

FCh



Progress Report: Methodology of Chilean Food & Agriculture LCI Database

Co-authors:

Alejandro Florenzano (FCh)

Michelle Senerman (FCh)

Cristóbal Loyola (FCh)

Mariana Aguirre (FCh)

Sangwon Suh (IERS)

Shivira Tomar (IERS)

Jonas Bengtsson (Edge Environment)

Presenter:

Cristián Emhart

Director Center for Sustainable Production & Consumption

Fundación Chile

10th of October 2014

Contents of this presentation

1. About Fundación Chile
2. Project context and partners
3. The need for this project in Chile
4. Main challenges
5. Methodological definitions
6. Methodology review
7. Next steps



Contents of this presentation

- 1. About Fundación Chile**
2. Project context and partners
3. The need for this project in Chile
4. Main challenges
5. Methodological definitions
6. Methodology review
7. Next steps



Our Mission

- Fundación Chile is a non-profit private corporation whose partners are the Government of Chile and BHP-Billiton – Minera Escondida.
- Our mission is to introduce high impact innovations and to empower human capital, in order to increase Chile's competitiveness, by promoting and developing the economy, through technology transfer and in alliance with local and global knowledge networks.



FCH
FUNDACIÓN CHILE

Center for Sustainable Production & Consumption

-Part of the Sustainability Dept.

-Our Mission:

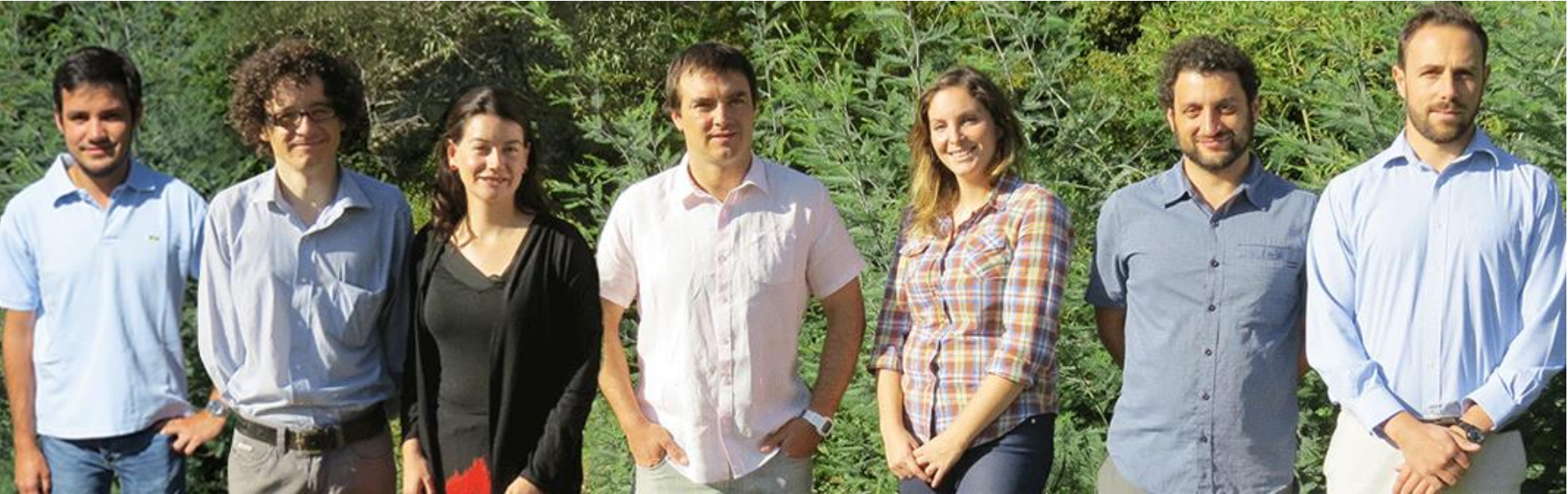
To provide complex information in a transparent and usable manner, giving visibility to the most relevant environmental and social impacts associated with the production and consumption of goods and services, in order to drive innovation and achieve a more sustainable and competitive economy.

Some initiatives:

- LCA databases
- Regional hub of The Sustainability Consortium (TSC)
- TSC researchers
- Verification process of an EPD program
- Iseal alliance subscriber
- Green marketing guidelines



Center for Sustainable Production & Consumption



-Green marketing guidelines





**Todos los consumidores conocerán la verdadera historia detrás de cada producto,
Bienvenido a la era de la transparencia de la información**

FCh
FUNDACIÓN CHILE

**En Fundación Chile movemos la frontera de lo posible
para construir un mejor futuro para nuestro país.**

Contents of this presentation

1. About Fundación Chile
2. **Project context and partners**
3. The need for this project in Chile
4. Main challenges
5. Methodological definitions
6. Methodology review
7. Next steps



ECOBASE

Proyecto apoyado por
CORFO
sueña emprende crece



ECOBASE

ALIMENTOS

Proyecto 13BPC3-19180

Co-ejecutor:



ECOBASE

CONSTRUCCIÓN

Proyecto 13BPC3-19204

Co-ejecutores:



Project partners and products

• **Government: Ministries of environment, agriculture, ProChile and Corfo**

• **Industry: 11 trade associations and their products representing 62% of Chilean food exports**

- Chilean food sector ranks 15th worldwide (US Commercial Service, 2012)
- Up to July 2014, exports have been more than US\$11.000 million (ProChile, 2014)



Dairy
5 members



Salmon
50+ members



Fruit & produce
(exporters)
+750 members



Mussels
50+ members



Wine
90 + members



Pork
30+ members



Fruit & produce
20 members + 7000 +
growers



Processed food
70+ members



Boutique wineries
15 members



Packaging
40+ members



Poultry
5 members



Main components

- Data collection and LCIA methodology
- LCI for 16 products (and their variations)
- LCA tools for the non expert user (industry)



Number of datasets (approx)

- Fruits (30)
- Processed fruits, dairy products and wine (30)
- Animal feed (9)
- Animal production (14)
- Animal processing (10)
- Aquaculture (8)



Contents of this presentation

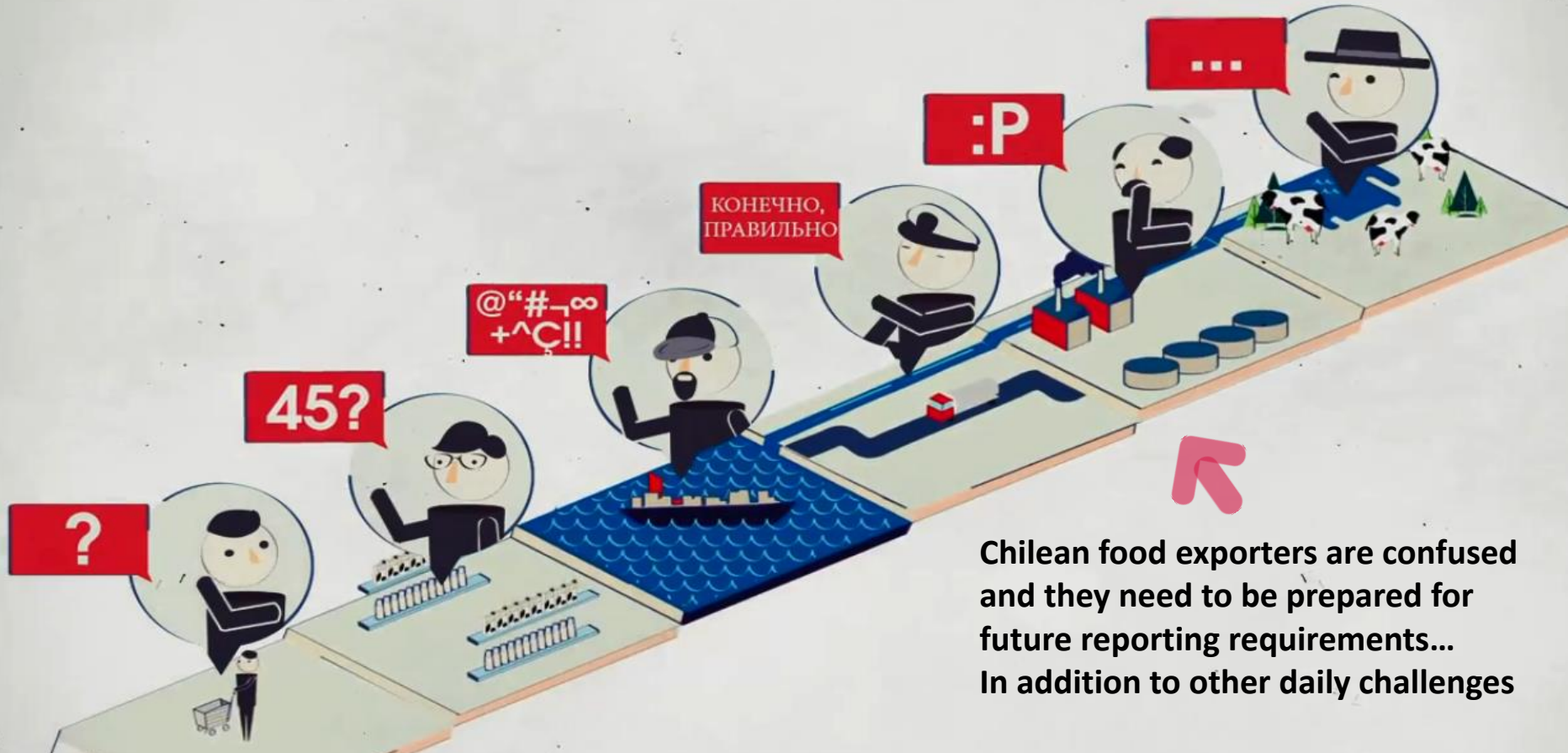
1. About Fundación Chile
2. Project context and partners
- 3. The need for this project in Chile**
4. Main challenges
5. Methodological definitions
6. Methodology review
7. Next steps



The need for this project in Chile



The need for this project in Chile



Chilean food exporters are confused and they need to be prepared for future reporting requirements... In addition to other daily challenges

Contents of this presentation

1. About Fundación Chile
2. Project context and partners
3. The need for this project in Chile
- 4. Main challenges**
5. Methodological definitions
6. Methodology review
7. Next steps



The Challenges

- Competitiveness (usability) vs data quality & scientific rigourosity
- Data availability (national and international)
- Industry committment
- International alignment



Contents of this presentation

1. About Fundación Chile
2. Project context and partners
3. The need for this project in Chile
4. Main challenges
- 5. Methodological definitions**
6. Methodology review
7. Next steps



Methodological definitions (some still under review!)

- Cradle to export port gate LCI
- Unit process level
- Regional level and market level LCI for each product
- Economic allocation of co-products when unavoidable
- Pedigree matrix to evaluate quality of the data



Methodological definitions (some still under review!)

- Important emphasis on
 - Fertilizer emissions (per ecoinvent approach)
 - Pesticides and agrochemicals (Pest LCI)
 - Land use and transformation (Blonk tool & PAS 2050)
 - Water use
- 16 impact categories of ReCiPe characterization method, except:
 - No ionizing radiation
 - Toxicity impacts by Usetox
 - Consumptive water by Riddout and Pfister (2012)




Contents of this presentation

1. About Fundación Chile
2. Project context and partners
3. The need for this project in Chile
4. Main challenges
5. Methodological definitions
- 6. Methodology review**
7. Next steps



Methodology development and review

Developed with: 



National review: Chilean LCA network
2nd version sent



International review: Quantis
1st round of comments



Contents of this presentation

1. About Fundación Chile
2. Project context and partners
3. The need for this project in Chile
4. Main challenges
5. Methodological definitions
6. Methodology review
7. **Next steps**



Next steps...

- Main deliverable are excel based LCA tools for the non LCA expert user
- An embedded database containing several hundred unit processes





Thank you
cristian.emhart@fch.cl