



Foresight analysis of the future role of fruits and vegetables in the food systems of Benin and Tanzania

Irene Medeme Mitchodigni and Wiston Mwombeki

World Vegetable Center



Foresight and Futures Thinking

Exploring the future to **navigate** in uncertain and turbulent time

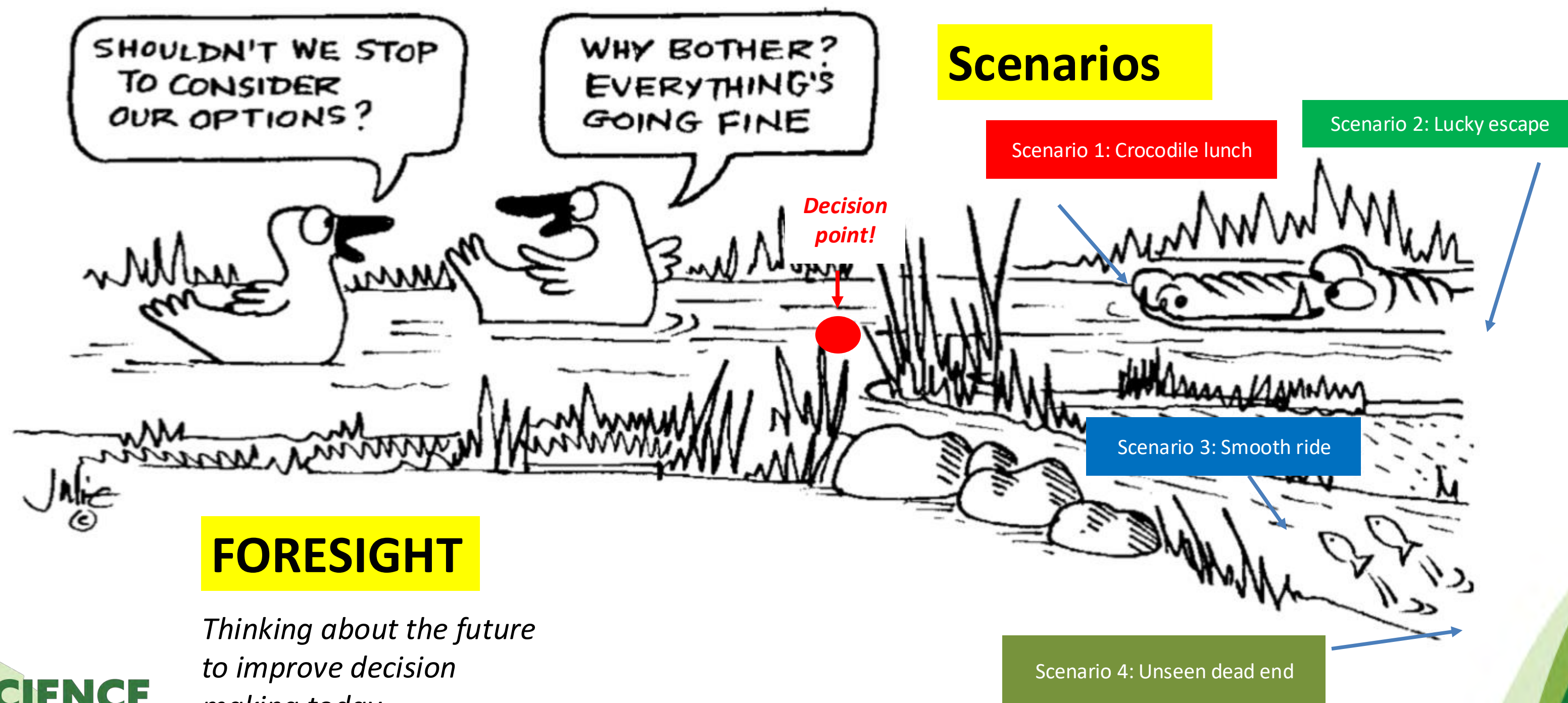
Envisaging alternative futures

Assessing the **implications** of current trends and future uncertainties

Examining how systems can be “**nudged**” in desirable directions



Foresight Analysis in simple terms



Why Foresight Analysis?

Possible Futures

1) Make explicit the likely **future consequences** of today's actions or lack of action

2) Be aware of future pressures, shocks and risks to a system for enhanced **resilience**

3) Understand **desirable or undesirable future states** of a system

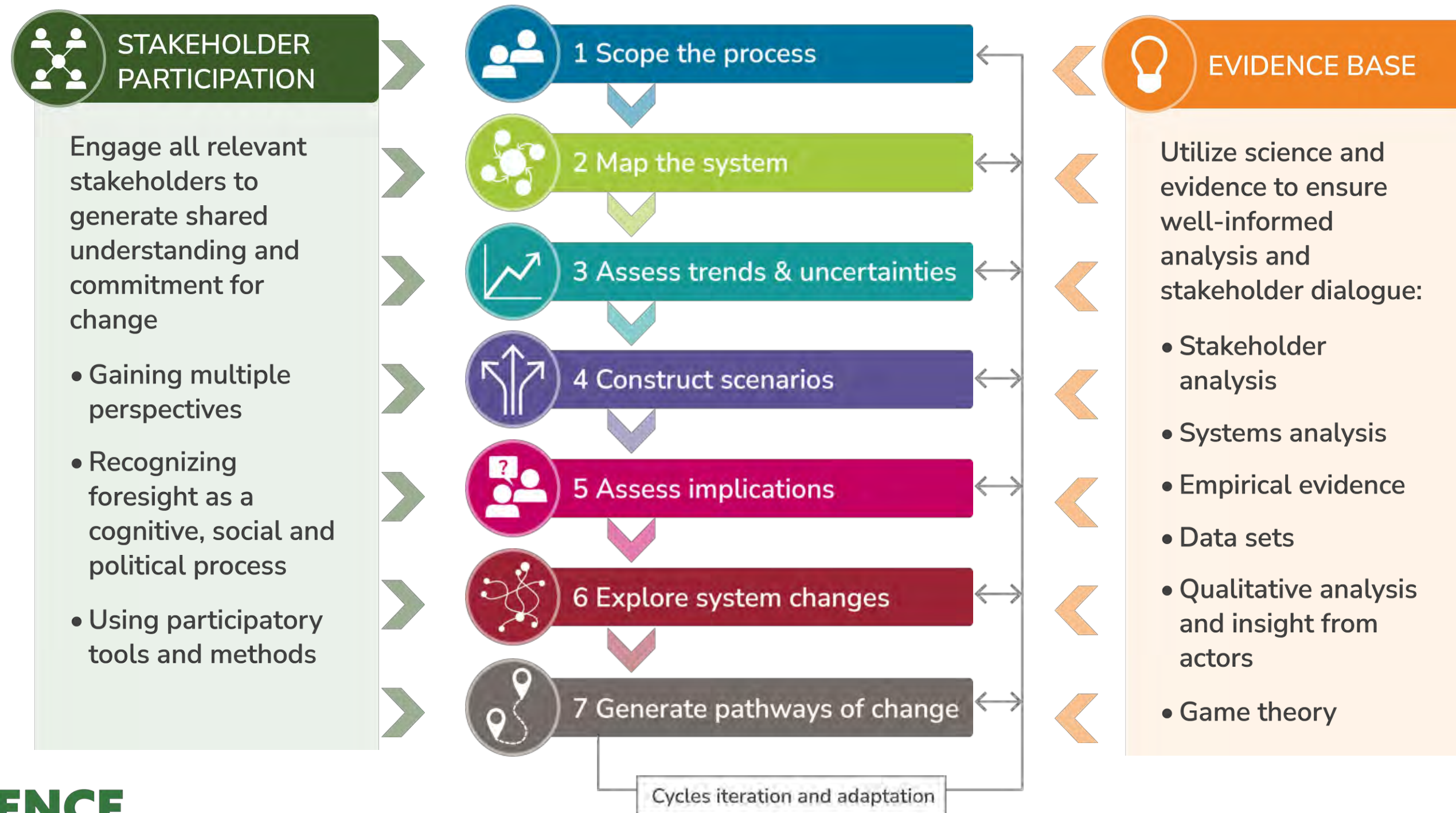
4) Create **Societal understanding** of desirable directions for systemic change

5) Enable anticipatory and adaptive policy and investment processes

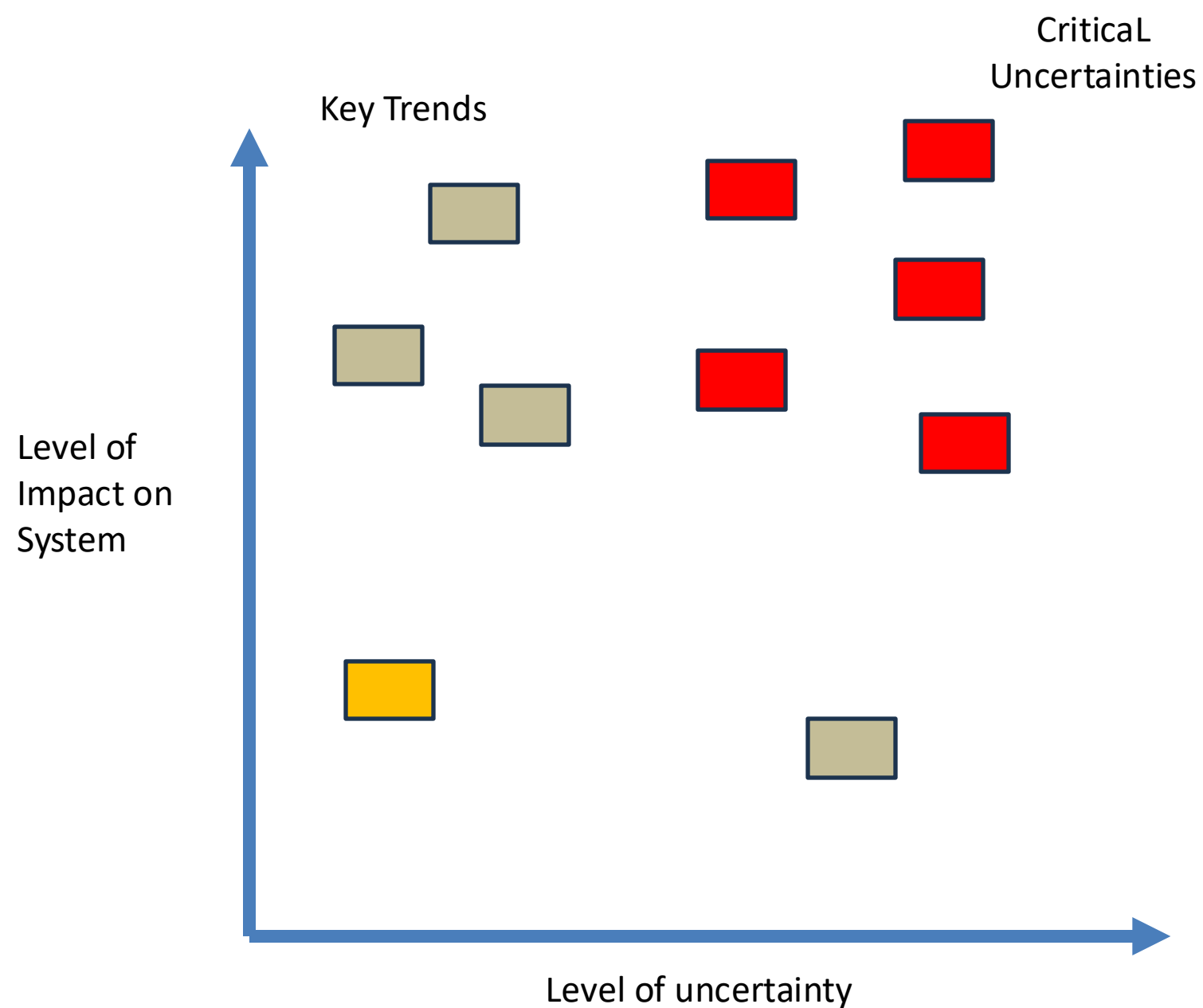
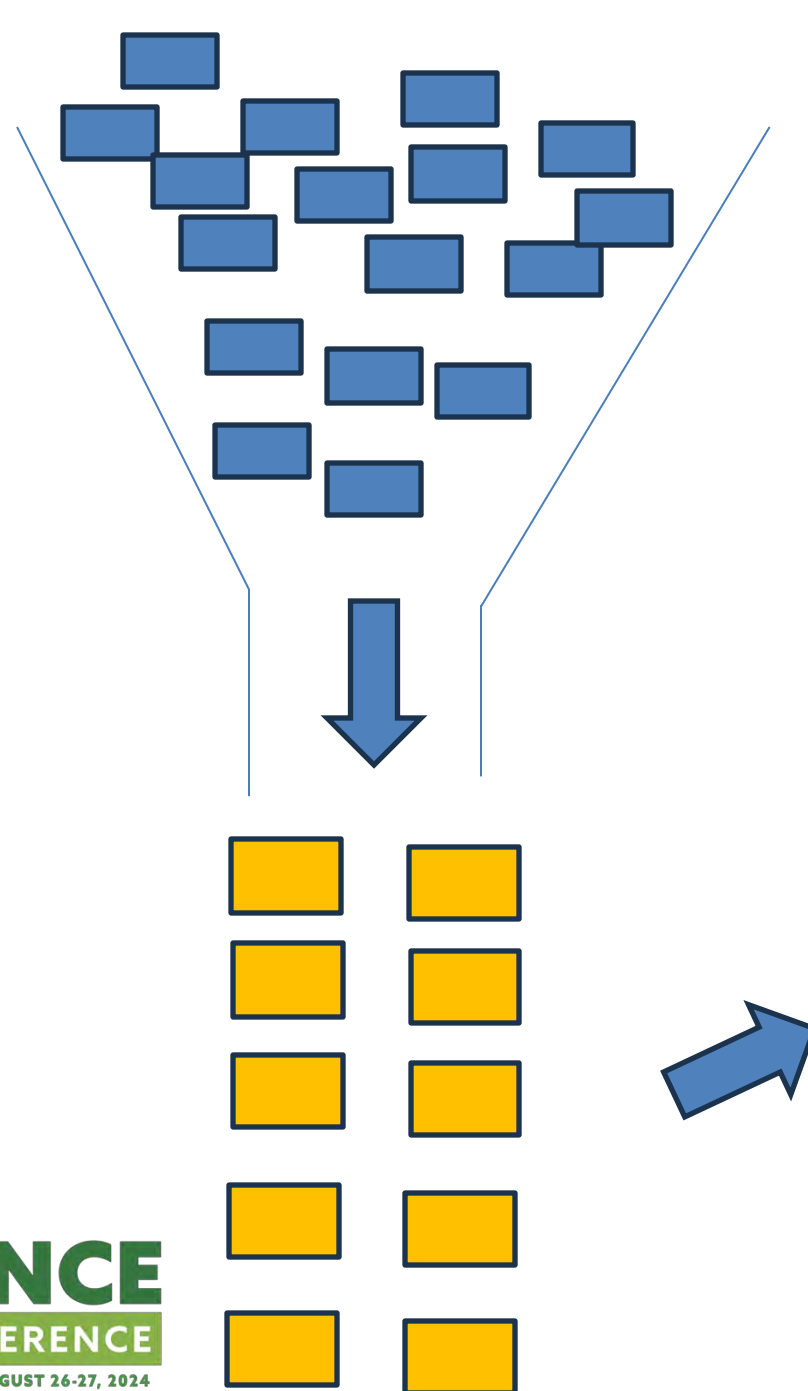
The future is created by how it is imagined today!

(realizing that today's perspectives are shaped by the past)

Guiding Framework



Identifying critical trends & uncertainties



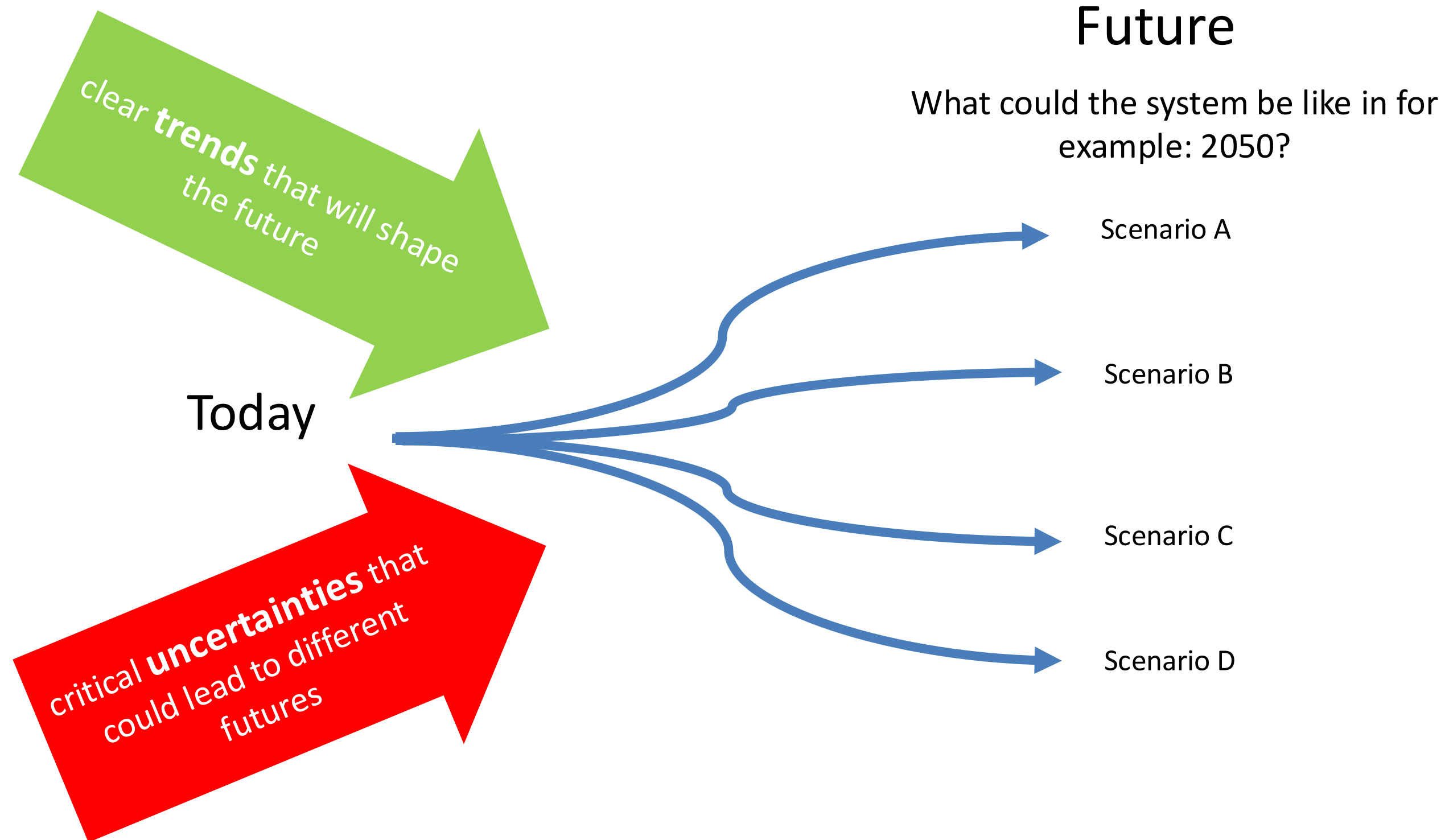
Henrichs et al. 2010

What are Scenarios?

Scenarios:

- Explore possible or plausible **future situations** based on assumptions about how key trends and critical uncertainties may influence a system
- Are based on as much **data and evidence** as possible about trends, critical uncertainties and their potential impact on the system of interest
- Take a **longer-term perspective** usually with a 5-to-50-year time horizon
- Describe in detail the **key features of the imagined future** state of the system with particular attention for the impacts on different stakeholder groups
- Use **back casting** to articulate the possible events and decisions that could have led to the future situation

Constructing Scenarios



BENIN Foresight Analysis



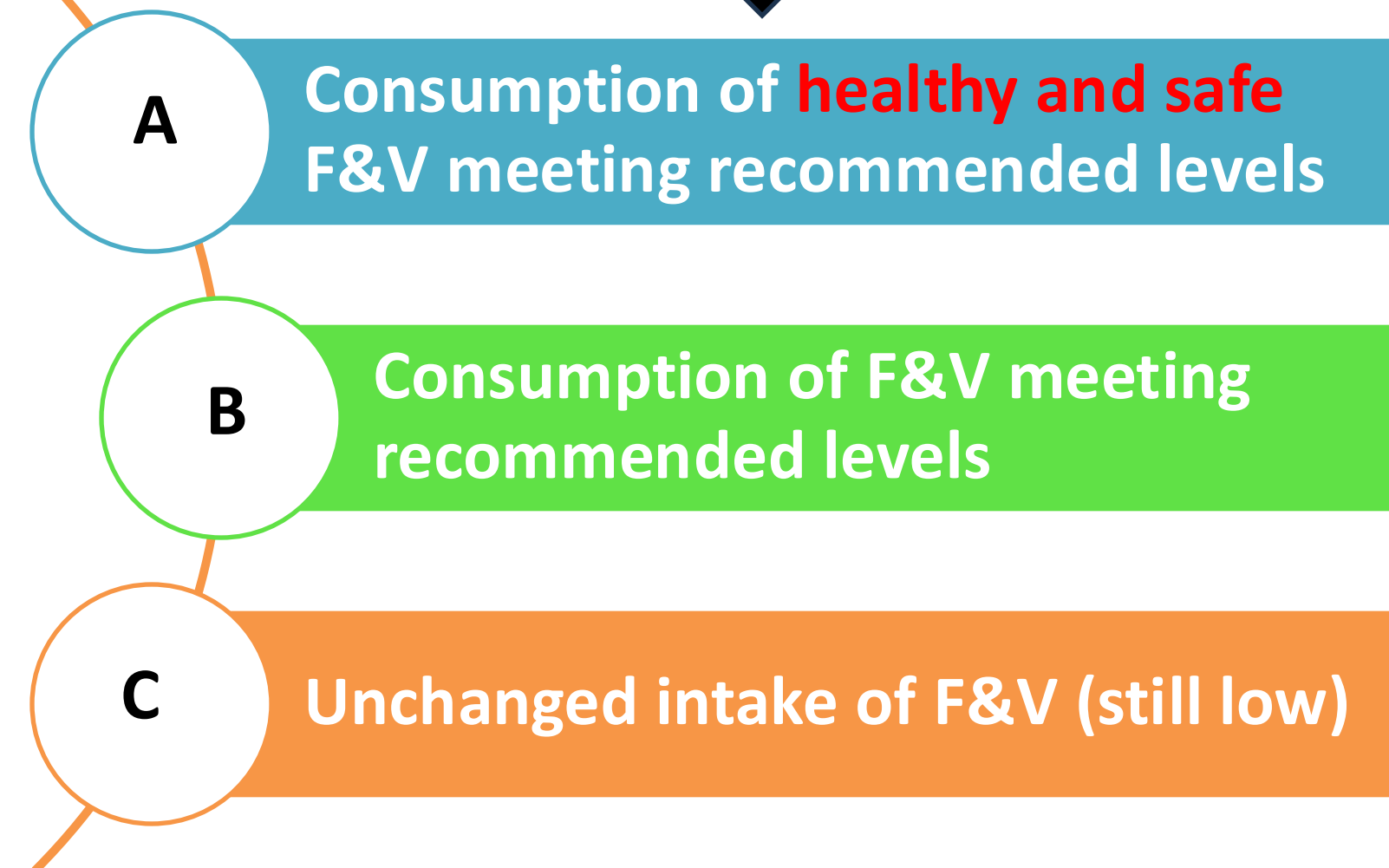
*Foresight analysis workshop
with the national platform
horticultural stakeholders
(4-8 march 2024)*

Results from Benin (1)



World cafe with the stakeholders

Main outputs: F&V in food system analysis and trends/uncertainties resulted in three scenarios



Results from Benin (2)

Table Exploring scenarios for future food systems and the role of fruits and vegetables by 2060

Scenario A	Scenario B	Scenario C
Consumption of the recommended level of healthy and safe fruits and vegetables	Consumption of the recommended level of fruits and vegetables	Stagnation in fruit and vegetable consumption
Disappearance of small businesses to conglomerates	Predominance of small and medium-sized enterprises	Predominance of small and medium-sized enterprises
High proportion of professional healthy and safe fruit and vegetable growers	High proportion of professional producers	Producers are not able to meet demand and challenges
Incentives, regulation and effective enforcement for the development of healthy and safe fruit and vegetable value chains	Incentives for the development of fruit and vegetable value chains	Lack of incentives and non-enforcement of fruit and vegetable value chains



Results from Benin (3)

Recommendations

1

- Make the results of the workshop available through a summary document for consideration in political actions by public actors

2

- Share the results of the prospective analysis during a workshop with policy makers of agricultural sector

3

- Develop a policy brief



The future of fruit and vegetables in Benin's food system: a visioning exercise

Irene Modoko Modokolo^a, Elyse Inkhiriya^b, Janvier Egehi^c, Ogunyemi Herbert Iko Afa^d, Yanni Emeric Modoko^e, Mathieu A.T. Avenan^f, Abdou Moussa Salsau^g, Euloge Vidogbo^h, Pepijn Schreinemakersⁱ, Bart de Groot^j, and Bita^k

^a World Vegetable Center, West and Central Africa - Coastal & Humid Regions, Cotonou, Benin

^b International Food Policy Research Institute, Washington, D.C., USA

^c Laboratoire Société-Environnement (LSE), Faculté d'Agronomie (FA), Université de Parakou (UP), République du Bénin

^d Laboratory of Food Sciences and Technologies (LUSTA), Faculty of Agronomic Sciences (FSA), University of Abomey-Calavi (UAC), Republic of Benin

^e Genetics, Biotechnology and Seed Science Unit (GBSSU), Laboratory of Crop Production, Physiology and Plant Breeding (PAGEV), Faculty of Agronomic Sciences (FSA), University of Abomey-Calavi (UAC), Republic of Benin

^f Independent Consultant

^g World Vegetable Center, Bangkok, Thailand

^h Wageningen University and Research

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The future of fruit and vegetables in the food system of Tanzania

Scope: Arusha and Kilimanjaro regions

The exercise involved:

- Twelve Tanzanian experts some of whom were members of the Arusha Sustainable Food System Platform.
- The findings were validated by 15 local policymakers with representatives from Arusha and Kilimanjaro regional offices.
- Representative from the five district councils (Arusha, Meru, Hai, Siha, and Moshi).
- Two researchers from the Tanzania Agricultural Research Institute –Tengeru.
- A team of three staff from WorldVeg and WUR facilitated the process.
- Forecasting period was 25 years ahead (2025-2050).



Four key projected trends towards 2050

1. Increasing consumer demand for safe and healthy fruit and vegetables.

- Income growth
- Population growth
- Health awareness

2. Climate change impacts:

- Hotter temperatures
- Drier conditions
- Increased pest and disease pressure

3. Land pressure:

- Urbanization
- Population growth
- Intensive farming practices

4. Commercialization and formalization

- Commercialization
- Formalization
- Improved marketing practices

This combination of rising incomes, growing populations, and increased health awareness will drive a sustained demand for safe and healthy fruit and vegetables, pushing the food system to adapt and meet these needs.

The food system will need to integrate climate-smart agricultural practices to mitigate these impacts, ensuring resilience and sustainability in the face of climate change.

Managing land pressure will require innovative land use planning, policies to protect agricultural land, and the promotion of sustainable intensification practices.

Commercialization and formalization will likely lead to a more efficient, reliable, and competitive food system, capable of meeting the growing demand for safe and healthy fruit and vegetables while navigating the challenges of climate change and land pressure.

The Three Plausible Scenarios

Scenario A. Very positive food system transformation

The food system of Arusha and Kilimanjaro will transform due to various trends and developments. Such as

- Rising health consciousness,
- Better education,
- Educational programs emphasizing balanced diets rich in fruit and vegetables
- Improved access to information about nutrition

To meet this growing demand we will need:

- Significant increase in the production and productivity of fruit and vegetables.
- Adoption of climate-smart agriculture practices, sustainable farming techniques, and advanced agricultural technologies
- Adherence to Good Agricultural Practices (GAP).

Scenario B: Moderate food system transformation

- Driven by high consumer demand for fruit and vegetables but less food safety consciousness
- Higher demand will lead to an increase price.
- Produces will be less affordable for certain population segments.
- This price disparity will prompt interventions by governments and NGOs to address nutritional inequalities through subsidies and targeted programs.
- Continued use of chemical pesticides and unsafe production practices leading to unsafe produce and adverse environmental effects.

Scenario C: Very negative food system transformation

- The food system will face significant challenges due to a shift in consumer preferences and various structural issues within the food system.
- Increasingly shift from healthy fruit and vegetables to unhealthy, ultra processed, and junk foods.
- Unaffordability and convenience of junk foods, aggressive marketing by food corporations, and desire for quick, easy meals over nutritional value
- Producers will struggle to meet even the reduced market demand for fruit and vegetables due to the limited adoption of modern agricultural practices and technologies

Conclusion

Scenario A is only plausible if:

- Changes will take place in terms of consumer behavior
- Imposing demands on the safety of fruit and vegetables
- Government enforcement of food safety standards
- Farmers must obey the GAP
- Availability of alternative inputs such as less harmful crop protection agents
- Clear governmental vision of urban planning to cater for fruit and vegetable production in the vicinity of Arusha & Kilimanjaro regions

Scenario B is plausible if:

- Producers find ways to respond to climate change effects and can professionalize their fruit and vegetable production.
- Increased, demand for fruit and vegetables mainly urban consumer
- Increased purchasing power of consumers
- Farmers will be responding because of more favorable market conditions

Some actions to avoid Scenario C,

- Anticipatory policy and stakeholder actions must be undertaken to facilitate farmers' responses to climate change and increased consumer demand
- Public-private collaboration with a strong reach among different segments of fruit and vegetable producers.
- Coordination between stakeholders in a national platform will be instrumental to tune intervention agendas and merge resources.
- Policy and stakeholder actions should not only be to economic and value addition but also provision of healthy, nutrient rich fruit and vegetables to consumer markets



Thank You



Email

irene.mitchodigni@worldveg.org

wiston.mwombeki@worldveg.org



Website

worldveg.org

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