



ECOLOGICAL TRANSFORMATION : « Are we ready? »

BAROMETER OF THE ECOLOGICAL TRANSFORMATION



#BaromètreTransformationEcologique
#Sommesnousprêts?

ECOLOGICAL EMERGENCY

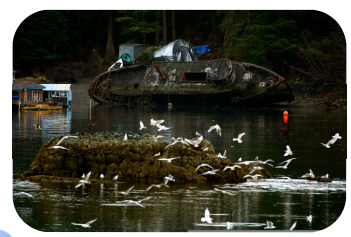
Are we ready?

1951

First report on the state of the environment by the International Union for Conservation of Nature.

1972

Stockholm Conference, first international conference of the United Nations on the environment and launch of the Earth Summits.



1985

Discovery of a hole in the ozone layer by scientists. To date, the only climate issue that has not deteriorated.

1978

The Amoco Cadiz, a Liberian supertanker sank and released 227,000 tons of oil off the coast of Brittany. The worst oil spill of the 20th century opened the way and became the first legal case to succeed in terms of oil pollution.

1997

Kyoto Protocol on climate change, 38 countries commit to reducing their greenhouse gas emissions by an average of 5.2% within 15 years, compared to 1990 levels.

1990

First assessment report of the IPCC (Intergovernmental Panel on Climate Change)

1987

Brundtland Report "Our Common Future" by the World Commission on Environment and Development (UN) establishes the definition of sustainable development as "a pattern of development that meets the needs of the present without compromising the ability of future generations to meet their needs."

2007

The former vice-president of the United States, Al Gore, was awarded the Nobel Peace Prize jointly with the IPCC, after having highlighted the dramatic consequences of global warming, notably in the documentary "An Inconvenient Truth".



1997

Discovery of the North Pacific waste vortex, also called 7th continent.

1992

First Earth Summit in Rio and signing of Agenda 21 by more than 170 countries, a program of actions to be transposed locally by governments and institutions, in all areas of human activity.

2021

Glasgow Conference on Climate Change (COP26), which resulted in the "Glasgow Climate Pact", thus completing the Paris agreement with notable advances concerning the exit from oil and gas and the 1.5°C ambition.



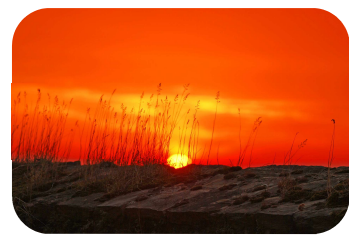
2015

The Paris Agreement was adopted at the Paris Climate Conference (COP 21). The signatory states commit to keeping the global temperature increase below 2°C, or even below 1.5°C by 2100.



2019/2020

"Black summer" in Australia: mega-fires ravage nearly 19M hectares of vegetation and thousands of homes..



2021

Warmest summer on record in Europe according to the European climate change monitoring service Copernicus.

2022

Record floods in Pakistan following intense drought, 10% of the country flooded since the beginning of the monsoon

WHY THE BAROMETER OF THE ECOLOGICAL TRANSFORMATION?

The debate around ecology has entered a new phase which is struggling to be structured on common grounds. If there is a consensus on the risks for the planet and all of humanity, the solutions to reduce our impact are still little debated and divide.

IPCC reports, climate strategies, Green New Deal, COP: the proposals to fight against climate change, biodiversity loss and pollution are numerous. But their adoption and large-scale deployment raises a major question: **are the changes needed to lead the "battle of the century" socially, economically and culturally acceptable to human communities?**

This question is at the heart of the Barometer of the ecological transformation carried out with a sample covering **more than half of the world's population** on the 5 continents.

This barometer aims to **make the public debate concrete** by working on **solutions**, and to understand **the obstacles and levers** of their **acceptability** to accelerate the transition.

3 thematic axes

Climate change

Pollution and
resource scarcity

Threats to
biodiversity and
food security

A novel angle: the acceptability of ecological solutions

- Are there **psychological, economic or cultural obstacles** to the transition?
- Are we ready to **bear or accept the cost of the ecological transformation?**
- How far are we ready to go? How **radical** should the **change** be?
- What levers could **improve the acceptability of ecological solutions?**
- How does the world public opinion project itself in a **"transformed world"**?

Methodology



Selection of target countries

A survey conducted in **25 countries** in **5 continents** with more than **25,000 individuals** (about **1,000 per country**).

Countries were **chosen** for **their demographic weight, their weight in terms of GHG emissions and to ensure a diversity of political and cultural ecological histories.**

Overall, these countries represent nearly 60% of the world's population and **68% of global GHG emissions.**

[See details on the next page.](#)



Collection method and field dates

A survey conducted **online** from **August 24 to September 26, 2022.**



Sample representativeness

For each of the 25 countries, a representative sample of residents aged 18 and over was selected. The representativeness was ensured according to the **quota method** applied to the following variables: **gender, age, socio-professional category or income** (depending on the country) and **region of residence.**



Results "World Opinion"

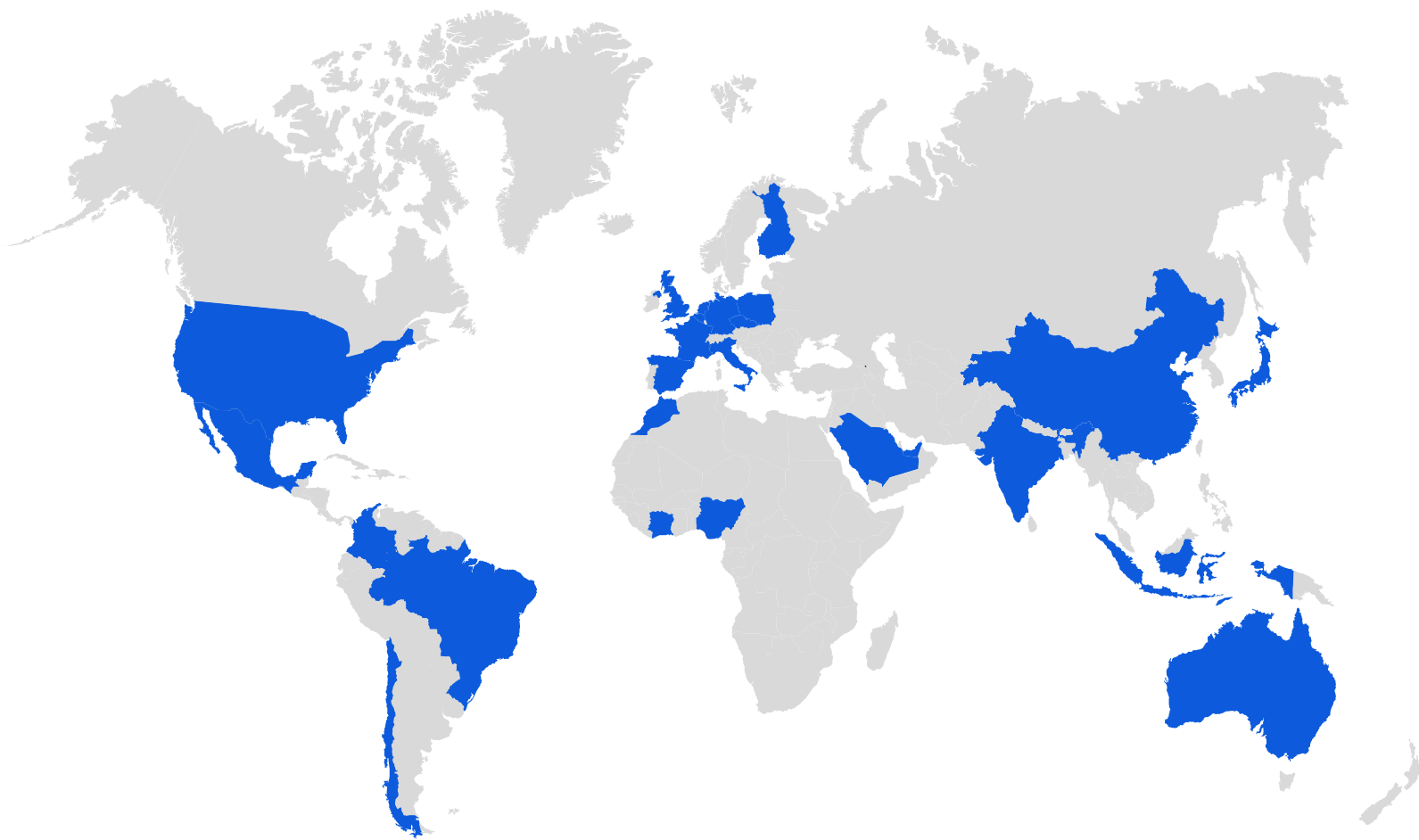
To constitute the **results of the "world opinion", an equivalence between countries was privileged** (each country counts for 1, no weighting according to the number of inhabitants). This choice was made to ensure that the diversity of countries is represented and thus avoid "world opinion" being only the average of the results of the most populous countries (China and India in particular).



Frequency of the barometer

Every 18 months (long period of evolution of representations, opinions and behaviour).

25 target countries



				Number of people interviewed	Pop. of the country on global pop.	Share of the country in global GHG emissions
TOTAL				25 111	59,4%	67,7%
AFRICA						
1		CIV	Ivory Coast	1 005	0,3%	0,1%
2		MAR	Morocco	1 030	0,5%	0,2%
3		NGA	Nigeria	1 000	2,6%	0,7%
AMERICA						
4		BRA	Brazil	1 006	2,7%	2,3%
5		CHL	Chile	1 006	0,2%	0,2%
6		COL	Colombia	1 005	0,6%	0,4%
7		USA	United States	1 002	4,2%	13,0%
8		MEX	Mexico	1 003	1,6%	1,4%
EASTERN ASIA						
9		CHN	China	1 000	18,1%	27,4%
10		IND	India	1 002	17,5%	7,3%
11		IDN	Indonesia	1 000	3,5%	2,2%
12		JPN	Japan	1 004	1,6%	2,5%
EUROPE						
13		DEU	Germany	1 006	1,1%	1,6%
14		BEL	Belgium	1 008	0,1%	0,2%
15		ESP	Spain	1 000	0,6%	0,7%
16		FRA	France	1 001	0,8%	0,9%
17		FIN	Finland	1 003	0,1%	0,1%
18		ITA	Italy	1 002	0,8%	0,8%
19		NLD	Netherlands	1 002	0,2%	0,4%
20		POL	Poland	1 000	0,5%	0,8%
21		CZE	Czech Republic	1 005	0,1%	0,3%
22		GBR	United Kingdom	1 003	0,9%	1,0%
MIDDLE EAST						
23		SAU	Saudi Arabia	1 002	0,4%	1,6%
24		ARE	United Arab Emirates	1 011	0,1%	0,5%
OCEANIA						
25		AUS	Australia	1 005	0,3%	1,3%



KEY FINDINGS

1

An intense feeling of vulnerability in the face of ecological and climatic risks, most of which are considered serious and immediate

A **feeling of extreme fragility now unites the historically most fragile countries** (low GDP, natural disasters already inscribed in the collective memory, long-standing experience of scarcity of essential resources such as water, etc.) **and developed countries**, which for a long time felt "sheltered", protected by their economic development and lesser exposure to the consequences of climate disruption and pollution (long-standing health policies, infrastructures, etc.).

71% express a **feeling of ecological and climate vulnerability**:

- **74%** fear that **living conditions will become increasingly harsh**
- **74%** are certain that **their country is exposed to the degradation of its ecosystem and its biodiversity**
- **70%** believe that their **country is exposed to migratory movements** caused by pollution and climate change
- **68%** are **afraid of material damage caused by natural disasters** (floods, droughts)
- **68%** feel **exposed to health risks**, afraid of getting sick **because of pollution**

Brazil, Chile, Colombia, Mexico, China, India, Italy, Spain, Poland: **vulnerability is over 78%** (Poland) **and up to 87%** (Italy).

The lowest level: Morocco (61%)

Saudi Arabia and Finland are exceptions to this feeling of fear that is prevalent in all other countries: they still account for 48% and 45% respectively of inhabitants who share a feeling of ecological and climate vulnerability.

2

75% of the world's inhabitants are convinced that climate change is occurring AND that human activity is the main cause

The feeling of **vulnerability fuels this conviction**: Brazil, Chile, Colombia, Mexico, China, India, Italy and Spain have the most climate-convinced people.

Contesting climate change is no longer on the agenda of world public opinion.

The increasingly frequent experience of "abnormal" phenomena has provided the proof that some people claimed, refuting or ignoring for decades the warnings of science: **89%** of the world's inhabitants now share the **certainty of an ongoing climate disruption**.

The "most hesitant" countries on the reality of the phenomenon total **less than 25% of skeptics** (Nigeria 23%, United Arab Emirates 21%, USA 20%, Finland 19%).

It is its **anthropic origin that is still being debated locally: 7%** defend the theory of a **strictly natural phenomenon** and **7%** plead the **impossibility of identifying the cause**.

The Netherlands, Finland, the USA, Nigeria, Australia, the United Arab Emirates and Saudi Arabia have **the most deniers**, with up to 41% of Saudis considering either that nothing is happening (15%) or that it is a natural phenomenon (16%) or that it is impossible to know (10%).

3

Faced with the "climate and ecological wall", eco-anxiety upsets the present and future of nearly 1/3 of the world's inhabitants

30% of the world's inhabitants **feel anxious, distressed about the future**. They often think about climate change and the environmental situation (pollution, quality of biodiversity), **to the point of not being able to live serenely, and even to the point of giving up long-term projects** such as having children (>33% in Poland, Indonesia, Japan, Brazil, Chile, Colombia, Mexico, and up to 58% in India!)

59% are concerned about the situation, but this does not prevent them from living serenely and making long-term plans (>60% in France, Spain, Czech Republic, Netherlands, Belgium, Finland, Italy, China, Brazil, Ivory Coast, Nigeria).

9% believe that **there is no real need to worry** (24% in Saudi Arabia)

4

The end of a world, but not the end of the world

Fear but neither resignation nor powerlessness: 60% are convinced that **we have the future in our hands**. Optimism and determination are the rule in Poland, Italy, China, Indonesia, India, Brazil, Colombia, Mexico, Ivory Coast, Nigeria (>64%, up to 86% and 90% in India and Indonesia).

A margin of hope that is decreasing sharply, especially on the European continent and in the oldest societies, where the majority of inhabitants are doubtful (30% of the world's inhabitants vs. > 50% in France, the Czech Republic, Belgium and Japan).

8% are, on the other hand, certain that "it's too late" (>10% in France, the UK, Belgium, Finland, Germany and Japan).

A future that is written in action: 67% are **certain that inaction will cost humanity more than action** (>56% in all countries, up to >80% in India, Indonesia and China)

Act **collectively** to **reduce and invent**

55% think that **we must profoundly change our way of life, live more soberly AND implement technologies to compensate for and reduce the consequences of pollution and climate disruption** (>50% in all countries except the UAE and Saudi Arabia, whose societies are divided into 3 thirds: 1/3 sobriety, 1/3 technologies, 1/3 both).

5

The need to nourish a new imaginary : draw me the transformed world...

60% of the world's inhabitants **have difficulty imagining what daily life could be like if we achieve the ecological transformation**: 24% don't see it at all, 36% have some ideas but find it very vague (majority in all countries except China, India, Colombia, Ivory Coast and Nigeria where a very small majority imagine the world and our daily life after the ecological transformation).

In particular because **there is little or no discussion of the solutions to be implemented** (56% on average, up to 83% in Japan. Exceptions are the Netherlands, Indonesia, India, UAE and Saudi Arabia.

However, **hope is everywhere**: if imagining the daily life is difficult, the majority of the world's inhabitants want to believe that ecological transformation is synonymous with a "better world", in which **we will live in better health (75%), happier (69%), more serene (69%)**, in which we will **consume less but better (69%), with more solidarity (64%)**, and in which we will be **more comfortable (63%)**.

It is **not without concerns: purchasing power and the fear of frustration** of having to give up certain practices.

Germany is the only country where projected gains and losses are almost equal.
Latin America and Black Africa are the most optimistic continents.
USA, Europe, Australia and Asia are measured but mostly positive.

6

Which way to go?

Fear of the consequences of inaction is now significantly **stronger than fear of the cost of change**: the ratio of projected gains and losses is almost systematically and everywhere in favor of ecological transformation.

6 out of 10 people in the world say they **are willing to accept 90% of the changes that green solutions would entail**.

Provided that :

- They have the **guarantee that the solution does not present any health risk**, or that it contributes to protect or improve health and quality of life
- To be **sure that the solution is really useful** (demonstrate the contribution to the fight - reduction of emissions, depollution, food and energy sovereignty...)
- To **share a real project for the future of society, which gives desire and motivation**, and can produce a collective movement
- That the **economic and cultural costs are bearable**: progressive evolution, equitable distribution of the financial surcharge (social justice) and adoption of the practice or new lifestyle by the majority

7

Climate change: an absolute emergency, acceptable solutions conditioned by health guarantees and proven usefulness

79% of the world's inhabitants are convinced that **climate change is a serious and immediate risk**.

There are **few, if any, known solutions**:

- The **capture of CO2 to transform it into methane or hydrogen surprises many** (unknown >60% everywhere except India, Indonesia and China).
- The **production of local low-carbon energy** from the incineration of non-recyclable waste and biomass and the equipping of buildings with intelligent tools **to optimize energy consumption are less surprising but are rarely known** by more than 1 out of 2 inhabitants in any country (excluding India, Indonesia, Finland, Poland and Italy).

Their consequences (energy costs and proximity to facilities) **are acceptable**: 68% proximity to wastewater treatment plants, 63% proximity to incinerators, 61% paying a little more for energy so that it is less CO2 emitting and "local".

Most favorable countries: Netherlands, Germany, Italy, China, Indonesia, India, Brazil, Mexico, Nigeria.
The extra cost is an irritant in France, Czech Republic, Belgium, Finland, Japan, Ivory Coast and Saudi Arabia.
Most reluctant countries: Saudi Arabia, Morocco, Japan, Czech Republic and to a lesser extent Spain.

On average, **two conditions are required**: a **guarantee that these solutions do not present any health risk** (1st condition, 49%), that **their contribution to reducing GHG emissions is demonstrated** (43%, 2nd condition) and that **they are sustainable for national energy independence** (43%, 2nd condition).

8

Resource scarcity and pollution: a certain and immediate risk, desirable and already partly “familiar” solutions

Resource scarcity and depletion, and **resource pollution and direct impact on health** are respectively perceived as **serious and imminent risks by 77% and 76%** of the world's inhabitants.

Circular economy solutions to recycle materials and avoid extracting more are **the best known** in the world. They are already part of everyday life and are **widely adopted**: recycling of plastic waste, recycling of used electric batteries and recycling of WEEE by 2/3 to 3/4 of the population (except in Morocco, UAE and Saudi Arabia where only a little more than 1/2 are aware of these solutions).

Solutions for the depollution of natural resources are not very surprising but are significantly less known (depollution of soils contaminated by heavy metals and hydrocarbons, and depollution of indoor air, rarely > 50%; eco-design and elimination of micropollutants present in water rarely do better).

Their consequences (additional purchase costs, individual sorting and consumption habits and proximity to industrial sites) **are acceptable**: 75% to 82% of the world's inhabitants say they are ready to do more waste sorting, buy products, equipment and food packaged in containers made in part from recycled materials.

The **additional cost** (at the time of purchase or through taxes) **degrades acceptability but is tolerated by just over 60%** of the world's inhabitants. Locally, it is an irritant: notably France, Czech Republic, Belgium, Finland, Japan and Ivory Coast). Morocco and Saudi Arabia stand out and have between 60% and 40% of opponents to the consequences of these solutions (consumption habits and cost)

On average, **2 conditions were required**: to have the **guarantee that these solutions do not present any health risk** (1st condition, 47%), that **it is demonstrated that they are sustainable solutions** to resource depletion and pollution (45%, 2nd condition).

9

Threats to biodiversity and food security: a real risk, partially acceptable solutions provided if there are solid health guarantees

74% of the world's inhabitants are **convinced that the lack of food and the risk of having poor quality food is serious and immediate.**

There are **few, if any, known solutions:**

- **Feeding fish and farm animals with fly larvae meal** is **outside the collective imaginary** (unknown >60% everywhere except India and Indonesia).
- **Wastewater REUSE for crop irrigation** is poorly known at the global level (1 out of 2), but with strong disparities between countries. The same is true for the use of organic waste and sludge from wastewater treatment plants to produce "organic" fertilizers to replace "chemical" fertilizers.
- **Urban agriculture is less confidential** (57% know this solution).

Their consequences are mostly acceptable: the use of REUSE for agriculture (69%), household tasks (69%) and hygiene (66%) are fairly widely accepted, as are the agricultural use of organic fertilizers for everyday food (68%) and the reduction of meat consumption (67%).

The additional cost of REUSE is an irritant for 4 out of 10 people worldwide, but acceptable to a majority (59%).

The **behavioral change required by REUSE for drinking water and by insect-based bioconversion is resisted** in most parts of the world (on average 45% and 39% respectively of opponents. Majority rejection is in Japan, Nigeria and the Middle East).

Most favorable countries: Netherlands, Belgium, Italy, China, India, Brazil, Mexico.

The extra cost is an irritant in France, Czech Republic, Belgium, Finland, Japan, Morocco, Ivory Coast and Saudi Arabia.

Most reluctant countries: Saudi Arabia, Morocco, Ivory Coast, Japan, Finland and Czech Republic.

On average, **2 conditions were required:** to have the **guarantee that these solutions do not present any health risk** (1st condition, 54%), that it is **demonstrated that these are sustainable solutions** to the risk of running out of food and having poor quality food (43%, 2nd condition).