



ACEG

Climate Action &
Global Ecosystems
Association

Methodological Illustration: How will societies in 2050 experience daily life if climate action and sustainability are pursued—or neglected—at different speeds and scales

Table of Contents

Group Work Diary	1
Step 1: Orienting the Methodology	2
Step 2: Identifying Critical Uncertainties and Constructing the Matrix.....	2
Global Cooperation vs. Fragmentation	2
Technological Innovation Pace vs. Stagnation	2
Step 3: The Narratives.....	3
Step 4: Opportunities, Threats, and Effective Interventions.....	4

Group Work Diary

The collaborative nature of futuring is exemplified by the group process. The diversity of academic backgrounds—from architecture to economics, art, and environmental science—enriched the scenario development, introducing multiple perspectives and concerns. Facilitated discussions allowed participants to share knowledge, challenge assumptions, and co-create narratives. The imaginative exercises, such as naming scenarios and envisioning daily life in 2050, were not ends in themselves but means of making abstract uncertainties tangible. The group’s work demonstrates that futuring is most effective when it is inclusive, participatory, and creative, harnessing the plurality of perspectives to construct futures that are both imaginative and purposeful.

The group, guided by a facilitator, engaged in a series of structured seminars that moved from mapping past experiences to envisioning possible futures. This iterative process was not only methodological but also relational, as participants learned to value each other’s insights and to integrate diverse disciplinary knowledge into coherent scenarios. The diary of the group’s work reveals the importance of dialogue, negotiation, and imagination in constructing futures. It also highlights the challenges of time constraints and methodological boundaries, which limited the exploration of certain factors but nonetheless provided a valuable framework for collective learning.

The group’s reflections underscore the role of futuring as a pedagogical tool. By engaging in scenario development, participants were not merely producing narratives but cultivating the capacity to think critically about uncertainty, complexity, and transformation. The diary illustrates how futuring can foster creativity, inclusiveness, and resilience,

qualities that are essential for addressing global challenges such as climate change. In this sense, the group’s work was both an academic exercise and a practical demonstration of how futures can be constructed through collective imagination and purposeful action.

Step 1: Orienting the Methodology

The futuring process begins by defining the guiding question and timeframe. In this case, the central question is: *“How will societies in 2050 experience daily life if climate action and sustainability are pursued—or neglected—at different speeds and scales?”* The timeframe is set to 2050, a horizon distant enough to allow for transformative change but close enough to remain tangible for current decision-making.

The methodology draws on critical uncertainties rather than linear projections. Instead of asking *what will happen*, it asks *what could happen* if certain drivers unfold differently. These uncertainties are then crossed to form a two-axis matrix, generating four distinct scenarios. Each scenario is not a prediction but a heuristic device, a lens through which to explore opportunities, threats, and interventions.

Step 2: Identifying Critical Uncertainties and Constructing the Matrix

For climate action and sustainability, two uncertainties stand out as particularly influential:

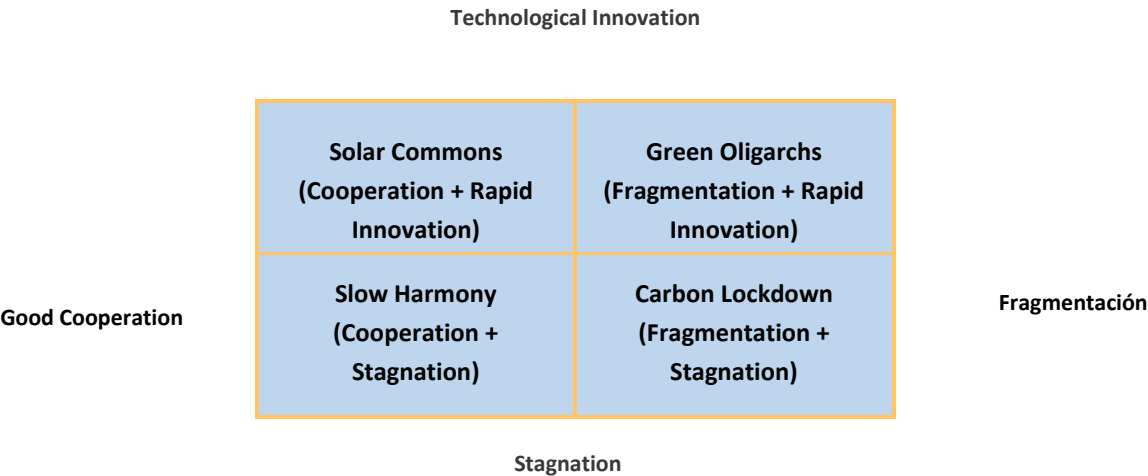
Global Cooperation vs. Fragmentation

This axis captures the degree to which nations, institutions, and communities collaborate in addressing climate change. At one extreme lies strong cooperation, characterized by shared governance, equitable financing, and collective action. On the other side, fragmentation, marked by nationalism, competition, and uneven responses.

Technological Innovation Pace vs. Stagnation

This axis reflects the speed and inclusiveness of technological development in renewable energy, water systems, and ecological restoration. Rapid innovation could enable breakthroughs in clean energy and adaptation, while stagnation would leave societies reliant on outdated systems and vulnerable to escalating impacts.

Figure 1: Scenario Matrix



Crossing these axes produces four contrasting futures:

- **Solar Commons (Cooperation + Rapid Innovation)**
A world where nations collaborate and technology advances inclusively, embedding sustainability into everyday life.
- **Green Oligarchs (Fragmentation + Rapid Innovation)**
A world where innovation flourishes but is monopolized by elites, deepening inequality and leaving many communities behind.
- **Slow Harmony (Cooperation + Stagnation)**
A world where progress is modest but equitable, relying on social cohesion and local resilience rather than technological breakthroughs.
- **Carbon Lockdown (Fragmentation + Stagnation)**
A world defined by scarcity, conflict, and survival, where fragmented governance and weak innovation leave societies exposed to climate crises.

Academic Framing of the Scenarios

Each scenario represents a distinct intersection of uncertainties, illustrating how divergent pathways can emerge from the same starting point. The nicknames serve as communicative tools, condensing complex dynamics into memorable shorthand. The descriptions highlight not only the structural conditions of each world but also the lived experience of its inhabitants.

This matrix provides the foundation for the next steps: developing the narratives that make these futures tangible and identifying interventions that could have been initiated in 2017 to steer toward more desirable outcomes.

Step 3: The Narratives

Scenario 1: *Solar Commons* (Cooperation + Rapid Innovation) Narrative (2050)

In the bustling city of 2050, the morning begins with a quiet hum of solar grids and wind turbines that power every home. Citizens wake to smart dwellings that regulate temperature and water use seamlessly, ensuring comfort without excess. The local news reports on a new transnational agreement to restore degraded ecosystems, a continuation of decades of cooperative climate governance. Schools open their doors to children who learn sustainability not as theory but as a lived practice, reinforced by urban forests that provide shade, food, and biodiversity. The atmosphere is one of cautious optimism: humanity has not solved every problem, but collaboration and innovation have created a world where sustainability is embedded in routine life.

Scenario 2: *Green Oligarchs* (Fragmentation + Rapid Innovation) Narrative (2050)

The morning in 2050 is sharply divided. In affluent enclaves, citizens wake to pristine air filtered through domed habitats, synthetic foods tailored to their health, and virtual assistants managing every detail of their lives. Outside these walls, queues for water stretch for blocks, and the news is filled with reports of violent clashes over resource distribution. Technological innovation has flourished, but its fruits are monopolized by elites and corporations. The world is fragmented, with islands of abundance surrounded by seas of deprivation. Sustainability exists, but only for those who can afford it, leaving the majority to struggle in degraded environments.

Scenario 3: *Slow Harmony* (Cooperation + Stagnation) Narrative (2050)

In 2050, mornings are modest but stable. Citizens wake to communities where water is shared through cooperative systems, food is grown locally, and technology plays a supportive but limited role. The news highlights grassroots climate initiatives and regional agreements that prioritize equity over speed. Progress has been slow, but cooperation has ensured that no one is left behind. Sustainability is not a spectacle of innovation but a lived practice of restraint, balance, and solidarity. The tone of daily life is one of resilience, where communities rely on social cohesion and shared responsibility to navigate uncertainty.

Scenario 4: *Carbon Lockdown* (Fragmentation + Stagnation) Narrative (2050)

The morning begins with survival. Citizens wake to degraded landscapes, rationed water, and constant uncertainty. Communities are fragmented, and the news is dominated by reports of climate disasters, migration crises, and resource conflicts. Innovation has stagnated, cooperation has collapsed, and fossil fuel dependency lingers in pockets of the world. Sustainability is not a guiding principle but a desperate necessity, pursued through subsistence farming, barter, and small-scale resilience. The atmosphere is one of tension and scarcity, where every day is a negotiation for survival, and the possibility of systemic transformation feels remote.

These narratives now set the stage for Step 4: Opportunities, Threats, and Effective Interventions — where we will analyze each scenario academically and propose what interventions, if implemented in 2017, could have influenced the trajectory toward more desirable futures.

Step 4: Opportunities, Threats, and Effective Interventions

Below the example presents a structured comparative table that synthesizes the four scenarios, highlighting opportunities, threats, and effective interventions.

Table 1: Opportunities, Threats, and Effective Interventions Across Scenarios

Depicted Scenario	Major Opportunities	Major Threats	Effective Intervention (2017)
Solar Commons (Cooperation + Rapid Innovation)	Abundant renewable energy; equitable access to resources; strong international governance; systemic resilience through collaboration.	Overreliance on technology; risk of innovation outpacing social adaptation; persistent inequalities if inclusiveness is not reinforced.	Establish binding international frameworks for renewable energy deployment, coupled with equitable financing mechanisms to embed social justice into climate action.
Green Oligarchs (Fragmentation + Rapid Innovation)	Rapid breakthroughs in clean energy, water purification, and ecological restoration; technological abundance in select regions.	Monopolization of resources; deepening inequality; conflict over access; sustainability as privilege rather than universal condition.	Create strong regulatory frameworks to prevent monopolization of renewable technologies; invest in community-owned energy and water infrastructure to democratize innovation.
Slow Harmony (Cooperation + Stagnation)	Strong social cohesion; equitable governance; resilience through	Vulnerability to climate shocks due to limited technological capacity; risk of stagnation in	Invest in community-based adaptation programs; strengthen local governance and embed

	<i>community-based adaptation; inclusiveness in decision-making.</i>	<i>addressing global-scale challenges.</i>	<i>sustainability into everyday practices to ensure resilience even without rapid innovation.</i>
Carbon Lockdown (Fragmentation + Stagnation)	<i>Limited opportunities in local resilience initiatives and small-scale sustainable practices; subsistence strategies provide minimal survival.</i>	<i>Escalating climate impacts; resource conflicts; widening inequality; systemic instability; survivalist conditions dominate.</i>	<i>Decisive global action to phase out fossil fuels and embed sustainability into economic structures; early systemic change to avoid lock-in of unsustainable practices.</i>

Academic Reflection

This comparative analysis underscores that interventions must be systemic rather than narrowly technological. Scenarios such as Green Oligarchs and Carbon Lockdown demonstrate how reliance on technological substitutes for ecosystem services can reproduce dystopian outcomes, where sustainability is either monopolized or reduced to survival. By contrast, interventions that embed equity, cooperation, and resilience—such as decentralized renewable energy, community-based adaptation, and inclusive governance—remain robust across multiple futures. The futuring exercise thus illustrates that effective climate action requires not only innovation but also social justice and systemic transformation, ensuring that sustainability is both equitable and resilient under conditions of profound uncertainty.
