



14<sup>TH</sup> EUROPEAN FARMING SYSTEMS CONFERENCE

FARMING SYSTEMS FACING CLIMATE CHANGE AND RESOURCE CHALLENGE

10<sup>TH</sup> – 14<sup>TH</sup> APRIL 2022, UNIVERSITY OF ÉVORA – PORTUGAL

# The contribution of family farming to foster sustainable food systems

**Prof. Sergio Schneider**  
Federal University of Rio Grande do Sul - Brazil

**From Peasants**

**To Smallholders**

**Now Family Farmers**

**Family and  
Land**

**Culture -  
Values and  
Tradition**

**Peasantry  
Family Farming  
Smallholders**

**Rural  
Communities**

# **What we already know about family farming in the world ?**

**1. There are around 500 million units of family farms in the world – total of units is 570 million;**

- 13% in low income countries;**
- 36% in lower middle income countries;**
- 71 %FFs have less than 1 hectare of land;**

**2. Family Farms are Highly Diversify:**

- by access to land;**
- by farming/production systems;**
- by income and economic position - poverty**

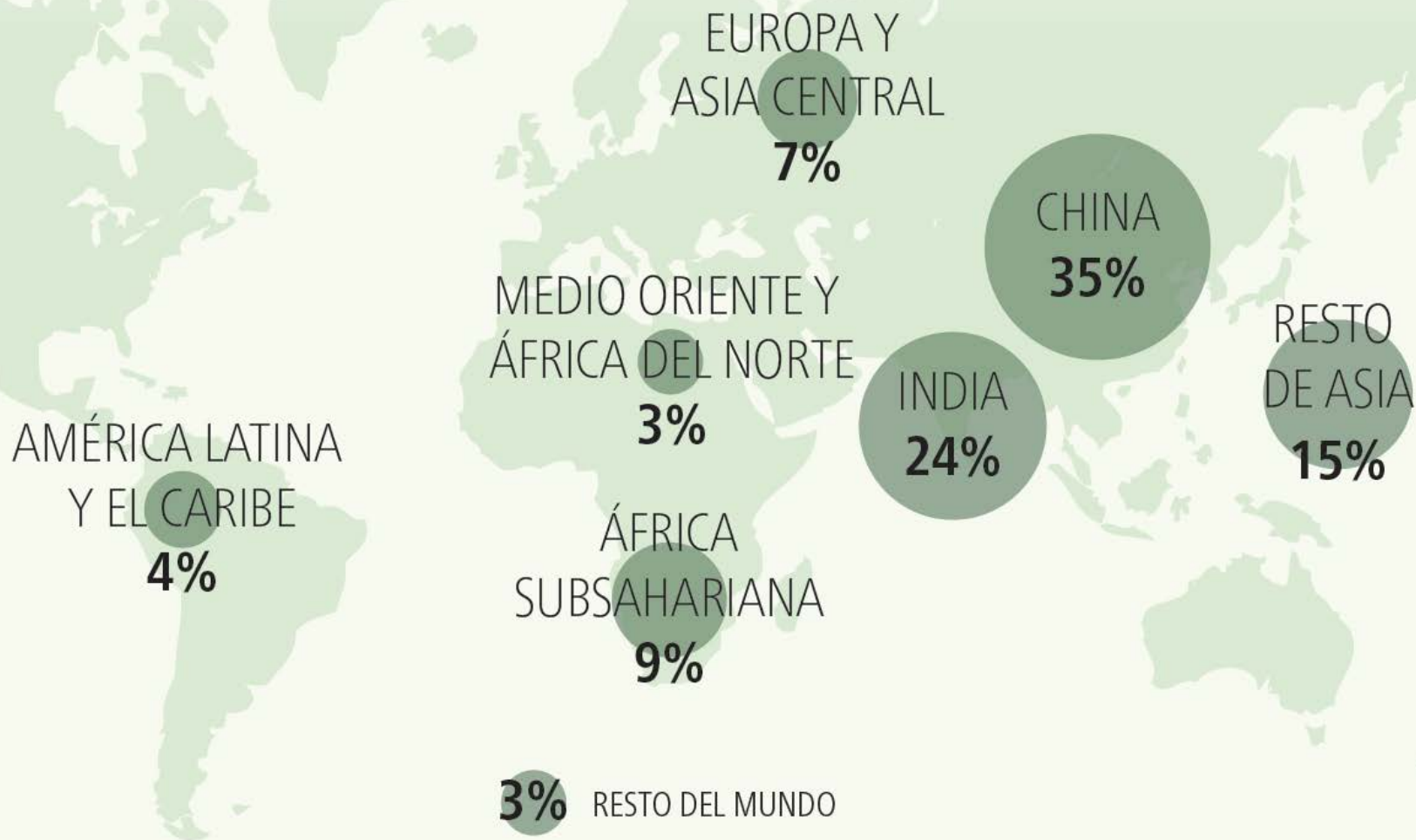
**3. Statistics and Information is misunderstood about FFs**

**Estimates find that there are at least 570 million farms worldwide, of which at least **500 million can be considered family farms.****

**Lowder, S.K., Scoet, J. and Singh, S. 2014. *What do we really know about the number and distribution of farms and family farms worldwide? Background paper for The State of Food and Agriculture 2014. ESA Working Paper***

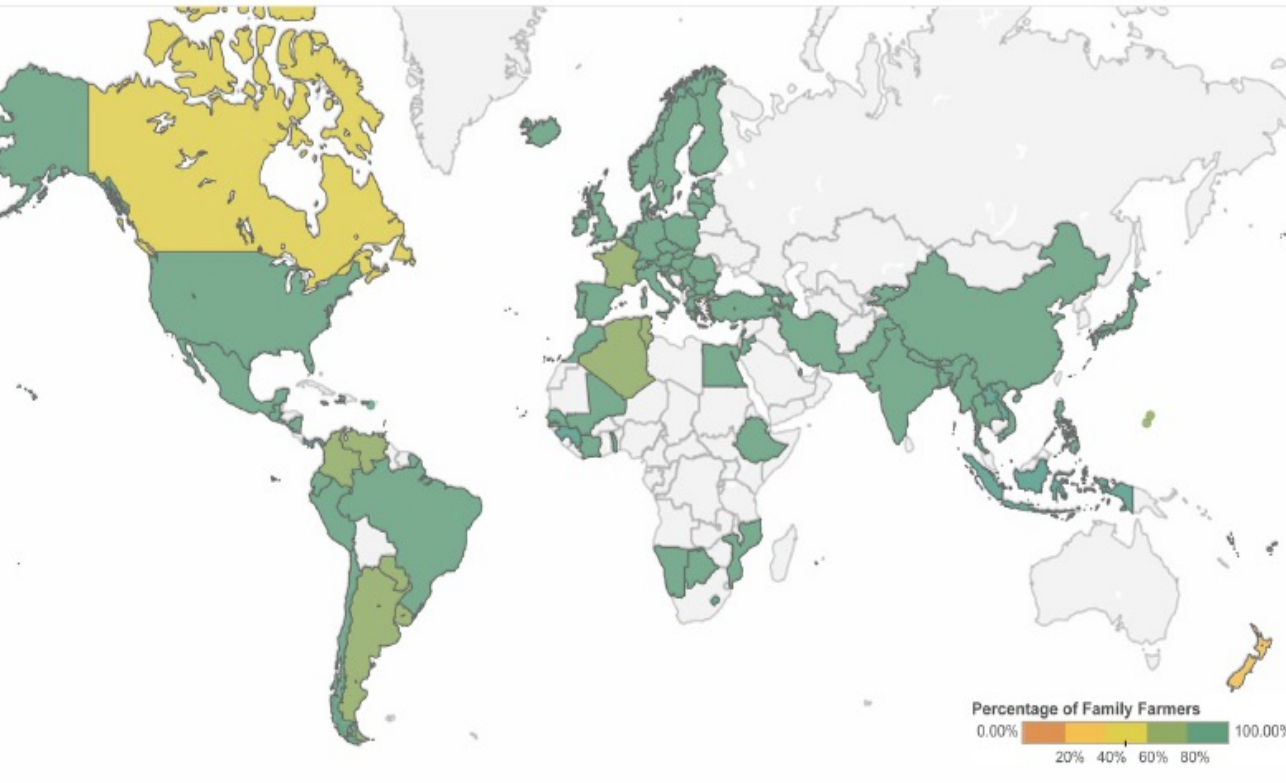
**No. 14-02. Rome, FAO**

## ¿DÓNDE ESTÁN LAS EXPLOTACIONES AGRÍCOLAS DEL MUNDO?



# The distribution of family farming is not uniform in different regions of the world

WORLD DEVELOPMENT



- a) Asia - 99%;
- b) Oceania - 78%;
- c) South America - 82%;
- d) Europe – 98%;
- e) Africa - 97%;
- f) North and Central America (88%)

## ¿DE QUÉ TAMAÑO SON LAS EXPLOTACIONES FAMILIARES?

**72%**  
tiene menos de  
**una hectárea**



**6%**  
tiene más  
**cinco hectáreas**

**22%**  
tiene otras dimensiones



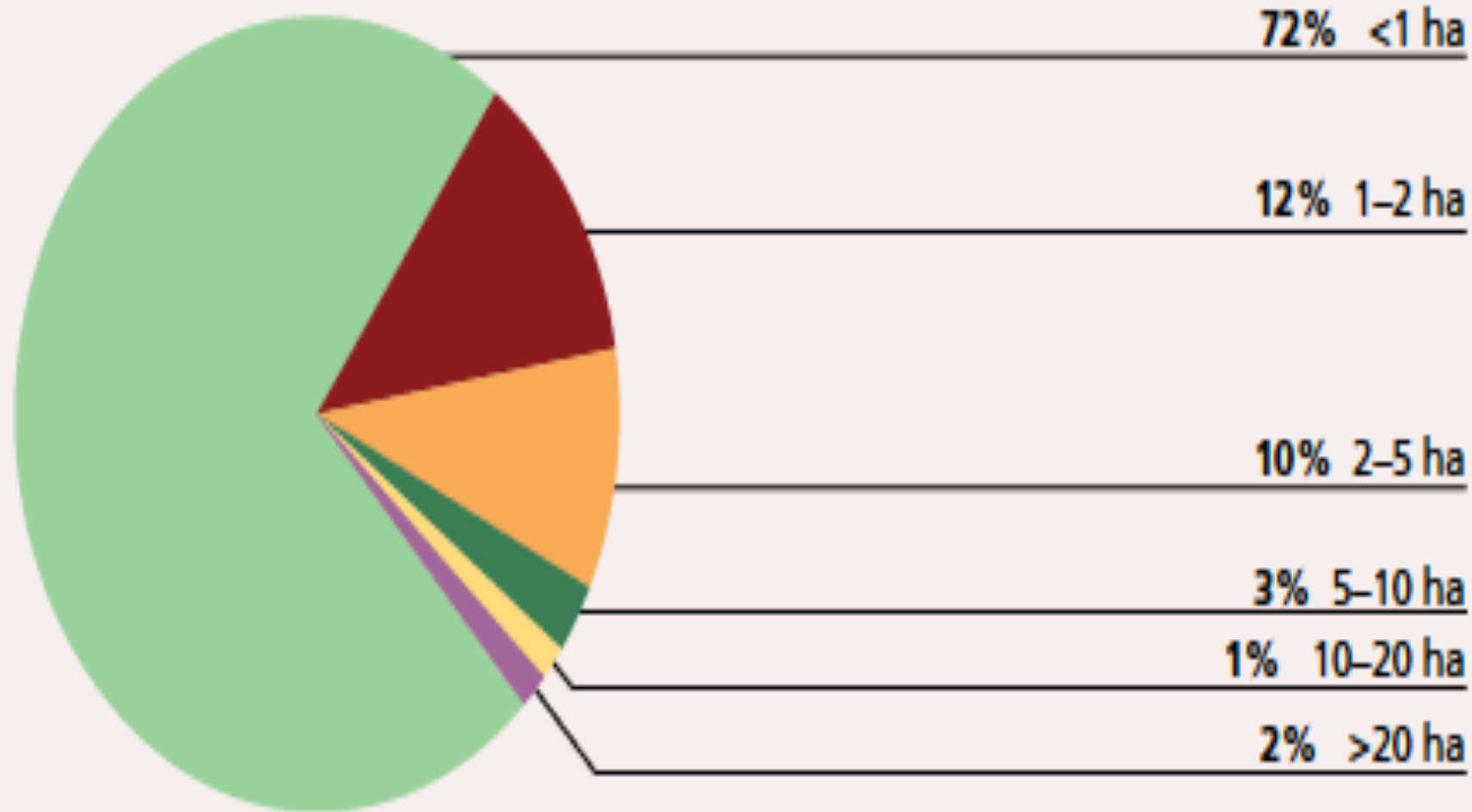
El **57%** de las explotaciones de Rwanda ocupan **menos de media hectárea**



El **47%** de las explotaciones de la India ocupan **menos de media hectárea**



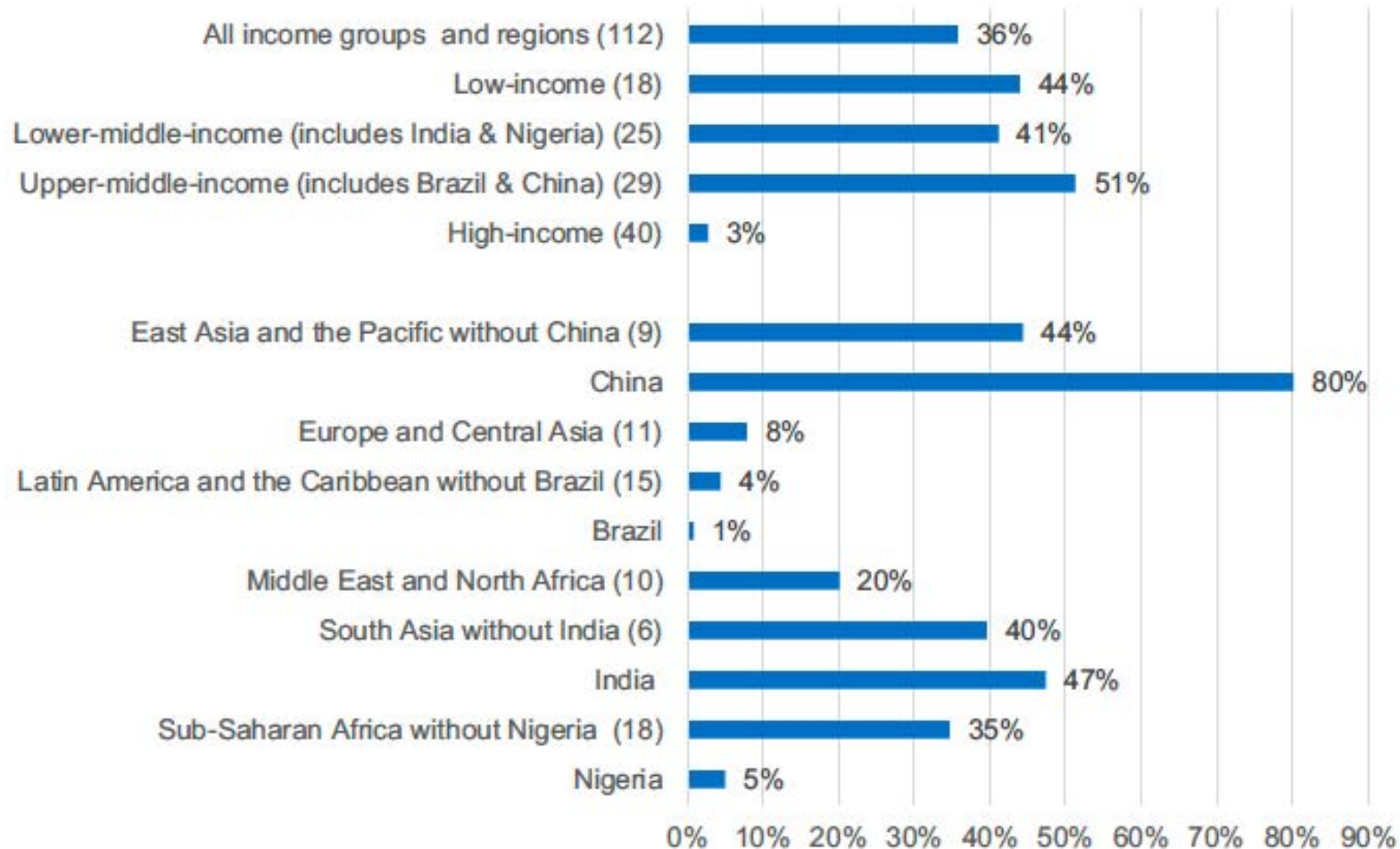
## Shares of farms, by land size class



Source: Lowder, S.K., Skoet, J. and Singh, S. 2014. *What do we really know about the number and distribution of farms and family farms worldwide?*

# S.K. Lowder, M.V. Sánchez and R. Bertini. Which farms feed the world and has farmland become more concentrated? **World Development 142 (2021)**

Share of value of food production from smallholders



# Proportion (%) of family farming units over total agricultural establishments in Latin America and the Caribbean, by regions

Great Region	Total no. of Establishments	N° of Family Units	% Family units/ total no. of establishments
Caribbean region	1.704.651	1.507.757	88,40%
Central America and Mexico	7.486.831	5.883.205	78,60%
Andean countries	5.078.283	4.051.342	79,80%
Southern Cone	6.144.774	5.154.533	83,90%
<b>Total</b>	<b>20.414.539</b>	<b>16.596.837</b>	<b>81,30%</b>

**We Still Need Better  
Understanding on  
Small Scale Family  
Farmers**

The major justification to follow with the research agenda on FF are related to:

FOOD,

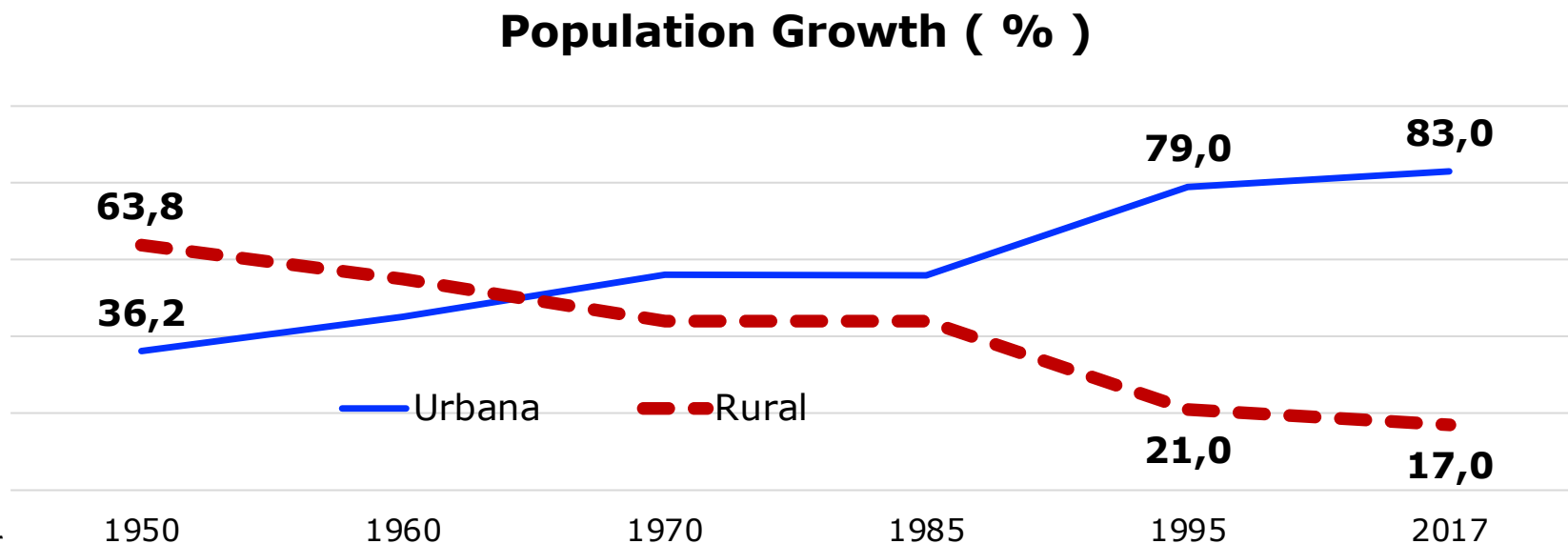
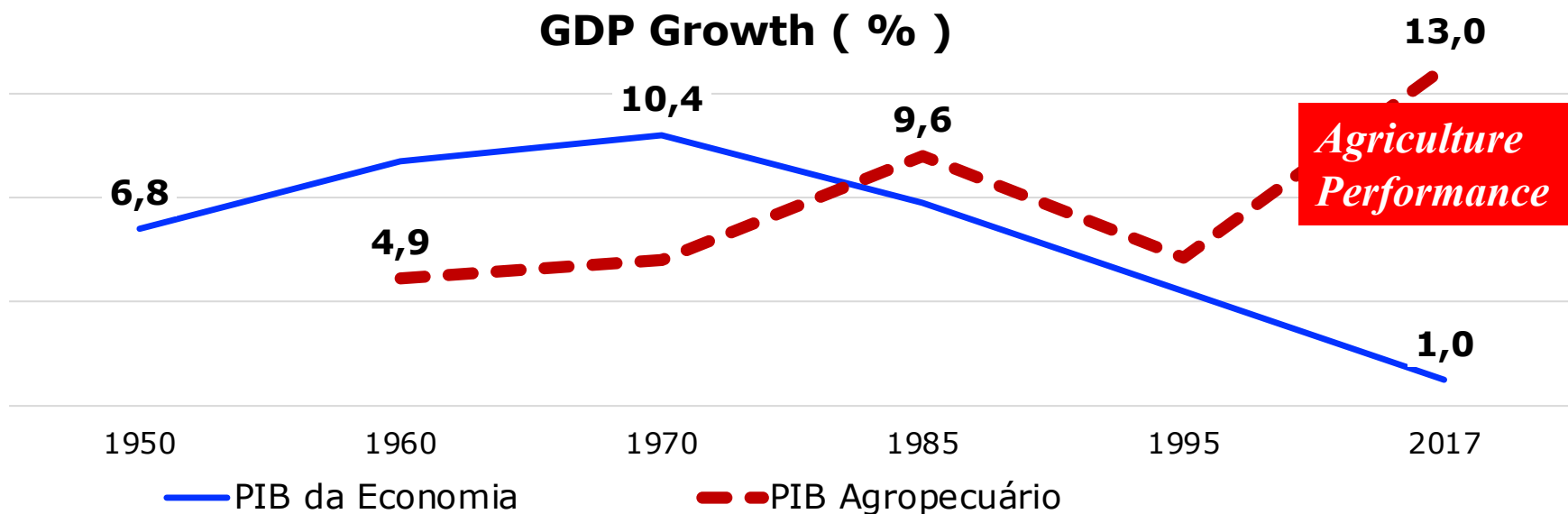
NATURE *and*

CULTURE

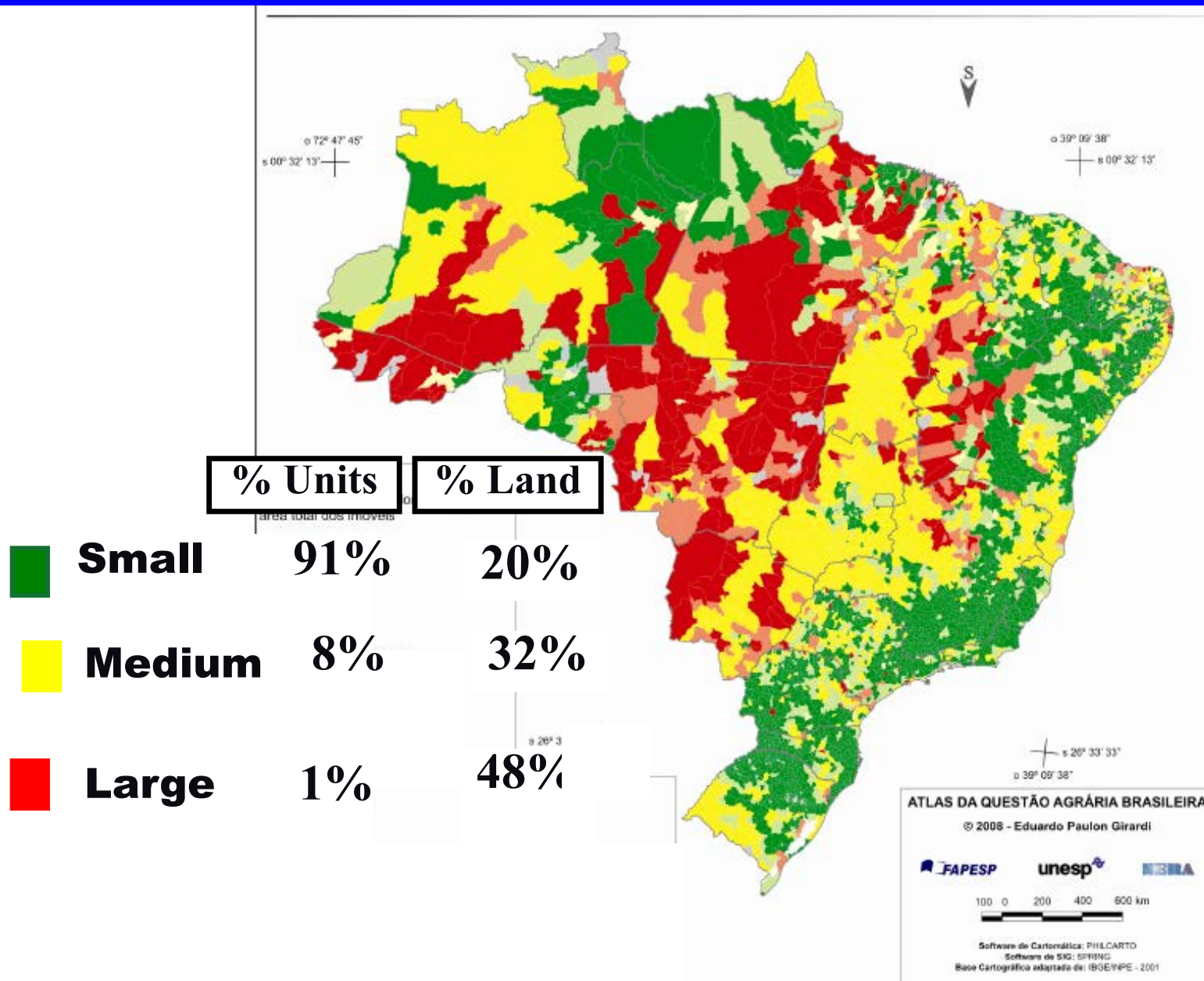
It would be very boring and, as Polanyi said, we will be under the risk if land, labor and money becom *Fictitious Commodities*.

**Quick Note on  
What is Going on  
in Brazil**

# GDP and Population - 1960 to 2017



# Brazilian Agrarian Structure, 2017




IBGE, Census,  
2016/7



# The Brazilian Model

## Welcome To Mato Grosso, The Giant Swath Of Land That's Feeding The Entire World


**ROB WILE** | DEC. 21, 2012, 9:59 AM | 133,473 | 25

[FACEBOOK](#) | [LINKEDIN](#) | [TWITTER](#) | [GOOGLE+](#) | [PRINT](#) | [EMAIL](#)

Since World War II, the U.S. has been hailed as the world's breadbasket, pumping grains and meat from its fertile heartland out to the world.

But another country is snatching that mantle away: Brazil.

In 2001, Brazilian agricultural exports totaled \$16 billion, according to USDA analyst Oliver Flake. By 2010 exports had climbed to a record \$62 billion and reached



NEWS FEATURE FOOD | NATURE | Vol 466 | 29 July 2010

## THE GLOBAL FARM

With its plentiful sun, water and land, Brazil is quickly surpassing other countries in food production and exports. But can it continue to make agricultural gains without destroying the Amazon?

Jeff Tollefson reports from Brazil.

Brazilian agriculture

### The miracle of the cerrado

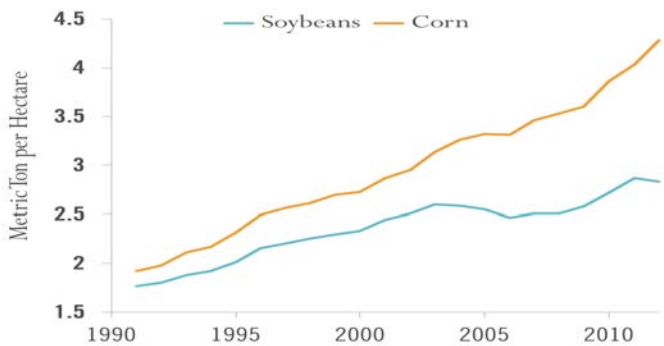
Brazil has revolutionised its own farms. Can it do the same for others?

Aug 26th 2010 | CREMAQ, PIAUI | From the print edition


[Like](#) 2.2k | [Tweet](#) 316



### Yield Progression, Corn and Soybeans in Brazil (1991-2012)



Brazil's agricultural miracle

### How to feed the world

The emerging conventional wisdom about world farming is gloomy. There is an alternative

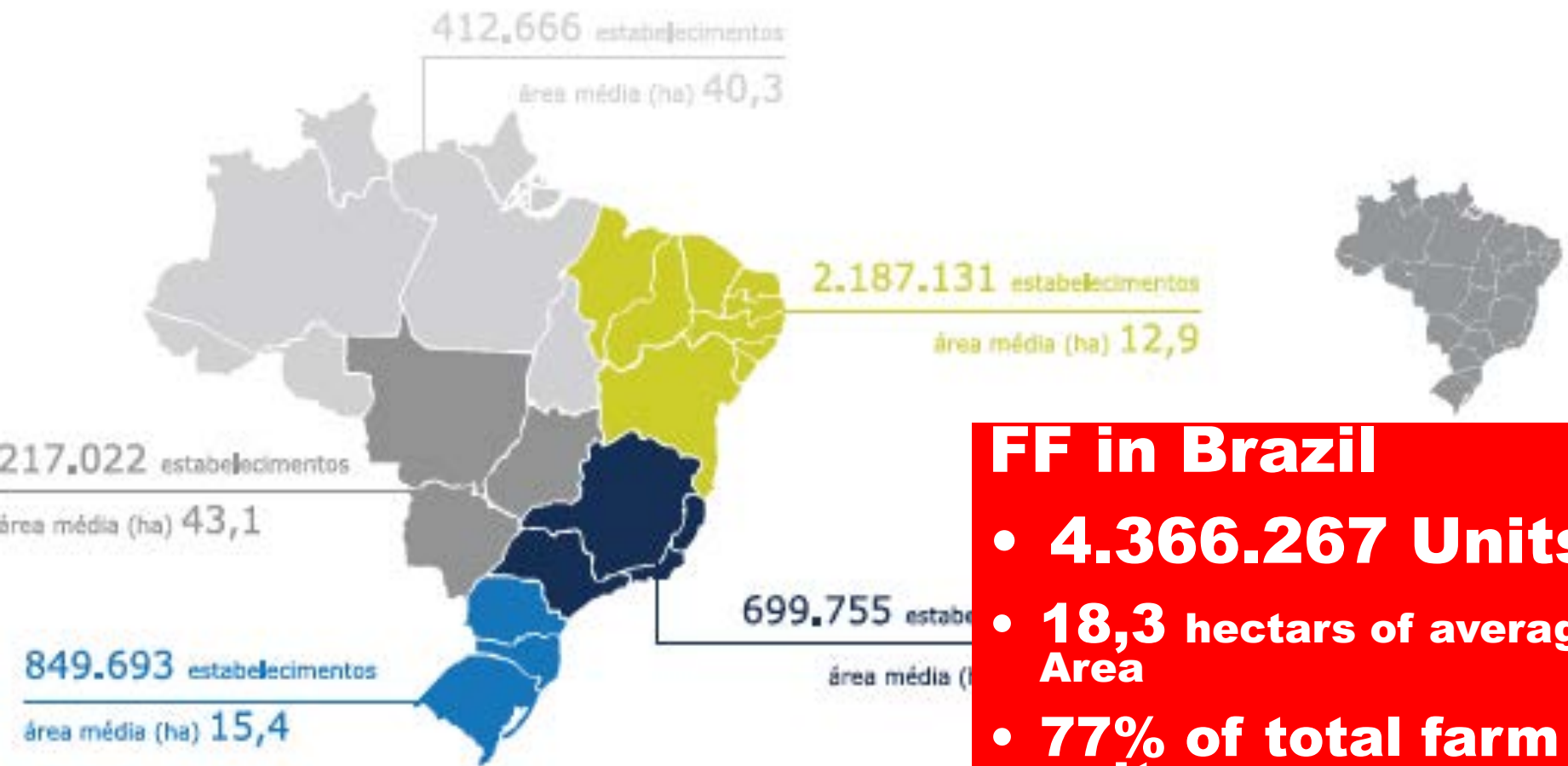
Aug 26th 2010 | From the print edition


[Like](#) 1.8k | [Tweet](#) 139



# **Family Farming in Brazil**

# Family Farmers in Brazil



## FF in Brazil

- **4.366.267 Units**
- **18,3** hectares of average Area
- **77%** of total farm units
- **GDP;**



Foto 25 de 83 - José Carlos Nunes, 41, espera que a chuva chegue para os seus dois filhos, em Santa Brígida (BA). Mais de 750 municípios em situação de emergência e mais de 4 milhões de pessoas foram afetados pela seca. Beto Macário / UOL - 22 de maio de 2012.



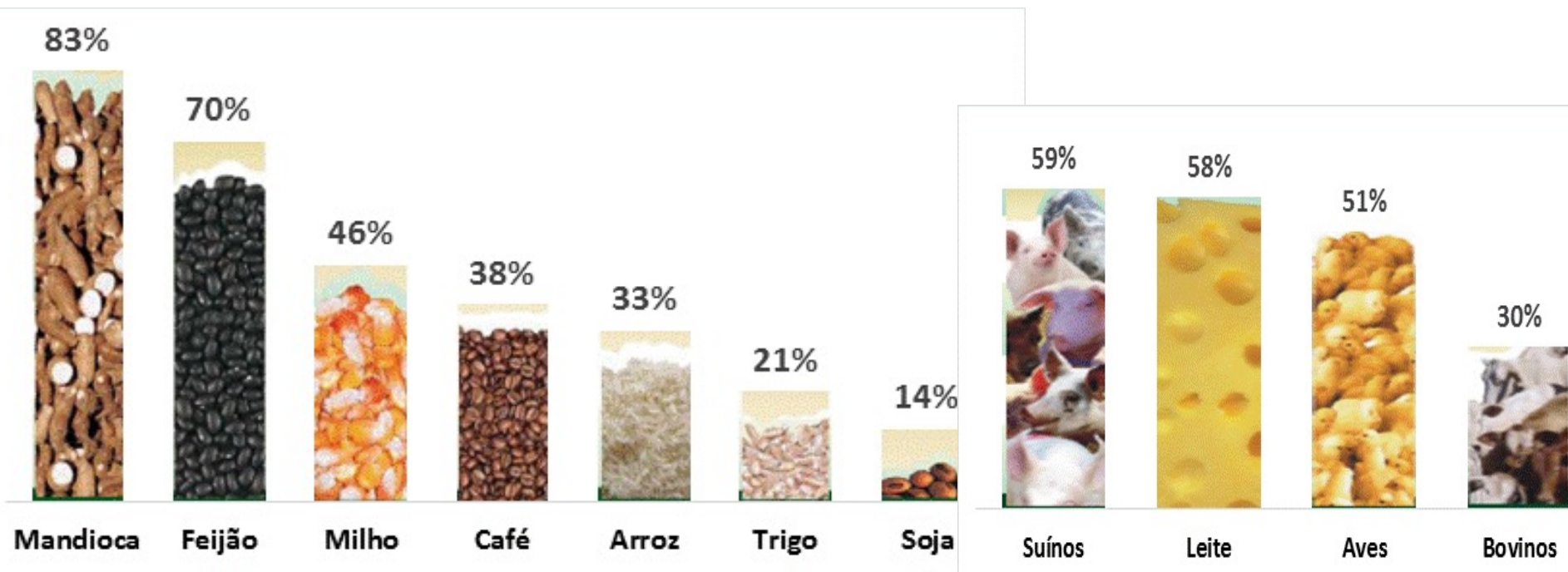
# A Family Farmer in Brazil

**By Law 11.326, 2006, is**

- ① do not have, in any way, an area bigger than 4 inspection units – different size per regions in the country;**
- ② use predominantly family labour force in the farmers unit – also wage labour up to 2 permanent works;**
- ③ have a minimum % of family income originating from the economic activities of the establishment or venture;**
- ④ the farmer unit must be lead by the family and not by external managers;**

❖ This Law also applies to fisherman, forestry, small cattle ranchers, indigenous people, traditional communities (former slaves/quilombos)

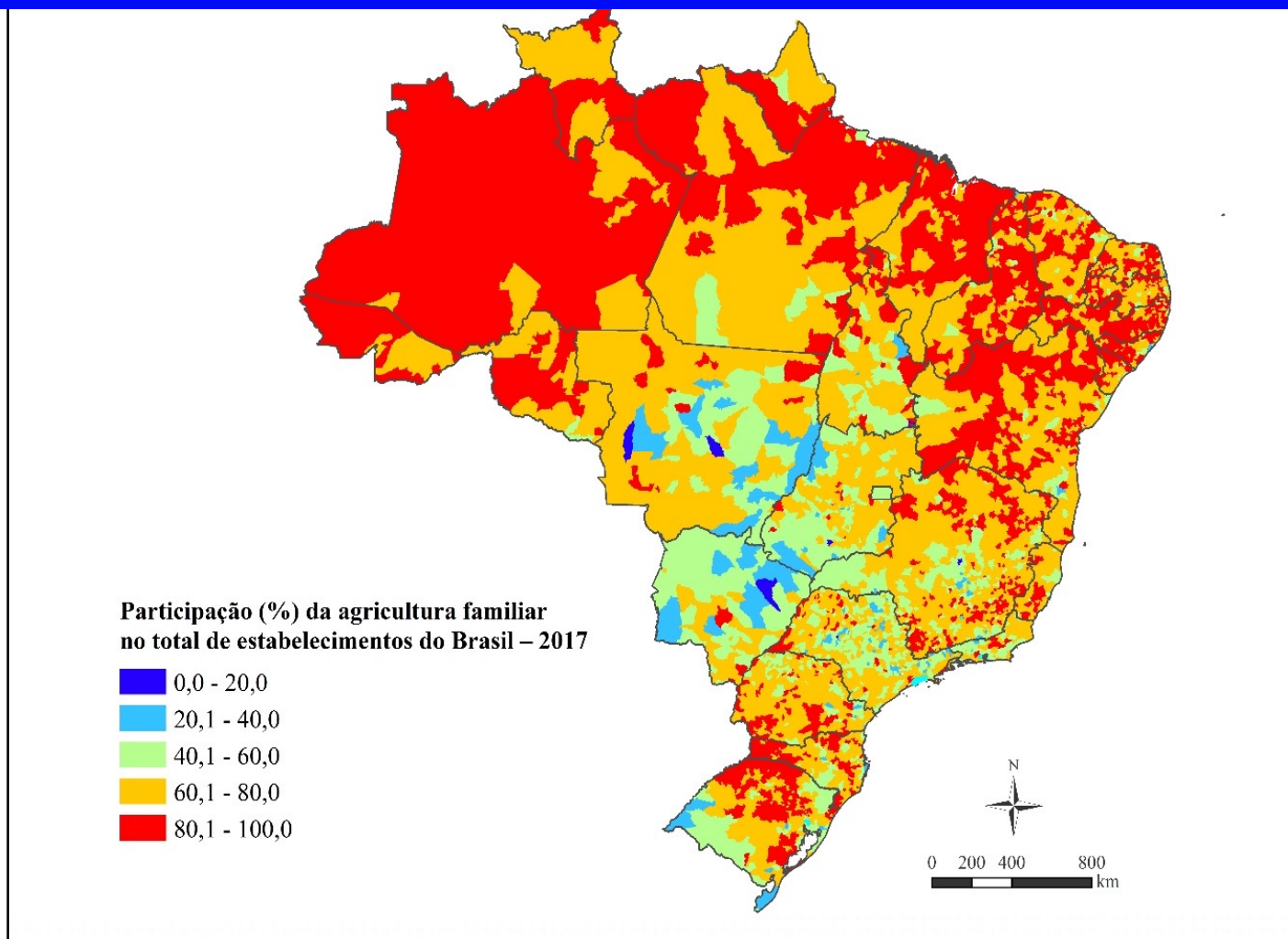
# Brazil - Share of FF in Several Crops/Branches According the Agricultural Census, 2017



# Size and Importance of Family Farming in Brazil 2017

<b>Farmes</b>	<b>Farm Units</b>	<b>%</b>	<b>ÁREA</b>	<b>%</b>	<b>PEOPLE OCUPADO</b>	<b>%</b>
NON Family Farmers -	1.175.916	23,2	270.398.732	<b>77,0</b>	4.989.566	33,0
<b>Family Farms (FF)</b>	<b>3.897.408</b>	<b>76,8</b>	<b>80.891.084</b>	<b>23,0</b>	<b>10.115.559</b>	<b>67,0</b>
TOTAL	<b>5.073.324</b>	100,0	351.289.816	100,0	15.105.125	100,0

# Participation (%) of FF in Total of Farming Units Brasil – 2017



**Fonte: IBGE. Censo Agropecuário 2017**

**Elaboração: Adrielli Santana (UNB/IPEA) e Joacir Aquino.**



**Connecting FF with  
the Current Problems  
we are Facing**

**Climate  
Change**

**Demography/Urbanization**

**Energy Transition  
Decarbonization**

***... the context we are  
living in***

**Uncertainty,  
distrust**

**??**

**Environmental  
risks**

**Increasing  
Unequalities and  
Multiple Exclusions**

# **FOOD**

**Window of Opportunity to  
New Political, Normative and  
Academic Perspectives**

# Global Food Security in an Urbanizing World

By 2050, **2/3** of the world's population will live in urban areas.



In the next 20 years,



of the world's population growth will occur in developing nations.

**80%**



of food for cities comes from domestic sources in rural areas.

The poorest households in the developing world spend

**60-80%**



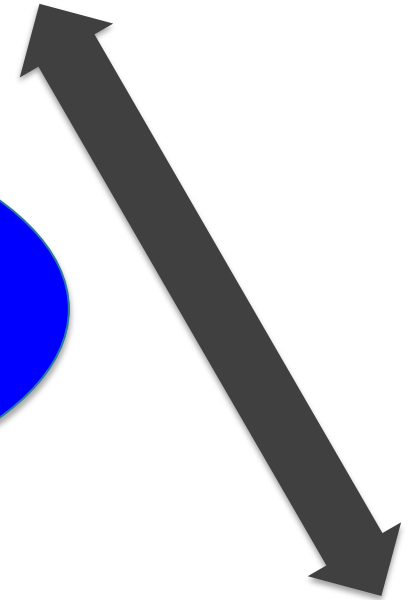
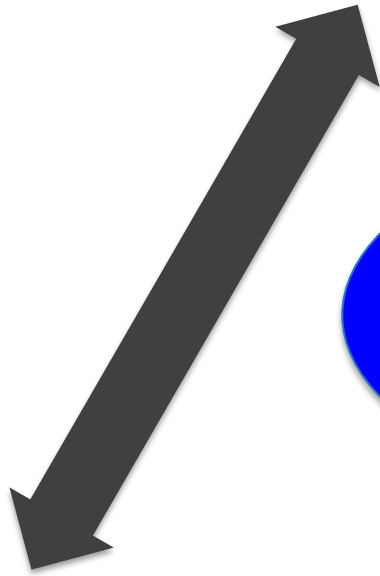
of their incomes on food.

**CLIMATE  
CHANGE**

**AGRICULTURE  
AND FOOD**

**HEALTH AND  
NUTRITION**

**URBANIZATION**



# TRENDS IN FOOD CONSUMPTION



Orgânicos



CLIMA  
terianismo



LOCAVorismo



Fonte: Maycon Schubert, 2018



**Tim Lang, London, 2015**

***“there is no way to achieve  
SDGs and implement 2030  
Agenda without change  
our food system !!!!***



# OBJETIVOS DE DESENVOLVIMENTO SUSTENTÁVEL

1 ERRADICAÇÃO DA POBREZA



2 FOME ZERO



3 BOA SAÚDE E BEM-ESTAR



4 EDUCAÇÃO DE QUALIDADE



5 IGUALDADE DE GÊNERO



6 ÁGUA LIMPA E SANEAMENTO



7 ENERGIA ACESSÍVEL E LIMPA



8 EMPREGO DIGNO E CRESCIMENTO ECONÔMICO



9 INDÚSTRIA, INOVAÇÃO E INFRAESTRUTURA



10 REDUÇÃO DAS DESIGUALDADES



11 CIDADES E COMUNIDADES SUSTENTÁVEIS



12 CONSUMO E PRODUÇÃO RESPONSÁVEIS



13 COMBATE ÀS ALTERAÇÕES CLIMÁTICAS



14 VIDA DEBAIXO D'ÁGUA



15 VIDA SOBRE A TERRA



16 PAZ, JUSTIÇA E INSTITUIÇÕES FORTES



17 PARCERIAS EM PROL DAS METAS



  
OBJETIVOS DE DESENVOLVIMENTO SUSTENTÁVEL

# United Nations Decade of Family Farming 2019-2028 - Global Action Plan



# Food System Transformations

## *approaches*

**Circular  
AgriFood  
Economy**

```
graph TD; A[Circular AgriFood Economy] <--> B[Sustainable Food System]; B <--> C[Environment and Social Resilience]; B <--> D[Consumption and Sustainable Diets]; C <--> D;
```

The diagram illustrates the interconnectedness of four key concepts in a food system. At the top is a red rounded rectangle labeled 'Circular AgriFood Economy'. Below it is a blue oval labeled 'Sustainable Food System'. At the bottom left is a green rounded rectangle labeled 'Environment and Social Resilience', and at the bottom right is a dark red rounded rectangle labeled 'Consumption and Sustainable Diets'. Double-headed grey arrows connect 'Circular AgriFood Economy' to 'Sustainable Food System', 'Sustainable Food System' to 'Environment and Social Resilience', 'Sustainable Food System' to 'Consumption and Sustainable Diets', and 'Environment and Social Resilience' to 'Consumption and Sustainable Diets'.

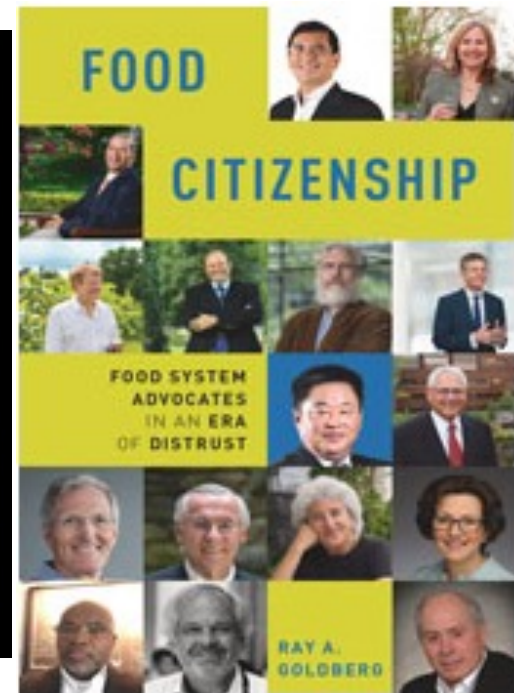
**Sustainable  
Food System**

**Environment  
and Social  
Resilience**

**Consumption  
and Sustainable  
Diets**

# Ray Goldberg

## From Agribusiness to Food Systems



**Towards a Food System that works for "*creating shared value*", 2020**

<https://global.oup.com/us/companion.websites/9780190871819/res/>

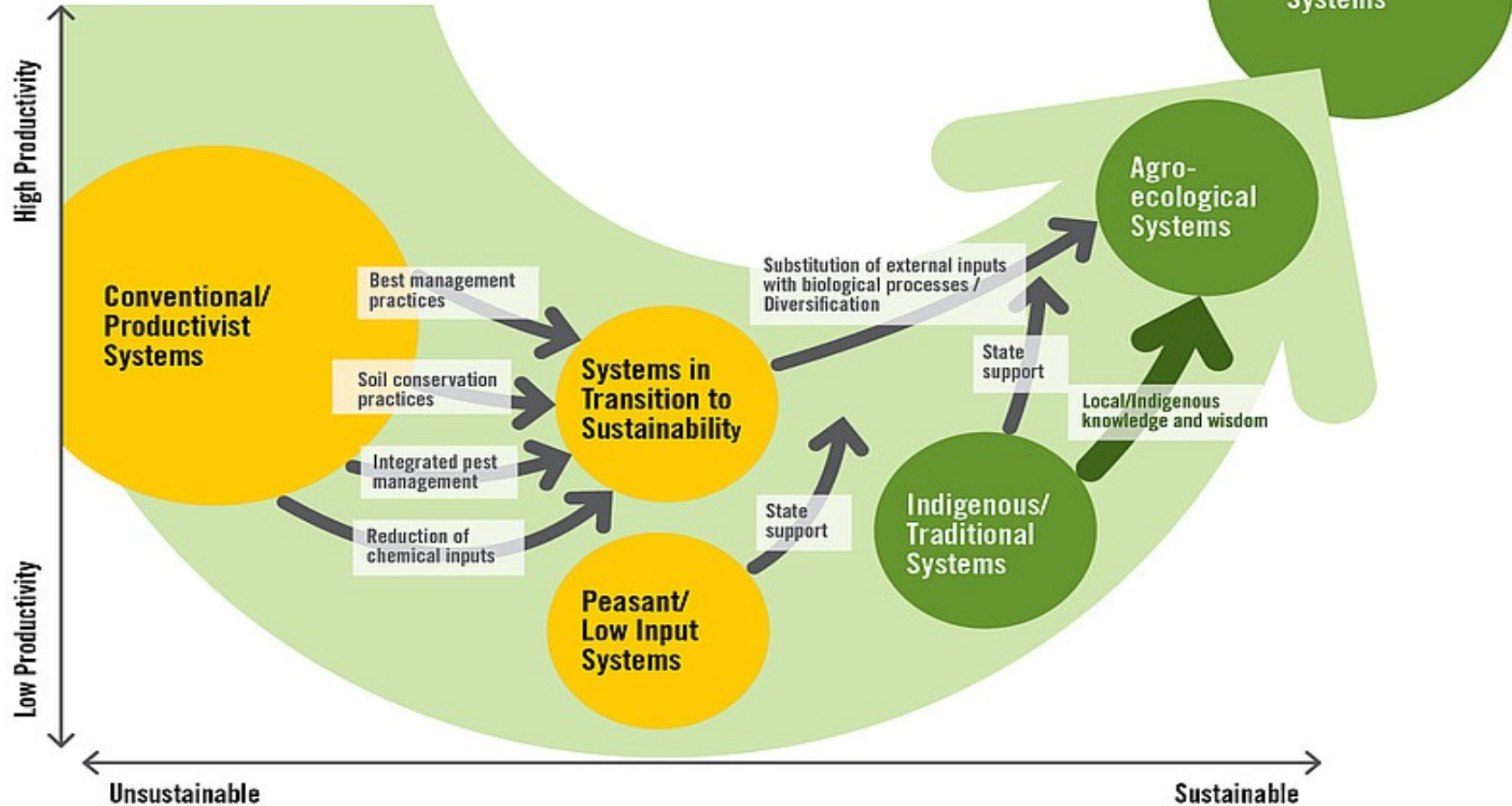
**Food**

***NEXUS***

**Water**

**Energy**

# The transition to sustainable farming systems – role of agroecology



Source: Latin America and the Caribbean, Summary for Decision Makers, p. 9



# A call to action

## Nutrition – a new global priority

Agriculture and food systems must deliver much more than food – they need to fulfil their potential to underpin the health and well-being of populations. At a fundamental level, consumers are making food choices that are not consistent with good nutrition, health and well-being. And public policies or private sector actions are not adequately aligning food systems toward the goal of improving nutrition.

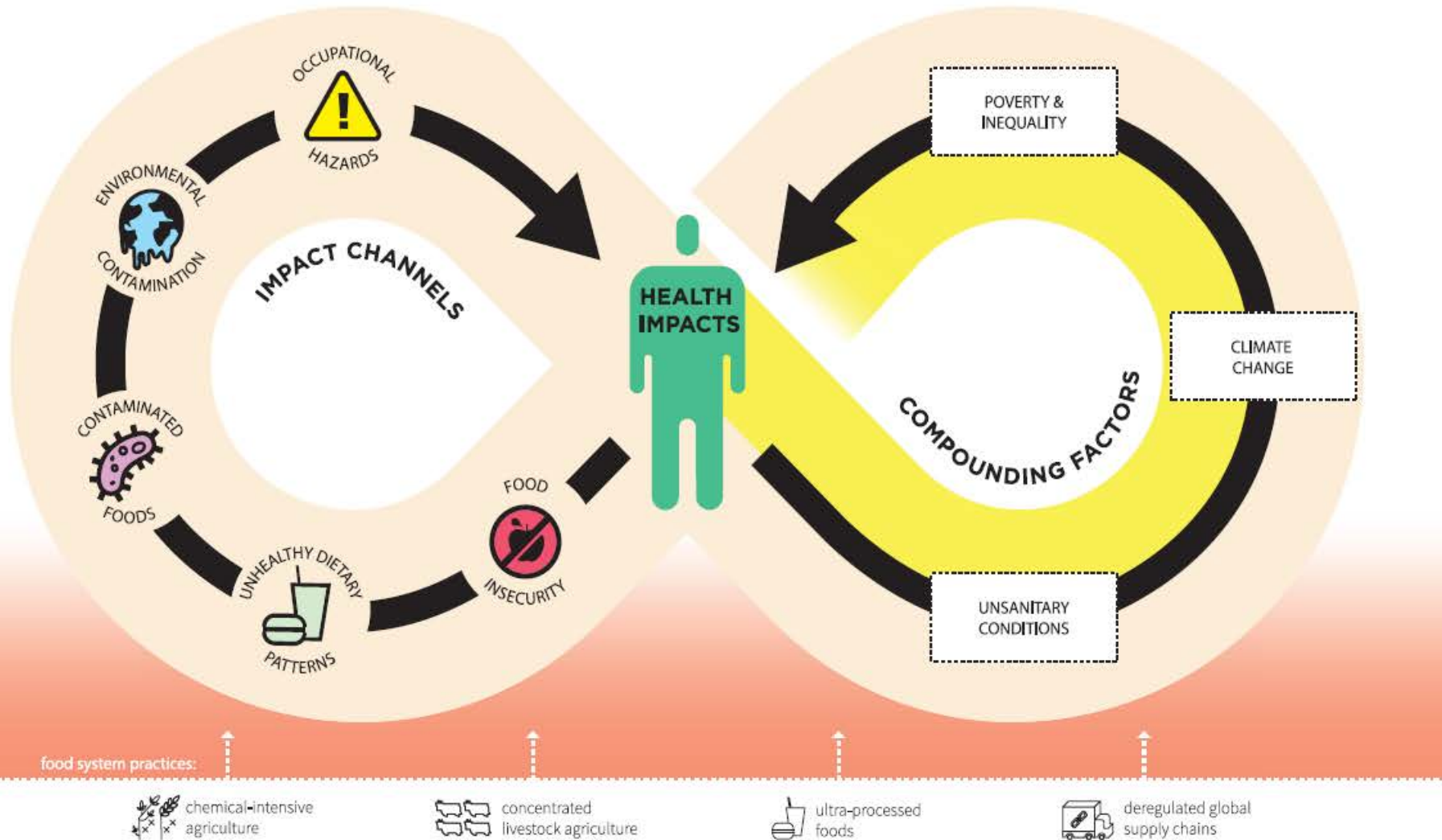
In making these changes, stakeholders will need to change the way they think about **FOOD SYSTEMS**. They are not merely for feeding people but for nourishing them well – FOOD SYSTEMS ARE IN EFFECT HEALTH PRODUCTION SYSTEMS. This change in mindset is subtle but crucial

# Sustainable Diets

High-quality diets are those that eliminate hunger, are safe, reduce all forms of malnutrition, promote health and are produced sustainably i.e. without undermining the environmental basis to generate high-quality diets for future generations

•Global Panel on Agriculture and Food Systems, 2-16 p. 32

# Agriculture, Food and Nutrition



Food systems need to be  
repositioned: from feeding  
people to nourishing people well

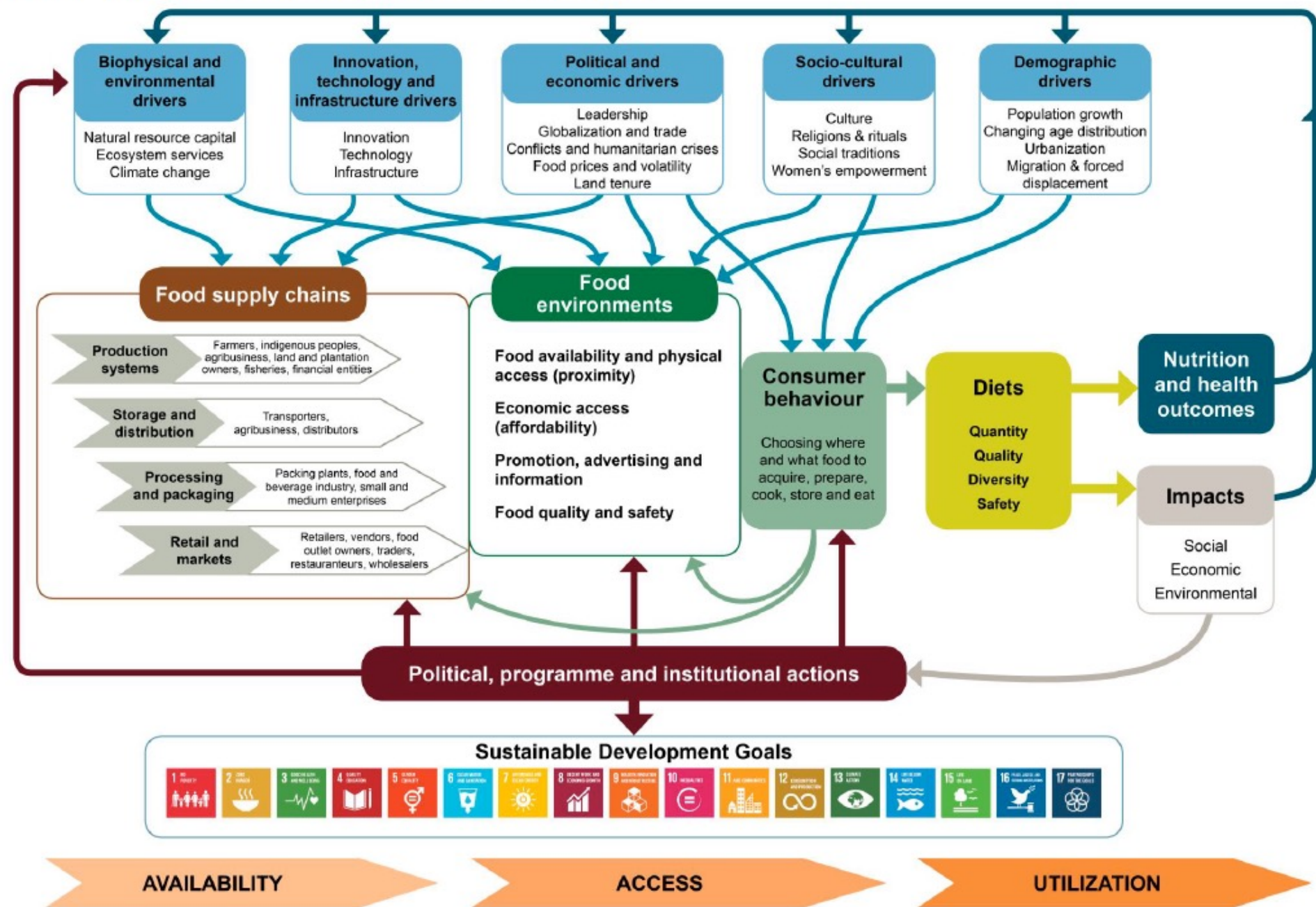
# A unifying framework for food systems transformation

A call for governments,  
private companies &  
civil society to adopt  
13 key principles

## BOX: Principles to guide agriculture and food systems transformation

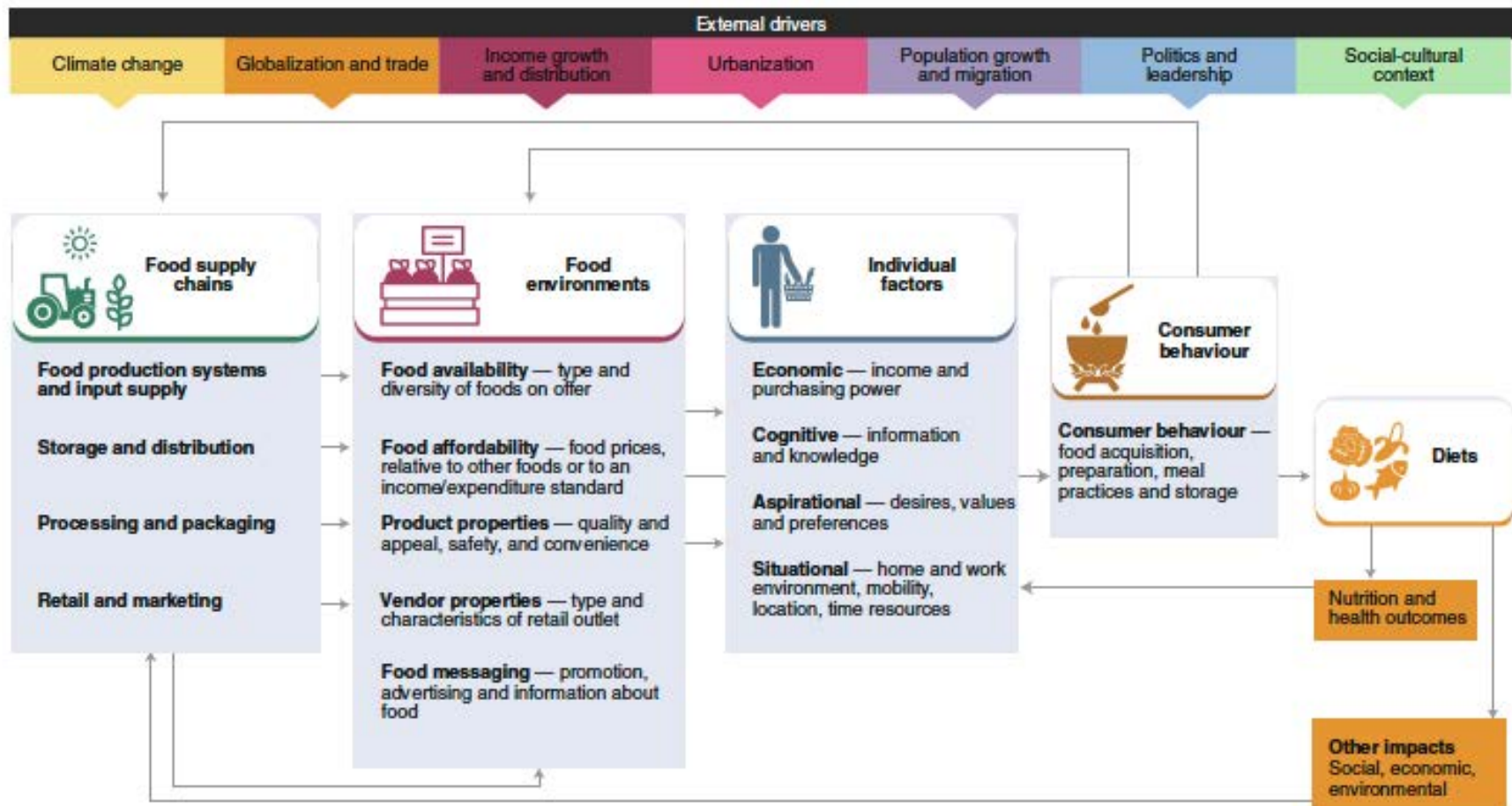
1. **Recycling.** Preferentially use local renewable resources and close as far as possible resource cycles of nutrients and biomass.
2. **Input reduction.** Reduce or eliminate dependency on purchased inputs and increase self-sufficiency
3. **Soil health.** Secure and enhance soil health and functioning for improved plant growth, particularly by managing organic matter and enhancing soil biological activity.
4. **Animal health.** Ensure animal health and welfare.
5. **Biodiversity.** Maintain and enhance diversity of species, functional diversity and genetic resources and thereby maintain overall agroecosystem biodiversity in time and space at field, farm and landscape scales.
6. **Synergy.** Enhance positive ecological interaction, synergy, integration and complementarity among the elements of agroecosystems (animals, crops, trees, soil and water).
7. **Economic diversification.** Diversify on-farm incomes by ensuring that small-scale farmers have greater financial independence and value addition opportunities while enabling them to respond to demand from consumers.
8. **Co-creation of knowledge.** Enhance co-creation and horizontal sharing of knowledge including local and scientific innovation, especially through farmer-to-farmer exchange.
9. **Social values and diets.** Build food systems based on the culture, identity, tradition, social and gender equity of local communities that provide healthy, diversified, seasonally and culturally appropriate diets.
10. **Fairness.** Support dignified and robust livelihoods for all actors engaged in food systems, especially small-scale food producers, based on fair trade, fair employment and fair treatment of intellectual property rights.
11. **Connectivity.** Ensure proximity and confidence between producers and consumers through promotion of fair and short distribution networks and by re-embedding food systems into local economies.
12. **Land and natural resource governance.** Strengthen institutional arrangements to improve, including the recognition and support of family farmers, smallholders and peasant food producers as sustainable managers of natural and genetic resources.
13. **Participation.** Encourage social organization and greater participation in decision-making by food producers and consumers to support decentralized governance and local adaptive management of agricultural and food systems.

Figure 1 Conceptual framework of food systems for diets and nutrition



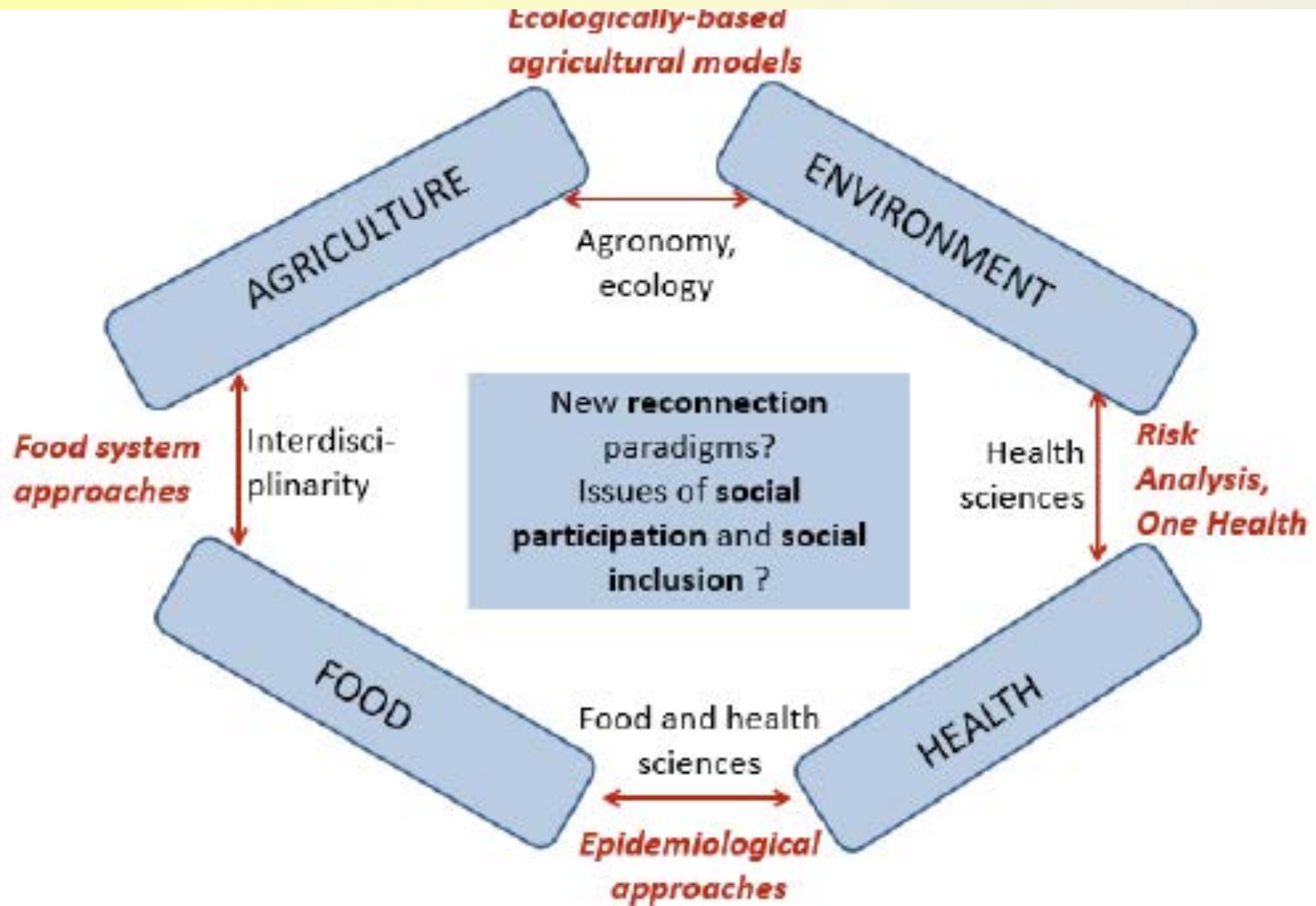
# The Food Systems Dashboard is a new tool to inform better food policy

Jessica Fanzo, Lawrence Haddad, Rebecca McLaren, Quinn Marshall, Claire Davis, Anna Herforth, Andrew Jones, Ty Beal, David Tschirley, Alexandra Bellows, Lais Miachon, Yuxuan Gu, Martin Bloem and Arun Kapuria



**Fig. 1 | Food Systems Framework.** The different components of food systems, their drivers and outcomes are interconnected. Figure adapted with permission from ref. <sup>11</sup>.

# ATTER Project and Claire Lamine (2019) Framework The central Issue of Reconnection

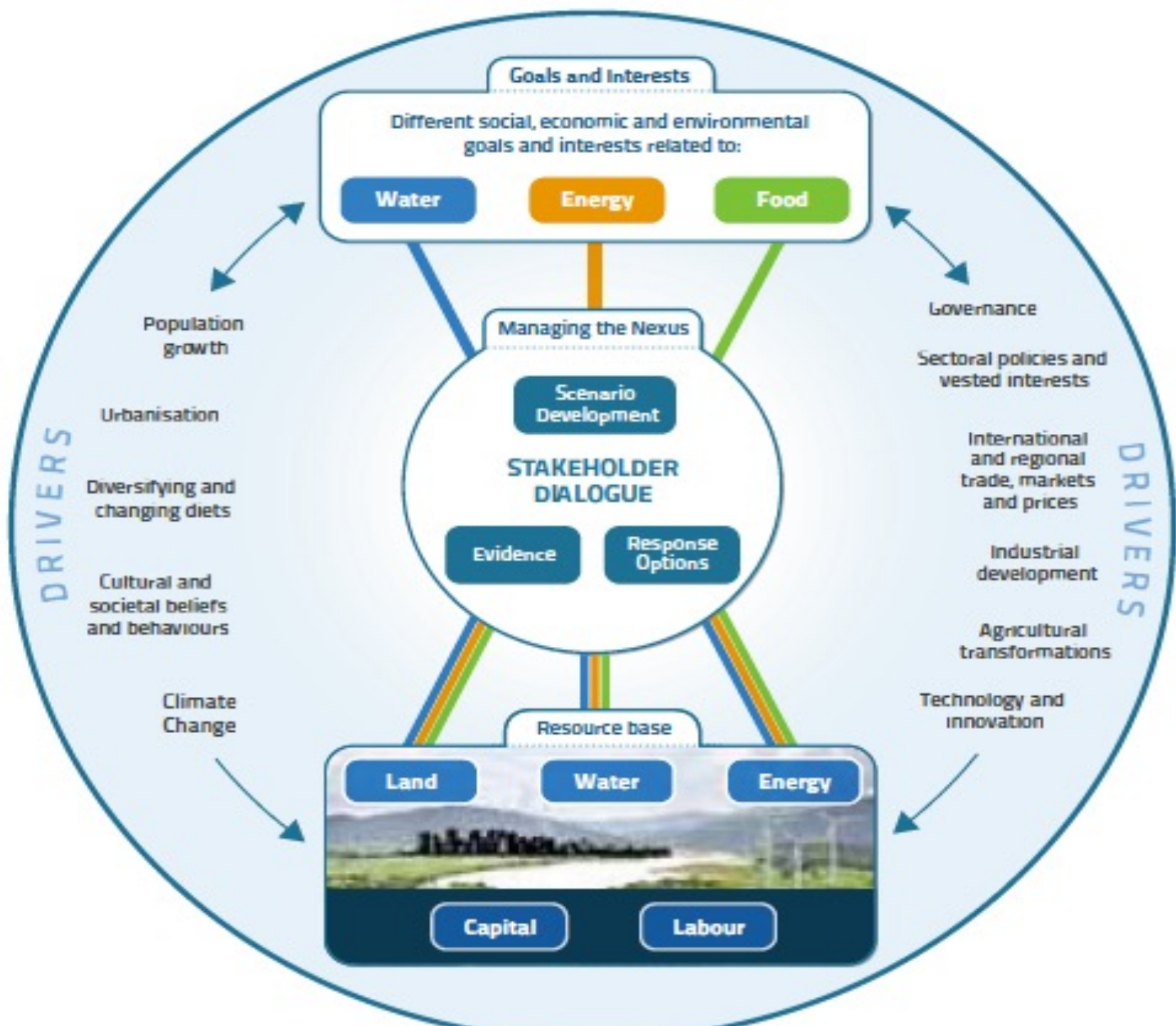




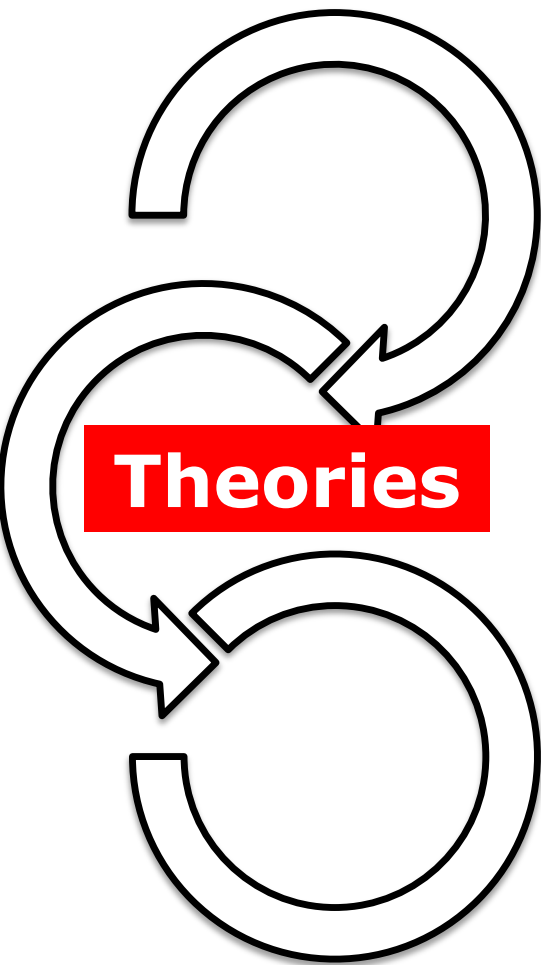
# The *CIRCULAR ECONOMOMMY*

4 'R' – *reduzir, reusar, reciclar e refabricar*





**What is My Own Perspective  
on the Future of Rural  
Development**



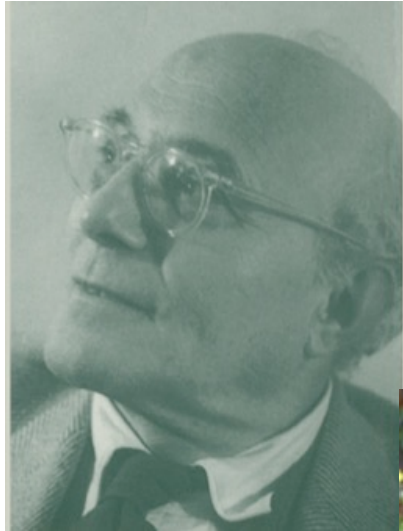
**Movimentos X  
Contramovimentos –  
Karl Polanyi**



**Guerra de Posição X  
Guerra de Movimento –  
Antonio Gramsci**



**Criar Valor X Extrair  
Valor –  
Mariana Mazzucato**



# The Legacy of Karl Polanyi

Market, State and Society at the End of the Twentieth Century

Nancy Fraser



*Economy and Society* Volume 43 Number 4 November 2014: 541–558  
<http://dx.doi.org/10.1080/03085147.2014.898822>

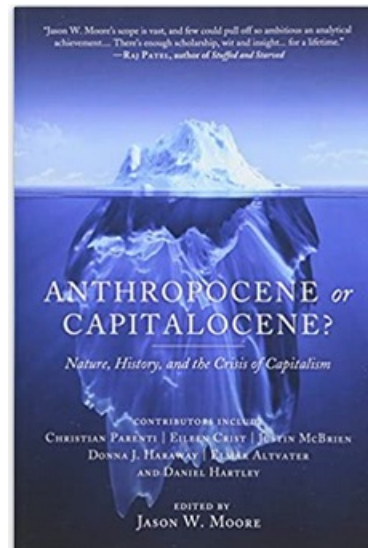


MARIANA MAZZUCATO  
THE VALUE OF EVERYTHING

MAKING AND TAKING IN THE GLOBAL ECONOMY



## Jason Moore



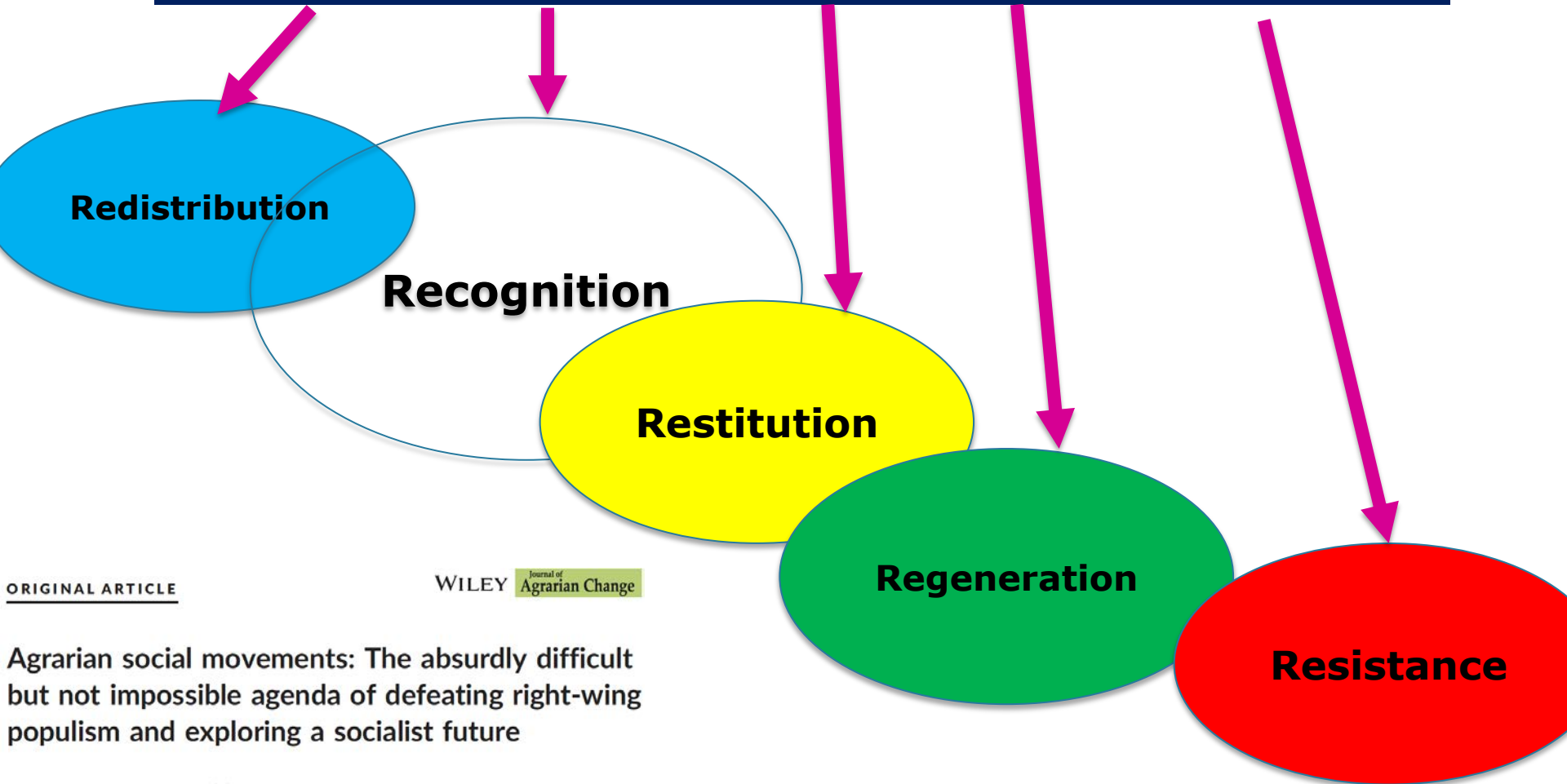
### Can society be commodified all the way down? Post-Polanyian reflections on capitalist crisis

#### The trajectory of the Anthropocene: The Great Acceleration

Will Steffen,<sup>1,2</sup> Wendy Broadgate,<sup>3</sup> Lisa Deutsch,<sup>1</sup> Owen Gaffney<sup>3</sup> and Cornelia Ludwig<sup>1</sup>

# What Strategy


# The Five "R" Strategy by Jun Borras



ORIGINAL ARTICLE

WILEY Journal of Agrarian Change

Agrarian social movements: The absurdly difficult but not impossible agenda of defeating right-wing populism and exploring a socialist future

Saturnino M. Borras Jr.<sup>1,2,3</sup> 

# What we need for sure?

## **1. Micro – No question about Strengthening Social Actors – groups, associations, movements, etc**

- Viable and sustainable forms of production are critical;
- To foster innovation and new/best markets

## **2. Meso - Collective institutions and organizations are Need**

- The recognition of class, gender, etc (Axel Hoonet)
- Laws and rules + resistance fights + construction of alternatives
- To foster cooperative organizations and social economy;

## **3. Macro - The role of State is undoubtly !!**

- Public policies make all difference !!;
- Credit and finance are important
- Regulation mechanisms and governance;



# First Level

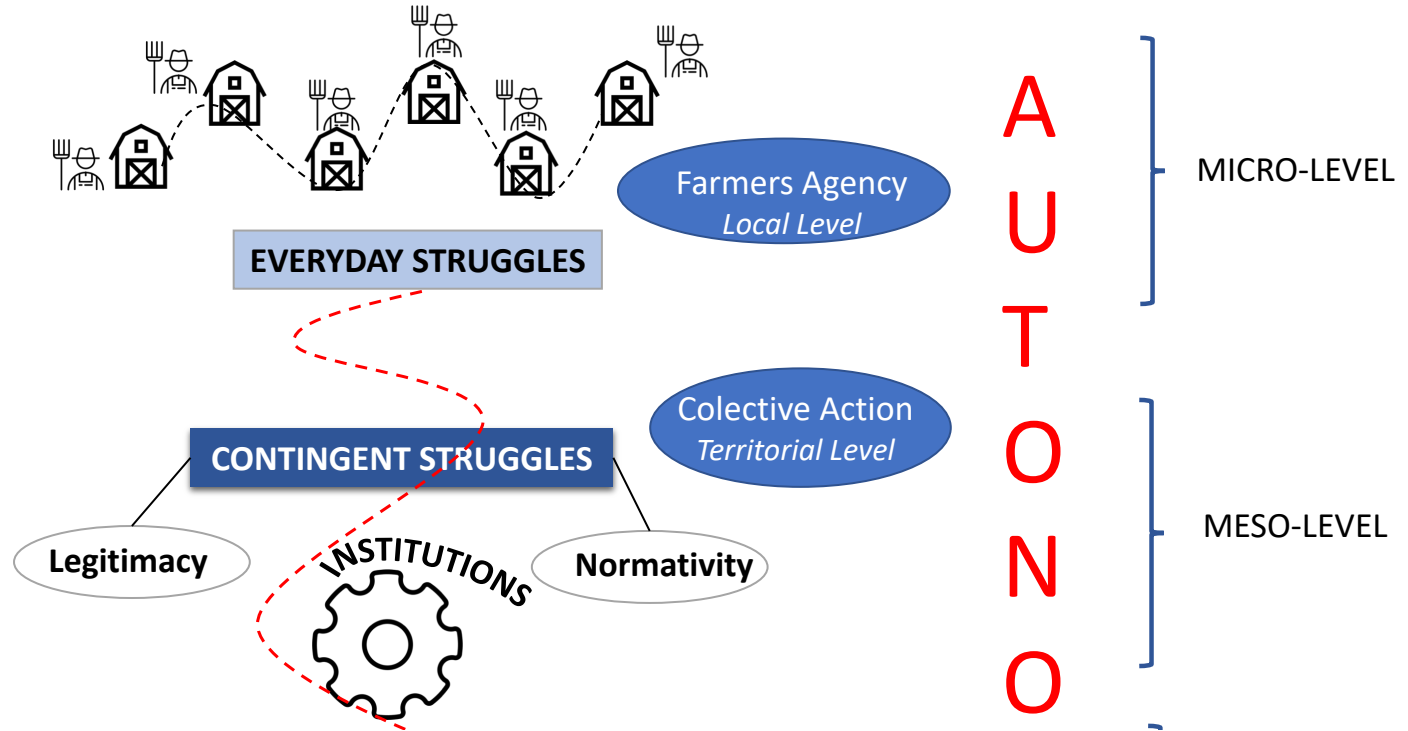
Framework based on:  
Norman Long  
Jan Douwe van der Ploeg



# Second Level

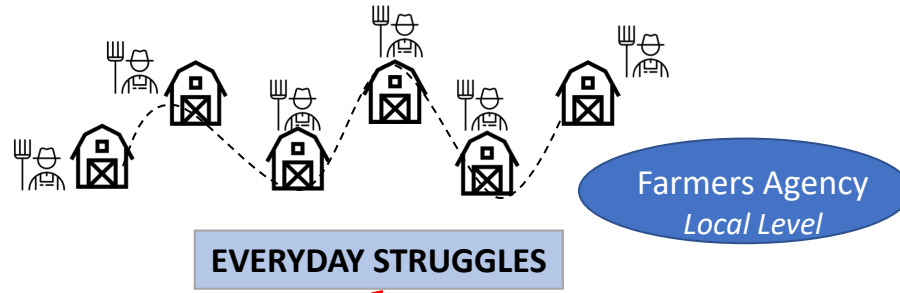
Framework based on:  
Norman Long  
Jan Douwe van der Ploeg

Framework based on:  
Karl Polanyi  
Elinor Ostrom



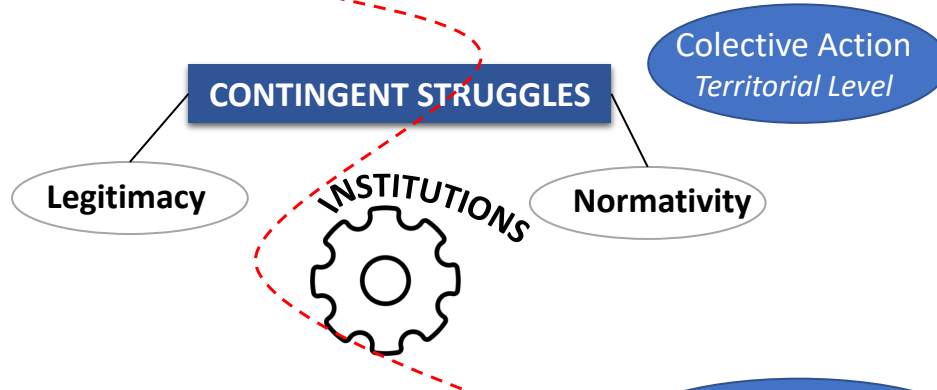
# Third Level

Framework based on:  
Norman Long  
Jan Douwe van der Ploeg



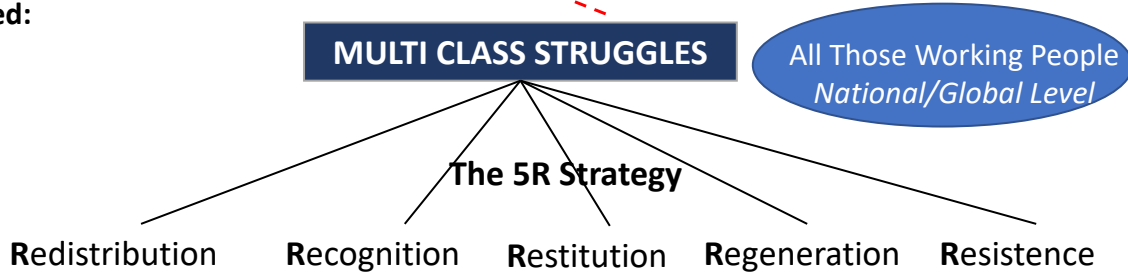
MICRO-LEVEL

Framework based on:  
Karl Polanyi  
Elinor Ostrom



MESO-LEVEL

Framework based:  
A. Negri  
Jun Borrás Jr.



MACRO-LEVEL

A  
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M  
Y

**Challenges  
Towards an  
Agenda for Family  
Farming and Food  
System Studies**

**More and  
Better Markets**

**FARMERS**

**Innovation  
and Cost  
Reduction**

**Inclusion in  
New Digital  
Technologies**

**Avoid Risk of  
Ubiquity  
F. Buttel**

**SCHOLARS**

**Develop new  
metrics for  
better  
assessment**

**Challenges of  
being Inter and  
Transdisciplinary**

**Thanks for Your  
Attention !!**

**Sergio Schneider –  
schneide@ufrgs.br**

## ① Demographic Issues –

- ✧ What is, actually a family farm ? The new shapes of the families in the rural;
- ✧ Rural migration and displacement – continuum to the urban;
- ✧ The consequences for the youth – succession and inheritance.

## ② Organization Questions –

- ✧ What is, at the end, the best way (Chayanov's optimal) to organize peasant agriculture ?
- ✧ The treats/advantages to in a coop versus a agro industrial food chain ?

## ③ Technological Threats –

- ✧ The myth '*small is beautiful*' is over – but, we should not take for grant the challenges of the new IT's for farmers;
- ✧ But, the key point is take back the control over the seeds and breeds !!!



## ④ **Market Challenges –**

- ✧ **There is increasing need for farmers/producers to integrate/articulate with urban people/consumers;**
- ✧ **The reconnection/delocalization debates in Global North and the revalorization in the Global South;**
- ✧ **Short food supply chains and Nested markets as possibilities.**

## ⑤ **Political and Social Matters – Multi Class**

- ✧ **Hobsbawm already said that “the death of the peasants” was a remarkable social phenomena in 20<sup>th</sup> Century...**
- ✧ **But, peasants still are important as political power for:**
  - **Struggles against social dispossession and injustice;**
  - **Support nature and biodiversity initiatives;**
  - **Foster food security and sovereignty over the world.**
- ✧ **The question is **How to connect peasants struggles and agendas with other actors ones** – Jun Borras 5 R’s Strategy !!**