

2050

# FUTURE SCENARIOS

Exploring implications of climate change on conviviality



Pernod Ricard  
*Créateurs de convivialité*



# INTRO DUCTION

As Creators of Convivialité at Pernod Ricard, we delve beyond the wine and spirits category to distinguish what makes meaningful moments of human togetherness. With the effects of global warming becoming increasingly visible, our Cultural Foresight team aims to decode how climate change will impact the way we live, consume and socialise in the year 2050.

In this report, the team combines quantitative and predictive tools with their sociological, qualitative

approach to champion a spirit of curiosity for a future filled with uncertainty.

Our state-of-the-art methodology blends the IPCC's latest projections with an in-house trend ecosystem that stretches across slow moving mega forces to fast moving micro signals. The study arrives at four major potential scenarios and uncovers the socio-political, economic and ecological conditions as well as the psyche, sentiment, behaviour and belief systems shaping everyday life.

By extending the report's knowledge, tools and learnings publicly for the first time, we aim to collectively construct brighter pathways to better navigate precarious waters. We believe that if we all work together we can evolve from witnessing the world's permacrises to becoming active changemakers influencing the best possible future for both people and the planet.



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- ▶ Eco-Harmony Society
- ▶ Green Totalitarianism
- ▶ Pleasure First Planet Second



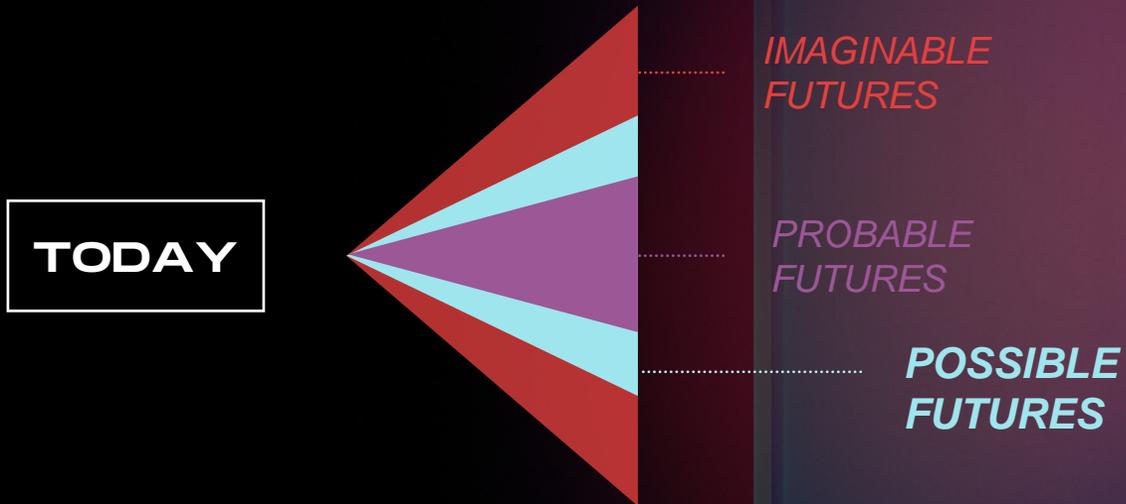
01

# INTRODUCTION & METHODOLOGY



# EXPLORING THE FUTURE

Focusing on possible futures is not psychic work



• **IDENTIFY**  
Driving forces



• **DEFINE**  
Critical uncertainties



• **DEVELOP**  
Future scenarios



• **DISCUSS**  
Implications & paths



## CONTEXTUALISING

Relying on recognised institutions to decipher climate and societal future outcomes

### IPCC 6TH ASSESSEMENT REPORT

The Intergovernmental Panel on Climate Change (IPCC) is a scientific group assembled by the United Nations to monitor and assess all global science related to climate change. Every IPCC report focuses on different aspects of climate change.



### SHARED SOCIOECONOMIC PATHWAYS (SSP) CORPUS

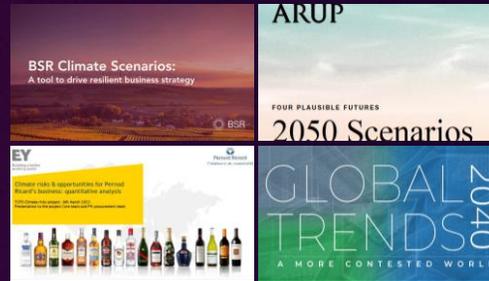
An international team of climate scientists, economists and energy system modelers have built a range of new “pathways” that examine how global society, demographics and economics might change over the next century.



## ENRICHING

Exploring complimentary sources bringing more granular signals for possible futures

### CLIMATE INTELLIGENCE



### CONSUMERS INTELLIGENCE



## ANCHORING

Using our unique insight and foresight ecosystem to anchor our findings in a solid framework

### CONSUMERS TRENDS



## EXPLORING POSSIBLE FUTURES

Investigating and scenarising four possible futures for 2050



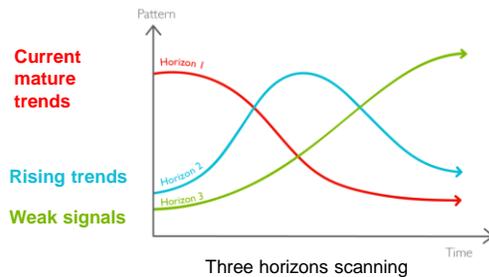
# ENVISIONING POSSIBLE SOCIETAL-CLIMATE SCENARIOS



# ENVISIONING POSSIBLE SOCIETAL-CLIMATE SCENARIOS

## HOW DID WE GET HERE

### PROJECTING TRENDS AND WEAK SIGNALS IN THE FUTURE



The approach known as 'Three Horizons Thinking' serves as a powerful tool to comprehend and chart the evolution of cultural shifts amidst unpredictable circumstances. We have categorized consumer trends based on two defining factors: their stage of development, and their potential to establish a solid foothold in society.

## STATE OF THE PLANET STATE OF SOCIETY

### CONSOLIDATING AND SYNTHETIZING EXPERTS' INTELLIGENCE



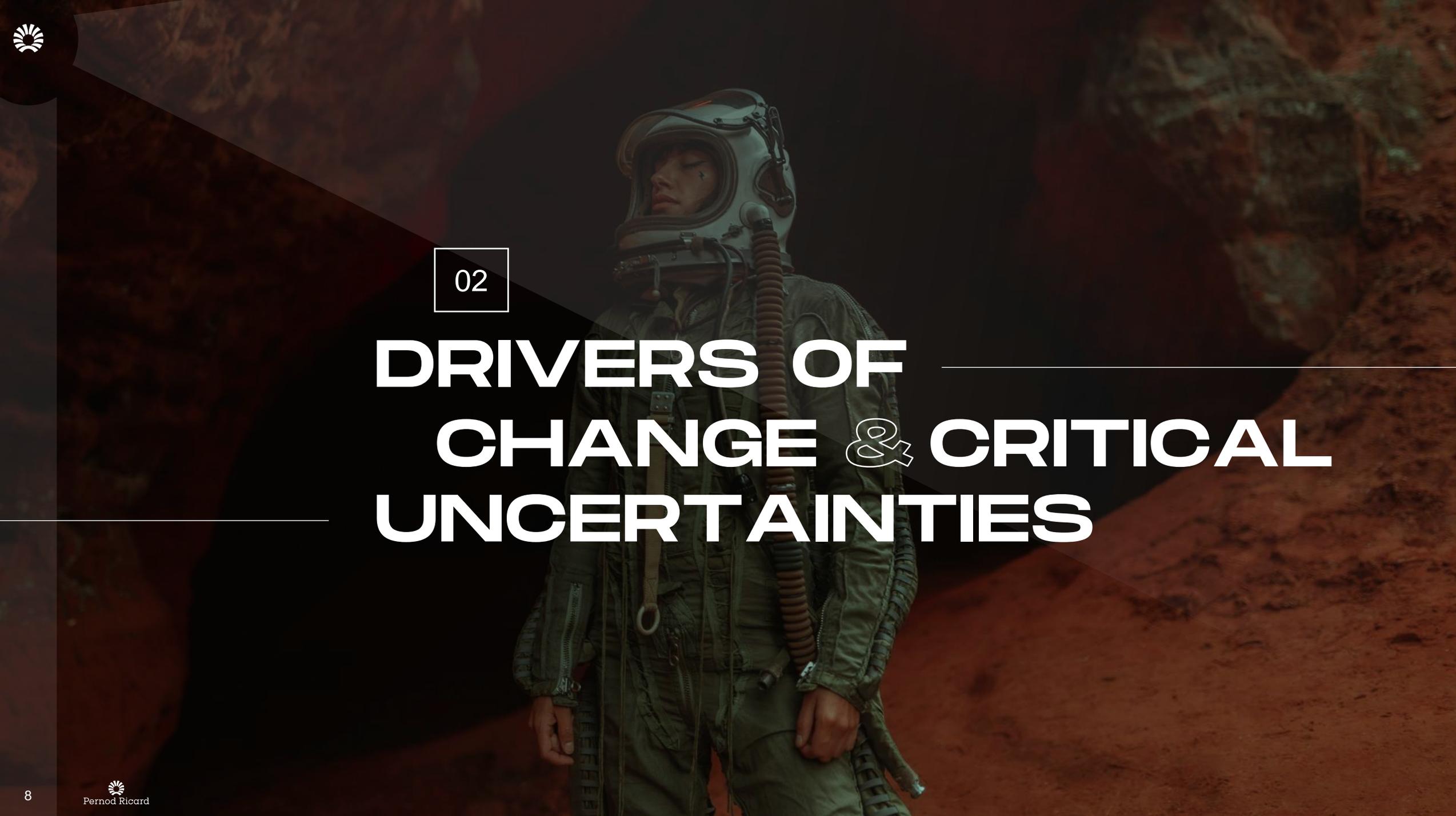
The insights and foresights detailed in these two sections draw primarily from the Intergovernmental Panel on Climate Change (IPCC) and other publicly available related open data tools. However, our concept of 'Green Totalitarianism' deviates marginally from the standard narrative set forth by the IPCC.

## STATE OF CONSUMERISM

### FORECASTING POSSIBLE FUTURES BY IMAGINING FUTURE HUMAN BEHAVIORS



The anticipated consumer trends and future artifacts featured in this section are born out of a convergence between our comprehensive trends ecosystem and the visionary works of climate fiction (cli-fi) authors, students and Pernod Ricard team members. This collaboration aims to vividly imagine and paint a potential portrait of our lifestyles by the year 2050.



02

# DRIVERS OF CHANGE & CRITICAL UNCERTAINTIES



Hyper-connectivity



The sustainability emergency



Reconfiguring urbanisation



The tech revolution



Global power shift



Social polarisation

**NEW MEDIA**

**CHANGES IN DEMOGRAPHICS**



**SHIFTS IN POWER & PRIORITIES**

**NEW BEHAVIOURS**



Female empowerment



Individualisation



An ageing population



The evolving middle class



Health & wellbeing



## PLANET

### The earth in climate carnage

The sense of emergency around the climate crisis has never felt as strong as in 2023, with impacts to the planet becoming increasingly visible.

Global warming presents major physical risks to the Earth, such as extreme weather events whose frequency and intensity are accelerated by climate change.

Measuring the future impact of the planet's exposure and vulnerability to climate hazards exposes radical potential dangers to the Earth's ecosystem, including water shortages, air pollution, heat-waves, fires, land sinks, and bio-diversity loss



## SOCIETY

### People's wellbeing in crises

Entering into the sustainability emergency, society is experiencing a growing understanding of the direct link between social and economic patterns and the affect they have on the climate.

People are seeing how the Earth's deterioration can negatively affect their own lifestyles.

As they reflect on the symbiosis between the planet's health and their personal wellbeing, consumption habits are being put under the microscope for one common destiny.

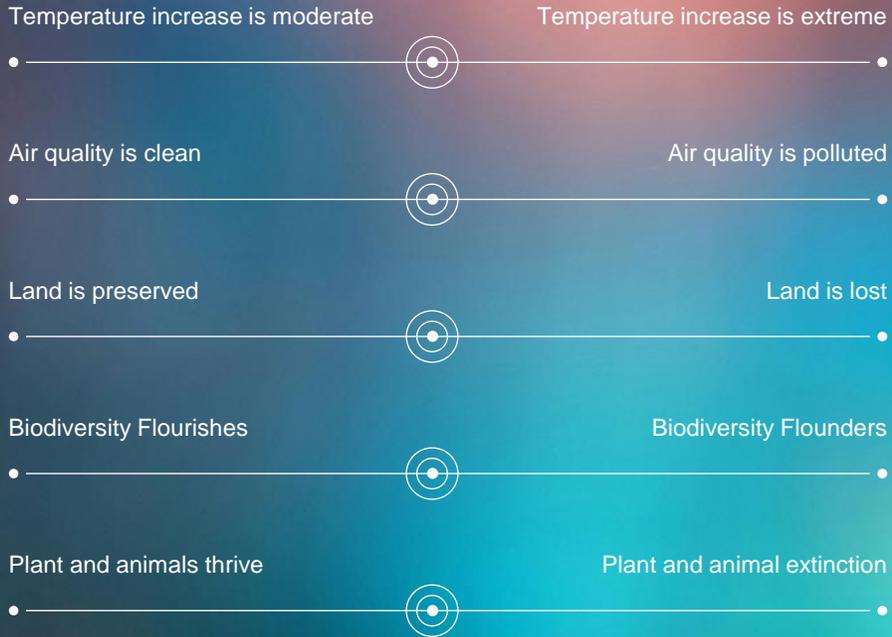


*Meta drivers of change*

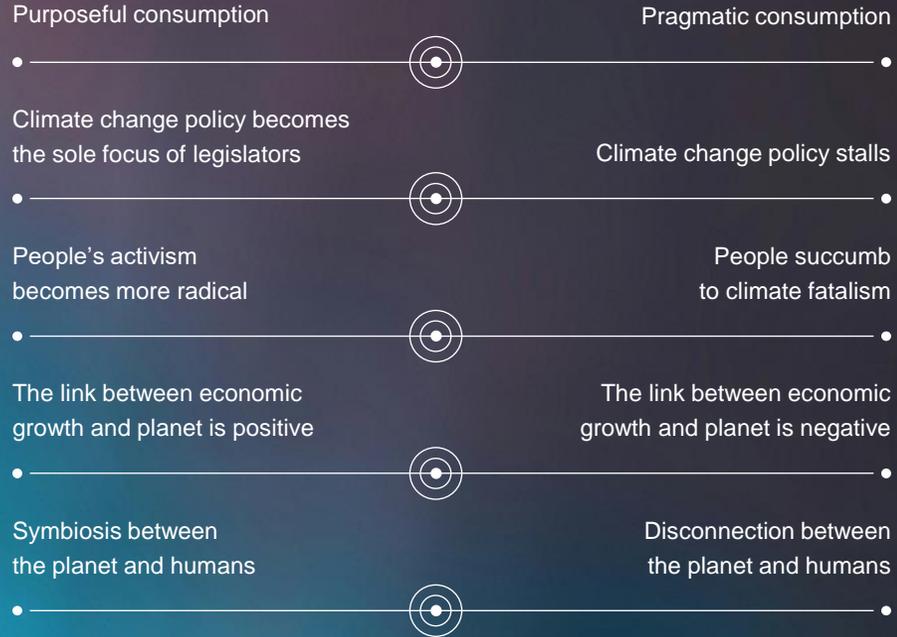
# SUSTAINABILITY EMERGENCY



# PLANET



# SOCIETY



*Critical uncertainties*

# SUSTAINABILITY EMERGENCY



PLANETARY HEALTH IS NURTURED

# FUTURE SCENARIOS 2050

— Prioritised critical uncertainties

SOCIETAL CONDITIONS WORSEN

SOCIETAL CONDITIONS STRENGTHEN

PLANETARY HEALTH DETERIORATES



PLANETARY HEALTH IS NURTURED



## GREEN TOTALITARIANISM

A world where the protection of the environment comes at the price of people's rights

## ECO-HARMONY SOCIETY

A world in which society thrives in symbiosis with nature



SOCIETAL CONDITIONS WORSEN

SOCIETAL CONDITIONS STRENGTHEN



## APOCALYPSE EXPRESS

A world in which people have to survive chaotic conditions.

## PLEASURE FIRST PLANET SECOND

A world where sustainable practices and the health of the planet are disregarded in favor of human comfort



PLANETARY HEALTH DETERIORATES



— **01**  
HOW DID WE  
GET HERE?

01

— **02**  
STATE OF  
THE PLANET

02

— **03**  
STATE OF  
SOCIETY

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— **04**  
STATE OF  
CONSUMERISM

04

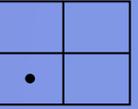
# FUTURE SCENARIOS OUTLINE



03

# EXPLORING 4 POSSIBLE FUTURES





# APOCALYPSE EXPRESS

The fragmented pathway: a world in which people have to survive chaotic conditions.

**+2.2°C**

Highest °C increase due to ineffective action. +4°C in 2100

**9.96Bn**

Uneven population distribution, with highest figures in developing countries. 12,62Bn in 2100

**\$17,440**

Poor economic and technological development, results in the lowest GDP per capita of all our scenarios





— **01**  
**HOW DID WE  
GET HERE?**

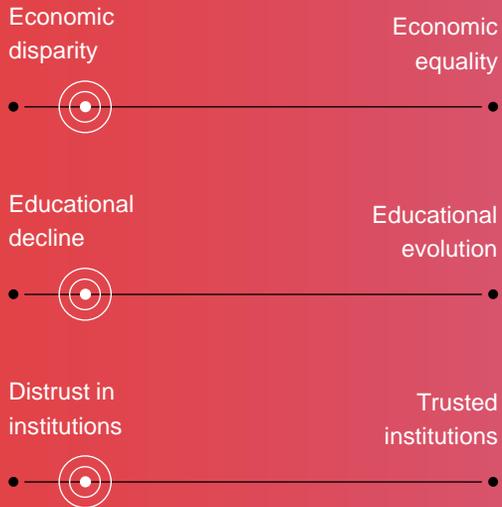




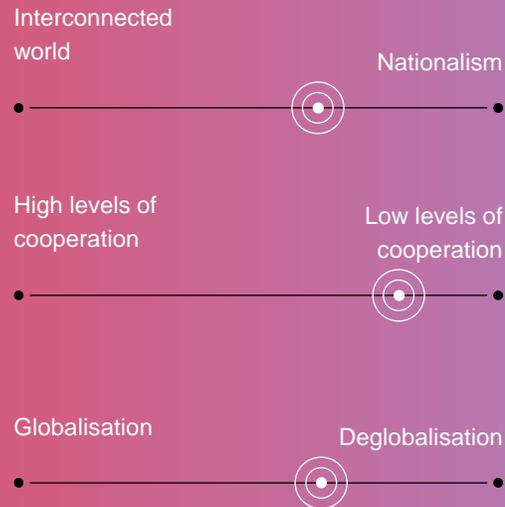
# DRIVERS OF CHANGE

## & CRITICAL UNCERTAINTIES

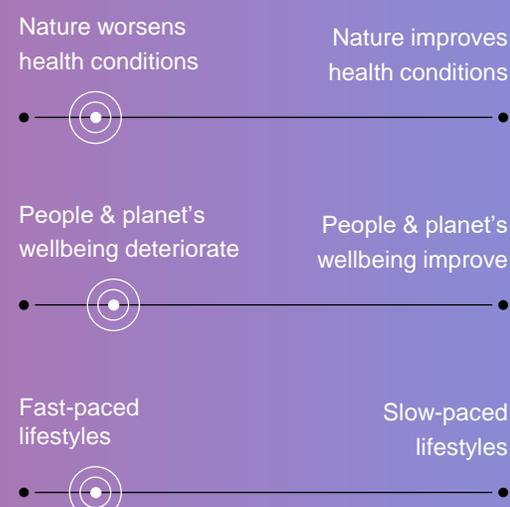
### SOCIAL POLARIZATION



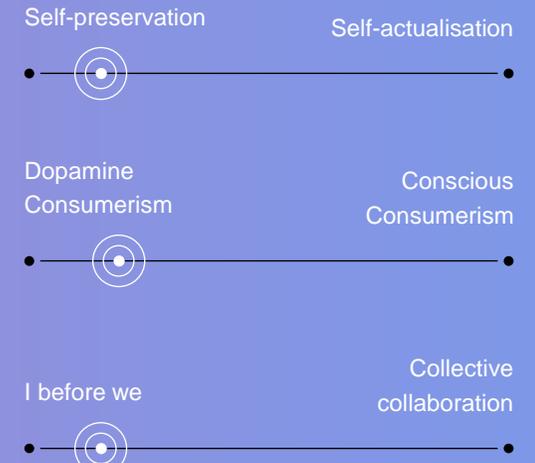
### GLOBAL POWER SHIFTS



### HEALTH & WELLBEING



### INDIVIDUALISATION

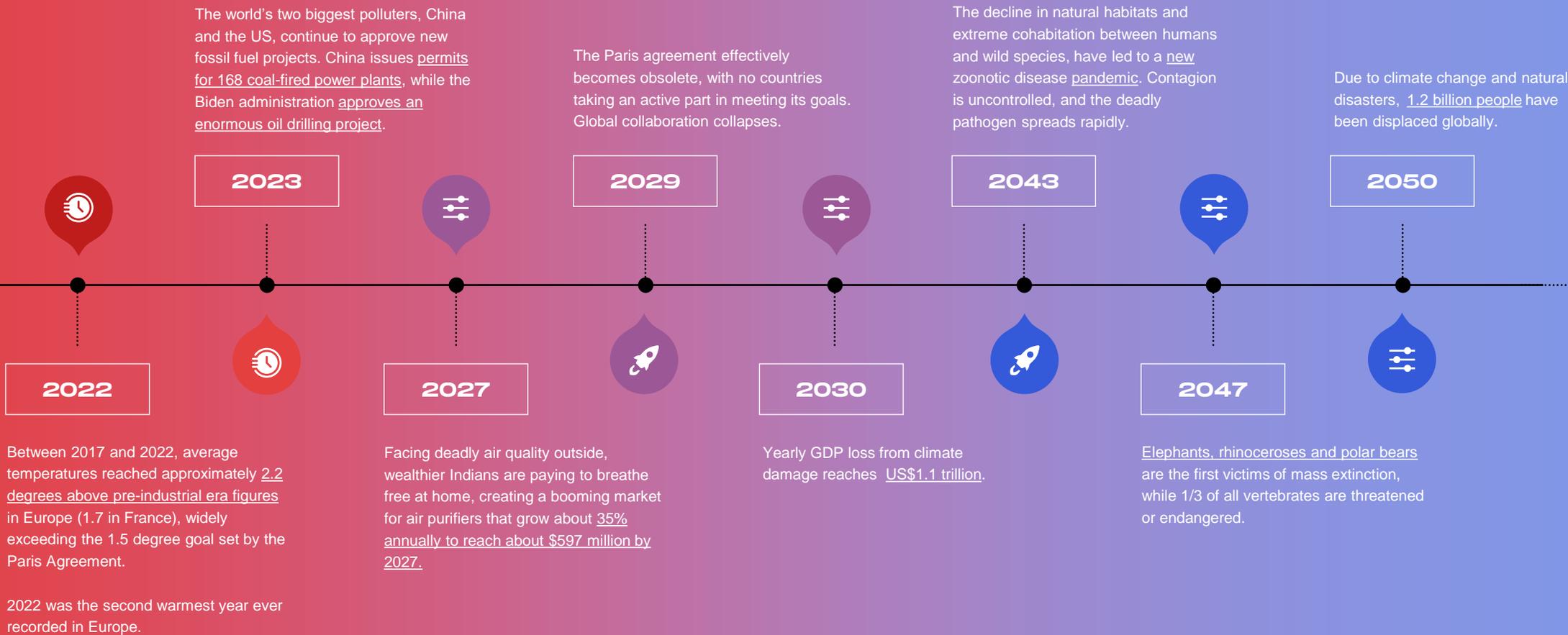




## Future Scenarios

# TIMELINE OF EVENTS

APOCALYPSE EXPRESS



**PASSED, REAL  
EVENTS**



**FICTION BASED ON  
REAL PROJECTIONS**



**PURE DESIGN  
FICTION**

# HOW DID WE GET HERE?

**NOW**  
2023

## Disaster starter

Although people live through the planet's destruction, there is no consensus on the severity of the situation or how to deal with it.

**NEXT**  
2023–2035

## Regional rivalry

International fragmentation characterises an era of regional rivalry and an individualistic mentality of 'I before we'.

**FUTURE**  
2035–2050

## Apocalypse Express

International collaboration is broken, and people survive through circumstances of poor ecological and economic development.



— 02 —  
STATE OF  
THE PLANET





**CLIMATE  
COLLAPSE**



**SLOW  
MODERNISATION**  
*fuels high energy intensity  
and emissions*

**INEFFICIENT  
AGRICULTURE**  
*in the face of global food  
demand*



2050 Snapshot

# CLIMATE COLLAPSE

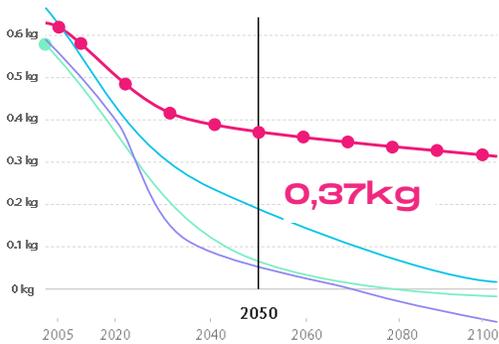


## FOSSIL FUELS DOMINATE

Traditional sources of energy continue to be the most popular and uptake of renewables is negligible.

### CARBON INTENSITY OF THE ECONOMY

Measured as the kilograms of carbon dioxide emitted per dollar of GDP

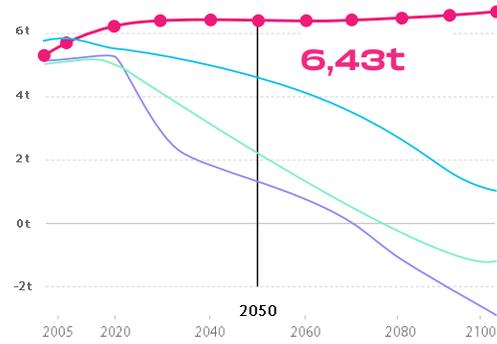


## HARMFUL EMISSIONS UNMANAGED

Society is slow to innovate or develop sustainable alternatives to traditional energy, and emissions are out of control.

### PER CAPITA CARBON DIOXIDE EMISSIONS

Measured as the global average

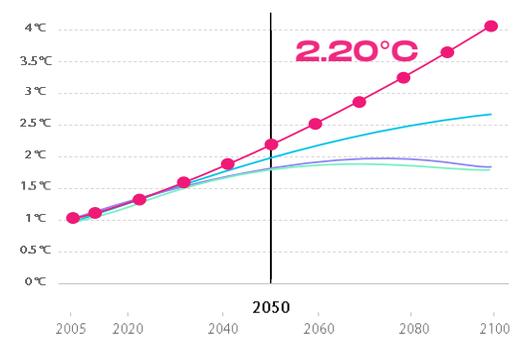


## GLOBAL WARMING UNCONTROLLABLE

Without international consensus and action, temperatures soar to the point of no return.

### GLOBAL AVERAGE TEMPERATURE INCREASE

Relative to the pre-industrial era, which is taken to be the year 1750



Apocalypse Express

Green totalitarianism

Eco-Harmony

Pleasure first, planet second



# FUTURE HOTSPOTS

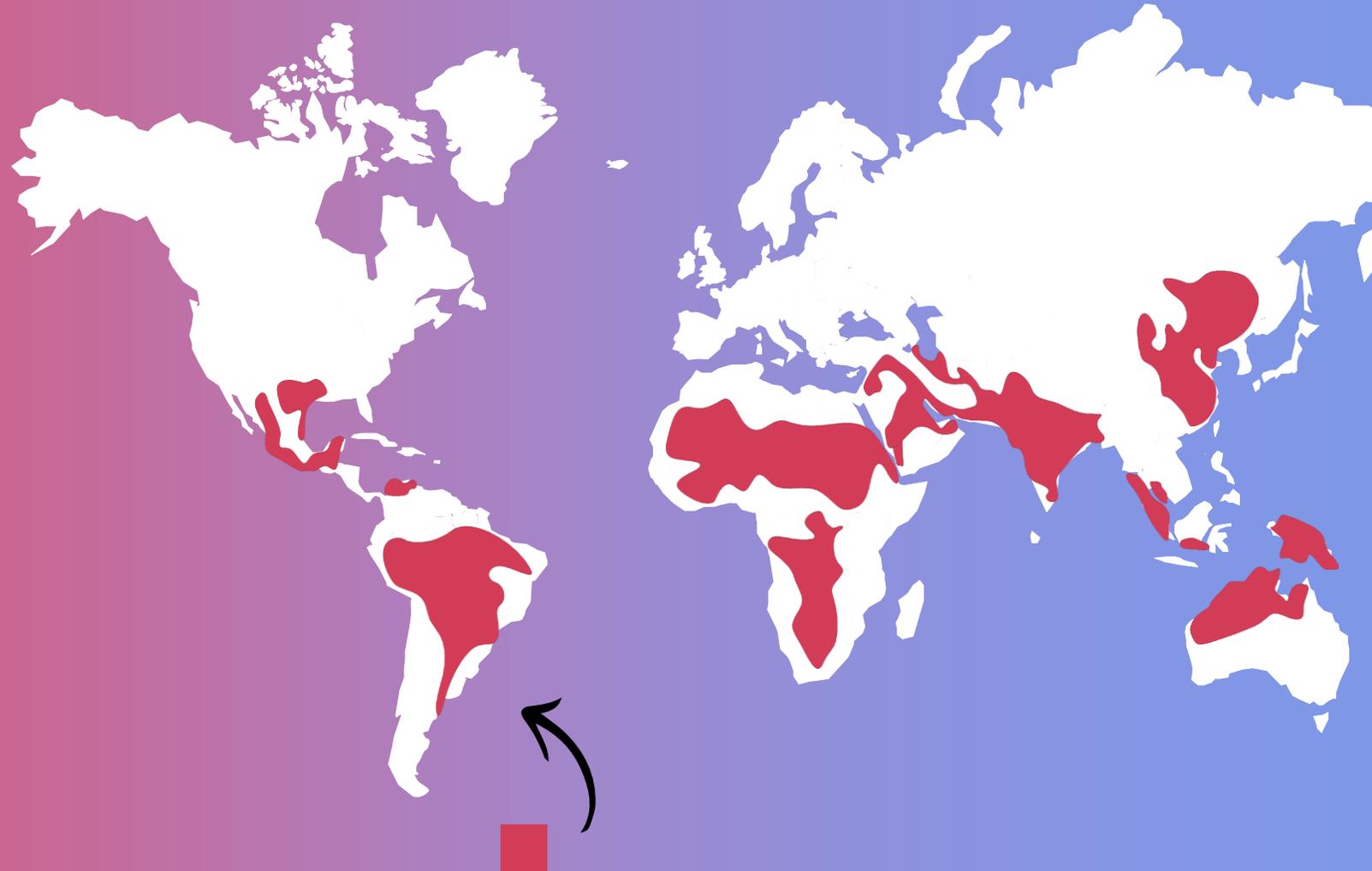
## Climate change will make some places too hot to live

In the future, many regions will see a large increase in WBGT (WetBulb Globe Temperature), referring to heat stress in direct sunlight. Exposure to a wet bulb temperature of 35°C or higher, for a minimum of six hours, becomes life-threatening for human beings.

According to Nasa, in 2050, the most affected regions will be South Asia, the Persian Gulf, and the Red Sea, while In 2070, Eastern China, parts of Southeast Asia, and Brazil will be the most vulnerable.

According to the World Climate Research Programme, in 2100, tropical regions such as Northern India, Southeast Asia, South-Eastern USA, Northern Australia, Central Africa and Central America will be extremely vulnerable to the increase in humidity and near-surface air temperature.

Source: World Climate Research Programme



*In 2100 with 4.0°C global warming areas where a wet bulb globe temperature greater than 32°C occurs for more than 10days per year.*



2050 Snapshot

# INEFFICIENT AGRICULTURE

in the face of global food demand



**LOW AGRICULTURAL PRODUCTIVITY**

Limited agricultural trade, intensification and technological advances restrict productivity.



**UNCONTROLLED AGRICULTURE EXPANSION AT THE EXPENSE OF NATURAL LAND**

Unregulated agricultural expansion intensifies environmental concerns



**FOOD INSECURITY RISES**

High demand, high cost and low income drive food insecurity.



Fiction based on real projections



APOCALYPSE EXPRESS

# PRIORITISING FOOD PRODUCTION IN A RESOURCE-SCARCE WORLD

In 2050, as global demand for agricultural production reaches its peak, the primary focus is placed on prioritising the cultivation of crops for food, while feed crops, fibre crops, oil crops, ornamental crops and industrial crops are deprioritised. In a period marked by widespread resource scarcity, discretionary products are also deprioritised to address the pressing requirements associated with food production.

**90%**  
of the Earth's soil is degraded  
2050, compared to 33% in 2018.

Source: IPBES, 2018



— **03**  
**STATE OF  
SOCIETY**

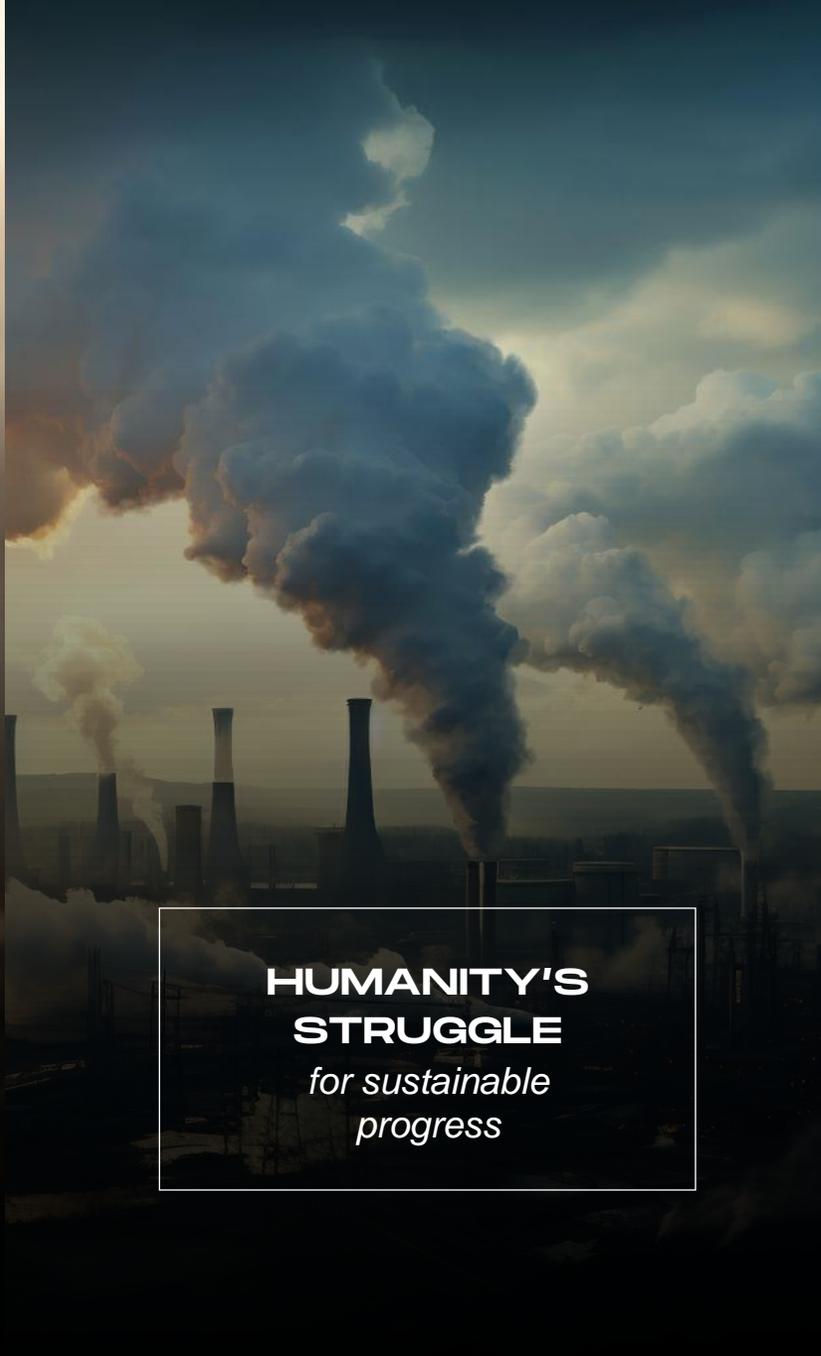




**SOCIETY'S  
ALARMING  
DECLINE**



**GLOBAL  
TENSIONS**  
*& the rise  
of Nationalism*



**HUMANITY'S  
STRUGGLE**  
*for sustainable  
progress*



2050 Snapshot

# SOCIETY'S ALARMING DECLINE

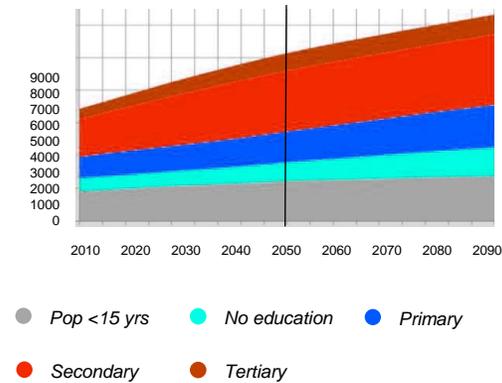


## UNEQUAL SOCIETAL CONDITIONS

Lack of investment in education means inequality persists and birth rates rise consistently

### WORLD POPULATION IN 2010–2100 BY BROAD AGE-GROUP AND EDUCATIONAL ATTAINMENT

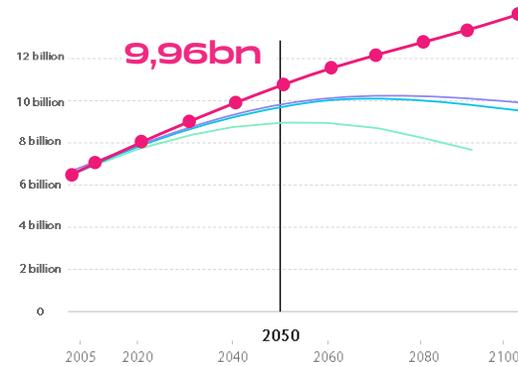
Population in Millions



## POPULATION GROWS CONSISTENTLY

The world enters into a vicious circle of population growth and poverty. Consumption, production and demand on resources increase.

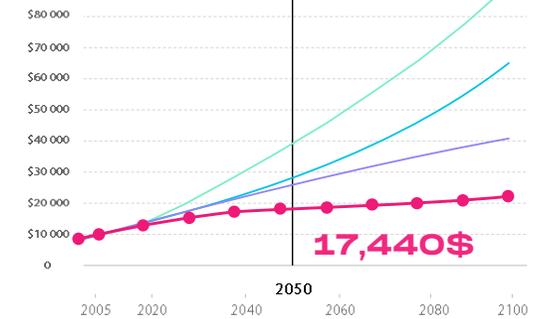
### WORLD POPULATION EVOLUTION, 2005-2100, GLOBALLY



## ECONOMIC DEVELOPMENT STAGNATES

World market prices are highest in history, but people's inability to afford goods means GDP is almost stagnant.

### GLOBAL GDP PER CAPITA, 2005-2100, IN US DOLLARS





2050 Snapshot

# GLOBAL TENSIONS

& the rise of nationalism



### RESURGENT NATIONALISM & CONSTRAINED TRADE

A shift towards regional security and limited international trade.



### REGIONAL RIVALRY

Weak global cooperation intensifies regional rivalries and conflicts



### INCREASED SOCIAL INEQUALITY

Equality ambitions are unachieved, as poverty and gender disparity persist.



### NEGLECTED ENVIRONMENTAL CONCERNS

Lack of global cooperation threatens sustainability goals





2050 Snapshot

# HUMANITY'S STRUGGLE

for sustainable progress



Fiction based on real projections



# WATER SCARCITY & GLOBAL WATER CONFLICTS

Water shortages emerge as a critical issue in 2050. Population growth has escalated the global demand for water, placing unprecedented stress on resources.

The adverse effects of climate change, which not only **reduce water supply** but also disrupt rainfall patterns, make water resources more erratic and unpredictable in many regions.

**Worldwide cloud and water wars are waged**, with countries **draining rain-producing cumulus clouds** in wet countries through cloud seed technology, dispersing rain across arid regions.

**5 billion**  
*people face water shortages in 2050.*

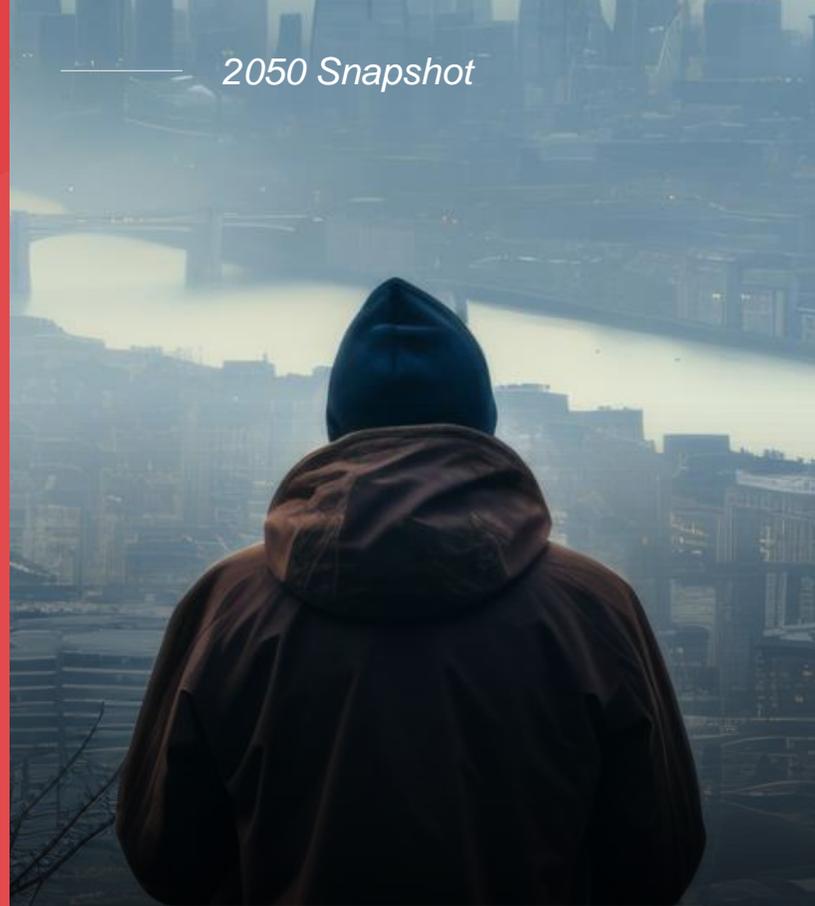
*Source: United Nations, 2022*



— **04**

**STATE OF  
CONSUMERISM**





**APOCALYPSE  
FATALISM**



**GATED  
CONVIVALITY**



**INSPERIENCE  
TAKEOVER**



# APOCALYPSE FATALISM

## Global hopelessness fuels selfish behaviours.

As the permacrisis accelerates and social inequalities and environmental instability continue to worsen, many individuals struggle to fulfill basic needs. Water stress, food insecurity, health deterioration, and housing crises have contributed to the development of a “me-first” mentality, where individuals prioritise their own interests above others.

Feeling abandoned and disempowered, people adopt self-reliant and self-interested consumerism, prioritising value for money. Businesses engage in the war on prices with short-term vision. Mistrust in institutions, corporations, and others is exacerbated by media manipulation and deepfakes.

To cope with hopelessness and loneliness, people embrace chaotic lifestyles, nihilistic indulgence, dystopian narratives and aesthetics, and a “fuck it” attitude which absolves them of purpose. In doing, they acknowledge the darkness of both present and future times.

### RELATED TRENDS

- *Permacrisis*
- *Individualism*
- *Dopamine Consumerism*

“*We will be  
doomed*”

*United Nations Chief Antonio  
Guterres warns*



# GATED CONVIVIALITY

**Elitist socialites indulge in exclusive circles and behind closed doors.**

Increasing inequality widens the gap between the ultra-rich 1% and the struggling 99%. Fearing social uprisings in public places, high-net-worth individuals (HNWIs) adopt discrete behaviours and prioritise subtle distinction over ostentation. Quiet luxury reigns.

The fragmentation of societies also leads to social segregation, polarised communities and, consequently, gated conviviality. People choose to socialise within their filter bubbles, in their safe circles, and in silo.

The gatekeeping on-trade model booms, with private members clubs and invite-only parties becoming even more exclusionary and impenetrable. The cost and level of secrecy associated with entry are higher than ever. This model offers people with shared financial circumstances a safe space within which to show-off and indulge lavish lifestyles.

## RELATED TRENDS

- *Increasing inequalities*
- *Offline filter bubbles*
- *Exclusive conviviality*



# INSPIERIENCE TAKEOVER

As going out becomes increasingly unsafe, home becomes the primary stage for conviviality.

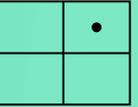
Home is the ultimate safe space and the central stage on which to socialise, entertain and consume, whether by necessity (cost, health, safety) or by choice (privacy, freedom, control).

For many, hosting at home is the most accessible and appealing way to socialize, with trusted and chosen circles amongst whom they can truly let go. In response, brands continue to provide for the home space, with engaging innovations that seamlessly encourage discovery, creativity and interactivity - taking home entertainment to the next level.

While home trade dominates, the on-trade sector loses market shares. However, these two sectors eventually converge, as the ultimate home entertainment experience recreates the on-trade experience in the comfort of one's home.

## RELATED TRENDS

- *Inspierience economy*
- *Offline filter bubbles*
- *Ultra-convenience*



# ECO-HARMONY SOCIETY

The green growth pathway: a world in which society thrives in symbiosis with nature

**+1.76°C**

Lowest °C increase due to mitigation policy. +1,76°C in 2100

**8.53Bn**

Lowest population due to good societal conditions. 6,96Bn in 2100

**\$34,148**

Highest GDP per capita, as planet prosperity = economic prosperity





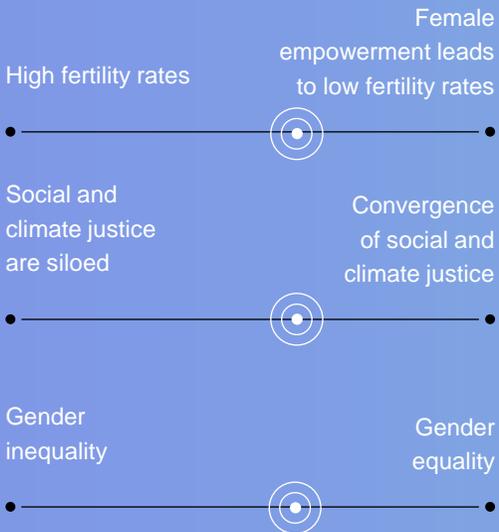
— **01**  
**HOW DID WE  
GET HERE?**



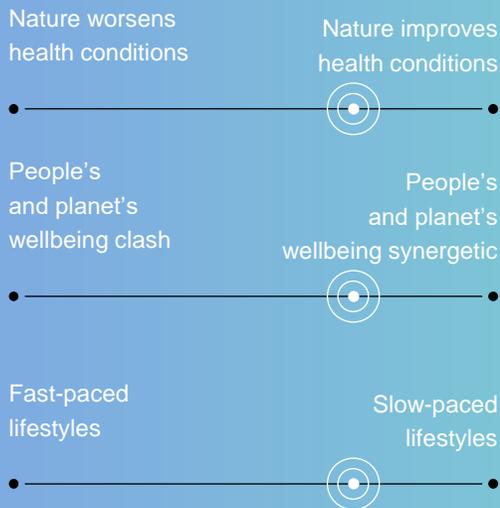


# DRIVERS OF CHANGE & CRITICAL UNCERTAINTIES

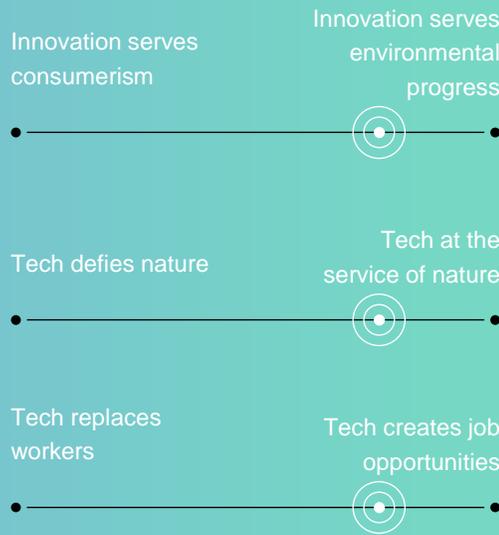
## FEMALE EMPOWERMENT



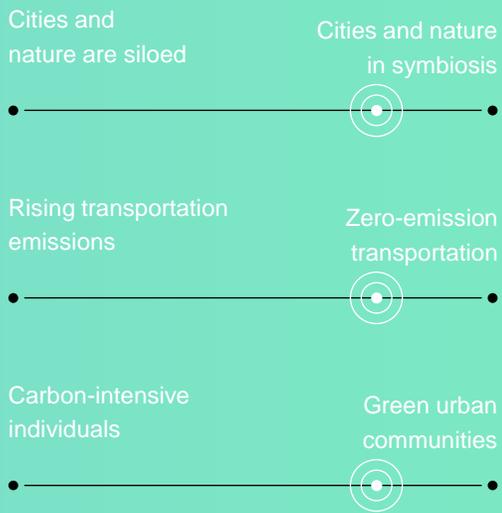
## HEALTH & WELLBEING



## TECH REVOLUTION



## RECONFIGURING URBANISATION





## Future Scenarios

# TIMELINE OF EVENTS

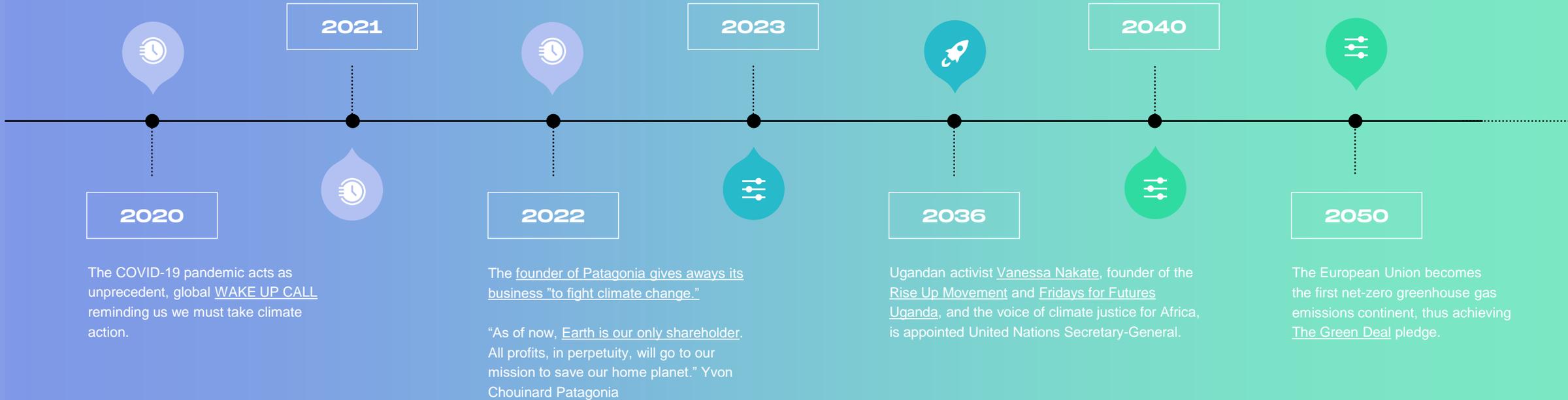
G7 leaders announce,

**“Our world must not only become net zero, but also nature positive”**

In doing so they shift global objectives from reducing humanity’s negative impact on nature, to proactively adopting nature-positive practices.

First net zero transatlantic flight from Virgin Atlantic is scheduled for late 2023.

Nature’s rights are now enshrined in most constitutions, granting all nature the same rights as humans and fighting ecocide. Back in 2017, the River Ganges in India and Whanganui in NZ became the first non-human entities to be granted the same legal rights as people.



**PASSED, REAL EVENTS**



**FICTION BASED ON REAL PROJECTIONS**



**PURE DESIGN FICTION**

# HOW DID WE GET HERE?

**NOW**  
2024

## **The great awakening**

People, businesses and institutions experience a collective moment of realisation, finally prioritising climate change like to crisis level, and reacting with urgency to tackle it.

**NEXT**  
2024–2035

## **The green rush**

International mobilisation and collaborative action paves the way towards a regenerated and prosperous world, where the green economy thrives.

**FUTURE**  
2035–2050

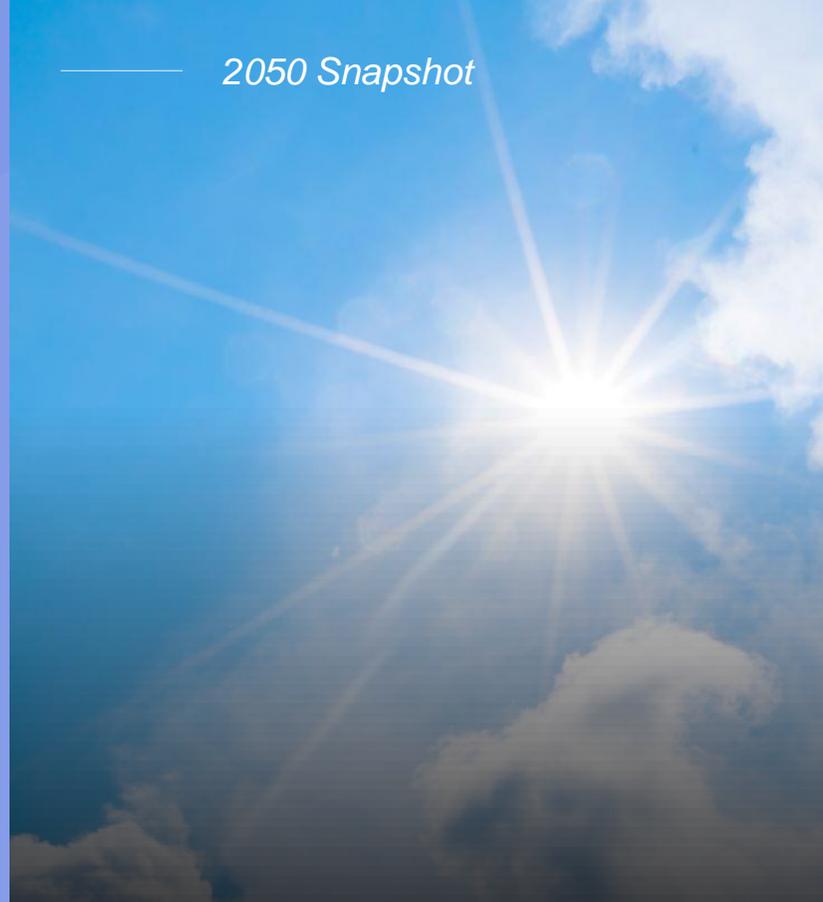
## **The Eco- harmony society**

Globally, society thrives in symbiosis with nature.



— 02  
STATE OF  
THE PLANET





**CONTROLLING TEMPERATURES**  
*through fossil fuel reduction*

**EXTREME WEATHER EVENTS**  
*still surge*

**ENERGY POLICIES**  
*enable fast transition*

**FOOD PRODUCTION**  
*management is improved*



— 2050 Snapshot

# CONTROLLING TEMPERATURES

through fossil fuel reduction

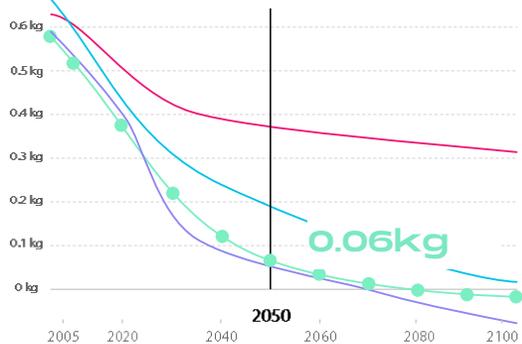


## FOSSIL FUELS FADE-OUT

The amount of carbon used significantly drops, as the world aims to free itself from fossil fuels.

### CARBON INTENSITY OF THE ECONOMY

Measured as the kilograms of carbon dioxide emitted per dollar of GDP

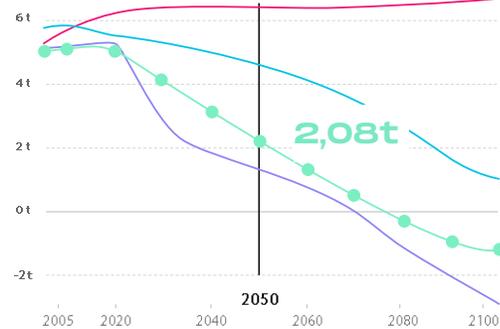


## HARMFUL EMISSIONS DECREASE

Global efforts lead to significant reductions in the amount of greenhouse gasses released into the atmosphere.

### PER CAPITA CARBON DIOXIDE EMISSIONS

Measured as the global average

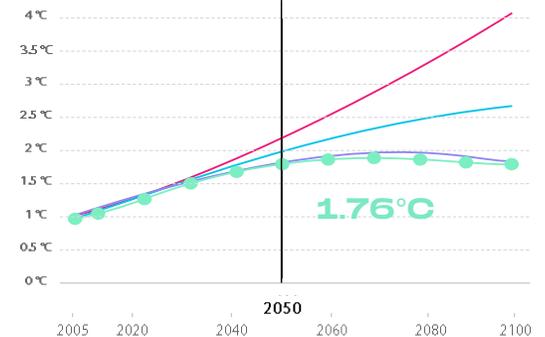


## TEMPERATURE INCREASE CURTAILED

The world comes together to successfully keep temperatures under control.

### GLOBAL AVERAGE TEMPERATURE INCREASE

Relative to the pre-industrial era, which is taken to be the year 1750



Apocalypse Express

Green totalitarianism

Eco-Harmony

Pleasure first, planet second



2050 Snapshot

# EXTREME WEATHER EVENTS

still surge



### EXTREME ONE-DAY PRECIPITATION EVENTS

Frequency pre-industrialisation  
**Once every 10 years**

Frequency at 1.76°C temperature rise  
**Once every 6 years**

At 1.76°C, an extreme one-day precipitation event that would have occurred once a decade in a climate without human influence will likely occur every 6 years instead. The events' intensity will increase to be between 10.5% and 14% wetter.

**x1.5 to x1.7 more often**

**+10.5 to +14% more intense**



### EXTREME HOT TEMPERATURE EVENTS

Frequency pre-industrialisation  
**Once every 10 years**

Frequency at 1.76°C temperature rise  
**Once every 1 to 2 years**

At 1.76°C, an extreme temperature event that would have occurred once a decade in a climate without human influence will likely occur every 1 to 2 years instead. The events' intensity will increase to be between 1.9°C and 2.6°C hotter.

**x4.1 to x5.6 more often**

**+1.9°C to +2.6°C more intense**



### EXTREME AGRICULTURAL AND ECOLOGICAL DROUGHT EVENTS

Frequency pre-industrialisation  
**Once every 10 years**

Frequency at 1.76°C temperature rise  
**Once every 5 years**

At 1.76°C, extreme agricultural and ecological drought events that would have occurred once a decade in a climate without human influence will likely occur every 5 years instead. The events' intensity will increase to be between 0.5 and +0.6 sd drier.

**x2 to x2.4 more often**

**+0.5 to +0.6sd more intense**



2050 Snapshot

# FOOD PRODUCTION

management is improved



### ARABLE LAND REDUCTION FOR ECOSYSTEM RESTORATION

The protection of natural lands is expanded at the expense of agricultural lands.

### FOOD SECURITY ENSURED

Reduced meat consumption and less waste mean per-capita food demand lowers, ensuring food security.

### IMPROVEMENT OF AGRICULTURE PRODUCTIVITY

Good governance and tech advancement increase crop yields.



Focus on existing system

Rather than bending nature to produce food, food is designed for nature to thrive. Ingredients are **\*NATURE-POSITIVE.**



**\*LOWER-IMPACT INGREDIENTS**

Using peas instead of wheat reduces GHG emissions by 40%



**\*DIVERSE INGREDIENTS**

Increasing crops diversity dampen pests and diseases and preserve genetic resources, thus ensuring resilience



**\*UPCYCLED INGREDIENTS**

Cacao farmers increase their income by 30% by selling the whole fruit, turning by-product into high-value sweeteners



**\*REGENERATIVELY-PRODUCED INGREDIENTS**

Regenerative agriculture - that aims to restore and enhance ecosystems – reduces GHG emissions by 50%, biodiversity loss by 20%



— **03**  
**STATE OF  
SOCIETY**





2050 Snapshot



**SOCIETAL  
AND ECONOMIC  
PROSPERITY**



**SHAPING  
A SUSTAINABLE  
GLOBALISATION  
MODEL**



**WELFARE  
PRIORITISED**

**ENVIRONMENTALLY  
-FRIENDLY  
HUMAN PROGRESS**



2050 Snapshot

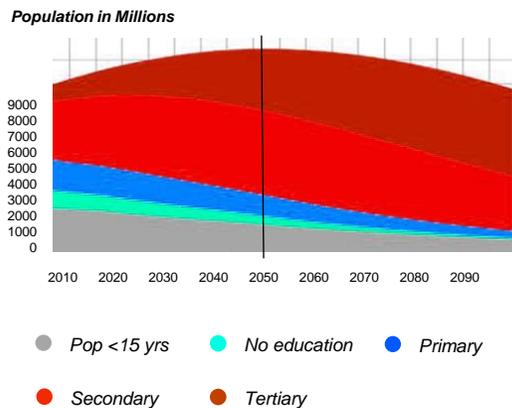
# SOCIETAL & ECONOMIC PROSPERITY



## BETTER SOCIETAL CONDITIONS

Investment in education leads to notable declines in the amount of children born each year.

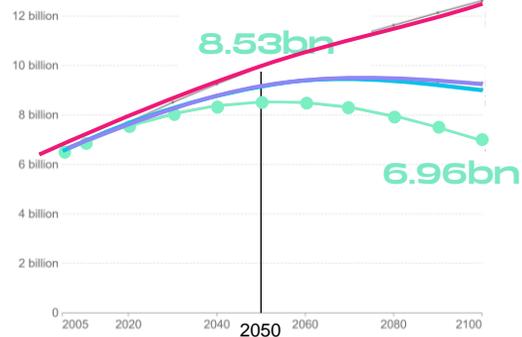
### WORLD POPULATION IN 2010–2100 BY BROAD AGE-GROUP AND EDUCATIONAL ATTAINMENT



## POPULATION GROWTH DECELERATES

A low world population naturally reduces consumption, production and demand on resources.

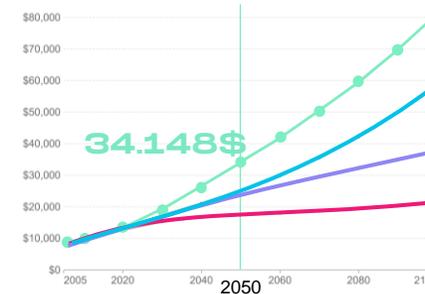
### WORLD POPULATION EVOLUTION, 2005-2100, GLOBALLY



## ECONOMY THRIVES

The virtuous circle linking the wellbeing of humans and nature also positively impacts global GDP.

### GLOBAL GDP PER CAPITA, 2005-2100, IN US DOLLARS



Apocalypse Express

Green totalitarianism

Eco-Harmony

Pleasure first, planet second



2050 Snapshot

# SHAPING A SUSTAINABLE GLOBALISATION MODEL



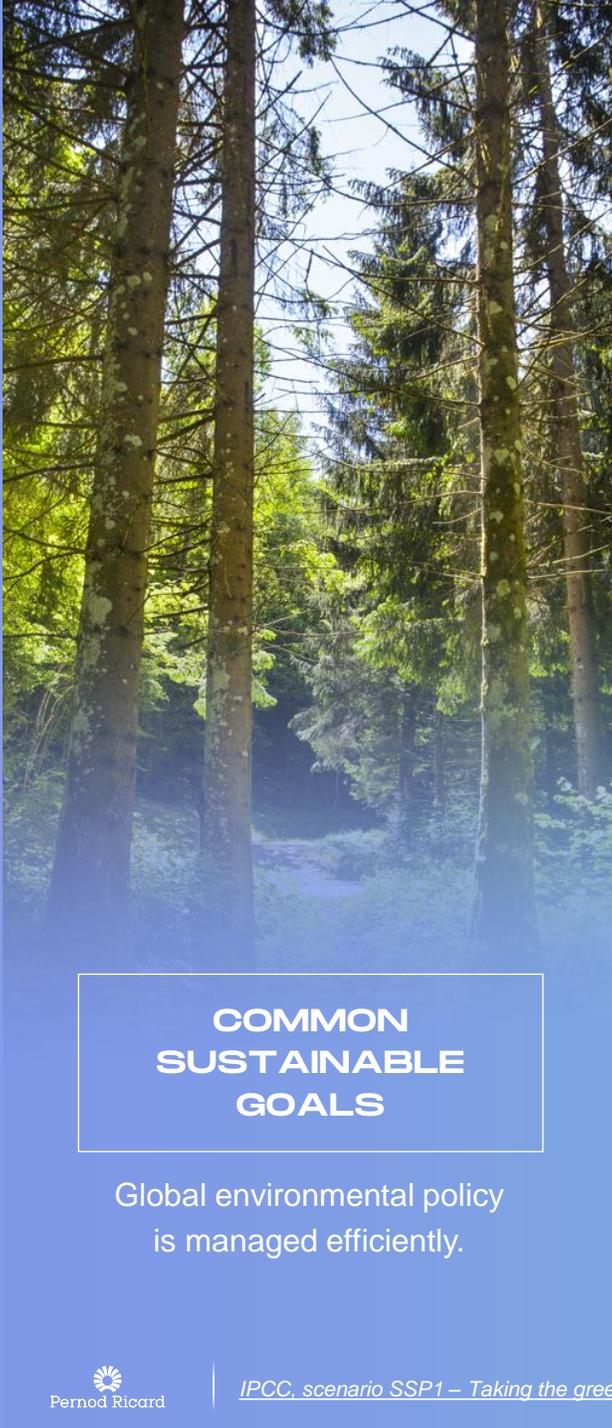
**STRONG  
GLOBAL  
COOPERATION**

Collaborations increase as equity and support are prioritised.



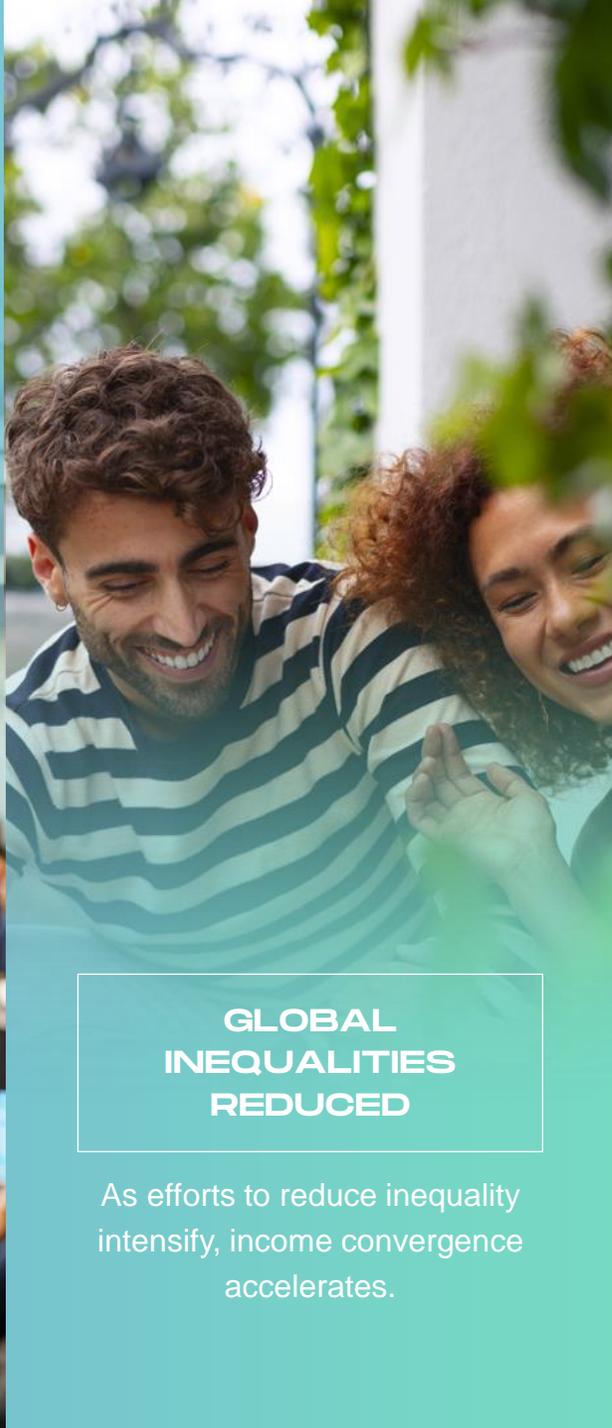
**COMMON  
SUSTAINABLE  
GOALS**

Global environmental policy is managed efficiently.



**MODERATE  
TRADE  
TRANSFORMATION**

Global markets are highly connected, but there is a preference for regional trade



**GLOBAL  
INEQUALITIES  
REDUCED**

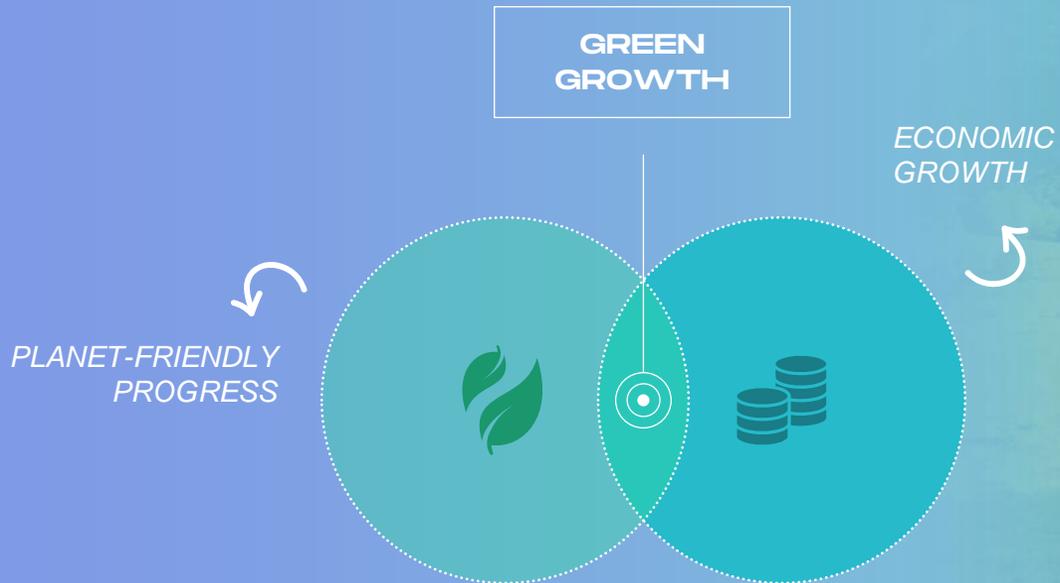
As efforts to reduce inequality intensify, income convergence accelerates.





# GREEN GROWTH IS THE NEW PARADIGM FOR ECONOMIC DEVELOPMENT

Green growth ensures that natural assets can deliver their full economic potential on a sustainable basis.



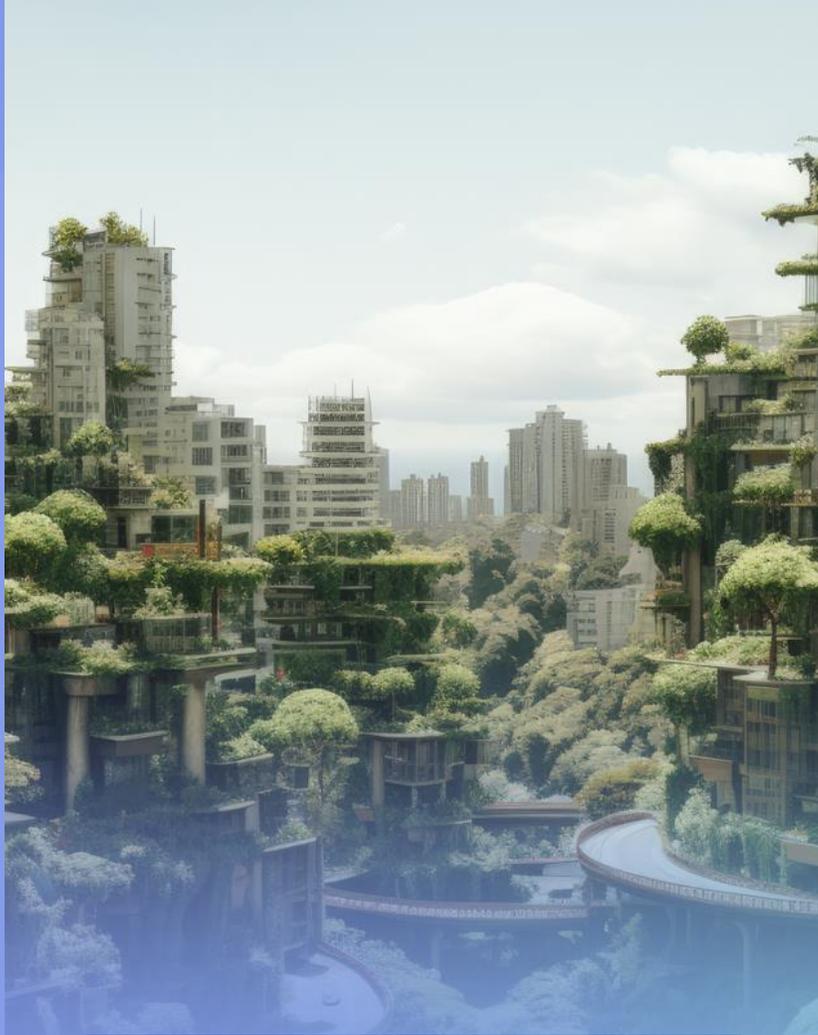
Fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our wellbeing relies.



2050 Snapshot

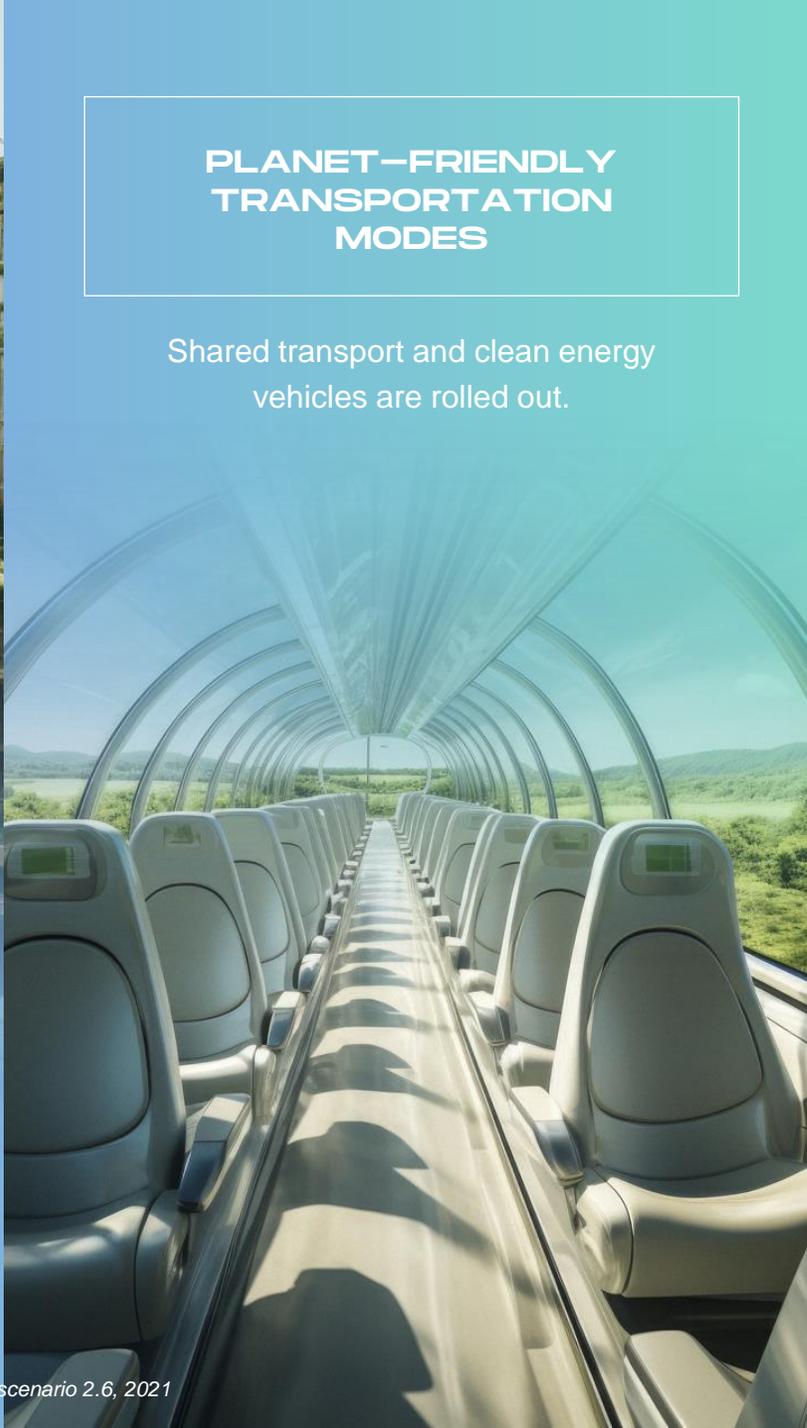
# ENVIRONMENTALLY-FRIENDLY HUMAN PROGRESS





## CITIES IN SYMBIOSIS WITH NATURE

Urbanisation expands with eco-friendly living principles in mind.



## PLANET-FRIENDLY TRANSPORTATION MODES

Shared transport and clean energy vehicles are rolled out.



## TECH AT THE SERVICE OF NATURE

Rapid tech development prioritises environmental sustainability.



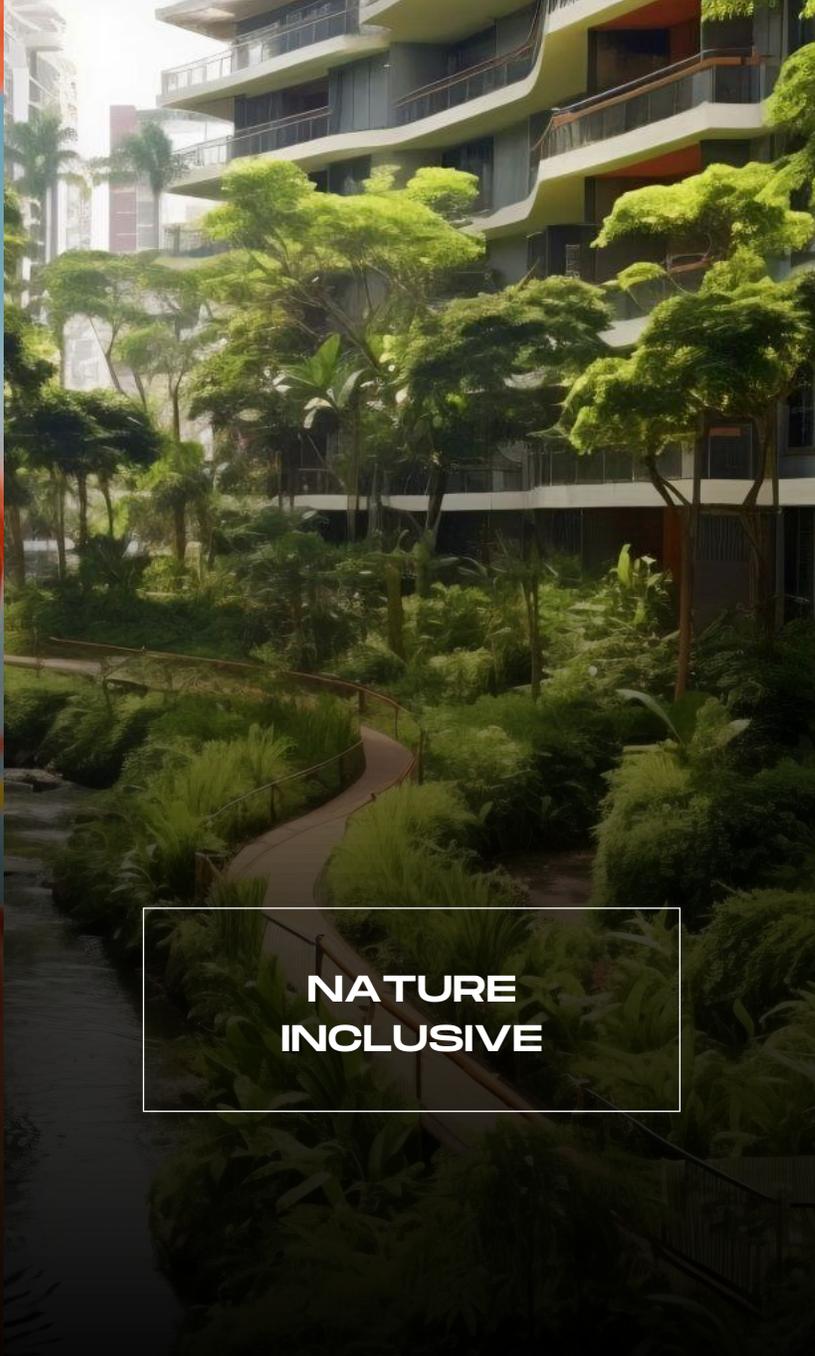
— 04

# STATE OF CONSUMERISM





**SOUTH  
POWER**



**NATURE  
INCLUSIVE**



**CHERISHED  
WASTE**



# SOUTH POWER

Global soft power shifts from North to South, following the trajectory of youth culture

As demographic weight influences cultural dynamics, the dominant influence of Western culture, along with its population size, gives way to the rise of the Global South.

Its multicultural lifestyles (Latino, pan-African and pan-Asian) become the new aspiration, embracing reinvented craftsmanship, revived culinary traditions, vibrant celebration rituals, different definitions of hospitality and hedonistic ways of life.

Mexico City, Lagos, Sao Paulo, and Bangkok emerge as the new capitals of cool and buzzing hotspots, radiating energy and excitement.

As cultural values diversify, Western brands become cross-culturally fluent, collaborating and innovating to de-Westernise their narratives and resonate with this new global audience.

## RELATED TRENDS

- *Emerging Soft Powers*
- *Multicultural Lives*
- *De-Westernising Narratives*

# 1/4

*of the global population lives in Africa*

# 1/2

*of the African population is less than 25 years-old – making Africa, the global hub of youth culture*

“*The older mindset was that brands wanted to sell their products to Africa – now they need to buy products from Africa*”

Yannick Do, Co-founder of African lifestyle platform Dola

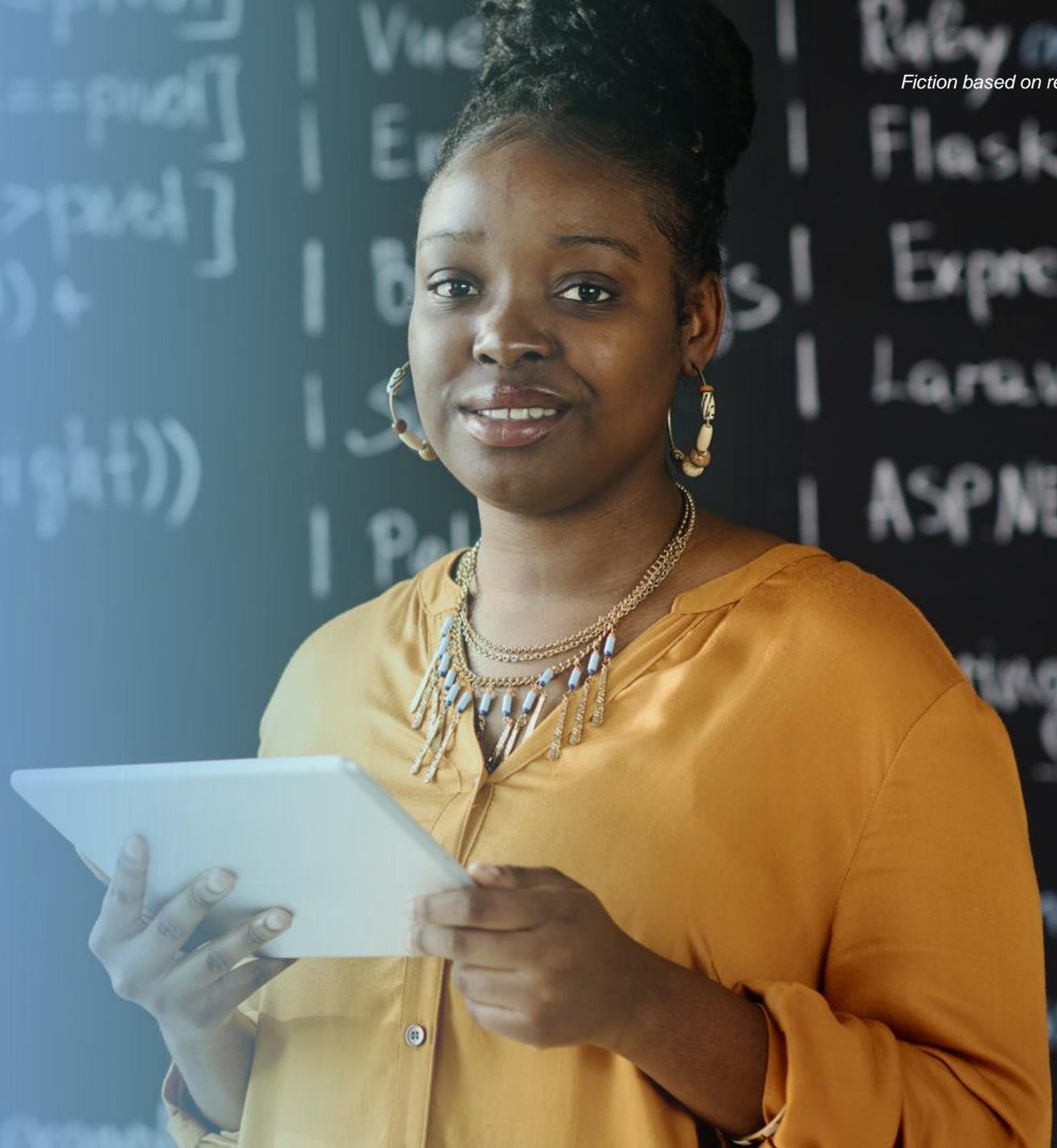


Fiction based on real projections



# IN 2050

Kenya's education system (of the younger adult population) is similar to that of Europe in 2020s.





# NATURE INCLUSIVE

A shift takes place from an human-centric vision of the planet, towards one that acknowledges the world's interconnected ecosystem

As the world shifts into a nature-inclusive era, societies strive for domination-free systems and embrace principles of diversity and inclusion for all living beings. Constitutions guarantee equal rights for humans and the natural world.

Education prioritises the understanding of and empathy for nature through outdoor learning, wildlife observation, plant identification, and hands-on cultivation classes, fostering interspecies togetherness from an early age.

People actively engage in regenerative pursuits, dedicating their leisure time to contributing to the restoration and healing of the planet.

While nature-positive volunteer work is highly esteemed, green skills become valued in recruitment processes.

## RELATED TRENDS

- *Diversity and Inclusion Revolution*
- *A New Understanding of the Natural World*
- *Interspecies Togetherness*

🗨️ *As the 20th century had been called 'the century of human rights' this new era (the 21st century) would be known as the 'century of the rights of Mother Earth' 🗨️*

*Bolivian President Evo Morales*



# CHERISHED WASTE

## Turning trash into treasure

Challenging planned obsolescence in product design and shifting from an expiration mindset to a regeneration mindset sparks a new paradigm where everything is valued - every individual, all living beings, and even waste, which is perpetually repurposed. This marks the demise of disposability.

Consciousness and collaborative efforts from both businesses and consumers expedite solutions for reduction, recycling and upcycling, prolonging the lifespan of materials, and creating a truly circular journey of products.

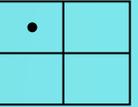
Businesses break through boundaries, forging cross-industry partnerships to mutually share and repurpose waste. From disposing to harnessing it, various innovations emerge. Decomposition generates renewable energy, fruit and vegetable scraps introduce new taste pallets, fermentation of food by-products yields neutral spirits, and discarded elements contribute to the development of sustainable materials and pioneering packaging.

### RELATED TRENDS

- *Circular Economy*
- *Zero Waste*
- *Waste to Taste*

## -50%

*The UN target to reduce 50% of food wastage by 2030 has been successfully achieved.*



# GREEN TOTALITARIANISM

**The forced moderation pathway:** a world where the protection of the environment comes at the expense of people's rights.

**1.79°C**

°C increase is contained thanks to strict mitigation policy. +1,8°C in 2100

**9.15Bn**

Average population growth is inconsistent across regions

**\$23,945**

Global GDP per capita is relatively low, due to moderation policies and social inequalities





— **01**  
**HOW DID WE  
GET HERE?**





# DRIVERS OF CHANGE & CRITICAL UNCERTAINTIES

## HYPERCONNECTIVITY



People empowered

People alienated



Data privacy respected

Data privacy denied



Decentralisation of information

Centralisation of information



## GLOBAL POWER SHIFT



Strengthened democracies

Eroding democracies



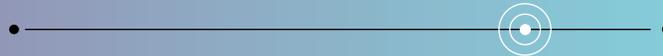
Agreed global collaboration

Forced global Collaboration



Reduced inequalities across countries

Increasing inequalities across countries



## SOCIAL POLARISATION



Wealth disparities decreased

Wealth disparities increased



Disadvantaged people

Favoured Elite



Individual freedoms respected

Individual freedoms undermined





## Future Scenarios

# TIMELINE OF EVENTS

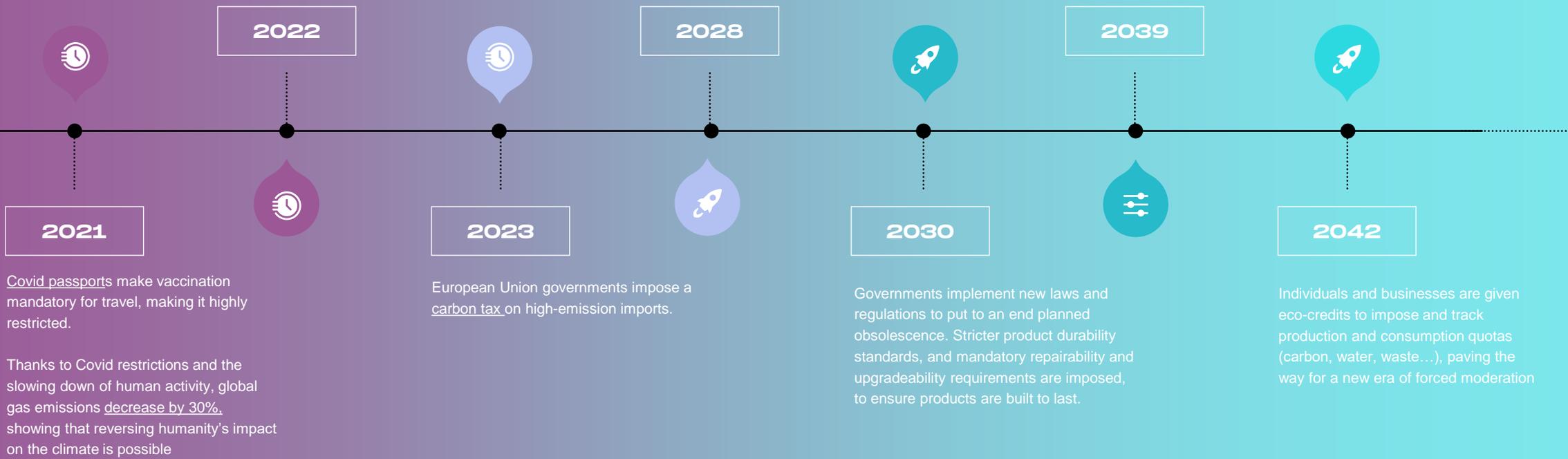
GREEN TOTALITARIANISM

In 2022, United Nations Secretary-General António Guterres says:  
"Humanity must cooperate or perish".

France bans short-haul domestic flights for journeys that take less than 2.5 hours by rail, encouraging train travel.

The United Nations declares a "World State of Emergency", after repeated heatwaves and severe water crises.

The price of carbon has more than doubled since 2020 and hits roughly US\$500 per ton of CO2.



**PASSED, REAL  
EVENTS**



**FICTION BASED ON  
REAL PROJECTIONS**



**PURE DESIGN  
FICTION**

# HOW DID WE GET HERE?

**NOW**  
2024

## The quest for transparency

People and governments increasingly pressure businesses to prove their eco-credentials

**NEXT**  
2024–2035

## Rising eco-politics

Disillusion with some citizens' inaction sees eco-anxiety increase, and climate activists create a wave of authoritarian political parties that lobby for people's sustainable practices to be monitored.

**FUTURE**  
2035–2050

## Green totalitarianism

A world where the protection of the environment comes at the expense of people's rights.



— 02 —  
STATE OF  
THE PLANET





**IMPOSED  
GREEN GOALS**

**ENFORCED  
REGULATIONS**  
*accelerate energy  
transition*



**REGULATED  
PATHWAYS**  
*to sustainable agriculture*



2050 Snapshot

# IMPOSED GREEN GOALS

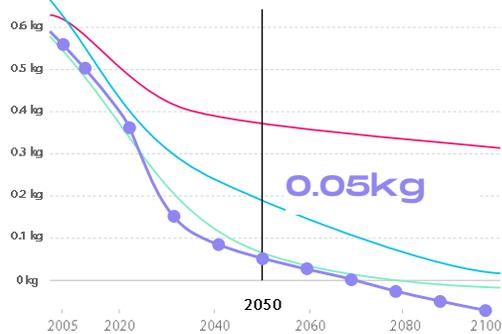


## FOSSIL FUEL USE FORCED DOWNWARD

The amount of carbon used significantly drops, as the world aims to free itself from fossil fuel.

### CARBON INTENSITY OF THE ECONOMY

Measured as the kilograms of carbon dioxide emitted per dollar of GDP

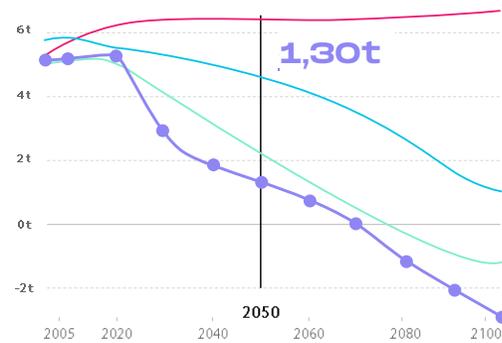


## STRICT POLICIES REDUCE HARMFUL EMISSIONS

Strict mitigation policy leads to significant reductions in the amount of greenhouse gasses released into the atmosphere.

### PER CAPITA CARBON DIOXIDE EMISSIONS

Measured as the global average

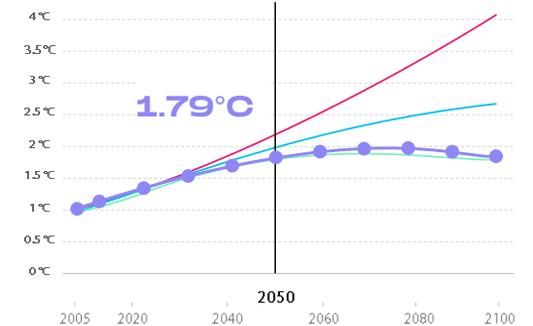


## TEMPERATURE INCREASE CONTROLLED

The world comes together to successfully keep temperatures under control.

### GLOBAL AVERAGE TEMPERATURE INCREASE

Relative to the pre-industrial era, which is taken to be the year 1750



Apocalypse Express

Green totalitarianism

Eco-Harmony

pleasure first, planet second



# THE ECO-CREDIT SCORE

In 2050, the concept of personal freedom takes a backseat, as a complex and controlling system governs every aspect of people's lives. In this world, society is driven by the "Eco-Credit Score."

Within the system, each individual's carbon footprint, water usage, waste generation and mode of transport is recorded and reflected as a score, which becomes the currency of the era, determining one's purchasing power and overall access to resources. From groceries to travel, entertainment to housing, every transaction requires the use of eco-credits.

Businesses are also subject to the same data-backed eco-authentication.



Pure design fiction



GREEN TOTALITARIANISM

# THE ECO-CREDIT SCORE

**4.1 TONS**  
PER CAPITA  
 Average global annual CO2  
 consumption in 2024

**1.30 TONS**  
PER CAPITA  
 Authorised annual CO2  
 consumption in 2050

**816KG**

Round trip  
Paris to New York



**112KG**

A full tank of gas



**36KG**

1KG of beef



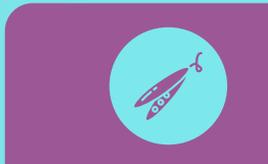
**29KG**

1KG of coffee



**2KG**

1KG of beans



**800GR**

1KG of bread

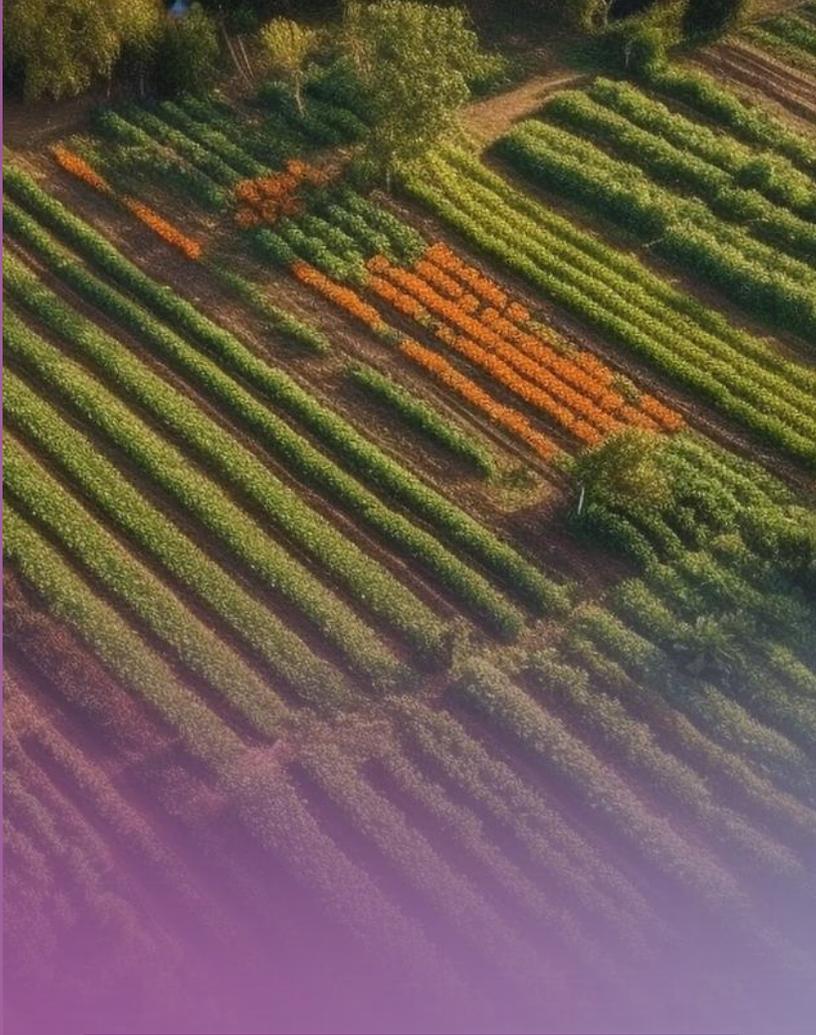




2050 Snapshot

# REGULATED PATHWAYS

to sustainable agriculture



### IMPROVED AGRICULTURAL PRODUCTIVITY

Tech advancements improve the efficiency of the agriculture industry.

### RESTRICTED AGRICULTURE FOR THE EXPANSION OF NATURE

Regulations around land use restrict agricultural expansion and increase forests around the world.



### RESHAPING FOOD CONSUMPTION

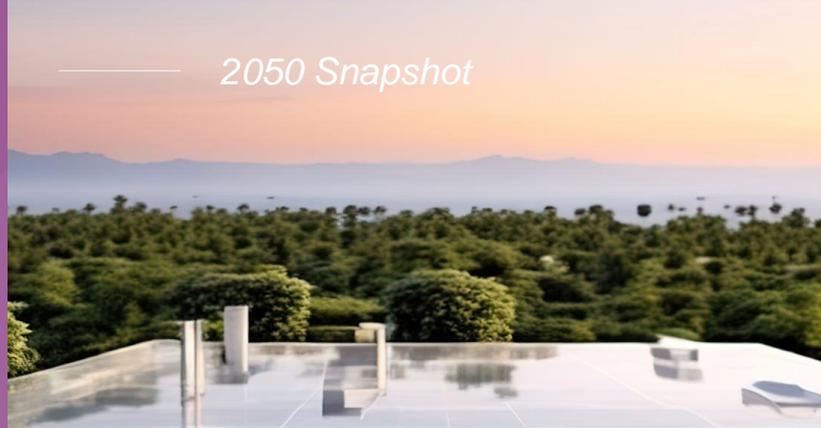
Low demand for crops and livestock coupled with increasing market prices shape diverse consumption patterns





— **03**  
**STATE OF  
SOCIETY**





**ECONOMIC  
PROSPERITY  
IS UNEQUAL**



**CENTRALISED  
POWER**  
*in a fragmented world*



**SPATIAL  
CONSTRAINTS &  
TECHNOLOGY FOR  
CONTROL**



2050 Snapshot

# ECONOMIC PROSPERITY IS UNEQUAL

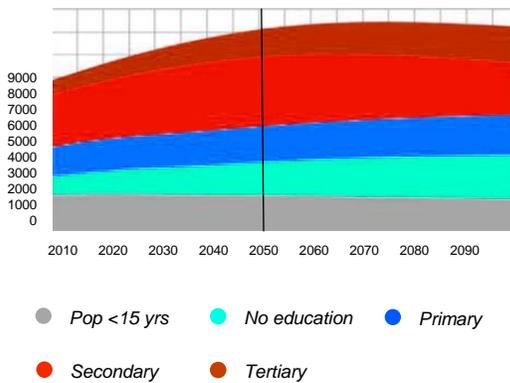


## UNEQUAL INVESTMENT IN SOCIETAL CONDITIONS

Although in some regions, improved education leads women to have less children, deteriorating education in others means that, globally, birth rates are balanced.

### WORLD POPULATION IN 2010–2100 BY BROAD AGE-GROUP AND EDUCATIONAL ATTAINMENT

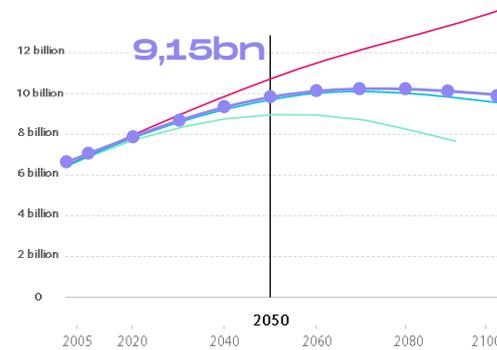
Population in Millions



## POPULATION GROWTH STABILISES

Birth rates vary across the globe, and the implementation of regulating policies contributes to gradual population stabilisation.

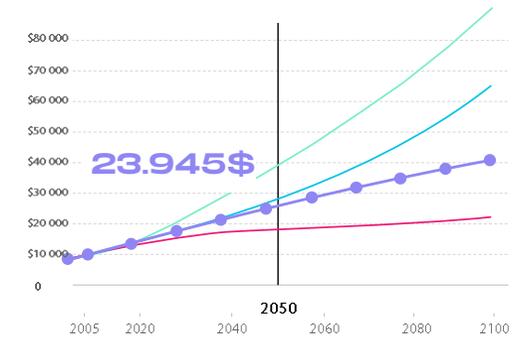
### WORLD POPULATION EVOLUTION, 2005-2100, GLOBALLY



## DEGROWTH POLICIES MODERATE GDP RISE

Global GDP rises moderately as inequality still exists within and across countries;

### GLOBAL GDP PER CAPITA, 2005-2100, IN US DOLLARS



Apocalypse Express

Green totalitarianism

Eco-Harmony

Pleasure first, planet second



2050 Snapshot

# CENTRALISED POWER

in a fragmented world



## EFFECTIVE LOCAL ENVIRONMENTAL POLICIES

Environmental policies focus on local issues in middle and high-income regions, with little attention given to vulnerable ones.



## THE GLOBAL ELITE

Successful global cooperation and trade to centralise power.



## AN UNEQUAL WORLD

A significant gap widens between a globally-connected elite, and fragmented lower-income communities.



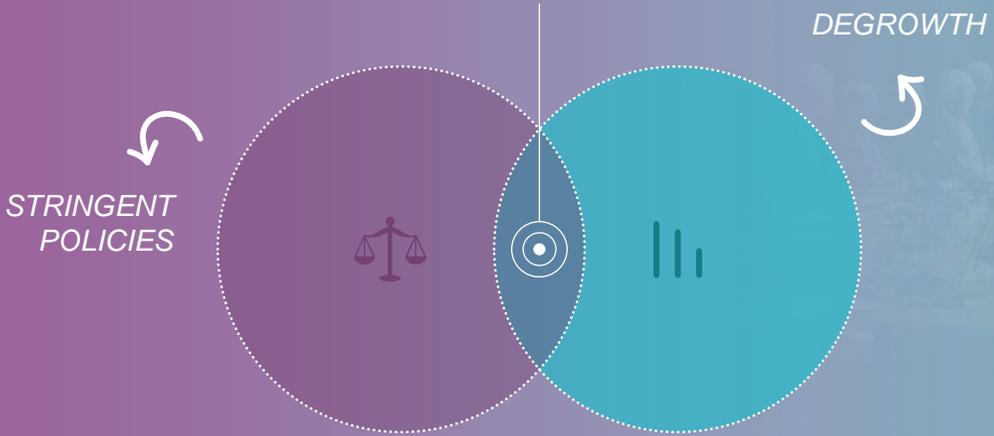
# FORCED DEGROWTH

Forced degrowth aims to enforce moderation by both businesses and consumers through governmental measures.

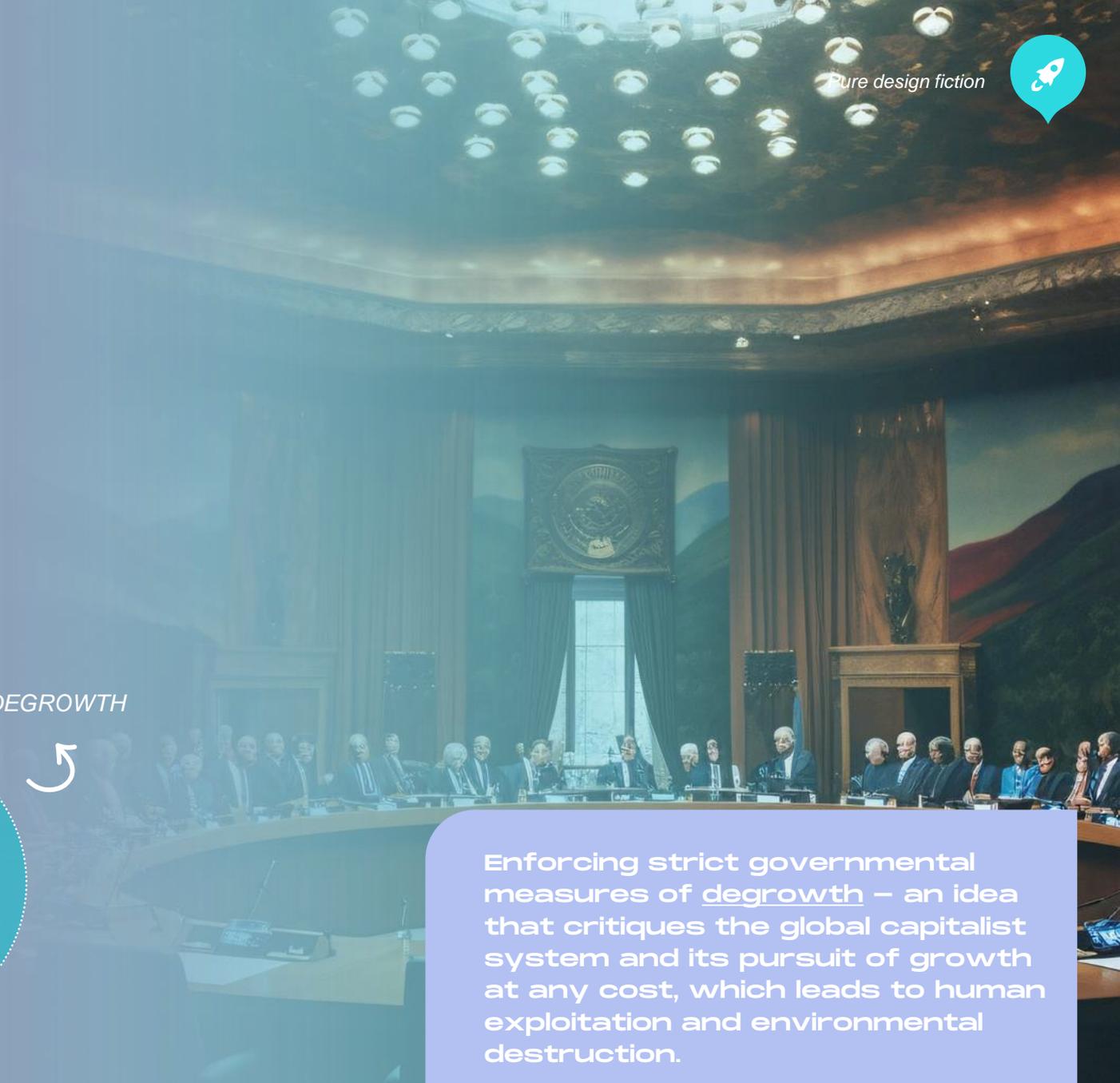
In this paradigm, individuals are compelled to reduce their consumption patterns in order to alleviate the strain on the planet. By implementing stringent policies, governments seek to preserve the environment, and promote a more sustainable and harmonious relationship with our natural resources.

GREEN TOTALITARIANISM

**FORCED DEGROWTH**  
*ensuring environmental preservation*



Enforcing strict governmental measures of degrowth – an idea that critiques the global capitalist system and its pursuit of growth at any cost, which leads to human exploitation and environmental destruction.





2050 Snapshot

# SPATIAL CONSTRAINTS & TECHNOLOGY FOR CONTROL



**RAPID URBANISATION  
LEADS TO A PREMIUM ON  
SPACE**

Economic circumstances dictate living situations within urban environments.



**HIGH-TECH DEVELOPMENT  
AT THE SERVICE OF  
CONTROL**

Technology develops significantly, but unevenly, across the world.



# SHAPING URBAN LIVING THROUGH OPTIMISED COMMUNITY SPACES

In 2050, the way people live in cities changes radically to optimise sustainability.

Highly integrated communities thrive within compact mixed-use spaces, designed for sustainability, longevity and purpose.

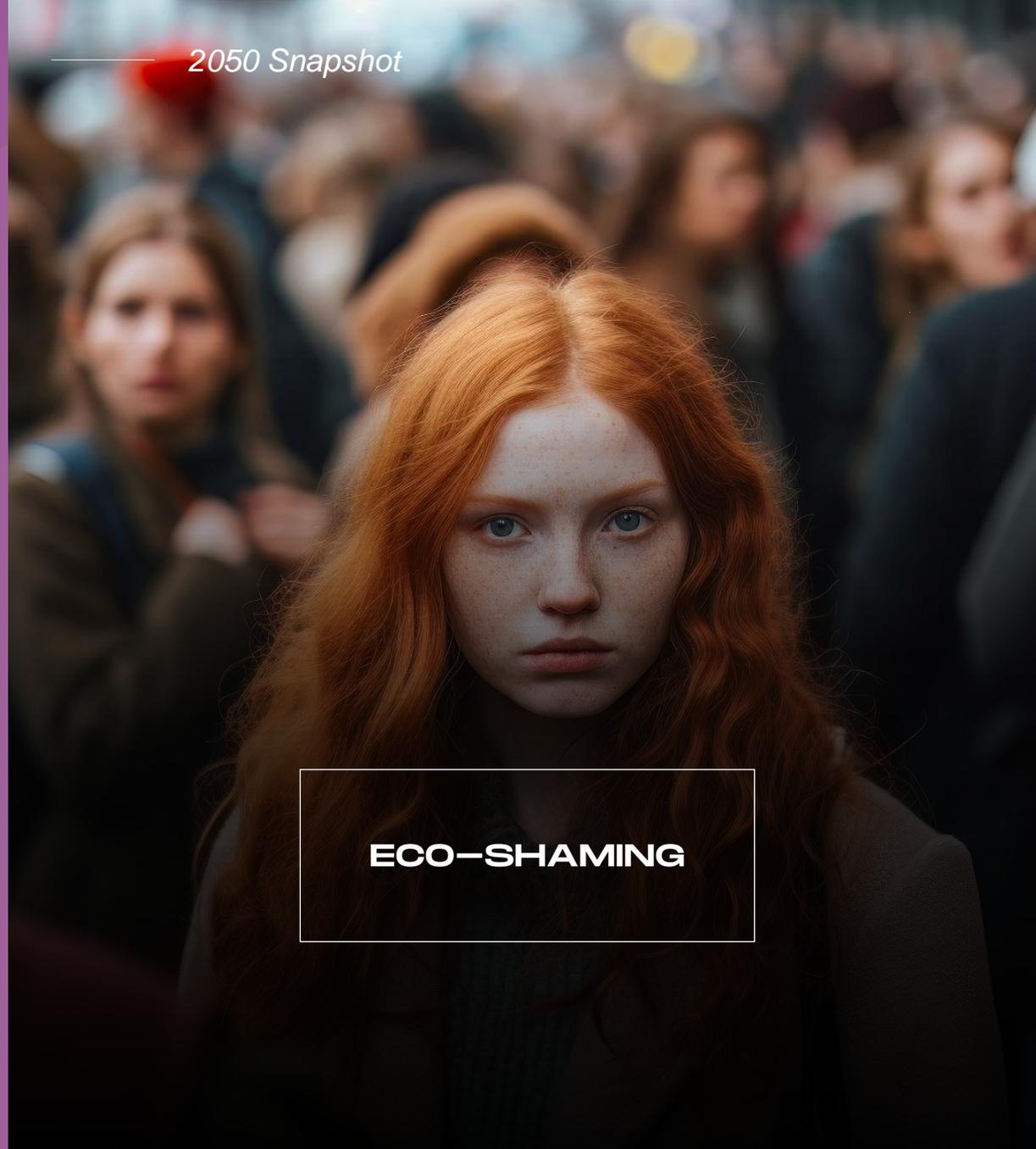
These all-in-one buildings and districts allow people to live, work, play, socialise, and shop all within 15 minutes walking distance, reducing transport needs and minimising residents' environmental impact.

However, the emphasis on communal living and compactness often translates into very restricted private living spaces and small apartments that are, on average, only 8m<sup>2</sup>.



— **04**  
**STATE OF  
CONSUMERISM**





**ECO-SHAMING**



**LOW FOOTPRINT  
DIETS**



# ECO— SHAMING

## Social pressure to adopt planet-friendly behaviours

People experience feelings of shame and guilt about the negative impact of their consumption on the planet.

To achieve environmental goals, governments employ nature-first policies involving regulations, surveillance, taxation, and reward systems that force moderation of consumption.

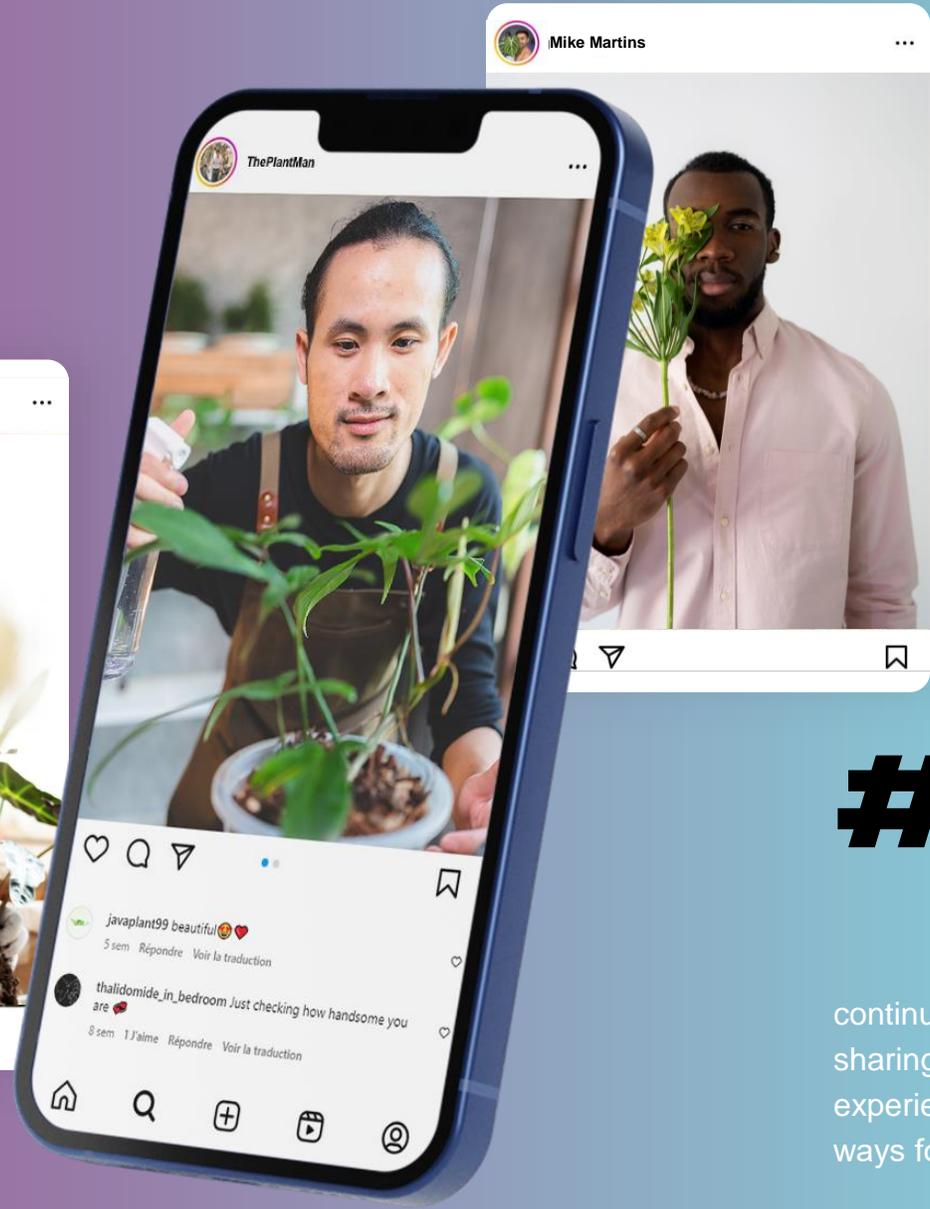
Individuals face both peer pressure and the systemic stigmatisation created by governments. They are even encouraged to report people who harm nature or engage in excessive consumption.

Businesses are also held highly accountable for their actions - or inaction - and face intense public scrutiny, shaming, backlash, and boycotts.

As society prioritises the wellbeing of the planet over that of people, individual freedoms and social cohesion are compromised.

### RELATED TRENDS

- *Eco-consciousness*
- *Business Accountability*
- *Boycott Brands*



# THE #PLANTPRIDE MOVEMENT

continues to gain momentum, as the sharing of green ostentation and experiences is one of the only acceptable ways for consumers to 'show off'.



# LOW FOOTPRINT DIET

**Food & drink consumption is regulated to ensure low environmental impact**

Strict regulations are imposed to deal with food and beverage products that significantly impact the environment. These include obligations around local production, bans on non-organic products, deforestation-free labeling, and heavy taxation on high energy-intensive goods like meat. From a consumer perspective, the eco-credit app facilitates a dietary shift by implementing rationing systems.

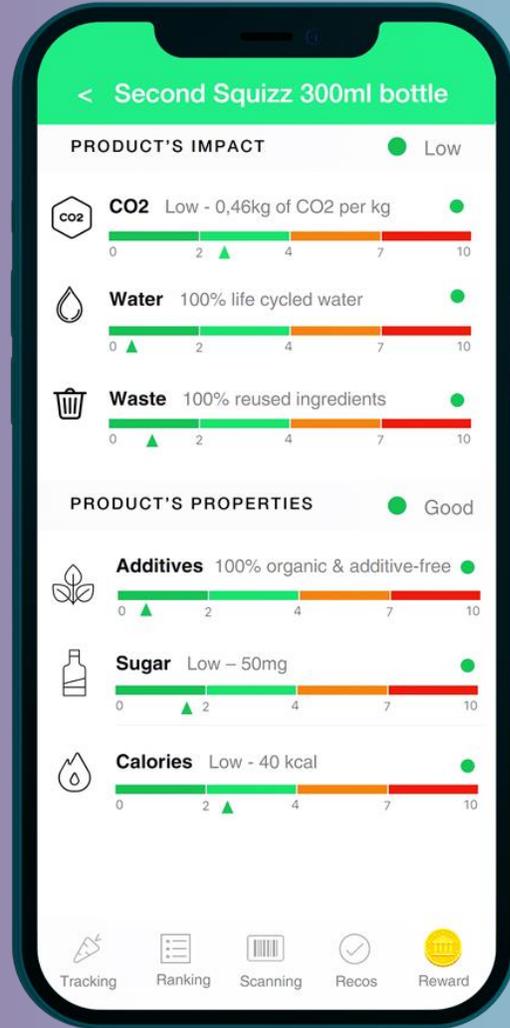
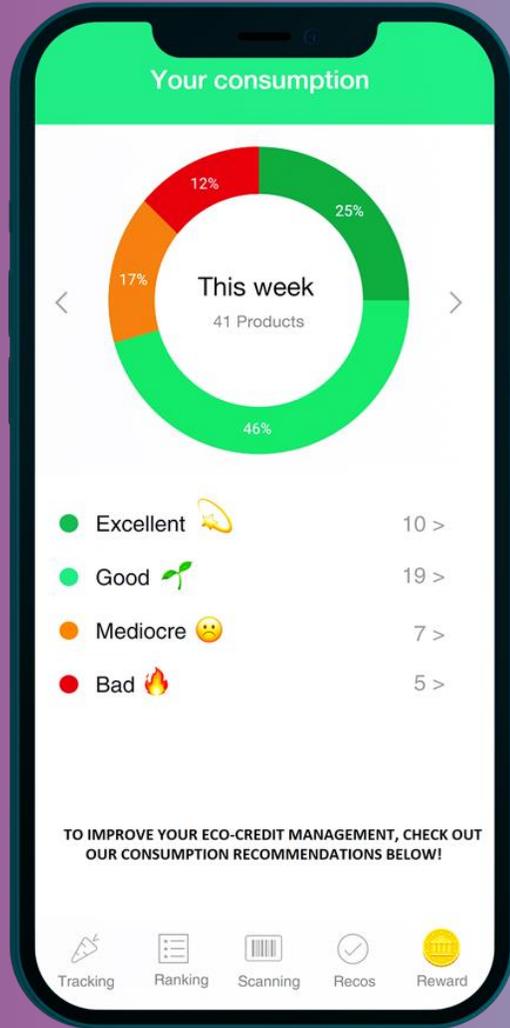
As less environmentally friendly options become more expensive, sustainability and affordability finally align. Eating locally and seasonally and adopting a plant-based diet is accepted as common sense. In the drinks industry, fermented beverages are preferred over distilled ones for their lower use of resources.

Multiple brands competing within the same product category are deemed unsustainable. Emotional differentiation is depriorised. In this context, smaller brands phase-out. Although empowered through information and better control over their consumption, consumers also face lack of options and choice.

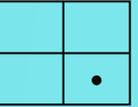
## RELATED TRENDS

- *Positive-impact Consumption*
- *Pragmatic Consumption*
- *Naturality at the Core*
- *Local Leaning*





Pure design fiction



# PLEASURE FIRST PLANET SECOND

**The middle of the road pathway:** a world where sustainable practices and the health of the planet are disregarded in favour of human comfort and convenience.

**+1.97°C**

Second highest °C increase due to only moderate action. +2,63°C in 2100.

**9.17Bn**

Steadied global population due to medium fertility and mortality

**\$25,175**

Second highest GDP per capita, as the middle class grows





— **01**  
**HOW DID WE  
GET HERE?**





# DRIVERS OF CHANGE & CRITICAL UNCERTAINTIES

## EVOLVING MIDDLE CLASS



The global middle class collapses

The global middle class consolidates



Western middle class dominates

Rise of non-Western middle class



Emerging middle class perpetuates unsustainable consumption patterns

Emerging middle class embrace sustainable consumption patterns



## INDIVIDUALISATION



Self-preservation

Self-actualisation



I before we

Collective Collaboration



Dopamine Consumerism

Conscious Consumerism



## TECH REVOLUTION



Digital divide widens

Digital divide narrows



Innovation serves environmental progress

Innovation serves consumerism



Tech creates job opportunities

Tech replaces workers

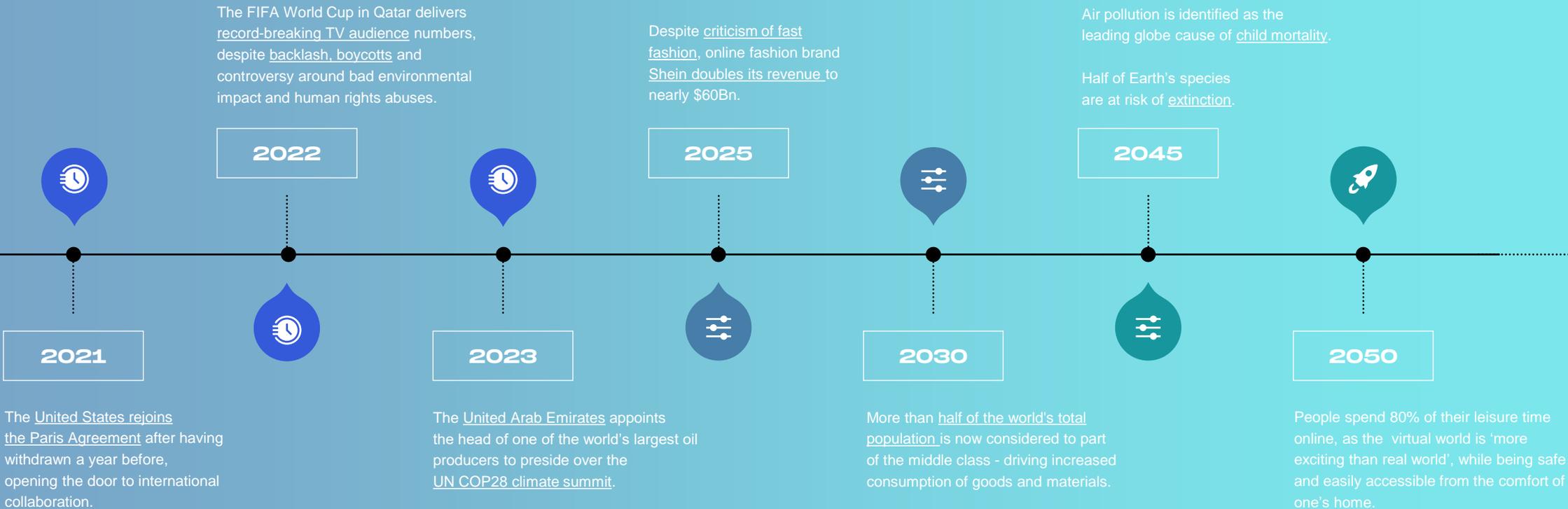




Future Scenarios

# TIMELINE OF EVENTS

PLEASURE FIRST PLANET SECOND



PASSED, REAL EVENTS



FICTION BASED ON REAL PROJECTIONS



PURE DESIGN FICTION

# HOW DID WE GET HERE?

**NOW**  
2024

## **A problem for the future**

For a world in permacrisis, climate change is considered to be just another problem.

**NEXT**  
2024–2035

## **The age of cognitive dissonance**

People, business and society behave in a bipolar way, making climate change mitigation hard to implement, and progress too slow.

**FUTURE**  
2035–2050

## **Pleasure first, Planet second**

A world where sustainable practices and the health of the planet are disregarded in favour of human comfort and convenience.



— 02  
STATE OF  
THE PLANET





**GREEN PROGRESS  
IS SLOW**



**ENERGY  
TRANSITION**  
*follows historical patterns  
of disparity*

**CONSUMPTION  
INCREASES**  
*faster than agricultural  
growth*



2050 Snapshot

# GREEN PROGRESS IS SLOW

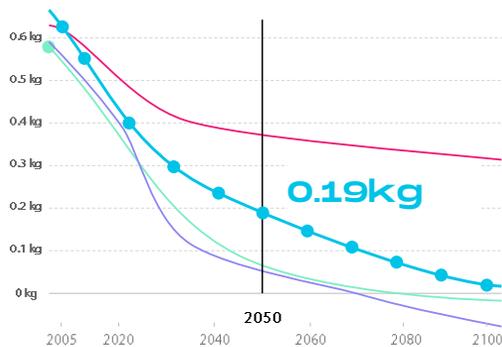


## FOSSIL FUELS LOSE DOMINANCE

As alternative energy sources are gradually embraced, carbon intensity reduces.

### CARBON INTENSITY OF THE ECONOMY

Measured as the kilograms of carbon dioxide emitted per dollar of GDP

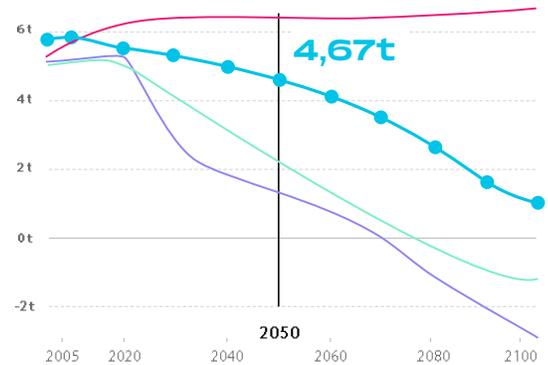


## HARMFUL EMISSIONS DECLINE SLOWLY

Lack of sustainable development and lack of widespread adoption means greenhouse gas emissions are slow to decrease.

### PER CAPITA CARBON DIOXIDE EMISSIONS

Measured as the global average

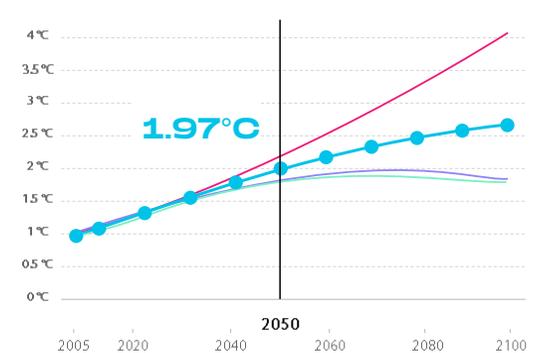


## TEMPERATURES CONTINUE TO INCREASE

Although at a declining rate, temperatures continue to rise before plateauing at the turn of the century.

### GLOBAL AVERAGE TEMPERATURE INCREASE

Relative to the pre-industrial era, which is taken to be the year 1750



Apocalypse Express

Green Totalitarianism

Eco-Harmony

Pleasure first, planet second



# IN 2050 CLIMATE CHANGES FOR FUTURE CITIES

By 2050, and as a result of +2°C global warming, iconic cities across the globe will experience significant climate change-related shifts.

Cities in the Northern Hemisphere will develop warmer climates, more associated with those of cities on average 1000km further south, today.

Cities in geographically tropical regions, will experience drier conditions.

## 77%

*of future cities are very likely to experience a climate that is closer to that of another existing city than to its own current climate.*

*Source: PLOS Climate Research, 2019*

## 22%

*of cities will experience climate conditions that are not currently experienced by any existing major cities.*

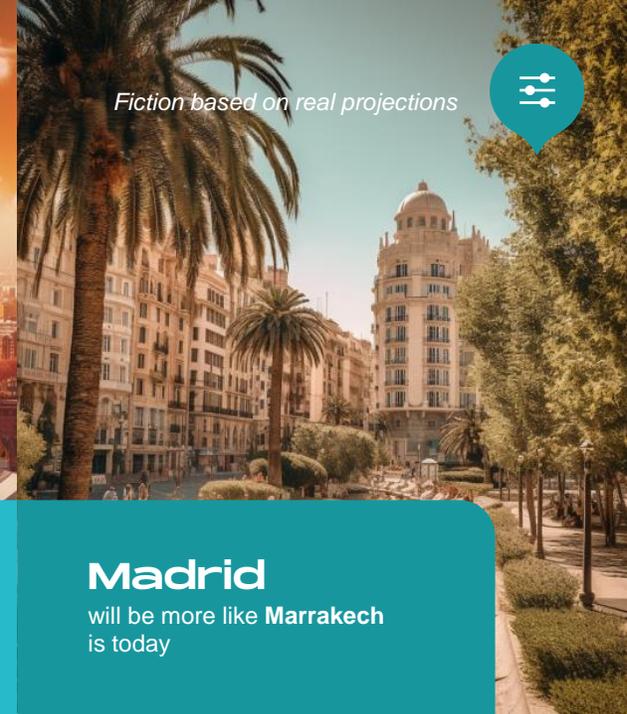
*Source: PLOS Climate Research, 2019*

*Fiction based on real projections*



### London

will be more like **Barcelona** is today



### Madrid

will be more like **Marrakech** is today



### Seattle

will be more like **San Francisco** is today



### Tokyo

will be more like **Changsa** is today



# FASHION'S COOLING TECHNOLOGY INNOVATION

By 2050, leaders in the apparel industry have unveiled revolutionary cool tech clothing lines, equipped with advanced cooling technology. This innovation transforms our approach to extreme weather, offering a reduction in body temperature, and providing comfort and adaptability in harsh conditions. Building on their success with heat tech clothing in the 2010s, these industry pioneers are now focused on ensuring people stay cool and comfortable.



2050 Snapshot

# CONSUMPTION INCREASES

faster than agricultural growth



### MODERATE AGROTECHNOLOGICAL DEVELOPMENT

Innovation in agriculture is moderate, and increases in crop yields slow down.



### PRODUCTIVITY REMAINS AVERAGE DESPITE INCREASED DEMAND

Global increases in food consumption and higher caloric intake impact the environment.

### INSUFFICIENT REGULATIONS PUT NATURE UNDER PRESSURE

Negative environmental management lead to deforestation





# CLIMATE CHANGE IS DISRUPTING THE FLAVOUR PROFILE AND HARVEST OF YOUNG GRAPES

## Increased alcohol content

Rising temperatures and lower rainfall cause grape berries to build up more sugars. This causes a higher degree of alcohol.



## Decreased acidity

As alcohol content increases, acidity, which adds freshness and zest to wine decreases.



## Earlier harvest

Grapes are harvested earlier to curb excessive alcohol. The result is an altered flavour profile of the grape.



## Unwanted Smoke Taint

As wildfires escalate in frequency and ferocity, compounds released by the flames are absorbed into the grape skin, creating unpalatable smoky tastes, textures and aroma that ruins vintages.



## Reduced crop yields

Extreme weather events such as frosts, floods, hail storms and droughts are radically reducing crop yields.





# THE GRAPE ESCAPE

Researchers, scientists and winemakers are experimenting with solutions to climate change by re-orientating grape growth;

## Cooler, wetter regions

Winemakers are growing grapes in places once considered too cold for fine wines.

01

## Taking the higher ground

Winemakers are planting vineyards at altitudes once considered inhospitable. Heat intensity lasts for shorter periods helping grapes to ripen at a more even pace.

02

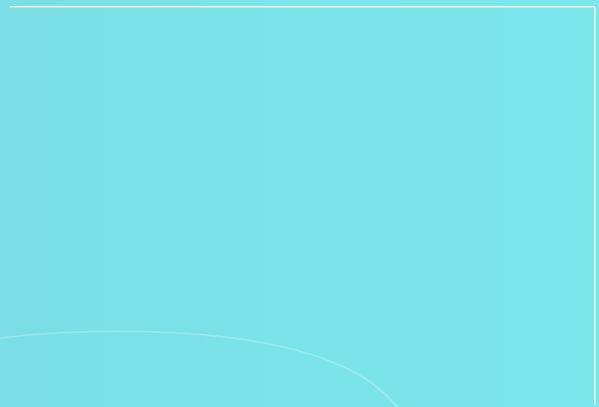
## Radiation reducing rows

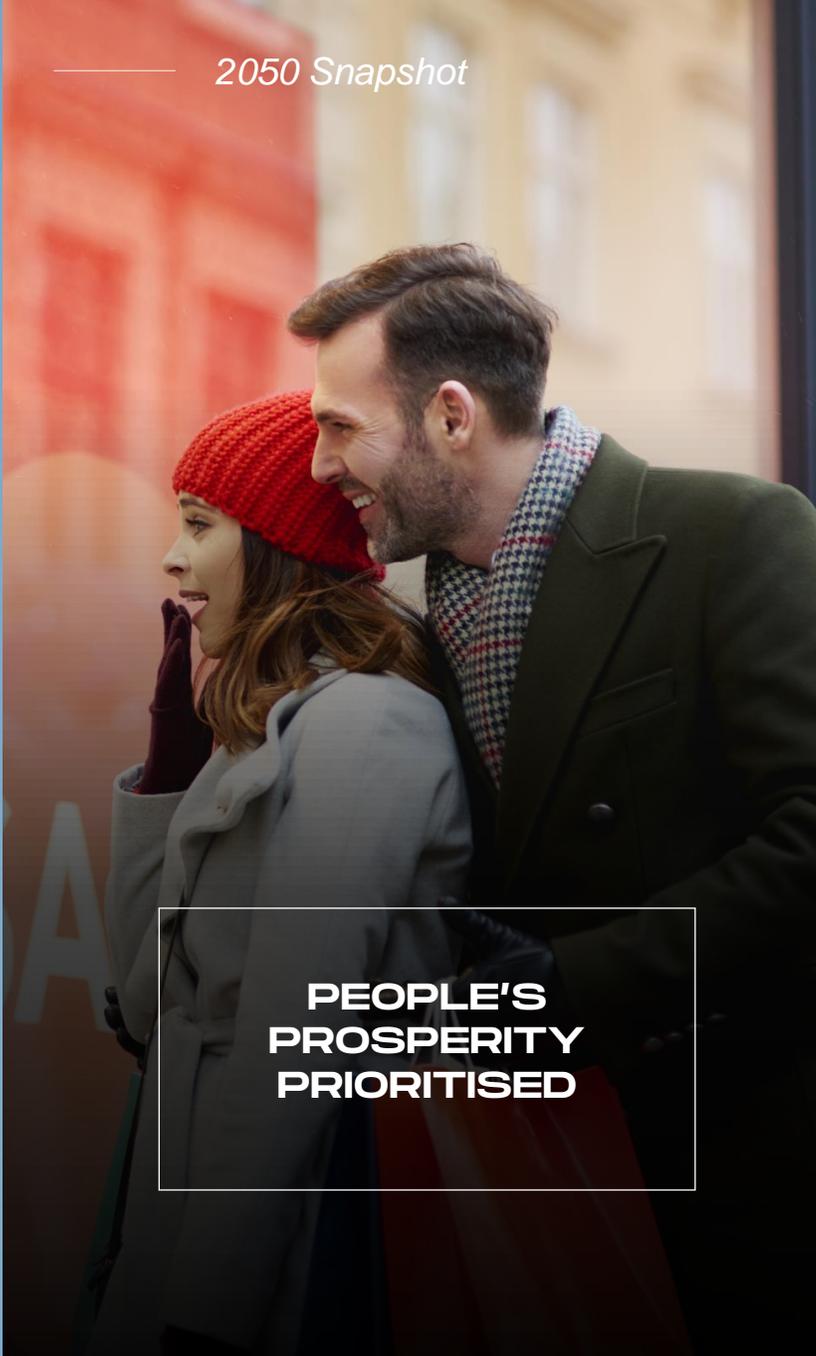
Winemakers are curtailing sunlight to prevent overripening.

03



— **03**  
**STATE OF  
SOCIETY**





**PEOPLE'S  
PROSPERITY  
PRIORITISED**



**GREEN PROGRESS  
– TOO LITTLE,  
TOO LATE**



**HUMAN PROGRESS  
FOLLOWS  
HISTORICAL  
PATTERNS**



2050 Snapshot

# PEOPLE'S PROSPERITY IS PRIORITISED

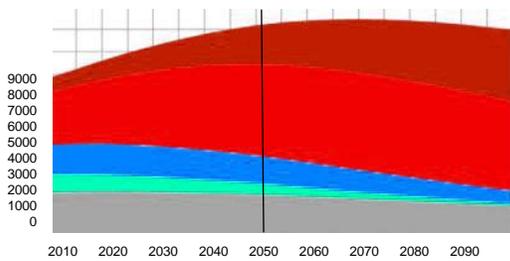


## SOCIETAL CONDITIONS SLOW TO IMPROVE

The lack of major investment in improved education means that birth rates continue to rise slowly.

### WORLD POPULATION IN 2010–2100 BY BROAD AGE-GROUP AND EDUCATIONAL ATTAINMENT

Population in Millions

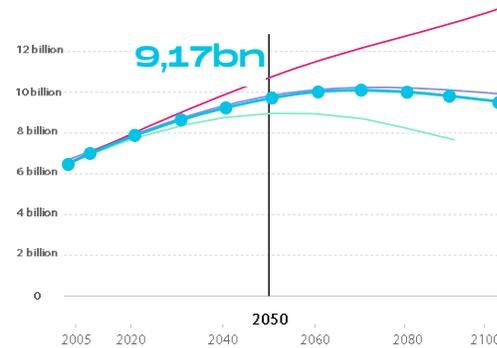


- Pop <15 yrs
- No education
- Primary
- Secondary
- Tertiary

## POPULATION GROWTH DECELERATES

The global population continues to grow slowly until 2050 and stabilizes in the second half of the century.

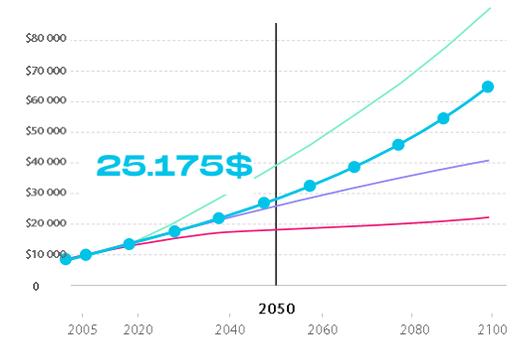
### WORLD POPULATION EVOLUTION, 2005-2100, GLOBALLY



## PEOPLE & ECONOMIES PROSPER UNEQUALLY

Policy decisions made primarily to benefit people not the planet, resulting in rapidly rising GDPs. However, they do not benefit everyone to the same degree.

### GLOBAL GDP PER CAPITA, 2005-2100, IN US DOLLARS



Apocalypse Express

Green totalitarianism

Eco-Harmony

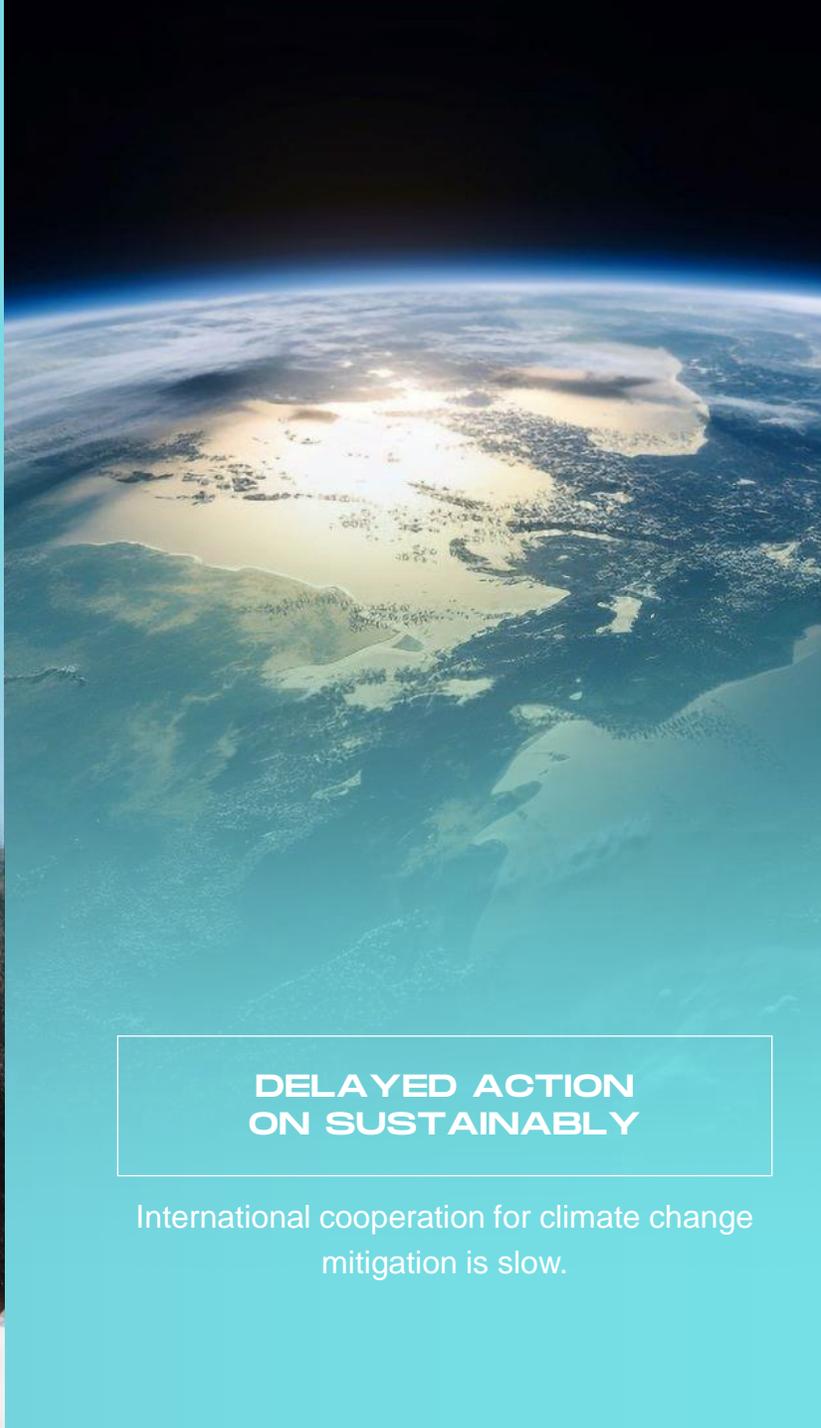
pleasure first, planet second



2050 Snapshot

# GREEN PROGRESS — TOO LITTLE TOO LATE





**SLOW PROGRESS  
TOWARDS EQUALITY**

The reduction of societal and economic disparities takes place at a moderate, but uneven pace.

**INEFFECTIVE GLOBAL  
COOPERATION**

Internationally, levels of collaboration are inconsistent.

**DELAYED ACTION  
ON SUSTAINABLY**

International cooperation for climate change mitigation is slow.



2050 Snapshot

# HUMAN PROGRESS FOLLOWS HISTORICAL PATTERN



**URBANISATION  
CONTINUES  
TO EXPAND**

Urbanisation follows historical patterns  
and doesn't slow down.



**TECH AT  
THE SERVICE OF  
CONSUMERISM**

Technology continues to improve gradually



— **04**  
**STATE OF  
CONSUMERISM**





**ECO-PARALYSIS**



**ALONE  
TOGETHER**



# ECO- PARALYSIS

## General helplessness in the face of the climate crisis

Globally, society faces being powerless when it comes to climate crisis, and is unable to respond. Individuals feel overwhelmed and powerless, perceiving their actions to be insignificant. This results in a lack of collective effort. This sense of helplessness makes consumers feel anger towards businesses and governments whom they hold responsible for failing to address environmental challenges. In response, green initiatives are implemented but often backfire. Good intentions lead to unintended, undesirable outcomes, as action is deemed to be 'too little too late'. In this era of global cognitive dissonance, where awareness coexists with inaction, people, businesses and governments find themselves trapped in a state of paralysis that paves the way towards climate carnage.

### RELATED TRENDS

- *Eco-conscious-ness*
- *Eco-anxiety*
- *Green alienation*

“ *Eco-anxiety is killing the climate movement* ”

*Marc-Aurèle Baly, journalist at Vice Magazine, referencing an [Australian study](#)*



# ALONE TOGETHER

## Digital living ironically contributes to an increasingly disconnected world

8G, hyper-realistic graphics, haptic feedback and spatial audio systems have boosted the sensorial appeal of the metaverse and eventually driven its widespread adoption.

In this tech-driven society, people spend as much time on screens as in real life, if not more. The virtual world has become a primary hub for social interaction, offering exciting and comforting alternatives to a crumbling reality. However, the lack of IRL human contact contributes to an epidemic of loneliness, amongst other mental health issues.

On the one hand tech giants are trying to solve the issue thanks to the development of AI companions, holographic communications or mindful tech usage programs. On the other hand, non-technology driven solutions like the promotion of inter-generational living or education on emotional literacy and empathy are becoming widespread.

### RELATED TRENDS

- *Tech-accelerated innovations*
- *Digital Living*
- *Rise of Loneliness*



# APPENDIX



# REFERENCES

This appendix provides a comprehensive collection of sources and documents that have been key in the development of this report. Central to our research is the work produced by the [Intergovernmental Panel on Climate Change \(IPCC\)](#), a globally recognized authority comprising the world's leading experts in climate science.

[AR6 Synthesis Report: Climate Change 2023](#)

[AR6 Climate Change 2022: Impacts, Adaptation and Vulnerability](#)

[AR6 Climate Change 2022: Mitigation of Climate Change](#)

[AR6 Climate Change 2021: The Physical Science Basis](#)

Our four distinct scenarios are specifically drawing upon the following Shared Socioeconomic Pathways (SSPs) and Representative Concentration Pathways (RCPs), provided by the IPCC:

Eco-Harmony Society	Green totalitarianism
Scenario SSP1: Taking the Green Road	Scenario SSP4: Inequality
Scenario RCP 2.6	Scenario RCP 2.6
Apocalypse Ready	Pleasure First, Planet Second
Scenario SSP3: Regional Rivalry	Scenario SSP2: Middle of the road
Scenario RCP 8.5	Scenario RCP 4.5

[Our World in Data – Visualisation of IPCC SSPs and RCPs Scenarios](#)

The data from the 4 scenarios – presented in Our World in Data Explorer – is accessible from the [SSP Database](#), published and maintained by the International Institute for Applied Systems Analysis (IIASA).

The data presented is sourced from the work of Riahi et al. (2017). The Shared Socioeconomic Pathways and their energy, land use, and greenhouse gas emissions implications: An overview, Global Environmental Change – processed by Our World in Data. Riahi et al. (2017).

[Nasa sea level projection tool](#)

Projections are based on the assessment presented in the [IPCC Sixth Assessment Report](#). Details of the sea level projections are provided in Box TS.4 and section 9.6 of the Working Group 1.

[Climate Central](#) - Land projected to be below annual flood level in 2050

Sea-level-projection source: Leading Consensus (IPCC 2021). Filters: PROJECTION TYPE: sea level rise + annual flood. POLLUTION PATHWAY OR SEA LEVEL SCENARIO: moderate cuts . LUCK: medium . AREAS TO SHOW AS THREATENED: All land below water level.

[Science Direct Articles, Global Environmental Change Journal.](#)

Human and Policy Dimensions

All articles are open access under the [CC BY-NC-ND](#) license [CC BY](#) license and [CC BY-NC-SA](#) license.

All articles are based on Socioeconomic Pathways (SSPs) and Representative Concentration Pathways (RCPs), provided by the IPCC.

- [Energy, land-use and greenhouse gas emissions trajectories under a green growth paradigm](#) - 2017 - Detlef P. van Vuuren and Authors. Published by Elsevier Ltd.

- [Fossil-fueled development \(SSP5\): An energy and resource intensive scenario for the 21st century](#)

2016 – Elma Kriegler and Authors. Published by Elsevier Ltd.

- [Future air pollution in the Shared Socio-economic Pathways](#)

2016 – Shilpa Rao and Authors. Published by Elsevier Ltd.

- [Future growth patterns of world regions – A GDP scenario approach](#)

2016 – Marian Leimbach and Authors. Published by Elsevier Ltd.

- [Land-use futures in the shared socio-economic pathways](#)

2016 – Alexander Popp and Authors. Published by Elsevier Ltd.

- [Shared Socio-Economic Pathways of the Energy Sector – Quantifying the Narratives](#)

2016 – Nico Bauer and Authors. Published by Elsevier Ltd.

- [The human core of the shared socioeconomic pathways: Population scenarios by age, sex and level of education for all countries to 2100](#)

2014 – Samir KC and Authors. Published by Elsevier Ltd.

- [The roads ahead: Narratives for shared socioeconomic pathways describing world futures in the 21st century](#)

2015 – Brian C. O’Neill and Authors Elsevier Ltd. All rights reserved.



# REFERENCES

In addition to the pivotal resources from the IPCC, this appendix also includes a range of complementary sources. These sources encompass a variety of perspectives and disciplines, enriching our analysis with diverse insights.

[Carbon Brief: How 'Shared Socioeconomic Pathways' explore future climate change](#)

Zeke Hausfather - April 2018

[Climate Impact explorer](#)

Calculations are based on the latest state-of-the-art science, including international climate and climate impact modelling initiatives such as [CMIP](#) and [ISIMIP](#). A full description of the data sources and methodology can be found [here](#).

[2023 GESDA Science Breakthrough Radar](#)

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For more information on [cited key resources](#).

[Arup 2050 scenarios: Four plausible futures](#)

Foresight, Research and Innovation - Arup's internal think-tank and consultancy. Released December 2019

[BSR Climate Scenarios](#)

BSR Staff - September 27, 2022

[CIA Global Trends 2040](#)

A publication of the national intelligence council

A more contested world2040 - march 2021

[OECD \(2021\), Global Scenarios 2035: Exploring Implications for the Future of Global Collaboration and the OECD](#), OECD. Publishing, Paris, <https://doi.org/10.1787/df7ebc33-en>.

[Ademe – Transitions 2050](#)

© ADEME Éditions, november 2021

[Paris à 50°C](#)

Mission d'information et d'évaluation du conseil de Paris, avril 2023

[IEA – Net Zero by 2050](#)

IEA (2021), Net Zero by 2050, IEA, Paris <https://www.iea.org/reports/net-zero-by-2050>, Licence: CC BY 4.0

[Parlons Climat en 30 questions – Troisième édition](#)

2022 - Valérie Masson-Delmotte, Christophe Cassou - La documentation française



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2050

# FUTURE SCENARIOS

A prospective Pernod Ricard study



Pernod Ricard  
*Créateurs de convivialité*