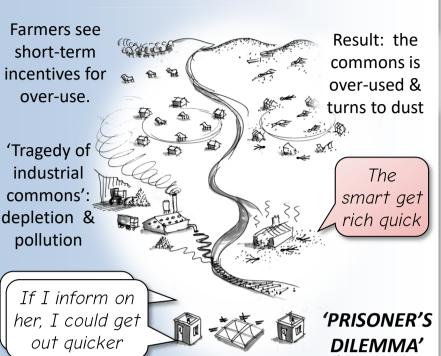
(Chapter 9: frontispiece - untitled)



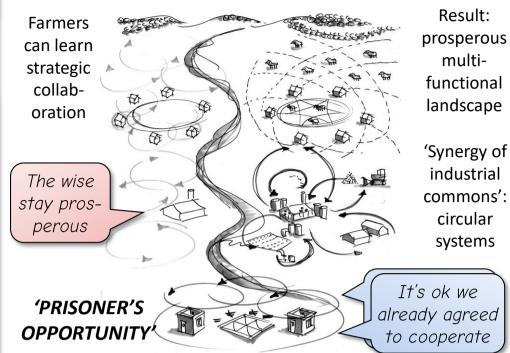
# **DEEPER-MIND-III**

Exploring the scope & varieties of collective intelligence, with example of the 'synergy of the commons'

### a) TRAGEDY OF THE COMMONS-I&II



#### b) SYNERGY OF THE COMMONS-III



# c) VARIETIES of COLLECTIVE INTELLIGENCE



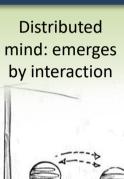
brain



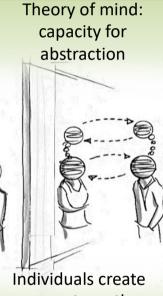
Social brain from

others

Developmental psychology



**Evolution of** social norms & systems



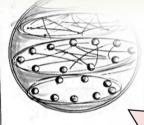
concepts on the realities of others

Deeper mind & collective social intelligence



Individuals enabled to collaborate on societal systems

Hive-mind & collective brain



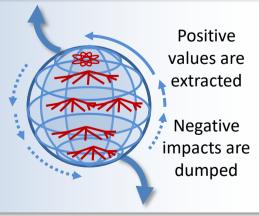
Individuals are parts of a larger cognitive whole

We think as one & we are as one

## d) EVOLUTIONARY INTELLIGENCE-I&II

#### **LINEAR COGNITIVE SYSTEM**

Functional & hierarchical intelligence, few feedback channels



SINGLE / **DOUBLE** LOOP **LEARNING** 

Divergent thinking: data to information

Relational thinking: memory of facts

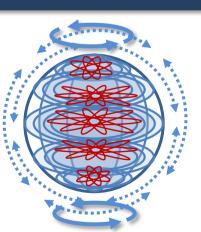
**Emergent** thinking: problem solving insight

Convergent thinking: linear processing

## e) CO-EVOLUTIONARY INTELLIGENCE-III

#### SYNERGISTIC **SYSTEM**

Collaborative & neuro-plastic intelligence, multiple feedbacks



Wider synergies of

**Further** synergies of effects

values

Deeper synergies of

**Emergent** 

thinking:

transform

insight

layers

MULTI-Divergent thinking: LOOP 'COfrom knowledge to wisdom **LEARNING'** 

Relational thinking: neuro-plastic, associative

Convergent thinking: pathways of co-production

# E/VALUATION-III

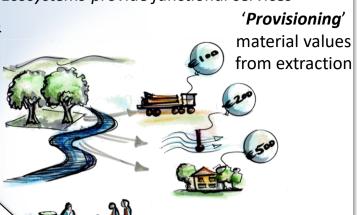
Exploring the shift from functional to synergistic valuation & evaluation, with ecosystems services

#### a) ECOSYSTEMS SERVICES-I&II

Ecosystems provide functional services

'Regulating' & 'supporting' services are non-market, often undervalued

This forest is all mine & I will sell it when the price is right!



'cultural' services are monetized

Market values: socio-ecosystems are traded

### b) SOCIO-ECOSYSTEMS RELATIONS-III

Socio-ecosystems enable many kinds of relationships



'Provisioning' functional values are managed & stewarded

> 'cultural' services are embedded

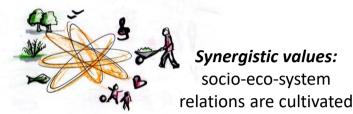
This forest we love & we will take care of it

**O** 

 $\mathcal{H}$ 

**Reality** 

state'



Synergistic values: socio-eco-system

### c) MARKET VALUES-I&II

Functional goods & market 'exchange values'

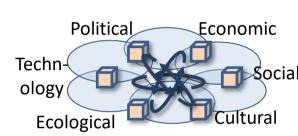
Supply



Demand

'free marketplace'

# d) RELATIONAL VALUES-III Societal 'relational values' are co-produced



'societal learning & trading zone'

### e) EVALUATION PROCESS-I&II

Task-focused management-style evaluation

**Objectives &** values: hierarchical, competitive

approach



Monetary measures of value & benefit

mandate is 'transactional'

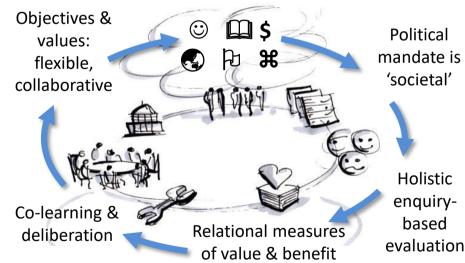
'Real

estate'

**Technical** bounded assessment

## f) EVALUATION PROCESS—III

Enquiry-focused learning-style evaluation



# g) EVALUATION SCOPE-I&II

'Logical framework' policy-management model

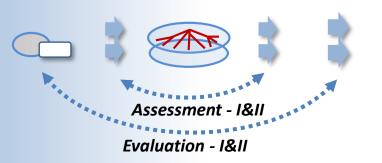
Defined Inputs & values / objectives

actions

adjustments

Outputs (direct)

Outcomes & impacts (direct)



### h) EVALUATION SCOPE-III

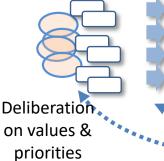
'Relational framework' policy-deliberation-learning model

Multiple Inputs & values / actions objectives

System transformations

Outputs & effects (total)

Outcomes & impacts (total)





Evaluation - III

Co-learning on outcomes

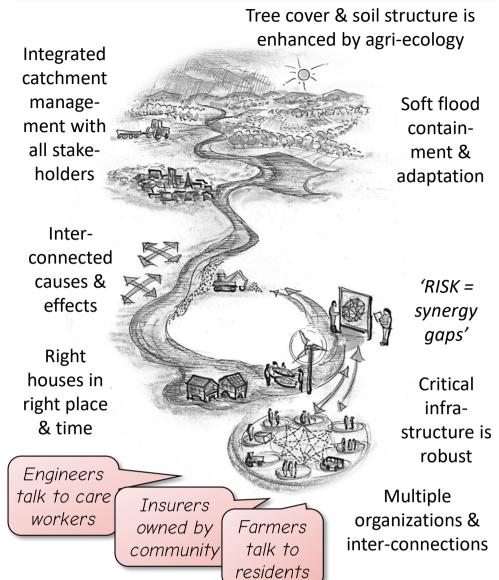
# RESILIENCE-III

Exploring the co-evolution of systems resilience, with examples of flood risk & climate adaptation



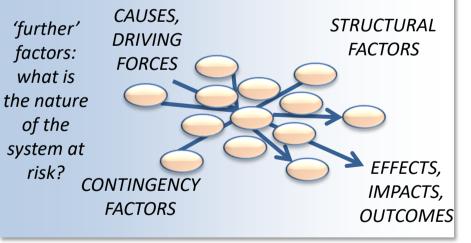


#### b) TRANFORMATIVE RESILIENCE-III



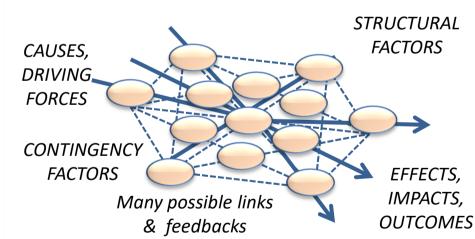
### c) LINEAR RISK TREE-I&II

'Risk Tree' with basic links from upstream to downstream



### d) CO-EVOLUTIONARY RISK NETWORK-III

'Risk Network' or 'Constellation' with many inter-connections



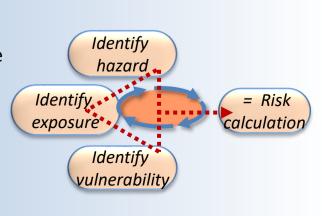
# e) LINEAR RISK CYCLE-I&II

Risk assessment works with components in silos

assessment is
a triangle to be
calculated:
risk =
hazard x
exposure x

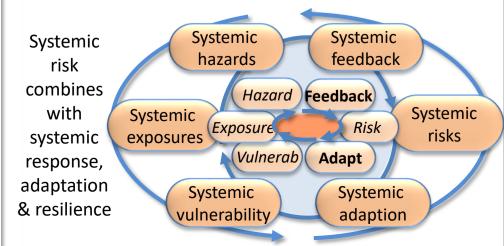
vulnerability

Risk



### f) CO-EVOLUTIONARY RISK CYCLE—III

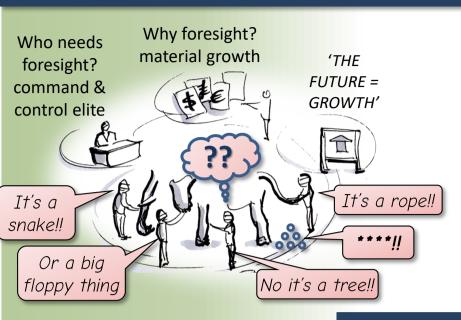
Risk evaluation works with multi-way learning & adaptation



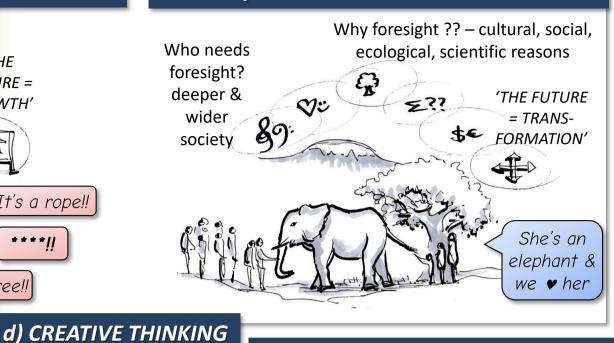
# FORESIGHT-III

Exploring the co-evolution of foresight for synergistic innovation



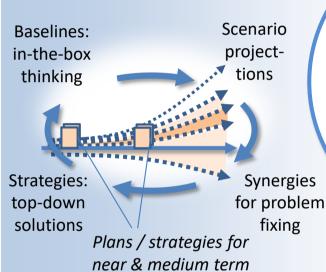


### b) 'ELEPHANT in the MIND'



#### c) SCENARIO-SOLUTION CYCLE

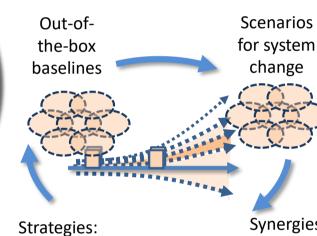
Process for functional problem-solving



VISIONS STORIES MODELS

### e) SCENARIO CO-LEARNING CYCLE

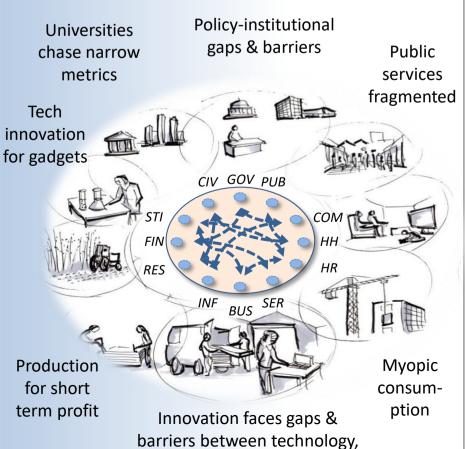
Process for co-learning & co-creation



Strategies: co-evolutionary<sup>®</sup> co-production Synergies for transformation

### f) ADAPTIVE INNOVATION-I&II

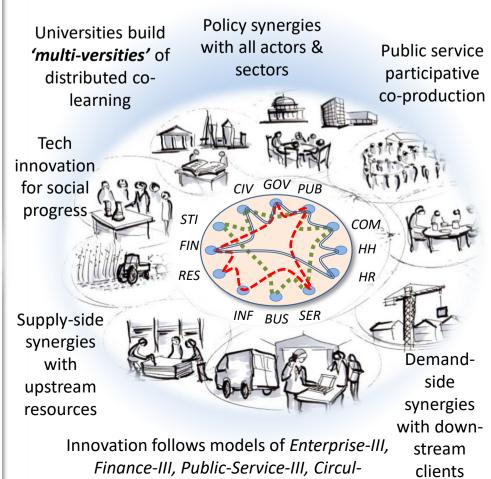
Low Carb innovation system - disconnected & dysfunctional



markets, finance, skills

# g) TRANSFORMATIVE INNOVATION-III

Innovation system with mutual learning & dynamic synergies



onomics-III, Organization-III, etc