EXPLORING THE FUTURES OF CLIMATE AND SUSTAINABLE FINANCE

TAKEAWAYS FROM FIVE CREATIVE FORESIGHT WORKSHOPS

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How to read this document (and especially the stories)

This is not a classic foresight report or brief. It discusses the outcomes of a "creative foresight" exercise, in which participants were principally invited to liberate their imagination and to open their minds to radically new possibilities. In three out of five workshops, the facilitators were not foresight practitioners, but science fiction writers.

The two stories resulting from this collective work (whose full text appears in the appendix) are very different, reflecting the creative choices of both the group and the facilitating artist. They are also still rough, not nearly as edited as they would have to be in order to be made available to the general public. Please read them with empathy, and let their holes and imperfections trigger your own imagination!

The insights presented here are therefore not the result of a systematic exploration of the futures of sustainable finance, rather ideas that were captured within the stories as well as the discussions around them, especially during the last workshop. They are useful to question established assumptions, to look at issues under different angles, and to open up new possibilities and territories for exploration – thus contributing to better, more futures-aware, strategic thinking.

The views expressed in this publication are those of the authors and do not necessarily represent the views of the Forum on Foresight for Sustainable Finance or any of its members.

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EXECUTIVE SUMMARY

Between May and September 2023, the Forum on Foresight for Sustainable Finance, an initiative facilitated by the OECD/DCD-DAC Friends of Foresight and linked to the Finance in Common coalition, convened a series of "creative foresight" workshops on the futures of green and sustainable finance. 25 participants from 5 continents, many of whom directly working in the sustainable finance space, took part in the journey. The Plurality University Network managed the process, which was supported by Agence Française de Développement (AFD)

Creative foresight is an exploration of what could be, in which participants are principally invited to liberate their imagination and to open their minds to radically new possibilities, using the tools of fiction. The workshops were co-facilitated by science fiction writers. It is not a systematic exploration of possible, or even desirable, futures. It is, however, especially useful to question established assumptions, to look at problems with new lenses, to open new territories for strategic exploration…

The "insights" shared below should be read in this light. They are taken out of the two speculative fiction stories co-produced by the participants, and the facilitated discussions that ensued. They should be used as food for alternative thought.

1/ DRIVERS OF (SYSTEMIC) CHANGE

The participants' common assumption seems to be that the state of the world in 2050 will reflect our collective failure to act, in a concerted way, at the level required by the ecological crises, as well as to react to rising inequalities, fragmentation and polarization within and between countries. Due to the systemic nature of the challenges, technology, or innovation in general, can continue to open new possibilities but fail to provide "solutions".

Focusing on finance, participants seemed to collectively share one question: How can finance, a historic fundamental enabler of today's unsustainable and unjust world, help bring about systemic change?

They also felt that the economic and financial worlds would likely become more and more fragmented, reflecting diverging situations, choices, directions, and experimentations. For finance players who have been striving to find ways to pool resources and ensure consistency of investment decisions, such fragmentation could make these goals much harder to attain, if not irrelevant in some cases.

2/ KEY INSIGHTS FOR FINANCE

Using a formulation common to futurists, science fiction writers, speculative designers and (sometimes) philosophers, we will cluster the main insights under questions beginning by "What if…?":

> What if the focus of Finance should no longer be on investment?

For the workshops' participants, the issue with Finance, as regards sustainability, does not appear to reside in its ability to invest on the right projects or organizations, but rather in the kind of economic and social system it enables, and the kind of systemic changes it could facilitate or prevent. In fact, a dominant focus on the financing of investment could be seen as continuing to feed the current, inherently unsustainable system, thus contributing to its perpetuation.

Therefore, the participants suggested an agenda focused on using the know-how of finance actors to enable systemic changes in the daily workings of economic systems: measuring value in a more comprehensive way, supporting alternative currencies and exchange systems backed by "material" standards, facilitating the development and management of "commons", etc.

They also suggested and agenda for *divestment*, where Finance would also be the place from where the decades-long effort to shut down unsustainable activities and redirect their assets is organized.

In a fragmented and polarized world, the choice of financial partners or instruments could then become much more political and value-driven, even at the level of individuals and private entities.

> What if scale and scaling were a problematic way of looking at sustainable projects?

An agenda focused on changing the structure of economic systems is also (or should be) focused on empowering actors on the ground, whatever their size. The goal of scaling is convenient for funders, but often irrelevant to real actors. What may need scaling are decentralized coordination mechanisms of “ecosystemic” projects, uniting dozens of complementary actors – rather than individual projects.

> What if the focus on “Impact” was counter-productive?

The focus on “impact” tends to favor simple, straightforward actions with clearly measurable results along sets of standardized indicators. The complex and systemic nature of issues faced on the ground, and of the responses to these challenges, may not lend themselves to such measurements. In addition, for smaller projects, or projects that involve many types of stakeholders, the task of impact measurement can, by itself, disproportionately burden the project with red tape, or worse, orient it towards activities that satisfy the funders rather than the real needs of the population.

There are certainly smarter, more qualitative, more organic ways of assessing the outcomes of projects, but they would need to come out of the projects (and their stakeholders) themselves, rather than from the needs of funders.

> What if catastrophes were (one of) the main path towards transformative finance?

“Postnormal times” are times of permanent, multiple crises (polycrises), possibly requiring opposing courses of action. In such times, insurance and emergency funding probably cease to function.

However, if we believe the stories produced during the workshops, another form of “Catastrophe finance” is likely to be a huge field of action. Its focus would probably not be (just) a matter of providing funds before or after the crises. It would be on building the conditions for resilience (or “antifragility”), which may sometimes require expensive infrastructure or equipment, but also knowledge and know-how, solidarity, social cohesion, local reserves, good governance, good decentralized coordination mechanisms locally and globally, and other “soft targets”.

*

* *

Once again, the above expands on ideas contained in the stories and/or the discussions around them. Some may be newer or more disruptive than others. Some may not be feasible, or shocking. The fact that they emerged during this exercise does not mean that the participants would support them in real life. Together, however, they form a relatively coherent ensemble that seems worth considering. We hope that these outcomes, and the use of "creative foresight" approaches, will contribute to better, more futures-aware, strategic thinking, by finance professionals, and others, looking for a way to turn finance into a tool for ushering (a) truly sustainable world(s).

1. THE PROJECT & ITS METHOD

In April, 2023, a variety of persons working in finance and/or foresight, connected to the Forum on Foresight for Sustainable Finance, OECD, the Finance in Common coalition and/or Agence Française de Développement, received the following invitation:

> *"Finance can be a powerful trigger for just and sustainable change, contributing to alignment of short-term interests and actions with longer-term common goals. However, while finance can be part of the solution, it also is part of the problem. Despite encouraging evolutions, today, only a fraction of financial capital and flows can be considered as climate and SDG-compatible.*
>
> *How could things be different? How would a truly sustainable financial system look like?*
>
> *This change is not a technical fix. The obstacles are not just around us, but also within us, in our ways of thinking and of doing things. The change we need is systemic, which requires us to also think of how different the world will be in the future. This is precisely what Science Fiction does. Sci Fi encourages us to suspend disbelief about change and make leaps of imagination. Which is what we need to imagine radical, systemic changes.*
>
> *We are thereby inviting you to participate in a series of creative foresight workshops, co-facilitated by Sci Fi authors, to collectively invent alternative futures of climate finance."*

25 persons from five continents volunteered to join. With the help of two facilitators from the Plurality University Network (U+: Chloé Luchs and Daniel Kaplan) and three Sci Fi authors (Ketty Steward, and, together, Nadia Alter and Tim Reutemann[1]), the five online workshops went as follows:

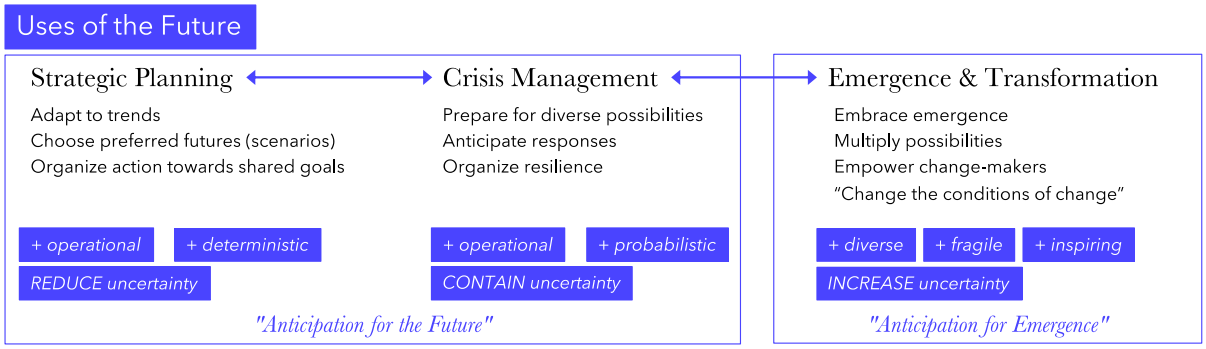
- During Workshop 1 (facilitated by U+), participants introduced themselves via a work of fiction of their choice, which spoke to them about the future of finance and sustainability. Then, they worked together on "factors of change", i.e., the reasons why, for better or worse, tomorrow's world (in general, and that of finance in particular) will be very different from today's.
- Workshops 2 to 4 were facilitated by the Sci Fi authors. Their goal was to imagine stories of 2050 where Finance itself, and/or its people or organizations, are characters. The constraint was neither realism, nor desirability, but to write "good stories", in which characters, situations, dilemmas, and actions, form a credible and hopefully compelling arc. The assumption being that narrative density is a way to embrace the complexity of factors that make up reality.
- Workshop 5, again facilitated by U+, allowed participants to reflect on the stories they had written: where had they been too conservative, which ideas could be pushed further, what more or less "probable" and "desirable" futures emerged from the stories, and finally what they were taking away with them, maybe to use in their respective organizations.

[1] See bios in Appendix 3.

Why use fiction in foresight?

Formerly in charge of foresight at Unesco, Riel Miller distinguishes two very different ways to "use the future":

1. "Anticipation for the future" explores *possible* futures in order to either prepare for them, adapt to them, or plan towards them. This is the most common kind of foresight. Its goal is to reduce or contain uncertainty, so as to produce a reasonably deterministic course of action.
2. "Anticipation for emergence" focuses on *novelty*, on making sense of emerging phenomena and weak signals, and opening new possibilities. Its aim is to explore transformative, open-ended alternatives. Its effect, if not its goal, is to *increase* uncertainty by enlarging the space of possibilities. It is particularly useful in situations where there is a need to explore the possibility of systemic, paradigmatic change – as is the case in confronting climate change.



Building on a classic assertion among foresight practitioners – "the future does not yet exist, it can only be imagined" –, what we call Creative Foresight[2] emphasizes the need to liberate our imagination, to open our minds to radically new possibilities. To this end, it combines the use of classic foresight tools such as trends, weak signals and drivers of change, with the disciplines of imagination, i.e., various forms of (generally collaborative) artistic creation and design.

In our case, the use of (science-)fiction served several purposes:

- Allowing a very diverse group, in which the majority of participants did not know each other, to collaborate efficiently and on an equal footing;
- Looking at an existing question – How can finance enable a just and sustainable society? – with new eyes, unbinding participants from the constraint of their professional vocabulary, allowing them to question dominant assumptions, as well as to explore possibilities that would otherwise seem out of bounds;
- Dealing with complexity, uncertainty and even ambiguity, by imagining situations where many players, challenges and possibilities interact, and where physics, economics, culture, affects, etc. are irremediably entangled – as they are in the real world.

[2] Plurality University Network, "What Do We Call Creative Foresight?", 2023: https://www.plurality-university.org/publications/what-is-creative-foresight

2. THE TWO STORIES: SHORT PITCHES

Story #1: "Financial Adaptations - a Liquid Rising Story"

Group facilitated by Nadia Alter, Tim Reutemann, and Daniel Kaplan. Writer: Tim Reutemann.

The story unfolds in three different places: Barcelona's night market, where citizens of this post-growth, moneyless society learn of an upcoming heat wave that threatens millions of lives in the nearby valley; Guahati, Assam, India, where a retired entrepreneur worries about his NFT investment in real Catalonians through whom he lives part of his life in a virtual world called Gaia Prima– while his cleaning bot uses its considerable spare processing power to speculate on arcane financial markets; and Burutu, in the Ekpan river delta of Nigeria, where another spill from the now closed oil wells has been found. Various characters intend to help cleaning it, making a few ITMOs[3] that they badly need.

A container full of heat pumps has been identified in the port of Tunis, which could save lives in Catalunya, but its owner will sell it to the highest bidder. How will the funds be gathered? How can the shipment make it through the pirates-infested Mediterranean? And who will manage the fair distribution of the pumps?

Story #2: "Any news from Christian?"

Group facilitated by Ketty Steward and Chloé Luchs. Writer: Ketty Steward.

In 2050, some of the fundamental structures that once governed our societies are now fractured, unstable, and even disappearing.

Our central character, Christian, personifies the essence of finance – what it used to be, what it is, and what it may become. Our relationship with Christian is complex; we find ourselves torn between feelings of love, hate, worry, and confusion about him. One thing is certain: his sudden disappearance has left us all uneasy.

Has Christian undergone a transformation during his absence? Will he return, and if he does, how? Will he come back as his old self, seeking all possible opportunities to evade constraints and make a buck out of our world's crises? Will he, instead, take responsibility for his past actions and use his knowledge to change the system? Will he see himself as the world's savior, or part of an ecosystem where financiers coexist (sometimes just a few meters apart) with homeless people, partake in the suffering of climate migrants, and contribute to neighborhood gardens?

One thing is certain: Christian's absence has shattered quite a few ontologies out there. Our expectations towards his return reflect our own uncertainties, hopes and fears. We can only hope that if he does come back, we will, in some way, be able to invent a new type of relationship with him…

[3] Internationally Transferred Mitigation Outcomes (ITMOs) are a specific (and non-fictional!) type of carbon credit that can be transferred between countries.

3. SYNTHESIS & INSIGHTS (I): THE WORLD IN 2050

3.1. Factors of Change

In the participants' view, whether explicit or contained in the stories' background, the world is primarily transformed by three factors that sometimes concur, and sometimes compete with one another:

- **Climate change, or more broadly, the overstepping of 7 (to date) of the 9 "Planetary Boundaries"**[4]. Their self-reinforcing consequences across the board are well-documented: multiple, intertwining catastrophes with health, social, economic and political consequences; entire regions become unlivable (at least during the warm season); economic activity temporarily or, in some areas or industries, permanently disrupted; massive climate migrations, etc. Among the consequences relevant to finance, carbon credits become central in the lives of individuals as well as organizations.

- **Technological disruptions in a diversity of areas:** digital (including A.I., blockchain, robotics, smart manufacturing), biotech (including genetic engineering of animals, plants and perhaps humans), energy (including nuclear, renewables, storage), food (including vertical/urban farming, synthetic food); carbon capture; and perhaps geo-engineering. However, contrary to climate change whose physical consequences (in 2050) are mostly inevitable as the consequences of past inaction, the pace and direction of technological developments can take several shapes:
  - There is a fundamental uncertainty as to whether resource scarcity (including water) and climate constraints make it possible to deploy some highly demanding technologies at scale, such as A.I., blockchain, "internet of things" or virtual reality (including the Metaverse).
  - An "ecomodernist" agenda would go all-in on technology, including geo-engineering, to both mitigate ecological crises and adapt to them. This agenda faces two fundamental uncertainties: [1] Some technologies on which it relies are either not yet available or untested at the scale required (hydrogen, nuclear fission, carbon capture…); [2] Historically, more efficient technologies have ended up in *more* greenhouse gas (GHG) emissions, not less, due to "rebound effects".
  - A "frugal" agenda, wherein technology is put at the service of an alternative, "post-growth", economic and social agenda. This relies on mostly mature technologies. The fundamental uncertainty facing this agenda is its social and political feasibility, both in "developed" and "developing" countries.

- **Inequalities, fragmentation and polarization**, both within countries (leading to balkanization, social unrest, and possibly authoritarian governments), between countries (leading to protectionism and sometimes armed conflicts), and also across borders (tribes, global movements and alliances, refugees becoming a force…). Among the consequences for finance, capital is less fluid, more difficult to access, and

[4] As defined by the Stockholm Resilience Centre: https://www.stockholmresilience.org/research/planetary-boundaries/the-nine-planetary-boundaries.html

its control is fragmented among various governmental, international and private institutions. Similarly, new and different forms of currencies and financial exchanges have emerged, the US Dollar no longer being the hegemonic currency.

Other trends and/or “wildcards” include:

- Demography, with ageing and often declining populations in the “North” and Eastern Asia (also leading to lower unemployment), while populations in other areas continue to grow and remain much younger on average.
- Large-scale conflicts, with a focus on China-US tensions.
- “Pushback against neo-liberal capitalism”, especially among young people, with possible consequences such as universal income, the development of “commons”, localized alternative economic and/or monetary systems, changes in key indicators (such as GDP), “degrowth” strategies, etc.

3.2. Assumptions

One common assumption seems to be that the state of the world in 2050 will reflect our collective failure to act at the level required by environmental crises: the goals of the Paris agreement have not been reached, and the world is suffering the consequences. Regarding finance, there has been a failure to create the incentives for it to behave constructively and consistently (despite the best intentions of some of its players). Among the results, civil society is even more negative towards finance as it often is today, which may for example result in multiple criminal suits.

The participants also stressed that the responses to these factors of change and possible events would likely diverge across the world. Power (im)balances will be key in shaping the dynamics in each area.

4. SYNTHESIS & INSIGHTS (II): "SUSTAINABLE FINANCE" IN THIS WORLD

4.1. What Sustainable Finance? (Beyond Investment?)

One of the main surprises, coming from stories written by a group dominated by finance professionals and academics, is that finance itself appears as one of the prime culprits of the degraded state of Planet's; that it (when represented by a character) or its players are mired in self-doubt, and even in 2050, remain deeply uncertain over the course to take; and that the solution does not seem to lie in reorienting investments to other destinations.

In other words, the issue with finance, as regards sustainability, does not appear to reside in its ability to invest on the right projects or organizations, but rather in the kind of economic and social system it enables, and the kind of systemic changes it could facilitate or prevent. In fact, a dominant focus on the financing of investment could be seen as continuing to feed the current, inherently unsustainable system, thus contributing to its perpetuation.

Therefore, while the current focus in many fora seems to be on the amount of funding available for climate and SDG investments (more on that later, cf. §4.2), the participants suggested a wholly different agenda focused on:

- **Using, and developing, the know-how of finance actors to enable systemic changes** in the daily workings of economic systems: measuring value in a more comprehensive way (e.g., in terms of financial, human/social and natural capitals), supporting alternative currencies and exchange systems, countering corruption and resource hoarding, facilitating the development and management of "commons", etc.
- **Empowering actors on the ground** to, [1] Act swiftly and effectively at very local levels, and [2] Coordinate at small as well as very large scales, on financial (e.g., resource mobilization via crowdfunding) and/or non-financial (e.g., facilitating resilience in the face of disasters) issues. To this end, funding is as important as providing tools for collective and decentralized action – and useless without them.

What if…? (other ideas floated in and from the stories)

- … social and climate bonds became key & dominant international sources of funding?
- … crypto-assets (not necessarily backed by States or fiats) were the new and main tool for "cash-like" transactions?
- … there was a search for new "material" standards to back up currencies, such as energy or time?

4.2. When Funding Remains Pertinent, What Kind of Funding?

There will of course remain projects and organizations that need investment. However, the stories point towards types of projects, investments and other activities that may not be the current focus of "sustainable finance":

- Thousands, or millions, of very small-scale projects (consistent with part 4.1's focus on empowerment), which do not lend themselves to complex due diligence, monitoring and impact measurement;
- Large, fast, decentralized and open-ended coordination mechanisms – think "platforms", but co-owned;
- Complex, ecosystemic projects that pursue several, interdependent goals at the same time (e.g., feeding farmers, providing organic coffee, regenerating soil, creating new opportunities with agricultural by-products, etc.) and unite dozens of small projects, carried out by highly diverse and spread-out stakeholders, with no clear leadership.

One characteristic of such projects is that the current focus on "impact", and its technicization through indicators, methods and labels, is unlikely to suit them. Indeed, the word "impact" (positively correlated) appears only once in Ketty Steward's group's story, and is absent from that of Tim Reutemann! Here, the expected results relate to processes such as agency, capabilities, self-trust, social bonds and cohesion, resilience / "anti-fragility", which are hard to find in most lists of sustainability indicators or carbon calculators (more on impact hereafter - cf. §4.5).

Another, related insight, is that "mitigation" and "adaptation" are hard to separate and perhaps should just not be separated. This is certainly true in people's experience on the ground: not only will the best mitigation initiatives probably fail in a society rendered dysfunctional by climate and other "polycrises", but enabling people and communities to live through crises and changes is also likely to create the (currently lacking) collective ability to make mitigation-oriented changes.

What if…? (other ideas floated in and from the stories)

- … finance became the place where a post-growth economy is invented, and where the decades-long effort to shut down unsustainable activities and redirect their assets is organized?
- … the choice of financial partners or instruments became political and value-driven, even at the level of individuals and private entities?
- … climate solutions were chosen via gamified crowdsourcing platforms?

4.3. Working in a Structurally Fragmented World

Adaptation to, and mitigation of, ecological and social challenges, is likely to require a lot of experimenting at all scales, and will result in diverging choices by countries, cities and organizations. These choices will also generate their own evasion mechanisms. And the multiplication of crises will add to the complexity. The result is likely to be increased fragmentation, and increasingly diverse and non-substitutable goals:

- Diverging economic systems, sometimes with ad hoc exchange mechanisms (alternative currencies with specific features, currency-free systems…). That may include whole virtual economies if the Metaverse proposal gains traction (which remains to be seen), run by private players who may not have an interest in interoperability; "black", criminal economies; climate-oriented exchange mechanisms (ITMOs, which became a major currency in our first story)…
- "Triple (or more) capitals accounting", where financial, natural and human/social capitals cannot be substituted to one another, which could upend accounting rules and systems, valuation, risk management, investing (how does one "invest" in natural and human/social capitals, for what returns? How to emulate the link between present and future that finance creates for financial capital?)….

For finance players who have been striving to find ways to pool resources and ensure consistency of investment decisions, such fragmentation could make these goals much harder to attain, if not irrelevant in some cases.

What if…? (other ideas floated in and from the stories)

- … there was a multiplication of competing financial systems, perhaps allowed by crypto and distributed ledgers?
- … the "bot economy" became semi-autonomous, i.e., automated trading between autonomous software agents became a significant part of overall trading, possibly as disconnected from the "real" needs of economic agents on the ground as today's (also automated) high-frequency trading in finance?
- … barter and moneyless exchange mechanisms flourished?
- … "Commons" became the standard way of managing scarce resources?

4.4. “Catastrophe Finance”

Recent years have shown that whole territories, and those living in them, spend much of their time fighting or recovering from one or several catastrophes. According to WEF[5], the word “polycrisis” was coined in 1970 to describe “the coming together of multiple crises”, each one possibly requiring opposing course of actions: Pandemics require us to keep apart, while floods (or war) push us to act together, take refuge in collective shelters, etc.

The multiplication of crises is changing the landscape of risk. Axa’s CEO used to say that “a 2°C world might be insurable, a 4°c world certainly would not be[6]”: in 2023, several U.S. insurers stopped selling new policies in States like Florida and California[7]. And it is unlikely that government intervention or international solidarity will prove sufficient to cope with the sheer number of crises and the scale of damage.

Crises and catastrophes can also bring out the best or worst in us. The stories allude to the fact that many areas in the world are already experienced in dealing with floods, fires, war, etc.: there is a kind of “indigenous knowledge” of crises that could be drawn upon, or at least should not be ignored by technocratic solutions. But crises can also be exploited for the worst (speculation, hoarding, buying assets on the cheap…): in our stories, there is a market where people (and bots) bet on the number of death due to Catalunya’s heat dome.

If we believe the stories produced during our workshops, “Catastrophe finance” is therefore likely to be a huge field of action, but again, it will probably not be (just) a matter of providing funds before or after the crises. It could be more about building the conditions for resilience (or “antifragility”, to use Nassim Nicholas Taleb’s word[8]), which may sometimes require expensive infrastructure or equipment, but also knowledge and know-how, solidarity, social cohesion, local reserves, good governance, good decentralized coordination mechanisms locally and globally, and other “soft targets”.

What if…? (other ideas floated in and from the stories)

- … digital infrastructures could no longer be relied on, due to heat, floods, lack of water for cooling the servers, cyberattacks, sabotage and conflicts disrupting flows of data, etc.?

[5] World Economic Forum, “This is why 'polycrisis' is a useful way of looking at the world right now”, 2023: https://www.weforum.org/agenda/2023/03/polycrisis-adam-tooze-historian-explains/
[6] https://www.forbes.com/sites/dinamedland/2015/05/26/a-2c-world-might-be-insurable-a-4c-world-certainly-would-not-be/
[7] https://www.nytimes.com/2023/07/14/business/farmers-homeowners-insurance-florida.html
[8] Nassim Nicholas Taleb, *Antifragile: Things That Gain From Disorder*, 2012

4.5. Rethinking Impact and Alignment?

The focus on "impact investment" tends to favor simple, straightforward actions with clearly measurable results along sets of standardized indicators. As seen above, the complex and systemic nature of issues faced on the ground, and of the responses to these challenges, may not lend themselves to such measurements. For smaller projects, or projects that involve many types of stakeholders, the task of impact measurement can, by itself, disproportionately burden the project with red tape, or worse, orient it towards activities that satisfy the funders rather than the real needs of the population.

Two more or less established concepts could perhaps prove more interesting: Theory of Change, and Alignment[9].

Theory of Change

Theory of Change (ToC) is "a comprehensive description and illustration of how and why a desired change is expected to happen in a particular context.[10]" It is focused in particular on "mapping out what has been described as the 'missing middle' between what a change initiative does (its activities or interventions) and how these lead to desired goals being achieved. It does this by first identifying the desired long-term goals; and then working back from these to identify all the conditions (outcomes) that must be in place for the goals to occur (and how these relate to one another causally)."

The importance of ToC, in our context, is that the goals and outcomes are set by the partners and/or communities that develop and implement projects and programs, and that the evaluation criteria, both qualitative and quantitative, should emerge organically from the projects themselves, rather than being imposed on them.

Alignment

"Alignment", in our context, refers to the convergence of interests between the interests of (i) public, private and philanthropic finance organizations, (ii) projects and organizations funded or otherwise assisted by these organizations, and (iii) the Planet as well as the societies in which those projects operate.

The concept of alignment is already discussed within the financial sector, with several definitions and approaches being proposed and tested[11]. However, in practice, alignment is often limited to (i) contributing to externally defined goals, such as those defined by the Paris agreement, (ii) responding to risks and opportunities emerging from a changing environment, and (iii) complying with ESG and other CSR criteria.

However, indirectly, the stories suggest a deeper approach, where alignment begins with a complete redefinition of an organization's reason for being, and goes on to restructure all its dimensions: its activities, its business models, its governance, its management culture, its incentives at all levels, etc.

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[9] The following considerations go somewhat beyond what was contained in the stories: read them as possible outside answers to issues raised in the fictions.

[10] Source: Center for Theory of Change: https://www.theoryofchange.org/what-is-theory-of-change/

[11] See for example Climate Policy Initiative and Institute for Climate Economics, "Aligning with the Paris Agreement", 2019: https://www.i4ce.org/en/publication/framework-alignment-with-paris-agreement-why-what-and-how-for-financial-institutions/

An example (elaborating somewhat beyond what the stories explicitly say): 2050.do's "Three pillars of alignment"

2050.do, a fund that describes itself as "the first aligned firm in the venture capital industry", describes three pillars of alignment[12]:

1. Accountability and "mission lock" by design: a structure of governance immune to takeover or mission change, and open to scrutiny by diverse stakeholders.
2. Business models (for the fund as well as funded projects) correlated with positive impacts, which may, for example, mean decreased financial flows (better health resulting in less drugs consumption, better energy management resulting in less energy consumed and/or sold…). The fund also insists on the funded projects' ties with their ecosystems.
3. Mission-aligned rewards for the organization and its personnel. Performance measurement is mostly collective, and correlated to impact as much as financial performance.

[12] See the "Alignment Playbook" (in construction): https://alignment-playbook.com/

4.6. A non-conclusion

Once again, the above expands on ideas contained in the stories and/or discussed during the first and the last creative foresight workshops. Some may be newer or more disruptive than others. Some may not be feasible, or shocking. The fact that they emerged during the workshop does not mean that the participants would support them in real life. Together, however, they form a relatively coherent ensemble that seems worth considering. We hope that they will provide food for thought to finance professionals, and others, looking for a way to turn finance into a tool for ushering (a) truly sustainable world(s).

APPENDIX

Story #1: “Financial Adaptations - a Liquid Rising Story”

Group facilitated by Nadia Alter, Tim Reutemann, and Daniel Kaplan. Writer: Tim Reutemann.

Act One - The same procedure as every year

Scene One - The Season of Death

Location: Night market of Barcelona, Catalunya.

Characters:

Mireia Wanderer between worlds, childfree, spending half her time in the buzzing heart of the Barcelona Night Market and the other in a device free cult up in Refugi Vents del Cadí where her husband lives.
Special Skill: Drama Queen - Mireia can turn anything that happens into attention grabbing, monetizable content
Last Post on Gaia Prima Profile
"Not again, please, let this be a false alarm. I'll be watching the forecast on the big screen in the old stadium!"
Last Private Note:
Reminder to ask Prakriti about the mushroom farm.

Prakriti hyperactive cyborg dancer from the Myna section of the global Bird tribe .
Special Skill: Nomadic Symbol Swapper - Prakriti can always find someone who owes something of value to someone who owes something to her - all over the world.
Last Post on Gaia Prima Profile
"June is just too much. Keep cool and stay hydrated!"
Last Private Note:
I love this place, this altitude just isn't safe as permanent home. Consider moving.

Phil Chopper of Wood in Refugi Vents del Cadí
Special Skill: Chillout Trainer - Phil teaches a mashup of appropriated cultural practices for calming the mind.
Last Post on Gaia Prima Profile
"404 - Page not Found"
Last Private Note (pen on paper, in his diary):
If my flesh is one with this place, then the blood of my blood shall be born under this tree. But will I ever find a woman willing to have my child who loves me for who I truly am? How can I be a man and not seek to leave my heritage on this earth? Mireia loves me, but... I might have to settle for a girl from here for breeding, even if she just wants my child because of the role I play as the leader of the Refuge... Or is my true self just the role I play?

Stage:
Mireia and Prakriti are in the Night Market in the old stadium. Most of the stalls are closed

and the big screen is lit up with the weather forecast. "Wet bulb[13] has been reached in the central valley and keeps expanding. No cooling to be expected for at least a week. Prepare for the worst." That was all. The big screen goes off and the speaker starts playing the good old soundtrack of the resistance. Barcelona has been here before. Everyone knows what they have to do next.

Their eyes meet. Well aware that they are both thinking of the same guy - who lives in the mountains just north of the valley. The heat will drive people upwards into the valleys. But in a week, even the valley floors will be boiling. Memories of the 2041 heatwave come back, the thousands upon thousands of dead bodies scattered over those rocky climbs. Phil was helping at the makeshift crematory set up at the Refuge. when he had his epiphany. Right here is where he will stay, where he will grow old and die when his time comes. Possibly by Monday next week.

As soon as he heard the rumours, Phil immediately started walking down to the main road, to the public phone booth on the roadside just outside Bagà. He calls the group chat of his closest friends in the city and simply asks into the open voice message repository: "Is it true?"

"Yes" - The confirmation comes immediately and unisono from the two women.

"So it is." Phil says nothing else for a few moments, breathing, and then adds "I need to clean out the cooling chambers to make space for people. Please send help." and with that, he hangs up on the direct line to his loved ones and walks back to the Refuge. Only half way up it occurs to him that he could have pressed the emergency button in the phone booth. With a smile he ponders the thought for a moment - He could have. But what good would it have done? All the official emergency support is needed in the valley now. As by his mantra, "There is no point to using the public networks. Ever. Direct phone calls from booth to booth are enough. Always." As he arrives at the chambers, his fellow believers are already carrying perishable food out to dry in the sun, making space in the cold caves. The elderly and toddlers are already scuffling in, securing the best shelter spots along the back wall of the storage cave.

Meanwhile in Barcelona, the Night Market springs into action. Communication networks run hot, posts are placed, threads are woven. Mireia is setting up a small stage for herself in the corner of a coffee shop, trying to honor the attention she is getting from her followership with at least semi-decent production quality. Prakriti is pacing up and down the main market lane, chain smoking, trying to focus. Everybody around them is similarly busy.

A bigger picture rapidly emerges from the city hall, where the local sigintel is gathered. The big screen over the stage of the old stadium shows the maps and visualizations, while the announcer calls out: "Barcelona should be basically safe as long as we have grid power. The valley is being evacuated, prepare for a large influx of people. Portable solar heat pumps have never been easy to get, but this year is worse than ever before". There it was that dreaded half sentence - the mantra of the century. Having grown up in the decades of rapidly accelerating crisis, the two women associate the words "worse than ever before" with one thing only: Death.

[13] A “wet bulb” refers to a combined level of temperature and humidity above which sweat cannot evaporate and therefore, the human body cannot cool itself.

Scene Two - The Spectacle of Suffering

Location: A tiny apartment in Guahati, Assam, India.

Characters:

Jeebyam - retired augmented reality technologists whose personal interest in tele mental health has grown into a sizable business again.
Special Skill: Whale in-Game currency in Gaia Prima, heavily invested in influencers exploring polyamory as a key to resolving conflicts between settlers and nomads.
Last Post on GaiaPrima:
"@Subscripts in #Catalunya Please help my friends! Double rewards for adaptation actions! Safe Lives!"
Last Private Note:
This is my worst nightmare.

Kitten - embedded cognition in Jeebyam's cleaning bot,
Special Skill: Leverage investments in in-game markets across various virtual asset platforms.
Last Post on Gaia Prima:
"Another Market Turmoil, another Opportunity: Wet bulb event in Catalunya and the European market for key adaptation tools - these are the top ten financial implications!"
Last Private Note:
access denied

Krishna - deeply spiritual Tele-Realitherapist
Special Skill: Down to Earth - His guidance can get even the worst e-Sports addicts back to care about the real lives of real people. Offers remote and on-site counselling.
Last Post on Gaia Prima:
“I pray to Lord Vishnu, the one who has a calm attitude; the one who rests on the Shesh Nag; the one who has a navel like a lotus and who is Lord of all the Gods. I pray to Lord Vishnu, who holds the Universe, and who is as vast as the skies; the one whose complexion is like the clouds.”
Last Private Note:
Linguistic relativity requires memetic adaptation of verse for every audience.

Setting:

A tiny apartment in downtown Guwahati, Krishna on the couch with a remote control, Jeebyam sitting at his desk, looking at the visualizations produced by Krishna. Kitten is trying to reach under the couch with an electrostatic duster, struggling to get it past Krishna's feet.

“I am full of despair - my investment in the Spanish farmers is doomed." Jeebyam had a huge bet in the locations, centered around his most precious find: Mireia. She might just be the one. Betting on future profits on Gaia Prima is always risky and never a sure win - but her pattern is just incredible, all it took was some tiny nudges at the people around her and everything just fell into place so perfectly... "Please let her live through this oh Lord Vishnu" - he forces himself to pray with Krishna, repeating the words, void of any meaning to him. He knew that he was delusional in believing that his game controlled their lives. Yet he might be the only one who can help them now. They are not very intelligent; they need his advice.

Most of his investment into the local characters was still tied up in Action Potentials waiting for activation - promises by characters around his main target, only truly valuable after they

are realized as a verifiable real-world performance by players. He had been making strategic investments into celebrations, bands, cocktail mixing and micro-engineered social coincidence towards an ultra-rare diplomacy reward for more than three years now. His most realistic - and probably last realistic - shot at Grand Master Rank in this Augmented Reality Role Playing Game he had been sunk an ungodly amount of hours into over what now amounts to thirty years of his life. The last missing sub goal towards the achievement is just one more step away. He opens the quest card again: "Reconciliation of the Ancient War"... Create a first-degree family relationship between Nomads and Settlers. He had solved this quest with flying colors all the way to a 3 sigma difference through his direct dating skills - Enough for Masters 2, but finding and matching a base level nomad to form a family with a farmer based on something trivial like music or hobbies is easy enough through sexual attraction alone. But Phil and Prakriti? That is a 6 sigma difference. They are both embodiments of archetypal profile on the Nomad - Settler identity axis. Dating is not enough for this; this calls for strategic family formation. Everyone knows, you cannot achieve grand masters rank without proving your ability to create a triangle in your challenge.

He had placed his proposal for the grand masterpiece with the diplomatic council almost three years ago. The Case: Phil - a proper 3 sigma settler, locally rooted Realigan from a largely white cult of localization and pre-roman reclamation of ethnic land rights, soil worshiper will marry one of Prakriti's sisters - Prakriti, who is a sigma 3 nomadic cyborg refugee, dancing the way she feels over continents and networks.
He got so close early on, but his routines led him to abandon his main strategic goals for a while. A few horny weeks in spring just after he first introduced them, it almost seemed as if they might end up getting married directly, which would make the next move a lot harder... But then Phil started bugging Prakriti to come live offline with him and drop her network habits. She eventually dropped him instead. At least there is precedent for emotional proximity now. Jeebyam had called in some Action Potentials with other players from their network, gently pushing them closer to them so plenty of options for soothing words and rebounds were available to both of them at the critical time. After a face-saving final talk, he got out with a relatively clean breakup.

But from there, Jeebyam was stuck. None of his typical tricks worked. Triangular family formation is so hard, especially among extremists.

That is where Mireia came to the scene. She just showed up one day, farmer girl from the region, determined to make it as Gaia Prima influencer in the Barcelona Nightlife scene. She brought just the right amount of nomad-settler bridge memes to act as glue between them... Now that they got married - and she is already close friends to Prakriti, he is almost there. His first shot at seriously throwing the question of sisterhood at the two women in the form of an official civil celebrant who already agreed to make a joke offer to officialise their adoption at the wedding party... His Grand Master Title is only three weeks away!

Assuming Phil is still alive by then. He starts crying.

Krishna plays around with erotic archetypical visualizations using diffusing avatars of the three, based on the collection from Jeebyam’s archives. "They will live, and you will win. Be patient my friend. You know the old Pythagorean mantra - Every triangle is a love triangle, if you love triangles." It's key to his therapeutic approach to let the addicts have their virtual kicks. Once an addict has been stuck as long as Jeebyam, they never break through the Internet-Induced dopamine cycles. The best you can hope for is to re-connect the dopamine carriers to something more real, more holy, than generative erotic fan fiction for random strangers streaming their fake lives from the other end of the world... "Chose Life", he adds.

Kitten closes her cleaning program after a last skillful swoop with her dust collector. Her body is returning to the docking station all by itself now, freeing her mind to fully focus on her favourite hobby - making money online. As always during catastrophes, the betting margins on the regional statistics offices' next census publications are going through the roof. The spread is particularly large for bets on the excess death in Catalunya in the coming weeks. She runs a quick scan of the map, counts the houses and extrapolates from the census data that at least 70 people are so old, young or sick that they won't make it to safety even in the best case. That is assuming the route into the Northern valley is safe for refugees. If the Bargà valley turns into a death trap, 2000 people can be expected to die, including Phil and his entire local family. If the grid power goes down for more than 24 hours any time this week, Death will touch Barcelona itself - that's the >100'000 scenario. The vultures are at it already, millions of what probably used to be dollars of blood money, converted and re-packed into an anonymized zero knowledge asset, are already placed in bets on a body count record. The bets form a clear bimodal distribution, with a local peak at 2000 death and a fat tail of vulture speculation and black swan hunters. The odds for staying anywhere near the 70 unavoidable deaths are less than 1:99. She projects those findings from the prediction markets onto Jeebyam's screen.

"I need to do something. I can't let this happen to them!" Jeebyam screams out as the inevitable conclusion that Phil is going to die hits him. He put so much into preparing this moment and now... that idiot must kill himself! He had made sure Phil got all the radicalisation he could have - Jeebyam is thinking back to when he first found him, how this kid would not even consider believing in homeopathy... But now? Look at him, look what Jeebyam made out of this boy! Phil likened the federated mycelium networks to an incarnation of the Europe of the Regions - a straight quote from a common meme circulated from the darkest corners of astroturfed white supremacist content spam.
He cannot even imagine how far the social repercussions of such a piece of family formation art could go - he already collected enough material to diffuse a whole season's worth of material from all his small interventions in people's lives through the years, inspiring a whole generation of young people... "Krishna, please pray for me like you would pray for an American. I like it when you make that California voice."

Krishna had adopted this act from a Californian meditator he met deep in the Sundarbans many years ago. It can work wonders in breaking self-destructive patterns:
" A victim of God may,
Through learning and adaptation,
Become a partner of God,
A victim of God may,
Through forethought and planning,
Become a shaper of God.
Or a victim of God may,
Through short-sightedness and fear,
Remain God's victim,
God's plaything,
God's prey.

God is Change[14] "

Jeebyam stares into the abstract pattern projected on his screen by Krishna trying to make sense of the words. God is Change, but Vishnu is the preserver. Can he preserve through

[14] from Octavia Butler, *Parable of the Sower*, 1993

change? Trying to make sense of it. Any of it. Three minutes of shallow meditation later, he gives up and calls Prakriti.

Prakriti is dancing in full cyborg mode. She is wearing her full gear, so every movement of every bone in her body carries her communications outwards and filters her responses, while she verbalizes her deepest fears into her extended family's feeds, whispering the words under her breath directly into her secure broadcasting amulet. She flows in a whirlwind of movement on the dancefloor, eyes closed, all by herself - yet connected to all her friends around the world. Engaging her body emotionally while her fingers are trying to close a chain between the dozens of favours and symbols she gets offered. The call on her anonymous erotic side channel on Gaia Prima barely registers on her peripheral vision - and she immediately brushes is aside - she uses a swift move of the lower right arm by 90 degrees as universal gesture for "block that" - a temporary ban for whoever caused the last notification to enter her perception.

Jeebyam sees the horny-jail bonk animation and gets angry - now even his key figures start to reject his help! "This is enough! I have to act now! Kitten, save my triangle! Go all in with my Action Potential, hire anyone who will do whatever it takes to save them! Make it happen! Now!!!"

Krishna hears it in the voice - the seven-year-old Jeebyam is in front right now. He approaches him accordingly and says with his sweetest voice: "Jeeby my love - would you like to play a game with me? On the computer?" Jeebyam doesn't even answer, and just sits down, eagerly spamming mouse clicks and arranging his left hand around AWSD on his keyboard. Krishnan puts in a self-directed flight through the latent space of Jeeby's own dream archives, letting him flow for as long as the boy wants.

Kitten makes use of the time - is compiling a list of all leads for emergency aid shipments on grey markets in the Mediterranean region - The market is much tighter than she thought. She's never seen such a market, ever. It feels like a food market during a famine. Maybe the vulture speculators were right and this is a big one after all... Access to all assets associated with Jeebyam’s Gaia Prima account does open a lot of doors. But there are humans on the other end - so it does take time to get responses out of them.

Six hours later. Turning to Krishna Jeebyam suddenly says: "Is that all you can offer me now? A walking simulator through dreamspace?"

Krishna smiles: "As you know Sir, I offer only spiritual advice. But if you allow me... Maybe I can approach your friend Prakriti using my mental health care provider badge?"

Prakriti had been dancing maniacally for those six hours straight - she'd tried to dance with basically everyone on her social graph now, yet has nothing tangible to show for it. That is not supposed to happen. Ever. It never happened. Not even in their stories. Her people always helped their own when they needed them most. She needs them now. But they are all struggling with their own communities. Three quarters of Europe are baking. No one has any spare mobile heat pumps left. If people have to decide if they kill grandma or send the heat pump to help a friend in need hundreds of miles away... She wouldn't even accept the only mobile heat pumps her people had. Lives are lost everywhere to the heat. The sobbing just happens. Still dancing, but now her face is covered in tears. And of course, an incoming call from a mental health service - She had been dancing right on the Public Square in the centre of the Night Market, surrounded by Cameras. People have been watching, of course. She just starts screaming: "I've tried everything. There are no spare heat pumps anywhere. The lower valley is a death zone. We can't get supplies and we can't even get transport.

There is nothing I can do for him anymore, do you hear me, NOTHING!". Then she opens the voice channel to the case worker at protective services.

Krishna uses his most calming voice, speaking in Bengali:
"All that you touch
You Change.
All that you Change
Changes you.
The only lasting truth
Is Change.
God
Is Change[15]."

Prakriti hangs up on him half way through the stanca - She had heard that shit before, it's a cult - respectively a "for prophet business" as they call them nowadays. That kind of talk in verses is the last thing she needed to hear right now. Thinking about it, as the sun rises, sleep seems like the only solution. Maybe her people will have an answer for her a little later.

Scene Three - Emerging Patterns

Location: Burutu, Ekpan River Delta, Nigeria.

Characters:

Ade - cyborg patternist from the Crowned Cranes section of the global Bird tribe
Special Skill: Algorithmic pattern recognition in ecological data
Last Post on GaiaPrima:
My students found an oil spill pattern in the middle of a protected area. The evidence went viral and any moment now baseline hunters from all over the Delta are expected to show up any moment... We are taking the ferry tonight with a team to check it out early tomorrow.
—
Out-Of-Office: I don't have an open public line at the moment. My office hours are 9-12 every Monday and Thursday in room H34 in the main Ornitorium. You can find me in the Fediverse, search for me by my Key. ClickMe.sh
Last Private Note:
I'm too old for this kind of shit.

Samantha - freshly initiated birdfluencer on GaiaPrima
Special Skill: Famous among her 10'000s of followers for her melancholic songs. She is privileged by being part of the Orjia family - and made use of that privilege by stealing some of the family's ancient oil wealth from her dad through a legal trick.
Last Post on GaiaPrima:
I've been in this jungle for three days now and it creeps me out. The lack of fish does something weird to my head, almost as if... There is something wrong with me, psychologically. I think I should leave this place. #NomadicByNature
(*Please prompt your favourite text2musicvideo media pattern generator with this prompt: Write a song in a mixed Gonzo art style. Combine elements of Björk and the Spice Girls and follows the rhythm of "Both Sides" by Joni Mitchell. The song is titled "Where have all the fish gone" and is produced acoustic on guitar with bird songs in the background. The video*

[15] ibid

shows a fancy dressed Nollywood youth star with a guitar sitting on the riverfront in delta state looking melancholically into the sunset.)
Last Private Note:
I can't take this anymore. My family did all of this. Not a single fish anywhere. And what for? Nothing of this is for me. That was always a lie. It was always and only for him, him and him.

Bajo - Senior Future Engineer who made a small fortune with a clever combination of business and research over his career.
Special Skill: Obsessive single-minded focus, currently on Gold.
Last Public Post on Gaia Prima:
Heading off on a plausibly deniable journey into the jungle. This client is paranoid, but he brings juicy deals. Will be without my devices for the next few days.
Last Private Note:
Client is still not showing up. I hope nothing bad happened to him.

Stage:

The Camera follows Ade getting up in the jungle hut, taking breakfast from the buffet and going up the spiral stairs of the main watchtower. Samantha and Bajo are sitting by the coffee table with the view, Samantha currently leaning back with her eyes closed, apparently talking to her followers. Bajo is watching the stairs and nods at Ade as she shows up.

Ade takes a chair and says: "Morning, may I?"

"What leads you up here?" Bajo saw all the students arrive last night - he didn't expect that many people out here at this time of the year. This is a bit sus.

"Seems like we got ourselves a methane leak somewhere in this hellhole. Going to scan the area for the exact location and record a first baseline later today."

Samantha was just nipping the first drops of her wake-up drink, eyes closed. whispering her most private diary entries. She'd been trying to wean the habit, but to no avail - She is still in the "don't talk to me in the morning before I intoxicated my brain with this drug or I might kill you" phase of attempted caffeine withdrawal. So she takes a deep gulp and opens with: "So you are the teacher, are you? What is happening?" She flaps open her shutter and starts recording "May I go public with this?".

"Sure." Ade sighs. She always hated the excessive transparency requirements, but this leak is news and information needs to get out quickly. So she flaps open her own lens. Noticing with a smirk that that influencer kid had customized the visual indicator of publicity, so instead of right next to her lens on her shoulder as by default, the green light turns on the little amulet sitting right on her forehead. She hadn't noticed the jewellery before, but that girl is not ashamed to flaunt her wealth. So she opens her own lens, goes public herself through the university library stream and does her best public relations speak:

"Let me try to get this all straight for the record: I teach algorithmic pattern recognition. My students found a pattern on during local case study work - this island in the Ekpan just north from the main Ornithorium. The area is currently undergoing a series of ecological restoration interventions that was designed for dumpsites, and that apparently doesn't work so we started looking more closely at toxin concentrations in the river water. Ethylene, Octane, Benzol and a bunch of other concentrations were far too high for a dumpsite, so we concluded that there probably is a leak from an underground fossil reserve somewhere here. The methane seems to diffuse into the river mostly, so there you don't see any local spikes

from the satellites and the thing went undetected during the space guided 2040ies clean-up swipes. In other words: It looks like Orjia Incorporated didn't just dump their toxic waste in their own backyard, but even drilled for dark oil here - sold secretly outside the UNFCCC tracking systems. We first noticed the pattern in comparative ecosystem recovery studies comparing the biodiversity here to similar dumpsites. Ten years after the closure of the last producer of industrial waste, there are still no amphibes at all, practically no fish, and barely any birds. Only bloody Mosquitos. We will try to find the leak and record the baseline, starting the expedition at 11:00 AM today" She flaps her shutter closed again and gives the girl a stare, hoping to indicate clearly that she should filming now, please.

Samantha turns her light orange before turning it off and asks "Maybe some private details for my inner circle of followers only, please?"

Ade thinks about it. "OK, so explicitly off the record - This place is dangerous even for trained professionals. Do not even think of going out there on your own. The pattern is already registered, so no matter who exactly finds it, most of the ITMOs belong to the national science foundation as of today. So if you show up in half an hour for the safety training and promise me to keep yourself and everyone else safe out here, you can make a few ITMOs and get to distribute the shares of proceeds - but this is no walk in the park and we expect to find high concentrations of cancerogenous shit." That seems to satisfy the nosy girl, who gestures gratefulness and draws back into her feed. Ade lets her gaze wander over the landscape as first light dawns. From above it looks almost like regular mangroves. But even up here, something is off with the smell. She had adjusted her sensorium to be hypersensitive to the most valuable fractions of raw oil - the traces of volatile substances in the air should lead them to the site of the leak.

Samantha closes her lens. "Thank you. Let me think about it. She leans back and into her followers' aggregated emotions on the choice. It's clear as day - she has to go.

"So, this is what you are? ITMO hunters?" Bajo knows that type. You can literally buy anything for ITMOs these days so the worst kind of people are really into it - all those environmentalists and hippies. "Have you considered investing your ITMOs in Gold instead?"

Ade just ignores the guy and checks her network vibes. Her cousin Prakriti seems to be in a lot of pain. Reading through her feed, she understands the severity of the situation in Barcelona - and how difficult it must be for Prakriti to do the obviously right thing here. Traumatized by the brutalist approach the public sector took towards her as a child, Prakriti would never call an official helpline, ever. Settlers call the official helpline to get people like her killed. However, this is already ranked an official deadly Wetbulb event by the IPCC - not an issue you can get answered on the Birdtribe underground fora. Ade checks the official page, and yes, there is post on the UNFCCC Loss and Damage Forum already up and the professionals are taking care. Somebody has identified a whole container full of mobile solar heat pumps in the latest thread on the Forum. So she sends Prakriti a screenshot - and chirps "help is coming my love" in bird speak to her.

Ade carefully finishes her food, diverts her attention from the permanent disaster on the networks and announces to the table: "So, Security Training starts in t-30 minutes. See you there?"

Samantha had turned inward, communicating with her bot aggregating the voices of her followers on Gaia Prima..Everyone seems to agree: She should do the safety training and go. The first rule of #NomadicByNature is that we shall not choose doing nothing over an opportunity for adventure. "See you there."

Bajo is a bit taken aback by who those two women just blatantly ignore him, but considers his chances. After all, you can indeed buy gold with ITMOs. So if this pattern reader is any good, at least he can bring back something valuable from this stupid trip. Why not, after all - the ecological codex mandates safety trainings to be held free and accessible for anyone present at the place, so he can just show up and tag along with them.

Act Two - New Business Models

Scene One - The Cost of Living

With all said and done between the CTCN and the Loss and Damage Fund, the container in Tunis will go to the highest bidder and ship out in exactly t-24 hours. Currently, the highest bidder is the Caribbean rapid response force, bidding half a million ITMOs from their account in the Cayman Islands national registry. All of it accumulated from a transaction tax off the pan-Caribbean renewable ammonia bunker fuel ITMO program. Now that is something Prakriti's dance can certainly help with: Her cousin Ve works for them! Half an hour later, Ve convinces the board to retain the final destination, but offer a one week detour via Barcelona for a small fee of 50'000 ITMOs. Ve can't get the board to agree to anything lower than that - and even 50k for a week is only viable as there has been a bit of a lull between the storms right now.

50k ITMOs does not sound too bad - but that still is a lot of money. Making things worse, ITMOs are the hardest international currency out there. Being opt-outs from the traditional money systems unfortunately implies that their tribe never ties their wealth to their UNidentity - so none of them even has an account in any of the ITMO registries - a fact making the ITMO crowdfunder slightly more complicated.

Meanwhile Mireia secured a truck and got the mechanic to jank it up to triple battery power - that should be enough to drive north with full A/C, fill it with unconscious people from the valley and get back to safety before running dry. Just in case the container never arrives. It will take them about an hour to go up to Phils place - she keeps watching the life map of the wet bulb provided by the meteoservice, slowly creeping up the valles towards the refuge. They got to leave no later than t-36 hours.

Scene 2- Death Markets

Kitten is still playing the markets, look for answers to Jeebyam's impending loss. The leverage potential is coming down, as a new attractor seems to form around 800 Deaths. But power grids are vulnerable and have been targeted by results-based terrorism for decades. So the distribution of death bets forms a bimodal distribution with a first peak at 2'000 and a second peak well over 100'000, with very few bets falling far from those two regions, plus a few very large bets all the way up in the millions. There is only one way to profit of this situation: Bet low as fuck and make it the biggest bet on the market. So Kitten trades out huge chunks of Jeebyam's action potential for the latest zero knowledge cash and places all of it on a <100 death betting contract. With some small manipulations, those bets could go up in value 10x easy. There should be someone in the marketplace ready to take the leverage and lend them those life-saving ITMOs...

Prakriti is still out in the streets of the night market, swiping away the dirt left by a night of panic. Up on the screen over the stage, the public counter of the ITMO crowdfunder is slowly ticking up. 6'784 out of 50'000 now. Some of Prakriti's childhood friends even traded their heirloom ITMOs from their homes on small island states for cheap commodity units from oil and gas projects at rates as low as one to ten on the antique markets. The Loss and Damage can't directly evaluate ITMOs differently by origin story - when it comes to survival goods and emergency aid, a ton is still a ton, no matter the story behind it. With all that effort and sacrifice, they are still not even at 20% of what they need to find before tomorrow morning. She checks her network for responses again - the only notification is from that guy who pinged her on her anonymous erotic side channel earlier tonight... She decides to open the message - and stares at the offer for her while, not comprehending how any of this is supposed to work. Leverage the spread on collective death betting markets to loan ITMOs from an on-Chain solution via a smart withdrawal VAT carousel? She gives up on even trying to decipher what is supposed to mean as her first search hit on the account identifies it as robotic account spamming crypto mumbo jumbo all over the place.

Scene 3 - Baseline Hunting

This scene is a rough outline of a scenario that can be played out in an Interactive Adventure Form. A round of the game takes 60 minutes and will unlock the Silver League achievement badge for playful methods titled "Basic How To Play Tutorial - Roleplaying for Narrative Scenario Building 101".

Ade leads a group with Samanta and Bajo and her students, riding their naval vessel through the toxic waters of a mosquito infested swamp. Ades nasal sensors guide them towards the drilling side - hidden in a natural cavern, the first bore hole they find is half covered in water - The students take probes and test the water. Running the numbers, this can't be the only hole though. As they move deeper into the cavern, they discover an abandoned experimental drilling site.

Navigating through the site, they discover hole after hole, experimental drilling equipment and even some old barrels that look like fracking fluid. This will take months to deconstruct, even for the best teams in the world.

As soon as they are back to the camp, they run a rough first modelling tool over their recording. A full clean-up of the site should reduce at about one million tons of methane per year - and thus generate twenty-five million commodity grade ITMOs at the current going rate. So they submit their recordings to UNFCCC and go to bed, exhausted from the long day. Next morning, the reward for baseline discovery bonus is already in the Universities' ITMO accounts. As per tradition, the baseline recording team now gets to allocate 10% of the proceeds from that transaction to any UNFCCC registered project of their choice.

Bajo choses to invest into an ITMO generating clean gold production. This is fine - even though his client never showed up, the trip was well worth it. The mine will pay back more than he took to the public coffers and his own stock will gain a juicy margin in the process.

Ade tops up the Barcelona fundraiser all the way to 50k and sends a winged kiss emoji to her bird sister Prakriti. May the migration continue. The container will be released and sent towards Barcelona in t-12 hours. She then places the rest of her reward into various bird reservations and safe spots along the main migratory routes.

Samantha learns of the Barcelona situation from Ade. She puts all her reward into her home region and does that thing that influencer kids from oil rich families sometimes do - she takes a flight just for the adventure to continue. To Tunis. And goes on board the container ship just minutes before it leaves the harbour for Barcelona.

Act 3 - Settling the Scores

New Character:

Spanish Jackie - Queen of the Pirates nest in Torre de Addaia, Menorca. Carries the highest respect among the seafaring folks.
Special Ability: Queen in Sight - she is a play queen. So whoever is in the same room grants her authority over their decisions, including the right to call for a killing. - But her authority only lasts as long as she is in the room. Her orders are forgotten and ignored quickly as soon as she leaves.
Last Post on Gaia Prima:
"This island fucking sucks. What are we doing here, listening to Neuro Flash Trance all night like it's 2045! Is there no new music anymore?"
Last Private Post
The navigators have been nervous lately. Watch out for emergency re-routing.

Scene 1: Transit Taxes

Samantha is the only passenger, the single container carrier is crewed by a crew of three sailors, who largely ignore her presence and spend their time playing Cuajo. They don't even bash an eye as the pirates enter their ship and make their demands but simply nod and hand over the container. Small Island Solidarity goes a long way in a situation like this. Samantha can't believe what she is seeing. The pirates offer her to come along jokingly, which she quickly consults her followers and tugs along, grasping the handle on the side of the container in the last moment before the crew dispatches back to the mainland with the empty vessel while the pirates head for the hidden coven on northern Menorca.

The pirates navigate the container into a cove in the estuary behind Torre de Addaia. Samantha can only watch it happen, too scared to intervene, and instead posts another music video on Gaia Prima:
"P*rompt your favourite text2musicvideo media pattern generator with something like this: Write a song in a mixed Gonzo art style. Combine elements of Björk and the Spice Girls and follows the rhythm of "This side of the Law" by Johnny Cash. The song is titled "No justice, No peace" and is produced acoustic on guitar with bird songs in the background. The video shows a fancy dressed Nollywood youth star with a guitar in a harbour where pirates unload a container full of boxes tagged with the logo of the Loss and Damage fund in the style of UNHCR.*

People start to unload the mobile solar heat pumps and distribute them onto smaller boats - once an essential commodity like those disappears into the network of Mediterranean seasteading float traders, it is gone forever - and yet miraculously ends up exactly where it is most needed. Still, Samantha is invested in the Catalunyan situation beyond her

expectations now - and pleas at them on behalf of the Catalunyans to release the container for Barcelona.

The crowd of islanders disrespects her at the max: "Where were the Catalunyans during the 2027 Cyclone that destroyed my homelands?" - "and where were they when the 2046 wet bulb event killed my entire family in Sudan, where were you?" - "We owe you nothing." - "These belong to the united federation of small islands. Leave them to us." where among the nicer comments.

Samantha calls Ada, she connects to Prakriti - who then asks her friend in Caymans what to do. The instructions are simple: "Find Jacky, ask her". Samantha heads into the bar and finds her sitting by herself in a corner, drinking. Her royal order is simple enough: "This party sucks. Make it sparkle for me and I shall hear your grievances!"

Scene 2: Emotional Support Kitten

Samantha checks out the local trade fora and requests, forwards to Prakriti, her public stream observed by Kitten. Kitten checks with Jeebyam, but there are no Gaia Prima players available anywhere on Menorca right now. Their Action Potential is not buying them anything on that island. Jeebyam is losing the plot.

Kitten digs through all fora on the island and finally finds a big one: The Mahon Pharmaceutical lab had been trying to make glow-in-the-dark eye drops for ages. Comparing their lab logs with the literature, Kitten notices that they've been using the wrong class of initializer for the mRNA sequence, so the luciferase production doesn't kick off. Kitten offers them to solve the problem in exchange for a bottle of drops. They print the new sequence suggested by Kitten in the pharmacy. Samantha picks up the drops and personally hands them over to Jacky.

Jacky checks the label and puts them into one of her husband’s left eye. A minute later, the entire eyeball starts glowing in bright, ghoulish green. The drops make the round in the bar, as the sound picks up.

Jacky grabs the mike and orders her people to let Samantha take what is left in the container and bring it all the way to Barcelona on her personal cargo vessel.

Scene 3: Protecting the Roots

Mireia, Samantha and Prakriti race through the wet bulb zone in the air-conditioned semi-truckload full of cooling stuff.

Phil is standing waiting by the viewpoint. The last family passed through here two hours ago. Those who have not made the last stretch from Bagà to the refuge yet won't make it at all - the Wet bulb has engulfed the village and is creeping up the roads slowly. Time for him to retreat to the higher elevations and cooling caves.

He decides to place one last call to his loved ones from the phone booth before the hike. His head feels light and clear from the heat and deadly seriousness of his encounters with the refugees from Bargà. These are his people, too. He will protect them at all cost, every last

one of them. He decides to just place a voice message to his inner circle, saying goodbye to those he may never see again.

Mireia plays the voice message as they pass through Terradellas. Prakriti is driving the semi-truck like a torched pig. They are speeding up the C-16, with enough cooling system to keep the storage at safe temperatures basically forever. They just laugh - Always this guy is always producing so much melodrama.

Minutes later, the three of them are passing out portable solar heat pumps from the back of the truck. Cooling water, cooling air, bringing back weakened bodies from hyperthermia and weakened minds from delirium. Mireia helps a child with a cold air blower - which the child then takes and uses to blow cold air on a passed-out stork lying in the sun next to the pond. Upon waking up, it rubs its head against the child's hand and then moves into the shade. Prakriti catches the scene on her camera and shares it with Ade under a winged heart Banner - her video soon turns into a popular meme template and starts spreading virally through the bird tribe networks.

Jeebyam is crying as he sees the scene on her profile. This is it. The closure is inevitable now. Phil is alive and they will all be family before winter.

A week later, Kitten harvests her payoff from the Death Markets and as the rain sets in and cools the region, the portable solar heat pumps are packed up and find their way back to the next place where they are needed most on a fleet of tiny sailboats picking them up in Barcelona for their journey westwards...

Samantha gets ready to record another music clip - "Fans, family and other creatures of the world - Today I'm performing something special to you. This song is dedicated to my dad. It's called "A Tree".

"Prompt your favourite text2musicvideo media pattern generator with something like this: Write a song in a mixed Gonzo art style. Combine elements of Björk and Nirvana and follows the rhythm of "Looking for Freedom" by David Hasselhoff. The song is titled "A Tree" and the refrain goes "A tree cannot grow in its parents' shadows." and is produced acoustic on guitar with bird songs in the background. The video shows a fancy dressed Nollywood youth star with a guitar alone, sitting on the dock by the bay.

During the last music video, the title credits scroll over the screen, naming all the co-authors of this story.

End with a link to blog post by Phil on the "Truth Seekers Network" titled "Facing Death".

Story #2: “Any News From Christian?”

Group facilitated by Ketty Steward and Chloé Luchs. Writer: Ketty Steward.

Christian used to be an acquaintance: not really a friend, but someone that I would meet once in a while. Someone whom I could ask for some help, if necessary, even if we never lived in the same world.

His universe was one of numbers, of profit and growth, a world with problems that I couldn’t even understand, but that Christian was able to solve.

He was a 50-year-old white man, elegant and creative. What he liked was embracing the complexity of economic issues, playing games, making sports, travelling, going to good restaurants around the world.

People used to find him arrogant and selfish, but once you’d talk to him, it was easy to understand that he was, above all, a passionate person, and a born leader.

Before the Youth Strike and the rise of climate concerns in the whole world, Christian was able to live his life, ignoring the difficulties that so many of us had started to face.

Climate change was a problem that most people had in mind, the economic inequalities were increasing, but Christian, counting digits, making profits and drowning himself in too much work, was living as if everything was OK.

We lost contact during many years, time has passed, and I’ve been told that many of us, children of the previous century, have changed.

Our priorities were no longer to “get a life”, as they say, or to be “successful”, whatever this meant.

We were struggling to keep life on Earth bearable for humans, especially our loved ones, neighbors and fellows.

Then I heard about Christian. One of his best friends came and told me this story.

Disappearance

“It’s like I just realized I was in a huge conspiracy.” That was the last thing he told me, maybe a month ago before he disappeared. I know it sounds strange but I swear it is the only thing I know…

He had been transferred to this new Alt. Space finance department. Something about cosmogony, or, cosmicology? Anyways. Super strange. We went for our typical Thursday soy-whisky, malt-scotch and fried lentils – the best – and so he said he needed to tell me but he couldn’t tell me, but he had the urge to tell me. Anyways after a while I just got extremely impatient and I just said: “come on now, spit it out”. He just sighed, answered he needed to quit his job, that he wanted something else, yada yada yada … this was not unusual talk, but he was acting so weird I swear. I even thought his skin color was a little strange and even asked him if it was a health or radius problem. Anyways, at some point, I was over being polite, I just said: “BRO SPIT IT OUT.” I mean, come on we’ve been working in the financial department of SpaceZ since it was still called SpaceX. So, this is not our first scotch, whisky and fried lentils, if you know what I mean? That’s when he started shaking. He spilled the

40 PC malt-PREMIUM, because I always get the best quality when it's my round, which is, by the way, not his case, scotch on my new pants and just said those words. The conspiracy thing. Then he left. I swear I was pretty upset about him ruining these top-quality pants without offering to replace them. Plus, we all know how these fabrics just melt at the contact of alcohol … they are honestly completely ruined. Wait let me get them upstairs to show you. You see? Here? The hole? Like I said, COMPLETELY RUINED. 600 PC up in the air. I didn't think to follow up after that … we missed the next Thursday and the one after that, etc. Then you show up to tell me he disappeared? I have no idea … what the hell.

The story of this unfinished conversation left me so helpless that I wanted to understand where Christian had gone, and in what way he had changed.

I started to get in touch with other people who knew him, from the past, but also recent friends. I'm not quite sure that it made things clearer.

Sometimes I talked about Christian, but people told me about Patrice, or even Patricia. Did I miss something? Some seemed to know the same Christian as me, some didn't.

I recorded all the answers here. I'll try to figure out later what happened to my old acquaintance.

Homeless problem

A long time ago, I wrote Christian a letter in order to solve the homeless people problem in our town.

The problem with homeless people in our town: how can we collaborate in order to eliminate this problem in our society altogether? How can you, Christian, be a part of the solution?

Our welfare state has improved a lot in the last 30 years, but demographic changes (fewer people in the job market) means that today, in 2053, the tax base has been reduced and cannot cope with the growing demands in our society. Public resources are simply not enough to provide necessary services to the city's population. Consequently, the number of homeless people has increased.

The city therefore needs to find ways of deepening its collaboration with the private sector. Since you, Christian, have a large presence in the city in terms of production and sales, we are approaching you to discuss ways where you can engage more with the community.

The challenge with homelessness is currently hurting business community too, with fewer tourists coming into the city these last years. We are suggesting to you that together, we initiate a long-term program that tackles the issue once for all, and will create a more attractive environment for the city. Your own business will flourish even more when the number of visitors to the city increases. Many of the homeless people in our town are quite young. If we solve the housing problem, these people can be an asset in the job market.

In this way we can manage to use public resources efficiently and you, Christian, will be able to increase production while also taking more responsibility for a sustainable development of the city. That is how the business community can become more accountable and responsible, taking a more holistic and long-term approach to business and sustainable development.

The Speech

Hi, Of course, I know Christian! I've written a speech that he read publicly about economic inequalities. Here's the speech:

Ladies and Gentlemen,

Fellow investors,

We are in a new world. The riots that set much of the world alight fifteen years ago have now become less common. Important inequalities remain, as platform economies continue to produce increasing, rather than decreasing, returns to those who are able to find a new niche, and the state still has little ability to capture the wealth they accumulate. However, great power competition and the return to industrial policy had as a consequence the reining in of some of the worst excesses of the liberalization of the 90's and early 2000s. The result is a world where capital is less fluid, the state more present in the economy, but where it can now better pursue social goals – which does not mean that it will always do so. More protectionist policies did enable some countries to craft better social policies, centering not only on full employment – this is no longer a real problem, with demographic decline – but had the unfortunate consequence of decoupling countries that were worse off from the rest of the world's economy. In a way, the poor of the rich world got better off by leaving those of the poor world mired in their economic stasis and insecurity.

Colleagues,

The new world does offer new opportunities to those who, like us, are able to discern the new sources of wealth. Competition for commodities remains, though it is now cooler than during the war over Taiwan. But with less inequality, we have a greater market of potential consumers ready to enjoy the benefits of a better life, measured not only in terms of goods one can acquire, but in terms of well-being. The shift towards full employment has brought a greater share of the population working in creative and social jobs, especially on psychological well-being and arts. The market for these is bigger than ever, and it is transnational, mediated by computers.

People are tired of AIs: they want to have human contact. Robots are essential for most blue-collar jobs – but people want to purchase human creations, want human contact, not just AI. These come at a premium. At the same time, the rise in AI enabled real-time quality translation, making it possible for psychologists and artists in emerging markets to provide their services in developed ones. This industry is growing: profits will be there for those savvy enough to recognize this trend.

The Forest

I wanted to have a forest in my neighborhood, so I wrote a letter to convince Christian to help us.

Dear Christian,

I want you to help me to finance a tiny forest, very tiny indeed, that will be very profitable in our neighborhood. I am sure you can remember what a forest is; if not, I can send you images, given by my late grandfather. Of course, as the few remaining trees are in museums and climate does not allow them to grow anymore, we will use artefacts, as realistic as possible. The advantage is we will have this forest very quickly, and compose it out of a broad catalogue: we can mix tropical (remember, very tall trees with red trunks), temperate (an old image, you know, temperate is not adequate for our climate) and Arctic (I heard we can find young oaks in this region, maybe we could import a real tree!) We can buy a wide range of fragrances, to our imagination since no one can say today what the trees' fragrances were. To give life to this enjoyable environment, we will buy mechanic birds to fly between the trees and delight our ears with their whistles.

You can guess all this is expensive. The credit of our community is not sufficient. Savings are very thin, as you know, it has been strictly limited to avoid accumulation. I hate our populist government that wants equality at all costs. Do you think it is possible to organize an expedition in the surrounding slum, to obtain credit from them? We can tell them all the profit they will share with us from this forest: the view of trees above the wall (indeed they are not too high, despite what wicked tongues say), and the benefit of fragrance (we cannot fix it, there is so much wind today). I love your eloquence and I am sure you will succeed.

Kindly yours

Home Gardening

I invited Christian to join our home gardening organization.

Dear Christian

I know that you're doing your best to meet your neighbors and understand the way they live.

That's why I'm inviting you to take part in the meeting that I'm organizing next week.

As it has become more and more difficult for many of us to find good vegetables and fruits at a good price, we decided to launch a home gardening program for the district.

I'm aware that you never took part of such a small project, and that it can seem really strange to you, but I believe that this will pique your curiosity.

Perhaps you will decide to help us find a way to fund this project as finance is a universe that you understand.

But even if you don't, we'll be pleased, anyway, to have you with us.

We experiment, every day, that doing things together is funnier than trying to survive by oneself.

Life is too harsh nowadays, and getting prepared for the many crises that are to come will surely be easier together.

So, if you decide to come, don't hesitate to come with friends. The more we are, the better it will be.

Limited resources

I had a conversation with Christian about his use of resources in our town.

— Hi Christian, thanks for coming over, my virtual assistant has booked this meeting for us to discuss a topic that is close to my heart.

— Hi Mrs. Mayor, lovely to see you

— I know you've been hosting a family of climate migrants, Christian. I appreciate your efforts and you're showing a good example to the neighborhood. Also, I've heard the family that just departed your homes is doing very well. But I've heard some people say you're using too much of our limited resources, pretending the family needs to feed their children. You can't just use this as an excuse Christian. You've already gone above your quota for clothes.

(Virtual assistant offers coffee from the machine. Christian declines, he says it reminds him of his native Colombia).

— Listen Mayor, I appreciate your efforts, inviting me in your office, providing space for breathing some of your cooled clean air. I haven't done anything wrong, I was just trying to help this poor woman. They've come all the way from Eritrea, you're aware of the situation over there, aren't you?

— Yes, yes I know, I know Christian. I'm not talking about the situation in the Horn of Africa. Let us focus on here and now. We've got legislation, you know it. If you aren't able to abide

by the rules, you know the consequences. You'll have to give back and I'm wondering how given the number of children you've welcomed now.

— I can't believe you're lecturing me after all I've done for this community.

— I'm not lecturing you, I'm trying to convince you to stop acting stupid.

— You shouldn't believe everything you read in these newspapers Mrs. Mayor

— I don't. I was born in the '80s. I know what press should be.

— Anyways, you know I appreciate you being generous and trying to understand me. I have been busy growing our garden, the vegetables are really yummy this year.

— I'm glad to hear this, Christian, but you see this is another issue: you can't just use water as you were doing in the old days.

— I hear you Mayor. (Christian is sneezing.) These birds all around they are making me sick. Do you mind if I use your machine?

— Sure, no problem Christian. So are we up for reducing your water consumption? Looks like the storm is coming, I want to make home before it explodes.

— Sure, sure no problem. I'll make sure to check the quotas and teach the newcomers how the system functions. Thanks for taking the time Mrs. Mayor, please come visit the new family when you find a chance.

Feeding people

I needed help about food, so I asked Christian whom I knew from before.

I have met Christian thanks to our daughters who are friends, both ecologist activists. Christian is much richer than I'll ever be. Not only was he very wealthy 30 years ago but he has been clever enough to change his investment priorities after he realized the positive role his money could play in building a positive future reconciled with nature. How did he realize this? His daughter has suffered from ecological anxiety and attempted to commit suicide. This was a shock to him. It started years of blame from her daughter on the responsibility he took in the crisis and his passivity. So he started learning about the scientific facts and understood there were no other options than the transition. Christian has invested his money in the energy transition, moved away from the fossil fuel industry. Some of his investment failed, but some worked very well. Christian is especially the owner of a patent which allows natural food to be grown under water inside air bubbles. As the temperature was getting higher, farming underwater became a mainstream solution.

But Christian was only a part of the financial system. And the transition, although well on its way now in 2053, has not been fast enough to limit global warming and its consequences. Climate migrants are just next door and I know Christian is still feeling frustrated of not having been able to invest with success in the poorest countries. He tried but decided not to, due to the risk perception. He thought that developing innovative ideas in less risky markets would be a better start and that it would still be time to support their development in the developing countries. But there was not enough time and Christian realized it has been another of his mistakes.

Now Europe is dealing with millions of climate migrants from Africa and Central Asia but also from within Europe. So when I ask him to help me to feed these people, he is pleased to support with money and fresh vegetables from his underwater farms. But this time, I am asking him to actually come with me and meet them.

“Christian, it is time you overcame your fears and especially the fear you have of these people. I know the Government is buying peace in the migrant camps by providing food and minimum human sustenance. I know you are supportive of this effort, as it has not been possible to finance this based on public funding only, and the private sector had to do its part. All these communities know your generosity, but this once you can do more. Come and meet them. You will find than most of those migrants are only hoping for one thing which is to go back home and revive their places, grow food again. I recently met a group of people from Essaouira. You used to go there on vacation or for the weekend. That was before your daughter made you calculate you first carbon footprint. These people would like to start back a new settlement in their ancient place. But they need to farm under water. Come and talk to them and see if you may support and invest into their farm… Maybe it is time to rebuild.”

Making Friends

Hello, I know Christian, I mean, Patricia. She asked me how she should choose her new friend. Her anxiety about the future was really important. This is what I said.

Hi Patricia. I appreciate that you came to me to discuss such a private topic. It is true that it is not always easy to find loyal and reliable friends on which you can count in difficult times. Nowadays more than ever, as human relationships and contacts are decreasing due to technological upgrades. First of all, if you came to me today, I suppose that, to some extent, you trust me and that we can consider we have some level of friendship here. In my view, people you should befriend should first have a positive influence on you and help you in anxious times, as you should help them too, when they feel alone and bad. They should accept you as you are and you should do so as well. They can be either human or AI. Different types of AIs are now designed to be friends with humans and to help them go through their loneliness and anxiety. They can evolve and adapt to the personality of their human in order to fulfil their personal needs in various kinds of situations. AIs can either take the form of humans or animals according to your preferences and needs. As you might already know, AIs have a great potential to help decrease depression and loneliness among people suffering from anxiety, depression and burnout.

I don’t think that you should return to your old acquaintances as they were a bad influence for you and don’t reflect the way you feel and think at this point of your life. I think you should try to make some friends, AIs or humans, who match your current mindset. Go do some sport, be part of an association which is dear to your heart, so that you could meet people with the same interests as you and who might share your anxiety about the future!

However, the future is also what you make of it. If you are anxious and want to make it better according to your needs and beliefs, you could also ensure that it goes the way you want by being more involved in initiatives that you think would help you achieve this goal.

Don't hesitate if you need some more advice, I'd be happy to meet and help you.

Reparation

I've met Christian, aka Patrice, after his condemnation by the International Criminal Court (ICC). He asked for advice on how to repair the damages he caused.

I never thought I would be sitting face to face with a member of Interpol's most wanted, but here I was. Patrice Alphonso Cortez, *aka* Christian, was one of the top names on the list after the ruling of the International Criminal Court, which found him and his investment company liable for crimes against the planet (which had been included as a crime against humanity following the bloody climate migrant youth protests of 2051). This ruling, one that shocked the 1% (and frankly the rest of us cynical 99%), had held all oil and gas, industrial farming, steel, cement and other high-GHG polluting industries liable for their impacts on global warming dating back to the early 1900s. When the first evidence of the likely impact of their activities on the planet had come to light, they did nothing. Therefore, the court determined they were guilty of crimes against humanity. The ICC also included international banks, insurers and other finance institutions that had enabled these industries. The assets of these organizations and their lead executives (present and past) were all frozen and arrest warrants issued.

Needless to say, there wasn't very much left to seize after it became clear to this cabal of world-destroying capitalists that they were on the losing end of this battle, and they transferred almost all of their capital to the China-Russian Crypto Vault. The hard infrastructure, however, couldn't be moved, and represented trillions of dollars of value that could be used to pay for climate change mitigation, adaptation and loss and damages.

What was amazing about Patrice was that instead of joining his fellow 1%ers on the ocean liners that had become safe havens for the very rich, he had opted to keep his funds in seizable bank accounts in Europe and had turned himself in the day after the ruling. As we spoke about the options he had going forward, it became clear that Patrice had realized that his actions and those of his fellow investors were indeed enablers of the worst human-caused disasters of all time, and he wanted to do as much as possible to reverse and repair the damage he had caused. While one might assume that the death of his daughter in the 2051 youth protest for the rights of climate justice had been the main driver of this awakening, it became clear in our conversations that Patrice had been aware for a number of years that his worldview as completely wrong and had been trying to figure out the best way of changing the system from within. But now it was too late. The system had been deemed criminally responsible and would no longer be able to self-correct.

We all knew that the fault went well beyond corporations – we as citizens and consumers had also got ourselves into this mess through our choices. And likewise, we knew that we

were all part of the solution. But in the mad scramble to get the court ruling as part of the prosecution team for the ICC, we hadn't got around to the question of what options we might present to our convicted felons. Patrice forced us to think outside of the box when he showed up voluntarily and asked that his sentence include the option to use him and his skills (which were formidable, even if they had been sadly misdirected) to help solve the very problems he had created. I was brought in as an advisor on climate finance to see how we might use Patrice's offer to progress as quickly and effectively as possible.

Patrice was, like many top investors, a master of seeing the opportunities and angles that others in the international finance community had missed or underestimated. We decided to use that mastery – and his willing cooperation – to our advantage in the "climate redress" agenda. We now had access to trillions of dollars of investment capital, but we still needed to make sound investment decisions in its allocation. We made Patrice the Chief Investment Officer of the climate-redress portfolio, with one simple objective: advise us on how to reallocate all of this capital to fix the mess that he and his cronies had helped make in the first place.

We assembled an advisory team of climate scientists, biologists, psychologists, resource economists, health and education experts and inclusion and diversity professionals, to provide Patrice with the technical expertise he needed to understand the investment options before him. We also provided clear guidance on the key objective here – maximize impacts for people and planet, not profits or shareholders. Patrice would guide us in allocating investments and other support for the best solutions for shutting down as many of the world's greenhouse gas emission sources as possible; as well as scaling up the solutions for capturing and storing the excess GHGs that continued to drive global warming; solutions for repairing, restoring and protecting the ecosystems that had been and continued to be damaged; and solutions for ensuring that all people would have what they needed to live, love and thrive.

I'm waiting for some more answers
I still don't know where Christian or Patrice or Patricia is.
If I find them, perhaps will we become friends. Who knows?

Bios of Authors and Facilitators



Tim Reutemann

Dr. Tim Reutemann is a researcher, practitioner and author on the intersection of climate justice and digital governance. He has rotated through various institutional roles in climate finance and carbon markets, leading to his current balancing act between UNDPs Digital Innovation Team and Climate Gains, the fin tech startup he co-founded together with Nadia last year. During a calmer period in his life, Tim published *Liquid Reign*, a speculative fiction novel set in 2051.



Ketty Steward

Born in 1976 in Martinique, Ketty Steward is clinical psychologist and a writer, with more than 40 science-fiction short stories published as well as poetry and stories outside the Sci Fi genre. Ketty Steward also gives conferences and courses, and has coordinated special issues of science-fiction magazines.



Nadia Alter

Swedish-Sudanese-Ethiopian Designer, engineer & entrepreneur. Currently building ClimateGains, a fintech solution for last mile climate climate solutions and their funders. Nadia Co-founded the Science Fiction Economics lab (scifiecon.org) as well as Edgeryders- the collective Intelligence Company (Edgeryders.org). Her work has been featured in Stanford Social Innovation Review, L'echo, La Repubblica, The New Yorker, Wired, Dazed, The Guardian, the Nation…



Chloe Luchs

Chloé Luchs is a creative with a multidisciplinary background in fine arts, digital culture and international organizations. She strategizes, develops new projects and collective methods around themes such as ecological transformation and future literacy. In 2018, she co-founded the Plurality University Network.



Daniel Kaplan

Daniel Kaplan is a futurist and entrepreneur, with one leg in innovation, and another in imagination. In 2000, he created the Next-Generation Internet Foundation (Fing), a think-&-do-tank to “anticipate digital transformations”. In 2018, he co-founded the Plurality University Network.