Faculty of Geosciences
Copernicus Institute of Sustainable Development

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New pathways for governing food system transformations: a pluralistic practice-based futures approach using visioning, back-casting and serious gaming

Astrid C. Mangnus, Joost M. Vervoort, Steven R. McGreevy, Kazuhiko Ota, Momoe Oga, Mai Kobayashi, Christoph D. D. Rupprecht

This paper responds to the need for novel futures approaches to help new coalitions of societal actors create pathways to sustainability transformations. One proposed way to do this is to combine and re-imagine existing innovative practices as 'seeds' for transformational futures. This paper aims to show how practice-based, pluralistic futures processes can be implemented in real-world governance contexts to complement existing, global-level futures.

Case

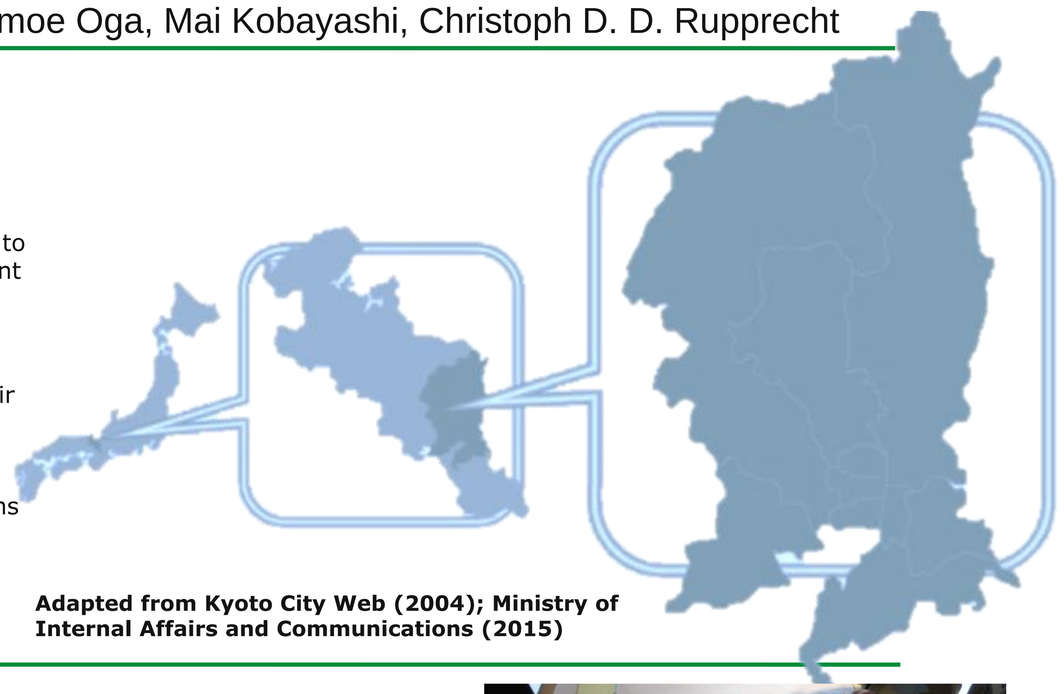
We focus on food systems transformations in urban contexts, using the concrete case study of Kyoto (Japan)'s food system to test the potential of this approach.

Methodology

Innovative combinations of methodologies (visioning, back-casting, digital and live role-playing games) were used and assessed in order to create multiple ways for participants to experiment and engage with food system futures, enabling them to co-create diverse yet grounded future pathways.

The methods were selected for and tested on their potential to impact the following variables:

- Generate innovative plans/**outcomes**
- **Learning** about the local food system
- **Empathy** with others in different roles/positions
- **Motivation to act** towards a sustainable food system
- **Network** growth



Adapted from Kyoto City Web (2004); Ministry of Internal Affairs and Communications (2015)

Table 1 Participants (39 individuals)

	Visioning interviews	Back-casting FG1	FG2	FG3	Game WS1	
Male	9	3	4	3	5	7
Female	5	3	1	2	3	5
Total	14	6	5	5	8	12

1. Visioning

Five key desires emerged from the visioning interviews, in which participants described their ideal 2050 foodscape for Kyoto:

- Transparency
- Local production for local consumption
- Quality and quantity
- Safety
- Engagement

→ The main juxtapositions were converted into 3 narratives for visions for 2050:

- Social & technological innovation
- Urban & rural areas
- Small & large actors

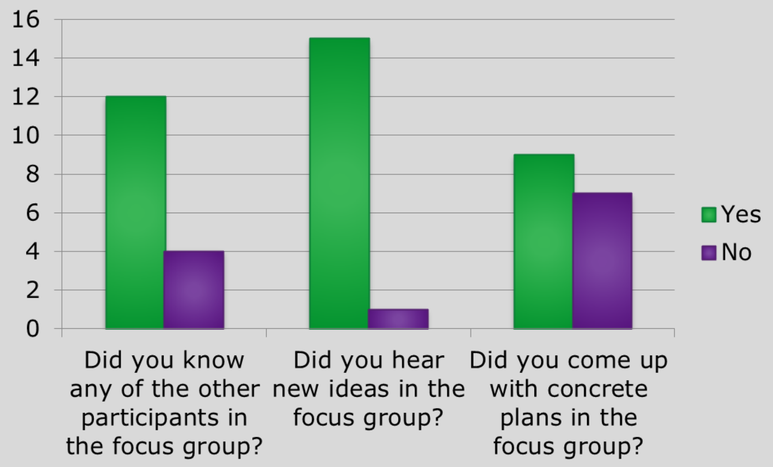
2. Backcasting

After adjusting the narratives to fit their own visions, the participants made pathways to the present, working backwards from 2050. There were a few main similarities in output:

- Long term: institutional change
- Mid-to-long term: organization of public support
- Short term: participants identify tasks for themselves

Back-casting. Photo: Momoe Oga

Figure 1 Back-casting survey results



- Method was new to 5 participants & 5 could imagine to use it more often
- Many new ideas came from other participants in backcast

Card game. Photo: Momoe Oga

3. Gaming

Video game prototype

In this game, participants took turns playing dofferent roles in the food system, and then voting on policy measures. They reported neutral to positive results for this game with regard to learning about the local food system and possible interventions, as well as increased insights into various roles. However, unexpectedly the feedback on the game showed some key insights into the most pressing local food system issues:

- Cap on local production
- Include large-scale consumers
- Punish waste or overproduction
- Include (de)population issues

Video game prototype. Photo: Astrid Mangnus

Card game

In this game, participants played a Food Policy Council (FPC), a non-governmental body consisting of food system actors that together push for change. The output of FPC plans from the card game was highly diverse, ranging from a kid's food mall including a special kid's currency to a vegetable dating service which connects consumers to farmers of Kyoto heirloom vegetables. Participants reported highly positive results for:

- Learning (about FPC's)
- Motivation to act (as member of a FPC)
- Engaging with new ideas

The only ambiguous outcome was the role play experience: some participants reported feeling uneasy about portraying someone whose job specifics were unknown or a person who was sitting at the table.

Table 2 Score per variable and method

Variable	Visioning	Back-casting	Video game	Card game
Outcomes	++	+	n/a	+
Learning	n/a	++	+/-	++
Empathy	n/a	n/a	+/-	+/-
Motivation to act*	n/a	+	n/a	+
Network	n/a	+/-	n/a	+

MAIN CONCLUSIONS

1. The combination of Kyoto-based 'seed' initiatives with initiatives from elsewhere and with a new food system governance model resulted in:

- **participants learning about new food system practices**
- **extending their networks**
- **broad support for actualizing a new food system governance model (FPC)**

2. Multi-method futures methods that combine existing practices and new modes of governance can lead to:

- **extended imaginaries about transformative pathways**
- **an increased likelihood of transformative changes in food system governance**

3. These results are useful within

- **the domain of urban food system transformations**
- **more broadly applicable in sustainability transformation contexts**

Contact Vening Meineszbuilding 7.42 | Princetonlaan 8A | 3584 CB Utrecht | a.c.mangnus@uu.nl | www.uu.nl/staff/ACMangnus | Twitter: @astridmangnus