

Agriculture

Food & Nutrient Security

LEG regional training workshop on national adaptation plans (NAPs) for the Pacific LDCs, in collaboration with the NAP GSP for the LDCs

3 – 7 November 2014, Port Villa, Vanuatu



the FAO (1998) definition:

- 'Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.'

→ scales: individual, household, national, regional and global levels

Two times



More



Less



Better

Food & Nutrition Security



National Policies: focus on availability and access

- food self-reliance implies that the country's production focuses on agricultural export products with a comparative advantage to generate sufficient resources to pay for the imported agricultural products.
- food self-sufficiency, which aims to produce all food demanded by the national population domestically.

(Deb et al. 2009).

- Food sovereignty is the right of each nation to maintain and develop its own capacity to produce its basic foods respecting cultural and productive diversity.

(Vía Campesina 1996)

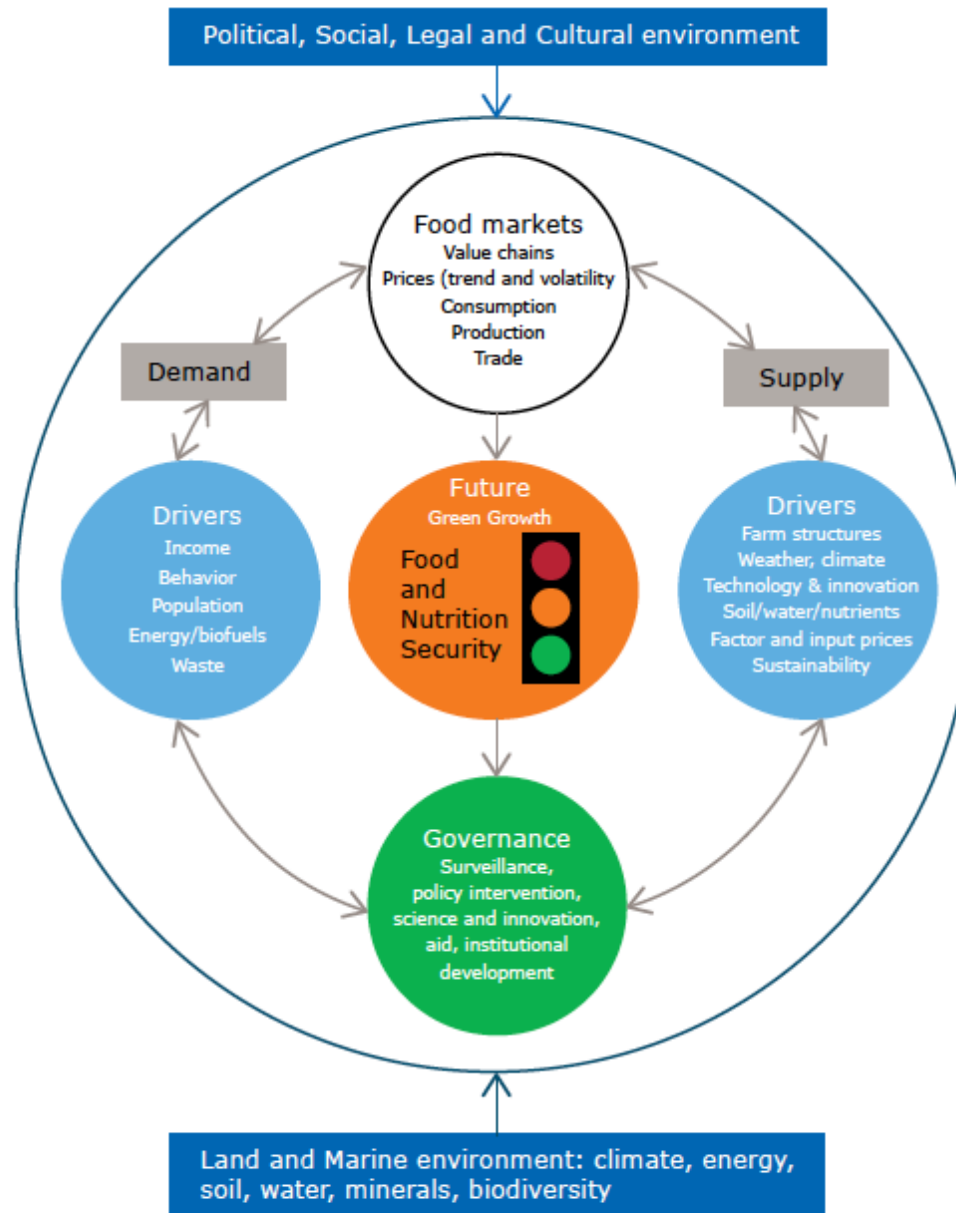
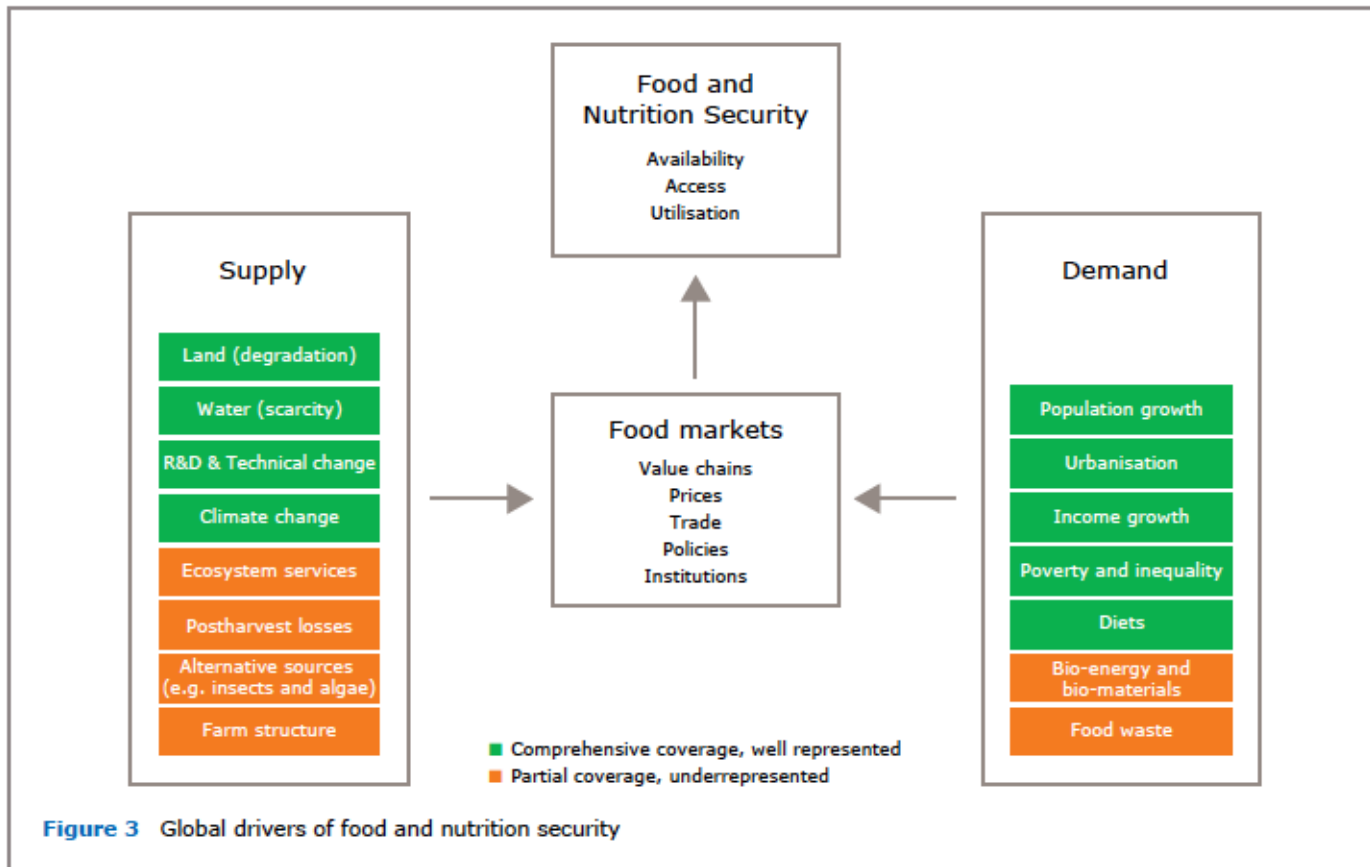


Figure 1 The broader picture

Source: Based on the FOODSECURE project

The Food Puzzle. Pathways to securing food for all.

Drivers

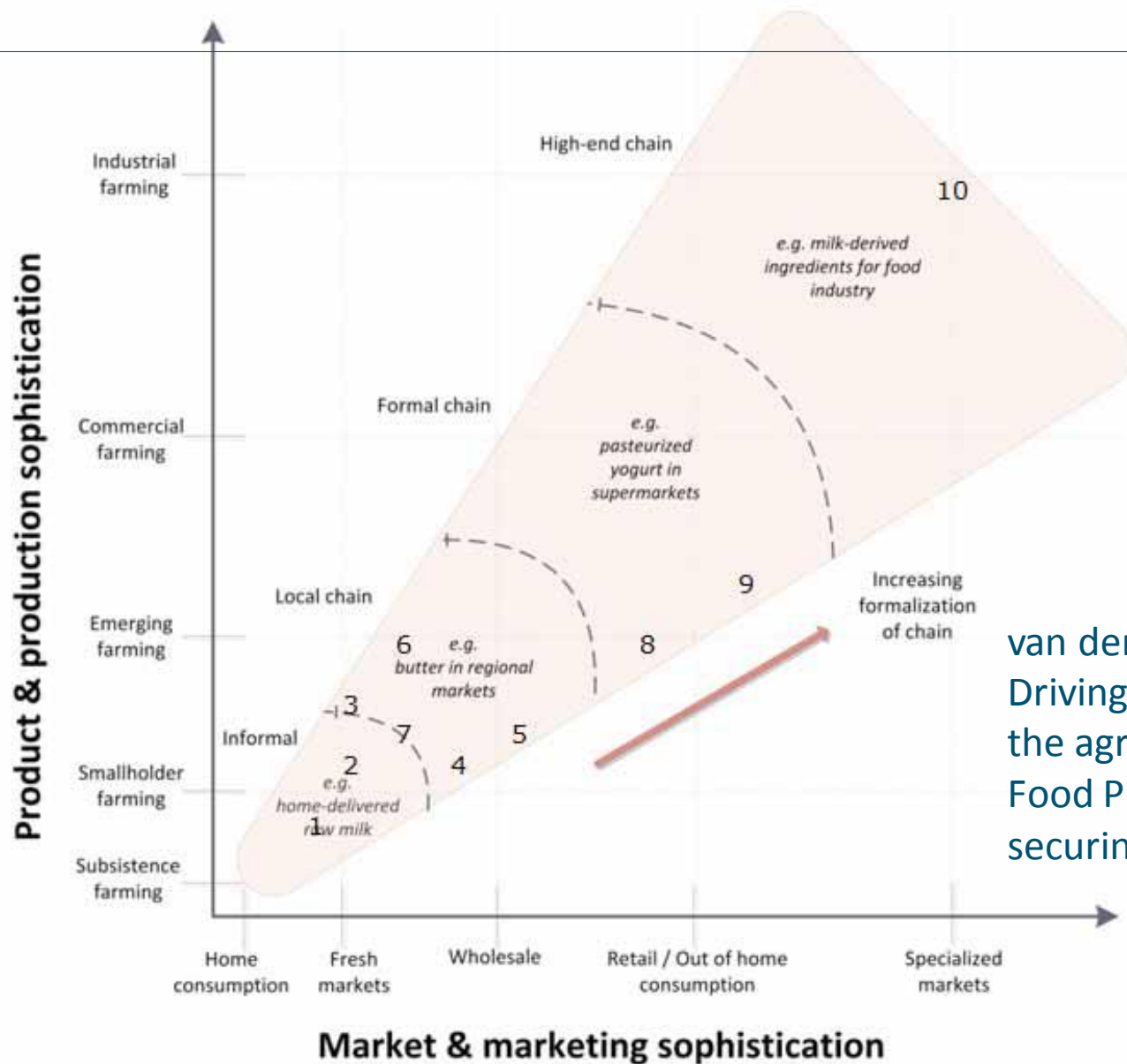


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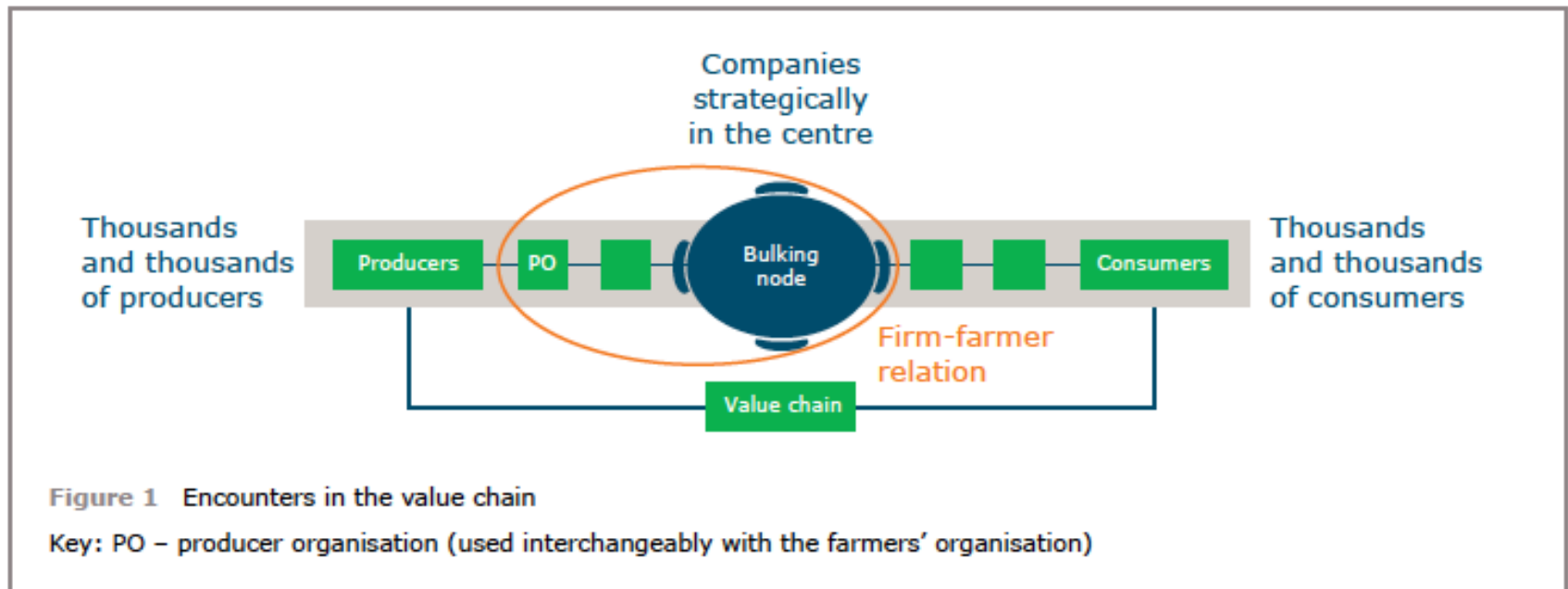
Markets are important



van der Lee et al. 2014
Driving innovations in
the agri-food system. In: The
Food Puzzle. Pathways to
securing food for all.



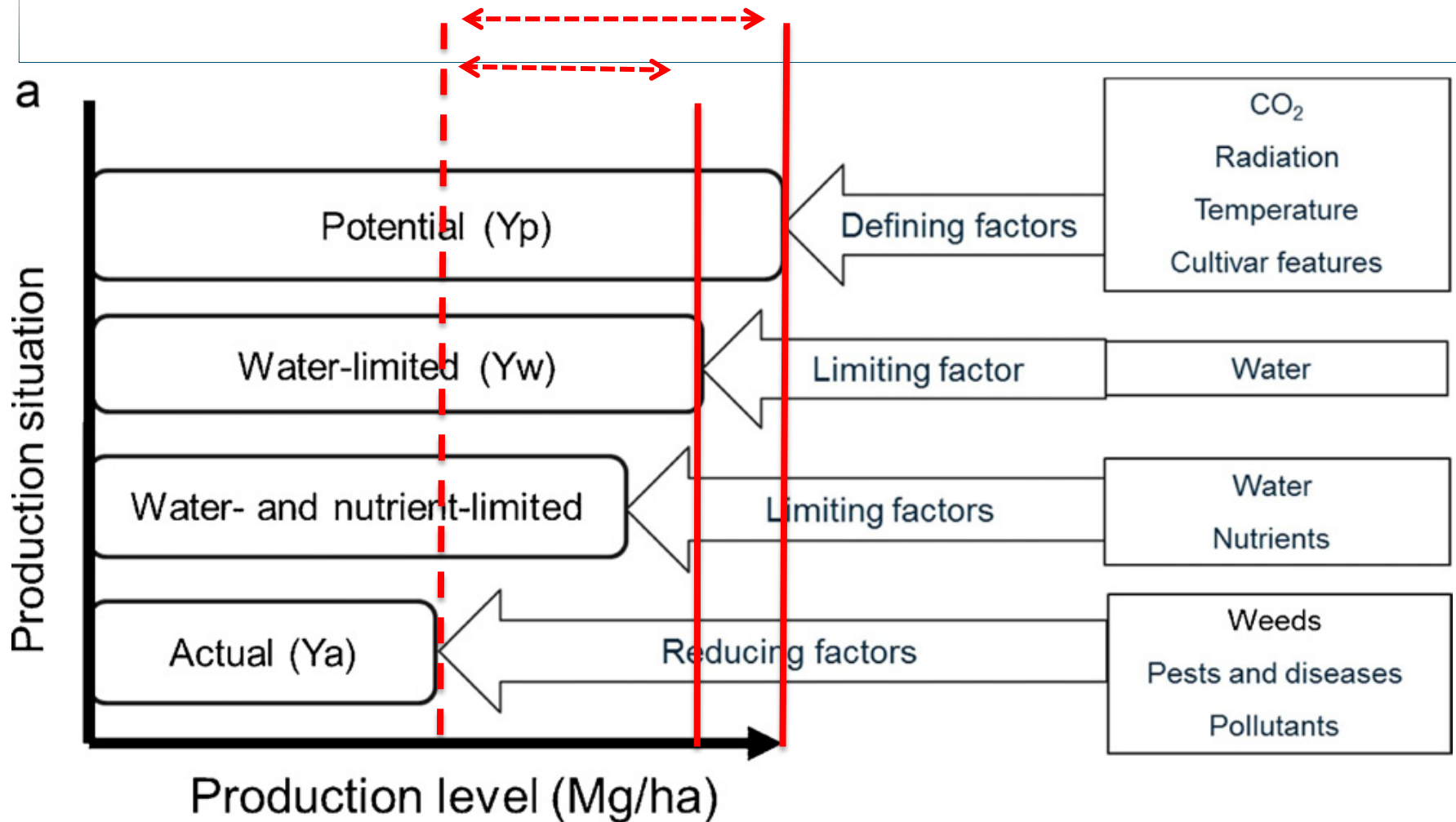
Farm Firm relations



No shortage of indicators

FNS INTERVENTION	Availability	Accessibility	Utilization	Stability
<i>Long term</i>				
Individual Level ¹	Legal status of ownership of the farm land	Participation of microfinance	Health insurance	
			Access to piped water	
			Main water source for drinking	
			Type of sanitation facility	
Household Level ¹	Legal status of ownership of the farm land	Participation of microfinance	Health insurance	
			Access to piped water	
			Main water source for drinking	
			Type of sanitation facility	
Macro Level	Public expenditure on education	Land reform ⁴	Public expenditure on health ³	
	Family planning program	Microfinance access ¹	% of population with access to sanitation facilities ³	
	Public expenditure on agricultural research and development	Constitutional right to social security ²	% of population with access to improved water source ³	
		Constitutional protection of the right to food ³		
		Domestic credit by banking sector ³		
		Deposit accounts with commercial banks ³		
<i>Short term</i>				
Individual Level ¹		Employment status	Behavior (smoking and hygiene, e.g. handwashing)	
		Decision making of food eaten at home		
		Sex-ratio of household members		
		Wage rate		
		Type of employment		
Household Level ¹	Yields per hectare for major staples/food crops	Household dependency ratio	Household hygiene practice	
	Household size	Income		
		Distance to nearest market		
		Distance to district capital center		
Macro Level	Average dietary supply ² adequacy	Food Price Index	Immunization rate ⁸	International price transmission ¹²
	Average protein supply ²	Agricultural import tariffs ⁵	Estimated number of people living with HIV/AIDS ⁵	Food price variability ¹²
	Agricultural irrigated land ³	Inflation rate ³	HIV prevalence among pregnant women ⁶	
	Rainfall amount ⁴	Exchange rate ³		
	% of agricultural import ⁵	% of population living on less than 1 dollar/day ³		
	Coefficient of Variation of length of growing period ¹⁰	Gini coefficient ³		

Production: Yield Gap



van Ittersum, et al, Z. (2013). Yield gap analysis with local to global relevance—A review. *Field Crops Research*, 143, 4–17. doi:10.1016/j.fcr.2012.09.009

Scales

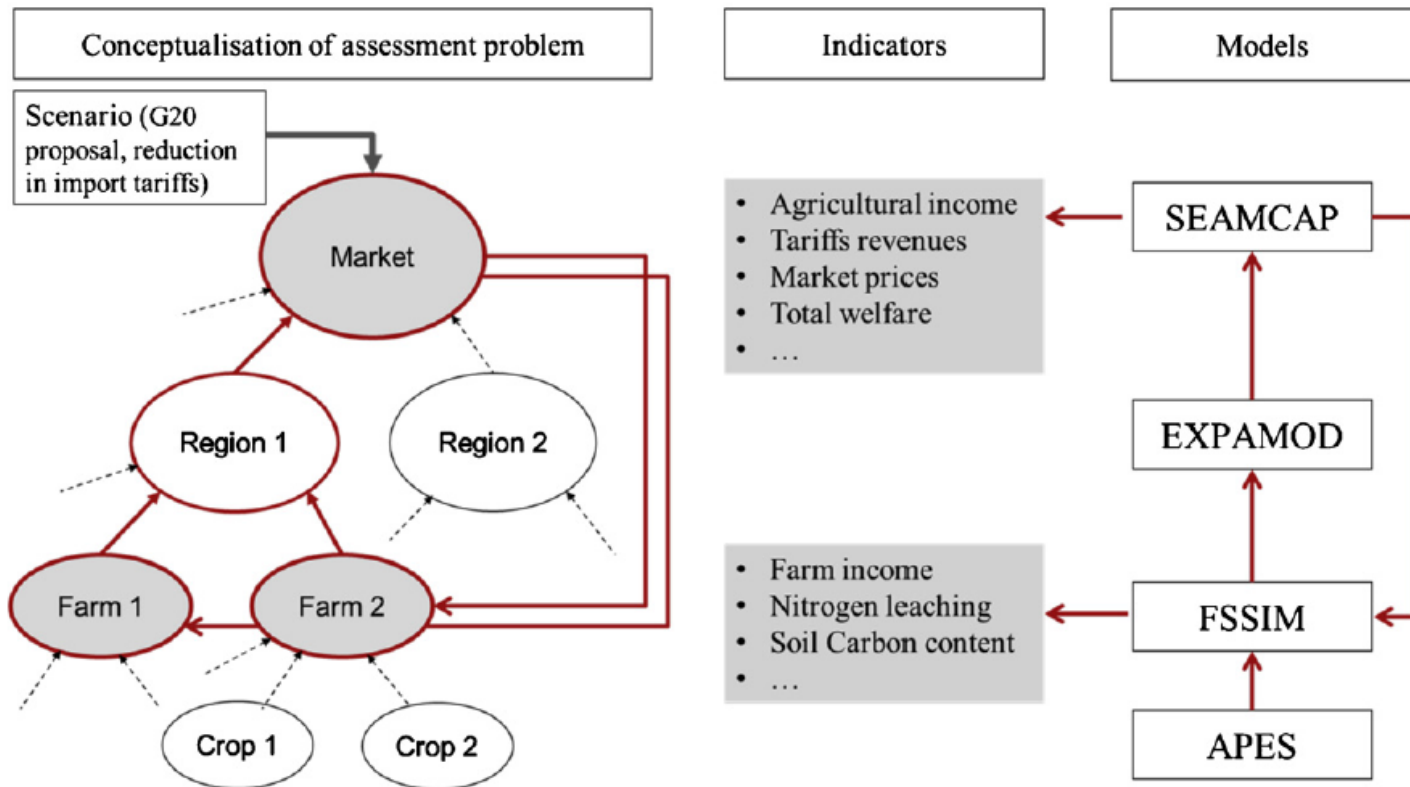
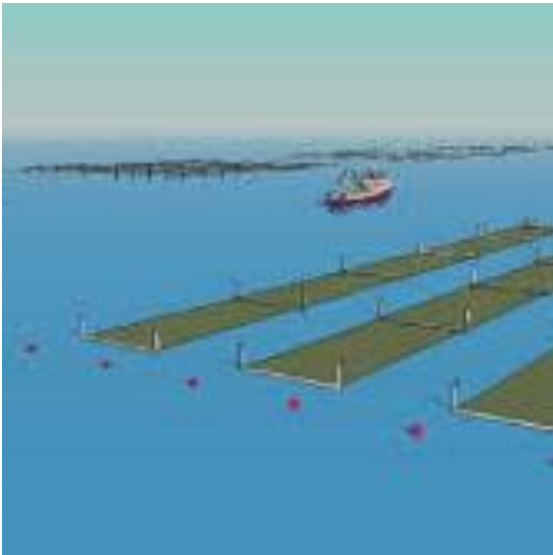


Fig. 2. Considered levels of organisation, indicators and models for test case 1 (see text for explanation). Note the market level is not only affected by the chain field-farm-region but also by other market factors (e.g. demand changes) not analysed in this study.

Ewert, F., et al ,(2011). Scale changes and model linking methods for integrated assessment of agri-environmental systems. *Agriculture, Ecosystems and Environment*, 142, 6–17. doi:10.1016/j.agee.2011.05.016

Think of new systems



Sea Farm



Think of new systems



Floating agriculture



Indoor agriculture

Take home messages

1. Food and Nutrient Security is complex, production is 1 important element
2. Climate change is not the only driver of change
3. Indicators are available use them
4. Methods and international networks are available to work on interventions at different scales
5. New systems are being developed and tested



Thanks

