

Lessons learnt from international agro-logistics interventions

Agrologistics forum 2022 – Egypt

6th of December 2022 – Bas Hetterscheid

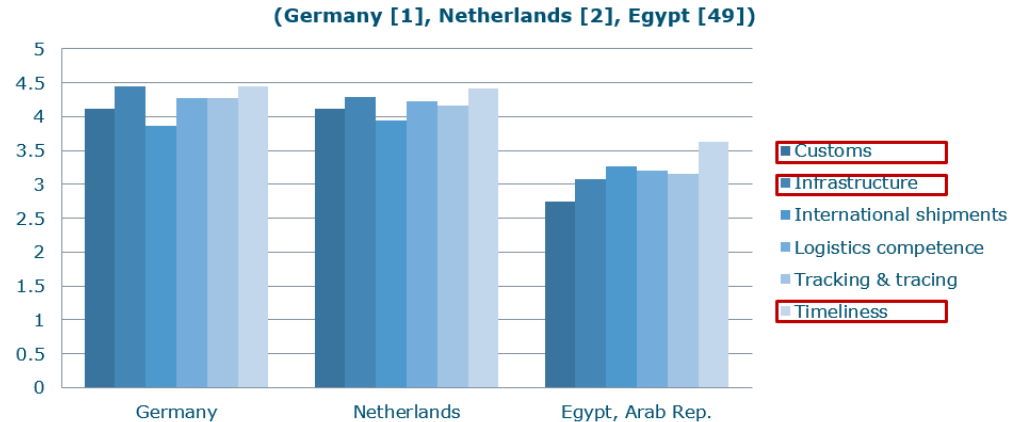


Why is agrologistics so important?

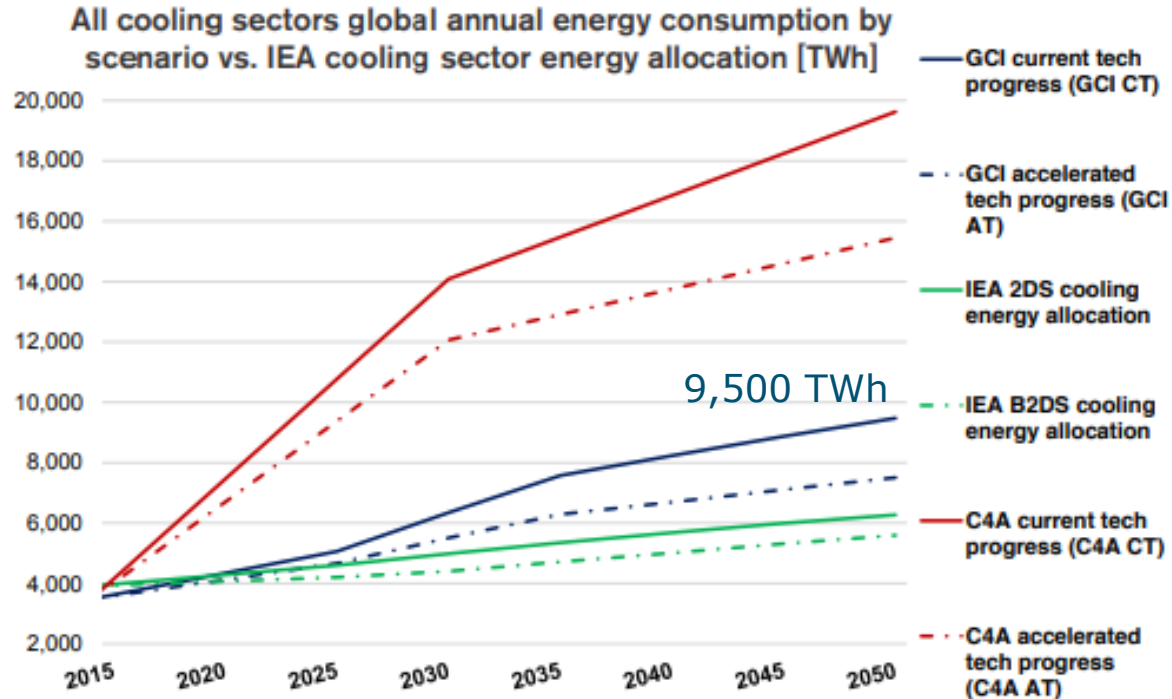
- > Productivity & GDP
- > Export & trade
- > Job creation

- < Transaction costs
- < Food losses

1 Dollar spent on infrastructure yields an additional 60 cents in economic activity



Growing demand for cooling



LETTER FROM RWANDA AUGUST 22, 2022 ISSUE

AFRICA'S COLD RUSH AND THE PROMISE OF REFRIGERATION

*For the developing world, refrigeration is growth. In
Rwanda, it could spark an economic transformation.*

By Nicola Twilley

August 15, 2022



Nexus on Water-Food-Energy

Cold chains – a hot topic at financial institutes



WHO WE ARE

WHAT WE DO

Home / Accelerating Decarbonization / Efficient and Clean Cooling



EFFICIENT AND CLEAN COOLING



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Investment Opportunities in Temperature-Controlled Logistics (TCL)



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ARCH COLD CHAIN SOLUTIONS EAST AFRICA FUND



Rabobank **RaboResearch** Food & Agribusiness

Sustainability and Innovation in Cold Chain I: Understanding the Sustainable Revolution

Agenda

- Reality check on cold chain development
- Lessons learned

Reality check on cold chain development



A SAIP facility



Cold chain assessment Rwanda

District	# cold rooms	Management	Status			
			Connected to Grid	Functioning	Switched On	Occupied
Rulindo	5		●	●	●	●
			●	●	●	●
			●	●	●	●
			●	●	●	●
			●	●	●	●
Musanze	3		●	●	●	●
			●	●	●	●
			●	●	●	●
Rubavu	1 facility with 5 cold rooms		●	●	●	●
Karongi	1		●	●	●	●
Rwamagana	2		●	●	●	●
			●	●	●	●
Ngoma	1		●	●	●	●
Gatsibo	1		●	●	●	●
Gasabo	1 facility with 2 cold rooms		●	●	●	●
Kicukiro	2 Facilities with 5 cold rooms		●	●	●	●
			●	●	●	●
Nyarugenge	2		●	●	●	●
			●	●	●	●

Public sector

Private sector

Outline of study TORs by investor

*“the study will look to establish the existing cooling needs both **met and unmet** in selected value chains and regions of the Country”*

Combined with other sectors:

- Building sector
 - Commercial
 - Public
 - Residence
- Healthcare sector



Country (in Cooling Facility funding proposal)	Cooling-related sectors targeted	Covered in firm's Expression of Interest ("X")
Bangladesh	<i>Buildings sector.</i> Energy efficiency of commercial and public buildings: air conditioning and passive measures	
El Salvador	<i>Healthcare sector.</i> Vaccine cold chains <i>Buildings sector.</i> Solarization and energy efficiency of health facilities: photovoltaic generation, air conditioning and passive measures	
Kenya	<i>Agriculture sector.</i> Cold chains (including off-grid) <i>Buildings sector.</i> Air conditioning of residential buildings and small business	
Malawi	<i>Agriculture sector.</i> Cold chains (including off-grid) <i>Buildings sector.</i> Energy efficiency of warehouses: air conditioning and passive measures	
North Macedonia	<i>Buildings sector.</i> Energy efficiency of public buildings: passive measures	
Panama	<i>Buildings sector.</i> Energy efficiency of residential and commercial buildings: air conditioning, residential refrigerators and passive measures	
Sao Tome and Principe	<i>Healthcare sector.</i> Vaccine cold chains <i>Buildings sector.</i> Solarization and energy efficiency of health facilities: photovoltaic generation, air conditioning and passive measures	
Somalia	<i>Healthcare sector.</i> Vaccine cold chains <i>Buildings sector.</i> Solarization and energy efficiency of health facilities: photovoltaic generation, air conditioning and passive measures	
Sri Lanka	<i>Buildings sector.</i> Energy efficiency of commercial and public buildings: air conditioning and passive measures	

Are the sectors comparable?

- Cooling for construction sector & healthcare **is a goal** (safety, pleasant working environment, cost reduction)
- Cold chains for agriculture **are means** to extend market, in quality, geography and time.

Rational for cold chain study



Guatemala's Refrigerated Warehouse Capacity went from 0.035 million m^3 in 2014 to 0.125 million m^3 in 2018, with 0.005 m^3 per urban resident in 2014 to 0.014 in 2018.

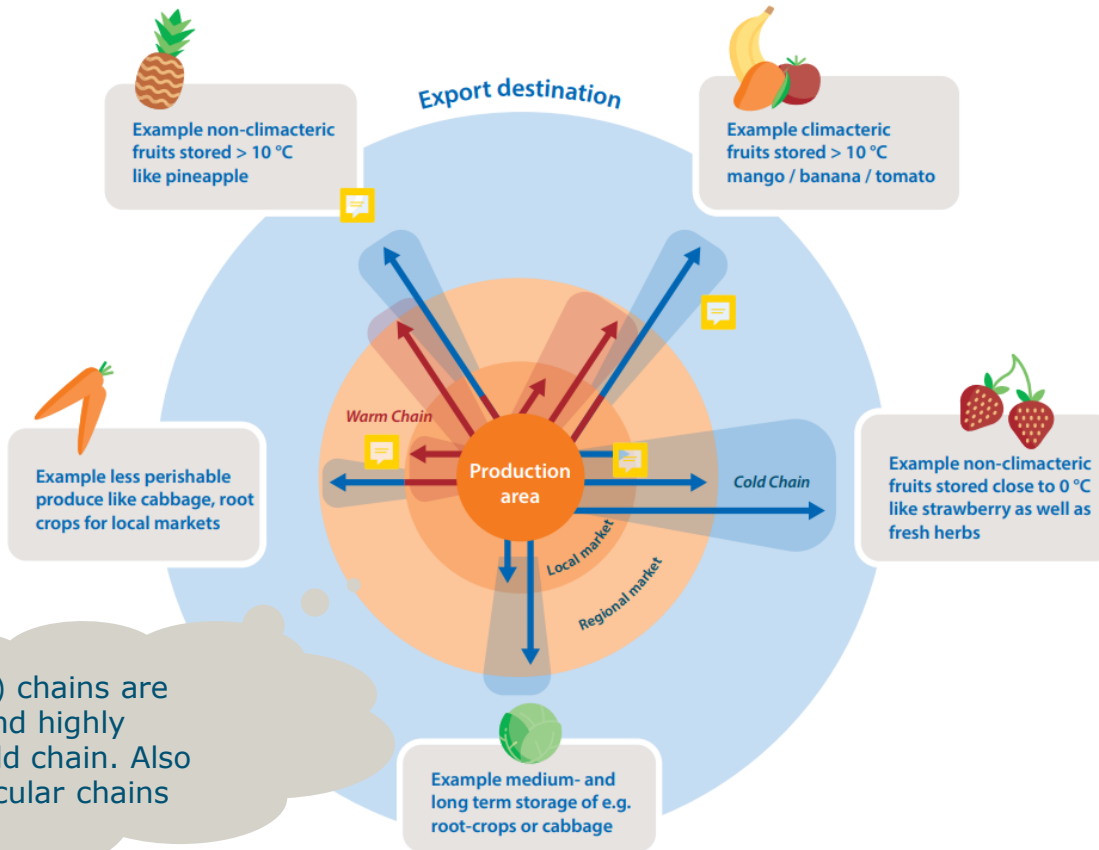
Low uptake of cold chains

Big % of Food Loss
Often at smallholders

Ideal investment !

Cold chains investments need
significant CAPEX input

Or: ideal formula for
creating supply
driven failing
investments (White
elephants) ?



Ambient (warm) chains are status quo and highly competitive to cold chain. Also suitable in particular chains

Competition of cold chain



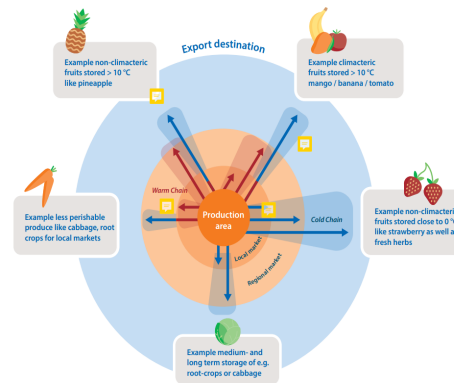
Greenhouse production



Irrigation



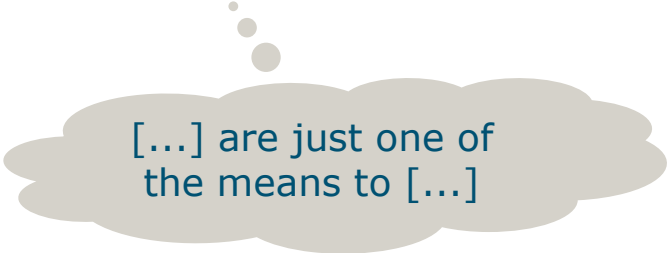
In-season products



Ambient chains

Mind the gap

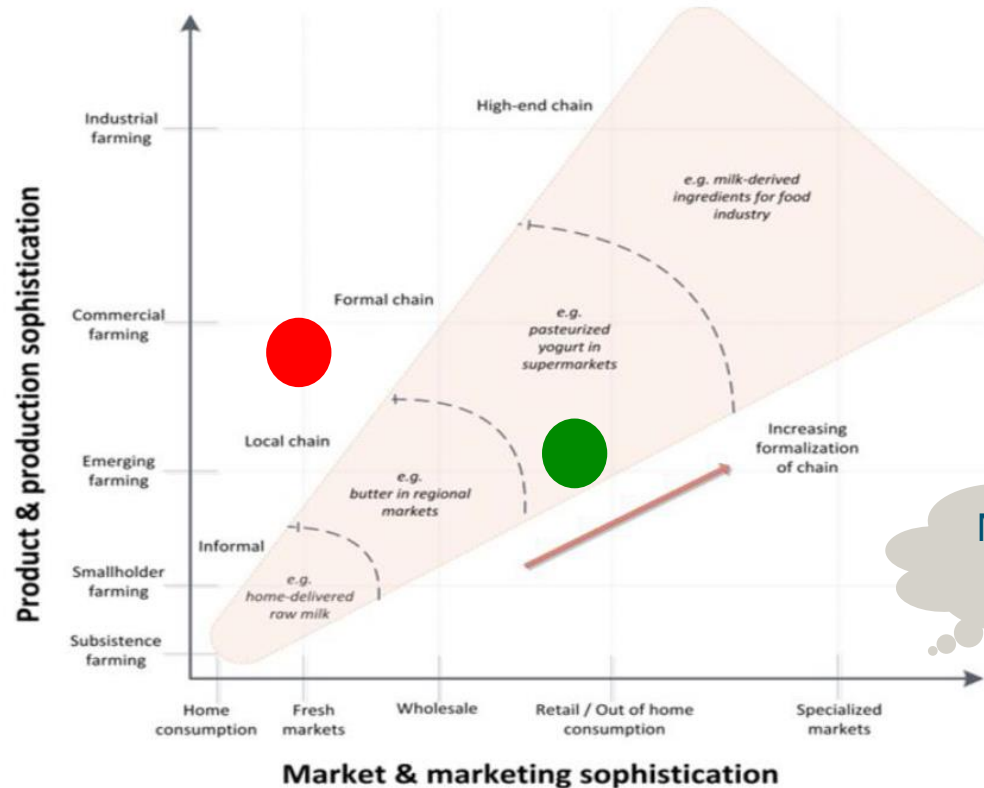
- Cooling for construction sector & healthcare **is a goal** (safety, pleasant working environment, cost reduction)
- Cold chains for agriculture **are means** to extend market, in quality, geography and time.



[...] are just one of
the means to [...]

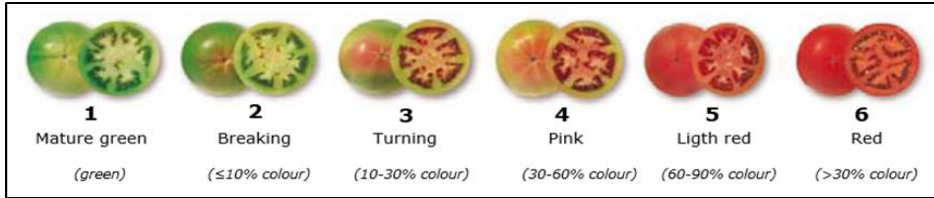
Lessons learned on agrologistics & cold chain

Cold chains – balancing sophistication



Market driven development

Market access for smallholder in horticulture



Background: Part of WBG 'Competitiveness Reinforcement Initiatives' in countries such as Haiti, Jordan and Benin.

Activities: Developing market connections through cold chain interventions, including capacity development.

Impact: Improved FNS in urban areas and economic development of farmers & value chain actors. Reduces postharvest losses.

Governments - Creating enabling environment



Project

Mainstreaming cold chains for
horticulture in Rwanda

Examples:

Public purchasing programs

Grace periods

Temporary import restrictions

How is this adopted in Egypt's NWFE?

Capacity development

Africa Centre of Excellence for Sustainable Cooling and Cold Chain Systems

- Develop, test and demonstrate
- Local capacity building
- Building public awareness



Learning from international best practices



Agrologistics sector study Netherlands

Describing the ecosystem and the international ambitions of Dutch agrologistics companies

What is your lesson learned in cold chain development?

Thanks for your attention!

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