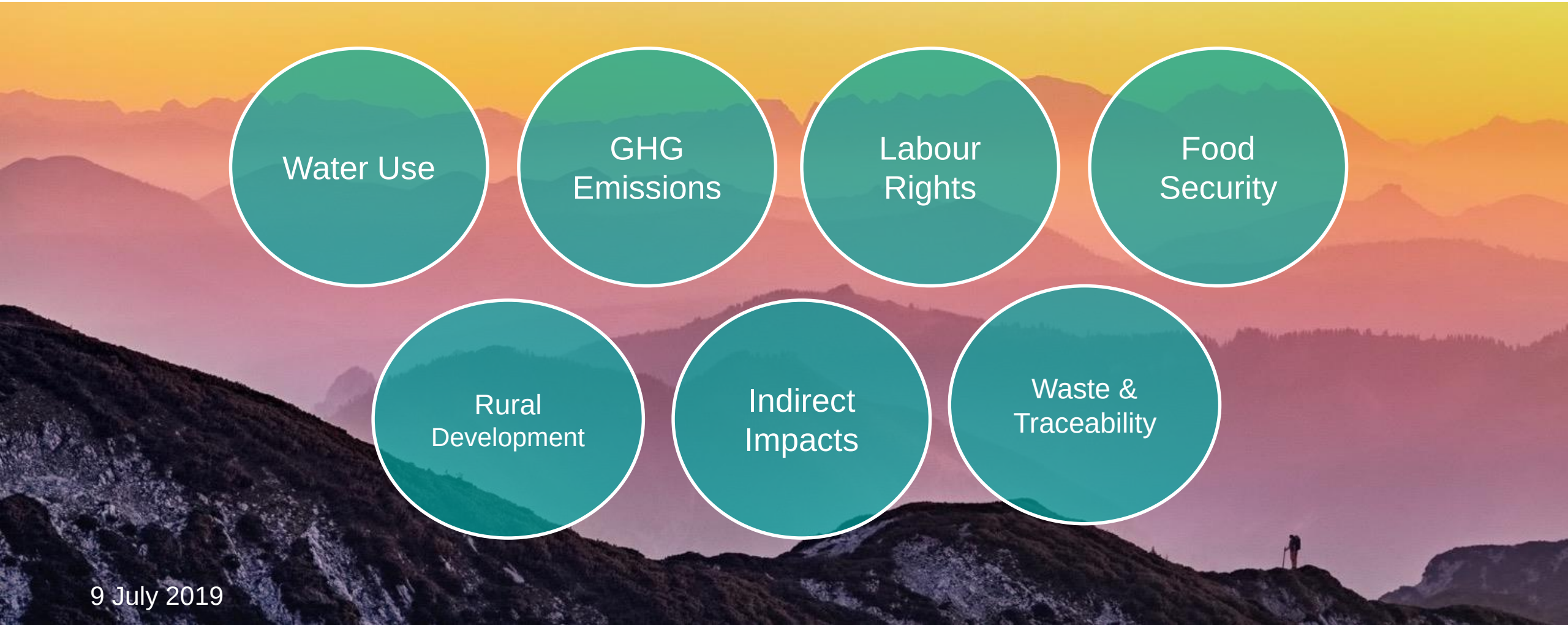
RESOURCE ASSESSMENTS

The foundation of smart sustainability

Real sustainability is built into the foundations of the project!

ISSUES TO BE CONSIDERED
Knowing the risks



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WATER USE

Factors We Consider

Community Water Access & Rights

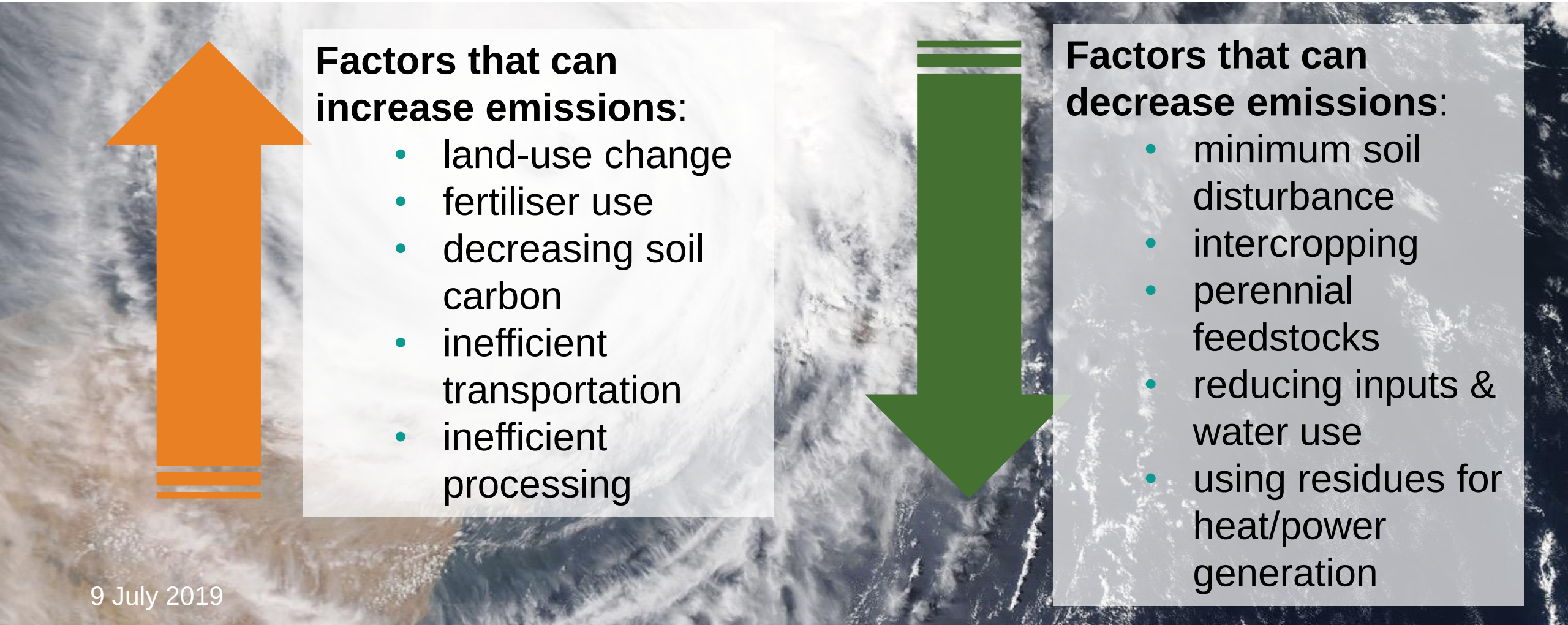
Maintaining & Enhancing Water Quality

Conservation of Surface & Groundwater

RSB requires a water management plan is in place to ensure that water quality, access and rights are ensured

GHG Emissions

The factors involved



Factors that can increase emissions:

- land-use change
- fertiliser use
- decreasing soil carbon
- inefficient transportation
- inefficient processing

Factors that can decrease emissions:

- minimum soil disturbance
- intercropping
- perennial feedstocks
- reducing inputs & water use
- using residues for heat/power generation

WORKERS RIGHTS

Sustainability is **not** just about the environment

Good practices:

- No forced labour / child labour
- Right to associate and collectively bargain
- Free from discrimination
- Fair wages and conditions
- Health and safety
- Dispute mechanisms
- Third party contractors

LOCAL FOOD SECURITY

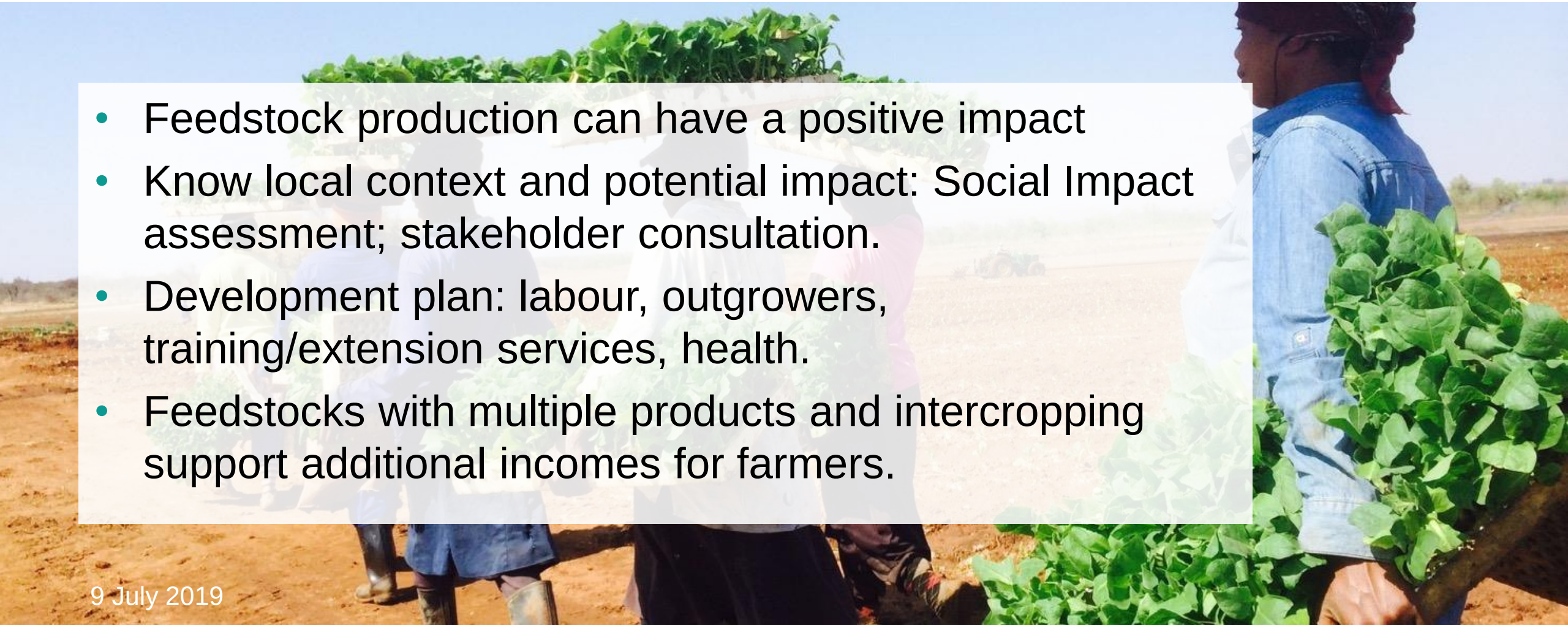
Are non-food feedstocks better for food security?

Can fuel / materials feedstocks support food security?

Good practices:

- What is the local context?
- Can food production be improved?
- Food development plan

RURAL DEVELOPMENT



- Feedstock production can have a positive impact
- Know local context and potential impact: Social Impact assessment; stakeholder consultation.
- Development plan: labour, outgrowers, training/extension services, health.
- Feedstocks with multiple products and intercropping support additional incomes for farmers.

Why Choose RSB

Smart Sustainability is Good for Business

THANK YOU!

Elena Schmidt | **Standards Director**
Roundtable on Sustainable Biomaterials

Q&A with Elena Schmidt from RSB

Elena Schmidt
Standards Director

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THANK YOU!

Sophia Opperskalski, Textile Exchange

Sophia@TextileExchange.org
Materials@TextileExchange.org