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Saline AgricuLture for ADaptation

Upscaling Saline Agriculture

Brussels, April 16th, Pim van Tongeren

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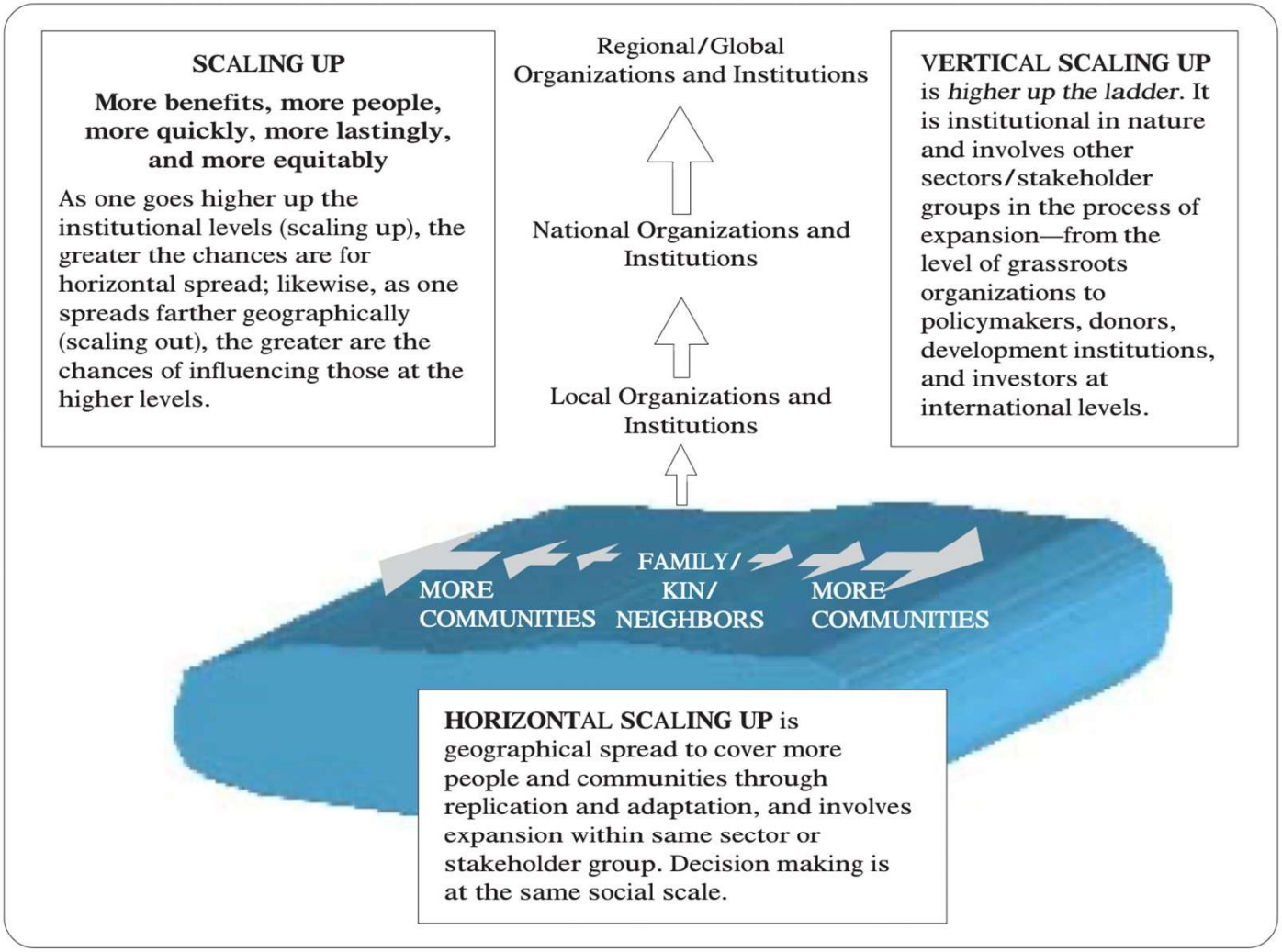
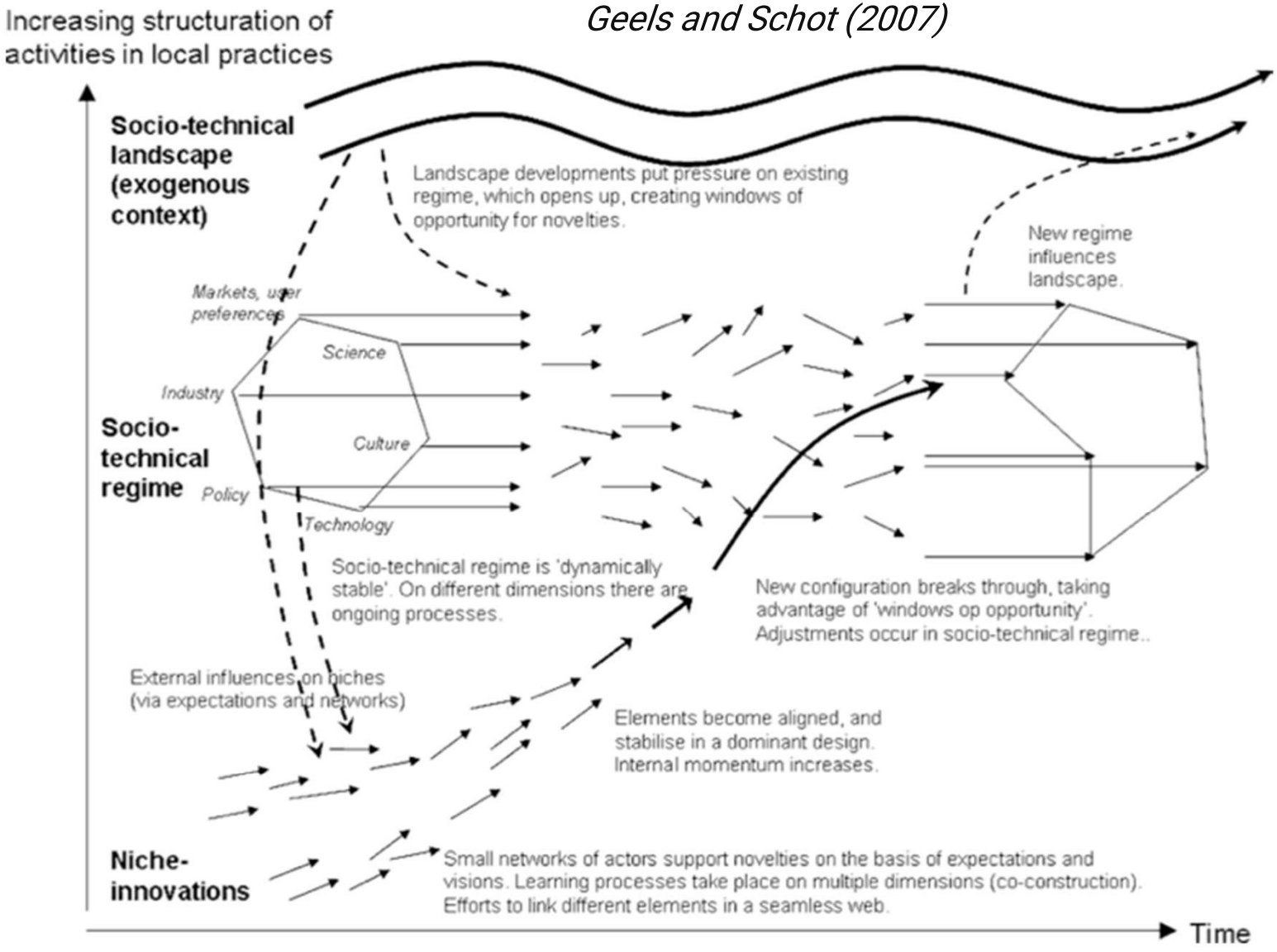
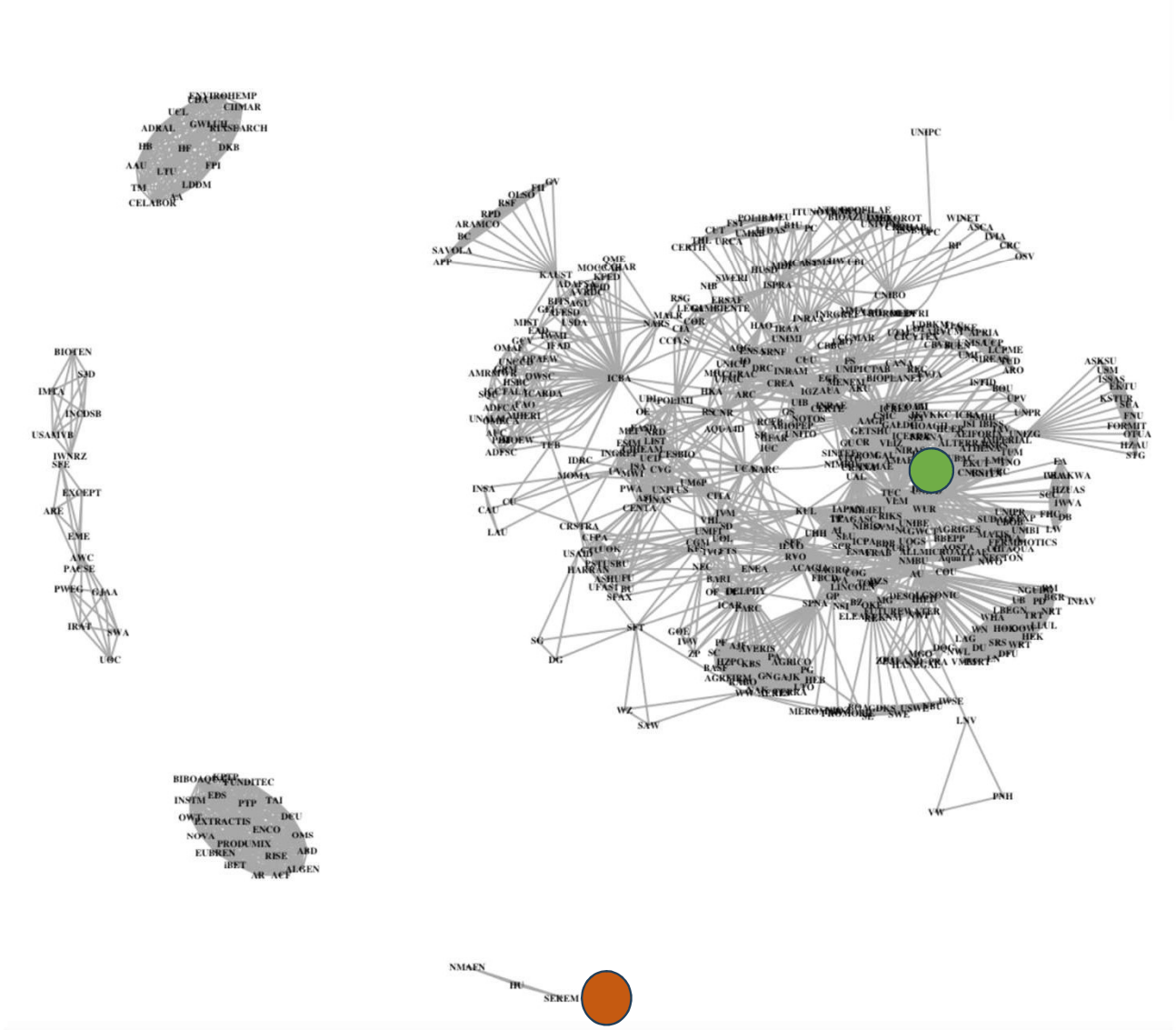


Figure 1. Definitions of scaling up (adapted from IIRR, 2000, p. 17).

Geels and Schot (2007)





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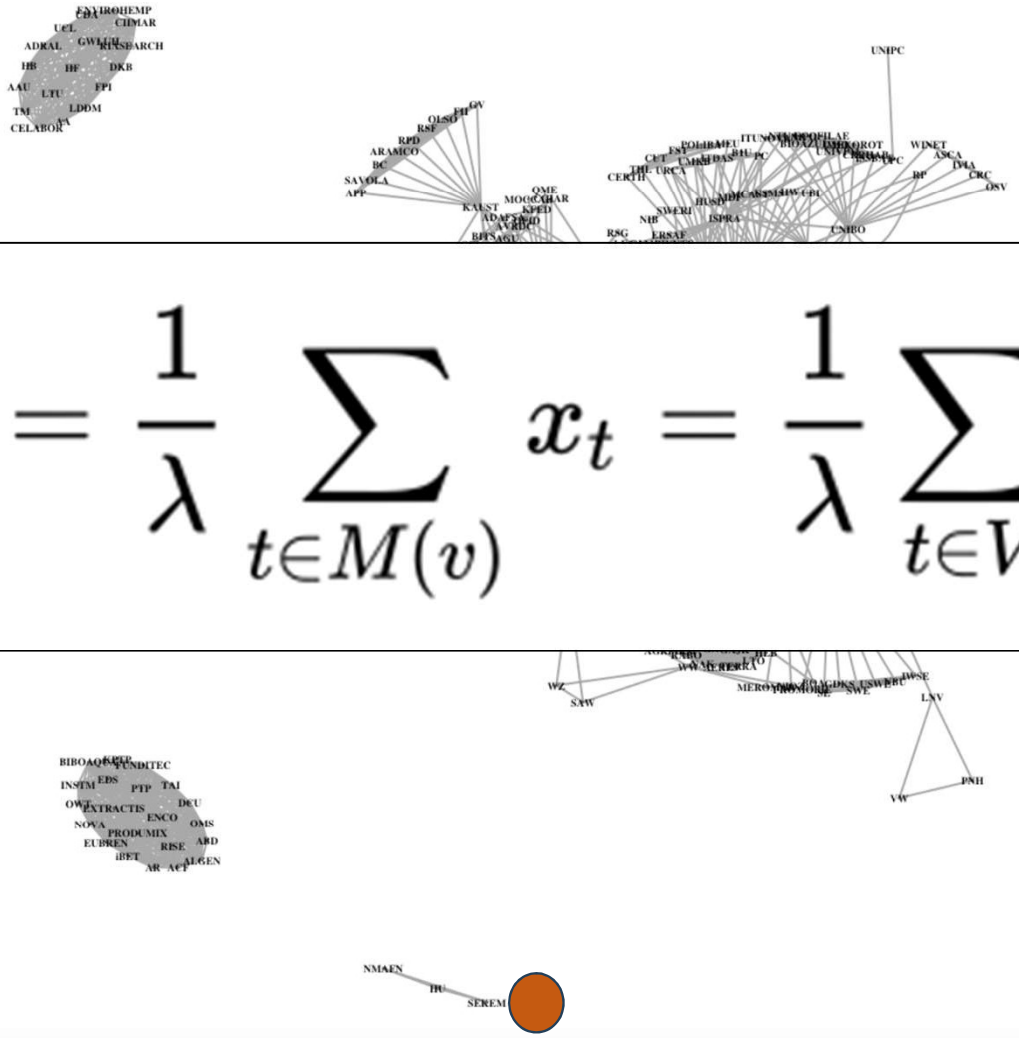


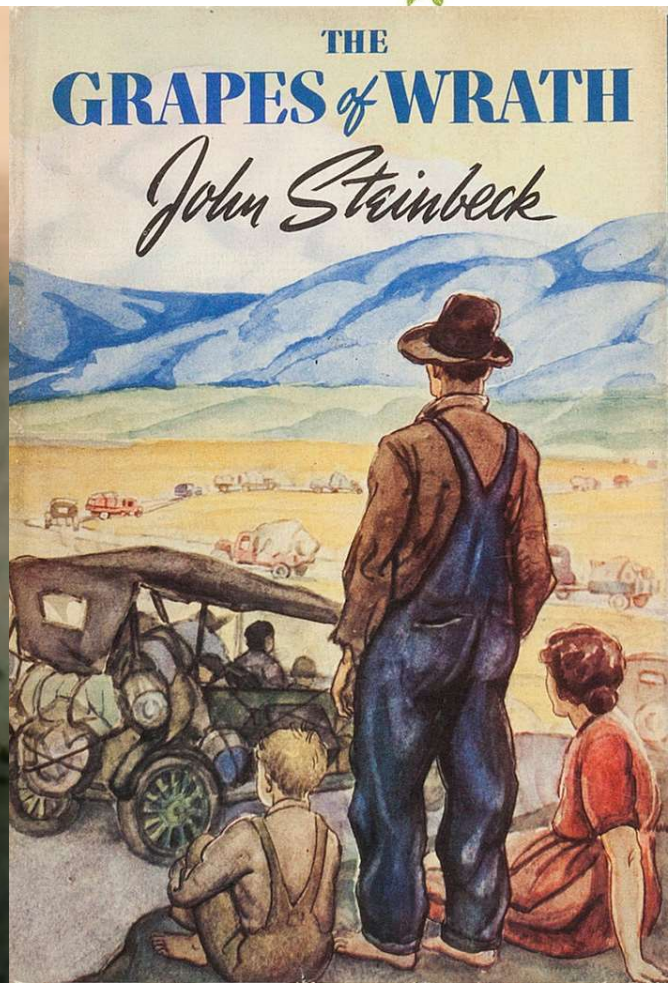
$$x_v = \frac{1}{\lambda} \sum_{t \in M(v)} x_t = \frac{1}{\lambda} \sum_{t \in V} a_{v,t} x_t$$

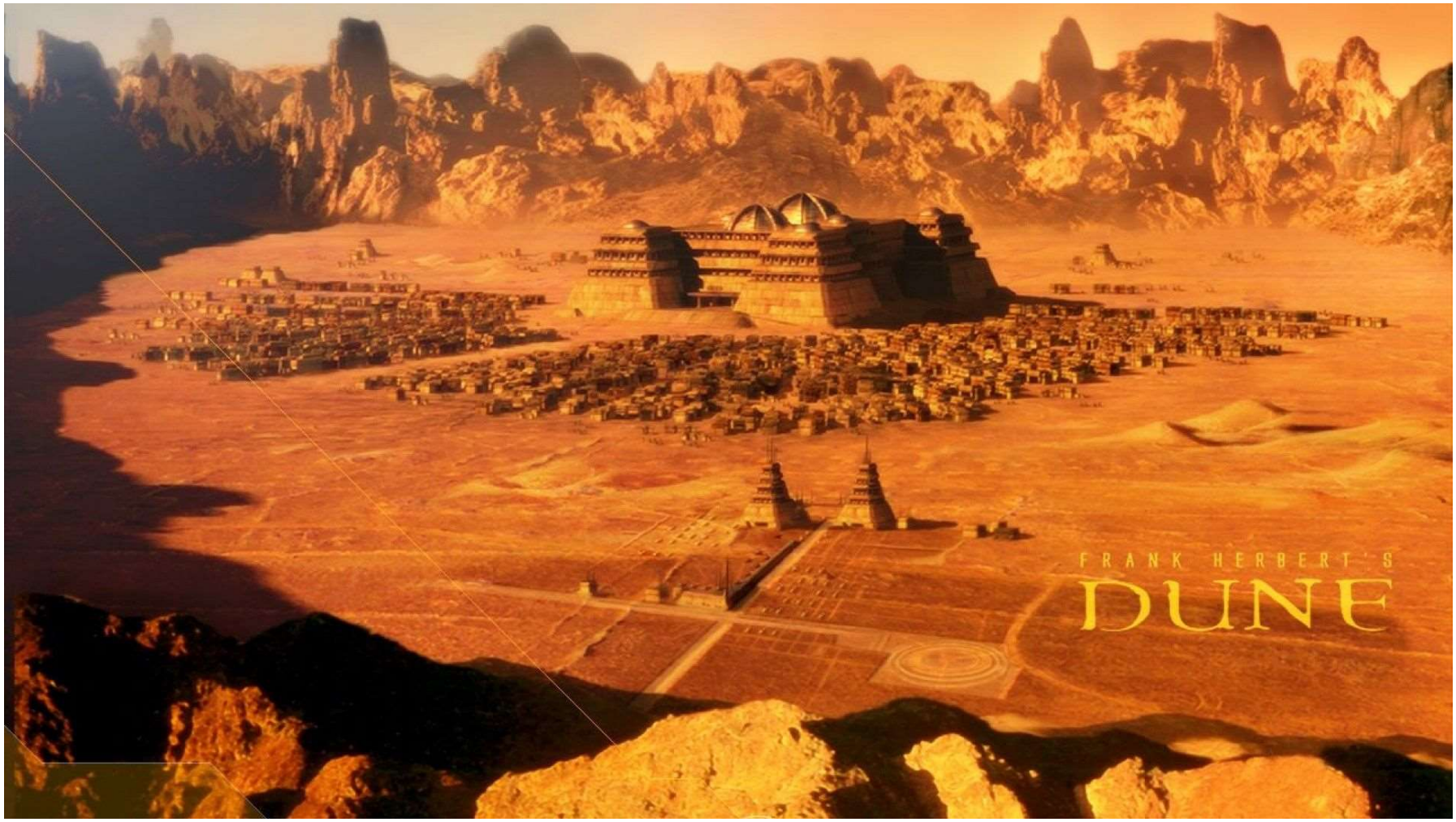
- The concept of "network power" refers to the influence, control, or centrality that actors within a network possess

- Potential problems arising from disparity in Network Power:

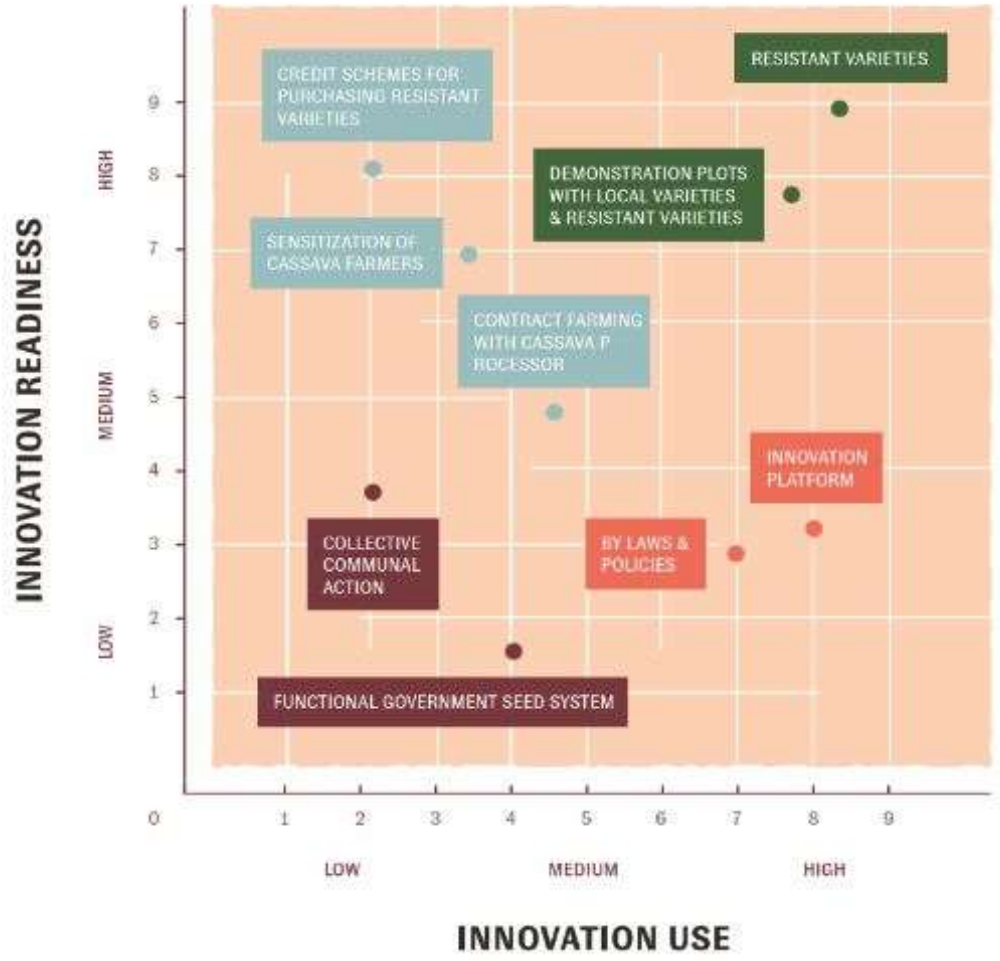
1) Structural Inequality
2) Resource Distribution
3) Knowledge Production
4) Dependency and Vulnerability

ANATOLIA
TURKEY
Caspian Sea
Tigris
Nineveh
Kalhu
ASSYRIA
IRAN
Assur
MESOPOTAMIA
Euphrates
SYRIA
Zagros Mountains
Mediterranean Sea
LEBANON
CANAAN
AKKAD
Tell Asmar
Sippar
BABYLONIA
Babylon
SUMER
Susa
Jerusalem
Dead Sea
IRAQ
Girsu
Lagash
Uruk
Ur
Eridu
JORDAN
CHALDEA
SAUDI ARABIA
Nile
N
modern-day coastline
Persian Gulf
Red Sea
250 km
250 miles
Fertile area of early agriculture


THE
GRAPES of WRATH
John Steinbeck


FRANK HERBERT'S
DUNE

Scaling Readiness (CGIAR Framework)



There is no one-size-fits-all scaling strategy

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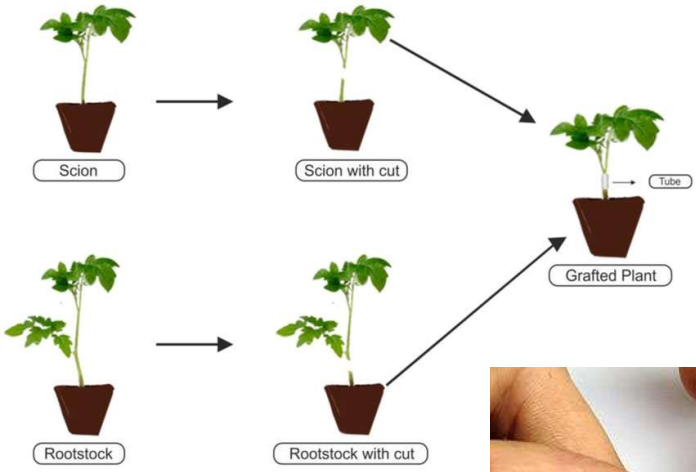
Core innovations may encompass (depending on local conditions and crops):

- Sensors for soil and water salinity
- Salinity stress and yield crop models
- Salt-tolerant varieties
- Grafting
- Integrated farm systems
- Soil amendments & mulching
- Innovative irrigation systems
- Drainage



Complementary innovations essential for scaling the *core innovations*:

- Favourable market conditions
- Supportive policies
- Financial investments
- Access to knowledge
- Organizational capacity to pilot projects and prove concepts

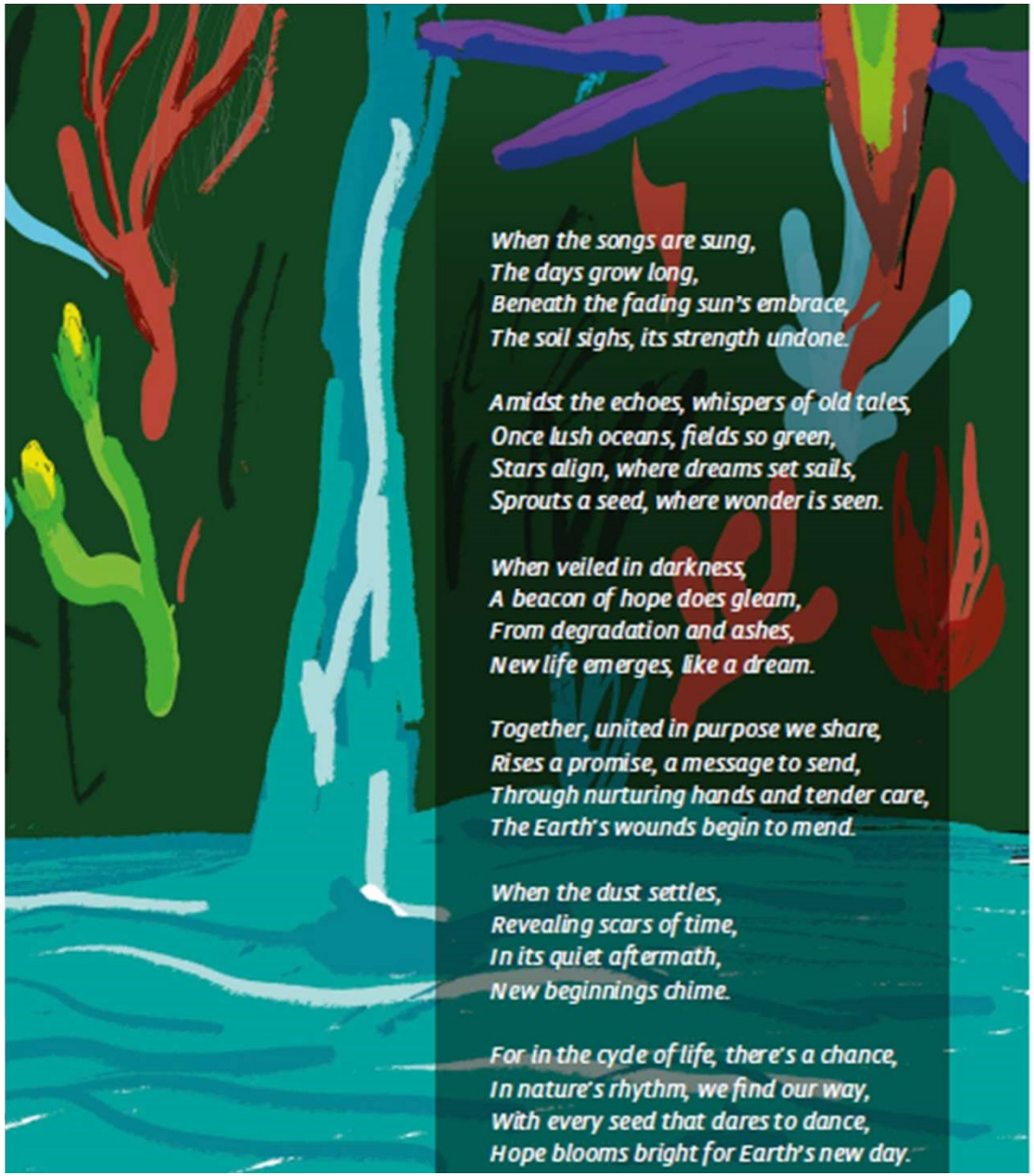
Scaling innovations in the context of saline agriculture *seems* complicated

But we can see the yellow brick road leading to Emerald City!

We need a holistic approaches considering:

- Technical,
- Organizational,
- Institutional,
- Socio-economic dimensions

-> & Local context & knowledge!


When the songs are sung,
The days grow long,
Beneath the fading sun's embrace,
The soil sighs, its strength undone.
Amidst the echoes, whispers of old tales,
Once lush oceans, fields so green,
Stars align, where dreams set sails,
Sprouts a seed, where wonder is seen.
When veiled in darkness,
A beacon of hope does gleam,
From degradation and ashes,
New life emerges, like a dream.
Together, united in purpose we share,
Rises a promise, a message to send,
Through nurturing hands and tender care,
The Earth's wounds begin to mend.
When the dust settles,
Revealing scars of time,
In its quiet aftermath,
New beginnings chime.
For in the cycle of life, there's a chance,
In nature's rhythm, we find our way,
With every seed that dares to dance,
Hope blooms bright for Earth's new day.

Thank you!

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