

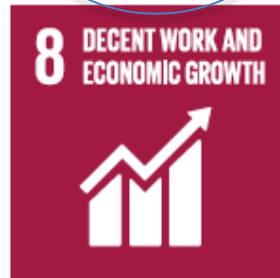
Achieving Sustainable Agriculture

Prof. Jeffrey D. Sachs

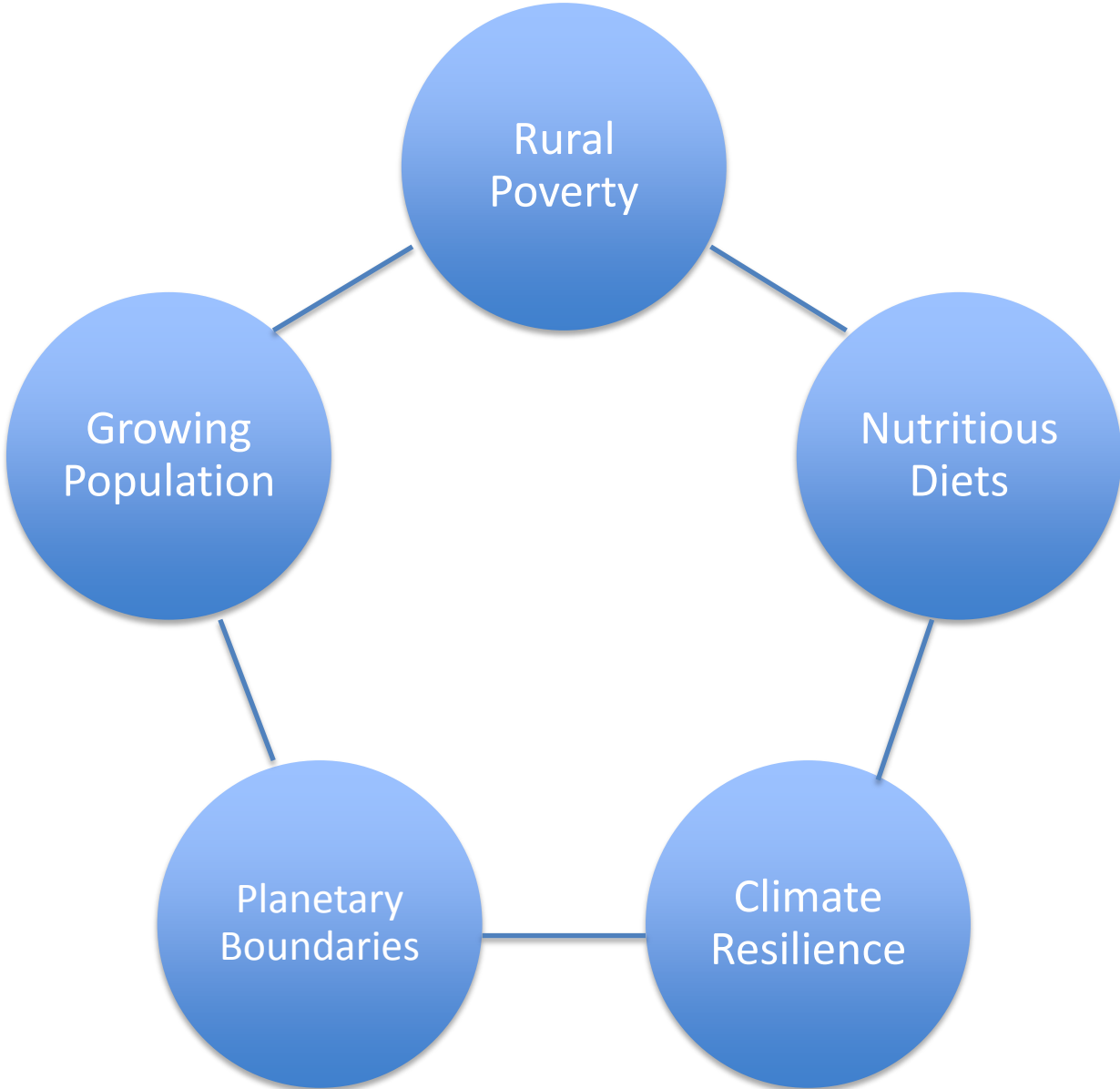
Special Advisor to the UN Secretary-General
On the Sustainable Development Goals

Forum for the Future of Agriculture (FFA)
Brussels, March 22, 2016

THE SDGS WILL OPERATE DURING 2016-2030



GRAND CHALLENGES OF SUSTAINABLE AGRICULTURE SDG 2



GRAND CHALLENGES OF SUSTAINABLE AGRICULTURE (SDG 2)	Main Challenges	Solutions within the Agriculture Sector	Solutions Beyond the Agriculture Sector
Rural Poverty (SDG 1)	100-150 million impoverished smallholder families	Modernization of smallholder farming, stop landgrabs	Skill-based industry and services
Nutrition (SDG 3)	1 billion hungry, 1 billion micronutrient deficiency, 1 billion obese	More production of legumes, fruits, aquaculture, poultry	Reduction of poverty, public education, reform of food industry
Climate Resilience (SDG 13)	Growing risks of climate-related food disruptions	Resilient farming, water management, new varieties	Implement Paris Agreement to remain well below 2°C
Planetary Boundaries (SDG 12, 14, 15)	Agriculture Sector impacts on water, pollution, climate, habitat	Low-till agriculture, precision farming, drip irrigation, etc.	Supply chain management, remote sensing, responsible consumers
Population (SDG 3, 4, 5)	Population > 9.7 billion by 2050, >11.2 billion by 2100	Rural Health and Family Planning Services	Girls' education and empowerment

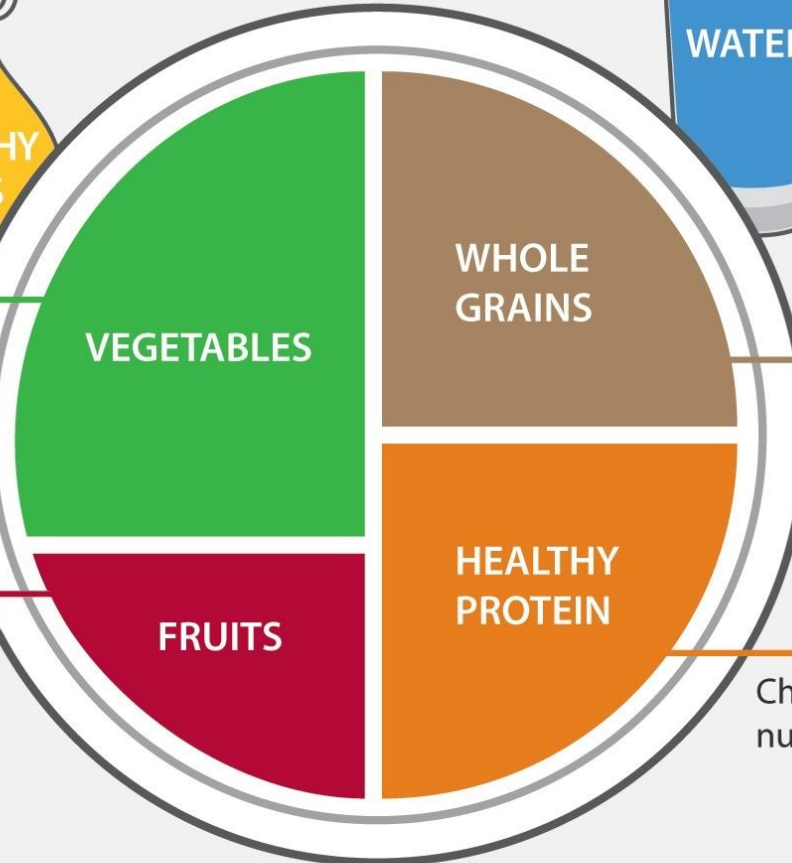
HEALTHY EATING PLATE

Use healthy oils (like olive and canola oil) for cooking, on salad, and at the table. Limit butter. Avoid trans fat.



Drink water, tea, or coffee (with little or no sugar).
Limit milk/dairy (1-2 servings/day) and juice (1 small glass/day).
Avoid sugary drinks.

The more veggies – and the greater the variety – the better. Potatoes and French fries don't count.



Eat a variety of whole grains (like whole-wheat bread, whole-grain pasta, and brown rice). Limit refined grains (like white rice and white bread).

Eat plenty of fruits of all colors.

Choose fish, poultry, beans, and nuts; limit red meat and cheese; avoid bacon, cold cuts, and other processed meats.



STAY ACTIVE!

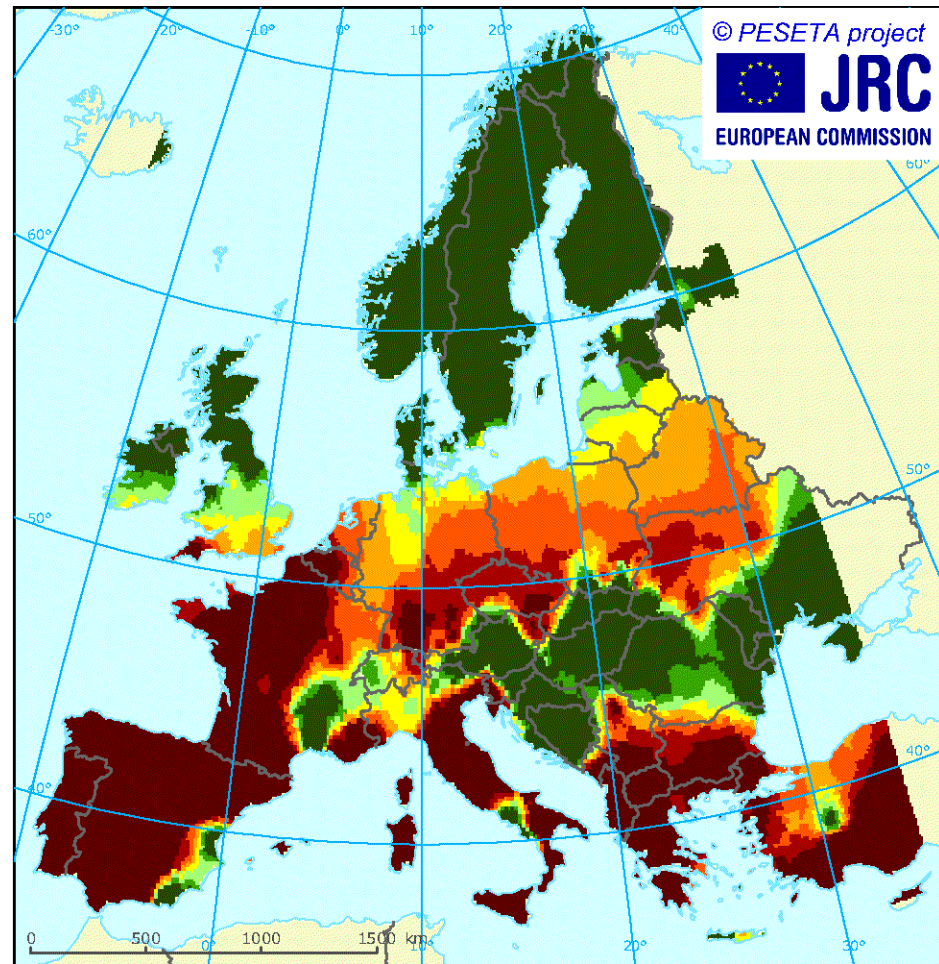
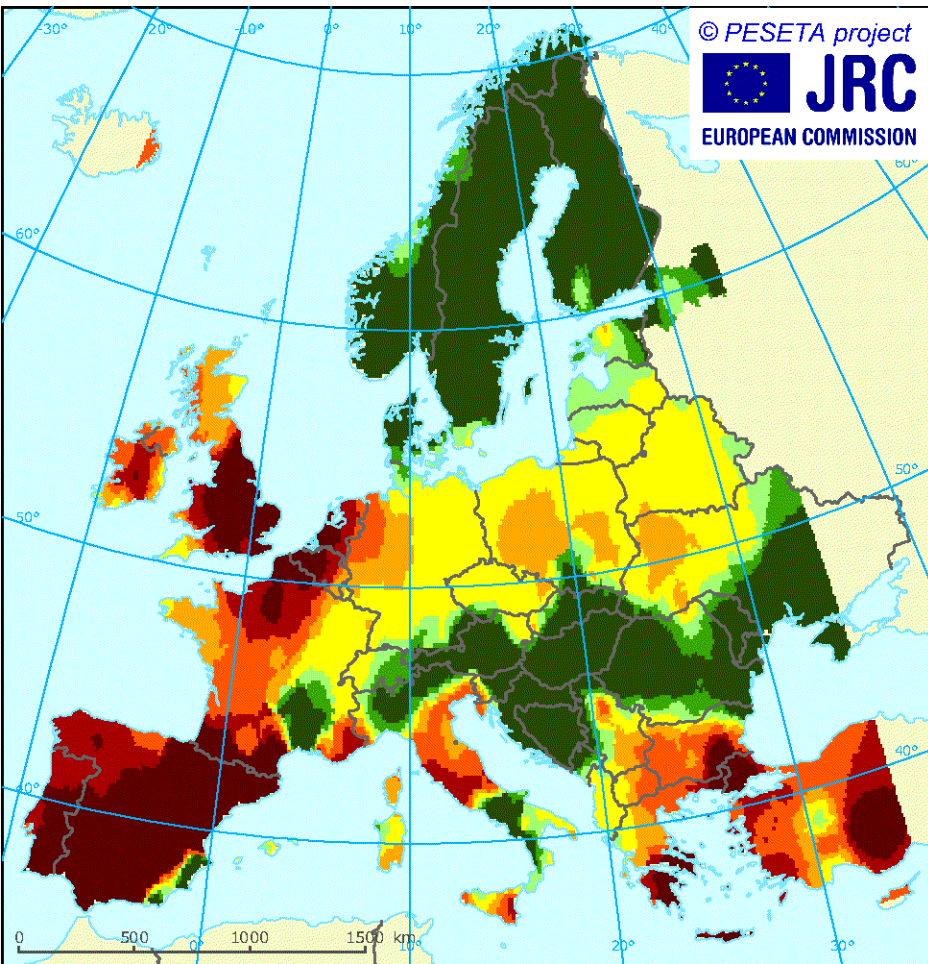
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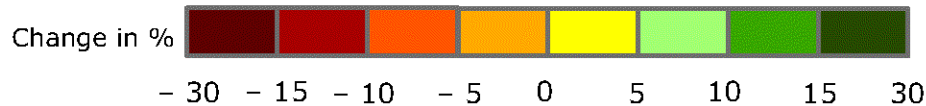
Harvard T.H. Chan School of Public Health
The Nutrition Source
www.hsph.harvard.edu/nutritionsource

Harvard Medical School
Harvard Health Publications
www.health.harvard.edu

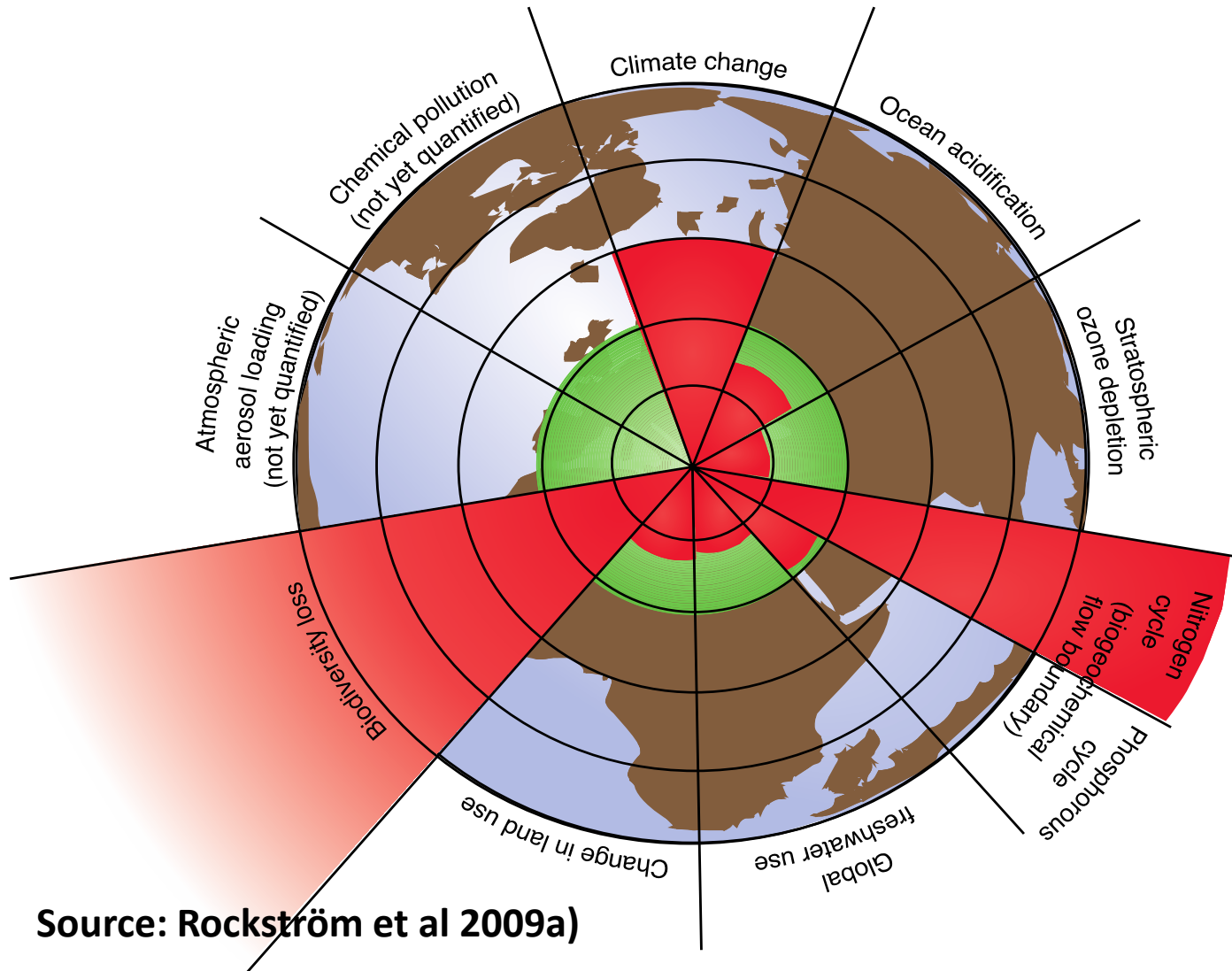




Simulated crop yield changes by 2080s relative to the period 1961–1990 under the HadCM3/HIRHAM (left) and ECHAM4/RCA3 (right) A2 scenario

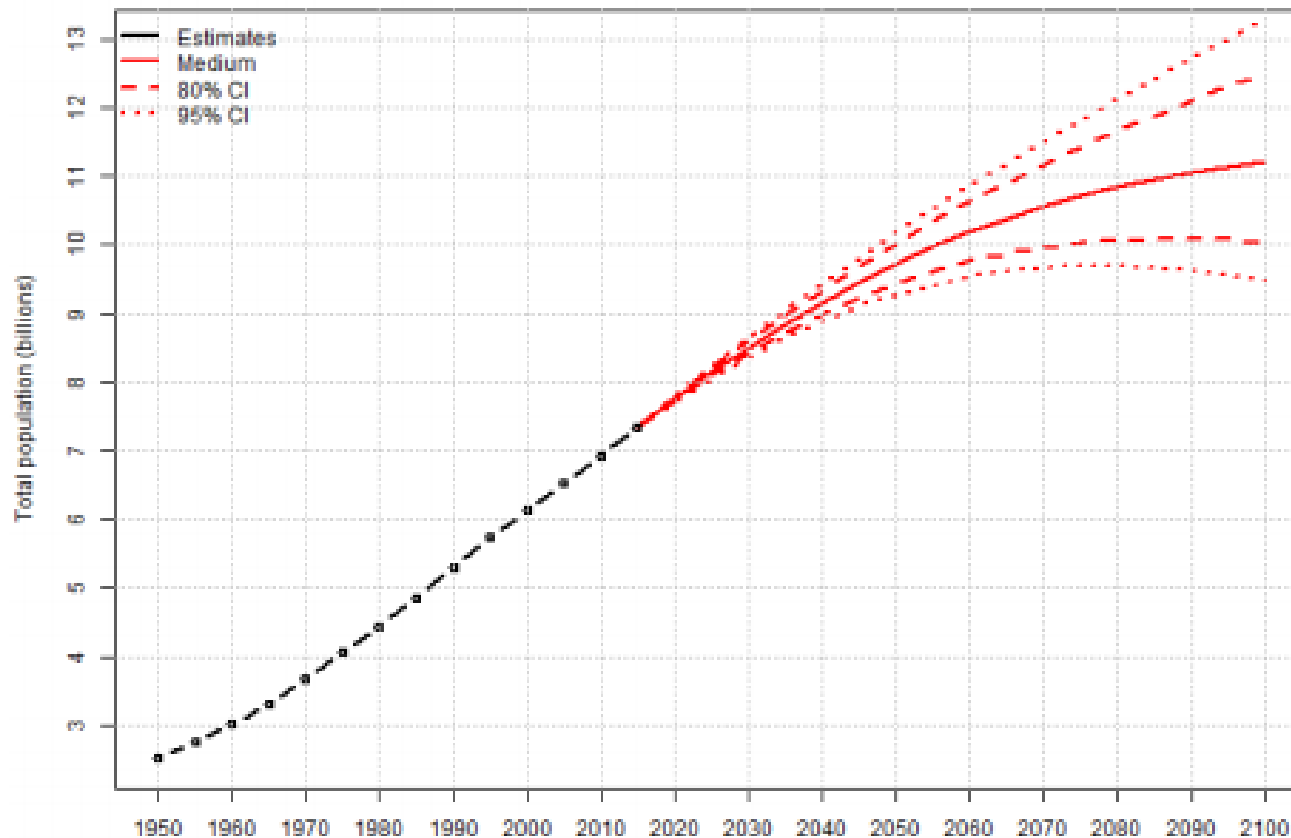


AGRICULTURE IS IMPLICATED IN MOST OF THE “PLANETARY BOUNDARIES”



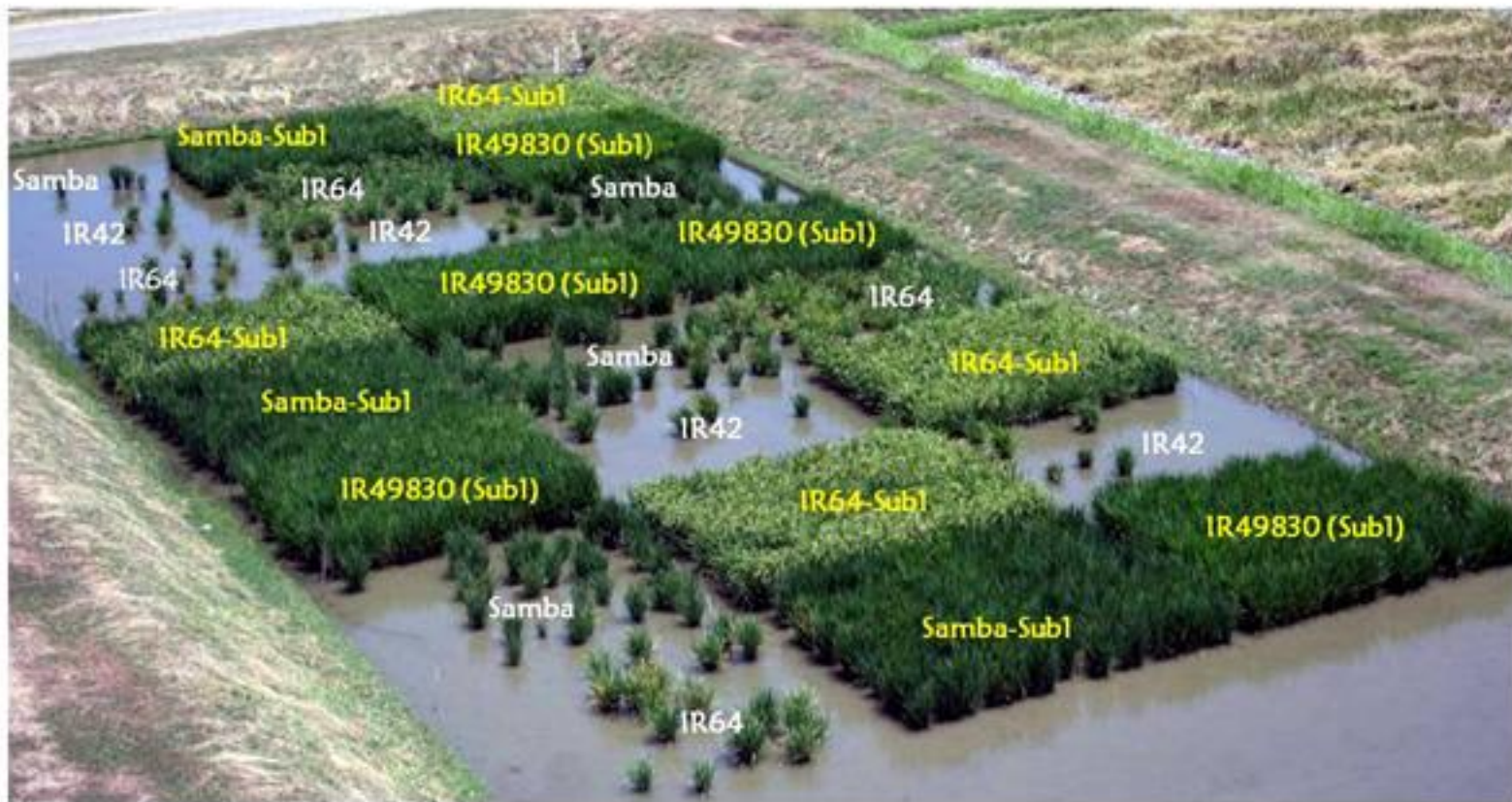
Population Exceeds 11.2 Billion by 2100 in Medium-Variant of the 2015 UN Revision

Figure 2. Population of the world: estimates, 1950-2015, medium-variant projection and 80 and 95 per cent confidence intervals, 2015-2100



Source: United Nations, Department of Economic and Social Affairs, Population Division (2015). *World Population Prospects: The 2015 Revision*. New York: United Nations.

New *Sub1* lines after 17 days submergence in the field at IRRI.



Genes for submergence tolerance moved into popular “mega-varieties”

Some Recommendations for Next Steps:

Standing Working Group for SDG 2 (FAO, WFP, CGIAR, GEF, Business, Academia)

National WGs for SDG 2

Global Agriculture Solutions Conference 2017

Global Technology Road-mapping for Nutrition, Sustainability, Resilience, and Ag Governance