



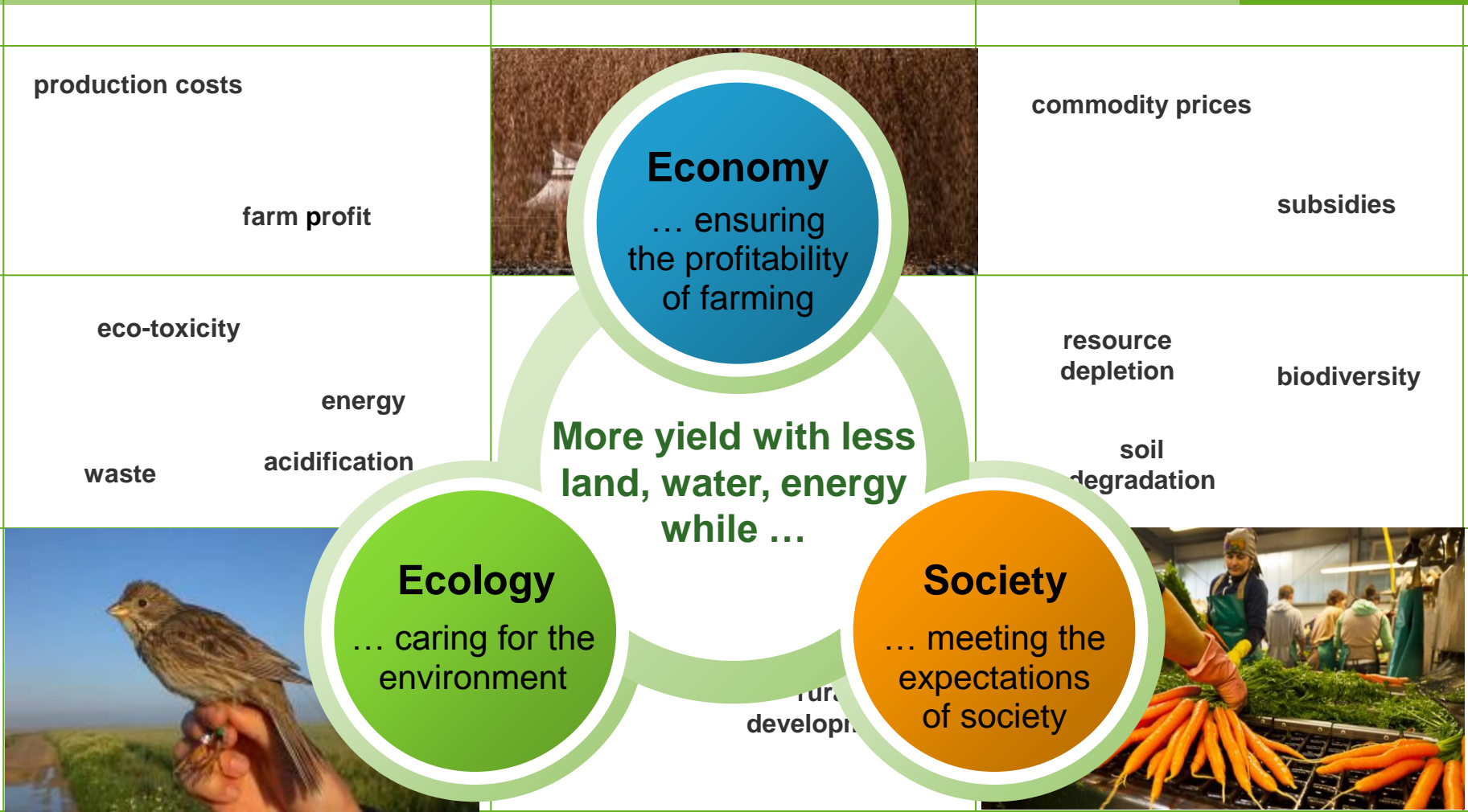
AgBalance™
A clearer view of agricultural sustainability

 **BASF**
The Chemical Company

Celmira Susana Sousa
Governmental Relations Manager Plant Biotechnology South Europe
ELO Workshop, Lisbon May 21st 2012

Sustainable Agriculture

Balancing all three dimensions



BASF`s motivation to develop AgBalance



- increase knowledge on sustainable agriculture and use as guidance for own R&D
- design innovative, more sustainable solutions for our customers
- **foster more rational debate on sustainability in agriculture**

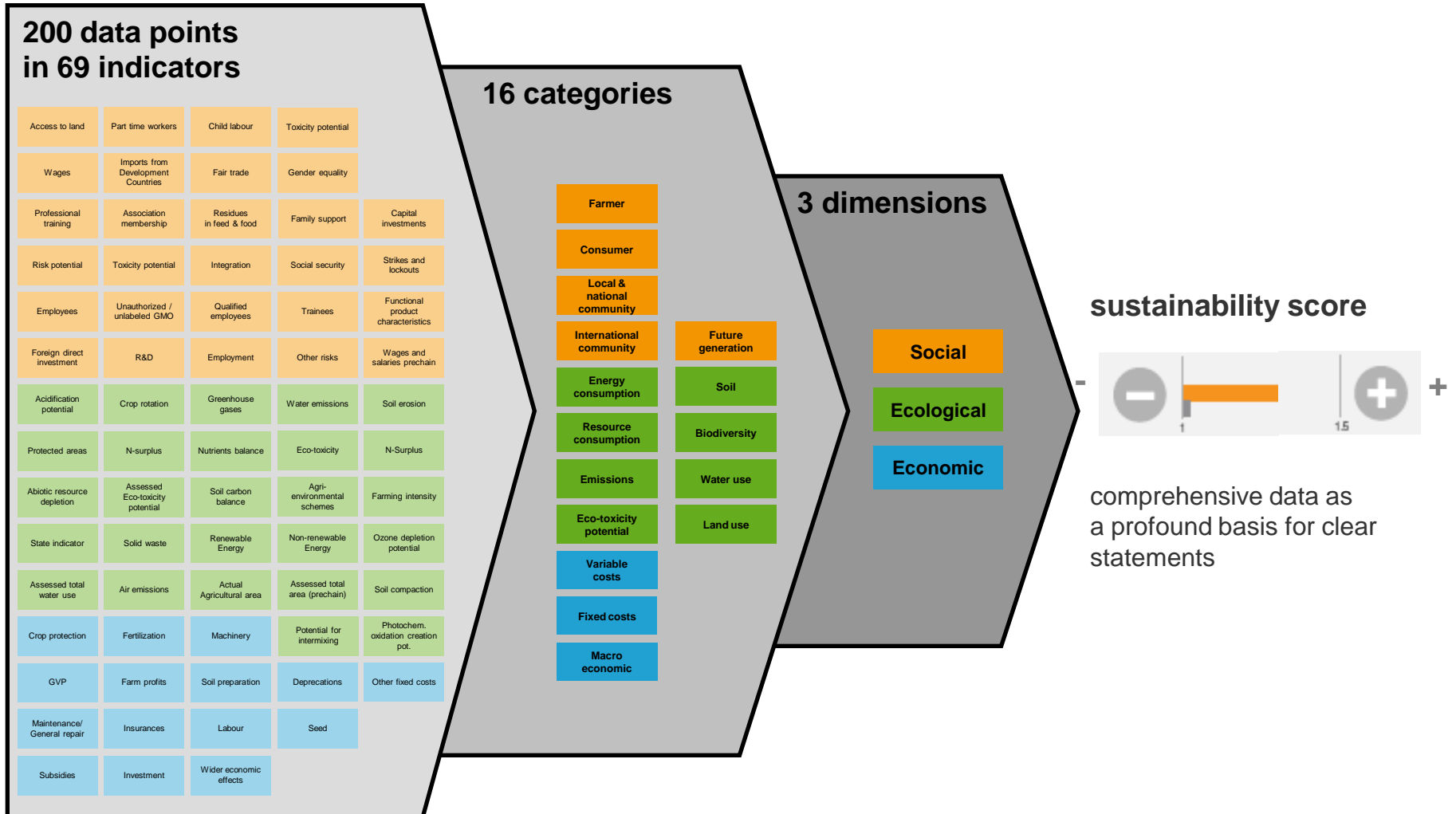
AgBalance Method Development

Measure sustainability in agriculture

- Holistic method for life cycle assessment in agricultural and food value chain production processes
- Helps to make informed decisions on how to manage improvement
- 16 categories, 69 indicators, more than 200 evaluation factors
- Independent assurance of functionality and coherence received by



From complexity to clear conclusions



Case study

Winter oilseed rape in Northern Germany

- Winter oilseed rape production in Mecklenburg-Vorpommern (Northern Germany)
 - Study scope and boundary: 1 ton of rapeseed at field gate
 - Alternatives: Good Agricultural Practice in 1998 and in 2008
 - Data sources: State agricultural research station, KTBL, farmers polls, EUROSTAT
- Yield: 2.7 tons/ha in 1998 and 4.1 tons/ha in 2008 (higher yield potential of OP varieties and introduction of hybrids)

→ Has productivity been increased at costs of sustainability?

Case study

Final result

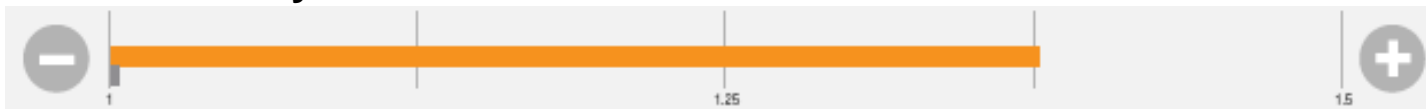


● 1998 ● 2008

- Better working conditions, higher salaries, more international trade
- More efficient use of land, water, energy and resources (such as phosphate and oil)
- Better ecotoxicity profile of modern pesticides
- Higher farm profits & lower fixed costs

Sustainability score

+ 38 %



→ Sustainable intensification of agricultural production is possible.

AgBalance ...

- is a unique method that assesses sustainability in a holistic way considering economic, environmental and social indicators.
- supports farmers in improving the sustainability of their production systems.
- helps all stakeholders to have a fact-based dialogue on sustainability in agriculture.



The Chemical Company