



Sustainability @Crop Science

*Shaping agriculture to
benefit farmers,
consumers and the
planet.*

Bayer AG

Patricio Gunning

Head of Industry Affairs

Cono Sur



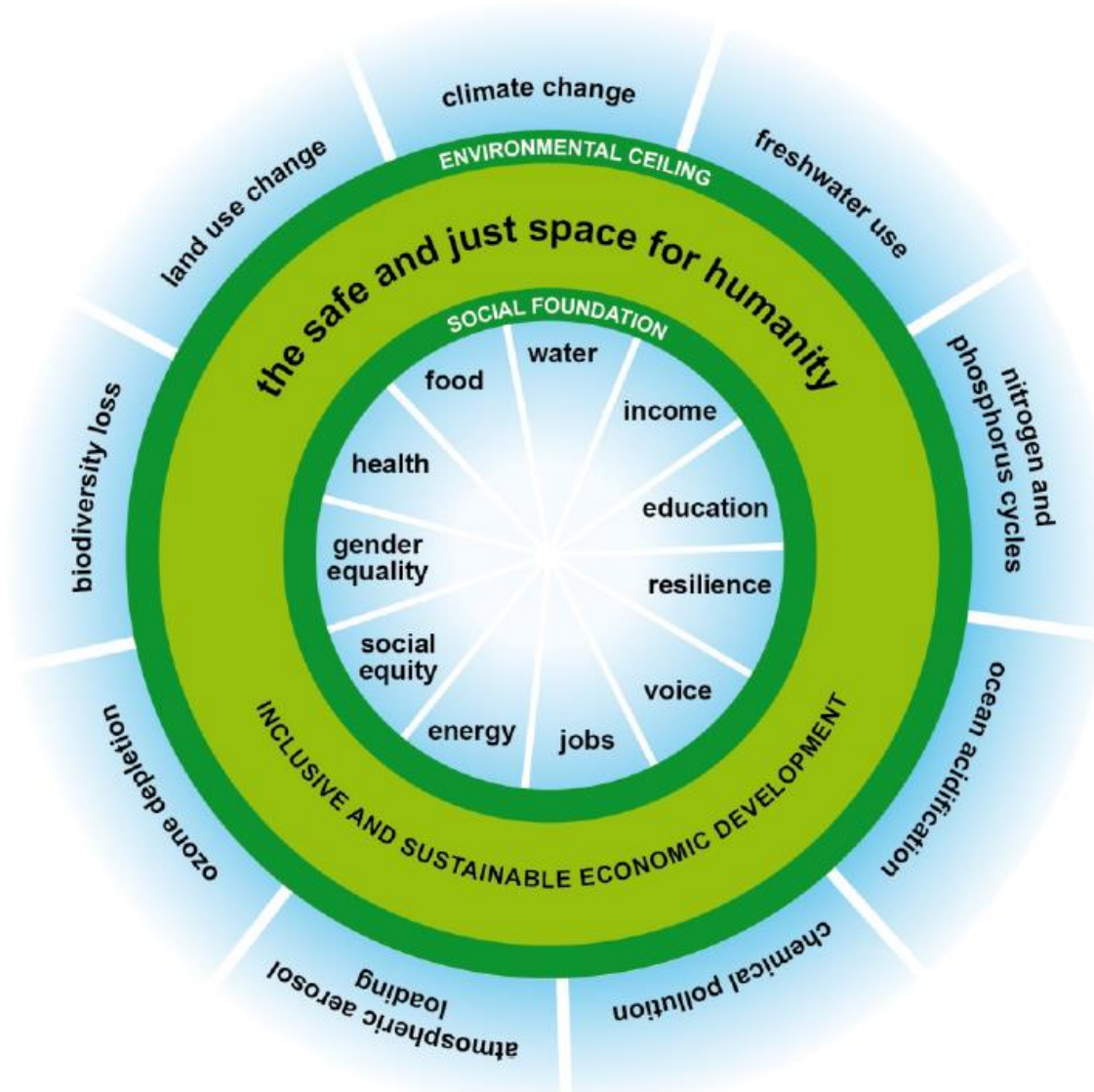
UN Sustainable Development goals

Sustainability is core to all we do!



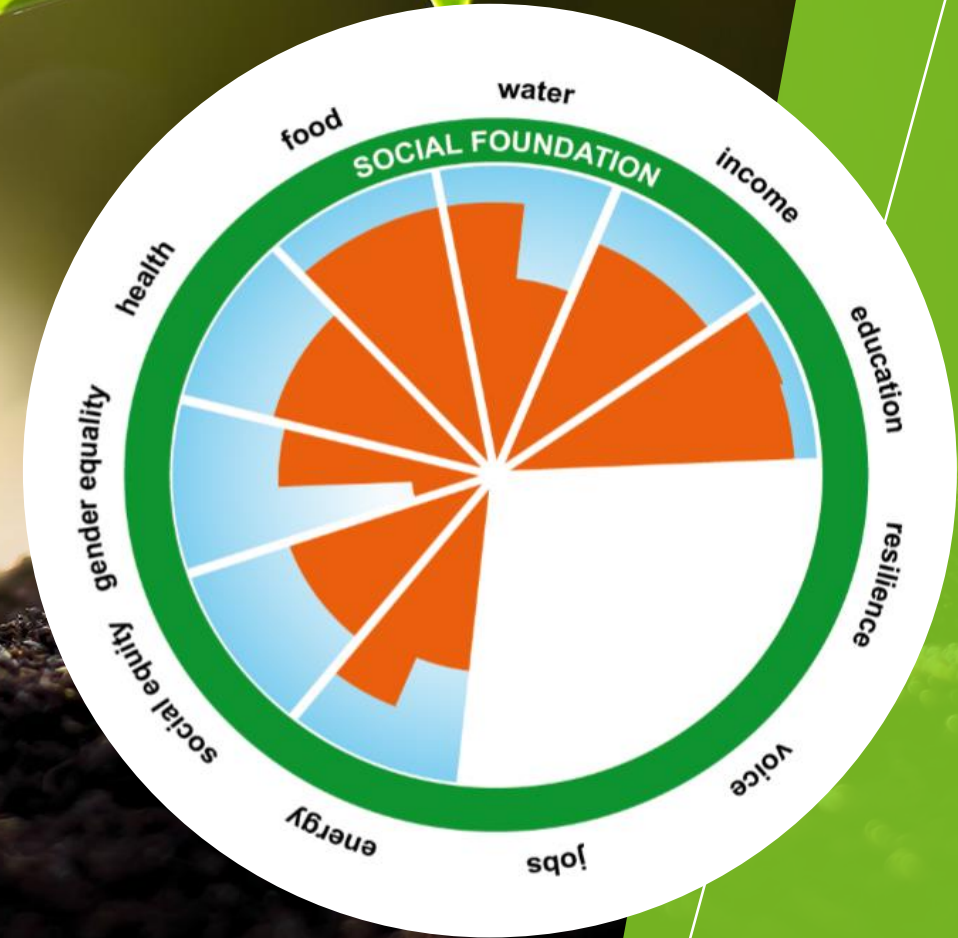
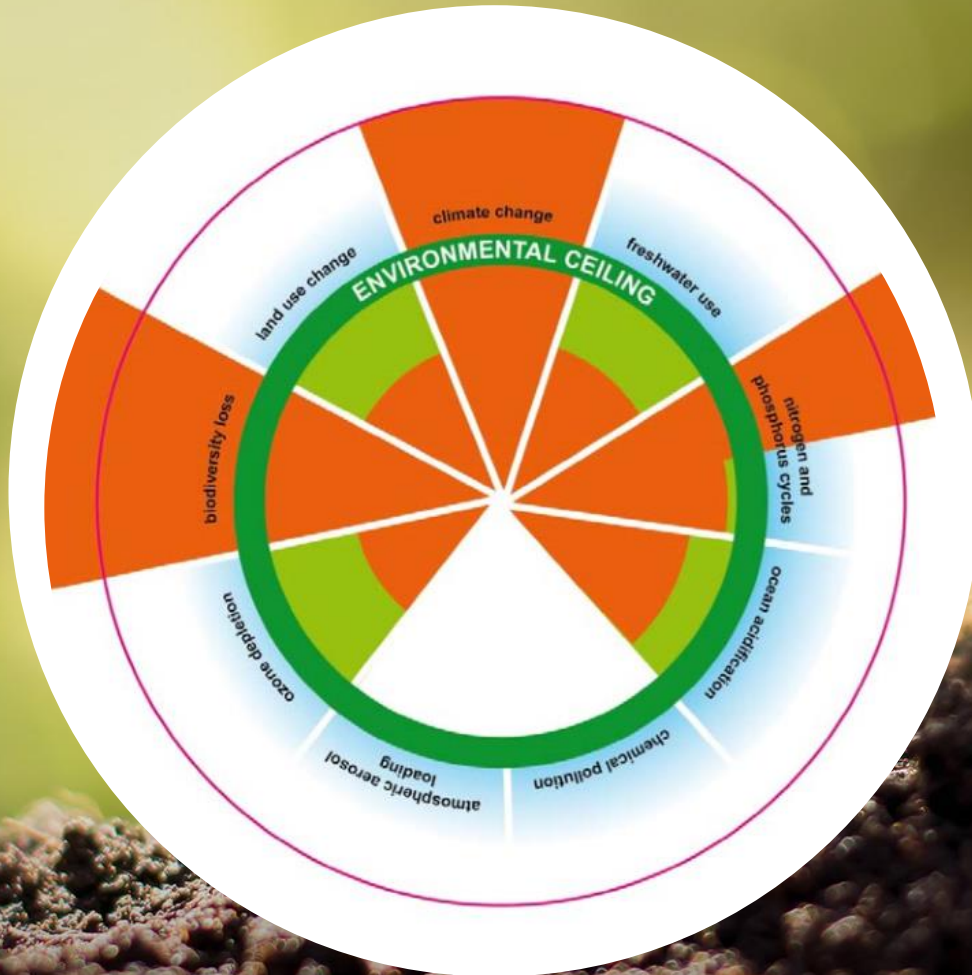
www.UN.com/sustainable-development-goals

The Model of *Planetary Boundaries provides better guidance*



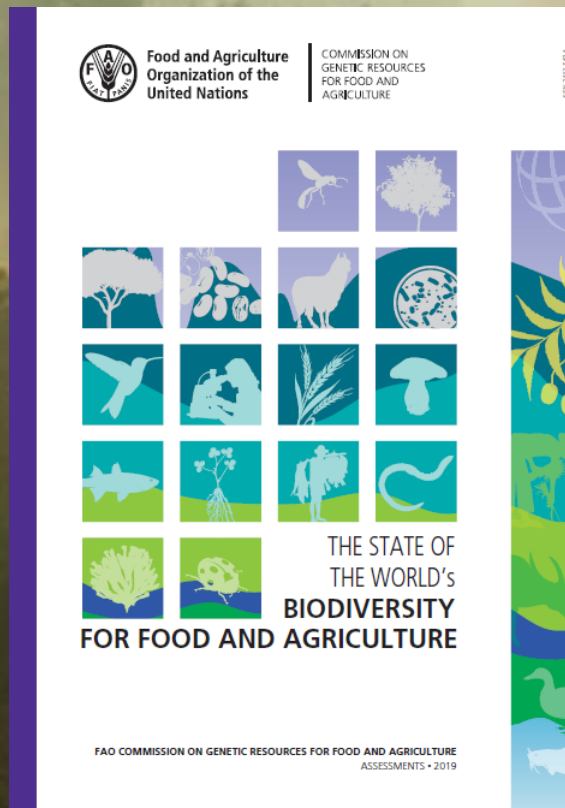
The Model of

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A Global Challenge

Biodiversity



*“The urgency of closing knowledge gaps in this field is underlined by **the mounting evidence that the world’s biodiversity is under severe threat and by the ever-growing challenges facing food and agriculture, including particularly those related to the impacts of climate change.**”*

***Sustainable Intensification:** “Biodiversity for food and agriculture (BFA) can contribute to efforts to increase the output and quality (e.g. nutritional content) of food and other products while using less land, water and other inputs per unit output.”*

<http://www.fao.org/state-of-biodiversity-for-food-agriculture/en/>



Future



2019



2018



2000



1980

Each Plot
=10
Bushel Yield



1940

Sustainable Intensification

// The history of corn production plot demonstrates the great strides we have made in producing more with less, and the opportunity we have to continue to “produce better” through tailored solutions that drive us toward our reduced environmental impact commitment while meeting the needs of a growing population on an increasingly hotter planet.



Enhancing *biodiversity*, over coming *climate change* while enabling *production of safe and affordable food*

Bayer's commitments by 2030

> Advancing a carbon-zero future for agriculture

Reduction in field greenhouse gases
emitted per kg of crops produced

- // Climate-smart practices:
 - // No-tillage
 - // Highly Productive Crops
 - // Cover Crops
 - // Precision Agriculture
- // Share knowledge and technologies

CLIMATE
**FIELD
VIEW**

**JOYN
BIO**

> Produce higher-yielding crops with fewer natural resources and inputs

30% Reduction in impact
on the environment

- // Climate FieldView for precision application of pesticides / fertilizers
- // Tolerant traits help to reduce pesticide use
- // Develop CP portfolio toward products with lower environmental impact



INTACTA RR2 PRO

> Empowering smallholder farmers to access sustainable agricultural solutions

>100M Smallholders benefit e.g. access to education, tailored solutions & partners

- // Enhancing social innovation (e.g. with Better Life Farming)
- // Digital transformation with FarmRise

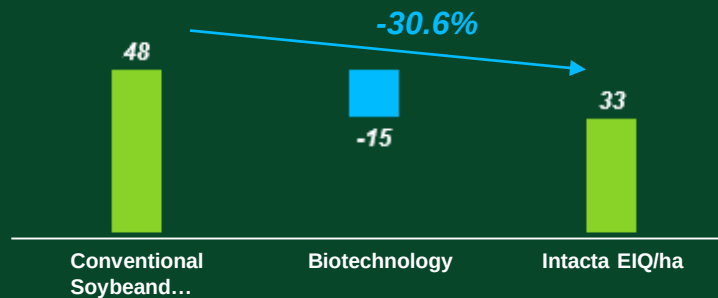


Intacta Soybean Example

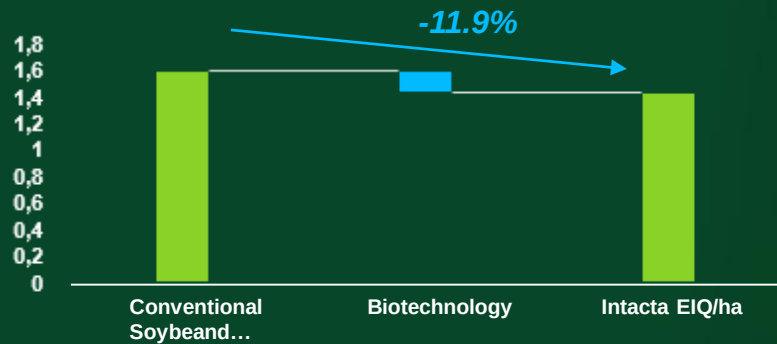
Balance farmers' needs with societal expectations

Increasing yields and profitability while using less inputs thereby reducing environmental impact.

Environmental Impact Quotient per Hectare



Active Ingredient per Hectare





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Thank you!

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