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# Evolution of Morocco's International Positioning



## Strategic Dashboard

Twelfth Edition  
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# LIMINAIRE

As part of its prospective monitoring mission-aimed at closely tracking the ongoing changes at the national, regional, and international levels, with a view to preparing Morocco for the world of tomorrow-, the Royal Institute of Strategic Studies (IRES) completed, in late October 2024, the 12th edition of its "Strategic Dashboard" series.

The Strategic Dashboard is one of the recurring outputs of IRES' "Prospective Monitoring" division. It serves as a tool to provide an overview and track the evolution of Morocco's international positioning in the political, economic, social, cultural, and environmental fields.

A mine of quantitative information and knowledge useful for decision-making, the Strategic Dashboard includes 189 strategic indicators.

The various indicators presented in this report are classified according to the five pillars of IRES' interpretive framework, namely:

- **Governance** : the entirety of collective action management processes, based on the direction of actors' behaviors (bottom-up), the mobilization, and the motivation of "agents" (coordinated actions, soft power).
- **Human-centric** : all developments and aspirations that contribute to reshaping Humanity, in its uniqueness as well as in its sociability, in its relationship with machines, work, and its living environment...

- **Nature-centric** : the search for a different relationship with the living world, an economy more respectful of the environment, and a lifestyle less focused on consumption; the awareness that we must now take care of nature and all living things.
- **Planeterization** : a new stage of disruptive progress, during which a state of globalism (post-globalization) coexists with a new awareness of the "living" quality of the planet, as a biosphere in which humans are merely one component.
- **Exponentiality** : the set of structural phenomena that are experiencing exponential acceleration, such as communication technologies, digitalization, demographics, economic competition, financialization, social inequalities, ...

Given the interdependencies between the dimensions of the two pillars "Nature-Centric" and "Planeterization", the related indicators have been grouped into the same section.

This new edition has been enriched by the integration of new strategic indicators related, in particular, to government effectiveness, financial opacity, risk resilience, sustainable competitiveness, green energy investment, youth perspectives, digitalization, artificial intelligence, cyber security, culture, and sport.

The number of indicators identified per pillar/sub-pillar does not presuppose the importance of the latter. It is often dependent on the availability of statistical data related to the relevant domain.

Some of these indicators have limitations that have been highlighted by several studies. According to IRES, they do not reflect the progress made by Morocco. Their inclusion in this Strategic Dashboard is solely due to the fact that these indicators are considered by international organizations to assess the country's situation.

Some indicators, with data dating back to 2016, which were included in previous editions, have been removed from the 2024 edition due to the cessation of their publication by the relevant organizations.

Information related to the various indicators has been gathered from a variety of sources, including national bodies such as the High Commission for Planning (HCP), ministerial departments, the Office des Changes, and international institutions such as the World Bank, IMF, OECD, UNDP, WHO, FAO, and CEPIL.

For each indicator, alert thresholds are determined by IRES. Recognizing that no universal method exists, the calculation of alert thresholds for each indicator has been carried out using different methods. The most commonly used methods are two in number.

The first method involves, in cases of abundant information, distinguishing three groups within the international community, each containing the same number of countries. The thresholds are thus defined by the averages of the middle and upper thirds of this community.

In cases of limited data availability, the second method used involves setting the following as thresholds:

- the averages established by international organizations, namely:
  - the UNDP for countries with medium and high human development,

- the standards set by international organizations such as the WHO and the IMF.

- the standards set by international organizations such as the WHO and the IMF.

Illustrative dashboards showing Morocco's positioning relative to these alert thresholds were generated through the compilation of the Strategic Dashboard's statistical data on the "Power BI" Business Intelligence platform, implemented by IRES in June 2023.

The analysis of this positioning and its evolution over time is the focus of this report. The number of places gained or lost in Morocco's international ranking is assessed on a constant scope basis.

The analysis of the results of the twelfth edition of the Strategic Dashboard revealed that Morocco enjoys, overall, a positioning:

- **favorable** in terms of indicators related to attachment to the national constants and identity values, universal school enrollment, combating hunger, basic living conditions (access to water, electricity, and sanitation), intangible capital per capita, fertility control, low contribution to climate change, maritime connectivity, traditional solidarity, open data, investment, anti-money laundering, global security, contribution to international peace and security, and external reputation;
- **intermediate** concerning indicators related to global governance, the rule of law, health security, efficiency of public institutions, perception of corruption, urban planning, ecological footprint, energy transition, competitiveness and global attractiveness of the country, air connectivity, the financial system, economic freedom, human development and social well-being, women's empowerment, preparedness for disruptive technologies, e-learning, digital inclusion, the knowledge economy, and institutional solidarity;

- **inadequate** when it comes to overall wealth per capita, food, water, and energy sovereignty, availability of water resources, quality of the education system, research & development, healthcare financing model, medical supervision, development of smart cities, political links, freedom of the press, and social mobility.

**In terms of the evolution over the past twenty years of Morocco's international positioning** (see the following summary table), **the main advances** are related, among others, to security and military power, reputation, soft power, the fight against hunger, poverty reduction, school enrollment and literacy, basic living conditions (access to water, electricity, and sanitation), road and rail density, life expectancy, women's emancipation, the environment (relatively low levels of greenhouse gas emissions), immunization coverage, the fight against money laundering, interpersonal trust, and institutional trust.

In contrast, **the decline in Morocco's international positioning** concerns the availability of water resources, food sovereignty, economic growth, income inequality, economic freedom, the perception of happiness, and youth prospects.

**The Kingdom's international ranking has remained stable** in relation to indicators such as attachment to the Nation, governance, perception of corruption, overall wealth per capita, intangible capital, prosperity, access to the healthcare system, medical and paramedical support, preparedness for artificial intelligence, digital transformation, and traditional solidarity.

In light of the above and with the aim of significantly improving its international positioning in the future, Morocco should undertake large-scale reforms in areas related to intangible capital, notably human capital, social capital, "knowledge and technology" capital, and institutional capital.

The Kingdom should also seriously consider the new paradigms of water, food, health, and energy sovereignty, within the context of both international and national challenges marked by the acceleration of climate change.

Mohammed Tawfik MOULINE  
Director General of the Royal Institute  
for Strategic Studies





# Summary Table

Pillars	Sub-pillars	International Positioning of Morocco	Period	Evolution of Positioning
GOVERNANCE	Organize the triple governance of existential risks, human rights, and common goods	Contribution to global governance	2014-2020	↗
		Global governance	2024	■
		Soft power	2021-2024	↗
		Global security	1998-2024	↗
		Internal security	2003-2021	↗
		Defense	1980-2024	↗
		Democracy & Rule of Law	1998-2024	→
		Economic freedom	1995-2024	↘
		Open data	2015-2023	↗
	Implement the governance X.0 compass	Inclusive growth	2017	■
		Public institution efficiency	1998-2021	→
		Public governance	1998-2024	→
		Financial system freedom	1999-2024	↗
		Perception of corruption	1998-2023	→
		Fight against money laundering	2012-2023	↗
Financial opacity		2022	■	

Legend :

↗	Progress	■	Favorable
→	Stagnation	■	Intermediate
↘	Decline	■	Unfavorable
■	Missing historical data		

Pillars	Sub-pillars	International Positioning of Morocco	Period	Evolution of Positioning
HUMAN-CENTRIC	Prepare for the future	Literacy	1994-2022	↗
		Education spending	1987-2023	→
		Universal schooling	1998-2023	↗
		Primary school student management	2007-2021	→
		School dropout	1999-2022	↘
		Vocational training	2000-2022	↘
		Quality of the education system	2001-2019	→
		Online learning	2022-2024	↗
		Higher education	2001-2022	↗
		Research & Development	2010-2018	→
		Knowledge economy & Innovation	2007-2024	↗
		Scientific and technical production	1998-2020	↗
	Globalize human rights	Human development	1960-2023	↗
		Women's empowerment	2000-2023	↗
		Health security	2021	Missing historical data
	Improve the quality of life	Prosperity and well-being	2009-2023	→
		Life satisfaction	2023	Missing historical data
		Social progress	2013-2024	↗

Legend :

- ↗ Progress
- Stagnation
- ↘ Decline
- Missing historical data
- Favorable
- Intermediate
- Unfavorable

Pillars	Sub-pillars	International Positioning of Morocco	Period	Evolution of Positioning
HUMAN-CENTRIC	Improve the quality of life	Life expectancy	1962-2020	↗
		Access to healthcare	1995-2021	→
		Basic health: vaccination	1980-2022	↗
		Medical support	1960-2022	→
		Maternal and infant mortality	1980-2022	↘
		Suicide	2000-2019	↗
		Hunger prevention	2000-2023	↗
		Poverty	1999-2020	↘
		Living conditions: access to water and electricity	1995-2022	↗
		Living conditions: sanitation and infrastructure	1994-2023	↗
		Road and rail density	1965-2021	↗
		Road safety	2000-2022	↗
		Strengthen social bonds and restore trust	Attachment to the nation	2011-2023
	Importance of family in personal life		2011-2023	→
	Importance of religion in personal life		2011-2023	→
	Political ties		2011-2023	↗
	Interpersonal trust		2011-2023	↗
	Institutional trust		2011-2023	↗
	Institutional solidarity		2001-2016	↗
	Traditional solidarity	2011-2023	→	

Legend :

↗	Progress	█ Favorable
→	Stagnation	█ Intermediate
↘	Decline	█ Unfavorable
█	Missing historical data	

Pillars	Sub-pillars	International Positioning of Morocco	Period	Evolution of Positioning
NATURE-CENTRIC & PLANETARIZATION	Promote sustainable management of natural resources	Availability of water resources	1967-2023	↘
		Freshwater withdrawal for agriculture	1998-2022	→
		Endemism	2022	■
		Exposure to natural disasters	2000-2023	↘
	Sovereignty	Food sovereignty	1963-2022	↘
		Energy sovereignty	1999-2024	↗
	Reduce the ecological footprint	Ecological footprint per capita	1961-2022	↘
		Natural capital: soils	1961-2021	↘
	Reduce the impact of the Anthropocene	Contribution to climate change (greenhouse gas emissions)	2005-2024	↗
		Cost of environmental degradation as a percentage of GDP	2000-2014	→
	Limit artificialization	Urbanization & Metropolization	1988-2023	↗
	Transition from globalization to globality	Circular mobility	1990-2024	→

Legend :

- ↗ Progress
- Stagnation
- ↘ Decline
- Missing historical data

Favorable

Intermediate

Unfavorable

Pillars	Sub-pillars	International Positioning of Morocco	Period	Evolution of Positioning
<b>EXPONENTIALITY</b>	Master technologies	Readiness for disruptive technologies	2003-2023	→
		Readiness for Artificial Intelligence	2023-2024	↘
		Robotic density	2017	Missing historical data
		Digital quality of life	2003-2024	↗
		Smart cities	2019-2024	→
		Intellectual property	1998-2021	↗
		Cybersecurity	2014-2024	→
	Humanize the economy	Inequalities	1991-2021	↗
		Employment and unemployment	1999-2023	→
		Economic financing	1980-2023	↗
	Guarantee and preserve the stability of the macro-economic framework	Economic growth	1999-2023	↘
		Inflation	1999-2023	→
		Public finances	1999-2023	→
		External accounts	1999-2023	→
		Investment	1998-2023	↗
Banking		1999-2022	↗	

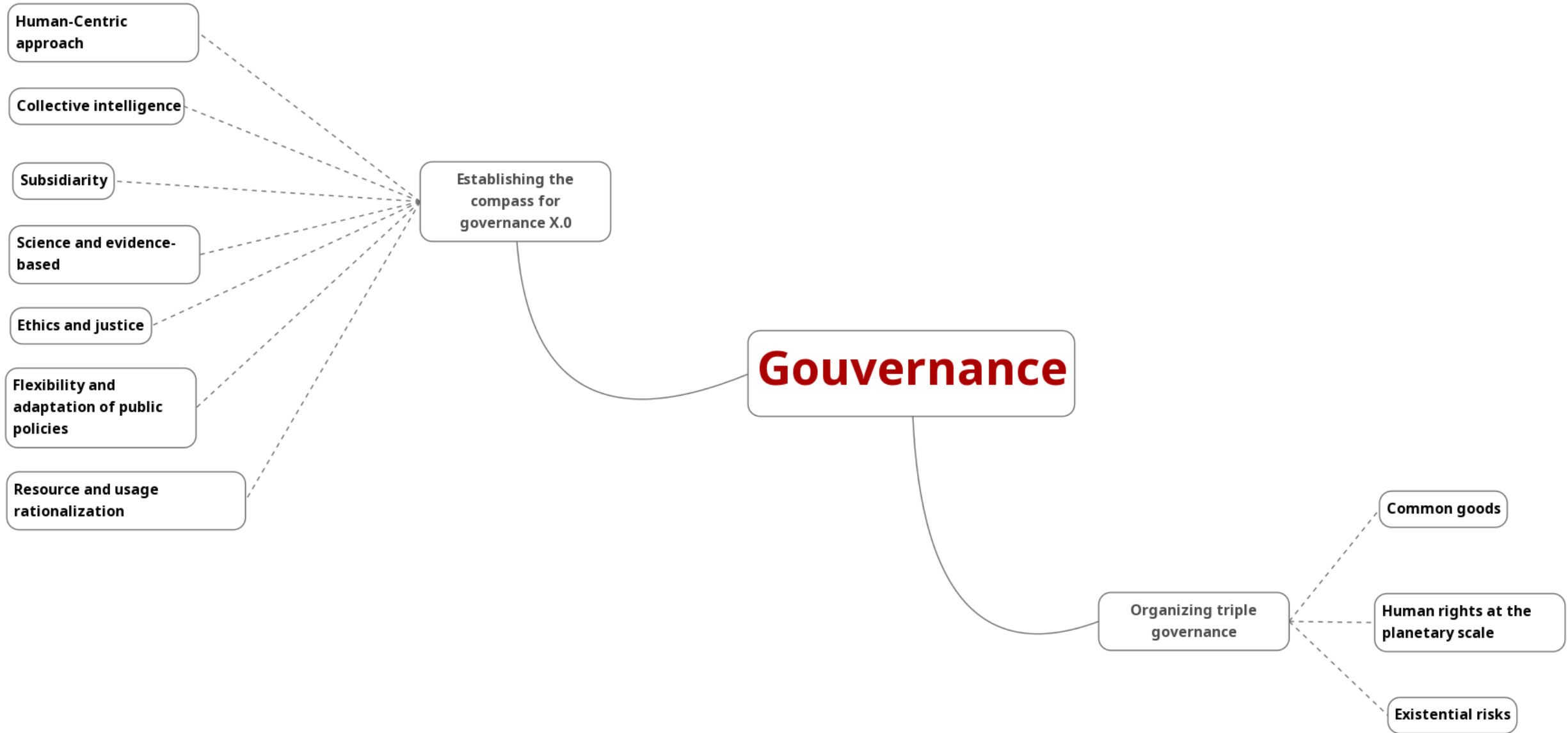
Legend :

↗	Progress	<span style="display:inline-block; width:15px; height:15px; background-color: #28a745; border:1px solid black;"></span> Favorable
→	Stagnation	<span style="display:inline-block; width:15px; height:15px; background-color: #ffc107; border:1px solid black;"></span> Intermediate
↘	Decline	<span style="display:inline-block; width:15px; height:15px; background-color: #dc3545; border:1px solid black;"></span> Unfavorable
Missing historical data		<span style="display:inline-block; width:15px; height:15px; background-color: #cccccc; border:1px solid black;"></span> Missing historical data

Pillars	Sub-pillars	International Positioning of Morocco	Period	Evolution of Positioning
<b>EXPONENTIALITY</b>	Strengthen global competitiveness and improve attractiveness	Global wealth per capita	2000-2022	→
		Intangible capital as a percentage of global wealth	2000-2018	→
		Global competitiveness of the country	1995-2023	↗
		Maritime and air connectivity	2004-2022	↗
		Economic transformation	2023	
		Economic complexity	2016-2021	↗
		Financial system	1999-2023	↗
		Global attractiveness of the country	1995-2024	↗
		Reputation	2011-2024	↗

Legend :

↗	Progress	<span style="display: inline-block; width: 15px; height: 15px; background-color: #28a745; border: 1px solid black;"></span> Favorable
→	Stagnation	<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffc107; border: 1px solid black;"></span> Intermediate
↘	Decline	<span style="display: inline-block; width: 15px; height: 15px; background-color: #dc3545; border: 1px solid black;"></span> Unfavorable
<span style="display: inline-block; width: 15px; height: 15px; background-color: #cccccc; border: 1px solid black;"></span>	Missing historical data	



# Governance

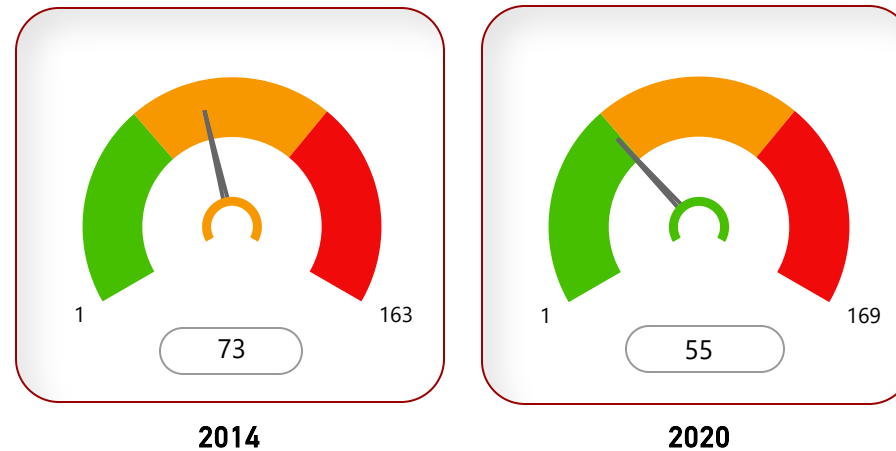
Organize the triple governance of existential risks, human rights, and common goods

## Contribution to Global Governance

### Good Country Index

Source: Calculations IRES\_ The Good Country

A notable improvement in Morocco's international positioning in global governance participation. This confirms the Kingdom's status as a credible partner on the international stage and its commitment to peace and security, as well as its involvement in promoting sustainable development in its region and beyond. Notably, Morocco is the 11th largest contributor globally to United Nations peacekeeping operations.





# Governance

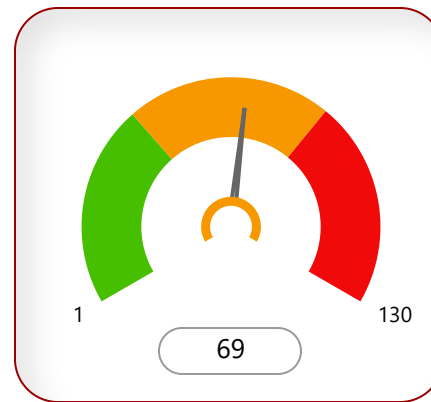
Organize the triple governance of existential risks, human rights, and common goods

## Global Governance

### Global Resilience Index

Source: Calculations IRES\_ FM Global

An intermediate positioning for Morocco in this indicator, considering its average resilience to natural disaster risks (fires, floods, earthquakes) and its moderate vulnerability regarding access to supply chains.



2024

# Governance

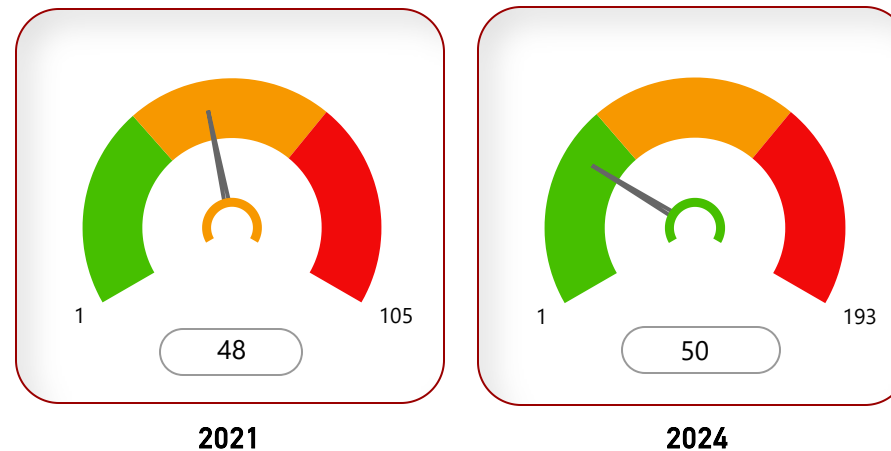
Organize the triple governance of existential risks, human rights, and common goods

## Soft Power

### Global Soft Power Index

Source: Calculations IRES\_ BrandFinance

An improvement in Morocco's ranking on this index, reflecting progress made by the Kingdom in gradually building its status as an attractive power. Regionally, Morocco ranked first in the Maghreb and eighth in the Middle East and North Africa in 2024.



# Governance

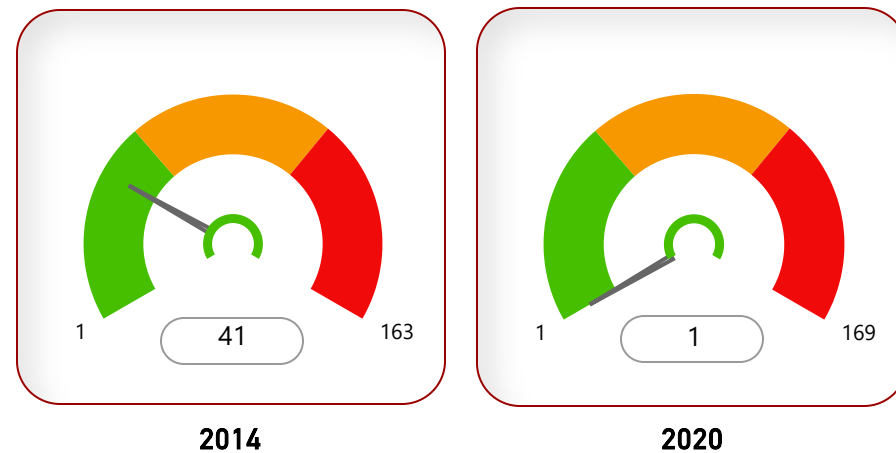
Organize the triple governance of existential risks, human rights, and common goods

## Global Security

### International Peace and Security Index

Source: Calculations IRES\_ The Good Country

An exceptional positioning of Morocco as a global leader in promoting international peace and security. This prominence is mainly demonstrated by the significant number of peacekeeping troops deployed by the Kingdom in UN missions and its achievements in cybersecurity.



# Governance

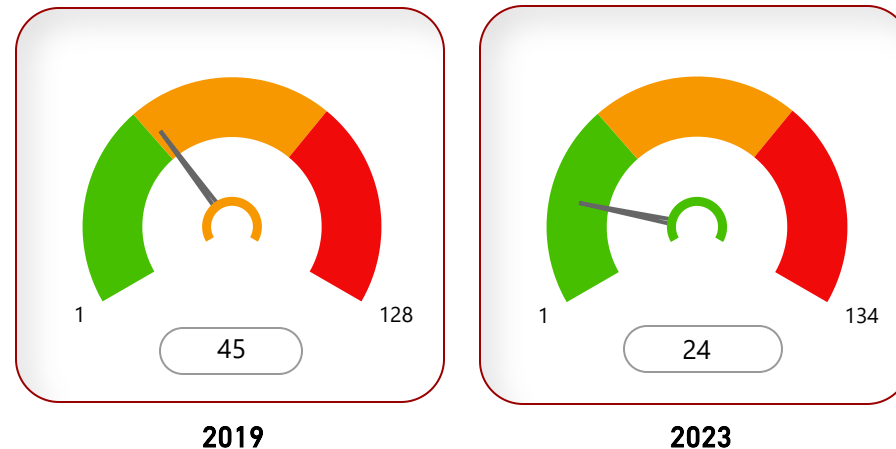
Organize the triple governance of existential risks, human rights, and common goods

## Global Security

### World's Safest Countries Index

Source: Calculations IRES \_ Global Finance

A positive evolution in Morocco's ranking, now among the 25 safest countries globally and the first in Africa. This upward trend, observed between 2019 and 2023, is primarily due to its political and security stability.



# Governance

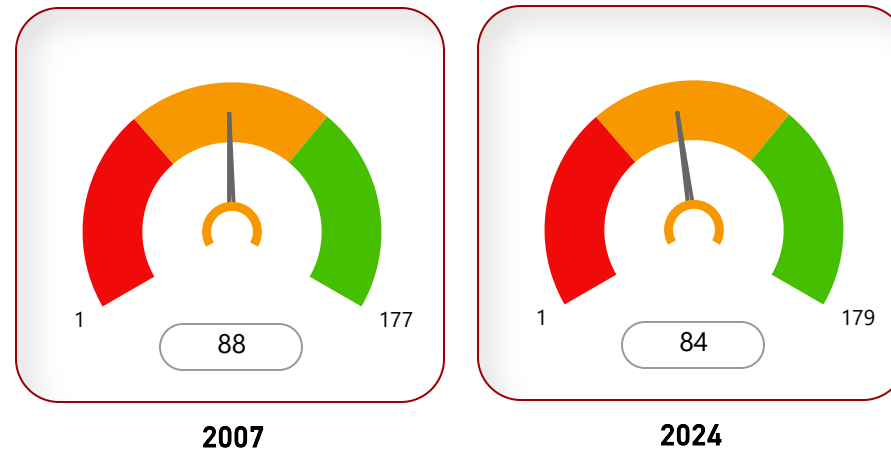
Organize the triple governance of existential risks, human rights, and common goods

## Global Security

### Fragile States Index

Source: Calculations IRES\_ Fund for Peace

An intermediate positioning of Morocco on this index, hindered by factors such as increased migration flows, brain drain, and economic development inequalities, according to the Think Tank "Fund For Peace."



# Governance

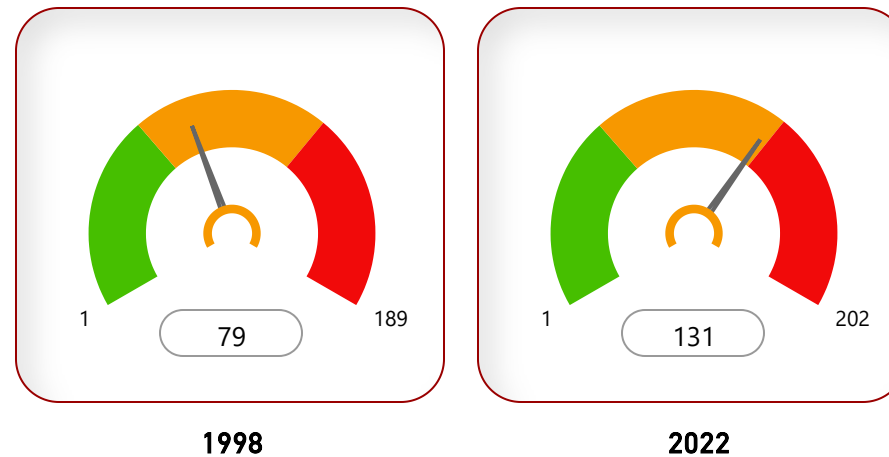
Organize the triple governance of existential risks, human rights, and common goods

## Global Security

### Political Stability and Absence of Violence and Terrorism Index

Source: Calculations IRES \_ World Bank

A decline in Morocco's international position on this index between 1998 and 2022, mainly due to escalating transnational threats in the Sahel, particularly terrorism and organized crime.



# Governance

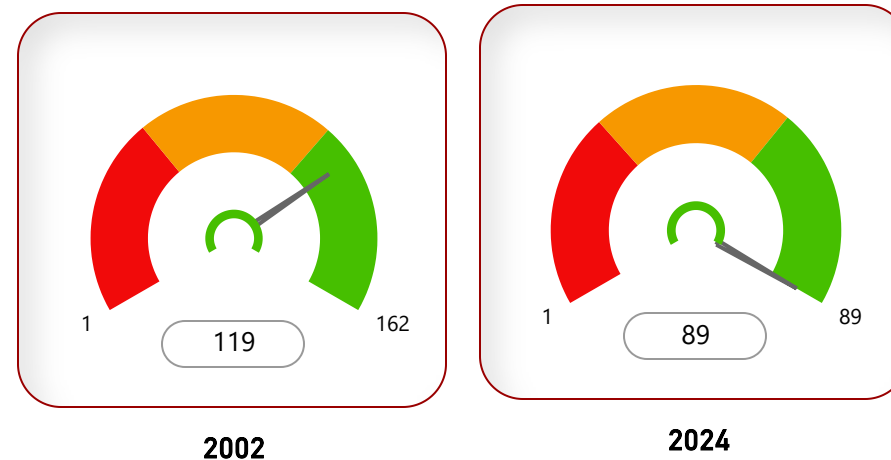
Organize the triple governance of existential risks, human rights, and common goods

## Global Security

### Global Terrorism Index

Source: Calculations IRES \_ Institute for Economics and Peace

A notable improvement in Morocco's international ranking on this index, reflecting the Kingdom's active commitment to combating terrorism and the efforts made by security authorities, including the ongoing dismantling of terrorist cells. Furthermore, Morocco's selection as a partner for the establishment of the United Nations Counter-Terrorism and Training Office in Africa — the first of its kind on the continent — attests to the trust and esteem enjoyed by its National Strategy to Combat Terrorism and Violent Extremism, under the enlightened leadership of His Majesty King Mohammed VI.



# Governance

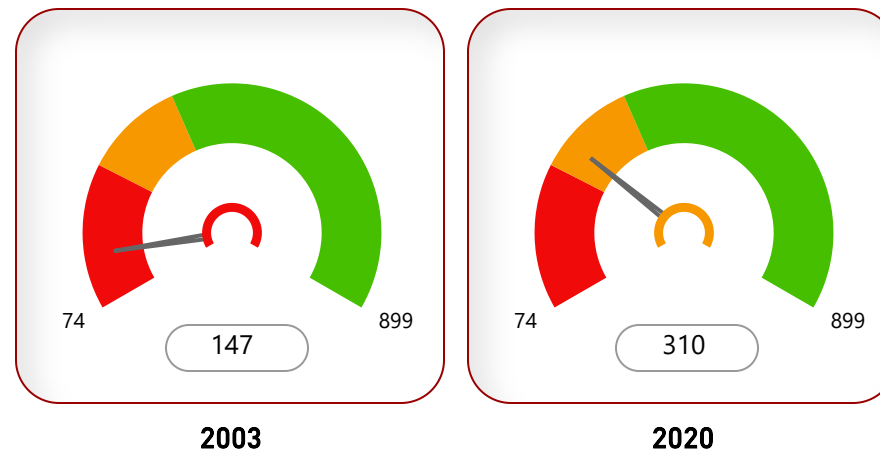
Organize the triple governance of existential risks, human rights, and common goods

## Internal Security

### Number of Police Officers per 100,000 Inhabitants

Source: Calculations IRES\_ UNODC and DGSN Data

An increase in the number of highly trained police officers to address new security challenges, committed to protecting the nation and its citizens, and recognized for their expertise internationally. The focus should remain on strengthening human resources in public security to address evolving forms of crime and counter terrorist threats, particularly in a region marked by significant instability.





# Governance

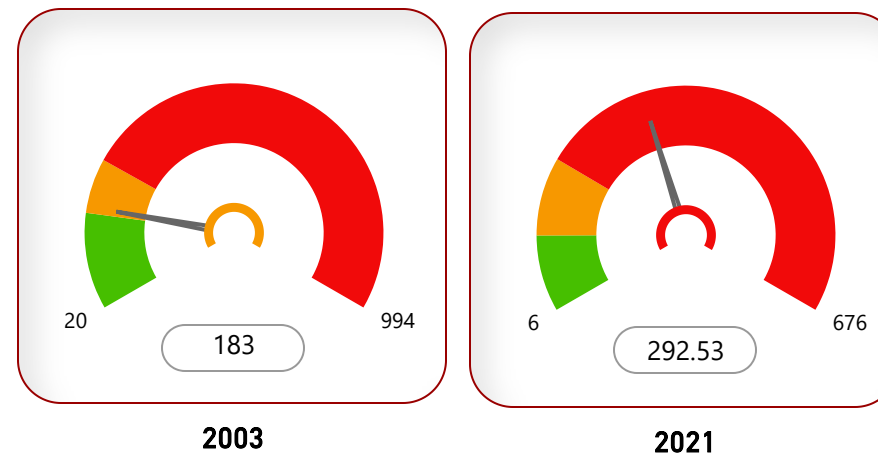
Organize the triple governance of existential risks, human rights, and common goods

## Internal Security

### Number of Detainees per 100,000 Inhabitants

Source: Calculations IRES \_ UNODC Data and General Delegation for Prison Administration and Reintegration

A recent increase in Morocco's prison population due to the rise in pretrial detention. The adoption of alternative sentencing, whose draft law was approved in October 2023, is expected to help reduce prison overcrowding.



# Governance

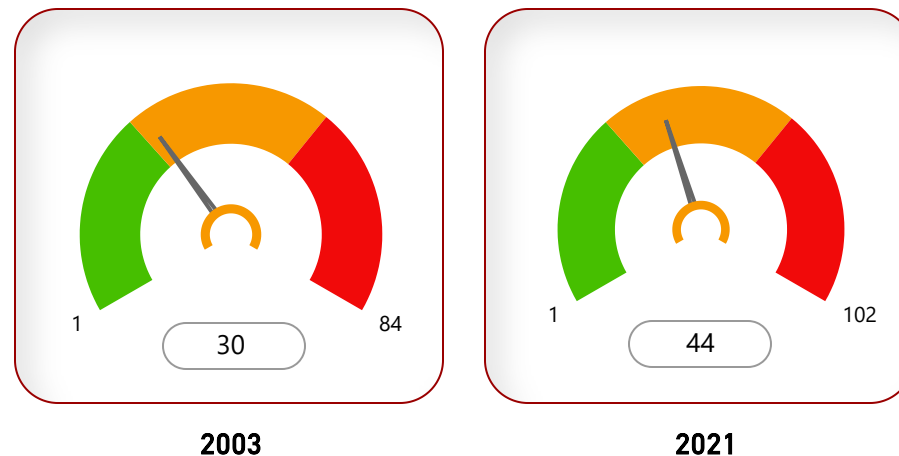
Organize the triple governance of existential risks, human rights, and common goods

## Internal Security

### Intentional Homicide Rate per 100,000 Inhabitants (Ranking)

Source: Calculations IRES\_ UNODC Data

A decline in Morocco's ranking on this index between 2003 and 2021, mainly due to rising psychotropic drug use, deteriorating mental health, and an increase in domestic homicides, according to the United Nations Office on Drugs and Crime.



# Governance

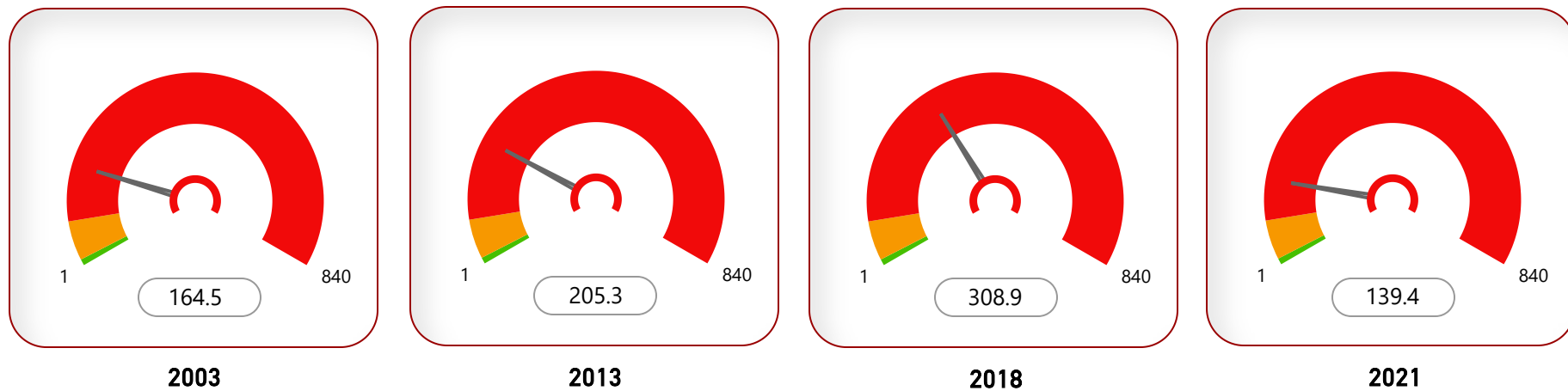
Organize the triple governance of existential risks, human rights, and common goods

## Internal Security

### Number of Assaults per 100,000 Inhabitants

Source: Calculations IRES\_ UNODC Data

An 87% increase in assault rates between 2003 and 2018, attributed, among other factors, to rising psychotropic drug use, relatively unregulated urbanization, and growing inequalities. However, the decline observed in 2021 is the result of measures taken by the General Directorate of National Security to combat this issue, including the creation and modernization of community policing units nationwide.



# Governance

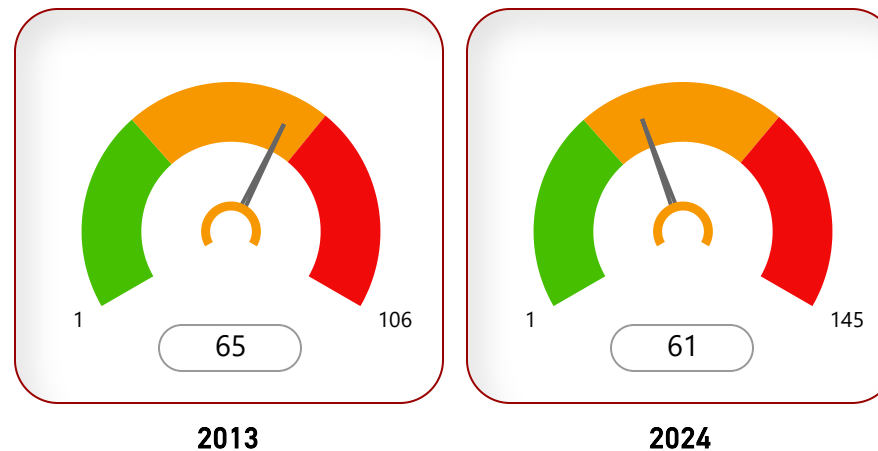
Organize the triple governance of existential risks, human rights, and common goods

## Defense

### Military Power Index

Source: Calculations IRES\_ Global Firepower

A positive evolution in Morocco's international ranking in terms of military power, due to a military strategy focused on modernizing and developing advanced defense systems. Additionally, the Kingdom's ongoing establishment of its own military industry is expected to enhance its sovereignty in this area. According to the "Global Firepower" institute, Morocco ranks 61st globally among 145 countries and seventh in Africa in 2024 for its military capabilities.



# Governance

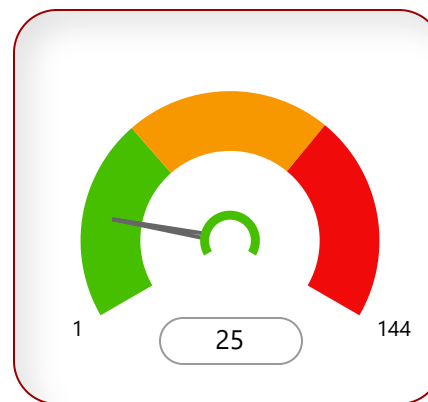
Organize the triple governance of existential risks, human rights, and common goods

## Defense

### Naval Military Power Index

Source: Calculations IRES\_ Wisevoter

A favorable ranking for Morocco on the naval power index, attributed to the strengthening of its naval capabilities, with 121 military ships, according to the American platform "Wisevoter." The Kingdom ranks 25th globally and fourth in Africa. As part of the implementation of the Royal Initiative for Atlantic Africa, further development of submarine capabilities would be beneficial.



2023

# Governance

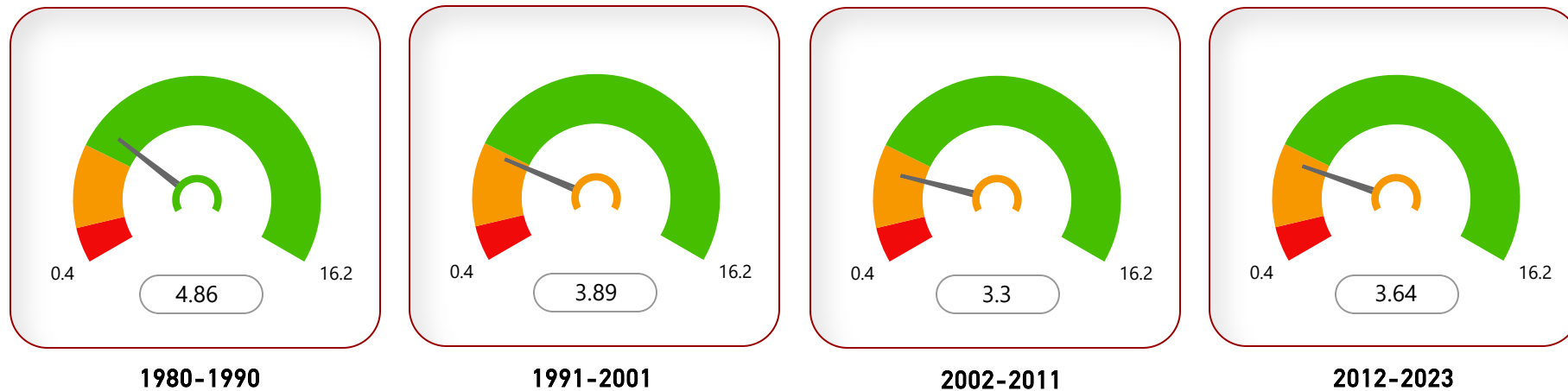
Organize the triple governance of existential risks, human rights, and common goods

## Defense

### Military Expenditures (% of GDP)

Source: Calculations IRES\_ SIPRI

Significant military expenditures, driven by the need to modernize and strengthen Morocco's defense capabilities, safeguard its territorial integrity, and counter potential threats in an unstable regional context. Notably, the Kingdom has recently initiated the development of a military and defense industry, considering the new paradigm of strategic sovereignty.



# Governance

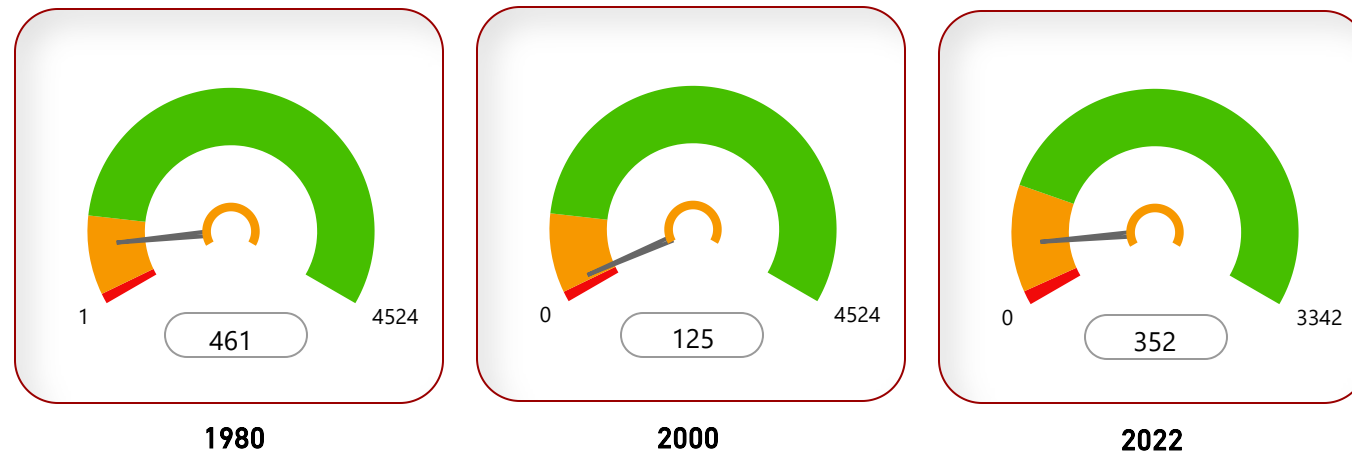
Organize the triple governance of existential risks, human rights, and common goods

## Defense

### Arms Imports (in Million USD)

Source: Calculations IRES\_ SIPRI

A recent increase in Morocco's arms imports, linked to the unstable regional geopolitical context and heightened transnational threats, including terrorism and organized crime.



# Governance

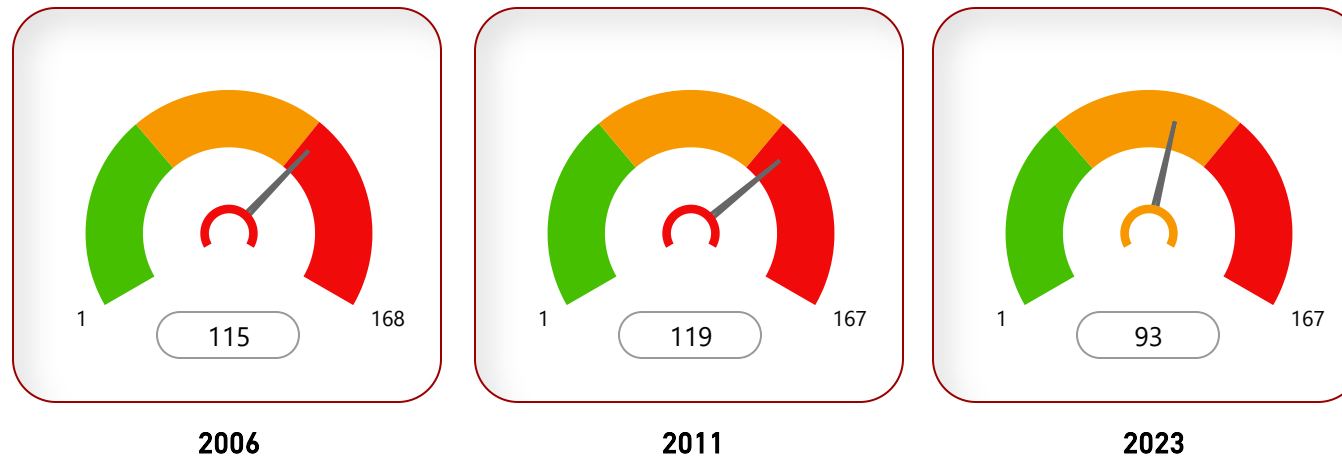
Organize the triple governance of existential risks, human rights, and common goods

## Democracy and Rule of Law

### Democracy Index

Source: Calculations IRES\_ Economist Intelligence Unit: Our World In Data

A marked improvement in Morocco's ranking on the democracy index, reflecting progress in building a modern democratic society since the adoption of the 2011 Constitution. In 2023, Morocco was ranked third in the "North Africa and Middle East" region.





# Governance

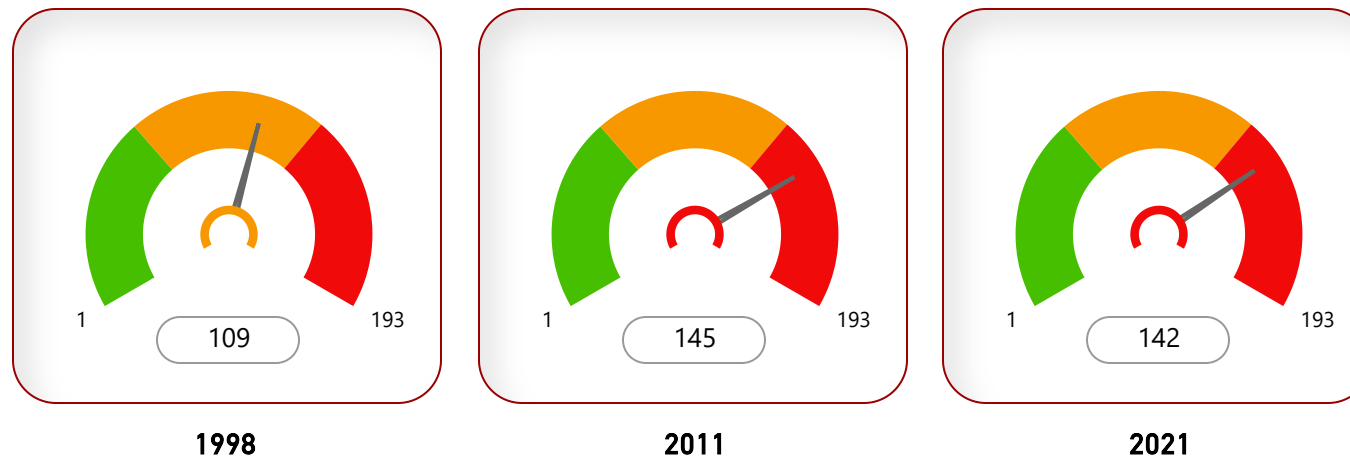
Organize the triple governance of existential risks, human rights, and common goods

## Democracy and Rule of Law

### Voice and Accountability Index

Source: Calculations IRES \_ World Bank

Morocco's international positioning on this index does not reflect the achievements of the 2011 Constitution in guaranteeing citizens' fundamental rights and expanding spaces for freedom of expression.



# Governance

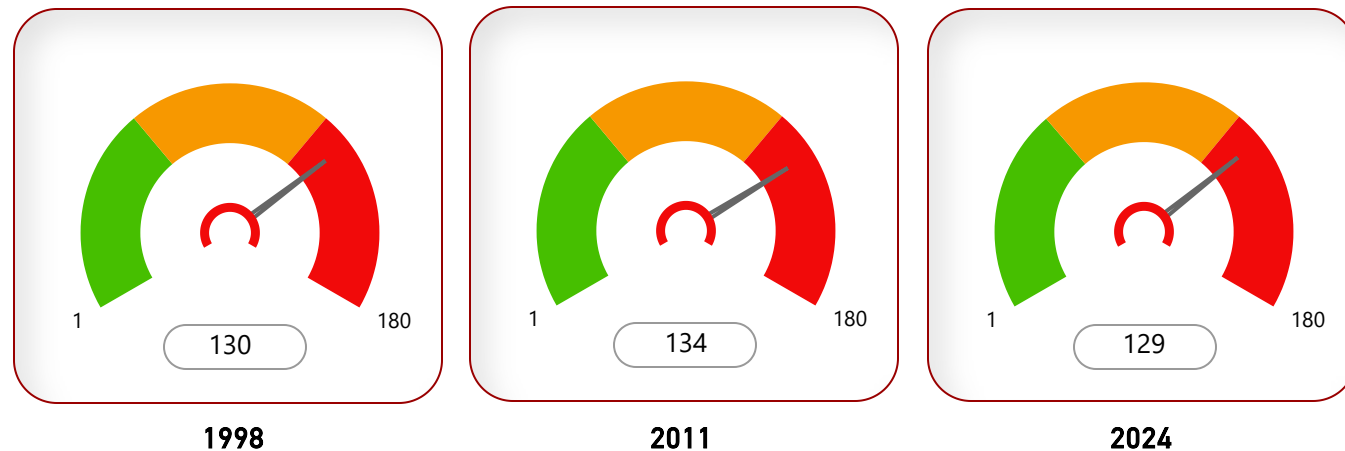
Organize the triple governance of existential risks, human rights, and common goods

## Democracy and Rule of Law

### Freedom of the Press Index

Source: Calculations IRES\_ Freedom House

An inappropriate international ranking for Morocco under this index, ignoring progress made in simplifying access to media information through the development of digital media, as well as in strengthening press freedom.



# Governance

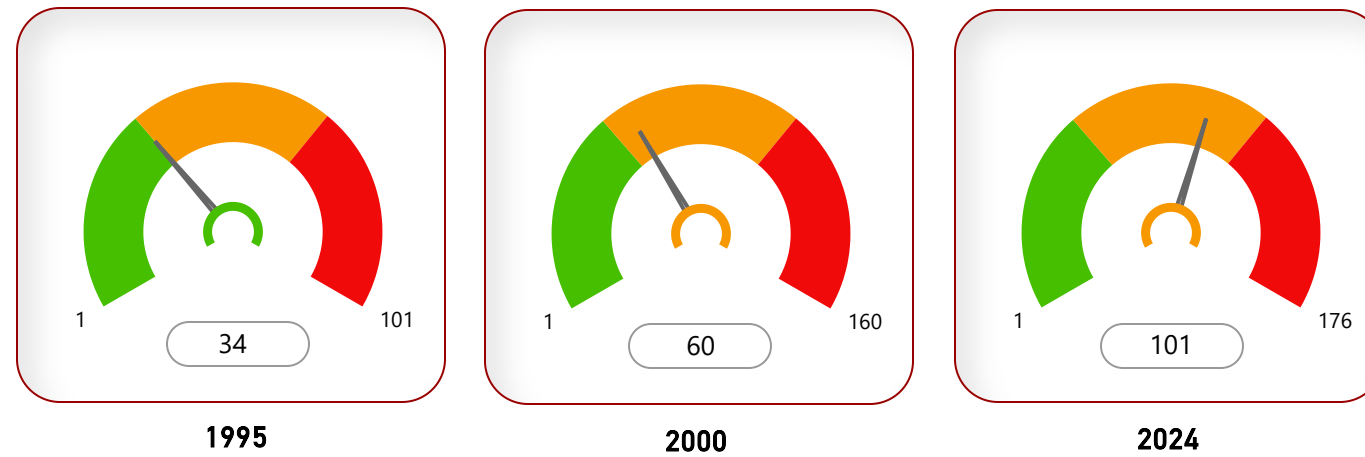
Organize the triple governance of existential risks, human rights, and common goods

## Economic Freedom

### Global Economic Freedom Index

Source: Calculations IRES\_ The Heritage Foundation

A decline in Morocco's international ranking on the global economic freedom index, influenced by delays in combating corruption, according to "The Heritage Foundation." Regionally, Morocco ranked first among its Maghreb neighbors and seventh in the Middle East and North Africa in 2024.



# Governance

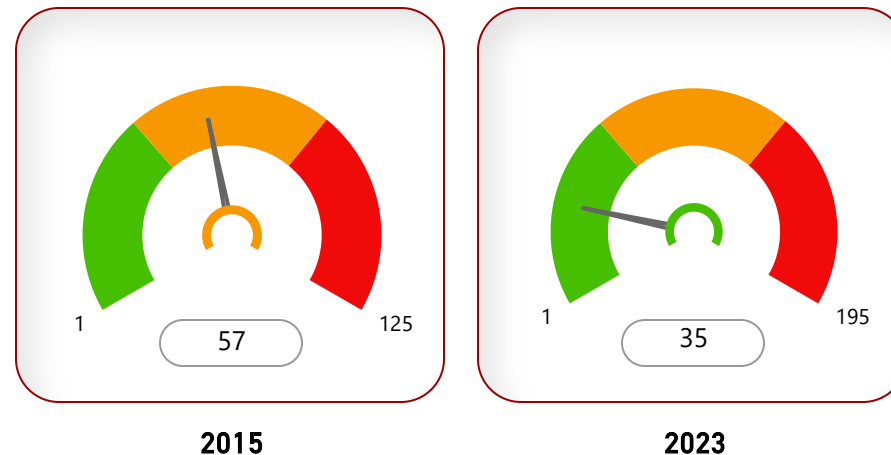
Organize the triple governance of existential risks, human rights, and common goods

## Open Data

### Open Data Inventory (ODIN) Index

Source: Calculations IRES\_ Open Data Watch

A favorable ranking for Morocco under this index, thanks to the 2011 launch of an open data platform, the first of its kind in Africa. To consolidate this achievement, the Kingdom would benefit from implementing a dedicated data openness strategy that aligns with the legal framework, particularly legislation on the right of access to information and personal data protection.



# Governance

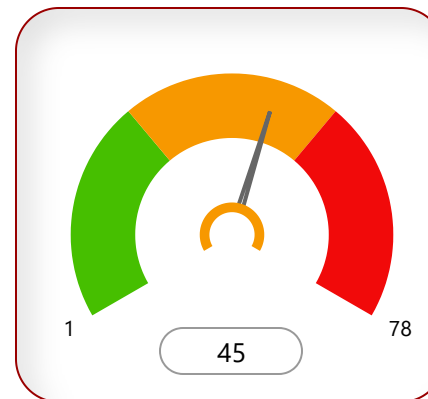
## Implement the governance X.0 compass

### Inclusive Growth

#### Inclusive Growth Index

Source: Calculations IRES\_ World Economic Forum

An intermediate ranking for Morocco under this index, which assesses developing countries' levels of inclusive growth. The Kingdom performs well in terms of responsibility and intergenerational equity. However, its ranking is hindered by the relatively low income levels of its population and the persistence of multidimensional poverty, according to the World Economic Forum.



2017

# Governance

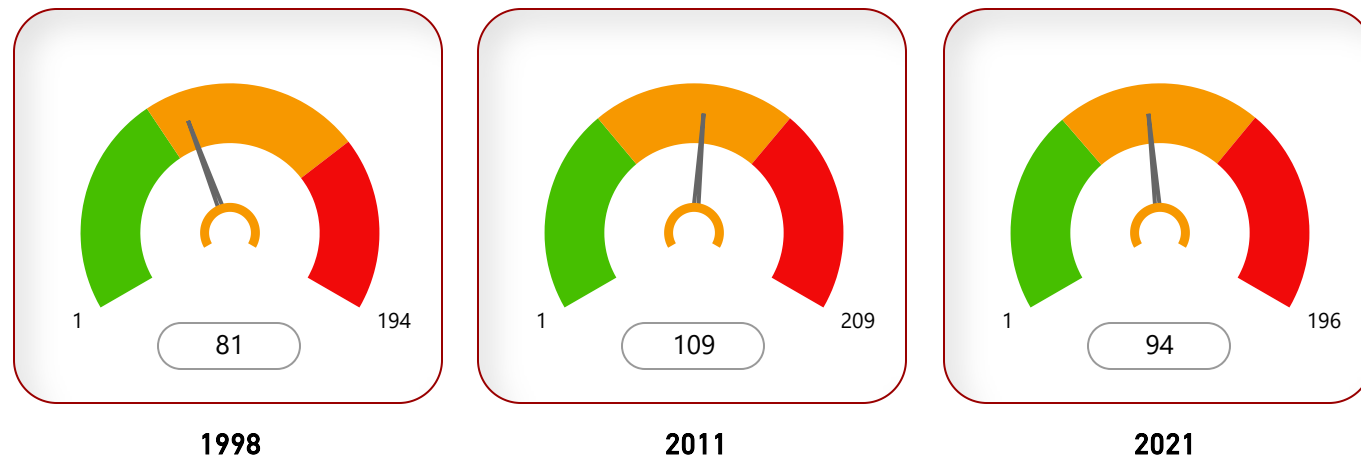
## Implement the governance X.0 compass

### Public Institution Efficiency

#### Government Effectiveness Index

Source: Calculations IRES\_ World Bank

An intermediate ranking for Morocco in recent years on the government effectiveness index. This position is largely attributed to structural challenges in the rapid operationalization of public policies.



# Governance

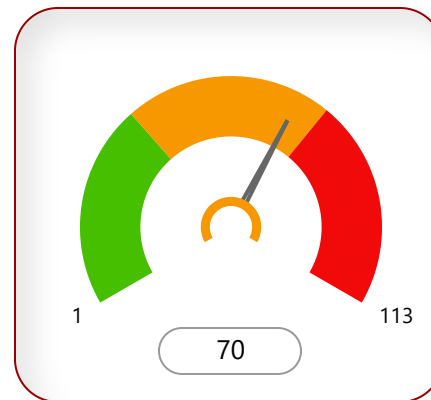
## Implement the governance X.0 compass

### Public Governance

#### Good Government Index

Source: Calculations IRES\_ Chandler Institute of Governance

An intermediate ranking for Morocco in this indicator, due to the underperformance in the components related to "institutional effectiveness," coordination in the integrated implementation of public policies, and the quality of digital services, according to the CHANDLER institute.



2024

# Governance

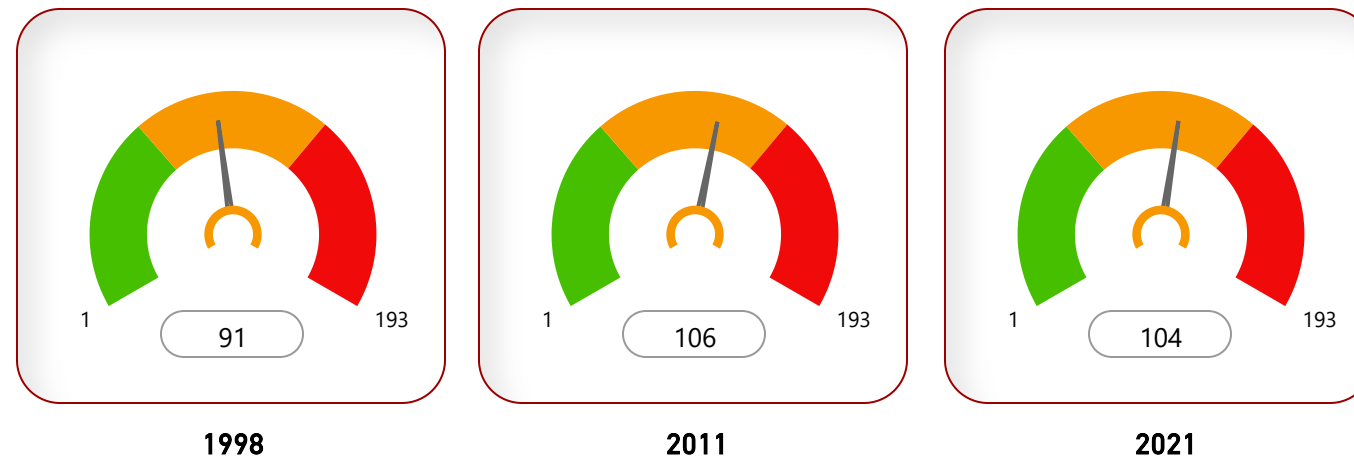
## Implement the governance X.0 compass

### Public Governance

#### Regulatory Quality Index

Source: Calculations IRES\_ World Bank

An intermediate international ranking for Morocco on this index, which remained almost stable between 2011 and 2021, despite measures to support the private sector, improve the investment incentive framework, and simplify administrative procedures.





# Governance

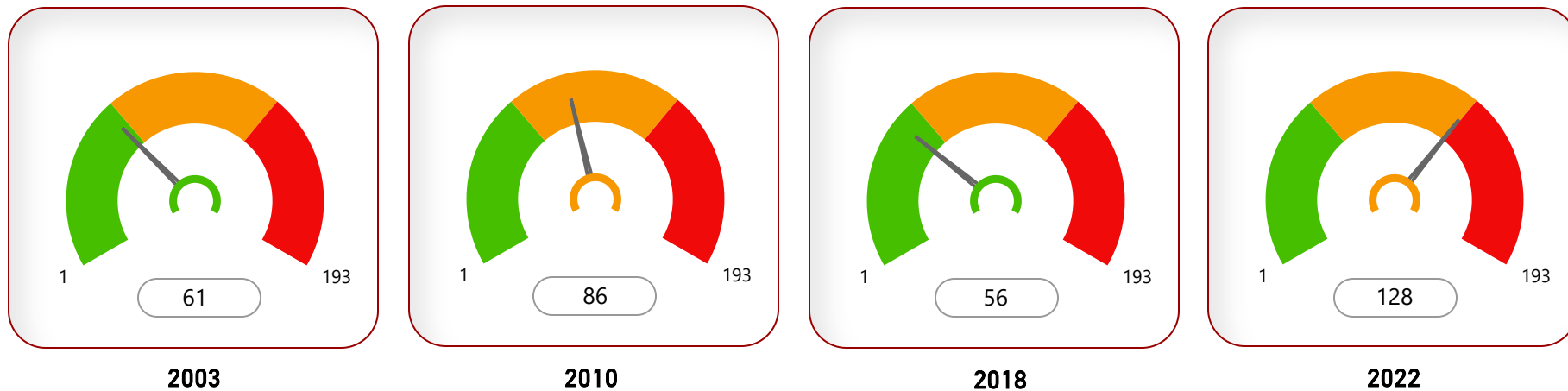
## Implement the governance X.0 compass

### Public Governance

#### E-Participation Index

Source: Calculations IRES\_ United Nations – Department of Economic and Social Affairs

Fluctuations between 2003 and 2022 in Morocco's international ranking for this index, reflecting inconsistencies in initiatives by various governments to foster citizen involvement in public decision-making processes, notably through the dissemination of information and consultation efforts.



# Governance

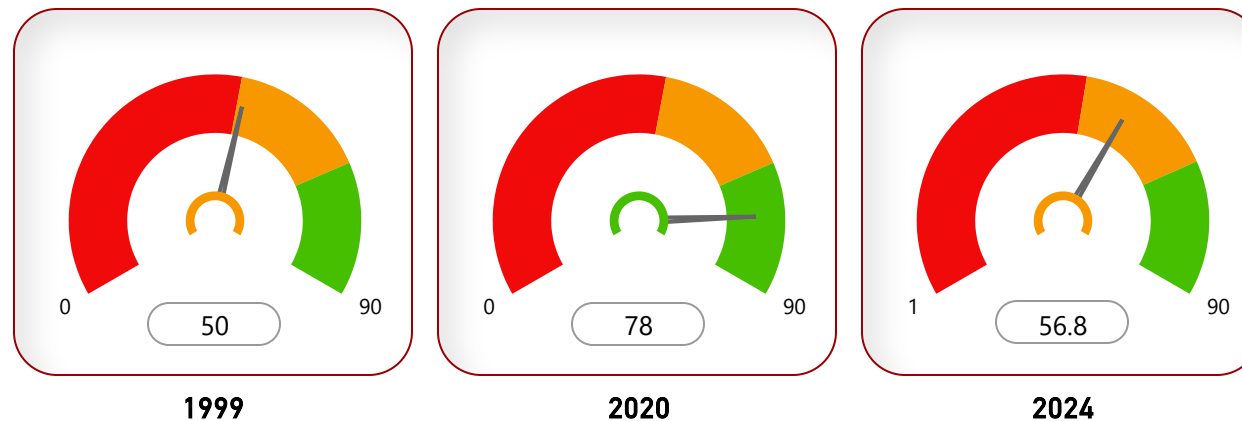
## Implement the governance X.0 compass

### Financial System Freedom

#### Financial System Freedom Index (Score)

Source: Calculations IRES \_ The Heritage Foundation

Notable improvements in financial system governance, particularly between 1999 and 2020, due to multiple reforms initiated since the early 1990s. These reforms fostered the international development of Moroccan banks, notably in Africa. However, Morocco's ranking declined in 2024 due to underperformance in components of this index related to "judicial effectiveness," "fiscal health," and "property rights," according to the American think tank "The Heritage Foundation."



# Governance

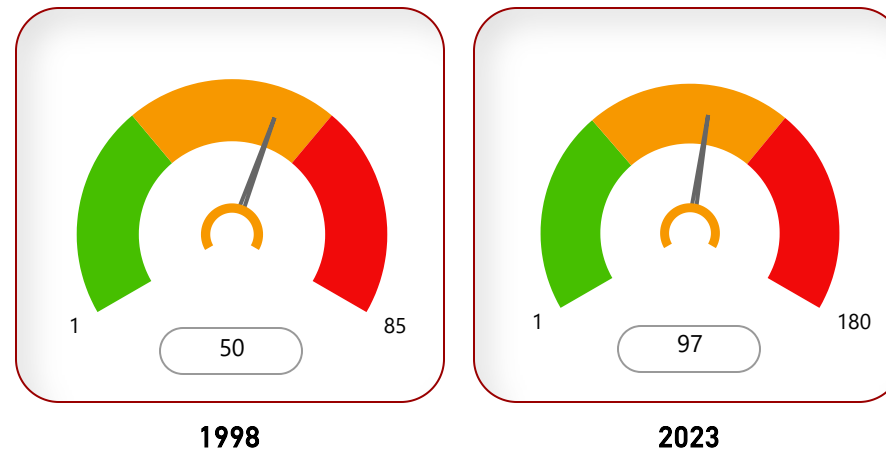
## Implement the governance X.0 compass

### Corruption Perception

#### Corruption Perception Index

Source: Calculations IRES \_ Transparency International

An intermediate ranking for Morocco under this index, which has remained nearly stable for 25 years. Corruption in the country affects both citizens' trust and the business environment. According to three editions of the national survey on social cohesion conducted by IRES in 2011, 2016, and 2023, corruption is identified as one of the main obstacles to harmonious coexistence. Accelerating the implementation of digital transformation projects and public administration modernization should improve the Kingdom's international ranking under this index in the future.



# Governance

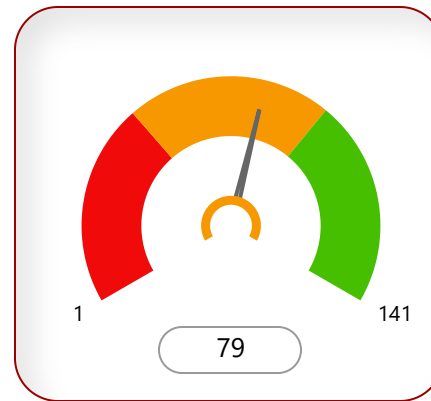
## Implement the governance X.0 compass

### Financial Opacity

#### Financial Secrecy Index

Source: Calculations IRES \_ Tax Justice Network

An intermediate ranking for Morocco according to this index, due to the underperformance in combating tax evasion. Indeed, annual losses incurred by Morocco due to tax evasion practices, particularly by multinational companies, were estimated at 919.5 million US dollars, or 0.7% of GDP, according to a report published in 2023 by the "Tax Justice Network".



2022

# Governance

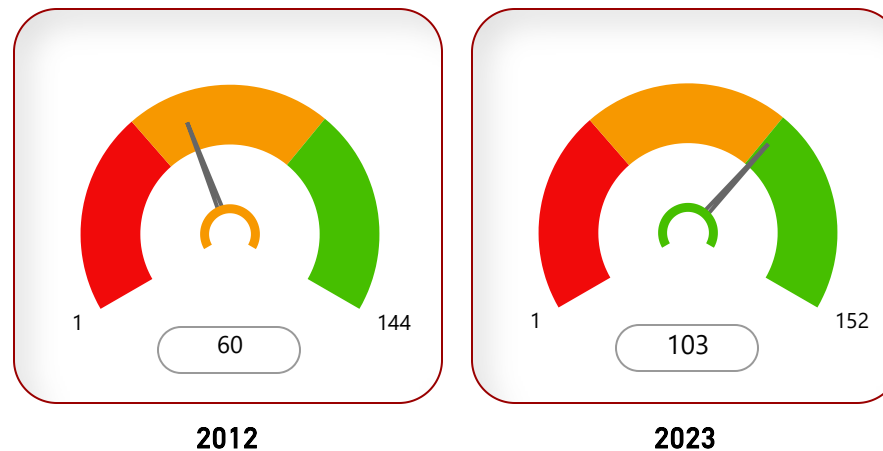
## Implement the governance X.0 compass

### Anti-Money Laundering

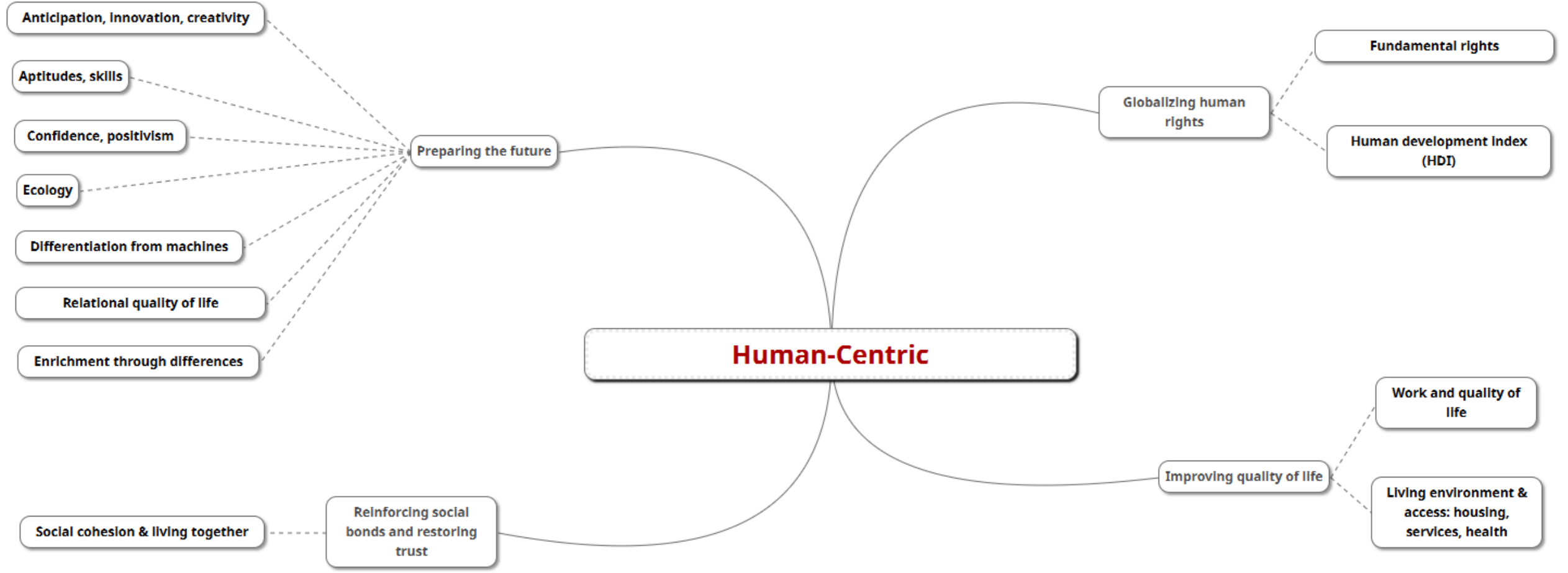
#### Anti-Money Laundering Index (Basel AML Index)

Source: Calculations IRES \_ Basel Institute of Governance

A remarkable improvement in Morocco's international ranking under this index, thanks to action plans implemented by the National Financial Intelligence Authority (ANRF) in compliance with Financial Action Task Force (FATF) standards for combating money laundering and terrorist financing. The Kingdom was removed from the FATF's grey list of countries under enhanced surveillance in February 2023.







# Human-centric

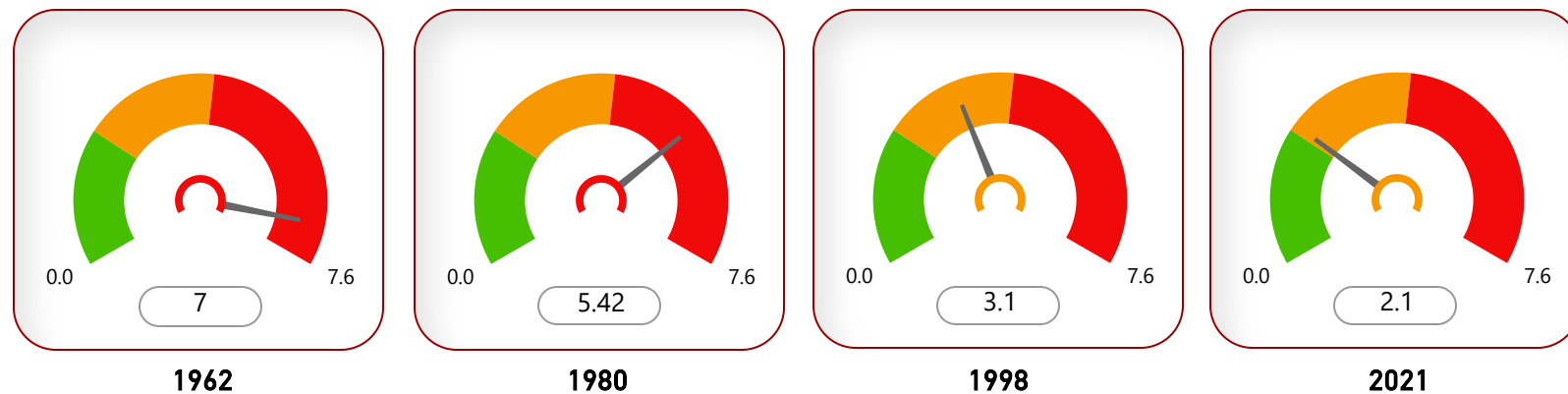
Prepare for the future

## Fertility Control

### Total Fertility Rate

Source: Calculations IRES \_ Ministry of Health; HCP; WHO

A demographic transition that is completing with a significant decline in fertility, measured by the total fertility rate, due to the combined effects of the decrease in the age of first marriage and increasing use of contraception. The fertility level reached in 2021 corresponds to the replacement level (between 2.05 and 2.1 children per woman according to the World Health Organization).





# Human-centric

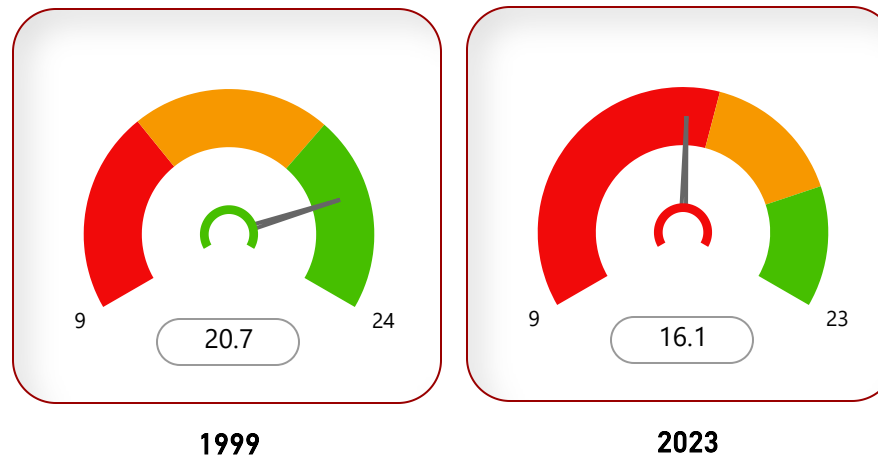
## Prepare for the future

### Youth

#### Youth Population Share (%)

Source: Calculations IRES\_ UN Population Division

A decline in fertility and changes in the age of first marriage for women have led to a narrowing of the base of the age pyramid, resulting in a progressive decrease in the proportion of young people.



# Human-centric

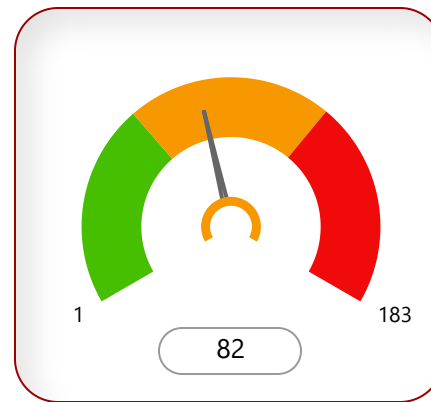
Prepare for the future

Youth Future Prospects

**Global Youth Development Index**

*Source: Calculations IRES\_ The Commonwealth*

An intermediate ranking for Morocco in this index, explained by average scores in the subcomponents "employment opportunities" and "political and civic participation of youth," according to the 2023 Commonwealth report on global youth development.



**2023**

# Human-centric

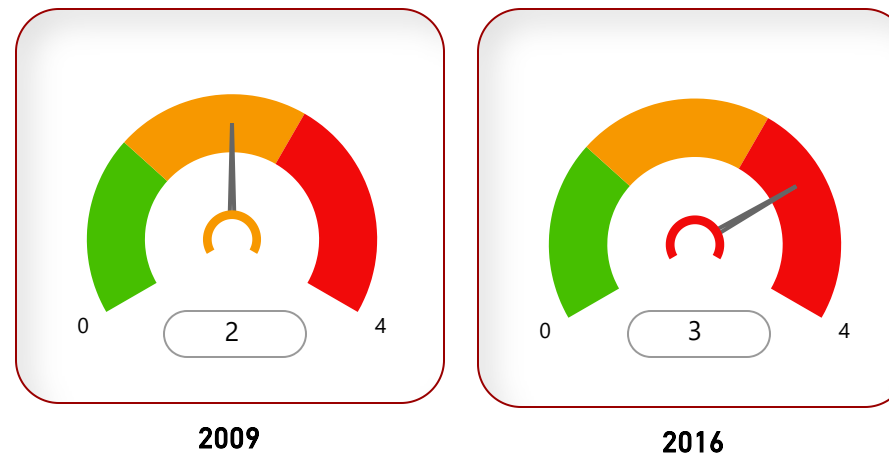
## Prepare for the future

### Youth Future Prospects

#### Youth Future Prospects

(0 : très tournées vers l'intérieur du pays ; 4 : très tournées vers l'extérieur du pays) *Source: Calculations IRES\_ CEPII*

Moroccan youth, particularly NEETs (Not in Education, Employment, or Training), feel excluded from the potential benefits of change and do not see a better future on the horizon, leading to their disillusionment and desire to leave Morocco in search of a hypothetical well-being elsewhere.



# Human-centric

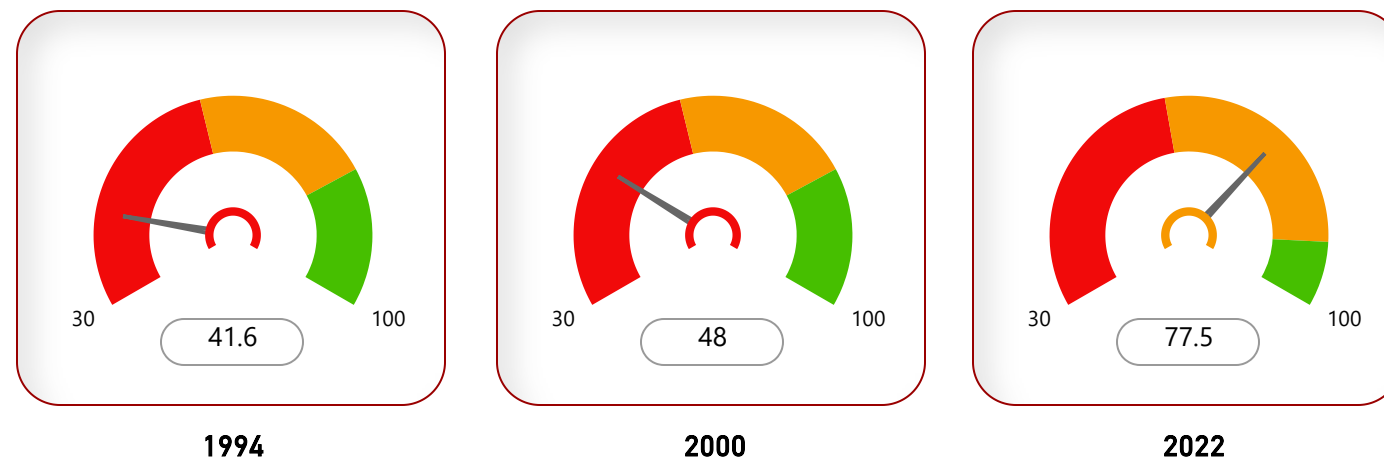
## Prepare for the future

### Literacy

#### Adult Literacy Rate (% of Population Aged 15 and Above)

Source: Calculations IRES\_ Ministry of National Education and Vocational Training; UNESCO

Significant progress in adult literacy between 2000 and 2022. However, the efforts made by the authorities and civil society actors, particularly after the launch of the National Initiative for Human Development in 2005, have not yet succeeded in eradicating adult illiteracy, which still affects Morocco's competitiveness and remains a handicap for its international positioning in terms of human development indicators.



# Human-centric

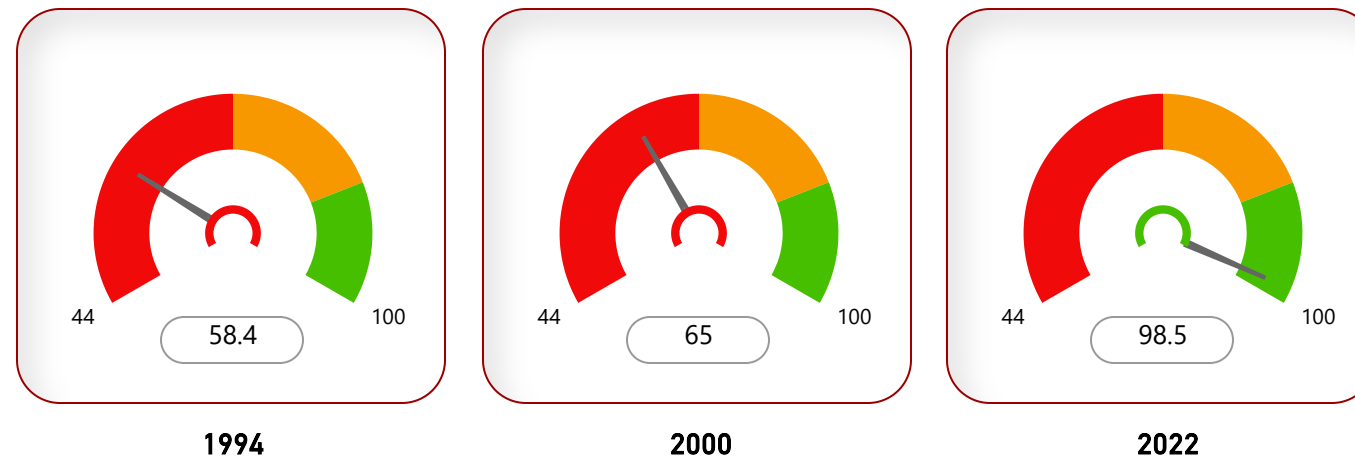
Prepare for the future

## Literacy

### Youth Literacy Rate (% of Population Aged 15-24)

Source: Calculations IRES\_ Ministry of National Education and Vocational Training; UNESCO

Almost universal literacy among young people aged 15 to 24, in relation to the widespread introduction of education in the first cycle of basic education.



# Human-centric

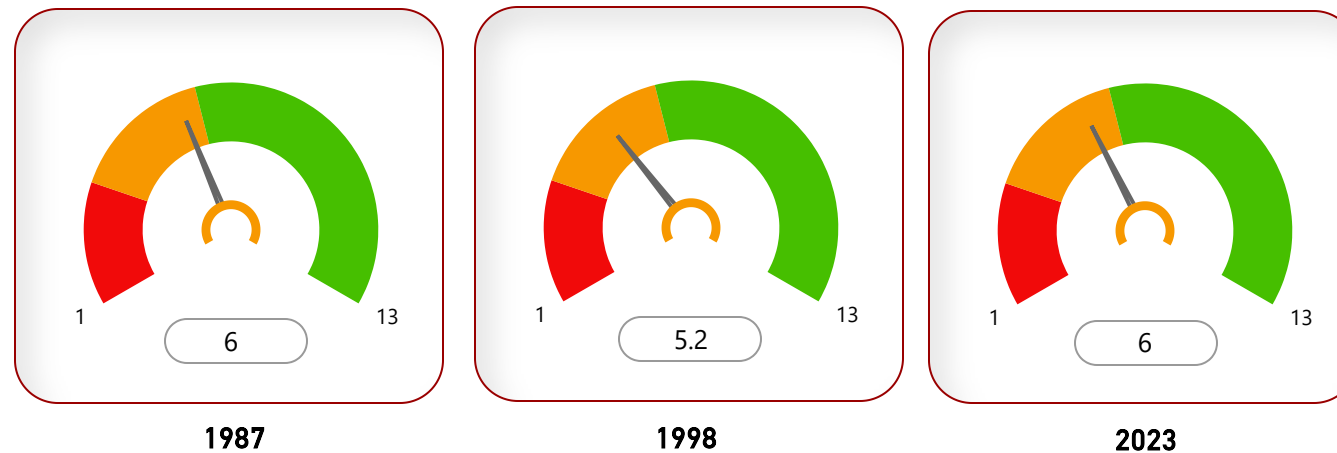
Prepare for the future

## Education Spending

### Public Spending on National Education as % of GDP

Source: Calculations IRES\_ MENFP; UNESCO

Significant education spending as a percentage of GDP. However, educational disparities persist, particularly between urban and rural areas and between public and private education.



# Human-centric

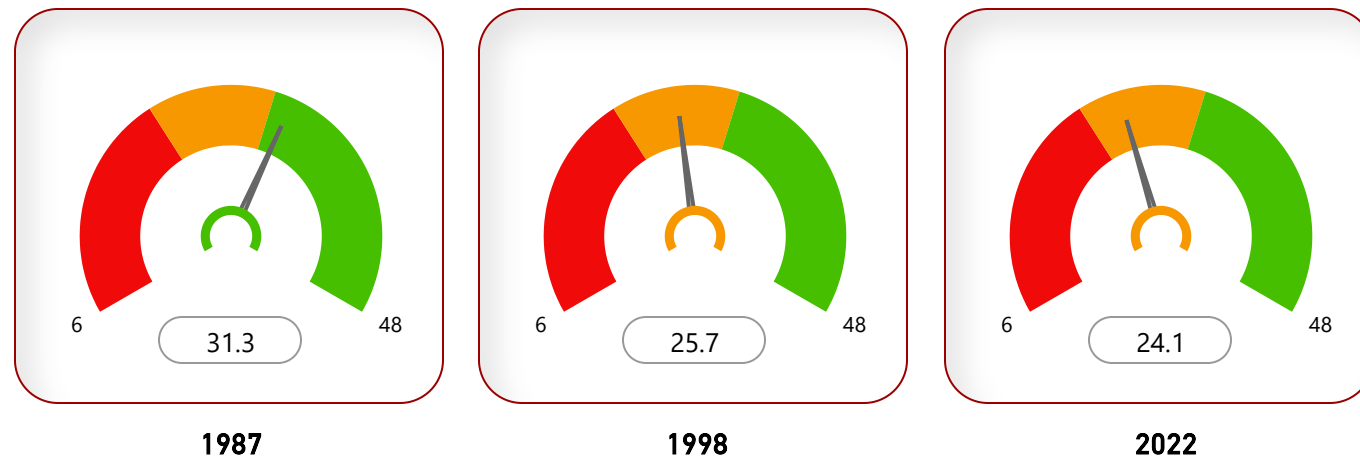
Prepare for the future

## Education Spending

### Public Spending per Student as % of GDP per Capita

Source: Calculations IRES\_ UNESCO

Public education spending per student, relative to GDP per capita, remained insufficient until 2022.



# Human-centric

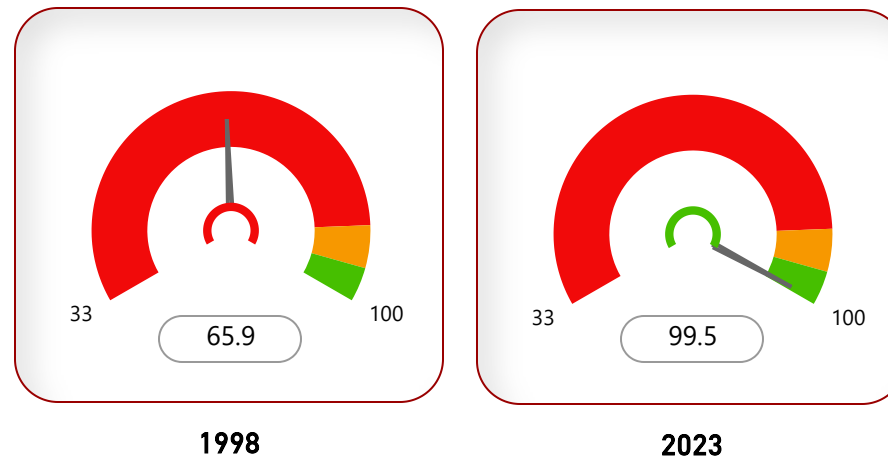
Prepare for the future

Universal Schooling

**Net Enrollment Rate in Primary Education (% of Age Group 6-11)**

*Source: Calculations IRES \_ UNESCO Data and Ministry of National Education*

Near-complete enrollment coverage in primary education due to the Kingdom's efforts in investing in basic education, improving school access, and extending primary education to remote rural areas.





# Human-centric

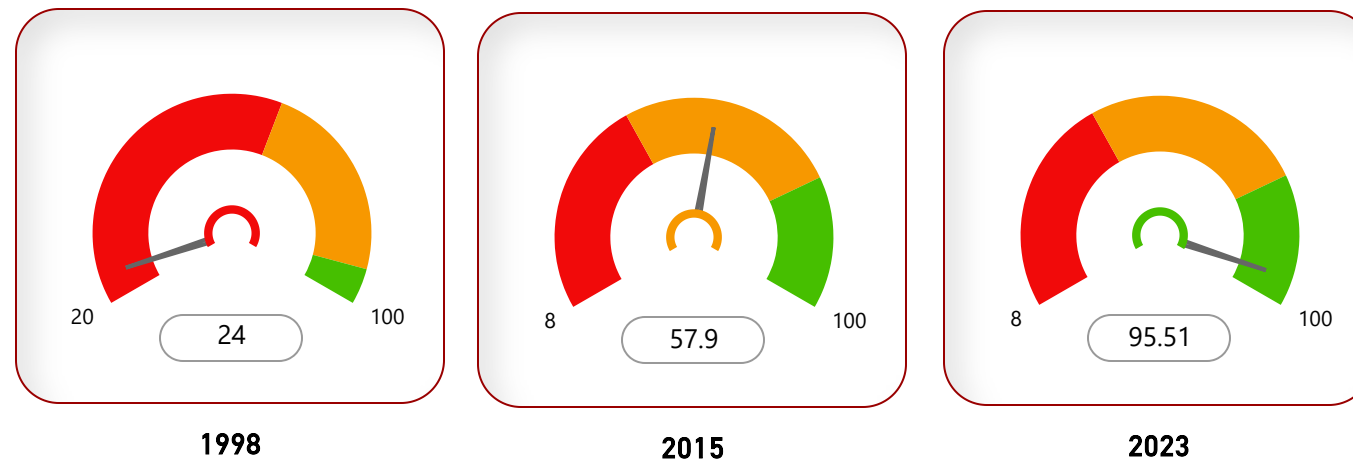
Prepare for the future

## Universal Schooling

### Net Enrollment Rate in Lower Secondary Education (% of Age Group 12-14)

Source: Calculations IRES \_ UNESCO Data and Ministry of National Education

A significant increase in lower secondary education enrollment rates, covering almost all students in the relevant age group. This progress results from educational reforms initiated by Morocco, particularly the 2015-2030 strategic vision for the education system, aimed at encouraging student retention.



# Human-centric

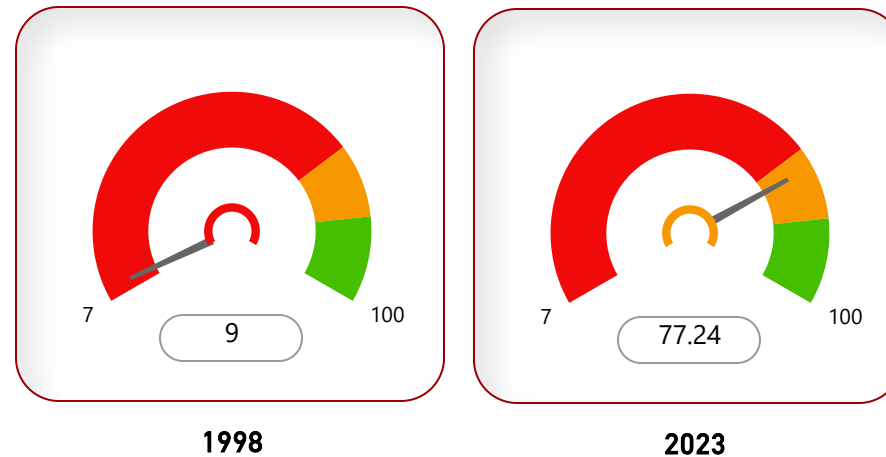
Prepare for the future

## Universal Schooling

### Net Enrollment Rate in Upper Secondary Education (% of Age Group 15-17)

Source: Calculations IRES\_ UNESCO Data and Ministry of National Education

A considerable increase in net enrollment rates in upper secondary education, primarily due to expanded capacity through the construction of new schools and Morocco's recent efforts to combat school dropout rates.



# Human-centric

Prepare for the future

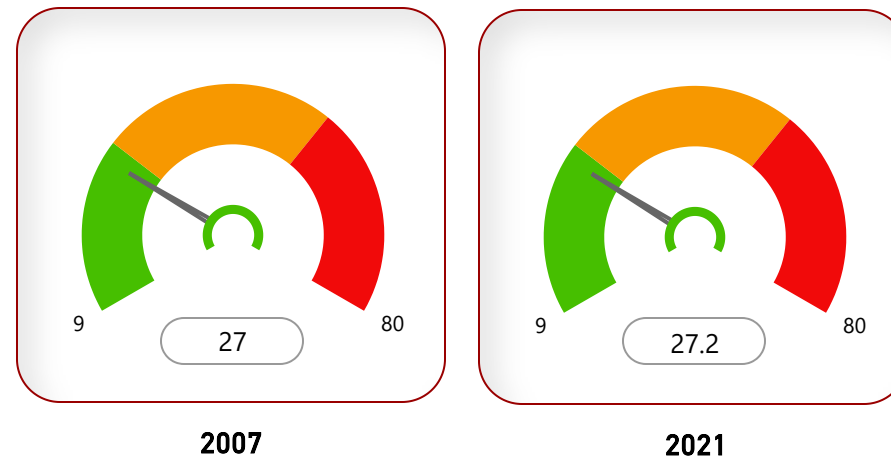
## Primary School Teacher-Student Ratio

### Teacher-Student Ratio in Primary Education

Source: Calculations IRES\_ UNESCO Data

An acceptable student-to-teacher ratio in primary education, at least until 2021. However, significant disparities exist between urban and rural areas and between public and private education systems.

*Nombre d'élèves par enseignant*



# Human-centric

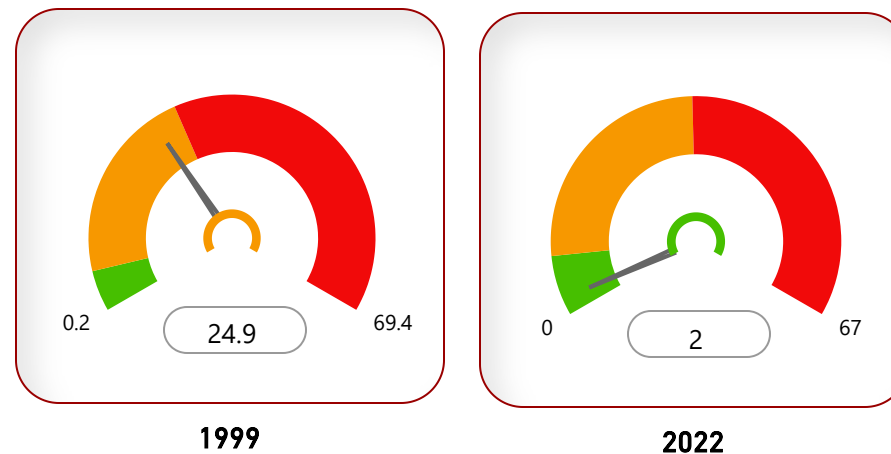
## Prepare for the future

### School Dropout

#### Cumulative Dropout Rate in Primary Education (%)

Source: Calculations IRES \_ Ministry of National Education; UNESCO

A significant decrease in the cumulative school dropout rate in primary education between 1999 and 2022, thanks to the multiple programs implemented by the authorities to address this issue, notably the "TAYSSIR" program for social support of needy households and the promotion of school transportation and canteens, particularly in remote areas.



# Human-centric

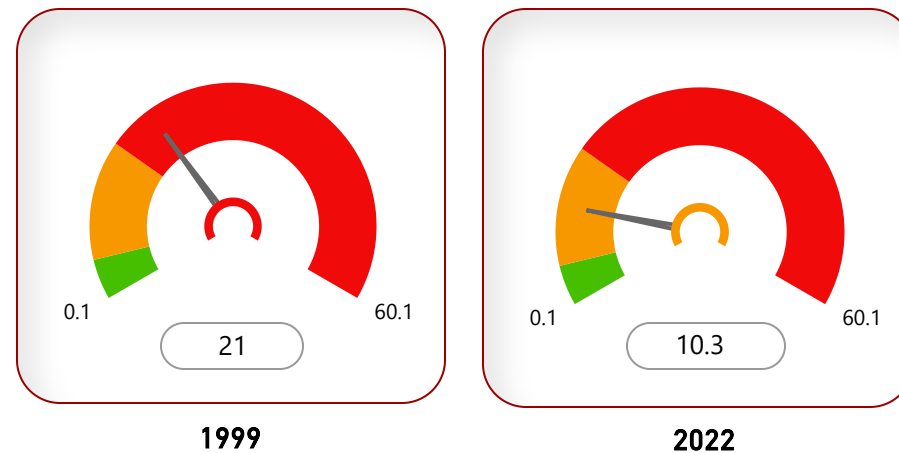
## Prepare for the future

### School Dropout

#### Cumulative Dropout Rate in Lower Secondary Education (%)

Source: Calculations IRES\_ Ministry of National Education and Vocational Training; UNESCO

A nearly 51% reduction in the cumulative school dropout rate in secondary education between 1999 and 2022, notably due to the implementation of the "TAYSSIR" program - launched in 2008 - aimed at providing financial support to poor families.



# Human-centric

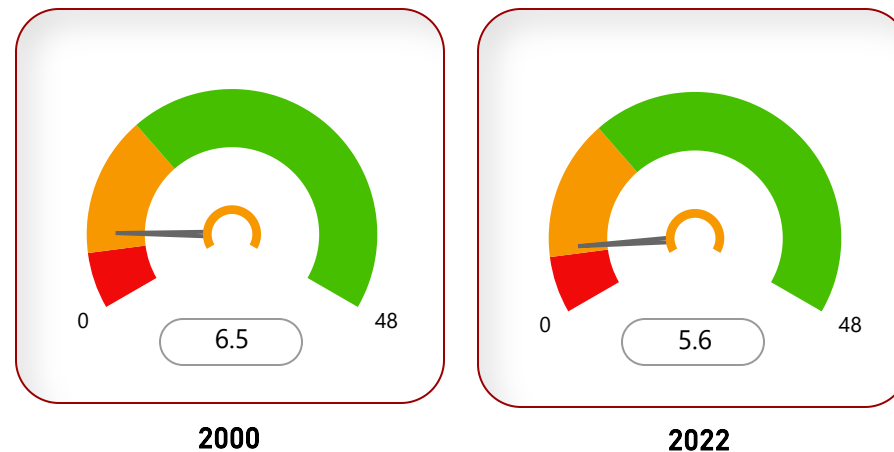
Prepare for the future

## Vocational Training

### Percentage of Enrollment in Vocational Secondary Education (%)

Source: Calculations IRES \_ UNESCO Data

A decline in the proportion of students enrolled in vocational secondary education in 2022 compared to 2000. This situation is partly due to limited capacity in vocational training institutions and the tendency of students to continue their studies in upper secondary education, as evidenced by the marked increase in enrollment rates in this cycle.



# Human-centric

## Prepare for the future

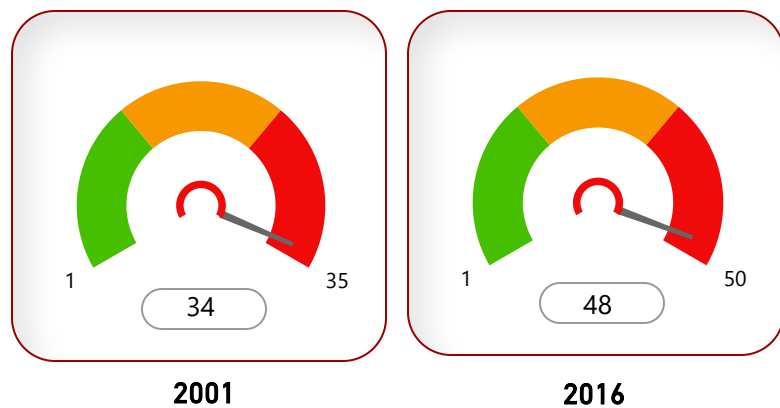
### Education System Quality

#### Morocco's International Ranking in PIRLS and TIMSS Tests

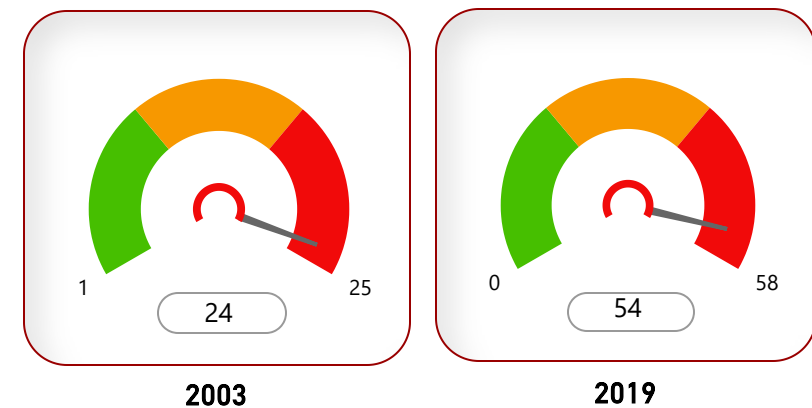
Source: Calculations IRES \_ International Association for the Evaluation of Educational Achievement

An unfavorable international ranking for Morocco, at least until 2019, regarding evaluations of its education system's quality. This stems partly from accumulated learning gaps among students, who lack objective assessments of their academic levels, and the limited use of discovery-based learning methods essential for improving reading, writing, and math skills. The 2022-2026 roadmap currently being implemented and the launch of the "Pioneering Schools" project in 2023 are expected to help address this issue.

International ranking of Morocco in "PIRLS" international tests (for 4th-grade students in primary education)



International ranking of Morocco in "TIMSS" international tests (for 4th-grade students in primary education)



# Human-centric

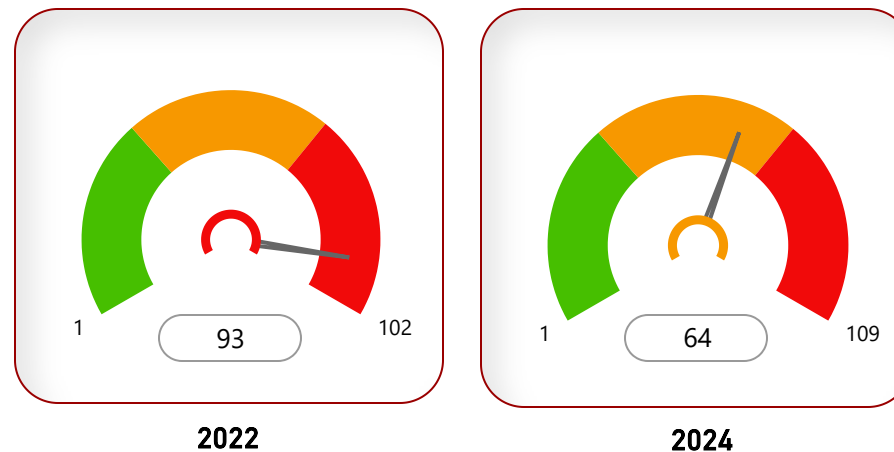
Prepare for the future

Online Learning

**Global Skills Index**

*Source: Calculations IRES\_ Coursera*

A significant improvement in Morocco's ranking under this index, thanks to the increasing use of online training by students and professionals to enhance their skills, particularly in emerging fields such as artificial intelligence, data science, and big data.





# Human-centric

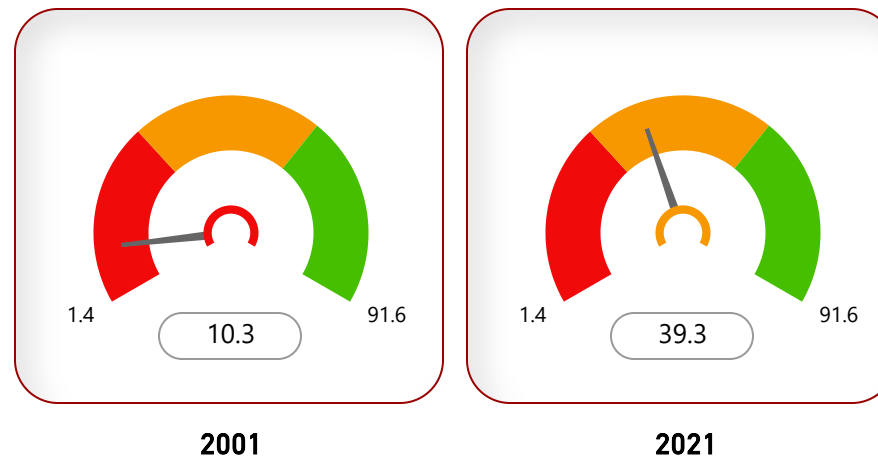
## Prepare for the future

### Higher Education

#### Higher Education Enrollment Rate (% of Age Group 19-23)

Source: Calculations IRES \_ UNESCO and Ministry of Higher Education

A strong increase in higher education enrollment rates between 2001 and 2021, driven by the adoption of open access in certain faculties and the implementation of the LMD system in 2003. However, despite this positive trend, it remains insufficient, revealing a significant gap between universities' total capacity and the growing number of enrolled students.



# Human-centric

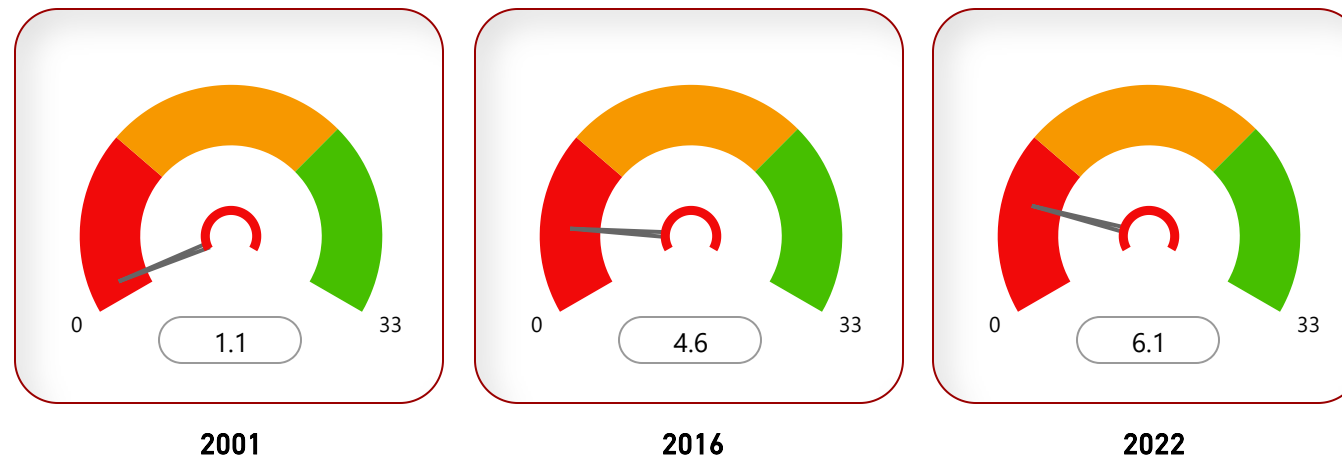
Prepare for the future

Higher Education

## Number of Graduates per 10,000 Inhabitants in Engineering and Manufacturing Industries

Source: Calculations IRES \_ UNESCO

A significant, albeit quantitatively reduced, lag in training for engineering professions, potentially impacting Morocco's ability to execute structural development projects. However, the Kingdom's system of prestigious schools enables the training of highly skilled engineers.



# Human-centric

Prepare for the future

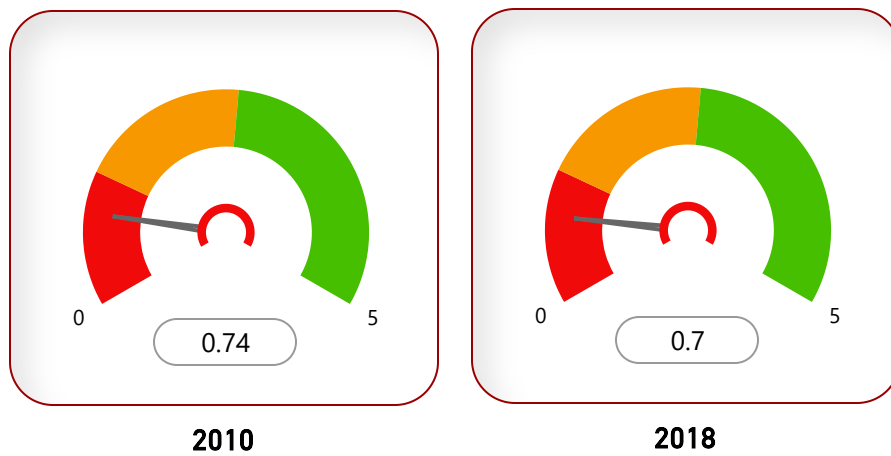
Research & Development

**Research & Development**

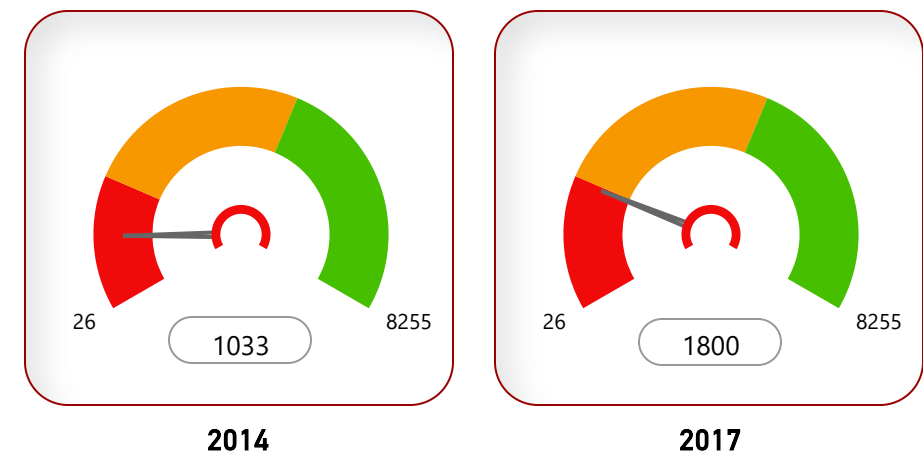
Source: Calculations IRES\_ UNESCO

Human and financial resources allocated to Research & Development (R&D), which are growing in the public sector, remain insufficient compared to countries at a similar level of development. This, therefore, hinders the creation of a talent pool necessary for knowledge development.

R&D expenditures (% of GDP)



Number of researchers in R&D (per 1 million inhabitants)



# Human-centric

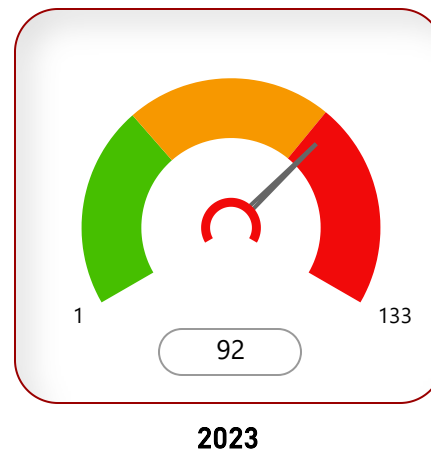
Prepare for the future

Knowledge Economy and Innovation

**Global Knowledge Index**

*Source: Calculations IRES\_ Mohammed Bin Rashid Al Maktoum Knowledge Foundation*

An inappropriate international ranking for Morocco in this index, particularly due to the absence of a genuine strategy for the development of the knowledge economy.



# Human-centric

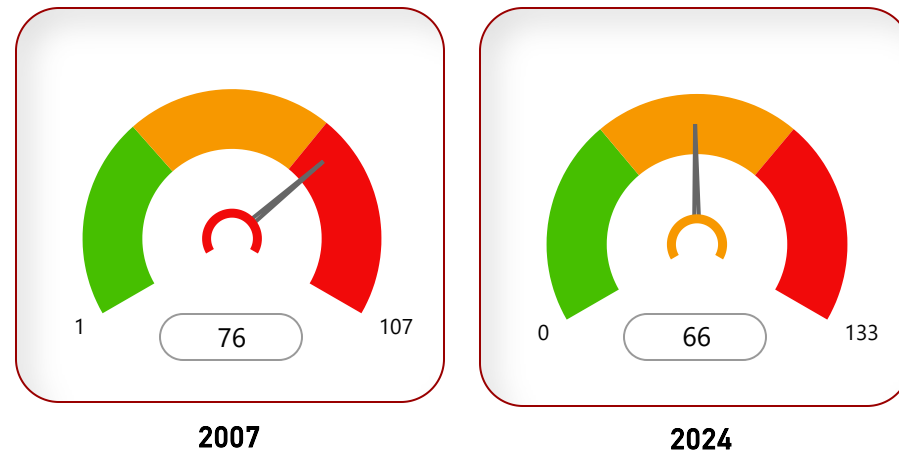
Prepare for the future

Knowledge Economy and Innovation

## Global Innovation Index (GII)

Source: Calculations IRES\_ WIPO/INSEAD

A significant improvement in Morocco's international position in the Global Innovation Index, which deserves to be consolidated and accelerated in the future. This performance is the result of efforts by the authorities in protecting and promoting industrial intellectual property and improving the innovation environment through the launch of several initiatives, such as "Morocco Innovation 2009" and the industrial innovation support program of 2023.



# Human-centric

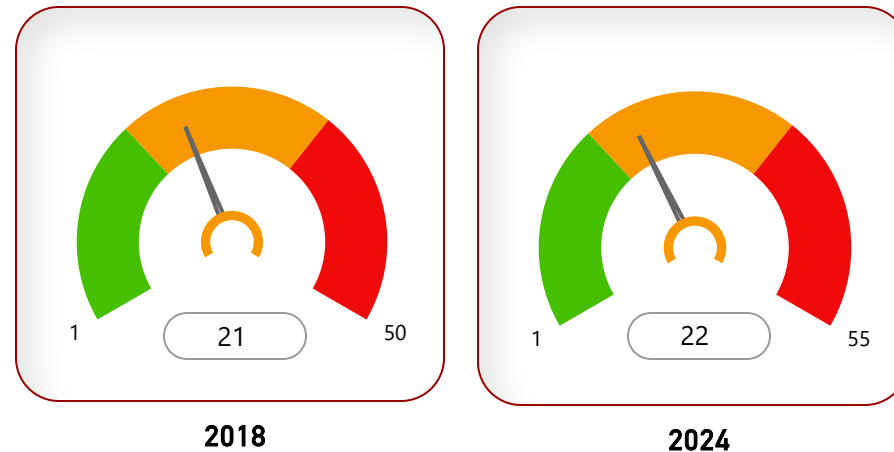
Prepare for the future

Knowledge Economy and Innovation

## Global Intellectual Property Index

Source: Calculations IRES \_ INSEAD; U.S. Chamber of Commerce

Good protection of patents and related rights, making Morocco the highest-ranked country among middle-income economies in the field of intellectual property. However, software piracy and physical counterfeiting rates remain high.



# Human-centric

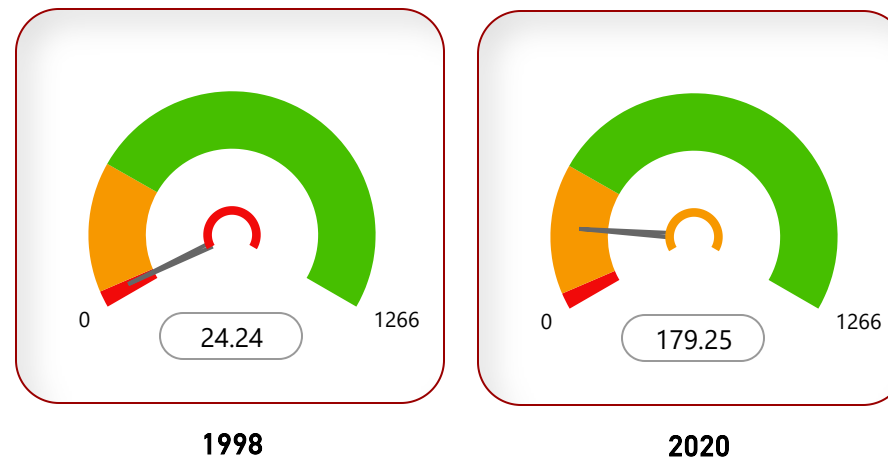
Prepare for the future

## Scientific and Technical Production

### Scientific and Technical Journal Articles Published (per 1 Million Inhabitants)

Source: Calculations IRES \_ World Bank

A low level of Moroccan scientific production despite its progress between 1998 and 2020. This situation is particularly explained by the insufficient funding allocated to scientific research and the limited mastery of the English language, which prevents some researchers from publishing their work in international journals.



# Human-centric

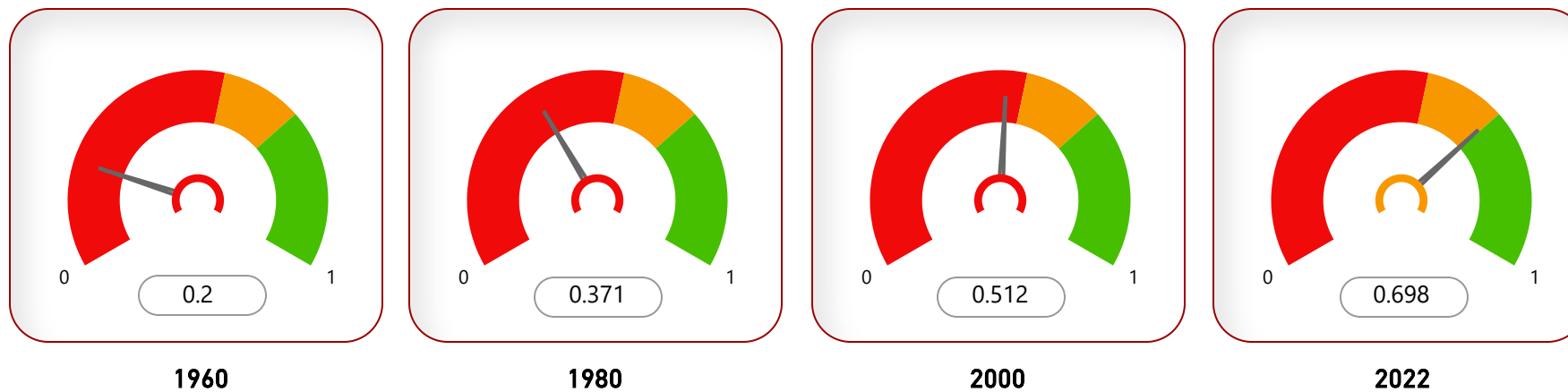
## Globalize human rights

## Human Development

## Human Development Index

Source: Calculations IRES\_ UNDP; Higher Council for Education, Training, and Scientific Research

The Human Development Index (HDI) has tripled since Morocco's independence, rising from 0.2 in 1960 to 0.70 in 2022. However, the Kingdom is currently ranked 122<sup>nd</sup> out of 193 countries due to its still limited per capita income and relatively low schooling duration in 2022, with an average of 6.1 years compared to 6.7 years for countries with medium human development and 12.3 years for countries with high human development. It is important to note that the Human Development Index is based on three dimensions: health, education, and standard of living, with equal weighting. As a result, some rentier countries with a higher GDP per capita than Morocco but facing political instability, conflicts, or wars may achieve a better ranking, revealing the limitations of this international index.





# Human-centric

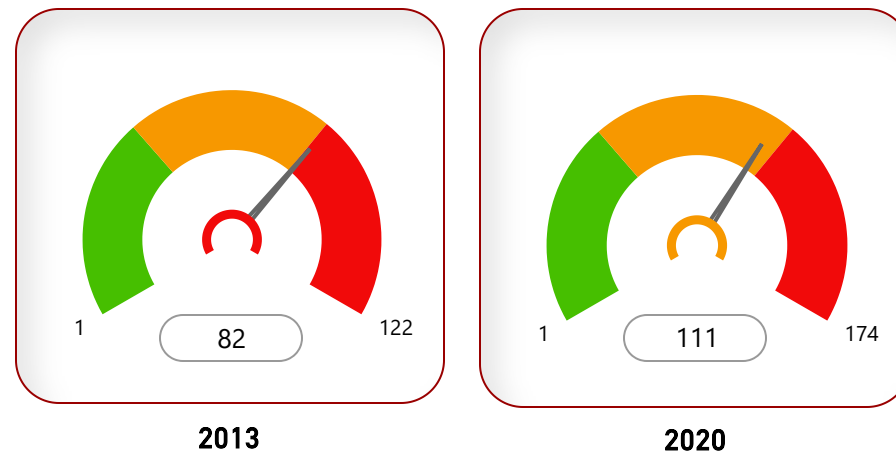
Globalize human rights

Human Development

**Human Capital Index**

*Source: Calculations IRES\_ World Economic Forum*

Morocco's unfavorable international ranking in this index, given the insufficient quality of the education system and the low integration of young people into the labor market.



# Human-centric

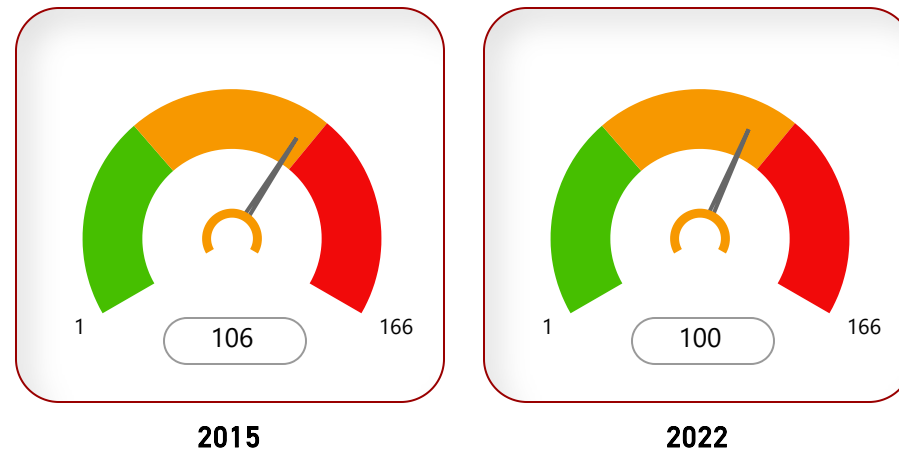
## Globalize human rights

### Human Development

#### We World Index

Source: Calculations IRES\_ WeWorld Organization

A slight improvement in Morocco's ranking under this index. In 2022, the Kingdom was among the countries with "moderate" inclusion of children and women in society, despite the efforts made to improve the condition of these two population groups.



# Human-centric

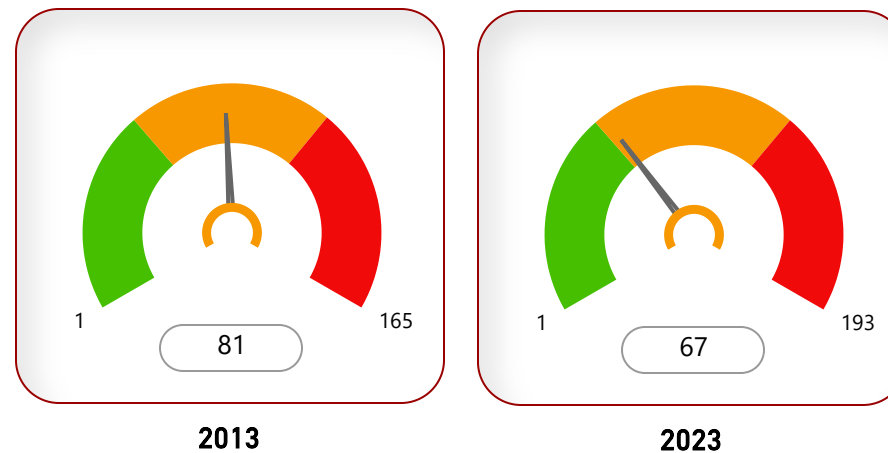
## Globalize human rights

### Human Development

#### Child Rights Index

Source: Calculations IRES \_ KidsRights; Erasmus School of Economics

An advancement in Morocco's international positioning under this index, notably due to measures taken by the authorities regarding the respect and protection of children's rights. However, this population group still faces various issues, particularly poverty, vulnerability, and sometimes forced labor.



# Human-centric

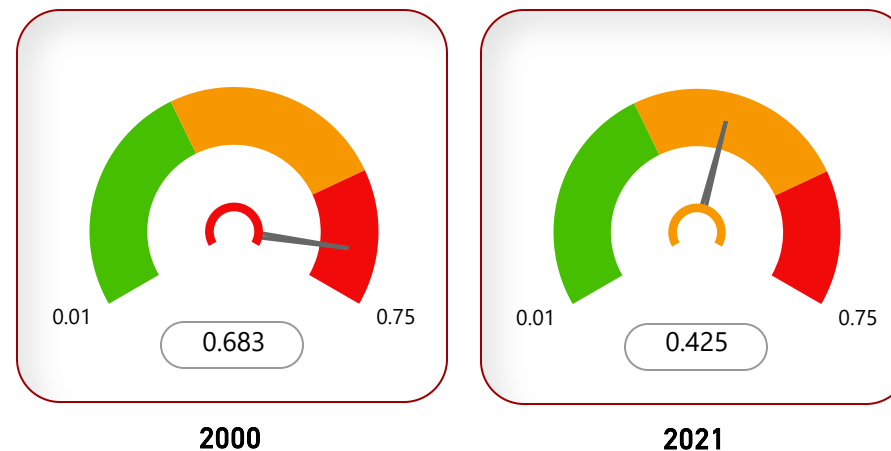
## Globalize human rights

### Women's Empowerment

#### Gender Inequality Index

Source: Calculations IRES\_ UNDP

A significant improvement in Morocco's score under this index. However, gender discrimination remains persistent despite the reforms undertaken by the Kingdom over the last two decades to anchor gender equality principles in the legal, political, economic, and societal spheres. Indeed, under the leadership of His Majesty King Mohammed VI, the Kingdom has reinforced its international commitments to women's rights, constitutionalized parity, and enriched the legal framework with a series of legislative reforms to promote gender equality, including reforms to the family code. However, despite the progress made, Moroccan women still find themselves in anticipation, with human potential insufficiently valued, social and family transformations poorly supported by public authorities, limited prospects for women's integration into the economic world, and marginalized representation in public governance bodies.



# Human-centric

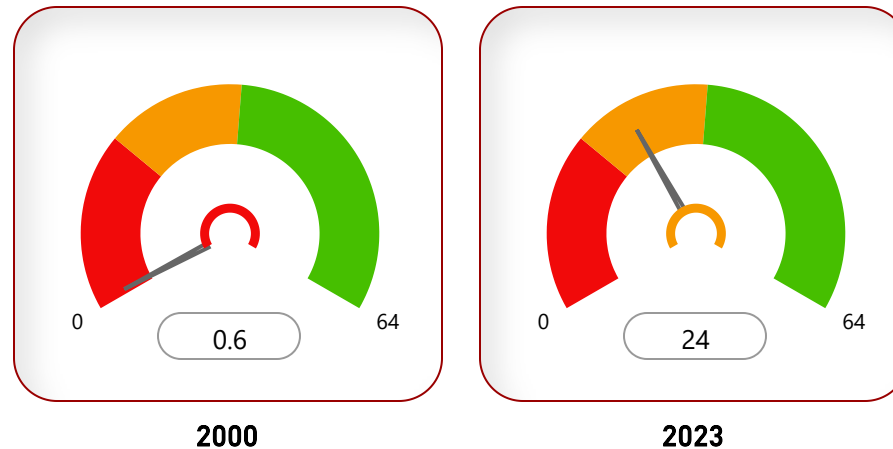
## Globalize human rights

### Women's Empowerment

#### Proportion of Women Holding Seats in Parliament (%)

Source: Calculations IRES\_ UNDP; World Bank

Notable progress in women's access to Parliament thanks to the adoption of the quota system. However, the current level of female representation should be further strengthened by addressing certain cultural factors related to gender stereotypes and adopting a political and moral charter to ensure parity and gender equality within political parties.



# Human-centric

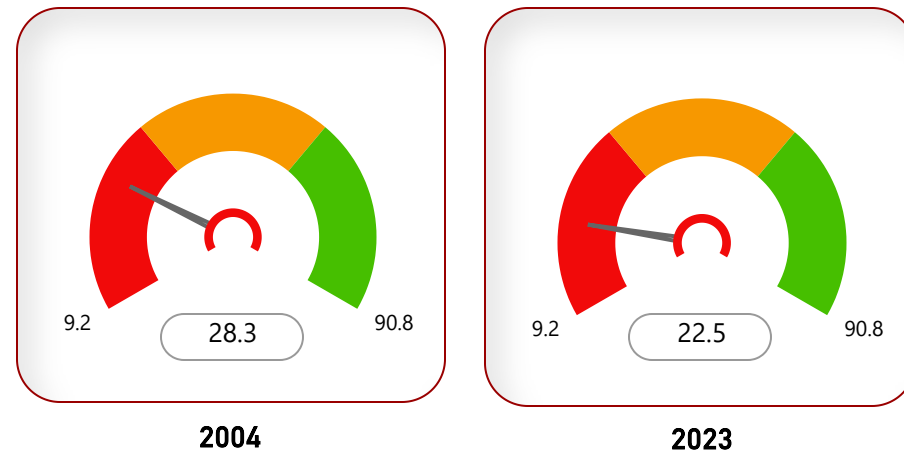
## Globalize human rights

### Women's Empowerment

#### Women's Participation Rate in the Labor Market (% of Women Aged 15+)

Source: Calculations IRES \_ World Bank

A decline in Moroccan women's participation in the labor market over the last 19 years. Morocco is currently characterized, like several other Arab countries, by a relatively low level of economic participation by women, due, among other factors, to a tight and exclusive labor market for this population group.



# Human-centric

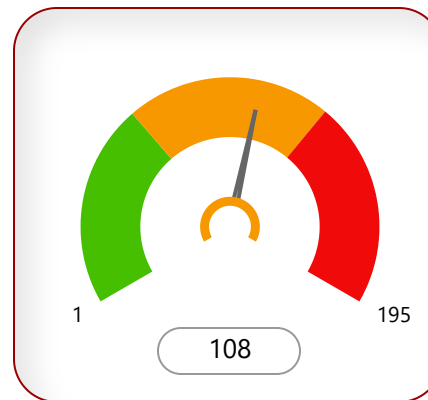
## Globalize human rights

### Health Security

#### Global Health Security Index

Source: Calculations IRES\_ Nuclear Threat Initiative; Johns Hopkins Center for Health Security

An intermediate international ranking for Morocco under this indicator, particularly due to recorded deficits in human capital and medical equipment. However, Morocco is ranked among the few African countries that are clinically prepared to face pandemic threats.



2021

# Human-centric

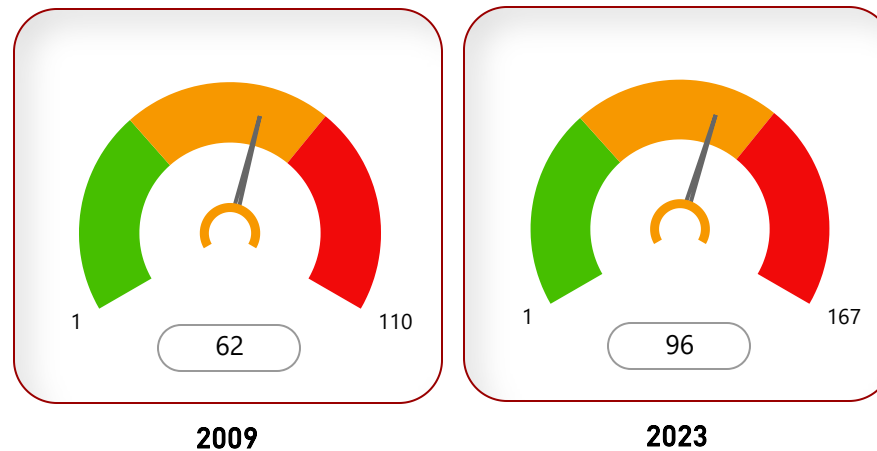
Improve the quality of life

Prosperity and Well-Being

**Prosperity and Well-Being Index**

Source: Calculations IRES \_ Legatum Institute

Morocco's intermediate position in terms of prosperity and well-being, primarily due to current insufficient performance in terms of human and social capital, according to the "Legatum Institute." Nevertheless, Morocco remains well-ranked in the components of the index related to security, living conditions, infrastructure, as well as the conditions for business creation and competitiveness; the latter two components having shown the best improvement over the past decade.





# Human-centric

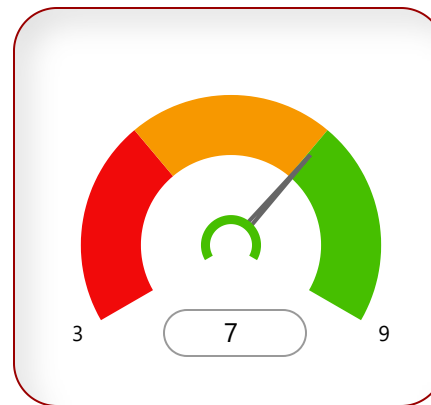
Improve the quality of life

## Life Satisfaction

### Life Satisfaction Level

(0 : faible ; 10 : fort) *Source: IRES*

A declaration by Moroccans, as part of the national social link survey conducted by IRES in 2023, reporting a high degree of satisfaction with their life.



2023

# Human-centric

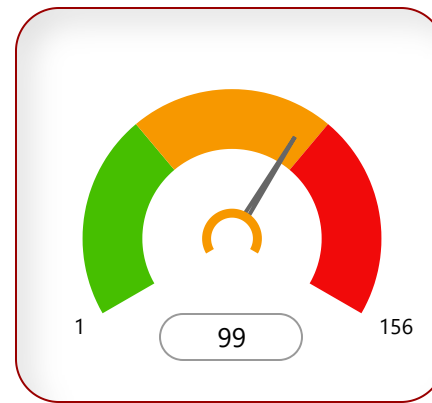
Improve the quality of life

Happiness Perception

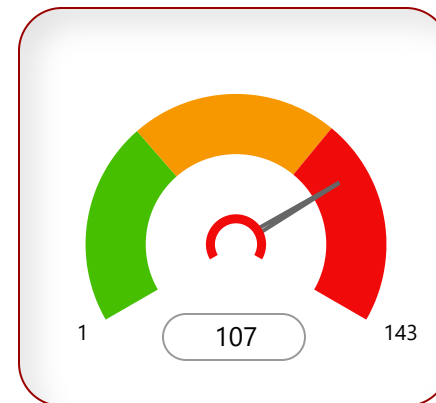
**World Happiness Index**

*Source: Calculations IRES \_ UN \_ Sustainable Development Solutions Network*

Morocco's unfavorable international ranking in this index is mainly due to the delay in implementing public policies aimed at improving citizens' quality of life. The ongoing construction of the social state should address this situation.



2010



2024

# Human-centric

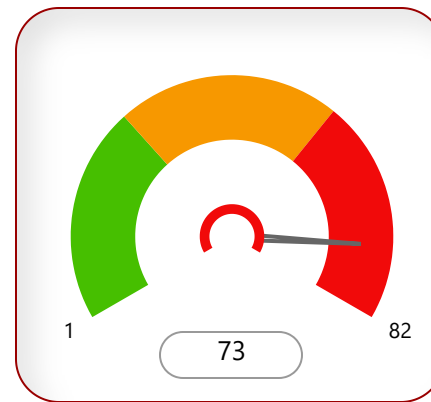
Improve the quality of life

Social Progress

## Global Social Mobility Index

Source: Calculations IRES \_ World Economic Forum

A stagnant social elevator in Morocco until 2020: Morocco ranks among the lowest countries on this index. This result highlights the need for significant effort, especially in strengthening human capital, fighting inequalities, and promoting youth employment.



2020

# Human-centric

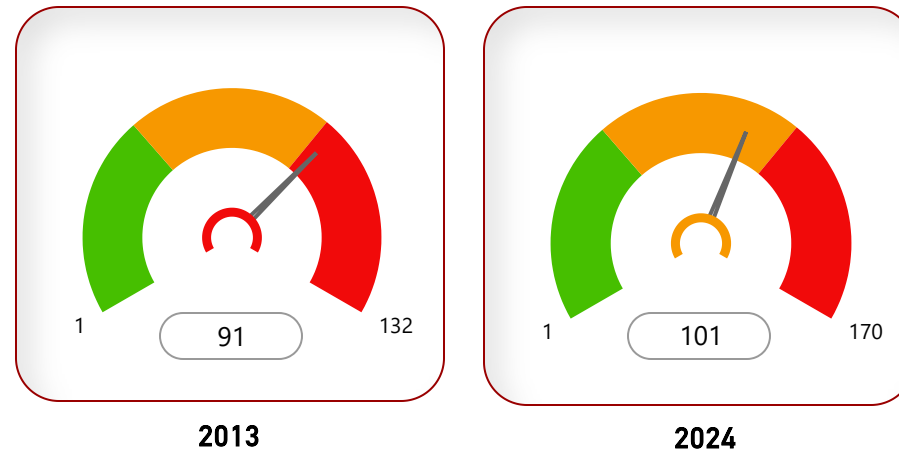
Improve the quality of life

Social Progress

## Social Progress Index

Source: Calculations IRES \_ Social Progress Imperative

Improvement in Morocco's international ranking between 2013 and 2024 on this index, which classifies countries into six categories based on their social progress. Morocco belongs to the 4th category, which includes countries characterized by underperformance in advanced education and social inclusion.



# Human-centric

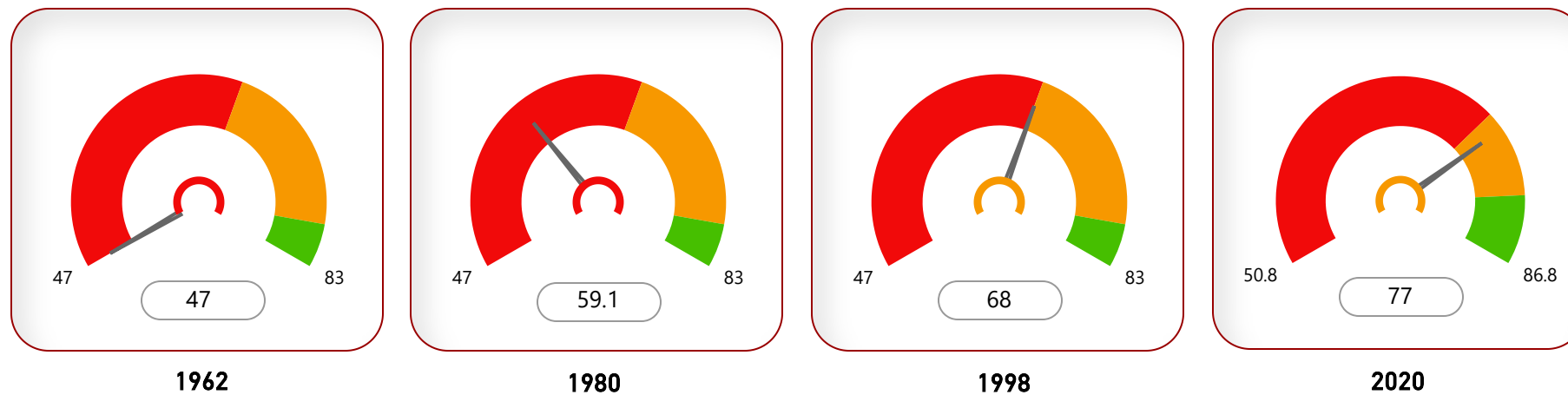
Improve the quality of life

Life Expectancy

Life Expectancy at Birth

Source: Calculations IRES \_ Ministry of Health; WHO

An increase in life expectancy at birth by 30 years since the early 1960s, thanks to the advancements made by Morocco in preventive healthcare and the gradual expansion of medical coverage.



# Human-centric

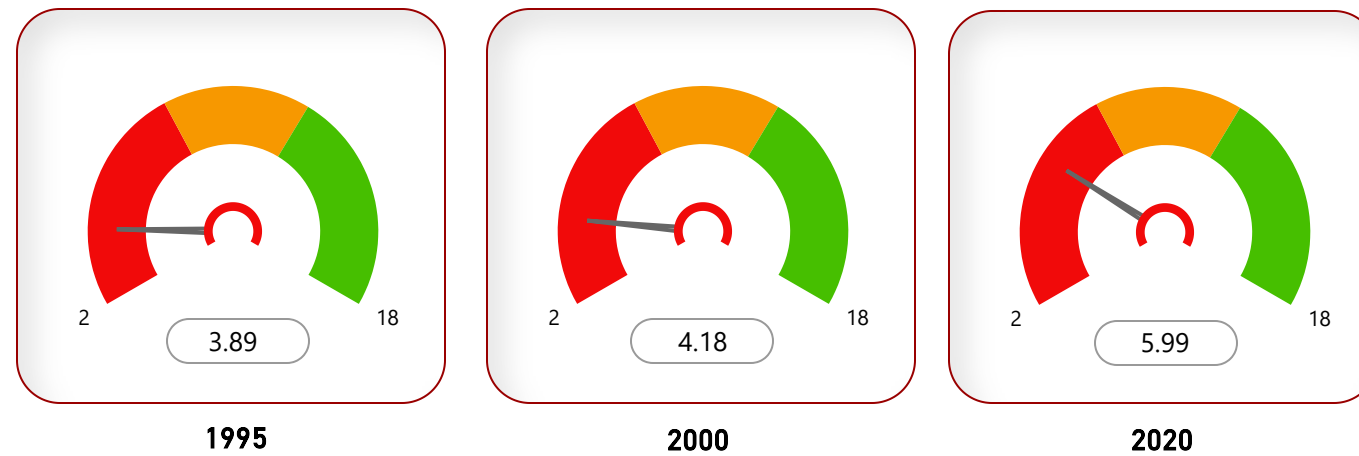
Improve the quality of life

## Healthcare Access

### Total Health Expenditures (% of GDP)

Source: Calculations IRES \_ WHO; World Bank

Health expenditure as a percentage of GDP has been continuously increasing over the last two decades. However, these expenditures remain insufficient to address traditional diseases, let alone serious pathologies and emerging pandemics.



# Human-centric

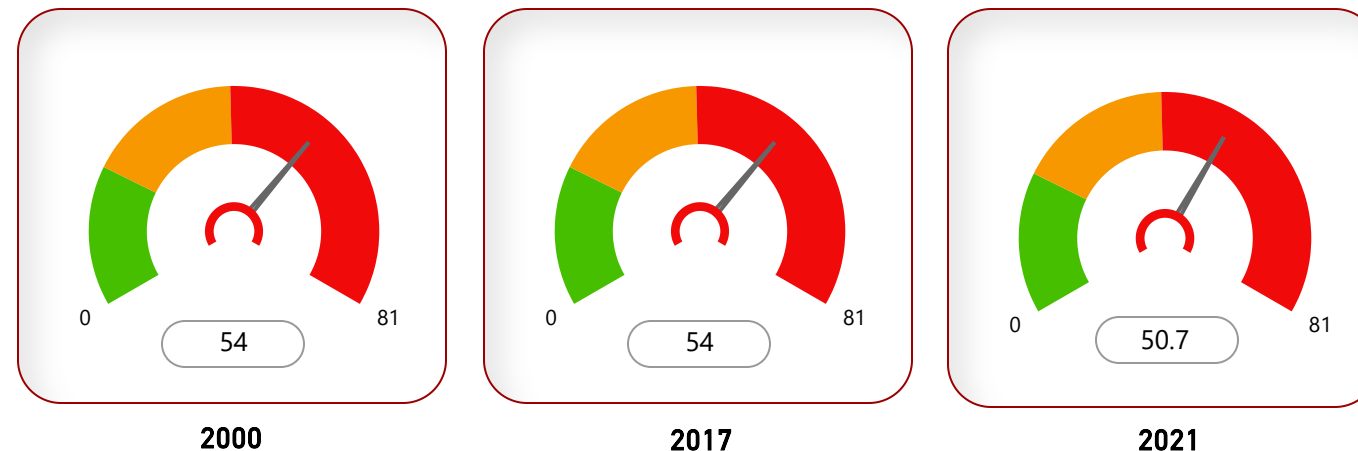
Improve the quality of life

Healthcare Access

## Out-of-Pocket Health Expenditures (% of Total Health Expenditures)

Source: Calculations IRES \_ WHO Database

A significant contribution of households to total health expenditure, which constitutes a significant economic burden for individuals and families. The health financing model, implemented for many years, has reached its limits as it risks further impoverishing households and significantly hindering access to healthcare for vulnerable populations. As part of the ongoing reform of the national healthcare system, it would be beneficial to base the new financial architecture of this system on the accountability of stakeholders and their systematic contribution to healthcare expenditures, with the objective of ensuring universal access to care according to a predefined package.



# Human-centric

Improve the quality of life

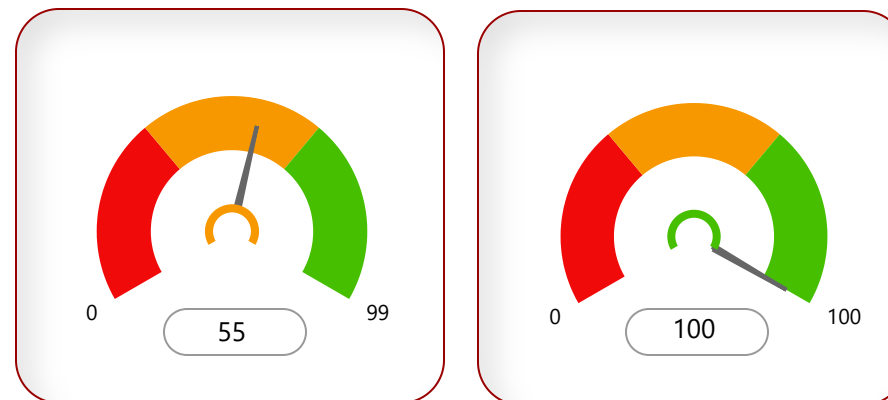
Basic Health: Vaccination

## Vaccination Coverage Rate for DTP1

Source: Calculations IRES\_ UNICEF

A national vaccination coverage rate exceeding 95% for target diseases, thanks to the national immunization program launched in 1987. In particular, the vaccine against Diphtheria, Tetanus, and Poliomyelitis, often used as an indicator of vaccination coverage worldwide, was administered in Morocco to 100% of infants in 2022. It is now necessary to preserve the achievements in infant and child vaccination and to enrich the vaccination program in the future by introducing other vaccines that have proven effective in other countries.

Taux de couverture de la 1ère dose de DTP1 (en %) (Vaccin Diphtérie-Tétanos-Polio)



1980

2022



# Human-centric

Improve the quality of life

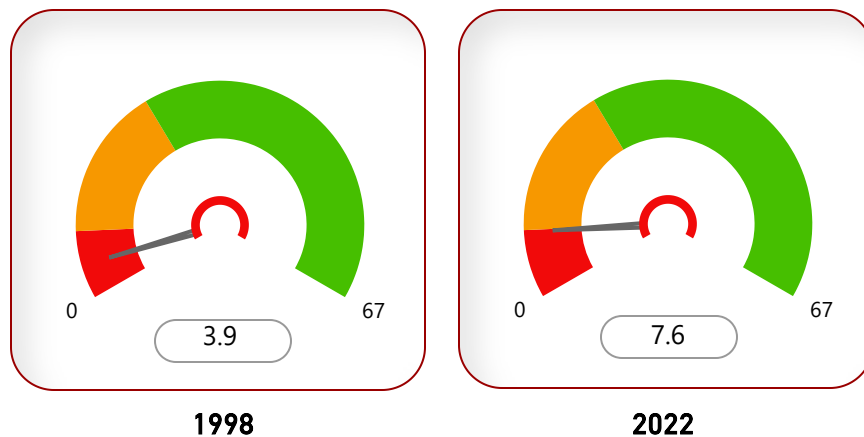
Medical Supervision

## Medical and Paramedical Density per 10,000 Inhabitants

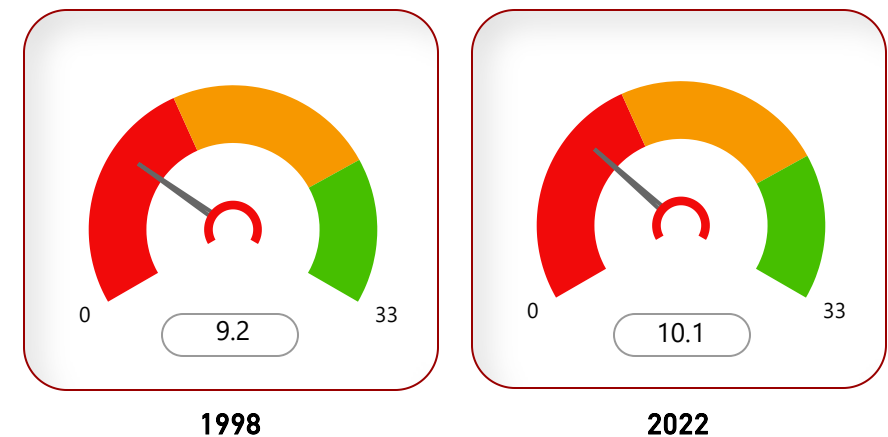
Source: Calculations IRES \_ Ministry of Health; WHO

The medical and paramedical workforce in Morocco (17 per 10,000 inhabitants, including 7 doctors and 10 nurses) remains below the critical threshold set by the World Health Organization (25 per 10,000 inhabitants). The 2020 health crisis underscored the need for a comprehensive reform of the national healthcare system, while positioning human capital development as a national sovereignty issue in a context marked by the widespread expansion of medical coverage.

Medical density



Paramedical density



# Human-centric

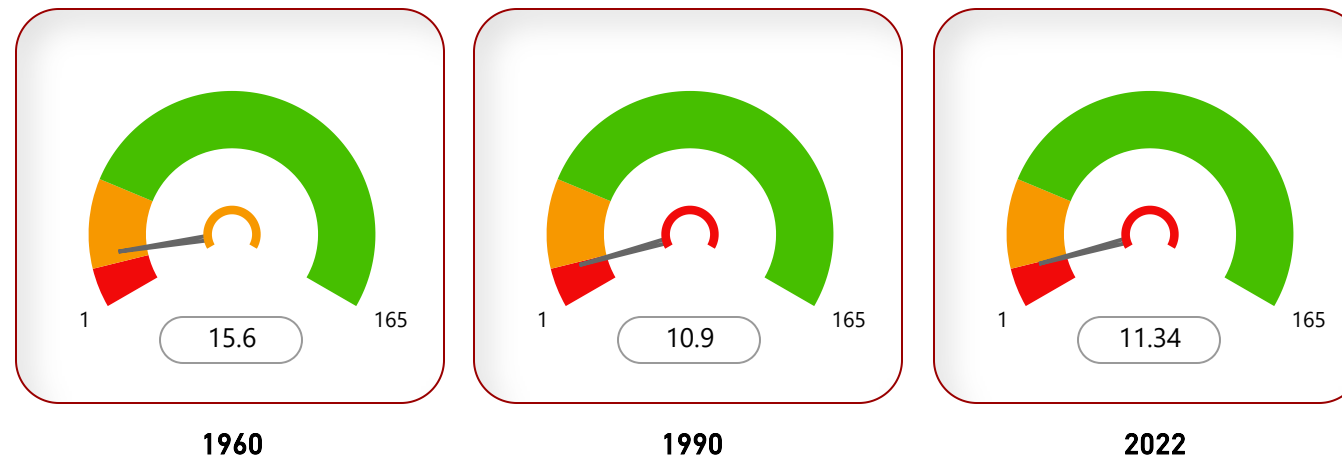
Improve the quality of life

Medical Supervision

**Hospital Bed Density (Number of Beds per 10,000 Inhabitants)**

Source: Calculations IRES\_ Ministry of Health; WHO

A shortage of hospital beds per 10,000 inhabitants. The current supply remains below the significant demand generated by demographic growth and the ongoing project of universal social coverage.



# Human-centric

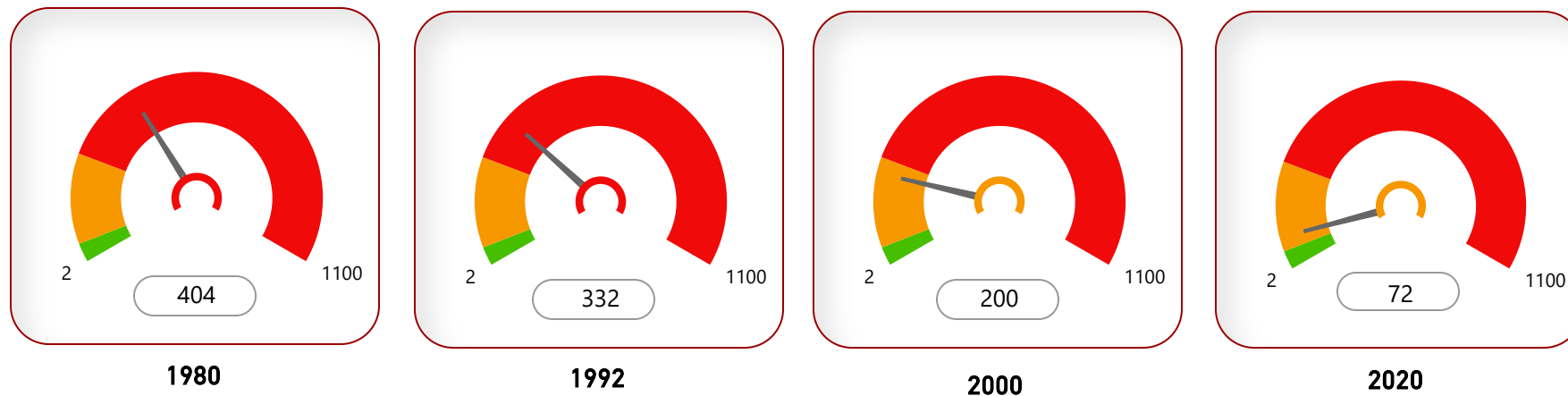
Improve the quality of life

## Maternal and Infant Mortality

### Maternal Mortality (Number per 100,000 Live Births)

Source: Calculations IRES \_ Ministry of Health; WHO

A significant reduction in maternal mortality, explained by improved follow-up during pregnancy, enhanced monitoring during childbirth, and strengthened care quality. However, additional efforts are needed to approach the performance levels of advanced countries.



# Human-centric

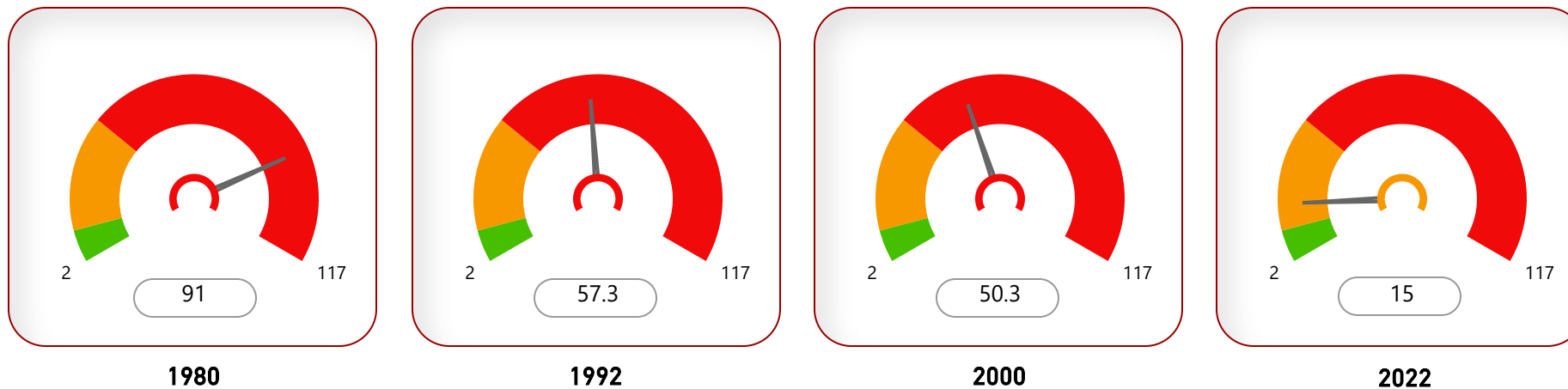
Improve the quality of life

## Maternal and Infant Mortality

### Infant Mortality (Number per 1,000 Live Births)

Source: Calculations IRES \_ Ministry of Health: WHO

Significant progress has been made by Morocco in reducing infant mortality, thanks to better follow-up for pregnant women and improved care at birth. However, additional efforts are needed to address the disparities between rural and urban areas.



# Human-centric

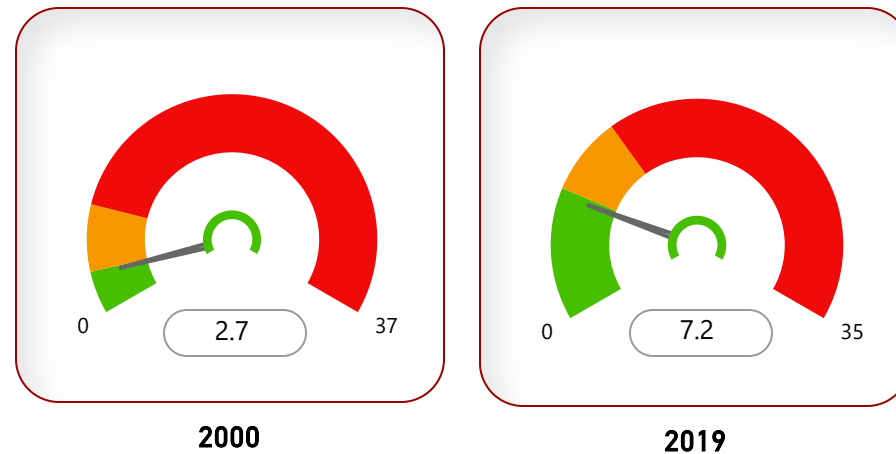
Improve the quality of life

## Suicide

### Suicide Rate per 100,000 Inhabitants

Source: Calculations IRES \_ WHO

A suicide rate in Morocco lower than the global average, but its recent increase must be taken seriously. The implementation of a prevention guide aimed at addressing this scourge, along with the creation of listening cells to support vulnerable individuals affected by this phenomenon, while raising awareness about the crucial role of the family, could help slow down the increase in suicide rates.



# Human-centric

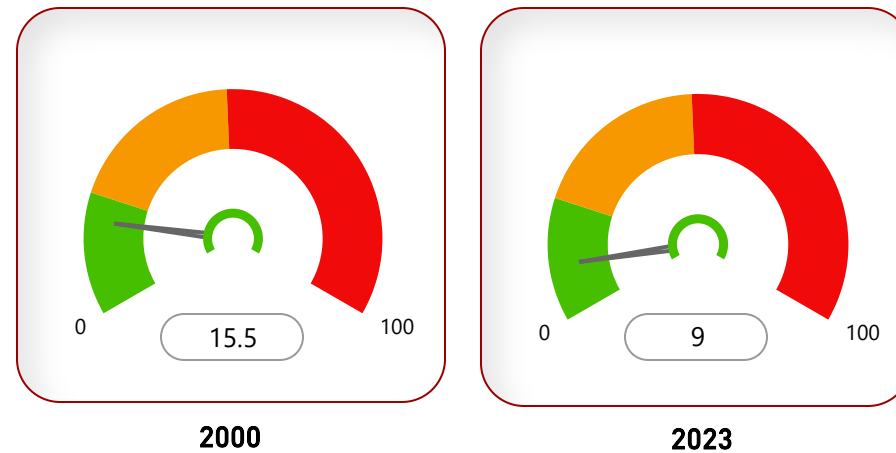
## Improve the quality of life

### Hunger Prevention

#### Global Hunger Index

Source: Calculations IRES \_ Concern Worldwide / Welthungerhilfe

Notable improvement in Morocco's international positioning under this index, reflecting the Kingdom's continuous commitment to achieving sustainable development goals, particularly goal number 2 regarding the fight against hunger, ensuring food security, and improving nutrition. In pursuit of these efforts, Morocco would benefit from revising its agricultural development model, considering new paradigms of food sovereignty and the preservation of water resources.



# Human-centric

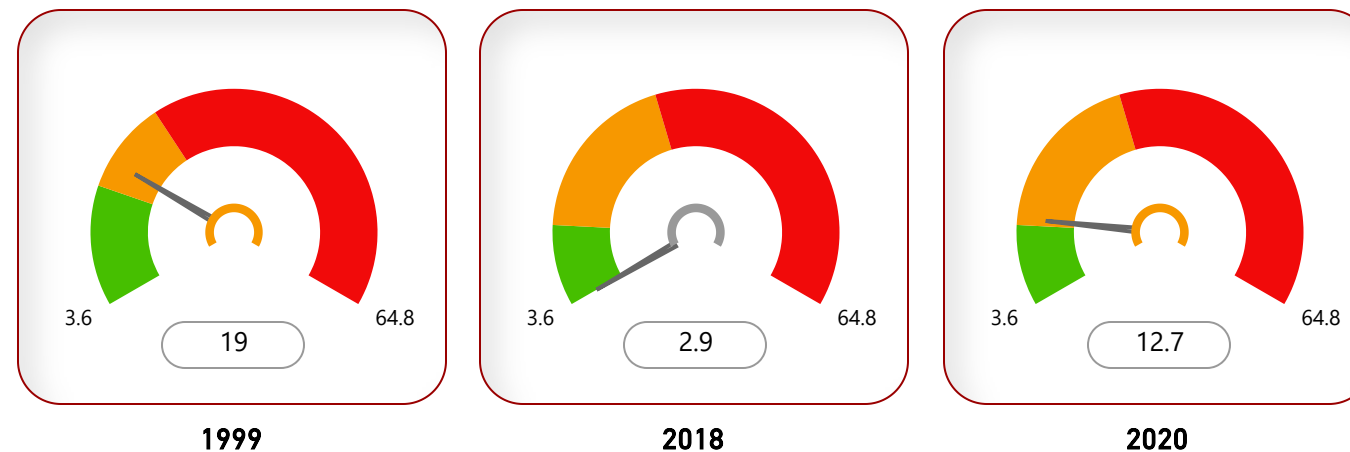
## Improve the quality of life

### Poverty

#### Relative Poverty Rate

Source: Calculations IRES \_ HCP; World Bank

A significant decrease in the relative poverty rate in Morocco between 1999 and 2018, which significantly dropped due to improvements in living standards and the development of income-generating activities, especially in rural areas, under the National Human Development Initiative launched in 2005. However, the 2020 health crisis, with the lockdown and job losses, led to an increase in this rate, multiplying it by 4 in two years. Fortunately, socio-economic measures, such as direct financial aid to vulnerable populations, helped limit this increase, avoiding a sevenfold rise according to the High Commission for Planning.



# Human-centric

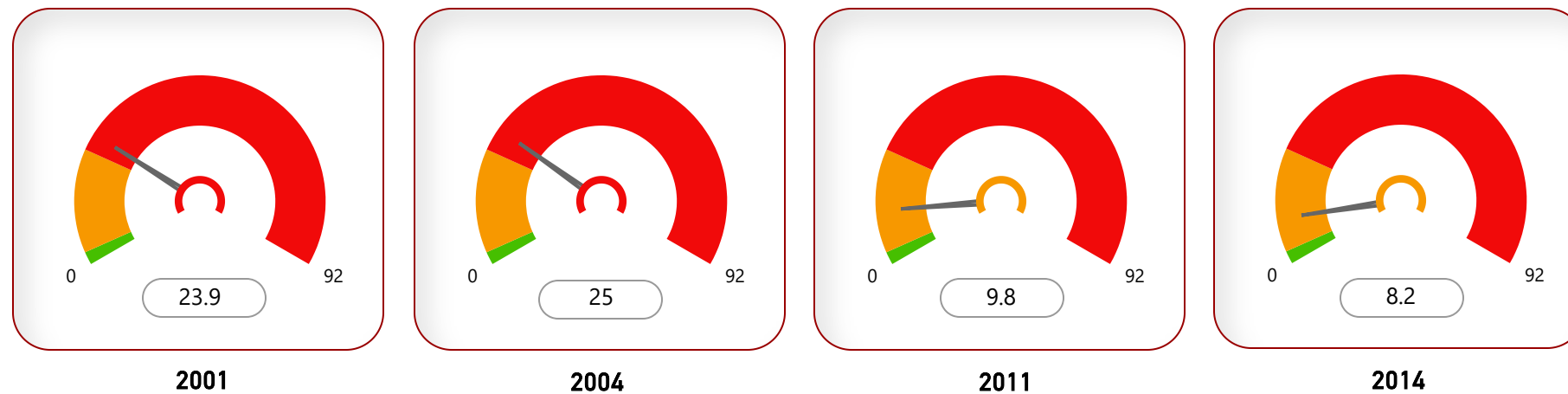
Improve the quality of life

Poverty

## Multidimensional Poverty Rate

Source: Calculations IRES \_ HCP; UNDP

A clear reduction in multidimensional poverty between 2001 and 2014, reflecting a decrease in deprivations in education, health, and living conditions for households, thanks to public policies implemented since 2000 and actions taken under the National Human Development Initiative (2005), which particularly targets the most vulnerable areas.





# Human-centric

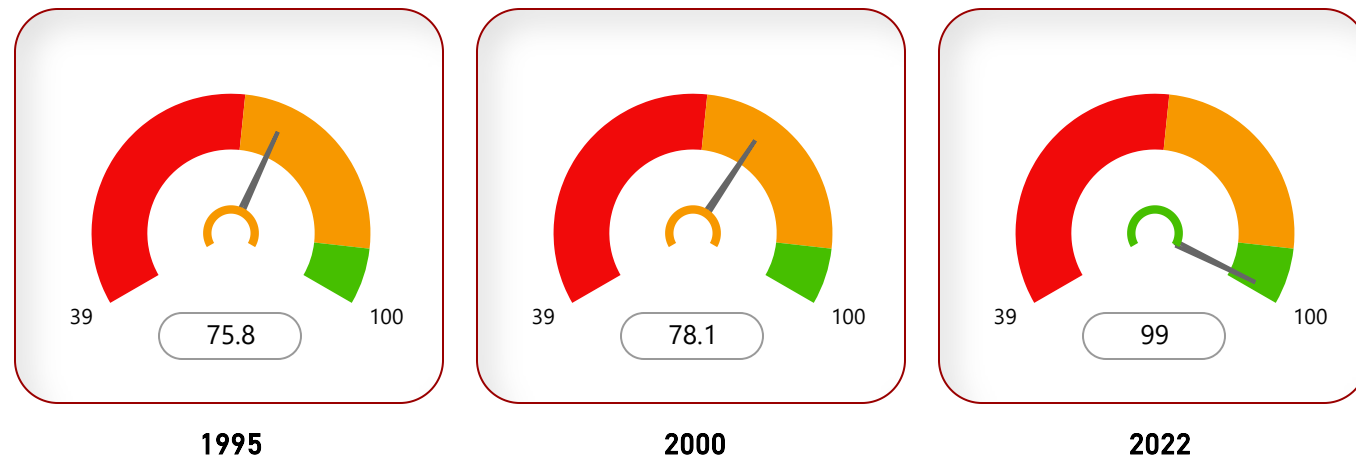
Improve the quality of life

Living Conditions: Access to Water and Electricity

**Access Rate to Improved Drinking Water Sources (% of Population)**

*Source: Calculations IRES\_ World Bank*

A significant advance in access to improved drinking water sources for the population, thanks to the Grouped Drinking Water Supply Program (PAGER), launched in 1995, and the National Drinking Water and Irrigation Supply Program (PNAEPI), initiated in 2020.



# Human-centric

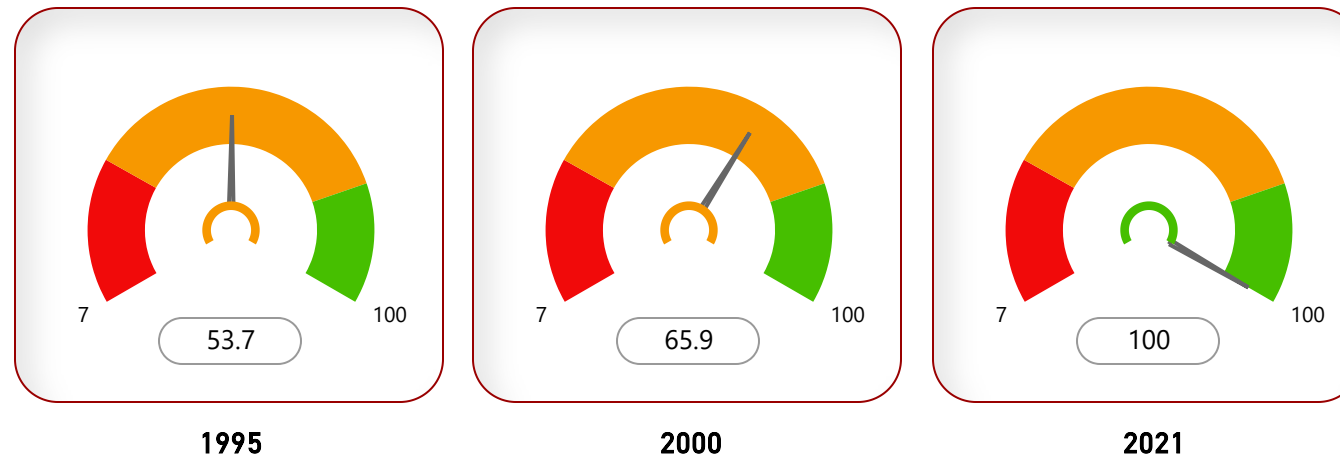
Improve the quality of life

Living Conditions: Access to Water and Electricity

## Access Rate to Public Electricity Networks (% of Population)

Source: Calculations IRES \_ World Bank

A significant improvement in Morocco's ranking according to this indicator, due to a rural electrification policy that has enabled the generalization of access to the electrical grid. The launch of the Global Rural Electrification Program (PERG) in 1996 resulted in more than quadrupling the rural electrification rate between 1996 and 2021.



# Human-centric

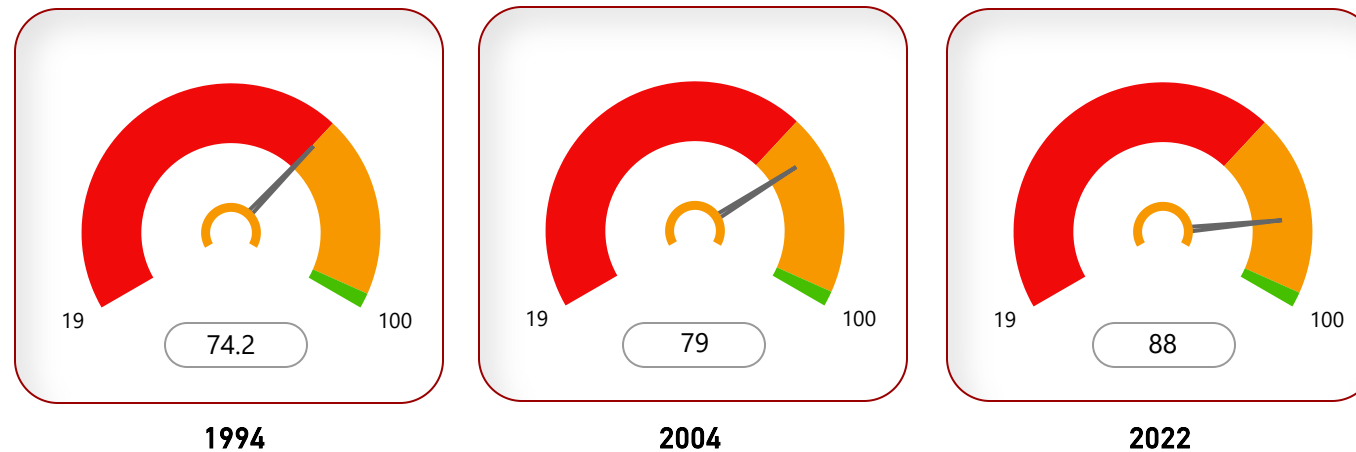
Improve the quality of life

Living Conditions: Sanitation and Infrastructure

**Connection Rate to Urban Sewerage Networks (%)**

Source: Calculations IRES \_ HCP; ONDH; World Bank

Significant progress made in reducing the backlog in wastewater sanitation in Morocco, mainly thanks to the National Liquid Waste and Wastewater Treatment Program (PNA), launched in 2005, which rehabilitated and expanded liquid waste sanitation networks and strengthened the stormwater network.



# Human-centric

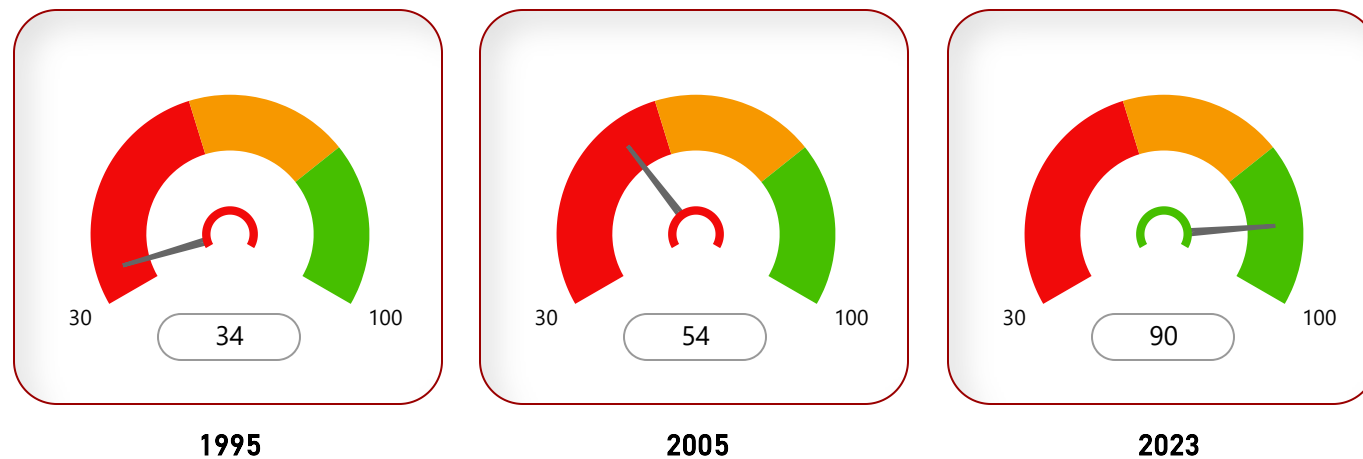
Improve the quality of life

Living Conditions: Sanitation and Infrastructure

**Rural Population Accessibility to Roads**

*Source: Calculations IRES \_ Ministry of Equipment, Transport, Logistics, and Water*

Implementation of the national rural roads program (PNRR) has promoted the opening up of rural areas, particularly those close to large urban centers. However, some rural areas still remain outside of this development.



# Human-centric

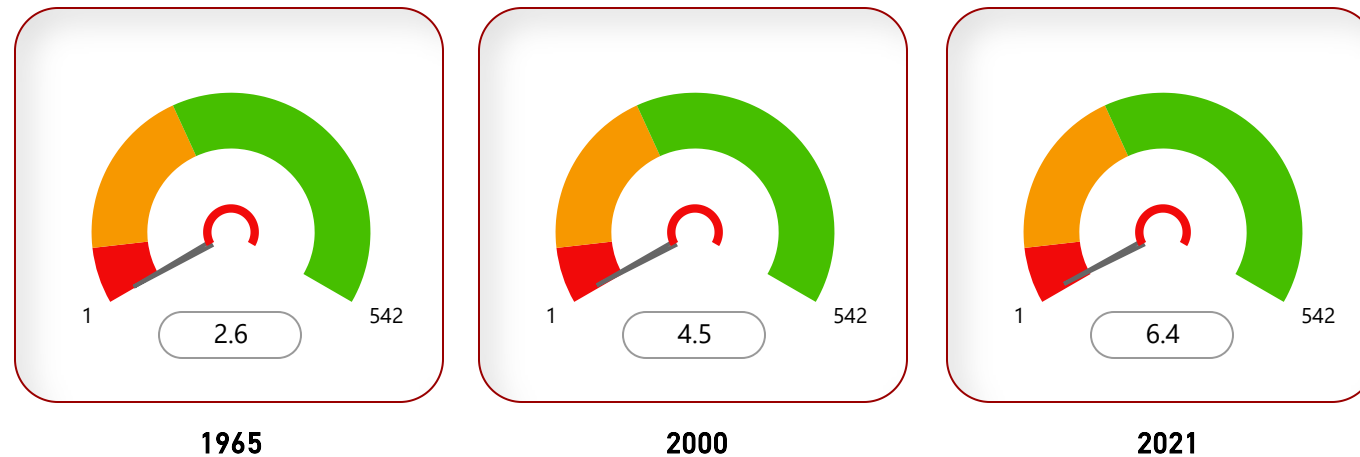
Improve the quality of life

## Road and Rail Density

### Paved Road Density (Km per 100 Km<sup>2</sup>)

Source: Calculations IRES\_ World Bank

The road density remains insufficient compared to the global average, despite the efforts made by Morocco to develop the road network, especially highways. This insufficiency is more evident in rural areas.



# Human-centric

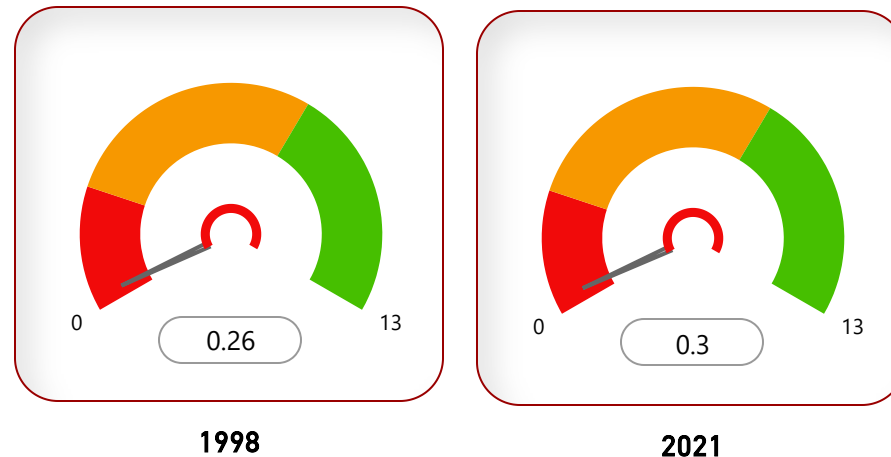
Improve the quality of life

## Road and Rail Density

### Railway Density (Km per 100 Km<sup>2</sup>)

Source: Calculations IRES\_ Ministry of Equipment, Transport, Logistics, and Water; World Bank

The rail density is very limited, covering not all regions of Morocco. Aware of this reality, Morocco has launched the modernization of its railway network in recent years and began in November 2018 operating a high-speed line between Tangier and Casablanca, with the project for its extension to Marrakech currently underway.



# Human-centric

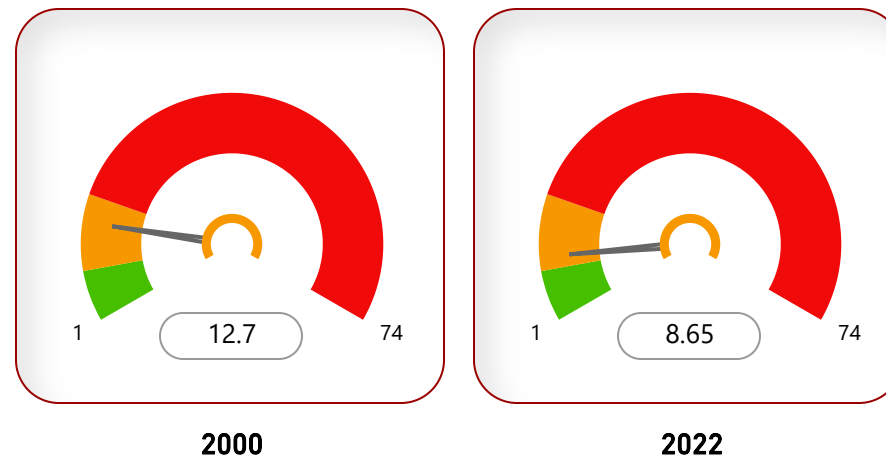
Improve the quality of life

## Road Safety

### Estimated Number of Road Traffic Deaths (per 100,000 Inhabitants)

Source: Calculations IRES\_ WHO and NARSA

A significant decrease in the number of people killed in road accidents, relative to the total population, thanks to recent measures taken as part of the national road safety strategy "2017-2026," aimed at strengthening road safety. However, the rate reached in 2022 remains concerning due to the non-compliance with traffic laws, the rapid growth of the national vehicle fleet, the condition of vehicles and roads, as well as the lack of civility among some road users.



# Human-centric

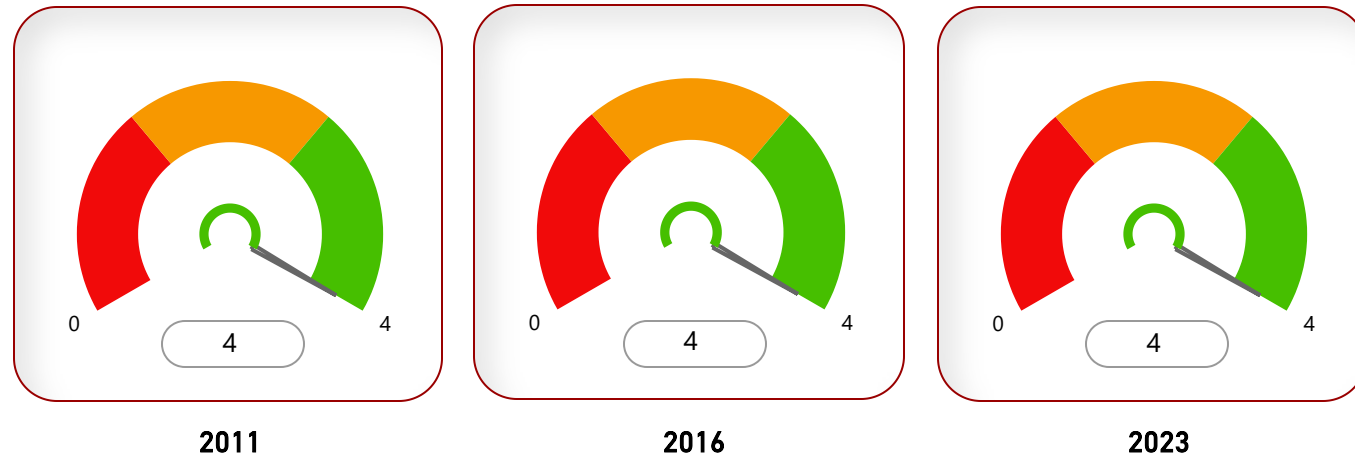
## Strengthen social bonds and restore trust

### Attachment to the Nation

#### Attachment to the Nation Level

(0 : faible ; 4 : fort) Source: IRES

An unbreakable attachment of the Moroccan people to the Nation, which, along with attachment to the Monarchy, forms one of the main pillars of living together in Morocco, as confirmed by the three editions of the national survey on social ties conducted by IRES, respectively, in 2011, 2016, and 2023.





# Human-centric

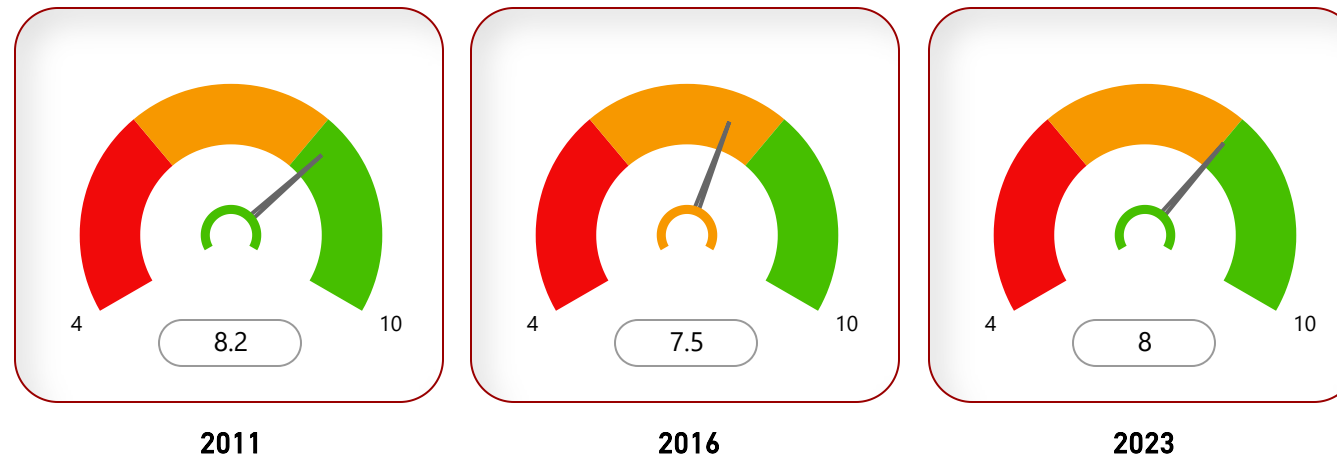
Strengthen social bonds and restore trust

## Importance of Family in Personal Life

### Trust in Family

(0 : faible ; 10 : fort) *Source: IRES*

The Moroccan family is credited with a very high degree of trust, unlike other social institutions.



# Human-centric

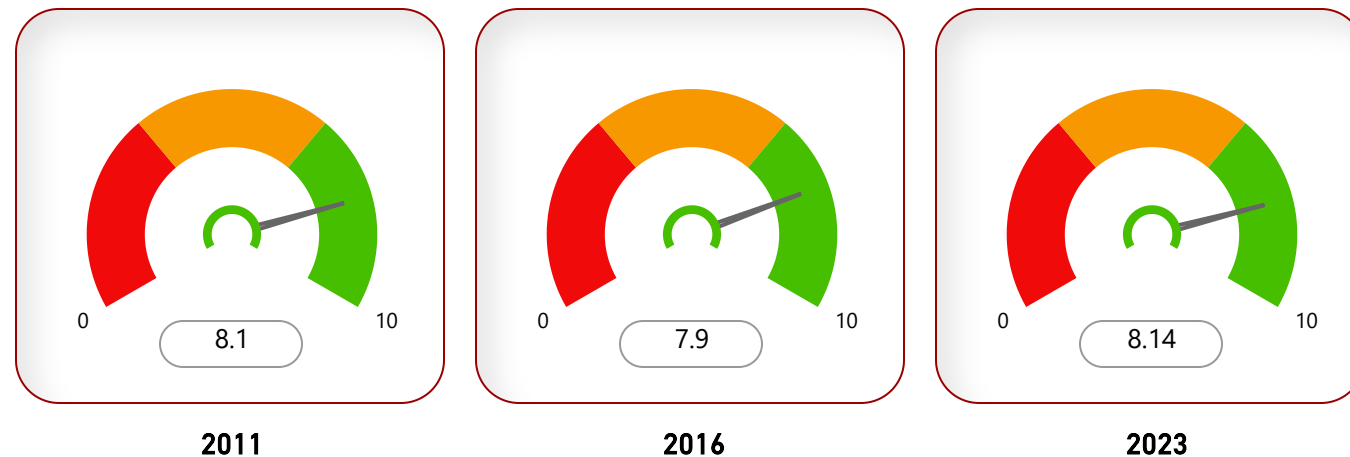
Strengthen social bonds and restore trust

## Importance of Family in Personal Life

### Importance of Family in Personal Life

(0 : faible ; 10: fort) Source: IRES

A strong degree of importance placed on family in personal life. Indeed, the results of the national social link survey by IRES (2011, 2016, and 2023) have reinforced the fact that the family remains the cornerstone of social ties in Morocco.



# Human-centric

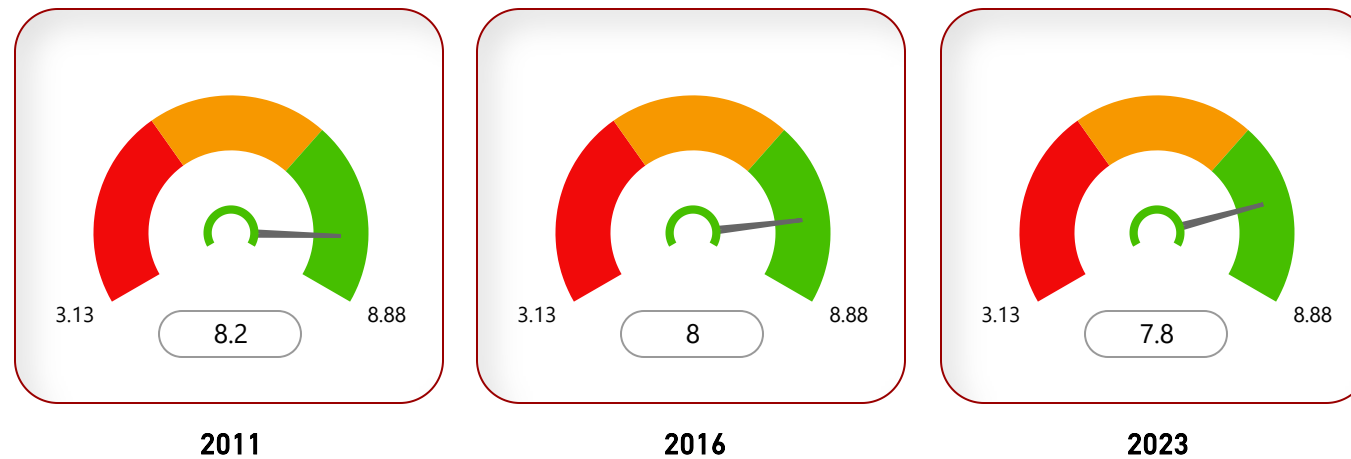
Strengthen social bonds and restore trust

## Importance of Religion in Personal Life

### Importance of Religion in Personal Life

(0 : faible : 10 : fort) Source: IRES

A very important role of the Muslim religion in the lives of Moroccans.



# Human-centric

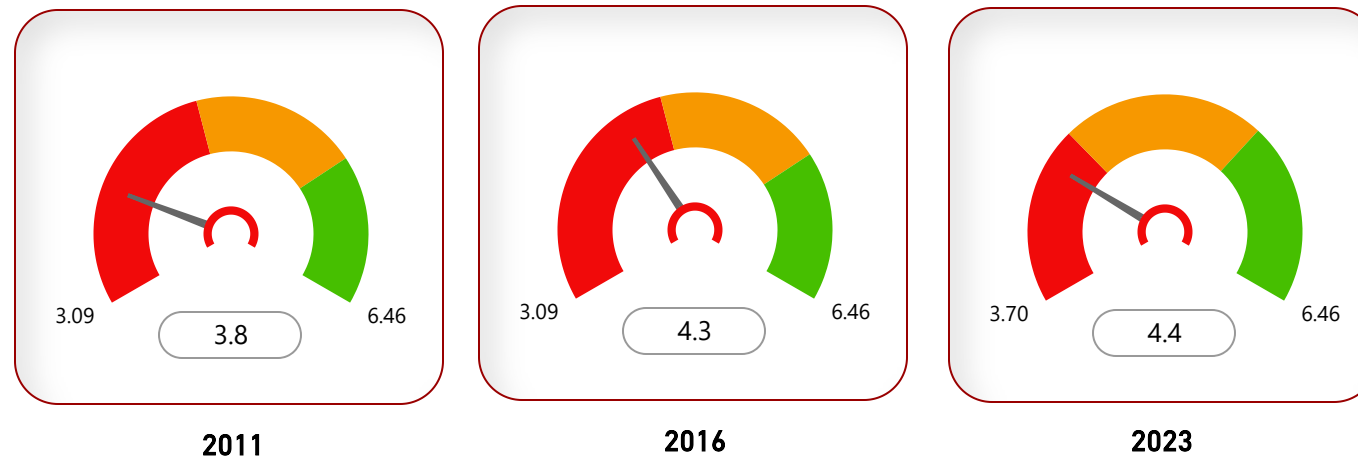
## Strengthen social bonds and restore trust

### Political Ties

#### Importance of Politics in Personal Life

(0 : faible : 10 : fort) Source: IRES

A political link that remains the most fragile of all social ties: 49% of Moroccans considered the political link to be "weak" in 2023, and 7 out of 10 Moroccans considered voting "useless" according to the national social link survey conducted by IRES. This thus reflects a relationship of distrust towards politics and representative institutions.



# Human-centric

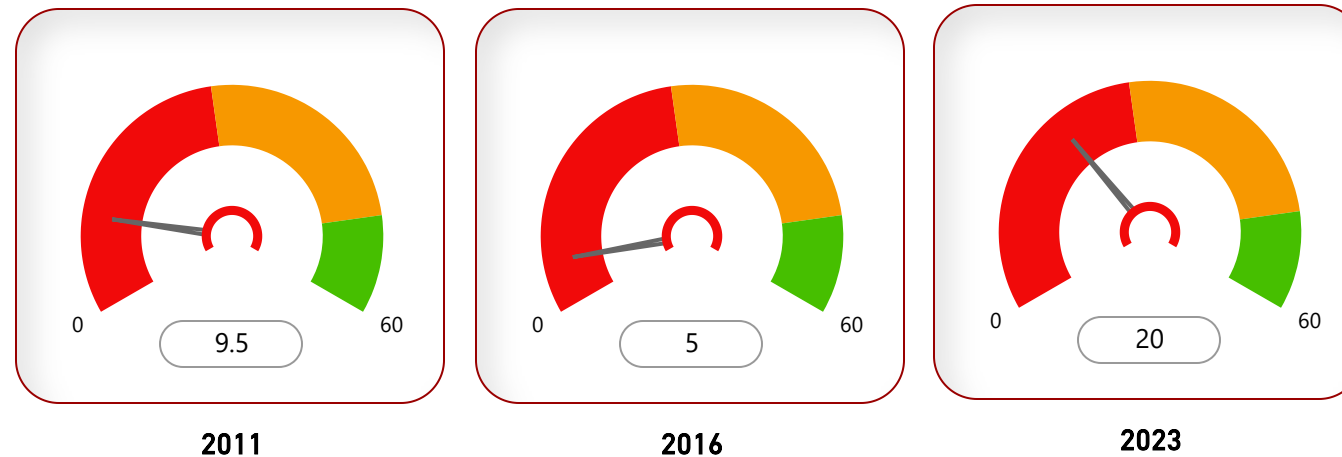
Strengthen social bonds and restore trust

## Interpersonal Trust

### Interpersonal Trust (% of People Trusting Most Others)

Source: IRES; World Value Surv...

Signs of improvement in 2023 regarding interpersonal trust, which constitutes one of the major foundations of living together: the rate of interpersonal trust quadrupled, rising from 5% in 2016 to 20% in 2023. This positive development deserves to be consolidated and accelerated so that Morocco ceases to be a society of personal distrust.



# Human-centric

Strengthen social bonds and restore trust

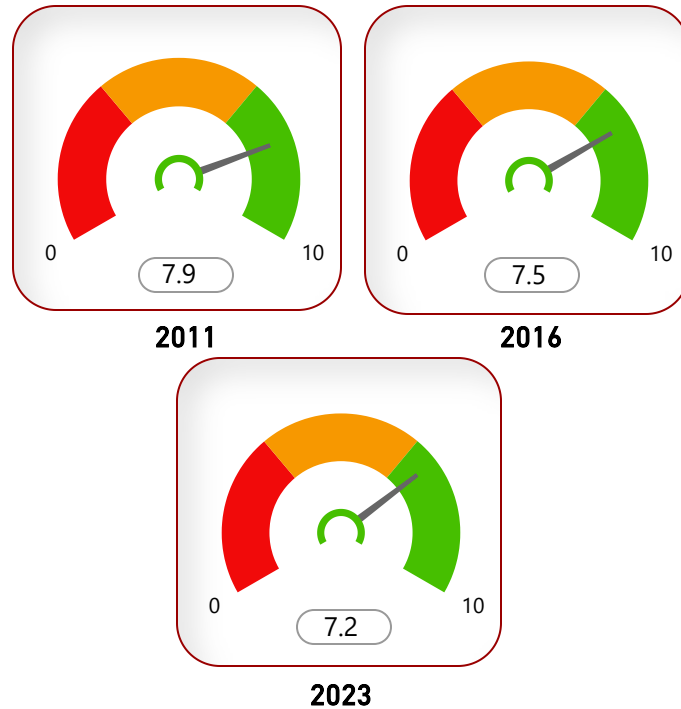
## Institutional Trust

### Trust in Institutions

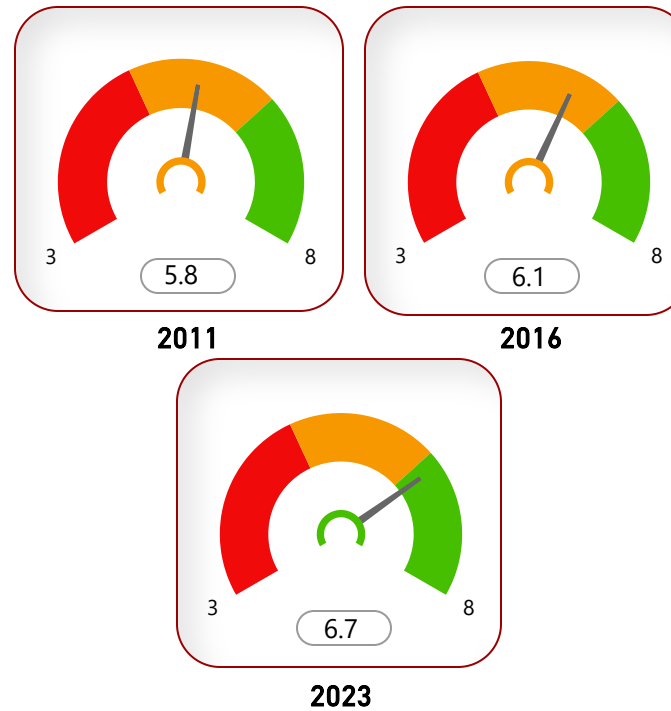
Source: IRES; World Value Survey

A high level of trust in educational and sovereign institutions, while institutional trust struggles to establish itself in the spaces of representative democracy, although it has been improving since 2011.

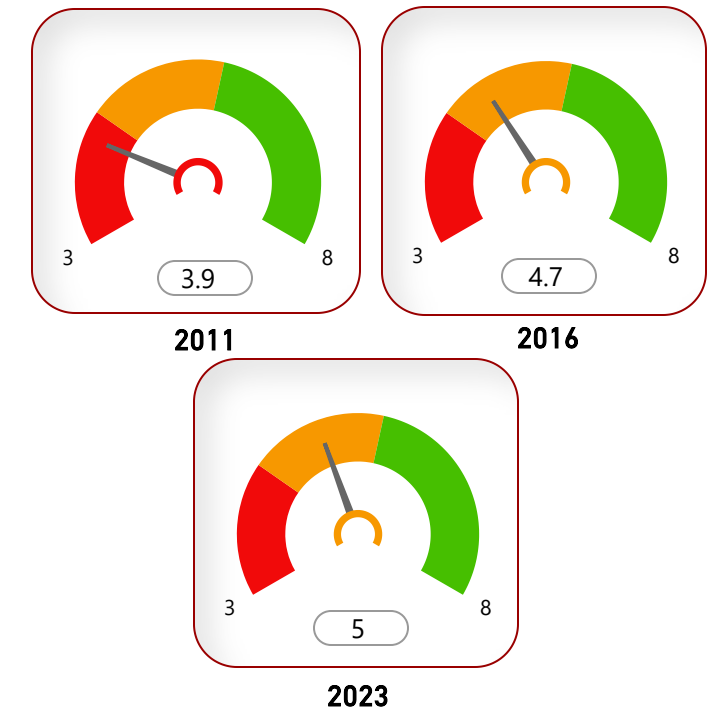
*Educational institutions*



*Sovereign institutions*



*Representative institutions*



# Human-centric

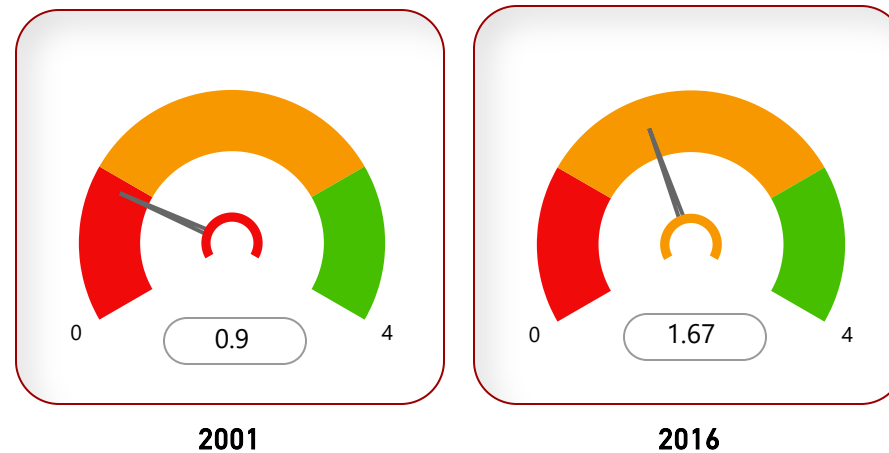
## Strengthen social bonds and restore trust

### Institutional Solidarity

#### Institutional Solidarity

Source: Calculations IRES\_CEP. (0 : Pas de prise en charge par les institutions publiques ou privées de la maladie, du chômage, de la retraite ; 1=faible part de la population couverte ; 4=très forte part de la population couverte)

A gradually improving system of institutional solidarity. The implementation of the project for the generalization of social coverage for all Moroccans should strengthen institutional solidarity and, by extension, contribute to consolidating social peace.



# Human-centric

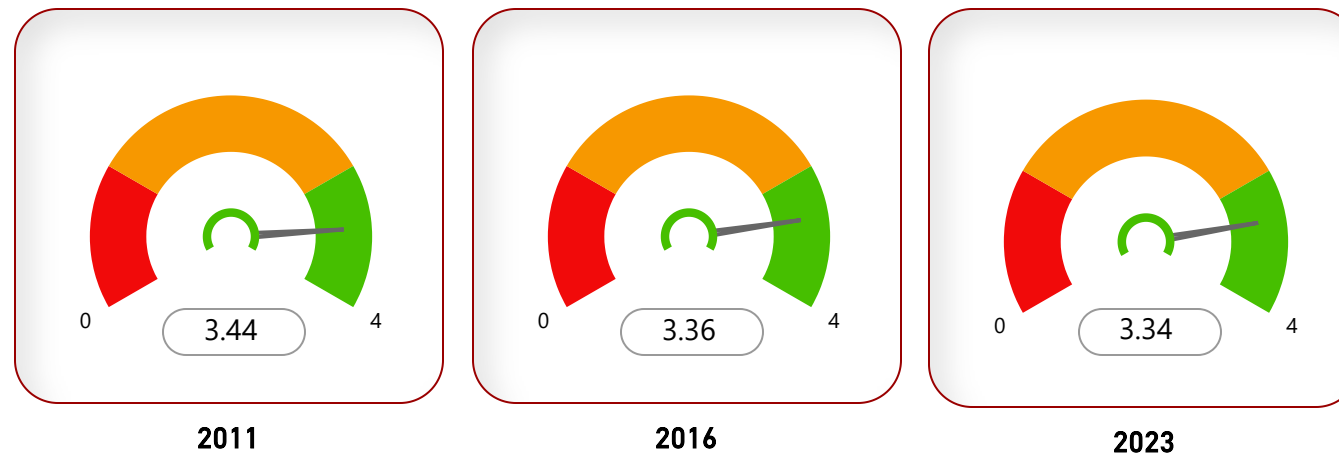
Strengthen social bonds and restore trust

## Traditional Solidarity

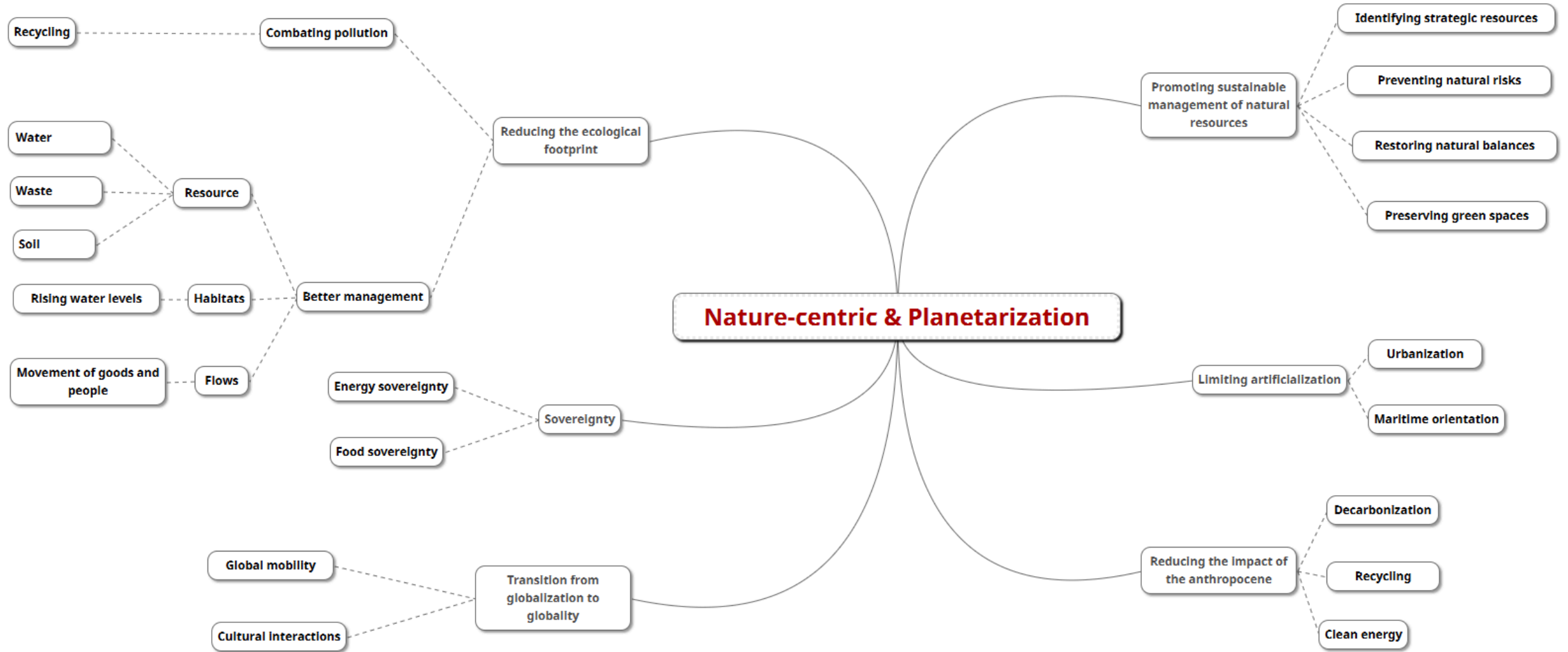
### Traditional Solidarity

(0 : faible ; 4 : très forte) Source: IRES

Traditional solidarities, especially those provided by the family, remain important in Morocco. Furthermore, solidarity among Moroccans reaches exceptional levels in times of crisis.







# Nature-centric & Planetaryization

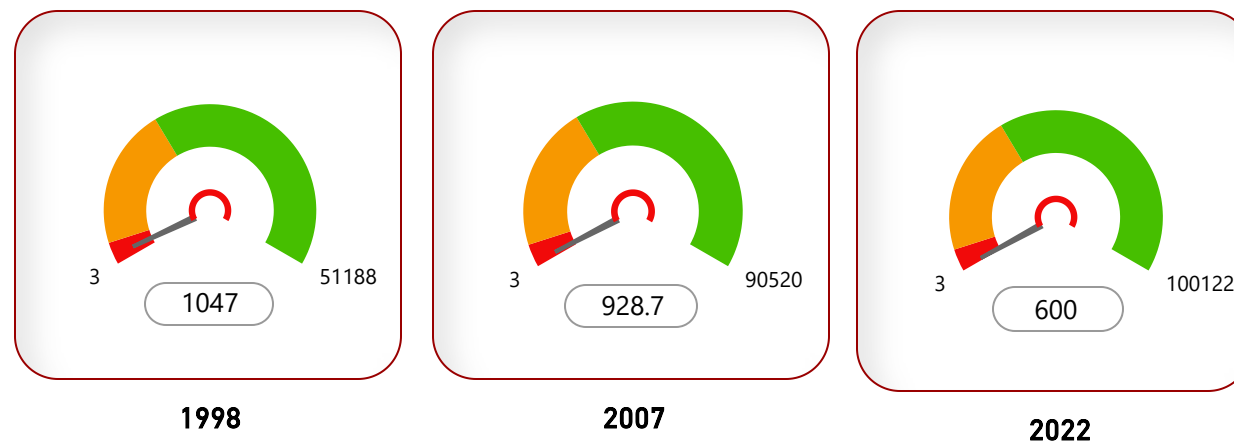
Promote sustainable management of natural resources

## Water Resource Availability

### Renewable Water Resources per Capita (m<sup>3</sup>/year)

Source: Calculations IRES\_ FAO\_ Aquastat

The water situation in Morocco has become highly concerning, both in terms of resource availability and its management. Indeed, the average potential "water capital" per capita per year is currently approaching the threshold of scarcity (500 m<sup>3</sup>/person/year). Morocco should manage water resources as a "common good" by encouraging water conservation, adopting the NEXUS approach (water, energy, agriculture, ecosystems), in order to implement an integrated environmental policy capable of preserving and ensuring the sustainability of "water capital," especially since the frequency and extent of droughts in Morocco have continually increased over the past few decades.



# Nature-centric & Planetaryization

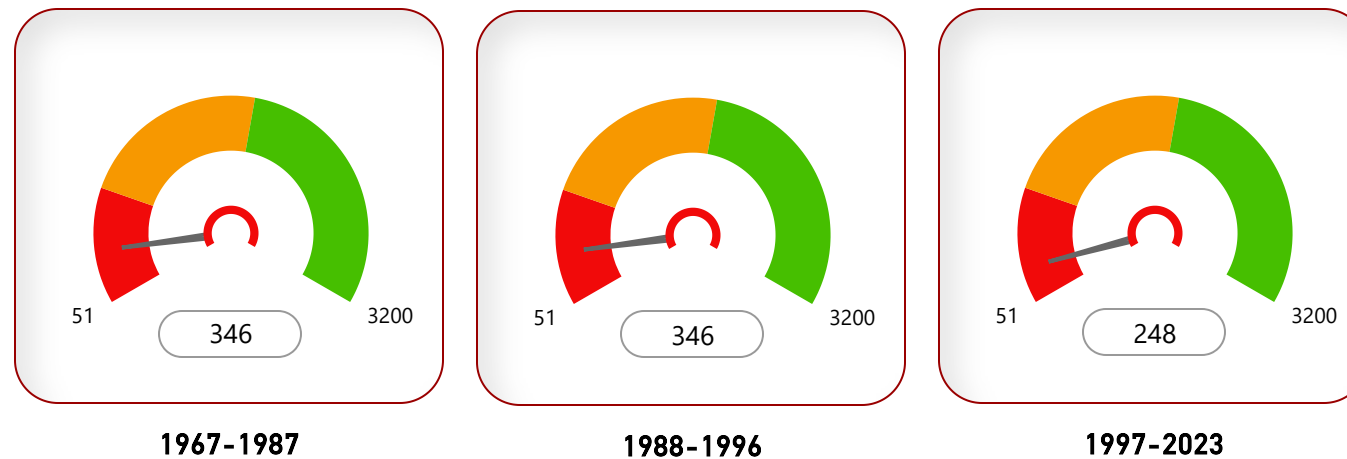
Promote sustainable management of natural resources

## Water Resource Availability

### Average Annual Precipitation (mm/year)

Source: Calculations IRES \_ World Bank

A significant rainfall deficit affecting water resources in Morocco. Specifically, the rainy season of the 2022-2023 period experienced precipitation deficits of at least 20% below the average observed between 1991 and 2020. This was the fourth consecutive year of insufficient rainfall, marking unprecedented levels of drought severity in the country's history.



# Nature-centric & Planetaryization

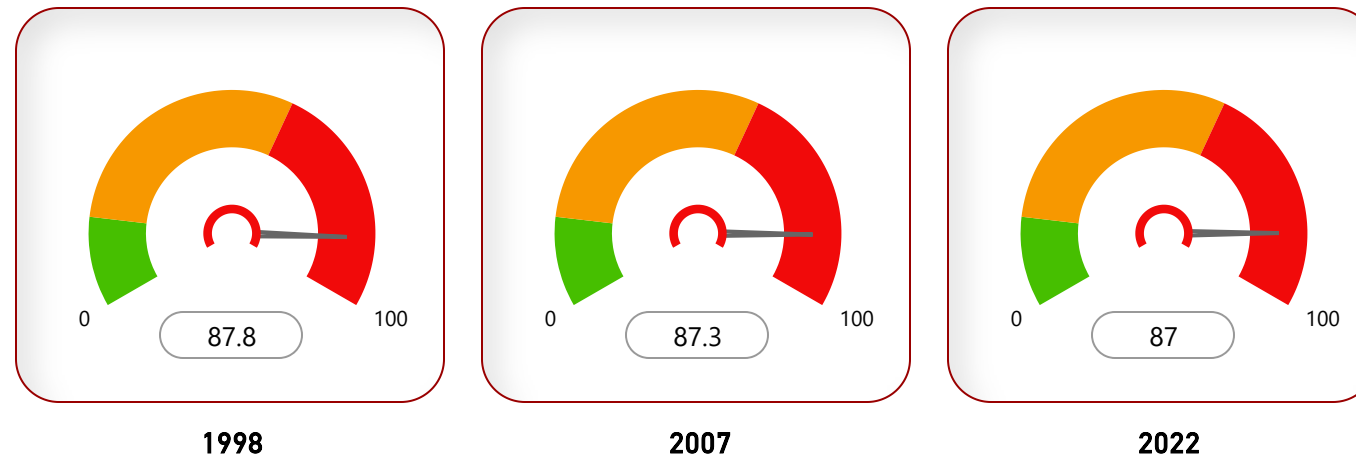
Promote sustainable management of natural resources

## Freshwater Withdrawals for Agriculture

### Annual Freshwater Withdrawals for Agriculture (% of Total Withdrawals)

Source: Calculations IRES \_ FAO \_ Aquastat

An agricultural sector, including livestock, that consumes a significant portion of mobilized water resources and is characterized by inefficient use of these resources. This calls for a complete review of water usage in this sector, prioritizing allocation to agricultural operators contributing to food sovereignty, establishing a better balance in agricultural policy between rainfed and irrigated systems, and conducting impact studies prior to authorizing agricultural projects that heavily consume water and do not valorize this strategic resource.



# Nature-centric & Planetaryization

Promote sustainable management of natural resources

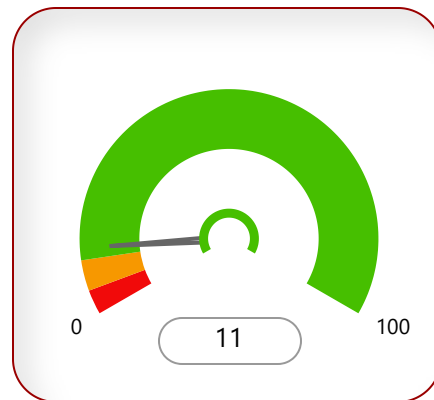
## Endemism

### Endemism Rate (%)

Source: Calculations IRES \_ National Water and Forests Agency

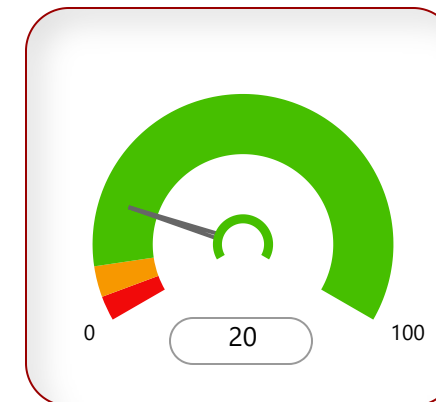
Morocco's geographical location, at the crossroads of Africa and Europe, and between the Mediterranean and the Atlantic, grants it the title of a "biodiversity hotspot" with a very large number of endemic species.

*Fauna endemism*



2022

*Vascular plant endemism*



2022

# Nature-centric & Planetaryization

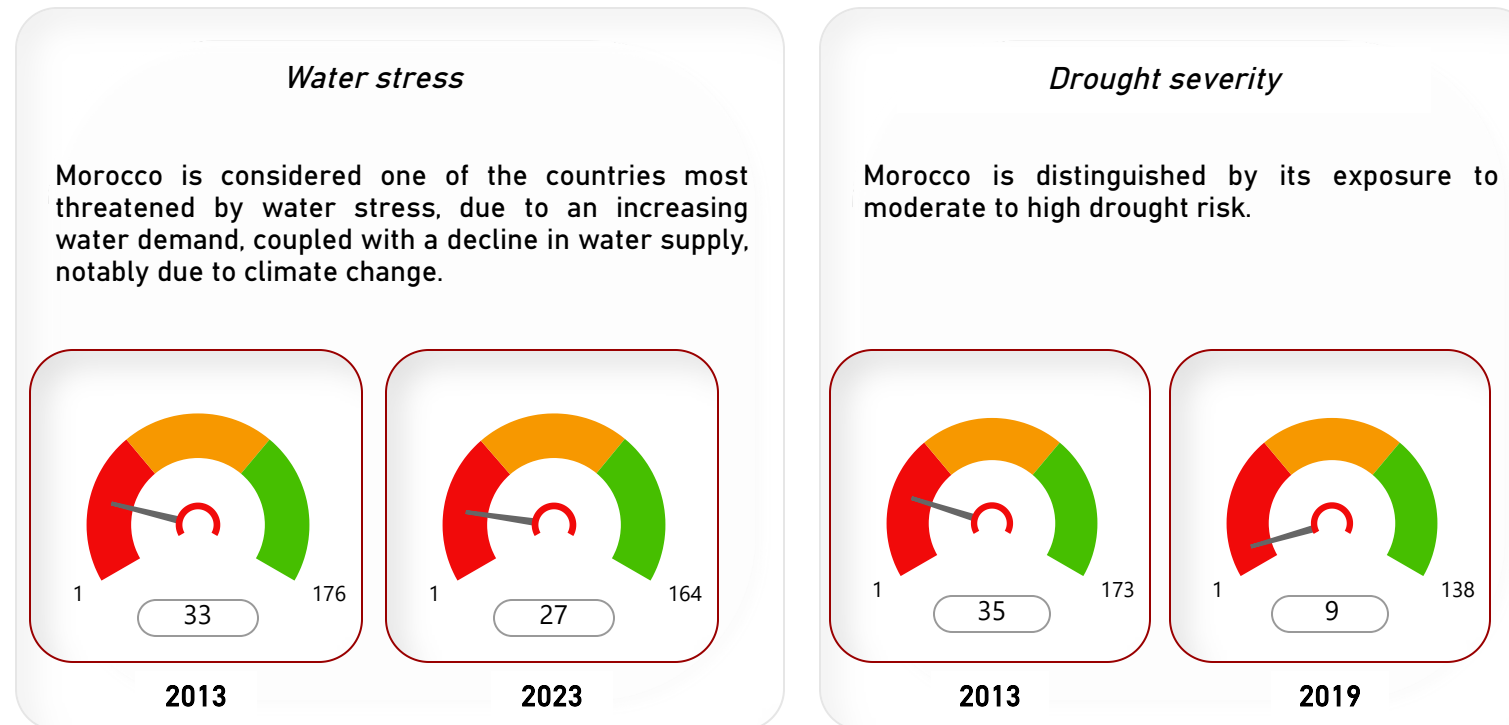
Promote sustainable management of natural resources

## Natural Disaster Exposure

### Exposure to Climate Change Risks

Source: "World Resources Institute"

The following two indicators, developed by the international organization "World Resources Institute," were published in 2013, with some updated in 2019 and 2023. They focus on the average exposure of countries to water-related risks, the most strategic resource in the world. These alarming indicators underscore the urgent need to address the critical issue of water.



# Nature-centric & Planeterization

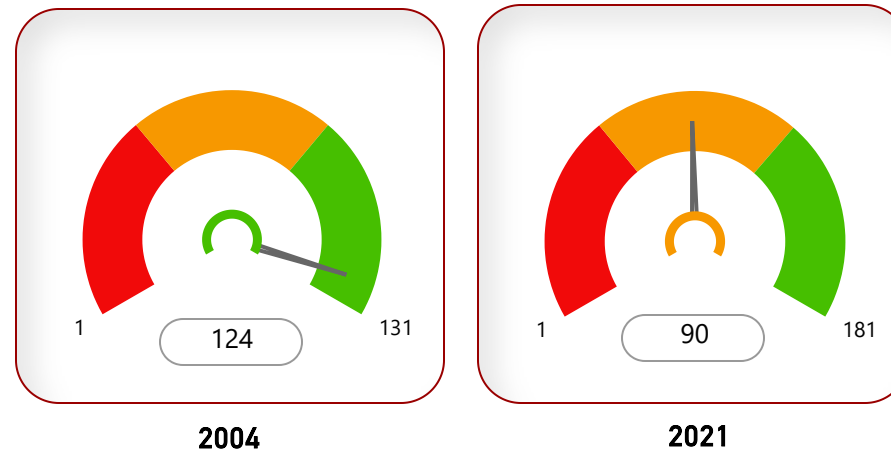
Promote sustainable management of natural resources

## Natural Disaster Exposure

### Global Climate Risk Index

Source: Calculations IRES \_ Germanwatch

Morocco is increasingly affected by multiple climate risks, particularly droughts and floods, whose economic and human costs are relatively high. Climate change, a global challenge, should be integrated into all of the country's public policies.



# Nature-centric & Planetaryization

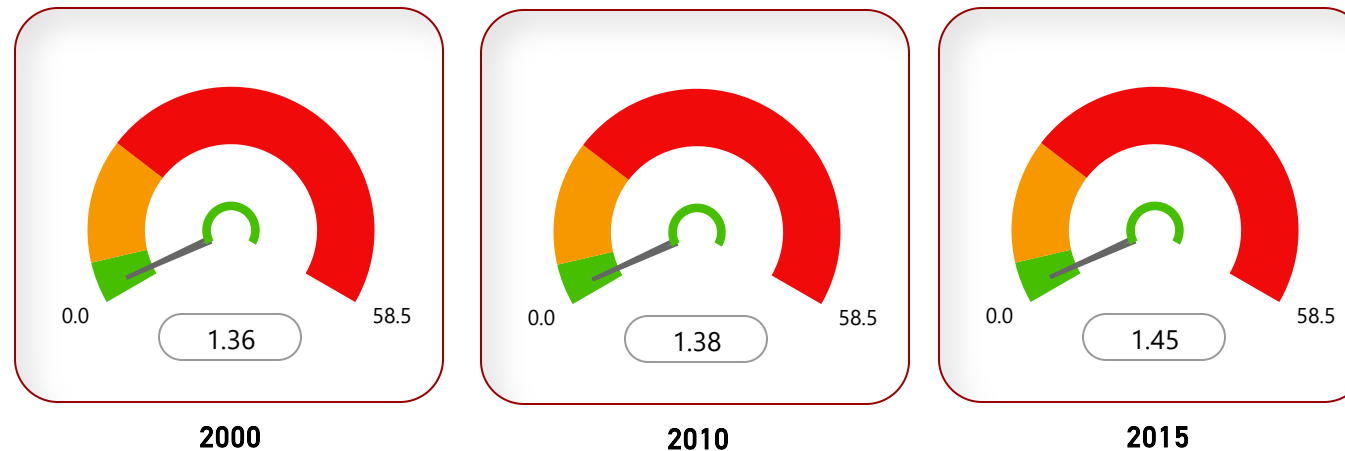
Promote sustainable management of natural resources

## Natural Disaster Exposure

### Marine Submersion Risk (% of Population Living Below 5m Altitude)

Source: Calculations IRES\_ World Bank

Vulnerable lands to marine submersion in Morocco, inhabited by 1 person out of 69, according to the latest available estimates calculated by the International Network on Earth Sciences Consortium. Sea level rise could accelerate in the future and pose significant risks in terms of coastal erosion, submersion of coastal plains, and salinization of groundwater.





# Nature-centric & Planetaryization

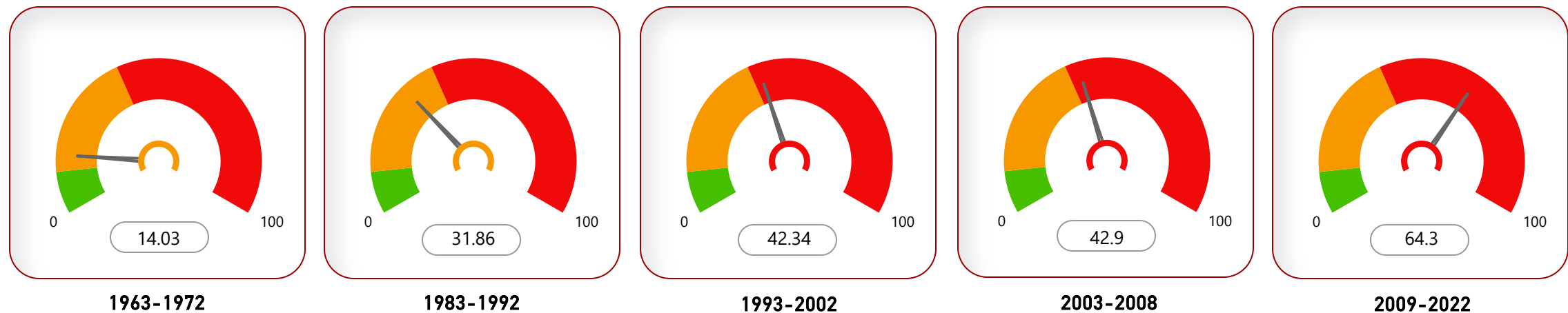
## Sovereignty

### Food Sovereignty

#### Cereal Import Dependency Rate (%)

Source: Calculations IRES\_ FAO Data

An increased dependence on external cereal supplies over the past 20 years due to population growth, frequent droughts, degradation of productive bases, and the worsening impacts of climate change. Additionally, the global context marked by multiple crises affecting supply chains for this vital commodity underscores the urgency of revising the agricultural development model, considering new paradigms of food sovereignty, water resource preservation, sustainability, and natural capital resilience.



# Nature-centric & Planetaryization

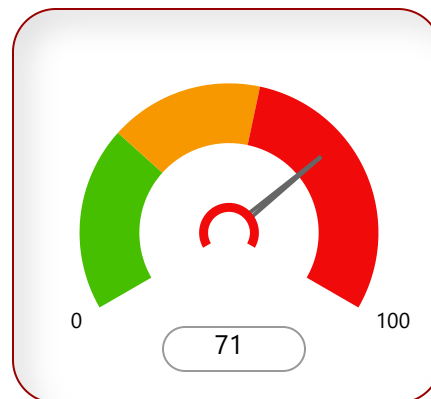
## Sovereignty

### Food Sovereignty

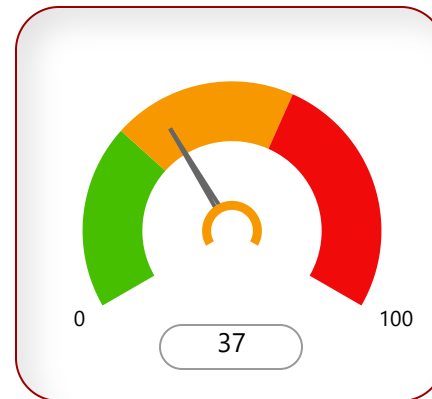
#### Sugar Import Dependency Rate (%)

Source: Calculations IRES \_ FAO Data

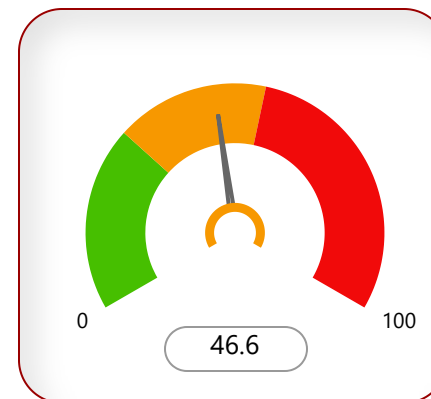
A national production that satisfies less than half of the demand for sugar, attributed, among other factors, to the stagnation of cultivated sugar beet areas, coupled with high consumption of this staple by households and professionals in the agri-food industry.



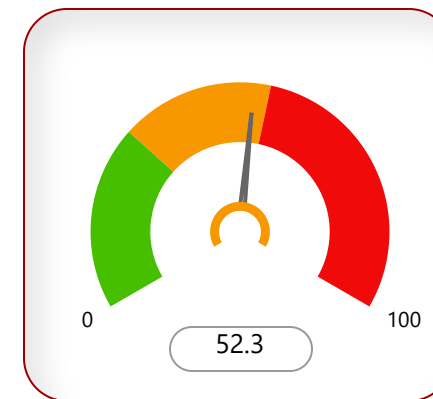
1963-1972



1983-1992



1993-2002



2009-2022

# Nature-centric & Planetaryization

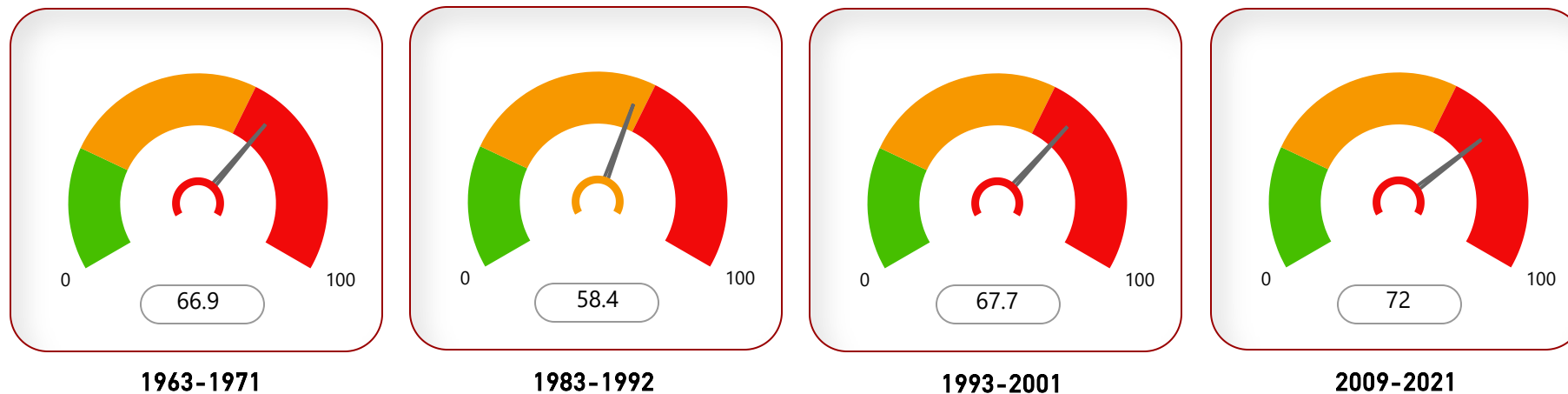
## Sovereignty

### Food Sovereignty

#### Vegetable Oil Import Dependency Rate (%)

Source: Calculations IRES\_ FAO Data

An increasing share of Morocco's vegetable oil needs being imported despite the development of oilseed production under the Green Morocco Plan. The new "Green Generation 2020-2030" strategy, which aims to strengthen food sovereignty and consolidate agricultural sectors, is expected to partially reduce Morocco's dependence on this food product.



# Nature-centric & Planetaryization

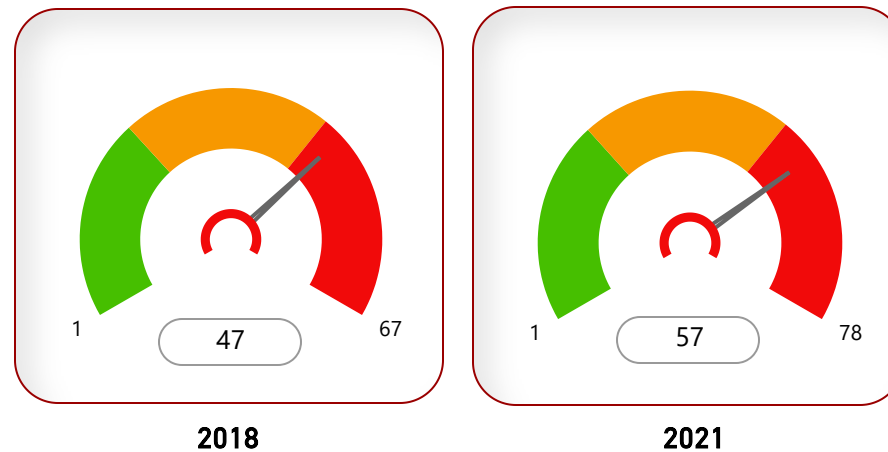
## Sovereignty

### Food Sovereignty

### Food Sustainability Index

Source: Calculations IRES\_ Economist Intelligence Unit (EIU); Barilla Center for Food & Nutrition (BCFN)

Morocco's delay in achieving food sustainability is primarily attributable, according to the Barilla Center for Food & Nutrition, to citizens' consumption habits, food waste, and, to a lesser extent, shortcomings in storage and refrigeration infrastructure and the development of sustainable agriculture.



# Nature-centric & Planetarization

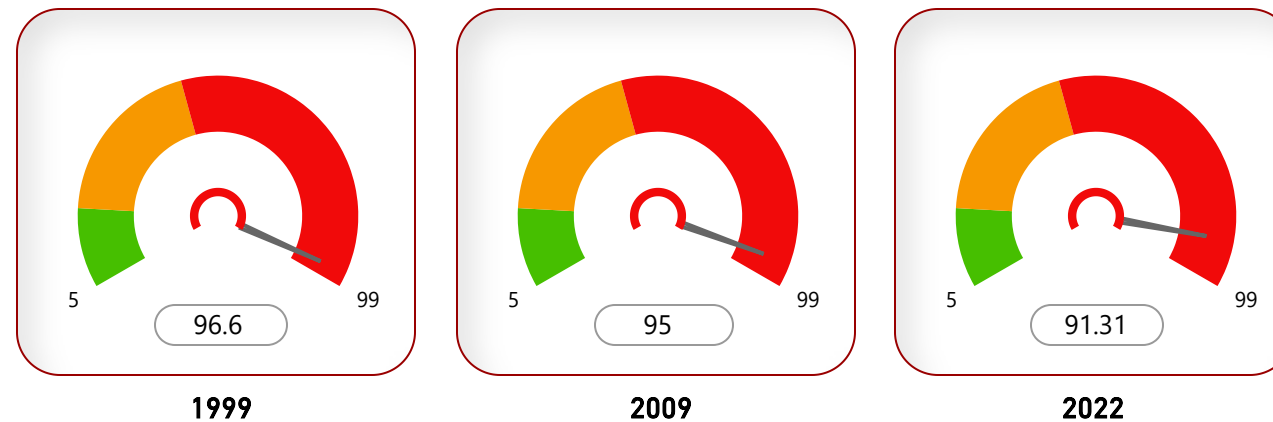
## Sovereignty

### Energy Sovereignty

#### Energy Dependency Rate (%)

Source: Calculations IRES\_ Ministry of Energy, Mines, and Environment; World Bank

A continued strong energy dependency despite efforts in energy transition and efficiency as part of the 2009 strategy. Only the decarbonization of the economy, including through the use of green hydrogen, can significantly reduce Morocco's energy dependence on foreign sources.



# Nature-centric & Planetarization

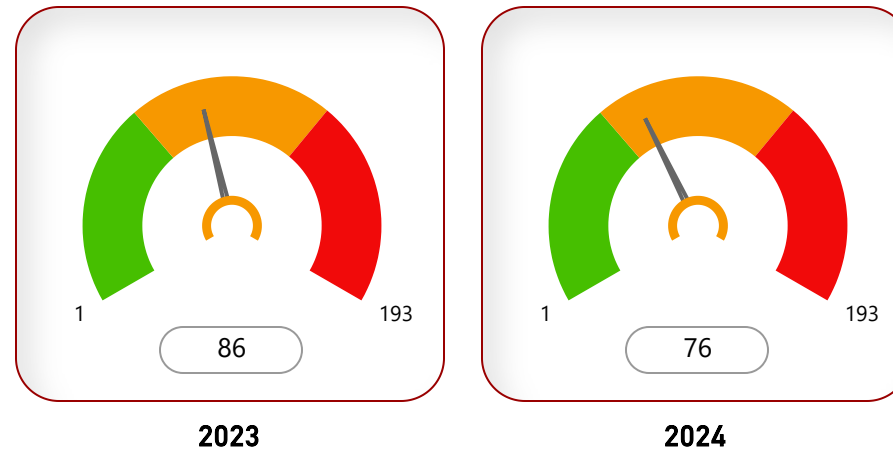
## Sovereignty

### Energy Sovereignty

#### Sustainable Future Index

Source: Calculations IRES \_ BrandFinance

A gain of 10 places between 2023 and 2024 in Morocco's positioning in the sustainable future index, thanks to advancements in promoting investment in green energy and combating climate change.



# Nature-centric & Planetarization

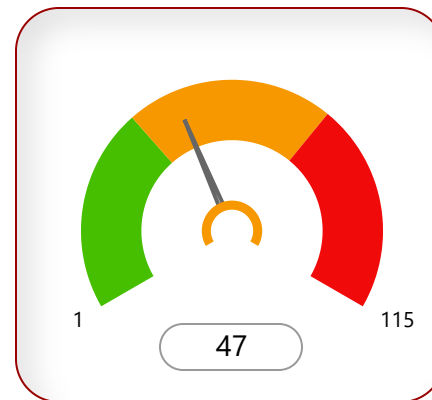
## Sovereignty

### Energy Sovereignty

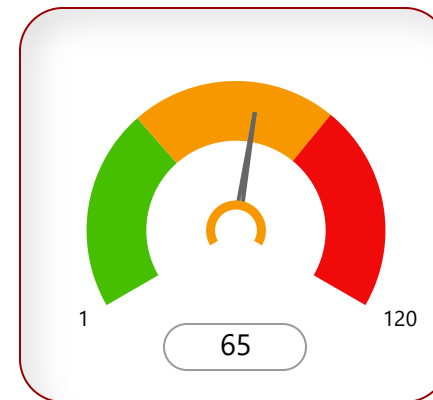
#### Energy Transition Index

Source: Calculations IRES\_ World Economic Forum

An intermediate international ranking for Morocco in this index, which could improve in the future if the Kingdom succeeds in accelerating the development of the renewable energy sector in line with the Royal Guidelines and further promotes energy efficiency.



2019



2024

# Nature-centric & Planetaryization

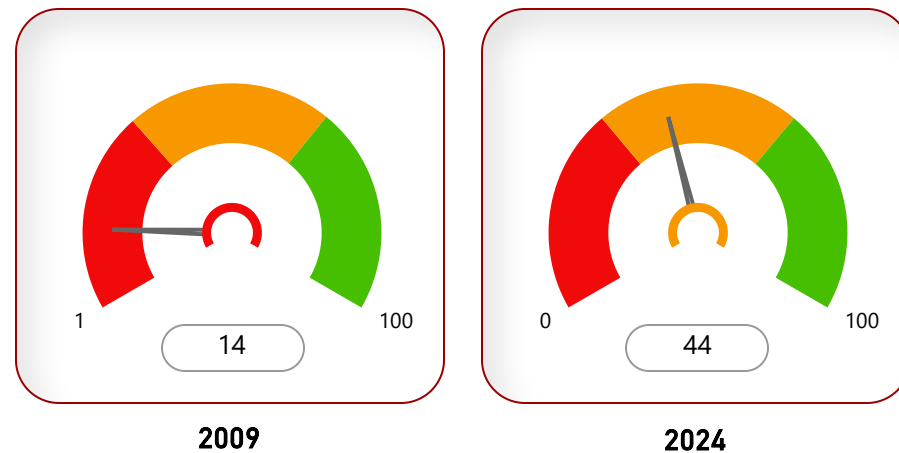
## Sovereignty

### Energy Sovereignty

#### Share of Renewable Energy in Installed Power Capacity (%)

Source: Calculations IRES \_ Ministry of Energy, Mines, and Environment; Ministry of Energy Transition and Sustainable Development

A share of 44% in 2024 for renewable energies in installed electric power (including hydropower) compared to nearly 14% in 2009. This increase is the result of efforts made by Morocco as part of the 2009 energy strategy.





# Nature-centric & Planetarization

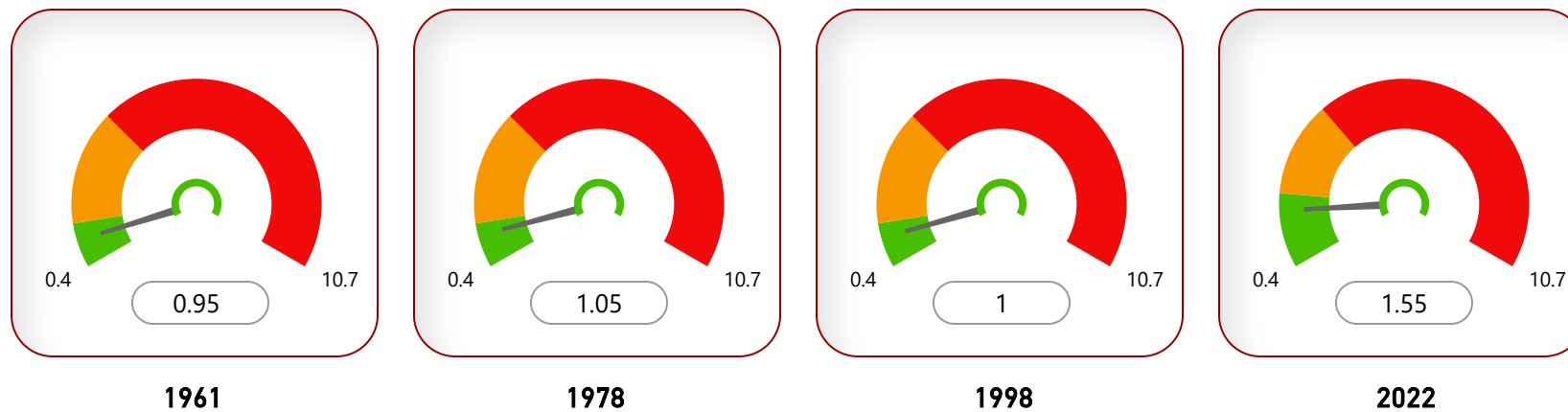
## Reduce the ecological footprint

### Ecological Footprint

#### Ecological Footprint per Capita (Hectares)

Source: Calculations IRES \_ Global Footprint Network

A continuous increase in Morocco's need for agricultural land and maritime spaces intended for resource production and waste absorption, explained by population growth and changing consumption patterns.



# Nature-centric & Planetaryization

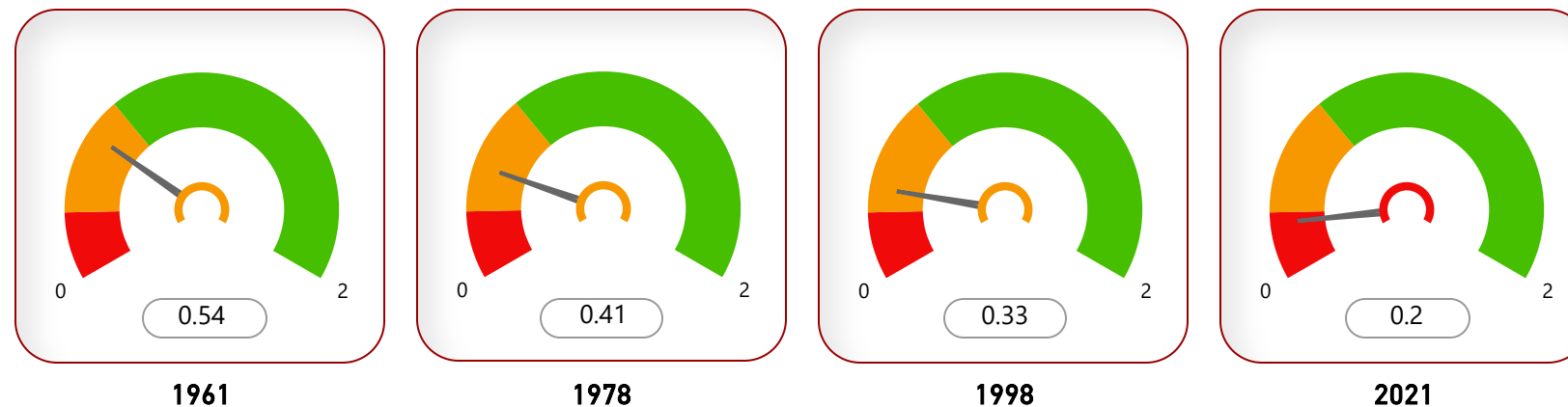
## Reduce the ecological footprint

### Natural Capital: Soils

#### Arable Land per Capita (Hectares)

Source: Calculations IRES\_HCP; FAO

A significant decline in terms of arable land. Agricultural lands in Morocco are undergoing major degradation, partly due to anthropogenic urban expansion that reduces arable land and partly due to natural phenomena such as desertification, salinization, and soil erosion that affect the quality and fertility of agricultural land.



# Nature-centric & Planetaryization

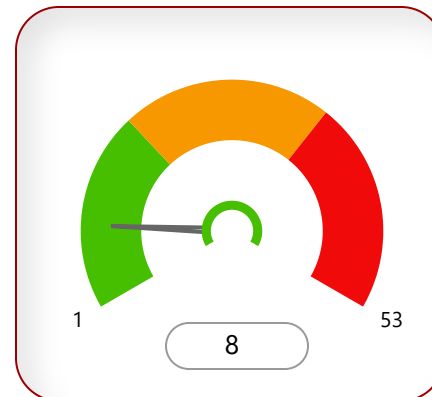
Reduce the impact of the anthropocene

Contribution to Climate Change (Greenhouse Gas Emissions)

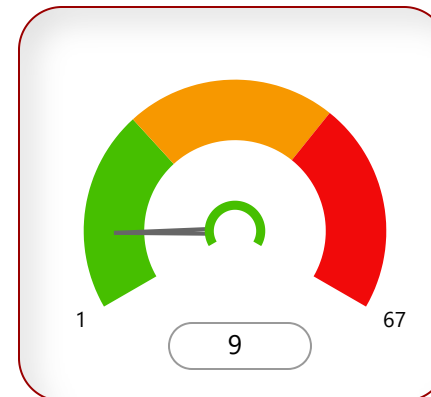
## Climate Change Performance Index

Source: Calculations IRES\_ Germanwatch

A very favorable position for Morocco in this index, given its low contribution to greenhouse gas emissions and its ongoing commitment to promoting the use of clean energy.



2005



2024

# Nature-centric & Planeterization

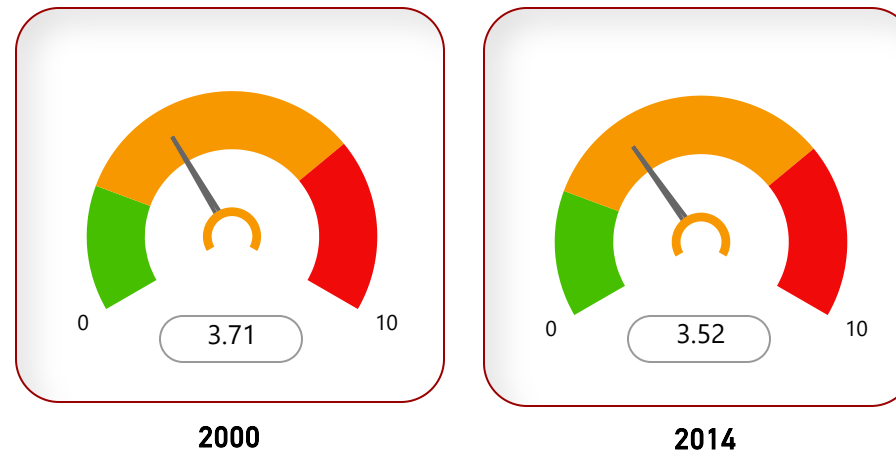
Reduce the impact of the anthropocene

## Cost of Environmental Degradation

### Environmental Degradation Cost as % of GDP

Source: Calculations IRES \_ World Bank

An environmental degradation, the average cost of which, according to World Bank estimates, amounted to nearly 4% of GDP in 2014. This situation is concerning given that Morocco spends less than 1% of its GDP annually on environmental preservation.



# Nature-centric & Planetaryization

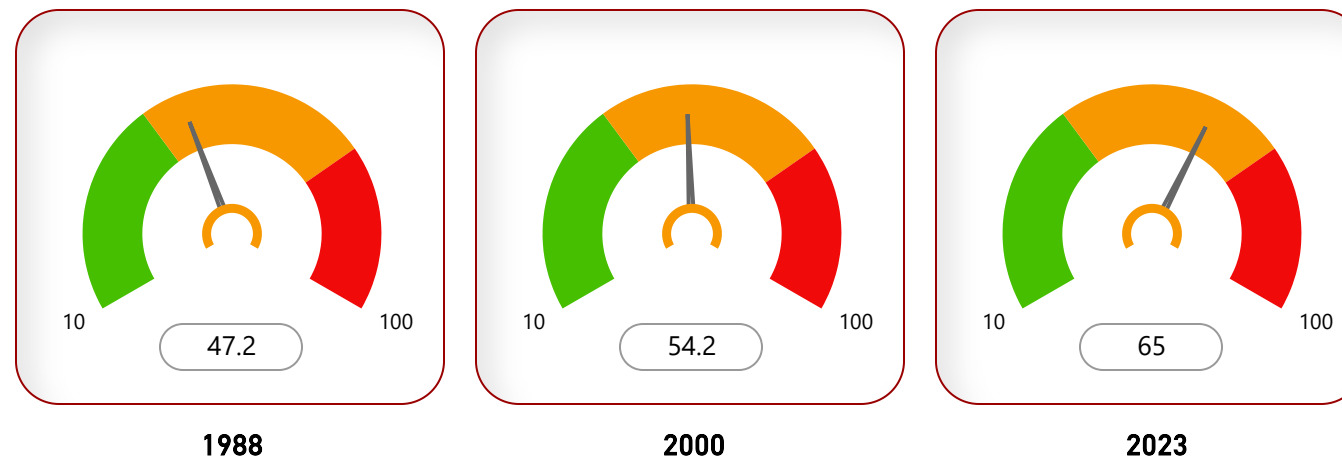
Limit artificialization

Urbanization and Metropolization

**Urbanization Rate (%)**

*Source: Calculations IRES\_HCP; UNDP*

An urban population that has surpassed the rural population since the early 1990s. Urbanization is expected to accelerate with the diversification of the national economy and the impacts of climate change. It is projected that this rate will reach approximately 75% by 2050, according to projections from the High Commission for Planning.



# Nature-centric & Planetaryization

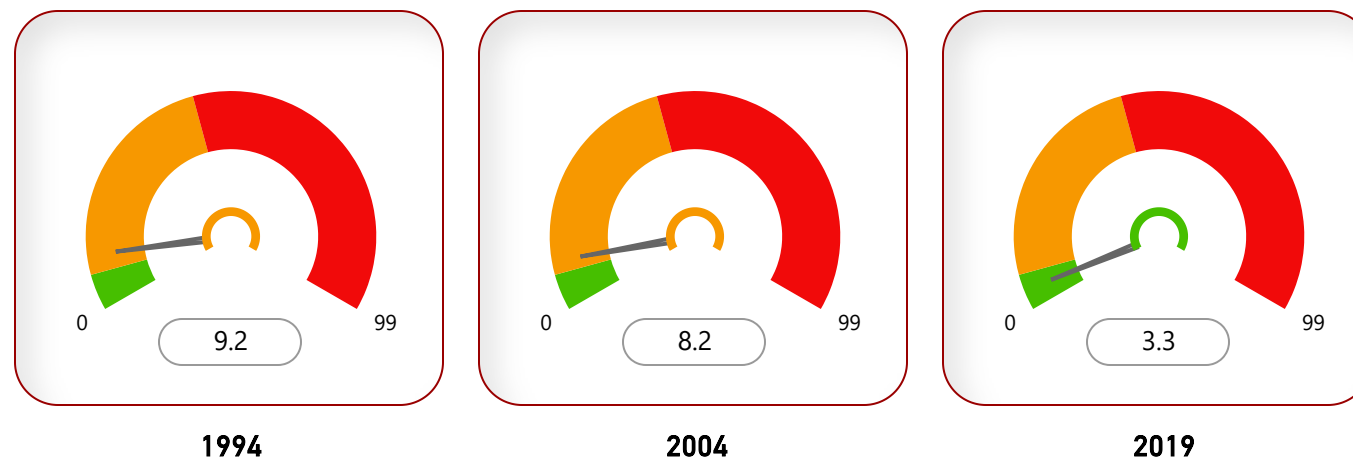
## Limit artificialization

## Urbanization and Metropolization

### Urban Population Living in Slums (% of Total Urban Population)

Source: Calculations IRES\_ Ministry of National Territorial Planning, Urbanism, Housing, and City Policy; UN-Habitat

An improvement between 1994 and 2019 in Morocco's international positioning according to this index, thanks to the implementation of the "Cities Without Slums" program launched in 2004. This program helped reduce a large number of unhealthy dwellings, resettle and rehabilitate households living in slums, reduce poverty, and improve infrastructure in the affected areas.



# Nature-centric & Planetaryization

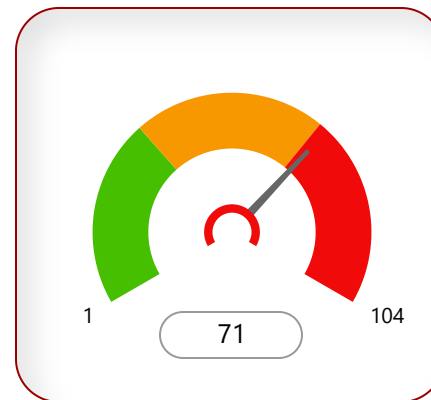
Transition from globalization to globality

Circular Mobility

**Henley Passport Index**

*Source: Calculations IRES \_ Henley & Partners Consulting Firm*

Morocco's unfavorable ranking in this index. As of 2024, the Moroccan passport allows freedom of travel with visa exemption to only 71 countries worldwide.



2024

# Nature-centric & Planetaryization

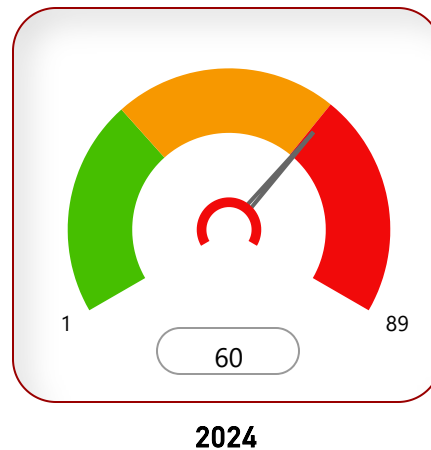
Transition from globalization to globality

## Circular Mobility

### Welcoming Countries Rank

Source: Calculations IRES\_ Passport Index

An almost intermediate ranking for Morocco in this index. In 2024, the Kingdom grants visa exemptions to nationals of only 77 countries for entry into the territory.





# Nature-centric & Planetarization

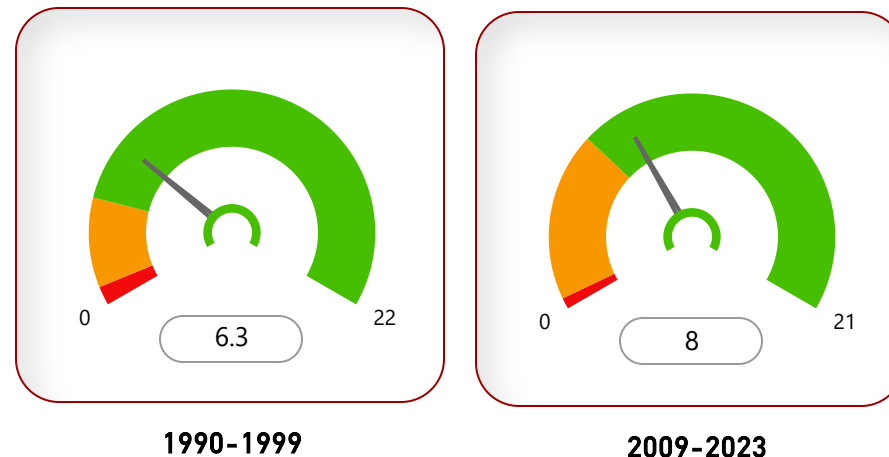
## Transition from globalization to globality

### Circular Mobility

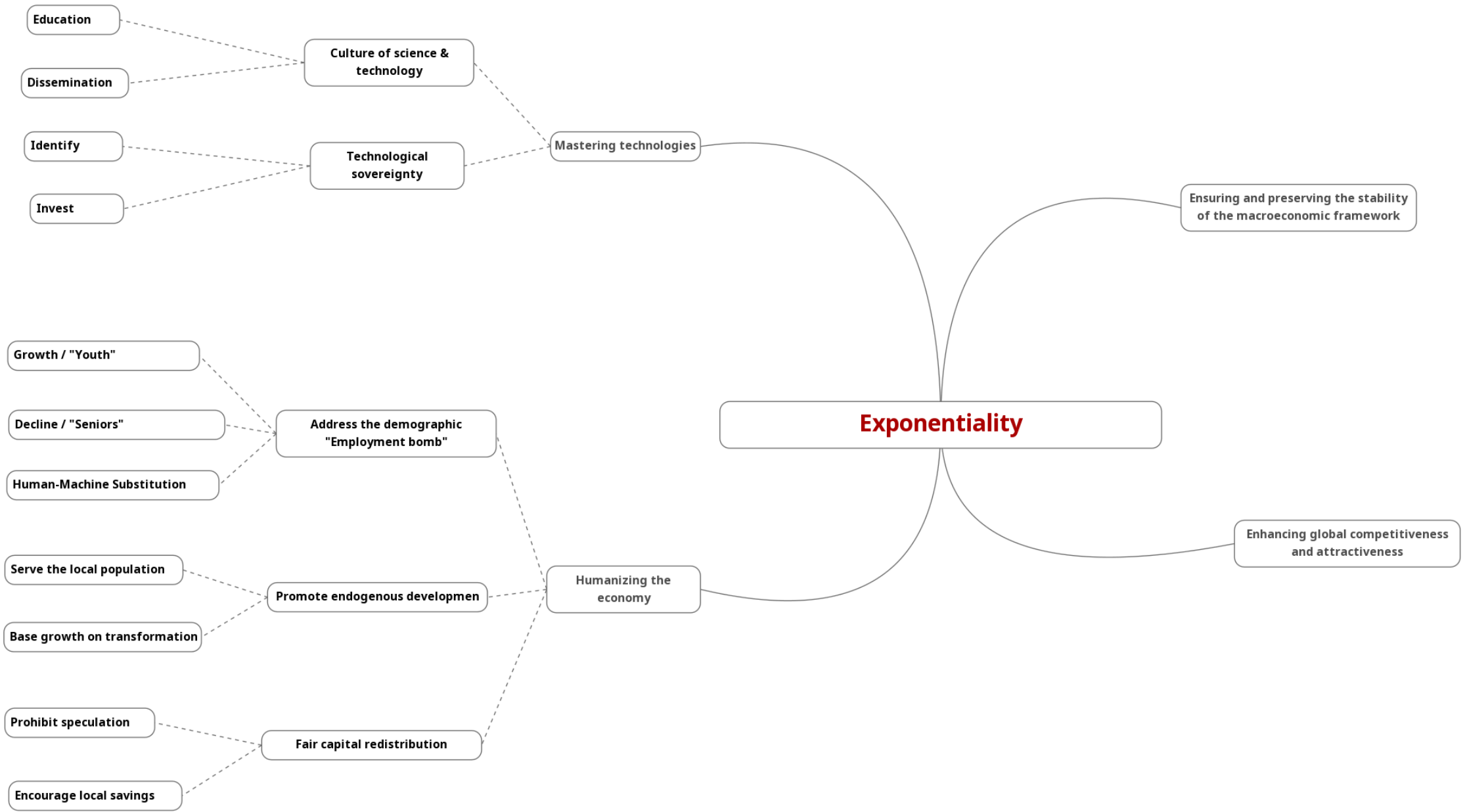
#### Remittances from Moroccans Abroad (% of GDP)

Source: Calculations IRES \_ Data from the Office des Changes; World Bank

A steady increase in transfers from Moroccans living abroad, which have withstood global shocks of various natures. Indeed, despite the Covid-19 crisis and its economic repercussions, transfers from the Moroccan diaspora increased by 78% between 2019 and 2023. Accounting for nearly 8% of GDP during the 2009-2023 period, these transfers constitute a significant source of financing for the Moroccan economy.







# Exponentiality

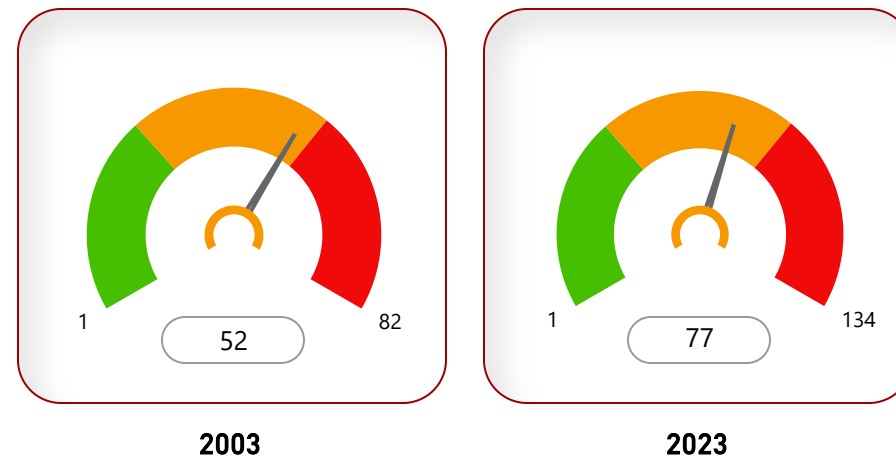
## Master technologies

## Readiness for Disruptive Technologies

### Network Readiness Index

Source: Calculations IRES\_ World Economic Forum; Portulans Institute

Morocco's intermediate international positioning according to this index, though slightly improved, due to the lack, until September 2024, of a long-term, global, and transversal vision in the digital sector targeting massive investment in advanced digital infrastructures, development of disruptive technologies, building digital skills, and preserving the country's digital sovereignty.



# Exponentiality

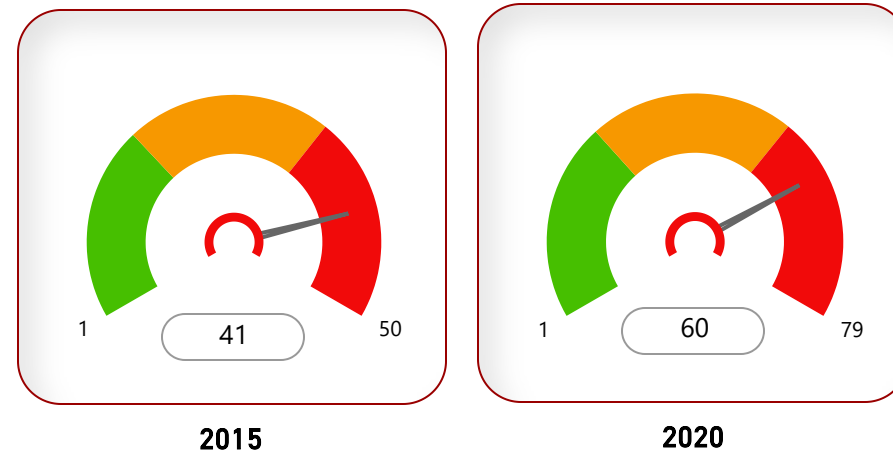
## Master technologies

## Readiness for Disruptive Technologies

### Global Connectivity Index

Source: Calculations IRES\_ Huawei

Morocco's inappropriate international positioning according to this index due, among other reasons, to the slow development of "high-speed" connectivity infrastructures.



# Exponentiality

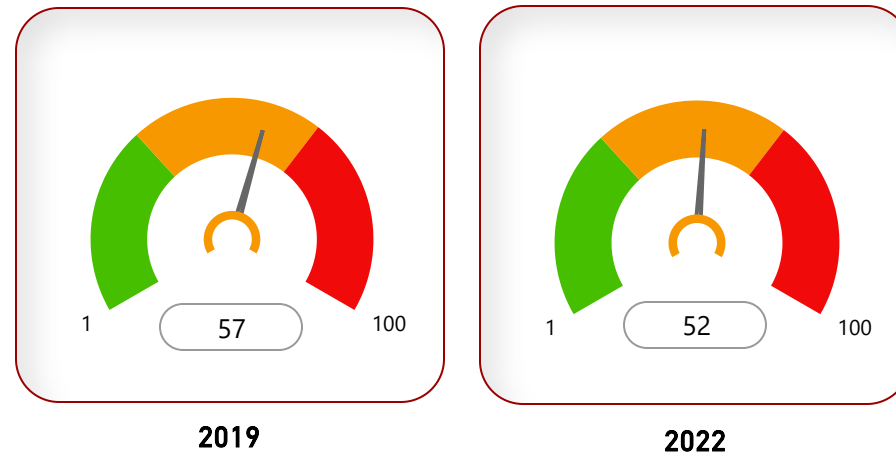
## Master technologies

### Readiness for Disruptive Technologies

#### Inclusive Internet Index

Source: Calculations IRES \_ Economist Intelligence Unit

Morocco's intermediate positioning according to this index, attributed to the persistence of inequalities in access to high-speed internet and the use of technologies. Moreover, the Kingdom ranks 5th globally in terms of the existence and extent of relevant local language virtual content.



# Exponentiality

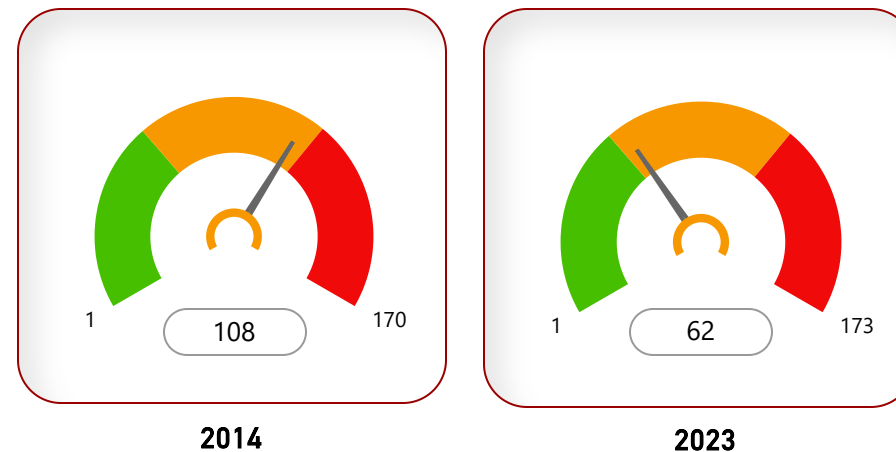
## Master technologies

### Readiness for Disruptive Technologies

#### Mobile Connectivity Index

Source: Calculations IRES \_ Global System for Mobile Communications (GSMA)

An improvement in Morocco's ranking according to this index due to the development and flexibilization of mobile telecommunications and the introduction of 4G in 2015.



# Exponentiality

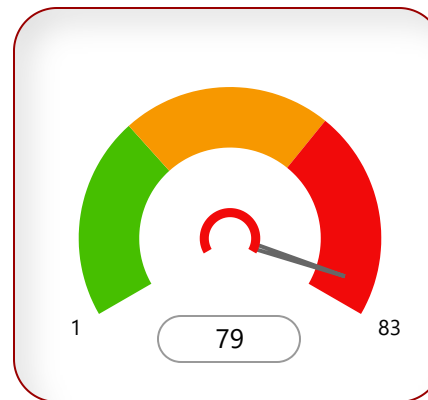
## Master technologies

### Readiness for Artificial Intelligence

#### Global AI Index

Source: Calculations IRES\_ Tortoise Media

An inappropriate international ranking for Morocco according to this index, partly explained by the lack of a strategic vision in artificial intelligence. However, thanks to national initiatives led with UNESCO, the implementation of educational programs to foster research, training, and the involvement of young talents in artificial intelligence, the Kingdom currently ranks 2nd in Africa.



2024



# Exponentiality

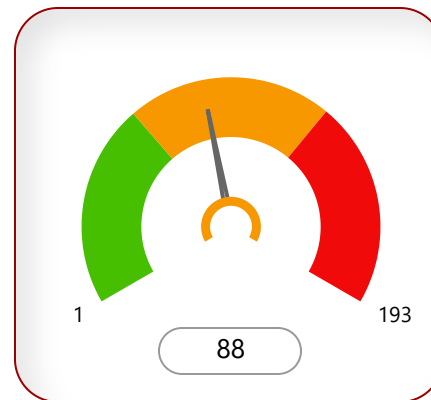
## Master technologies

### Readiness for Artificial Intelligence

#### Government AI Readiness Index

Source: Calculations IRES\_ Oxford Insights

A gradual integration of artificial intelligence into public sector practices through the implementation of several projects, such as Pacte ESRI 2030, data reconciliation and analysis systems from the General Tax Directorate, E-Moulouya, etc. However, in the absence of a holistic vision for the development of this disruptive field, the Kingdom's international positioning in the government readiness index for AI adoption remains intermediate.



2023

# Exponentiality

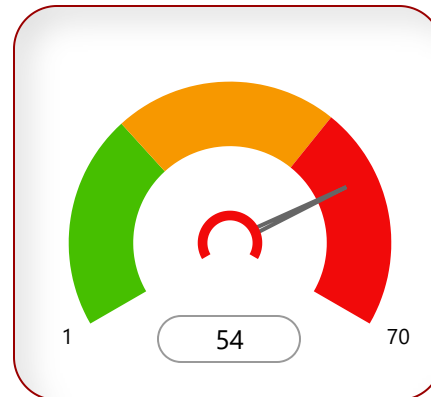
## Master technologies

### Robotic Density

#### Robotic Density (Industrial Robots per 10,000 Employees)

Source: Calculations IRES \_ United Nations Conference on Trade and Development

An unfavorable international ranking for Morocco in terms of industrial robotic density, reflecting the lack of genuine consideration for the digital dimension in the Moroccan industrial acceleration plan.



2017

# Exponentiality

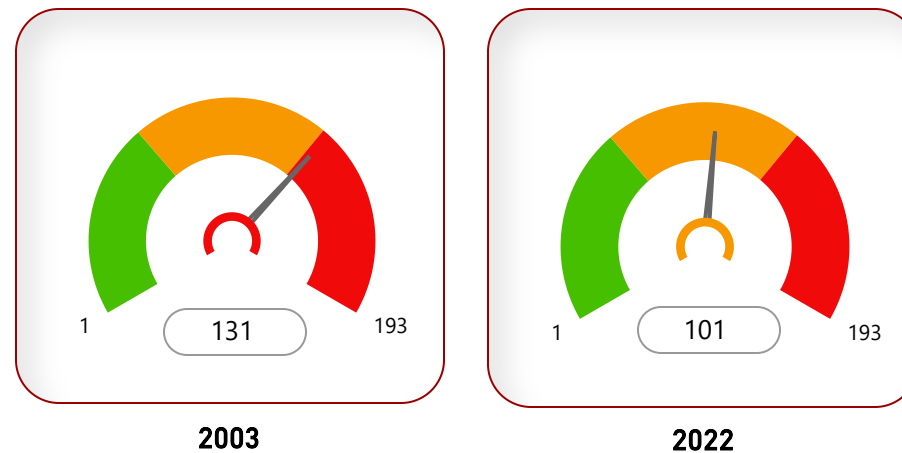
## Master technologies

### Digital Life Quality

#### E-Government Development Index

Source: Calculations IRES \_ UNDESA \_ UN E-Government Development Database

A gain of 30 places between 2003 and 2022 in Morocco's positioning in the e-government development index, resulting from the expansion of online services, which was accelerated during the health crisis. These advances are the result of efforts made under the E-Government program, a priority axis of the Morocco-Numeric 2013 and 2020 strategies.



# Exponentiality

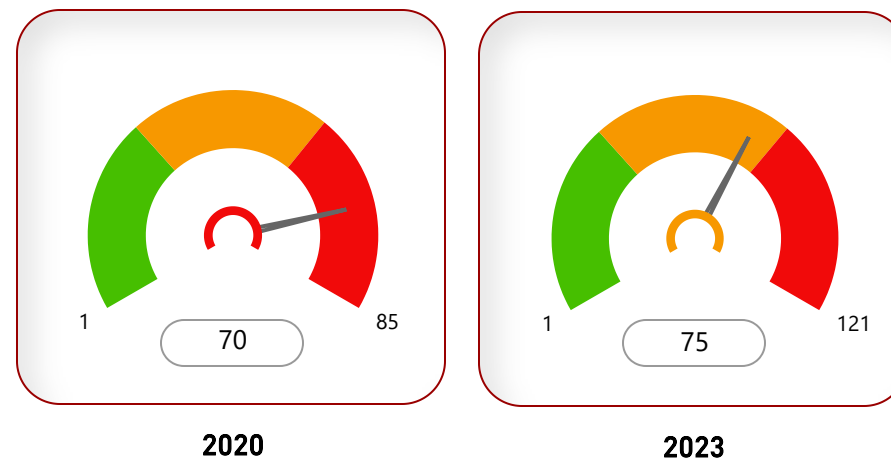
## Master technologies

### Digital Life Quality

#### Digital Quality of Life Index

Source: Calculations IRES \_ SurfShark

An advancement in Morocco's international positioning according to this index, particularly due to the performance achieved in e-government. Morocco is ranked 2nd in Africa and 1st in North Africa in terms of digital quality of life.



# Exponentiality

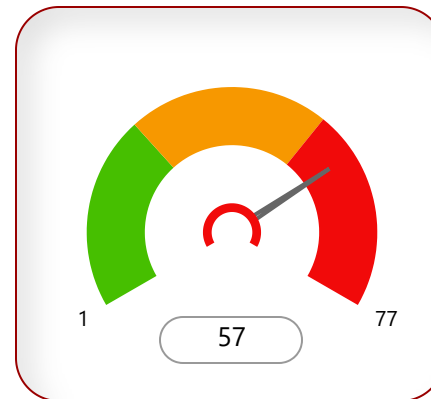
## Master technologies

### Digital Life Quality

#### Global Digitalization Index

Source: Calculations IRES\_ Huawei

An unfavorable international positioning for Morocco in this index, partly due to the weak contribution of the information and communication technology sector to economic growth. The national strategy "Morocco Digital 2030," launched in October 2024, could help drive momentum for the digital economy.



2024

# Exponentiality

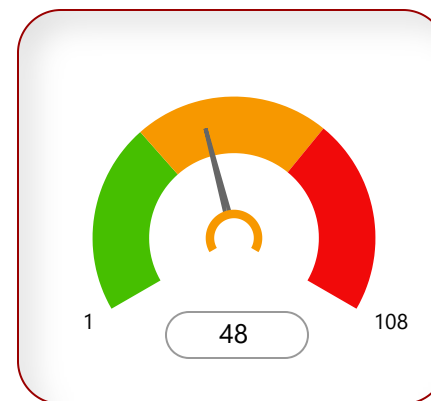
## Master technologies

### Digital Life Quality

#### Global Remote Work Index

Source: Calculations IRES \_ NordLayer

An intermediate international ranking for Morocco in this index. The Kingdom represents an attractive destination for remote work due to its capabilities in terms of cybersecurity, its tourism appeal, and its favorable cost of living. It is important to note that Morocco is the 1<sup>st</sup> country in Africa for conducive remote work conditions, according to the institution "NordLayer".



2023

# Exponentiality

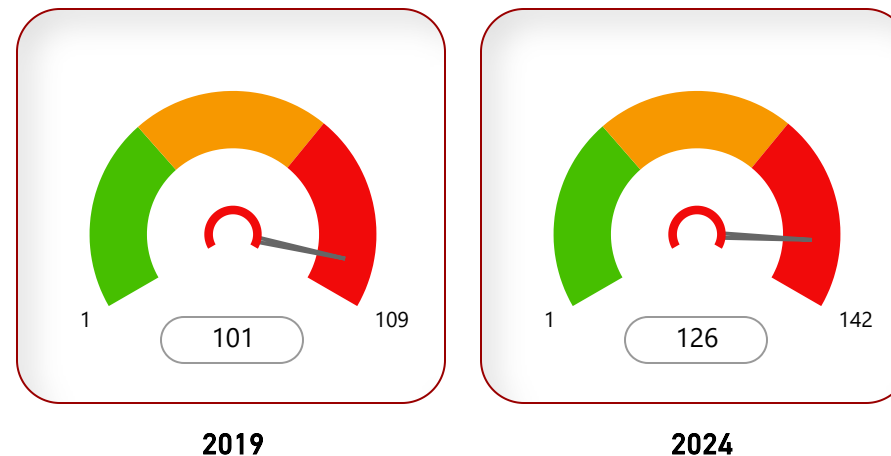
## Master technologies

### Smart Cities

#### Global Smart Cities Index

Source: Calculations IRES \_ International Institute for Management Development

An inappropriate international ranking for Morocco according to this index due, among other reasons, to insufficient investments in technological infrastructures in cities. However, it is worth mentioning that the Kingdom has initiated some projects aimed at developing smart cities, such as the launch of "Casablanca Smart City," starting with the use of IoT technologies to improve transportation services, waste management, and public safety.



# Exponentiality

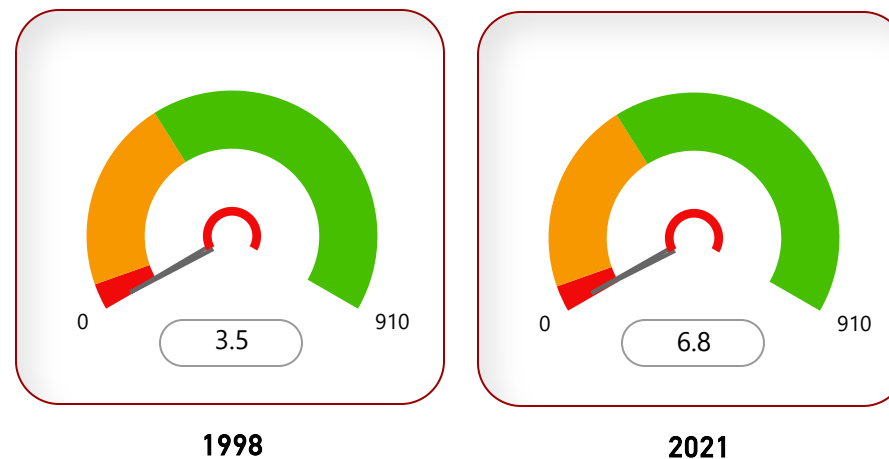
## Master technologies

### Intellectual Property

#### Number of Patents per 1 Million Inhabitants

Source: Calculations IRES \_ Data from OMPIC; WIPO

A low level of intellectual production in Morocco due, among other reasons, to the insufficiency of initiatives promoting patent filing, particularly in areas where the Kingdom is competitive.





# Exponentiality

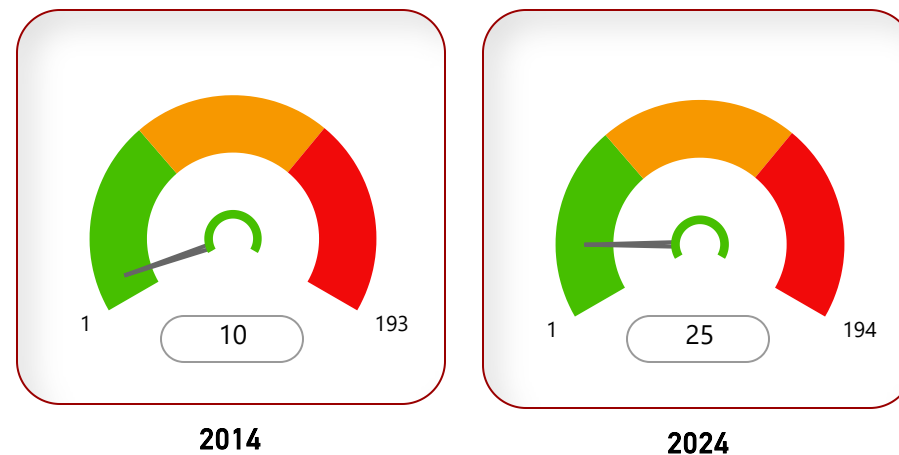
## Master technologies

### Cybersecurity

#### Global Cybersecurity Index

Source: Calculations IRES \_ International Telecommunication Union, ABI Research \_ Global Cybersecurity Index

A favorable ranking for the Kingdom in terms of cybersecurity, although it has declined between 2014 and 2024 due to insufficient performance in digital regulation, technological surveillance, and cooperation among national bodies. Aware of the rising cyber threats, Morocco has committed to strengthening its national information systems security capabilities and adopted a national cybersecurity strategy for 2030 in 2024. The next step would be to establish a cyber diplomacy for Morocco.



# Exponentiality

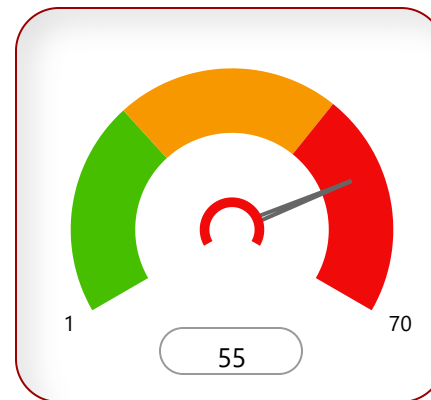
## Master technologies

### Cybersecurity

#### Cyber Threats Index

Source: Calculations IRES\_Mixmode

An unfavorable positioning for Morocco in this index due to its high exposure to cyber risks. Aware of this challenge, the Kingdom developed a cybersecurity strategy in 2012, which was revised in 2024. However, it should be reinforced as part of an ambitious long-term digital sovereignty strategy.



2024

# Exponentiality

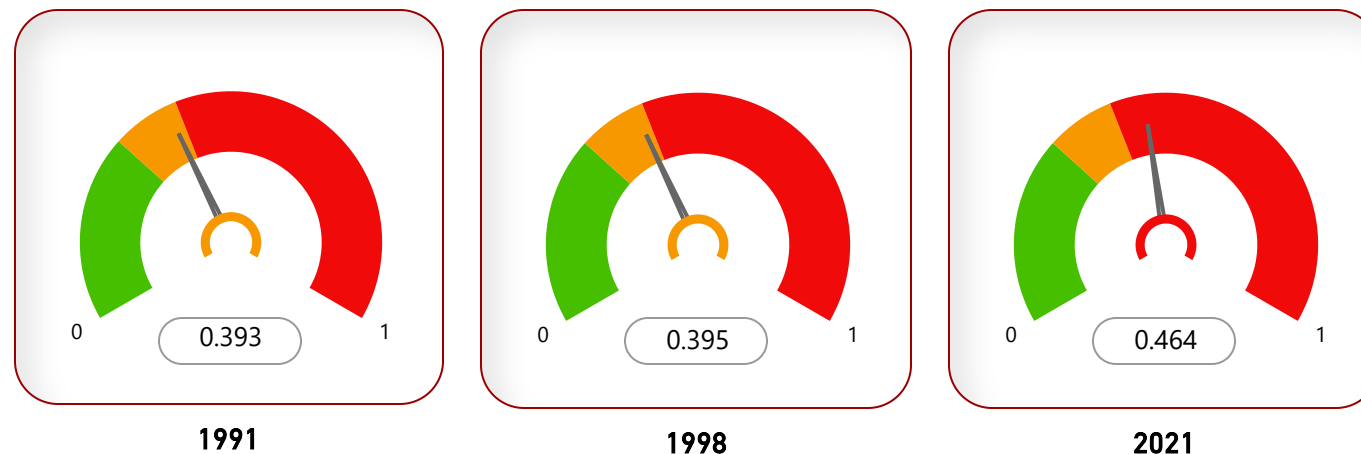
## Humanize the economy

### Inequalities

#### Gini Index

Source: Calculations IRES\_HCP; ONDH; UNDP (0 : égalité parfaite ; 1 : inégalité extrême)

A growth model of the Moroccan economy that still generates inequalities. Despite policies implemented in terms of human development, the GINI index has slightly increased between 1998 and 2021, highlighting the need for inclusive public policies with substantial content in the ongoing construction of the social state.



# Exponentiality

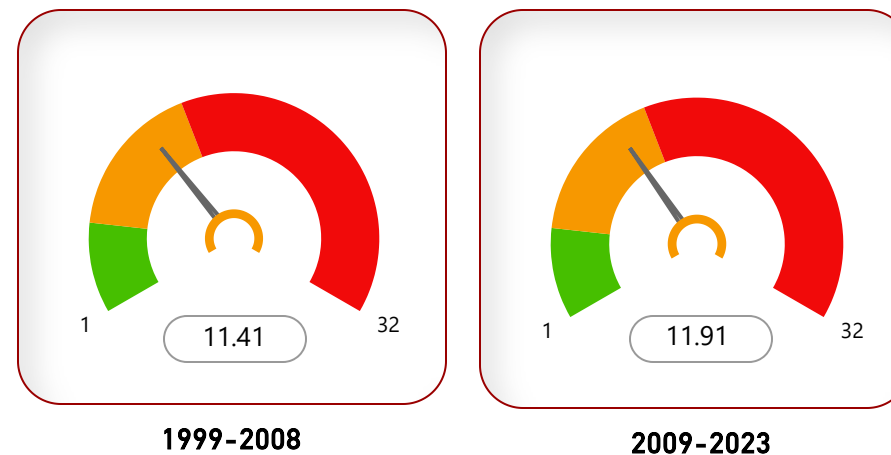
## Humanize the economy

### Employment and Unemployment

#### National Unemployment Rate (%)

Source: Calculations IRES\_ HCP: ILO

A high unemployment rate, due to the low creation of jobs, the persistent mismatch between supply and demand in the labor market, and job losses in agriculture and fishing due to the impact of climate change. According to the High Commission for Planning, the categories most affected by unemployment are youth (aged 15-24), graduates, and women.



# Exponentiality

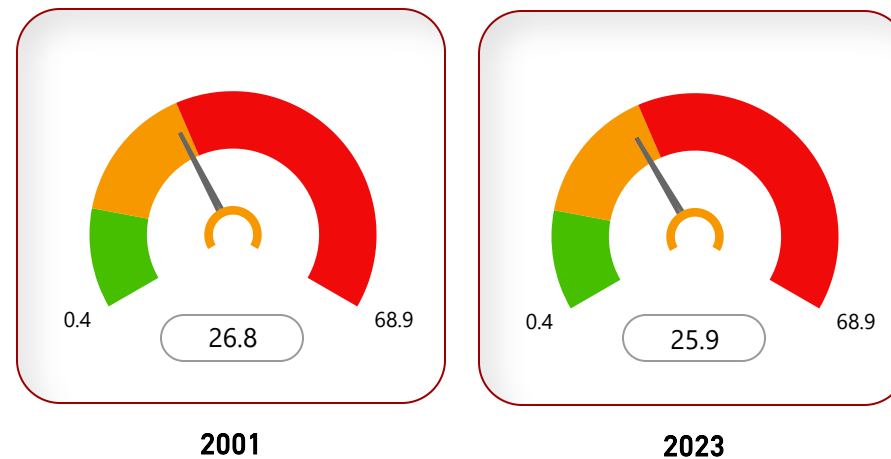
Humanize the economy

## Employment and Unemployment

### Unemployment Rate for Higher Education Graduates

Source: Calculations IRES\_ HCP; ILO

An still high unemployment rate among individuals with higher education, reflecting, among other factors, a mismatch between university education and the labor market's requirements.



# Exponentiality

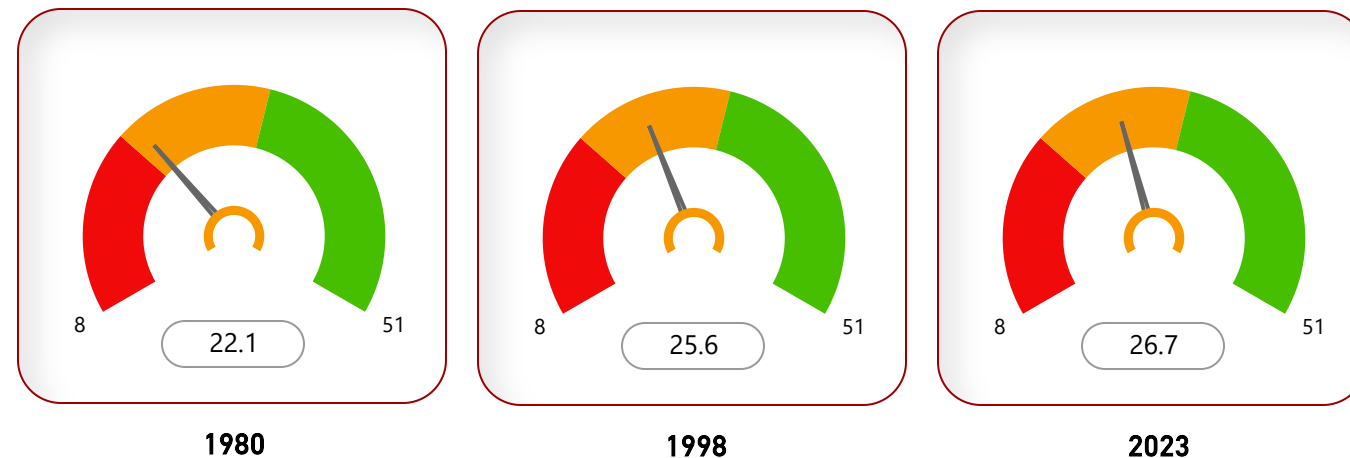
## Humanize the economy

### Economic Financing

#### Gross National Savings as % of GDP

Source: Calculations IRES\_HCP: World Bank

A significant increase in national savings since the 1980s, a period characterized by the implementation of the structural adjustment program and the launch of financial sector reforms. However, the level of national savings recorded in recent years, supported by remittances from Moroccans living abroad, remains insufficient to meet the financing needs of the economy, as the short-term component of these savings outweighs the medium- and long-term components.



# Exponentiality

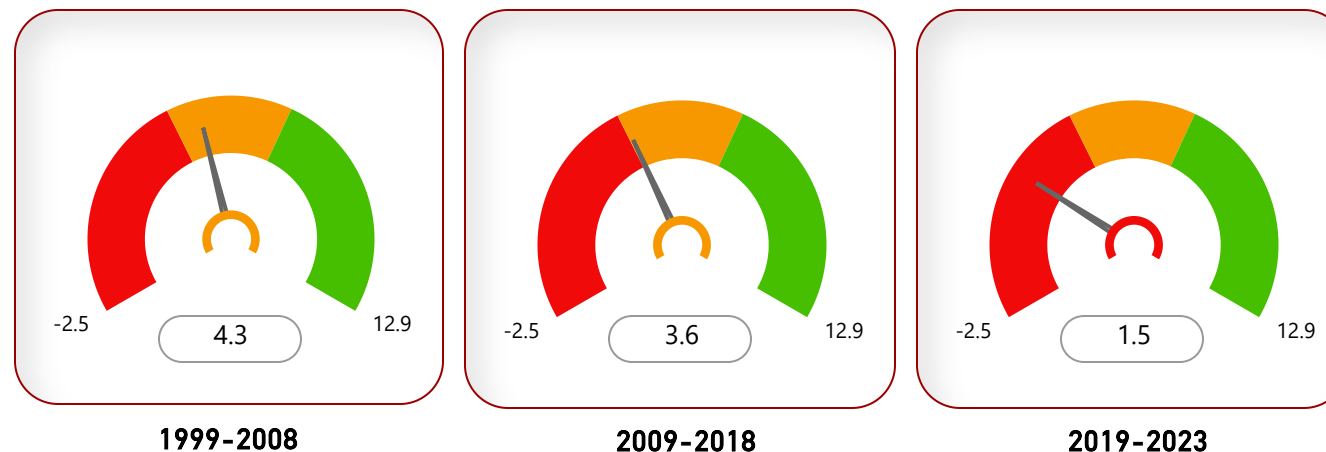
Guarantee and preserve the stability of the macroeconomic framework

## Economic Growth

### Economic Growth Rate (%)

Source: Calculations IRES\_ Data from HCP; World Bank

Economic growth that averaged 4.3% per year between 1999-2008, decreased to 3.6% between 2009-2018, and further slowed to 1.5% per year between 2019-2023, largely due to the effects of the 2020 health crisis, during which Morocco experienced a recession of approximately 7.1% of GDP. The post-pandemic recovery enabled Morocco to return to its average growth rate during the 2010s. Driven mainly by household consumption and continuing to rely heavily on public investment, the effectiveness of which is not fully proven, this economic growth is not supported by productivity gains, does not create enough jobs, and still generates social inequalities.



# Exponentiality

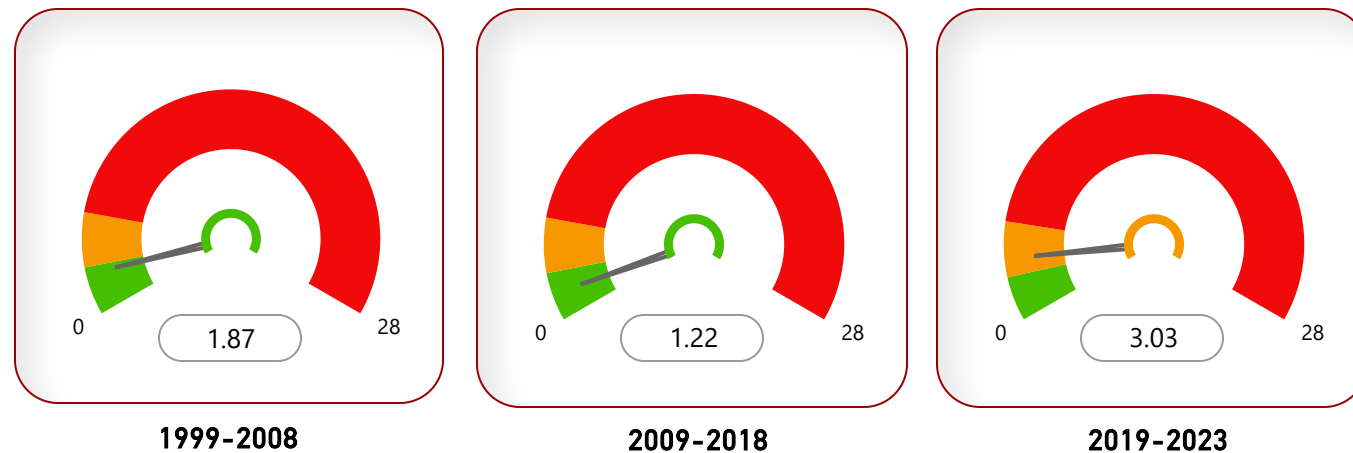
Guarantee and preserve the stability of the macroeconomic framework

## Inflation

### Inflation Rate (%)

Source: Calculations IRES\_ Data from HCP; World Bank

A controlled inflation rate, thanks to a monetary policy that promotes price stability and a system of subsidies for essential products that helps limit imported inflation.





# Exponentiality

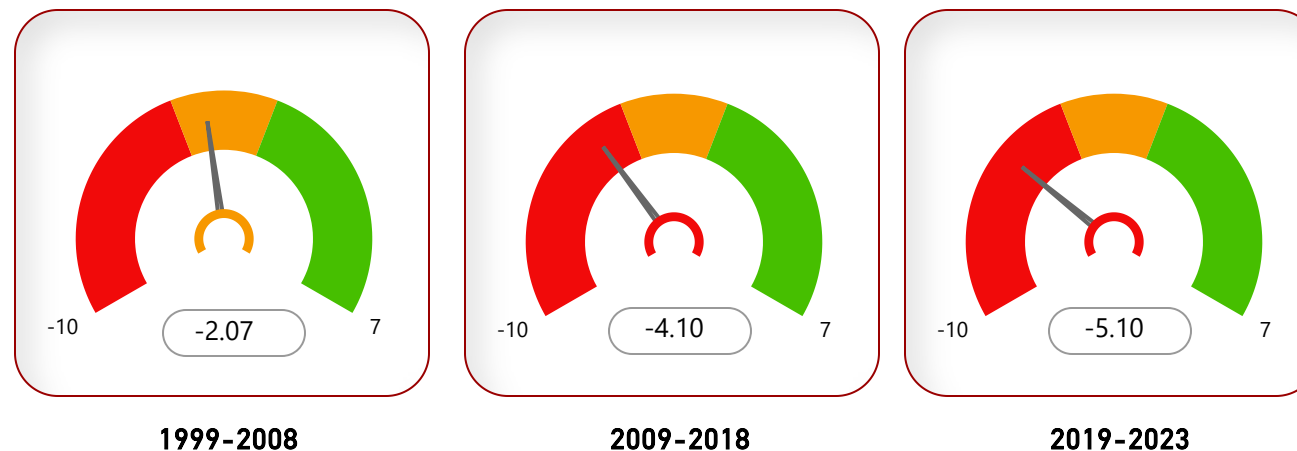
Guarantee and preserve the stability of the macroeconomic framework

## Public Finances

### Budget Balance as % of GDP

Source: Calculations IRES\_ Data from the Ministry of Economy and Finance: IMF

A budget deficit of about 5% of GDP during the 2019-2023 period due to the effects of the health crisis, increased compensation expenses to support citizens' purchasing power in the face of inflationary pressures, and higher budgetary spending to address the Al Haouz earthquake. Morocco should return to a deficit of 3% as soon as possible. To achieve this, it should maintain the sustainability of public finances by rationalizing public spending, improving the profitability of public investments, and seeking a better balance between internal and external financing. The implementation of the fiscal reform from the National Dialogues should be accompanied by better tax revenue collection.



# Exponentiality

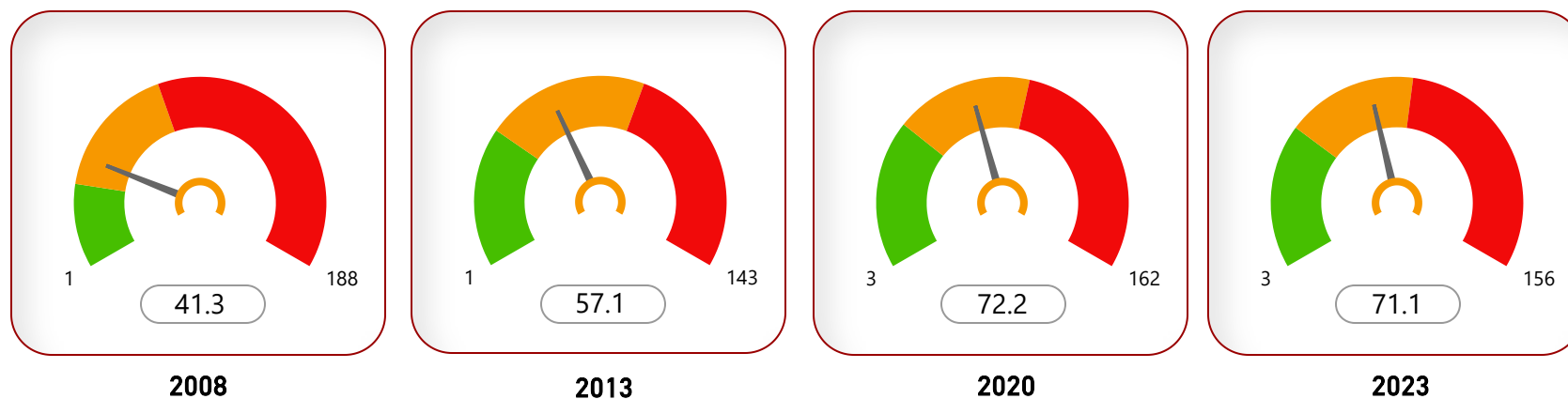
Guarantee and preserve the stability of the macroeconomic framework

## Public Finances

### Public Debt-to-GDP Ratio

Source: Calculations IRES \_ Ministry of Economy and Finance; IMF

A public debt ratio, although rising, remains sustainable in a context marked by an increased financing need triggered by the COVID-19 pandemic, which required measures to preserve the economic fabric and households' purchasing power, as well as the gradual construction of the social state. It is worth mentioning that the credit rating agency "Standard & Poor's" raised Morocco's credit ratings from "Stable" to "Positive" in March 2024, highlighting the country's resilience to various shocks and its ability to access national and international financing.



# Exponentiality

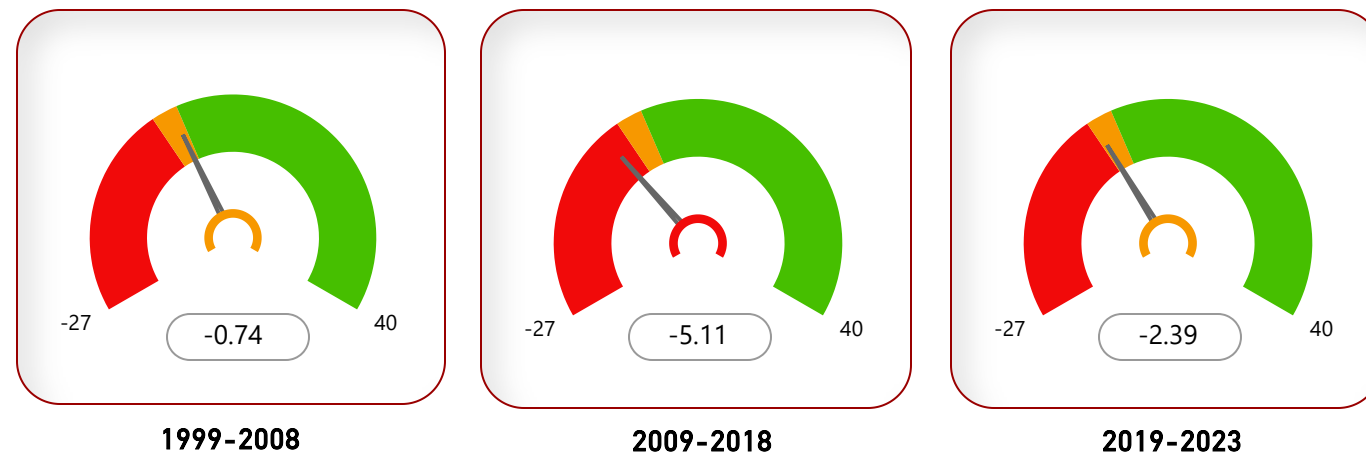
Guarantee and preserve the stability of the macroeconomic framework

## External Accounts

### Current Account Balance as % of GDP

Source: Calculations IRES \_ Data from the Office des Changes; IMF

A reduction in the current account deficit between the 2009-2018 and 2019-2023 periods, notably due to the development of exports, an increase in travel receipts, and the strong dynamics of remittances from the Moroccan diaspora.



# Exponentiality

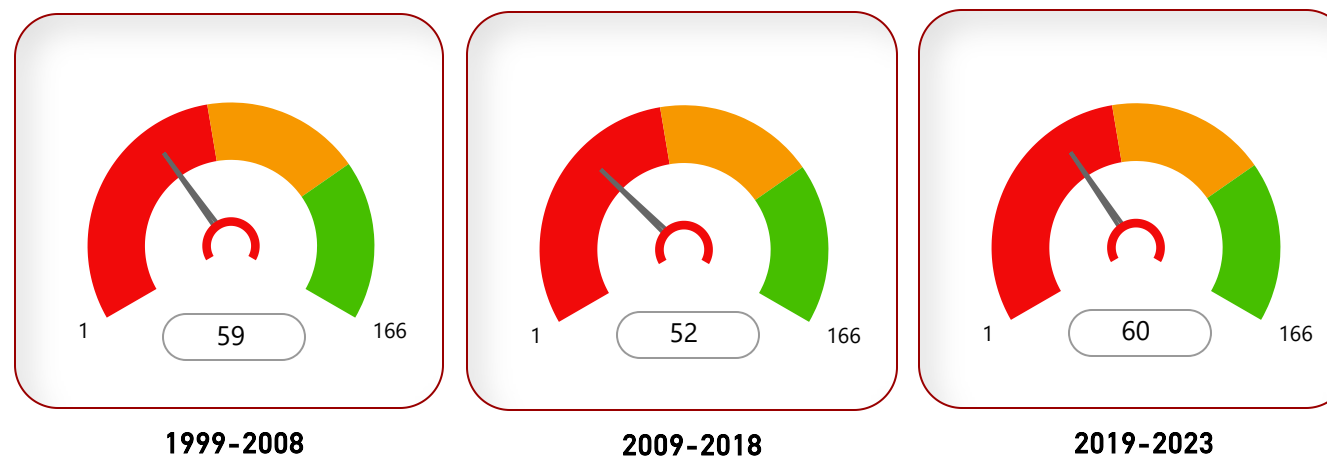
Guarantee and preserve the stability of the macroeconomic framework

## External Accounts

### Import Coverage Rate by Exports (%)

Source: Calculations IRES\_ Data from the Office des Changes: World Bank

A deterioration of nearly 7 points between the 1999-2008 and 2009-2018 periods in the coverage ratio of the trade balance, which was reversed during the 2019-2023 period, partly thanks to efforts made in promoting exports within the framework of Morocco's Global Trades.



# Exponentiality

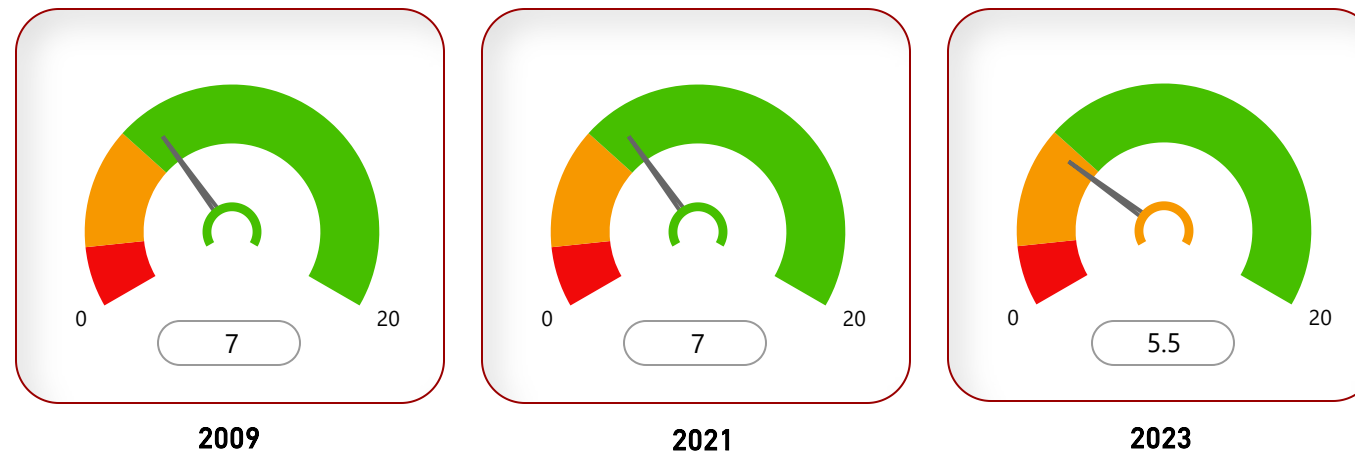
Guarantee and preserve the stability of the macroeconomic framework

## External Accounts

### Foreign Exchange Reserves (Months of Imports)

Source: Calculations IRES\_ IMF: BAM

A decline in foreign exchange reserves in terms of months of imports between 2021 and 2023, due to the increased weight of imports and external debt service, in a context marked by significant global economic turbulence following the war in Ukraine.



# Exponentiality

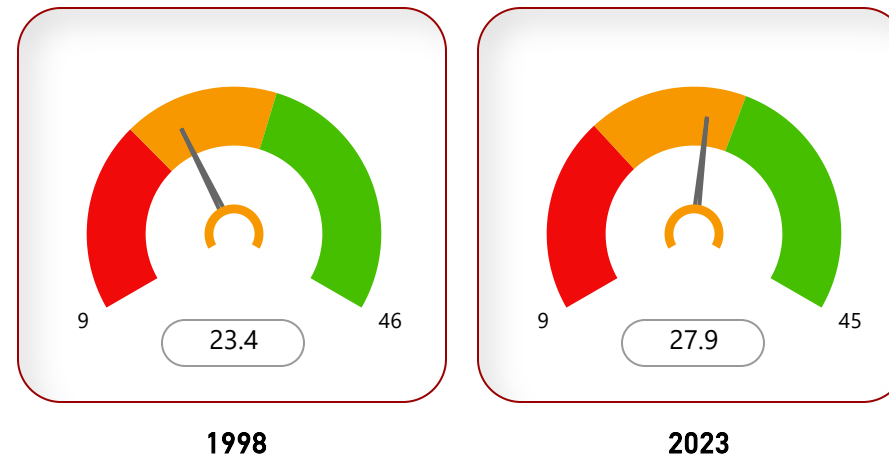
Guarantee and preserve the stability of the macroeconomic framework

## Investment

### Investment Rate (GFCF/GDP) (%)

Source: Calculations IRES\_ Data from HCP; World Bank

A high investment rate in Morocco, similar to that of emerging Asian countries. However, this investment, which is supported by strong contributions from the state and large public enterprises, generates insufficient returns. The operationalization of the Mohammed VI Fund for Investment and the implementation of the new Investment Charter should guide investment towards innovative productive capacities while encouraging a stronger contribution from the private sector.



# Exponentiality

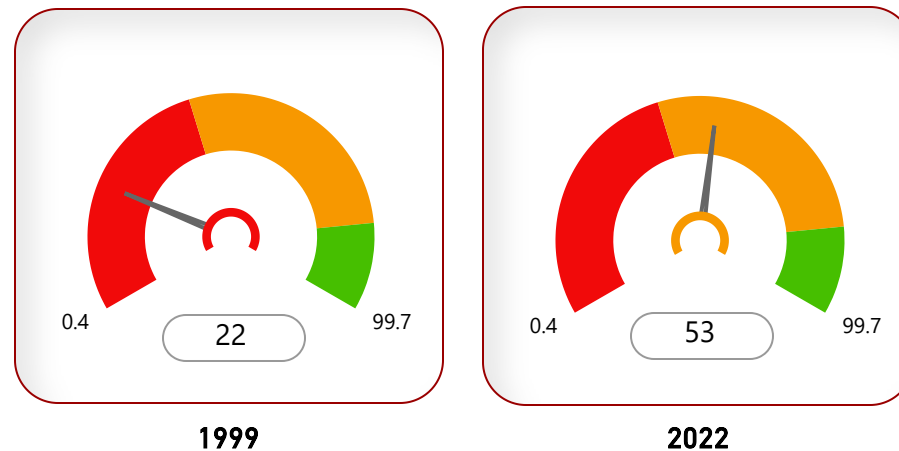
Guarantee and preserve the stability of the macroeconomic framework

## Banking

### Bank Account Ownership Rate (Residents)

Source: Calculations IRES \_ Bank Al Maghreb; World Bank

A more than doubling of the banking penetration rate between 1999 and 2022, thanks to reforms in the banking sector and the development of the banking network, including Barid Al Maghreb. This trend continues with the advent of participatory finance and digitalization.



# Exponentiality

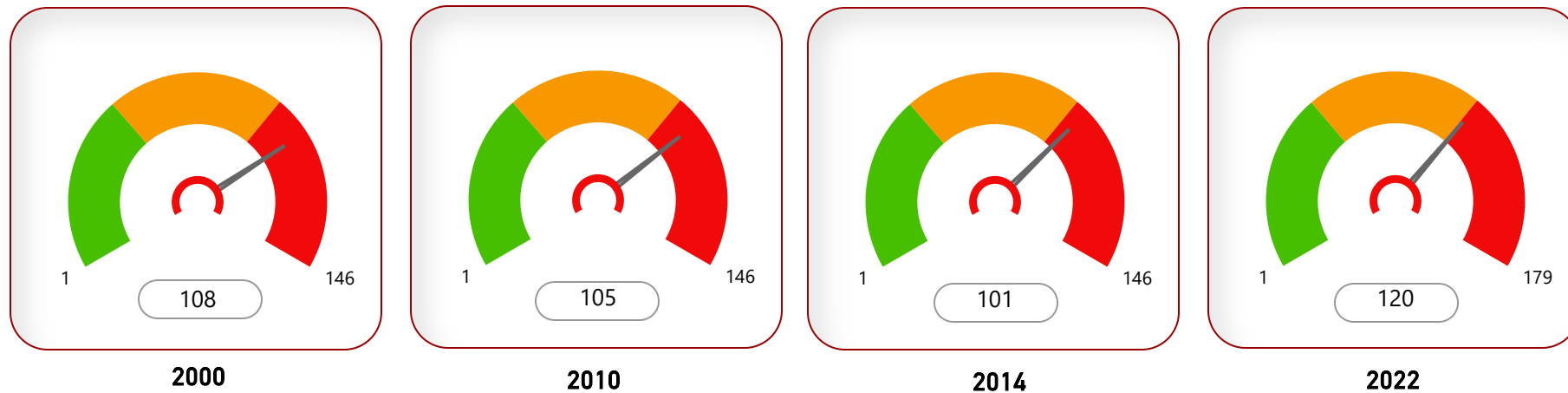
Strengthen global competitiveness and improve attractiveness

## Global Wealth and Intangible Capital

### Wealth per Capita

Source: Calculations IRES \_ Data from the World Bank

Although improving since 2000, Morocco's international ranking in terms of overall wealth per capita remains inadequate, highlighting the importance of considering the valorization of intangible capital in public policy development.





# Exponentiality

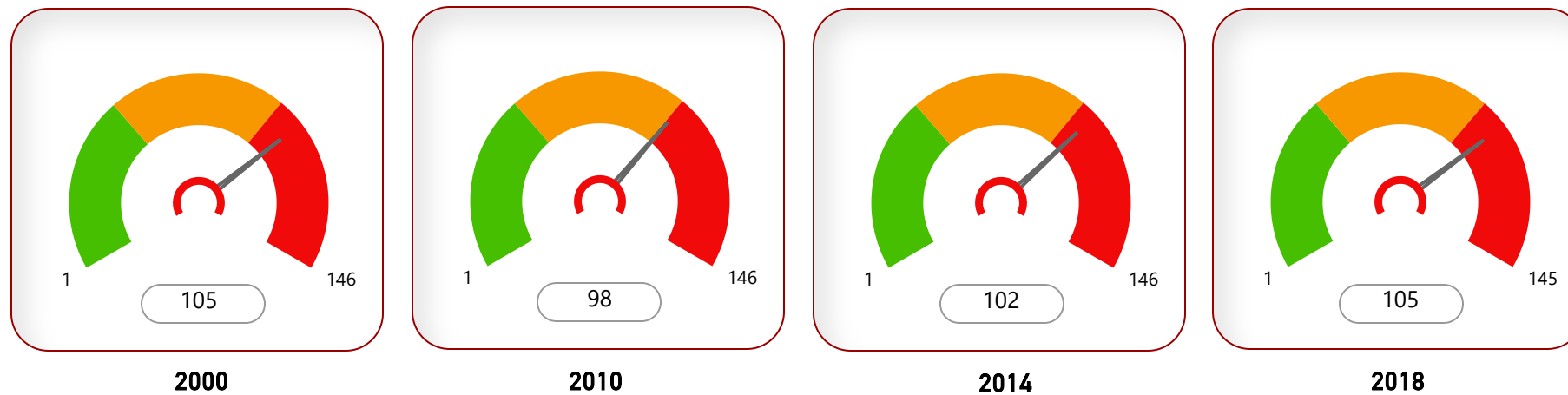
Strengthen global competitiveness and improve attractiveness

## Global Wealth and Intangible Capital

### Intangible Capital per Capita

Source: Calculations IRES \_ Data from the World Bank

A gain of 7 places between 2000 and 2010 in terms of Morocco's international positioning regarding intangible capital per capita. However, between 2010 and 2018, the country's international ranking showed a significant decline, partly due to the insufficient quality of human capital. The various reforms undertaken by Morocco to develop its human capital have not yet produced results that meet the Kingdom's development expectations.



# Exponentiality

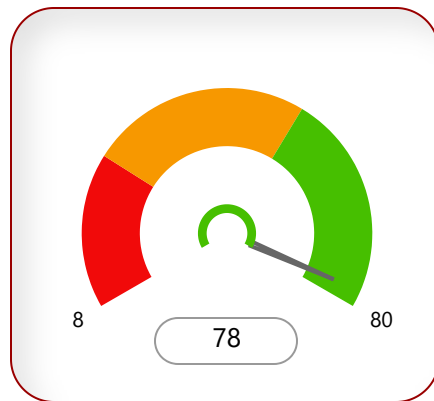
Strengthen global competitiveness and improve attractiveness

## Global Wealth and Intangible Capital

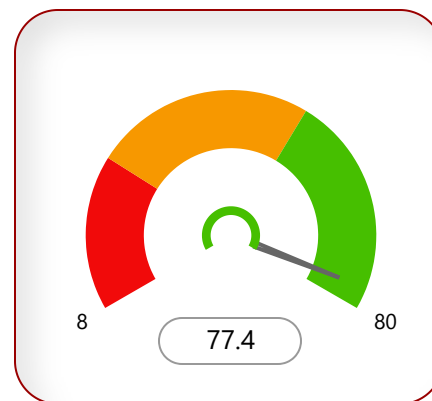
### Intangible Capital as % of Total Wealth

Source: Calculations IRES \_ IRES Report on Financial and Non-Financial Evaluation of Morocco's Global Wealth and Intangible Capital between 1998 and 2013

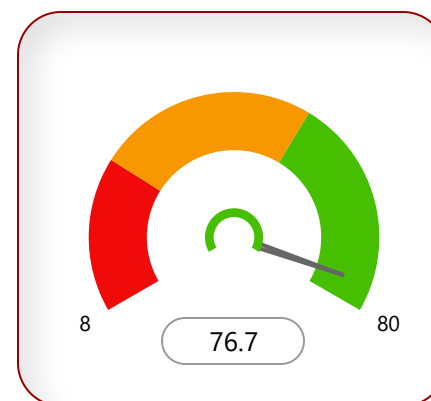
The weight of intangible capital represents, however, three-quarters of Morocco's overall wealth, a level close to that of OECD countries (80%). This intangible capital deserves to be strongly valued as a full-fledged wealth.



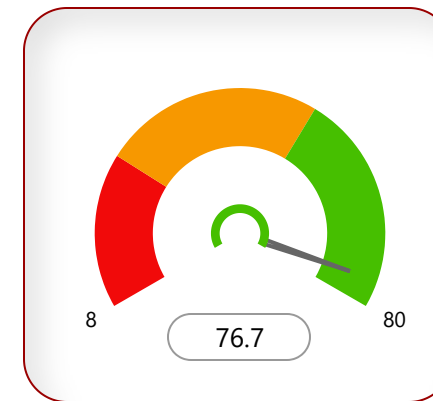
2000



2005



2013



2018

# Exponentiality

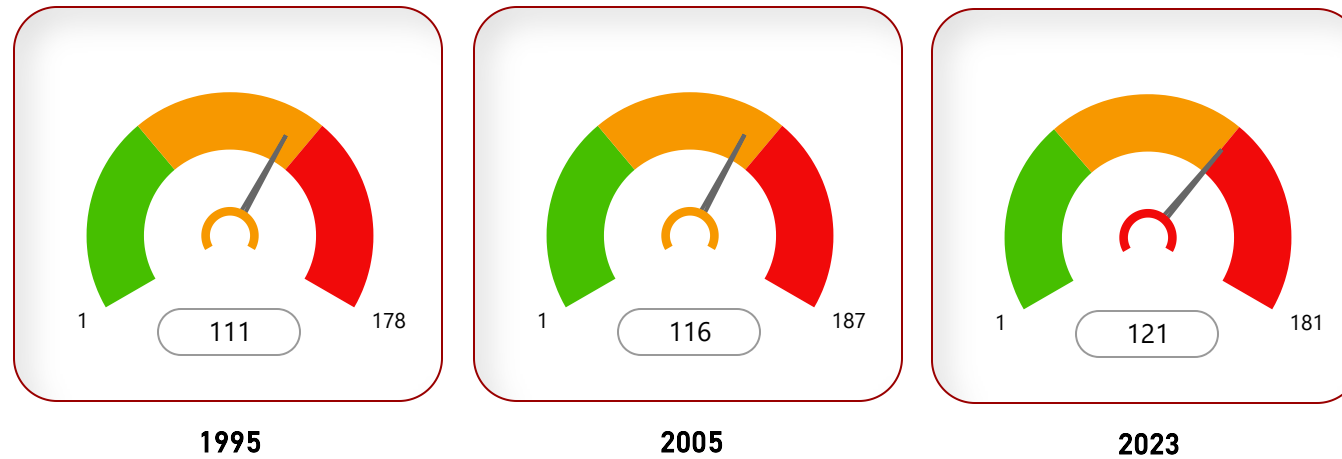
Strengthen global competitiveness and improve attractiveness

## Global Wealth and Intangible Capital

### GDP per Capita in Constant 2011 PPP Dollars (Ranking)

Source: Calculations IRES \_ World Bank

Morocco's international ranking, based on GDP per capita in Purchasing Power Parity (PPP), does not reflect the Kingdom's economic potential.



# Exponentiality

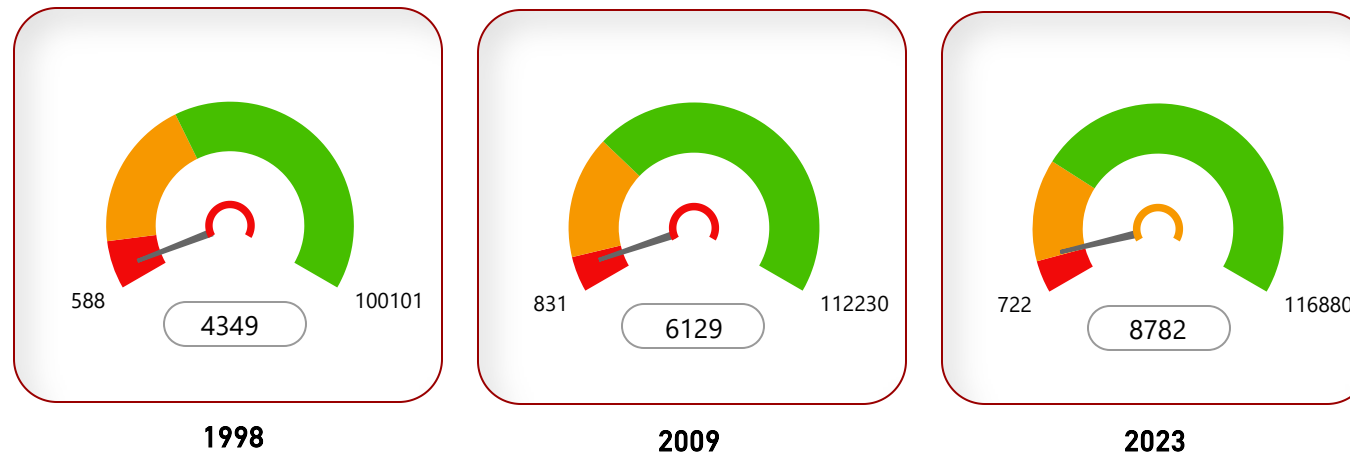
Strengthen global competitiveness and improve attractiveness

## Global Wealth and Intangible Capital

### GDP per Capita in Constant 2011 PPP Dollars

Source: Calculations IRES\_ World Bank

Real GDP per capita has improved since the late 1990s. Its growth rate has averaged 2.3% per year from 1998 to 2023. However, it remains insufficient compared to the performances of emerging countries.



# Exponentiality

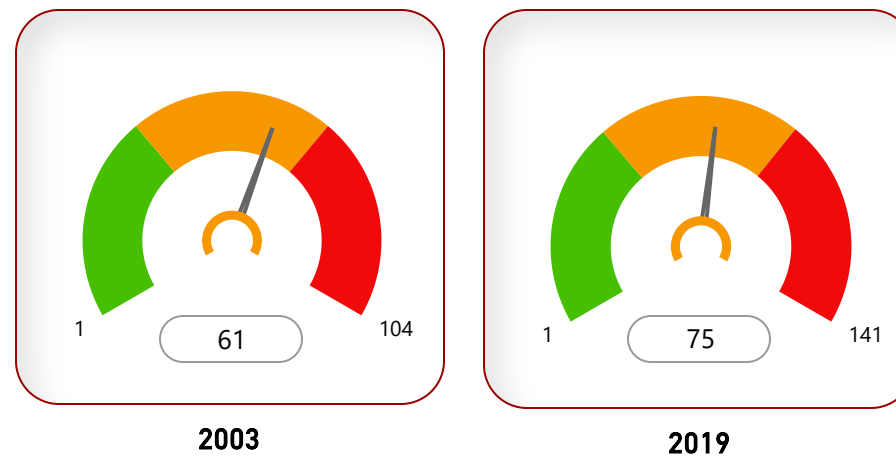
Strengthen global competitiveness and improve attractiveness

## Global Competitiveness of the Country

### Global Competitiveness Index

Source: Calculations IRES \_ World Economic Forum

A slight improvement in Morocco's international positioning in this index, linked to actions taken by the government in terms of sustained infrastructure development and strengthening logistics competitiveness.



# Exponentiality

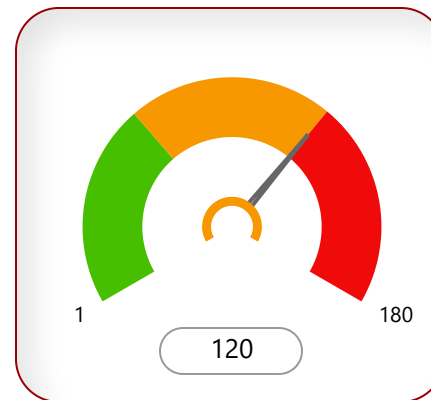
Strengthen global competitiveness and improve attractiveness

## Global Competitiveness of the Country

### Global Sustainable Competitiveness Index

Source: Calculations IRES\_ Solability

A less favorable positioning for Morocco in this index, mainly due to shortcomings observed in the components "social capital" and "efficiency in resource utilization." However, the Kingdom ranks first in Africa for the "intellectual capital" component.



2023

# Exponentiality

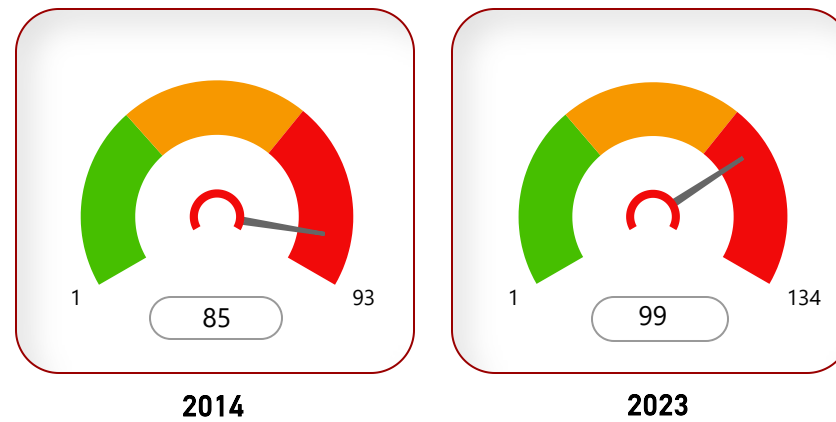
Strengthen global competitiveness and improve attractiveness

## Global Competitiveness of the Country

### Global Talent Competitiveness Index

Source: Calculations IRES \_ INSEAD

Morocco's international positioning in this index is improving but still inadequate. This ranking is attributable, among other factors, to a lack of investment in quality education, insufficient development of skills in artificial intelligence and digitization, and the absence of a regulatory and incentivizing framework to mobilize the Moroccan scientific diaspora and attract foreign talent.



# Exponentiality

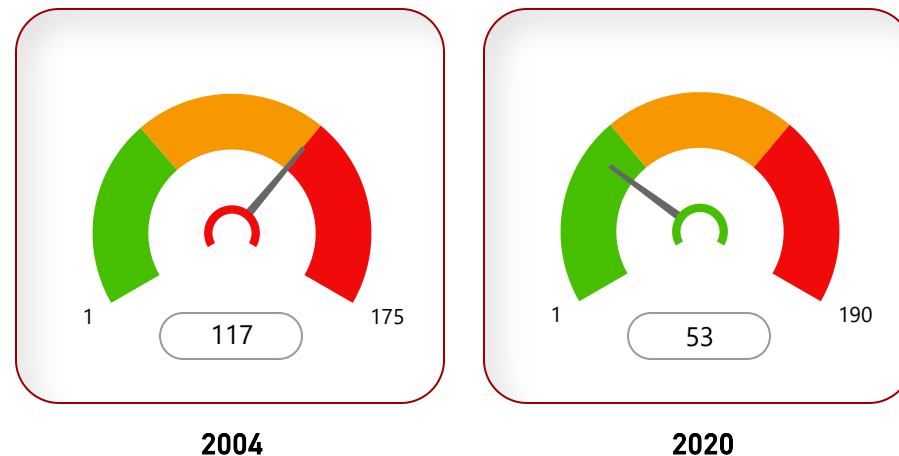
Strengthen global competitiveness and improve attractiveness

## Global Competitiveness of the Country

### Doing Business Index

Source: Calculations IRES \_ World Bank

A gain in Morocco's international positioning in terms of ease of doing business, with a rise of 75 places between 2004 and 2020, thanks to advancements in areas such as business creation, property transfer, loan acquisition, minority investor protection, and cross-border trade. With the launch of its new business environment strategy "2021-2025," Morocco could, in the near future, join the top 30 nations with an attractive business environment.





# Exponentiality

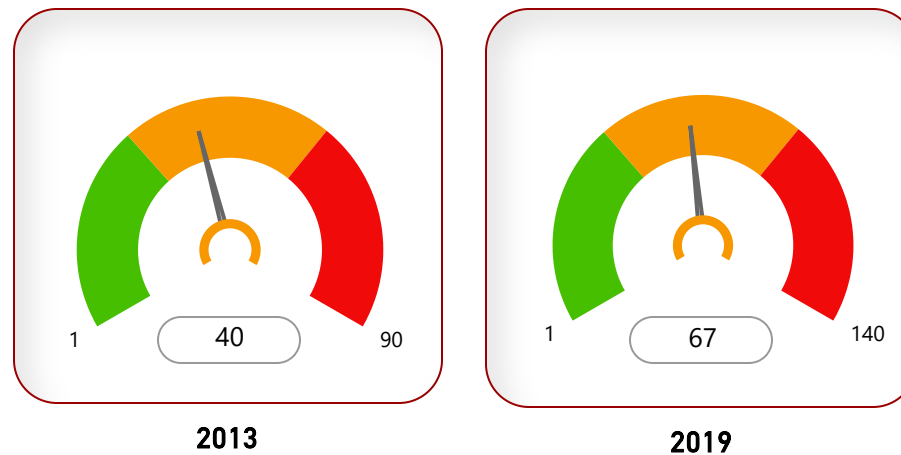
Strengthen global competitiveness and improve attractiveness

## Global Competitiveness of the Country

### Change Readiness Index

Source: Calculations IRES\_ KPMG and Oxford Economics Group

Morocco's notable ability to manage socio-economic and political changes and to capitalize on the opportunities arising from them, reinforced by the Kingdom's ranking of 67th out of 140 countries in the 2019 edition of the "Change Readiness Index".



# Exponentiality

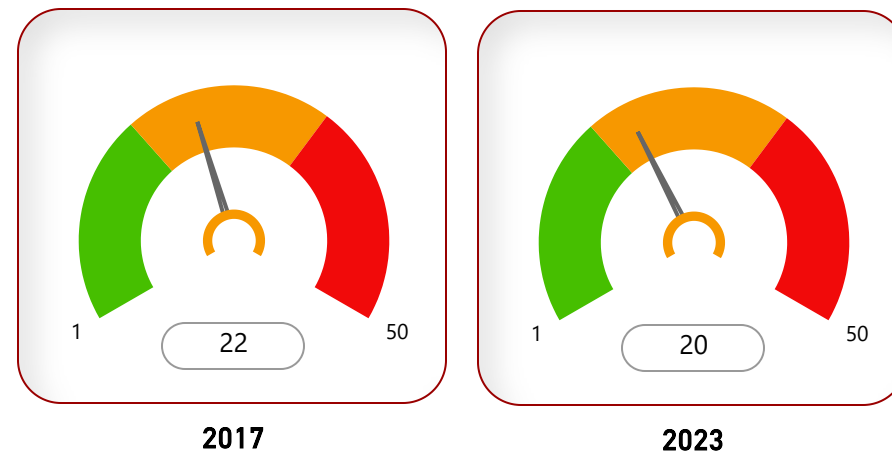
Strengthen global competitiveness and improve attractiveness

## Global Competitiveness of the Country

### Agility Emerging Markets Logistics Index

Source: Calculations IRES \_ Agility Group

An intermediate international ranking for Morocco in this index, explained by the development of infrastructure, improvement of logistics services, and the liberalization of transport modes (port, maritime, and air transport).



# Exponentiality

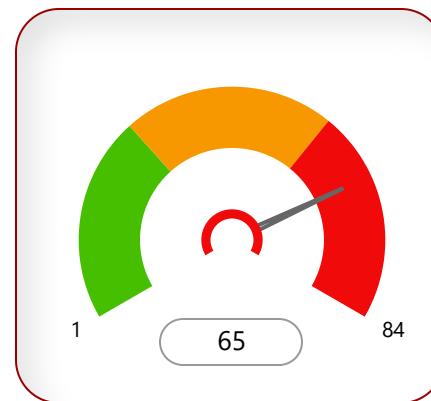
Strengthen global competitiveness and improve attractiveness

Global Competitiveness of the Country

**International Illicit Trade Environment Index**

*Source: Calculations IRES \_ Economist Intelligence Unit*

Morocco's international positioning in this index was not appropriate until 2018, despite the Kingdom's commitment to fighting smuggling and counterfeiting of excise-taxed products.



2018

# Exponentiality

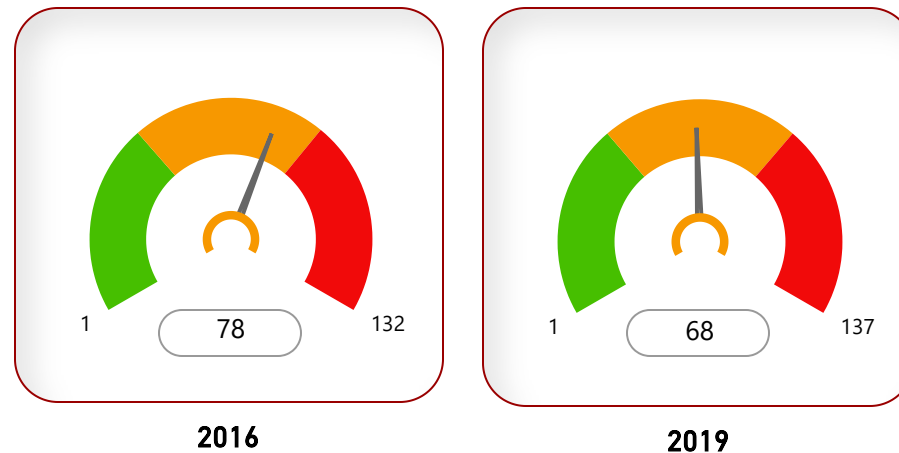
Strengthen global competitiveness and improve attractiveness

## Global Competitiveness of the Country

### Global Entrepreneurship Index

Source: Calculations IRES\_ The Global Entrepreneurship and Development Institute

An improvement in Morocco's position according to this index, where it ranks 5th in Africa. This ranking is favored by the Kingdom's ability to encourage the emergence of startups. However, the country still faces some shortcomings, particularly in developing human capital with entrepreneurial skills and in enhancing the competitiveness and international marketing of Moroccan products.



# Exponentiality

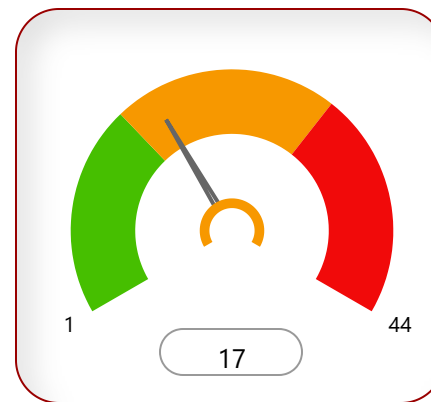
Strengthen global competitiveness and improve attractiveness

## Global Competitiveness of the Country

### Global Retail Development Index

Source: Calculations IRES\_ Kearney

An almost favorable ranking for Morocco in this index, considering its performance in terms of "market attractiveness," according to the American firm Kearney. Regionally, Morocco ranked 1<sup>st</sup> in the Maghreb and 6<sup>th</sup> in the Middle East and North Africa region in 2023.



2023

# Exponentiality

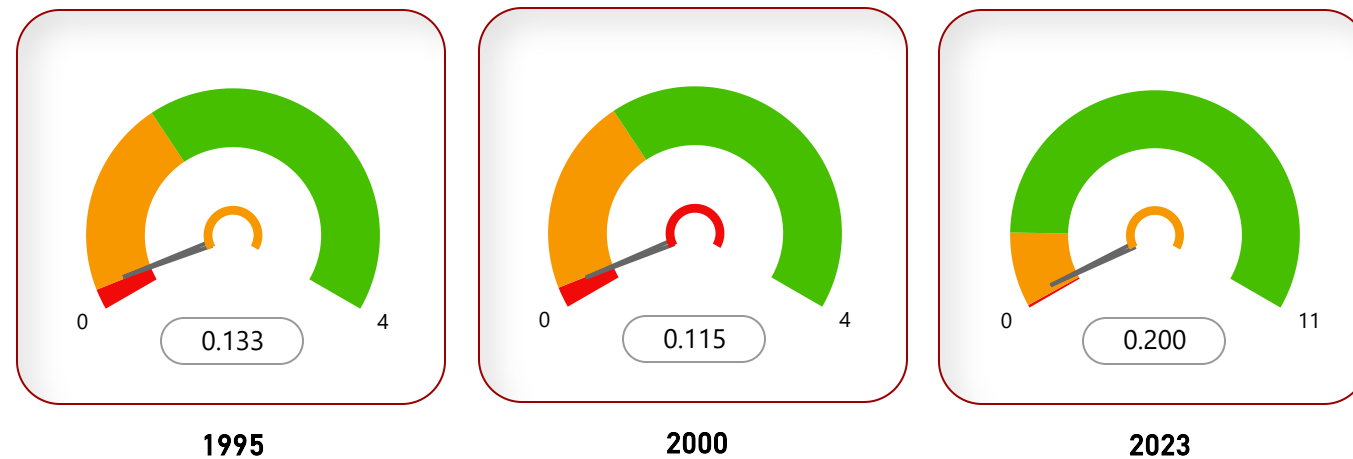
Strengthen global competitiveness and improve attractiveness

## Global Competitiveness of the Country

### Global Market Share (%)

Source: Calculations IRES\_ UNCTADSTAT

Morocco's share of the global market does not exceed 0.2%. This is far from the country's potential and ambitions. However, signs of improvement have been observed in recent years thanks to the policy of diversifying international economic partners.



# Exponentiality

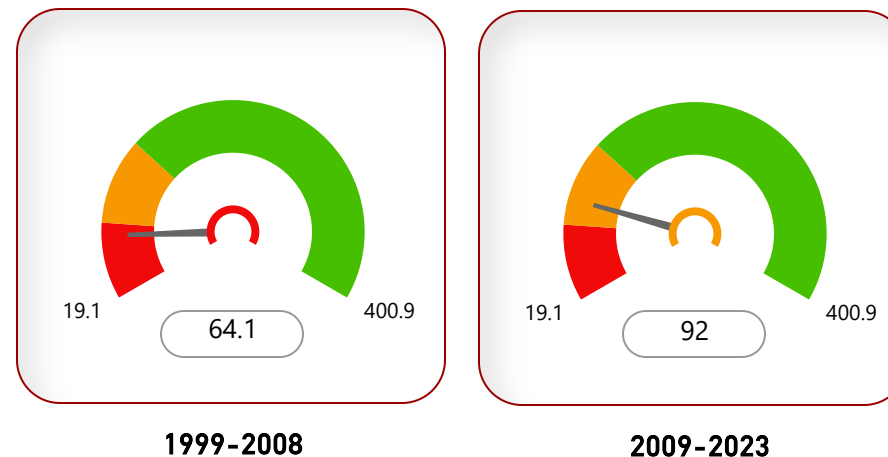
Strengthen global competitiveness and improve attractiveness

## Global Competitiveness of the Country

### Economic Openness Rate (Goods and Services) (%)

Source: Calculations IRES \_ Data from the Office des Changes; World Bank

Morocco's economic openness has increased, linked to the multiplication of free trade agreements concluded by the Kingdom and its active engagement in the multilateral trade system. However, this openness has led to a deterioration of the trade balance, mainly due to competitiveness issues in the national economy and the fact that Moroccan companies are not sufficiently benefiting from the preferential clauses in free trade agreements.



# Exponentiality

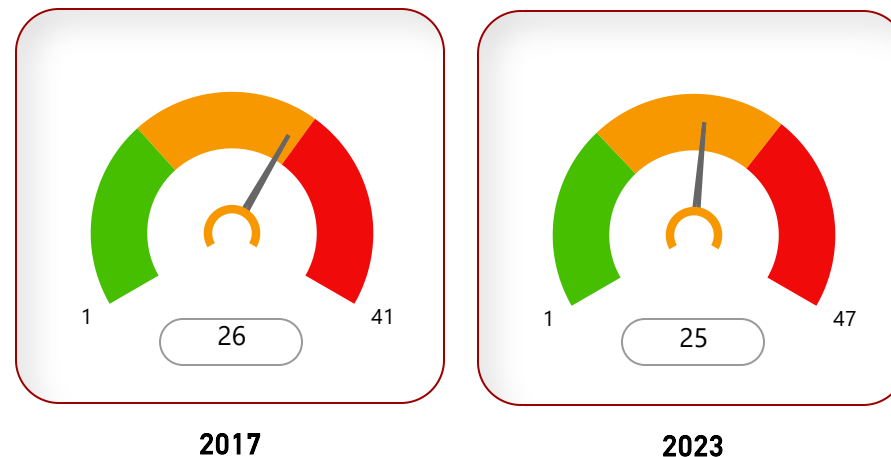
Strengthen global competitiveness and improve attractiveness

## Global Competitiveness of the Country

### Car Production Index

Source: Calculations IRES\_ International Organization of Motor Vehicle Manufacturers

A promising international ranking for Morocco in this index, thanks to the successful implementation of the strategy for developing the automotive sector, which has become a global industry for the Kingdom. It is worth mentioning that in 2023, the country maintains its leadership position in the automotive industry at both regional and continental levels.





# Exponentiality

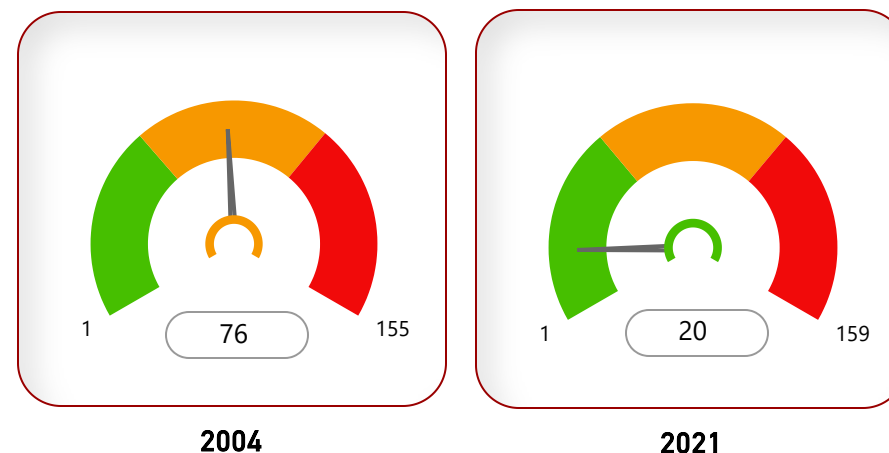
Strengthen global competitiveness and improve attractiveness

## Maritime and Air Connectivity

### Maritime Connectivity Index

Source: Calculations IRES\_ World Bank; UNCTAD

A strong improvement in Morocco's maritime connectivity and its positioning as a logistics hub for the Mediterranean basin, thanks to the construction of the Tangier Med port and the development of the capacity of other ports. Morocco, as Africa's leader in maritime connectivity, has gained more than 50 places in the international ranking for this index between 2004 and 2021. The ongoing creation of mega-ports such as "Dakhla Atlantique" and "Nador WestMed" should place the Kingdom in the top 10 nations with the best maritime connectivity in the near future.



# Exponentiality

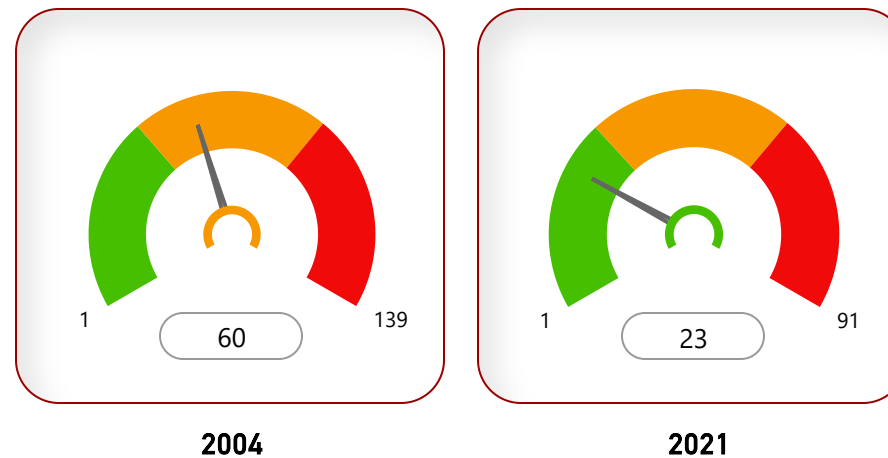
Strengthen global competitiveness and improve attractiveness

## Maritime and Air Connectivity

### Container Traffic in Ports (TEUs)

Source: Calculations IRES\_ Containerisation International

A remarkable positioning of Morocco in this index, due to its strong maritime connectivity, which has been reinforced with the Tangier-Med port.



# Exponentiality

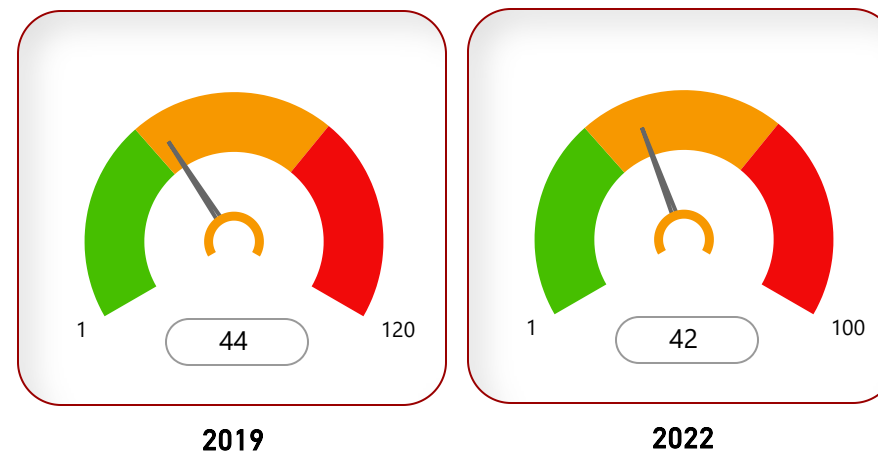
Strengthen global competitiveness and improve attractiveness

## Maritime and Air Connectivity

### International Connectivity Index

Source: Calculations IRES \_ International Air Transport Association

An intermediate international ranking for Morocco according to this index. The Kingdom ranks among the top 50 most connected countries globally, thanks to the continuous development of its air traffic and the expansion of its airport infrastructure. In Africa, Morocco ranks 2<sup>nd</sup> in terms of air connectivity.



# Exponentiality

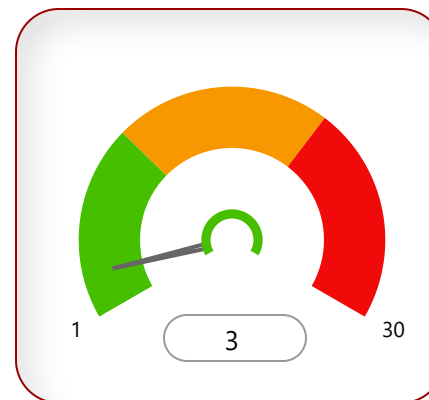
Strengthen global competitiveness and improve attractiveness

## Economic Transformation

### African Index for Economic Transformation

*Source: Calculations IRES \_ African Center for Economic Transformation*

An exceptional positioning for the Kingdom in 2023, being part of the Top 3 advanced African countries in terms of structural transformation of the economy. Indeed, Morocco has implemented several sectoral strategies, which have contributed to the development of its global industries, some of which are of medium and high technological intensity, such as aerospace and automotive. At the African level, the Kingdom holds the first place in the "technical progress" component.



2023

# Exponentiality

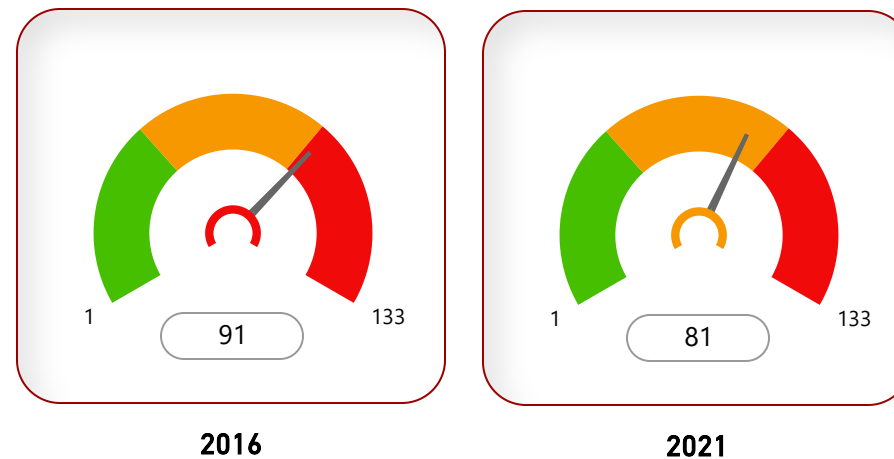
Strengthen global competitiveness and improve attractiveness

## Economic Complexity

### Economic Complexity Index

*Source: Calculations IRES \_ Harvard Growth Lab*

A significant improvement in Morocco's ranking between 2016 and 2021 in this index, thanks to the development of the Kingdom's six global industries: automotive, aerospace, agribusiness, textiles and leather, electronics, and offshoring. To further improve its ranking, the Kingdom should promote the industry of the future and target new potential high-tech niches, while providing substantial support for research and innovation.



# Exponentiality

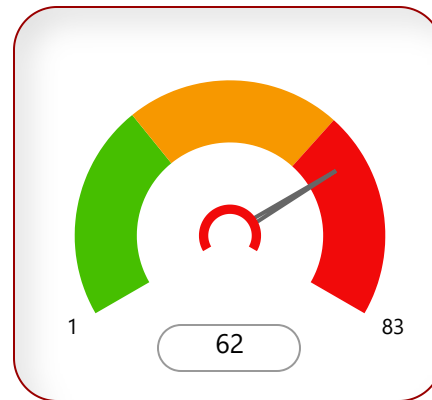
Strengthen global competitiveness and improve attractiveness

## Financial System

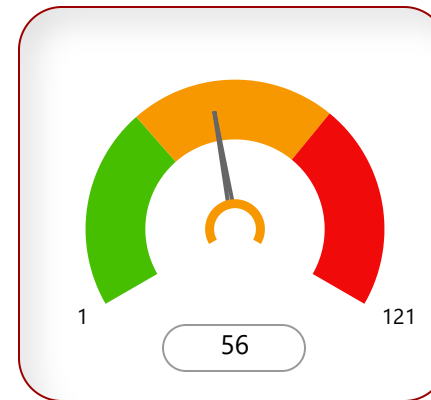
### Global Financial Centers Index

Source: Calculations IRES \_ Z/Yen Group

Morocco's positioning as a regional financial and economic hub: since its integration in 2013 into the ranking of the most competitive global financial centers, Casablanca's financial market has gained about 34 places between 2013 and 2024, becoming the leading financial center in Africa.



2ème semestre 2013



1er semestre 2024

# Exponentiality

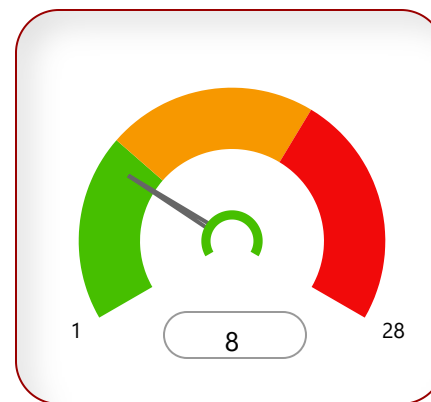
Strengthen global competitiveness and improve attractiveness

## Financial System

### Africa Financial Markets Index

Source: Calculations IRES \_ Official Forum of Monetary and Financial Institutions (OMFIF) & Absa Group

A very favorable ranking for Morocco in this index due to the efforts made by the Kingdom to reform the taxation of financial operations and adjust the regulation of financial markets, according to the Official Forum of Monetary and Financial Institutions.



2023

# Exponentiality

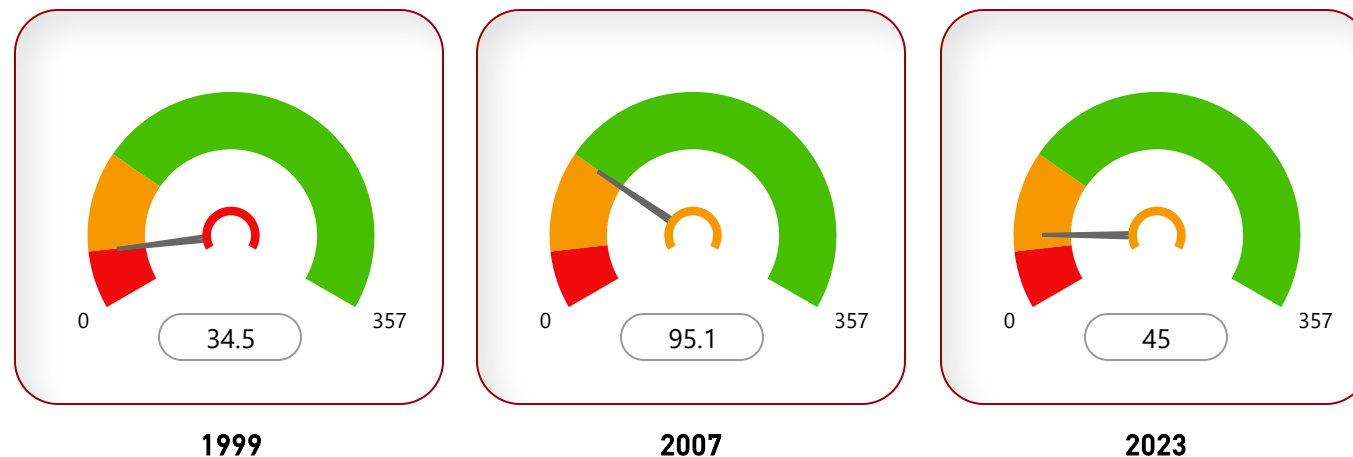
Strengthen global competitiveness and improve attractiveness

## Financial System

### Stock Market Capitalization as % of GDP

Source: Calculations IRES \_ Casablanca Stock Exchange; World Bank; AMMC (Moroccan Capital Markets Authority)

A stock market capitalization that, after significant growth between 1999 and 2007, has since declined due to the exit of several companies from the Casablanca stock exchange, at a time when the number of initial public offerings (IPOs) sharply decreased from 10 in 2007 to just one in 2023. Recent efforts to diversify financial products, improve accessibility for investors, promote IPOs of emerging companies, and invest in financial technologies should inject new momentum into the stock market and, by extension, improve its international positioning.





# Exponentiality

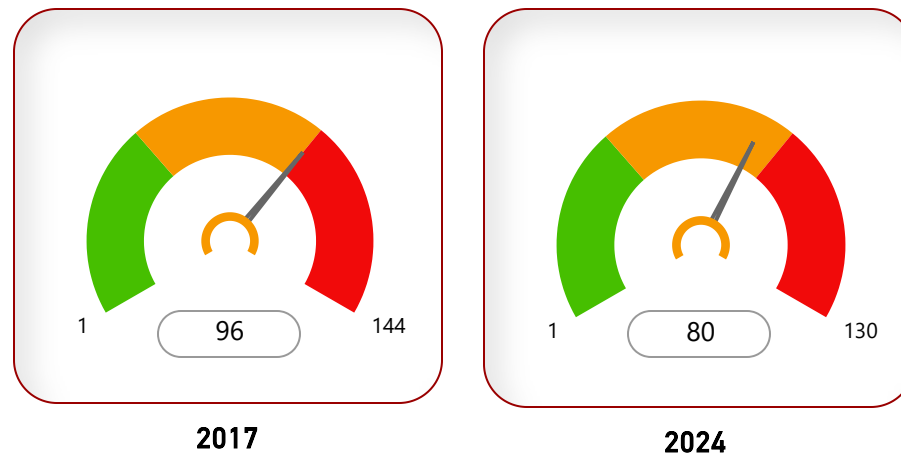
Strengthen global competitiveness and improve attractiveness

## Global Attractiveness of the Country

### Global Opportunity Index

Source: Calculations IRES\_ Milken Institute

A slight progression in Morocco's international positioning in this index, which assesses the attractiveness of countries for international investors, thanks to various measures undertaken by the Kingdom to improve the general business climate.



# Exponentiality

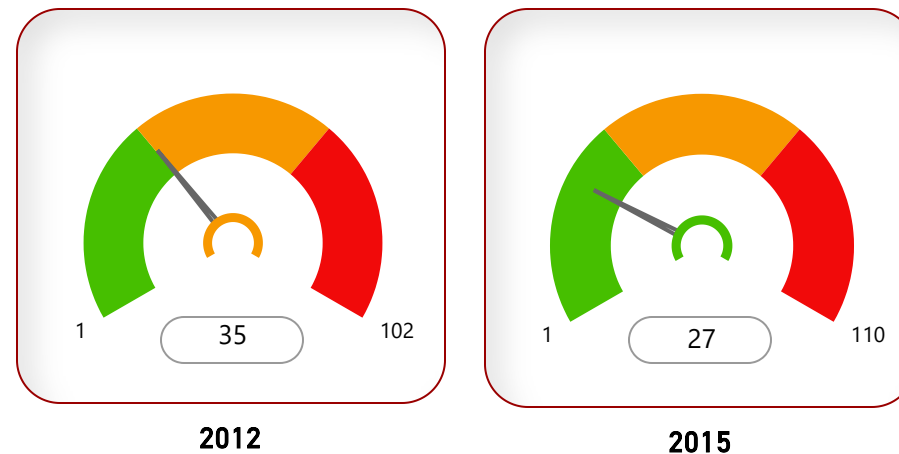
Strengthen global competitiveness and improve attractiveness

## Global Attractiveness of the Country

### Baseline Profitability Index

*Source: Calculations IRES \_ Daniel Altman \_ Foreign Policy*

A very favorable ranking for Morocco in terms of its attractiveness for foreign investments, notably due to its financial stability, according to "Foreign Policy".



# Exponentiality

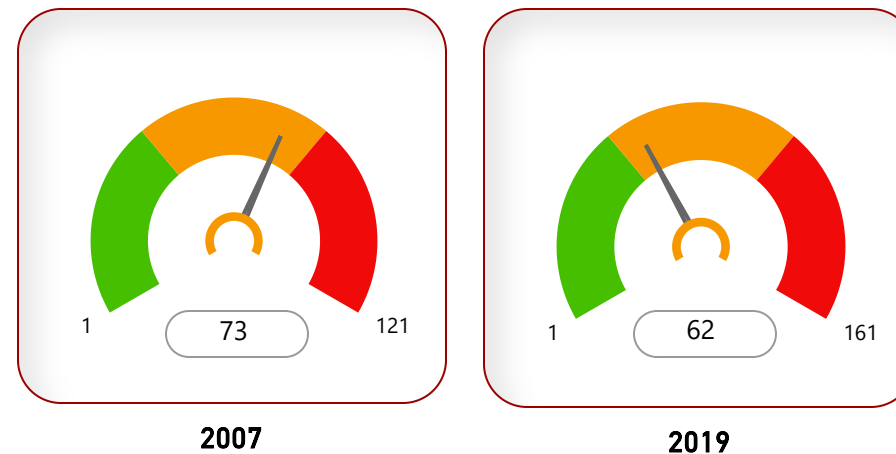
Strengthen global competitiveness and improve attractiveness

## Global Attractiveness of the Country

### Best Countries for Business Index

Source: Calculations IRES \_ Forbes

A notable improvement in Morocco's international positioning according to this index. The Kingdom gained 35 places between 2007 and 2019 thanks to an improvement in the overall business climate.



# Exponentiality

Strengthen global competitiveness and improve attractiveness

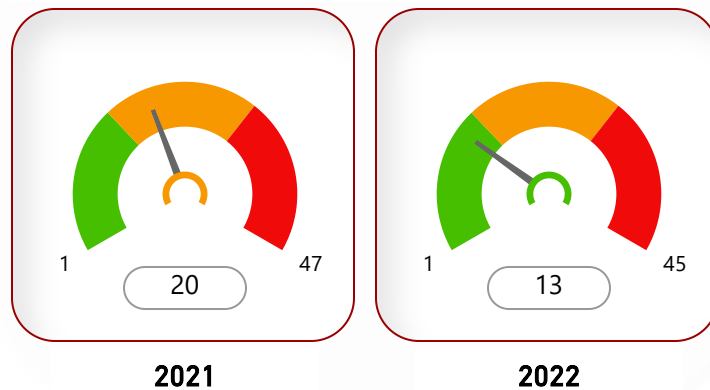
## Global Attractiveness of the Country

### Global Manufacturing Risk Index

Source: Calculations IRES \_ Cushman & Wakefield

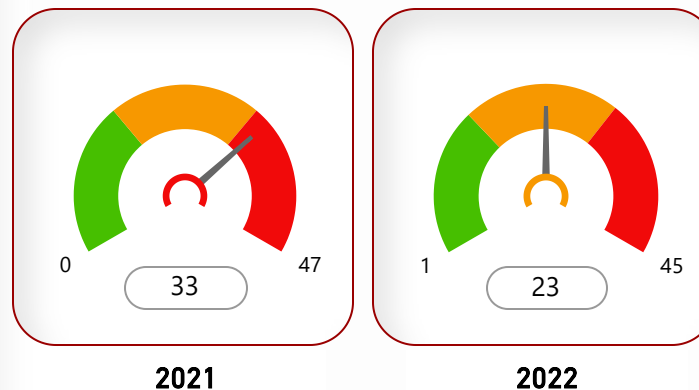
A ranking for Morocco among the 20 most attractive countries globally by "Best Cost," primarily due to its competitiveness in labor and clean energy costs.

#### Cost component

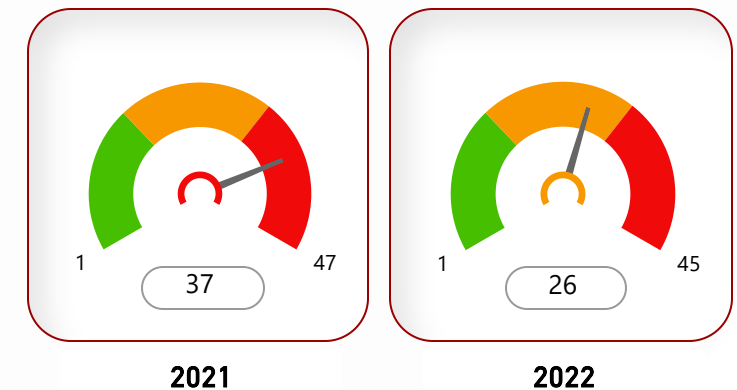


According to the two components of this index – "Post-COVID recovery capacity" and "Risk" – the Moroccan industrial sector is in full recovery following the health crisis.

#### Risk component



#### Post-Covid recovery component



# Exponentiality

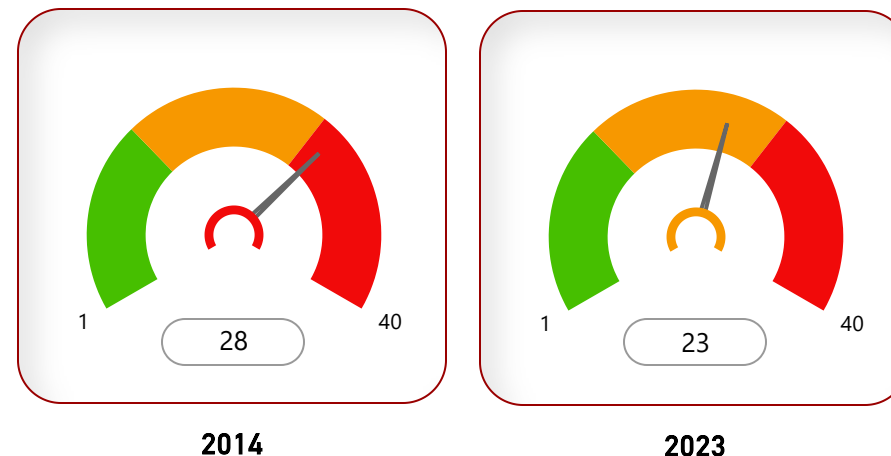
Strengthen global competitiveness and improve attractiveness

## Global Attractiveness of the Country

### Renewable Energy Country Attractiveness Index

Source: Calculations IRES \_ Ernst & Young

Morocco's ranking has improved in terms of investment attractiveness in renewable energy. The Kingdom is first in Africa and second in the Middle East and North Africa region. This situation reinforces Morocco's ongoing commitment to the energy transition.



# Exponentiality

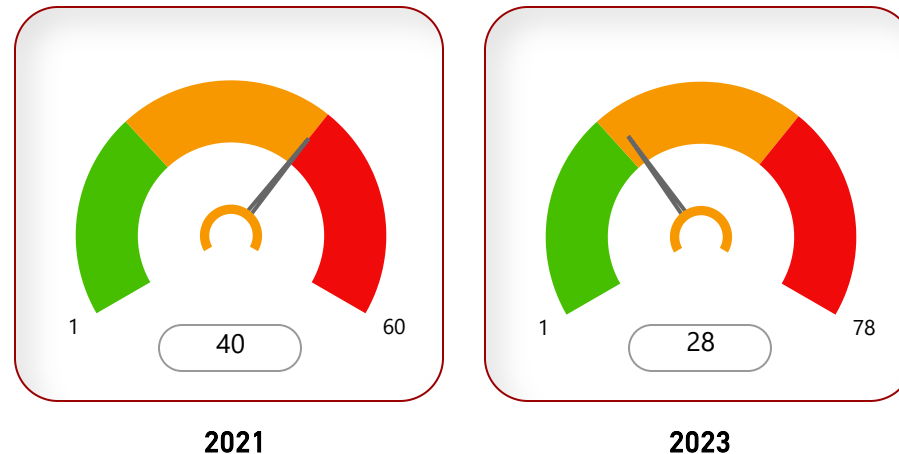
Strengthen global competitiveness and improve attractiveness

## Global Attractiveness of the Country

### Global Outsourcing Index

Source: Calculations IRES\_ Kearney Consulting

A significant improvement in Morocco's international ranking regarding outsourcing, thanks to the country's competitiveness in terms of costs, the availability of a skilled workforce, the development and maintenance of a brand reputation in outsourcing, particularly French-speaking, and the strengthening of the digital skills of the human capital. In Africa, Morocco is the 2<sup>nd</sup> best outsourcing destination.



# Exponentiality

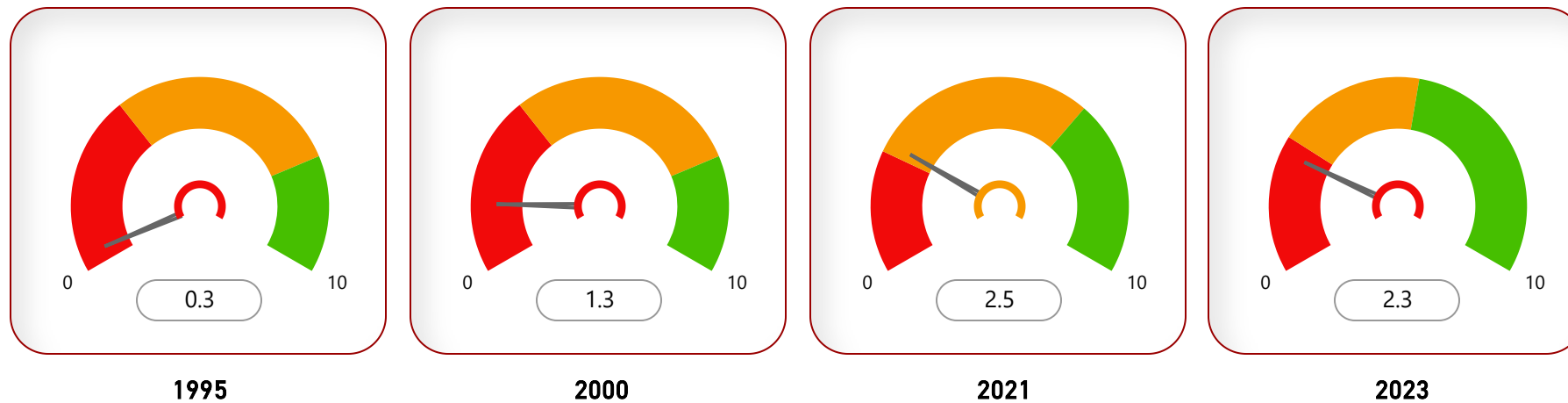
Strengthen global competitiveness and improve attractiveness

## Global Attractiveness of the Country

### Foreign Direct Investments as % of GDP

Source: Calculations IRES \_ Data from the Office des Changes; World Bank

After the rebound in 2021, a slight decline in foreign direct investment was observed due to dimmed global economic prospects in 2023, geopolitical tensions, and increased uncertainty among investors. The implementation of the new investment charter in 2023 and efforts in economic diplomacy should, in principle, have favorable impacts on FDI attractiveness.



# Exponentiality

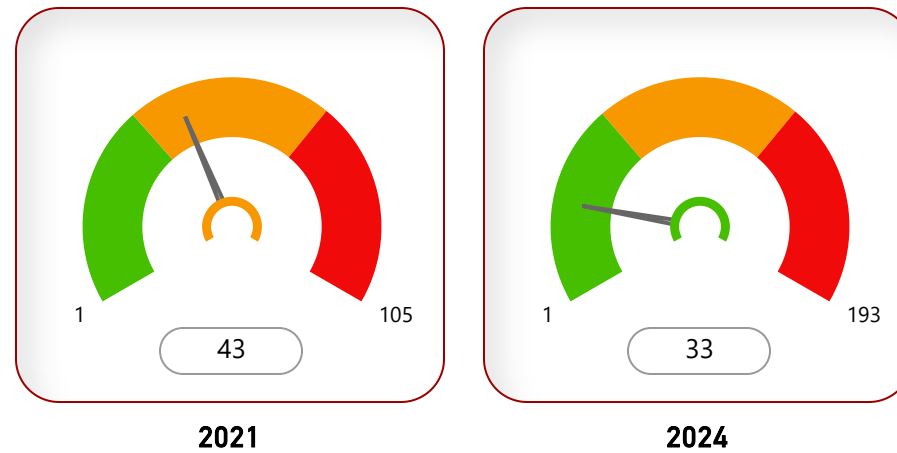
Strengthen global competitiveness and improve attractiveness

## Global Attractiveness of the Country

### Culture & Heritage Index

Source: Calculations IRES\_ Brand Finance

A favorable ranking for Morocco according to this index, due to the richness of its cultural heritage, its internationally appreciated gastronomy, the splendor of its natural landscapes, and the diversity and quality of artistic events held in the Kingdom.





# Exponentiality

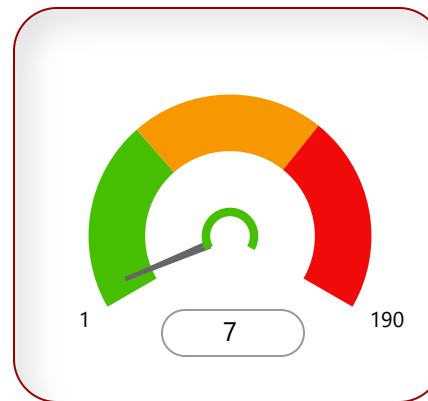
Strengthen global competitiveness and improve attractiveness

## Global Attractiveness of the Country

### Best Destination for Cost-Attractiveness

*Source: Calculations IRES \_ The Travel*

Marrakech, the Kingdom's tourist capital, ranks among the ten least expensive tourist destinations globally, largely due to affordable accommodation costs and relatively low transport fares, according to the firm "The Travel".



2023

# Exponentiality

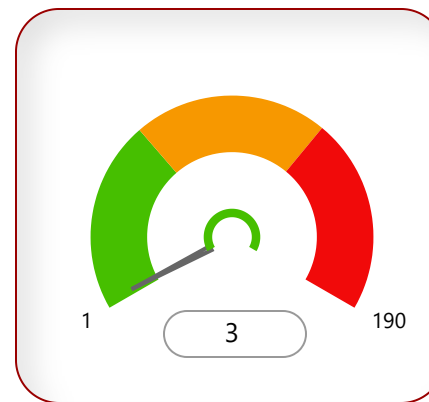
Strengthen global competitiveness and improve attractiveness

## Global Attractiveness of the Country

### Best Tourist Destination for 2024

Source: Calculations IRES \_ Lonely Planet

In 2024, the Kingdom is ranked among the top three most attractive global tourist destinations, given its cultural diversity, the richness of its natural landscapes, its good gastronomy, and the warm welcome and hospitality of its people.



2024

# Exponentiality

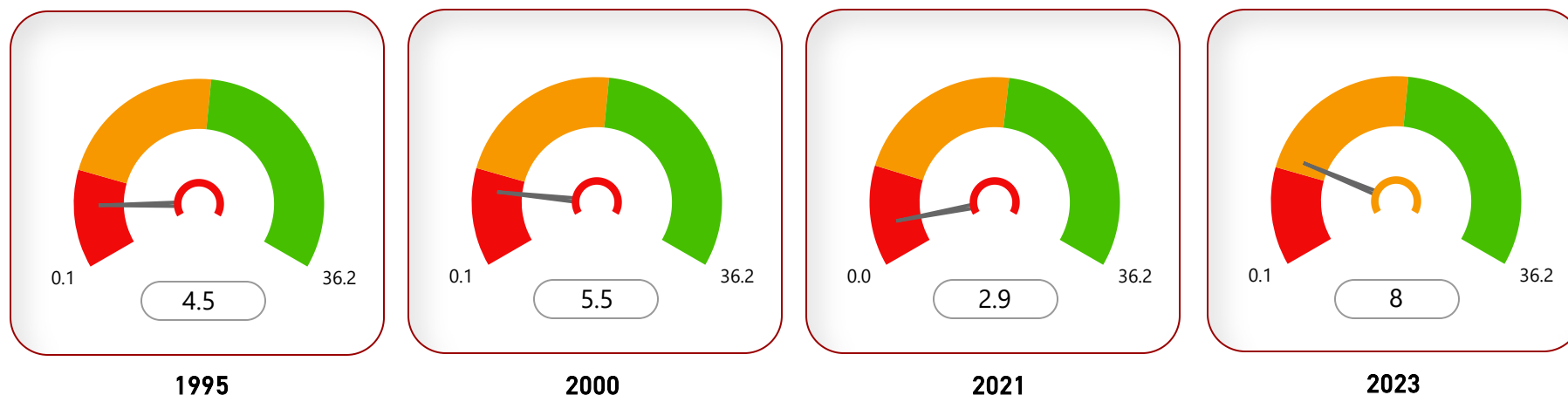
Strengthen global competitiveness and improve attractiveness

## Global Attractiveness of the Country

### Tourism Revenue Share in GDP

Source: Calculations IRES \_ Data from the Office des Changes; World Bank

A significant increase in the share of tourism revenue, after the decline recorded in 2021 due to the consequences of the health crisis. This increase is partly the result of the economic recovery after the COVID-19 pandemic and the lifting of health restrictions. However, to strengthen the resilience of Morocco's tourism sector in the face of potential crises, it is imperative to design a diversified and high-quality tourism offering, while exploring new opportunities such as medical and aesthetic tourism as well as eco-tourism.



# Exponentiality

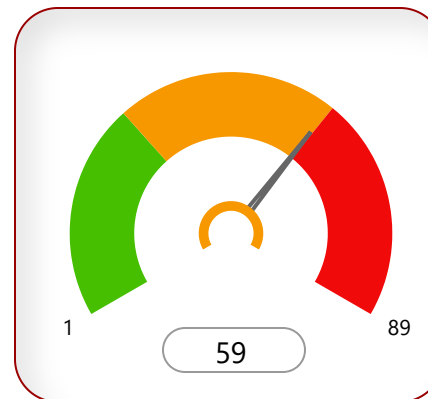
Strengthen global competitiveness and improve attractiveness

## Real Estate Transparency

### Real Estate Transparency Index

Source: Calculations IRES \_ JLL (Jones Lang LaSalle) Consulting

An intermediate international ranking for Morocco according to this index, which could improve significantly by implementing proper land regulation and setting up a reliable real estate information system. Moreover, the Kingdom ranked 1<sup>st</sup> in the Maghreb and 6<sup>th</sup> in the North Africa and Middle East region in 2024.



2024

# Exponentiality

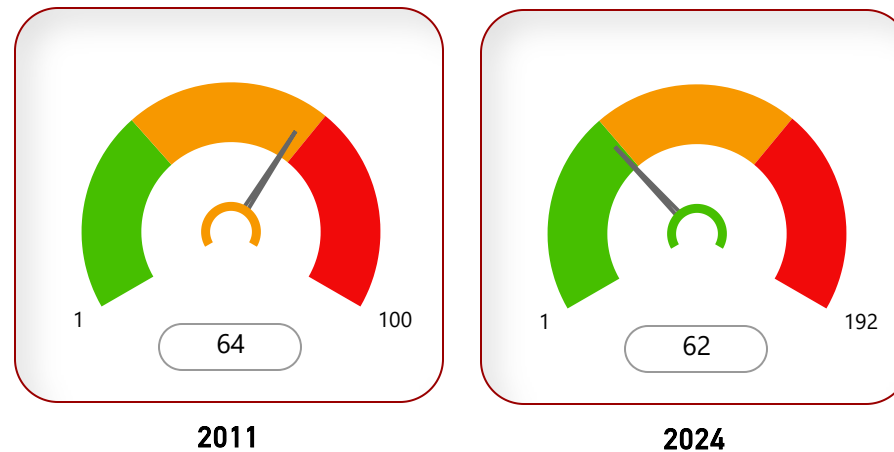
Strengthen global competitiveness and improve attractiveness

## Reputation

### Brand Finance Nation Brands

Source: Calculations IRES\_ Brand Finance

A favorable international ranking for Morocco in this index, which needs to be strengthened with the acceleration of structural reforms in human development and intangible capital, while designing and implementing a strong, sustainable, and durable "Morocco Brand" for promoting the Kingdom's image internationally.



# Exponentiality

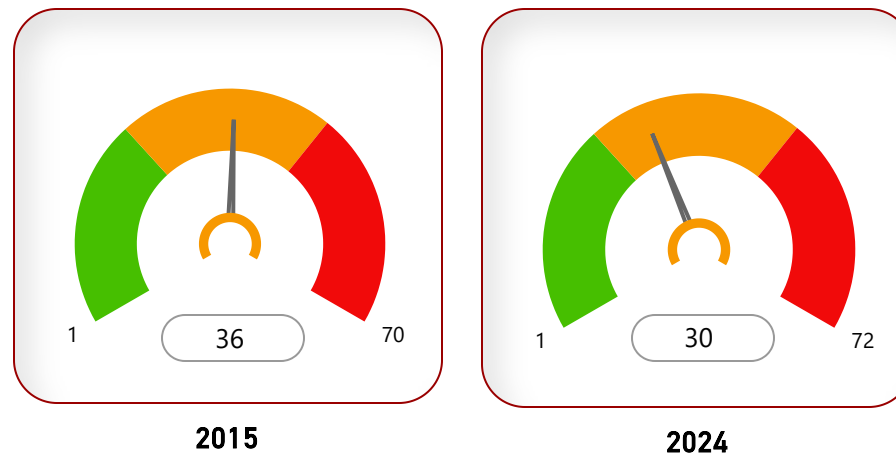
Strengthen global competitiveness and improve attractiveness

## Reputation

### Country Reputation Index

Source: Calculations IRES\_ IRES; Reputation Lab

An improvement between 2015 and 2024 in Morocco's international positioning, which has reached the Top 30 of countries with the best reputation among G7 countries + Russia. Despite this progress, Morocco's external reputation remains intermediate, with a score not exceeding 50 points out of 100. It is primarily driven by "aspirational" values ("Friendly and likable population", "Educated and reliable population", "Rich natural environment", "Attractive lifestyle") rather than rational values ("Ethics and responsibility", "Quality of institutions", "Level of development").



# Exponentiality

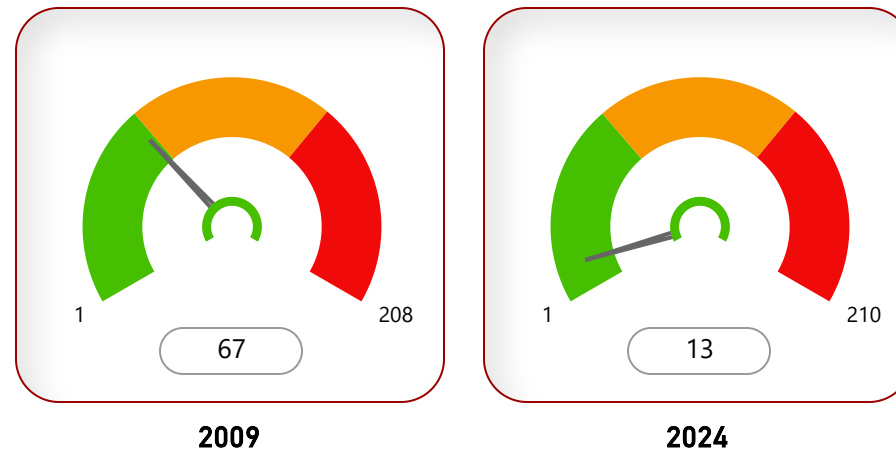
Strengthen global competitiveness and improve attractiveness

## Reputation

### FIFA World Rankings

Source: Calculations IRES\_ FIFA

A significant improvement in Morocco's international ranking for this index, mainly explained by the national team's achievements in the 2022 World Cup in Qatar. The Kingdom thus ranks at the top of the Middle East and North Africa region due to efforts made by the Royal Moroccan Football Federation under the enlightened leadership of His Majesty King Mohammed VI, may God assist him, especially in terms of restructuring national football and building internationally compliant sports infrastructure.



# Exponentiality

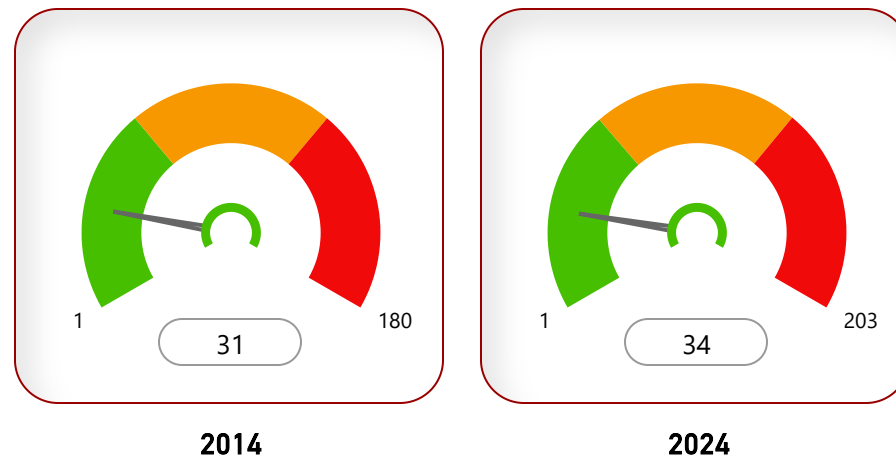
Strengthen global competitiveness and improve attractiveness

## Reputation

### Bloom Consulting Country Brand Ranking

Source: Calculations IRES \_ Bloom Consulting

A favorable ranking for Morocco in terms of the attractiveness of its tourism sector, confirming the Kingdom's status as a preferred global tourist destination. Morocco ranks 3rd in Africa as the best tourist destination, behind Egypt and South Africa.





# Exponentiality

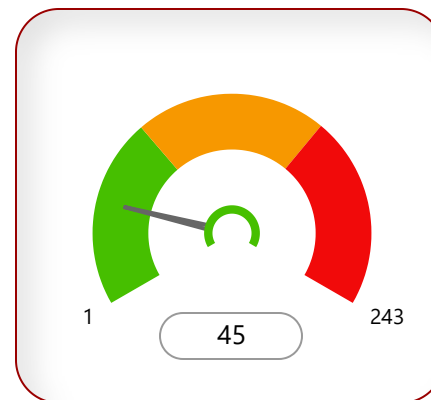
Strengthen global competitiveness and improve attractiveness

## Reputation

### E-Reputation Index

Source: Calculations IRES \_ Digital Country Index

A favorable positioning of Morocco according to this index. The Kingdom ranks 2nd in Africa as the most searched country on the internet, particularly due to its diverse civilization, cultural, gastronomic, natural, ecological, and archaeological heritage.



2017



# ANNEX : Glossary Of indicators

This annex highlights the definitions, as established by national and international organizations, of all the indicators composing the strategic dashboard.

## GOVERNANCE

### Organize the triple governance of existential risks, human rights, and common goods

#### Contribution to global governance

##### Good Country Index

The "Good Country Index," first developed in 2014 by researcher Simon ANHOLT, ranks 125 countries worldwide according to their contributions to the development of the planet and humanity through their policies and behaviors.

The "Good Country Index" is a composite index of 35 sub-indicators spread across 7 dimensions, namely:

##### 1. Science, Knowledge, and Technology :

- Number of foreign students in the country (relative to GDP);
- Exports of scientific journals and periodicals (relative to GDP);
- Number of articles published in international journals (relative to GDP);
- Number of Nobel Prize laureates (relative to GDP);
- Number of patent applications filed (relative to GDP).

##### 2. Culture :

- Exports of creative products (relative to GDP);
- Exports of creative services (relative to GDP).

- UNESCO Arrears ;
- Number of countries and territories with visa-free access for the country's citizens;
- Freedom of the press.

##### 3. International Peace and Security:

- Number of military personnel deployed in peacekeeping missions (relative to GDP);
- Arrears in financial contributions to UN peacekeeping missions;
- Number of victims from organized international violence (relative to GDP);
- Arms exports (relative to GDP);
- Score of the "Global Cybersecurity Index."

##### 4. Global Order:

- Number of treaties signed for diplomatic action and peaceful conflict resolution;
- Number of refugees hosted (relative to GDP);
- Number of refugees abroad;
- Proportion of the population donating to charity as a reflection of a cosmopolitan attitude.

##### 5. Climate:

- Empreinte écologique ;
- Ecological footprint;
- Exports of hazardous waste (relative to GDP);
- Organic pollutants in water (relative to GDP);
- CO2 emissions (relative to GDP);
- Emissions of other greenhouse gases (relative to GDP).

##### 6. Prosperity and Equality:

- Cross-border trade.

- Number of volunteers sent abroad (relative to GDP<sup>2</sup>)
- Size of the commercial market (relative to GDP<sup>2</sup>)
- Outbound Foreign Direct Investment (FDI) as a percentage of GDP
- Development aid as a percentage of GDP

#### 7. Health and Well-being:

- Food aid (relative to GDP<sup>2</sup>)
- Pharmaceutical exports as a percentage of GDP
- Voluntary excess contributions to the World Health Organization (WHO) relative to GDP
- Humanitarian aid contributions (relative to GDP<sup>2</sup>)
- Drug seizures (relative to GDP<sup>2</sup>)

The final ranking is obtained by calculating the average rank achieved by each country across the seven dimensions of the "Good Country Index." It should be noted that the rank of each dimension is in turn based on the average rank of the five sub-indicators that make up the dimension. The rank of the sub-indicators is a fractional rank (0 = highest rank; 1 = lowest rank) calculated relative to all countries for which data is available.

## Global governance

### Global Resilience Index

The "Global Resilience Index" helps to understand a country's vulnerability to risks (disruptive events and manageable risks) and its ability to recover quickly. The risks studied include, among others, climate change, resource scarcity, geopolitical instability, and environmental, social, and governance (ESG) concerns.

[2] "The indicator's score is divided by GDP so that poorer or less developed countries are not penalized in the ranking for their limited capacity to 'make a difference' in the world."  
- Simon ANHOLT, founder of the "Good Country Index"

## Soft Power

### Global Soft Power Index

The Global Soft Power Index, created by "Brand Finance," the world's leading independent brand valuation and brand strategy consultancy, integrates a wide range of measures that, in combination, provide a balanced and holistic evaluation of a nation's presence, reputation, and impact on the global stage.

## Global security

### International peace and security index

This indicator corresponds to the third component of the "Good Country Index" above. It is evaluated based on the measurement of:

- Peacekeeping troops,
- Arrears of payment for UN peacekeeping budgets as a percentage of the contribution,
- Violent international conflicts,
- Arms exports,
- Internet security and cybersecurity.

### World's safest countries index

Published by the magazine "Global Finance", the ranking of the safest countries in the world is based on three key factors: war and peace, personal security, and the risk of natural disasters. For the latter factor, the 2021 edition took into account the emergence of the COVID-19 crisis and how it was managed by the countries included in the ranking.

## Fragile State index

"Fragile State Index" is an index developed by the American think tank "Fund for Peace" and published by the magazine "Foreign Policy." It is an annual ranking of countries worldwide based on their levels of stability and the pressures they face. The first ranking was established in 2005.

The index does not necessarily predict when states may suffer from violence or collapse. Instead, it measures vulnerability to collapse or conflict. This index provides a diagnosis of the problems that drive a state toward failure. It helps decision-makers anticipate and monitor the evolution of these issues to avoid crisis periods by making the right decisions and developing smart programs.

The index is based on 12 indicators belonging to three categories: social, economic, and political.

### 1. **Social Indicators cover :**

- Demographic pressures
- The significance of refugee or internally displaced movements
- Community grievances
- Chronic and sustained emigration

### 2. **Economic Indicators include :**

- Unequal economic development
- Severe economic decline

### 3. **Political Indicators relate to :**

- Criminalization and/or delegitimization of the state
- Gradual deterioration of public services
- Suspension or arbitrary application of the law and large-scale human rights violations
- The security apparatus
- The emergence of factions within the elite
- Intervention by other states or external political actors

For each indicator, the scores are placed on a scale from 0 to 10. The total score is the sum of the scores for these 12 indicators, ranging from 0 to 120. A low score indicates stability, while a high score indicates a critical situation; the higher the ranking of a country, the better its condition.

## Index of Political Stability and Absence of Violence/Terrorism

This indicator evaluates the degree of political stability and the impact of terrorism and violence within a country. It ranges from -2.5 (low performance) to 2.5 (high performance).

## Indice global de terrorisme (Score de 0 à 10)

This index, a multidimensional "measure" of terrorism, aims to assess the direct and relative impact of terrorist attacks on countries within the international community. The index ranges from 0 (no terrorism impact) to 10 (high terrorism impact). The score is an average of the last five years, weighted by four factors: the total number of terrorist incidents in a year; the total number of deaths caused by terrorism; the total number of injuries caused by terrorism; the approximate level of material damage caused by terrorism.

## **Internal Security**

### Number of Police Officers per 100,000 Inhabitants

"Police personnel" refers to the personnel, recorded as of December 31 each year, belonging to public agencies whose main functions are the prevention, detection, and investigation of crime and the arrest of alleged offenders. Data concerning support staff (e.g., secretaries) should be excluded.

### Number of Detainees per 100,000 Inhabitants

The prison population includes all individuals, both pre-trial and convicted, held in penal or correctional facilities. Non-criminal prisoners held for administrative purposes, including those detained pending investigation of their immigration status and foreign nationals who are not allowed to remain in the country, should be excluded from this category.

### Intentional Homicide Rate per 100,000 Inhabitants (Ranking)

Voluntary homicide is defined as the unlawful, intentional killing of one person by another.

### Number of Assaults per 100,000 Inhabitants

Assaults refer to physical attacks made by one person against another person's body, causing severe bodily harm. Sexual assaults, threats, and assaults leading to death are excluded from this indicator.

## **Defense**

### Military Power Index

This index, published by the think tank "Global Firepower," evaluates and ranks countries based on their military power.

The index is based on 8 dimensions, namely:

- The workforce (availability, suitability for service, active military workforce...)
- Land capabilities (armored vehicles, self-propelled guns, towed artillery pieces, rocket launchers...)

- Air power (military aircraft, helicopters, aerial vehicles...)
- Naval power (aircraft carriers, frigates, corvettes, destroyers, submarines...)
- Natural resources (oil production/consumption and oil reserves)
- Logistical capabilities (merchant navy strength, major ports and terminals, road coverage, rail coverage, ...)
- Financial resources (annual defense budget, external debt, foreign exchange and gold reserves...)
- Geographical situation (country size, coastline, shared borders, coverage of navigable waterways).

### Naval Military Power Index

The index evaluates the number of warships and submarines, as well as factors such as the age of a fleet, its logistical support, and its attack and defense capabilities.

### Military expenditures as a percentage of GDP

The data on military expenditures from SIPRI are derived from NATO's definition, which includes all current and capital expenditures of armed forces, including peacekeeping forces, ministries of defense, and other government agencies involved in defense projects, paramilitary forces if they are deemed to be trained and equipped to carry out military operations and activities in the military space.

Such expenditures include costs for both civilian and military personnel, including military pensions and social services for personnel, operations and maintenance, procurement, research and development, and military aid (which is included in the military expenditures of the donor country). Excluded from these expenditures are civil defense and costs related to past military activities, such as veterans' benefits, demobilization, conversion, and weapon destruction.

However, this definition cannot be applied to all countries as more details would be needed regarding what is included in military budgets and what is included in off-budget military expenditures.

### Arms imports in millions of dollars.

Arms transfers refer to the provision of military weapons through sales, aid, gifts, and manufacturing licenses. The data covers most conventional weapons such as aircraft, armored vehicles, artillery, radar systems, missiles, and military ships. Excluded from this calculation are other military equipment such as small arms and light weapons, trucks, small artillery, ammunition, support equipment, technology transfers, and other services.

### **Democracy and Rule of Law**

#### Democracy Index (score from 0 to 10)

The Democracy Index is an index, created in 2006 by The Economist Intelligence Unit, which aims to assess the level of democracy in 167 countries. This study was first published in 2006.

The calculation of the index is based on 60 criteria grouped into five categories: electoral process and pluralism, civil liberties, functioning of government, political participation, and political culture. The rating is done on a scale from 0 to 10, and based on this score, countries are classified into four regimes: full democracy, flawed democracy, hybrid, or authoritarian.

#### "Expression and Accountability" Index (score from -2.5 to 2.5)

This indicator measures the ability of citizens in a country to participate in the selection of their leaders. It also evaluates citizens' freedoms of expression and association, as well as press freedom.

### Freedom Press Index

The press freedom index, developed by the international organization "Freedom House," evaluates the independence of the media worldwide. This index measures the degree of freedom in printing and disseminating information, as well as the level of freedom in electronic media. It is based on the legal environment of the media, the political pressures influencing press relations, and the economic factors affecting access to information. The ranking of the index is based on annual surveys on press independence, to which experts from participating countries respond. Countries are classified into three categories according to their level of press freedom: "free," "partially free," or "not free."

### **Economic Freedom**

#### Global Economic Freedom Index (score from 0 to 100)

Economic freedom is the fundamental right of every individual to control their own labor and acquire property. In an economically free society, individuals are free to work, produce, consume, and invest as they wish, with this freedom both protected by the state and without constraint. In economically free societies, governments allow capital and goods to move freely and refrain from restricting liberty beyond what is necessary to protect and maintain liberty itself.

Ten components of economic freedom are measured, assigning a score to each on a scale of 0 to 100, where 100 represents the maximum freedom. These 10 economic freedoms are grouped into four main categories:

- Rule of law (property rights, freedom from corruption);
- Limited government (tax freedom, government spending);
- Regulatory efficiency (business freedom, labor freedom, monetary freedom);
- Market openness (trade freedom, investment freedom, financial freedom).

## Open data

### Open Data Inventory ODIN

The data openness index evaluates the availability and coverage of official statistics in a given country in order to examine policies aimed at promoting open data, identify gaps and deficiencies, improve access to data, and encourage dialogue and coordination between national entities responsible for publishing statistics.

The components of this index include the availability of key indicators over time and by geographical subdivisions, the ability to download data in readable formats with metadata, and open usage conditions.

The statistics assessed cover the social domain (population, health, education, gender, crime, and poverty), economic domain (national accounts, labor, price indices, public finance, currency and banks, trade, and balance of payments), and environmental domain (land use, resources and energy, pollution, and built environment).

## Implement the governance X.0 compass

### Inclusive Growth

#### Inclusive growth index

The Inclusive Growth Index, developed by the international organization "World Economic Forum," ranks countries worldwide according to their ability to ensure that citizens contribute to and benefit from economic growth.

Thus, it illustrates the sustainable economic development strategy implemented by each country. This indicator distinguishes between advanced countries and developing ones, providing two separate rankings.

## Effectiveness of Public Institutions

### Government Effectiveness Index (score from -2.5 to 2.5)

This indicator measures the quality of public services, the capacity of the civil service, its independence from political pressures, and the quality of public policy formulation.

### Public governance

#### Good Government Index

The "Good Government Index" is an annual evaluation that measures the capabilities and effectiveness of 113 governments worldwide concerning leadership and foresight, laws and policies, the strength of institutions, financial management, market attractiveness, global influence and reputation, and the promotion of social mobility.

#### Regulatory Quality Index (score from -2.5 to 2.5)

This indicator measures the government's ability to ensure well-designed policies and regulations that allow the private sector to develop and encourage its growth.

#### E-participation index

This composite indicator, derived from the United Nations "E-Government Survey," measures the procedures followed by governments in different countries to include their citizens in the formulation of policies and government decisions and in the development of public services.



## Freedom of the financial system

### Freedom of the financial system index

Financial freedom is a measure of the effectiveness of banking services, the independence of government control, and interference in the financial sector. In an ideal banking and financial environment where there is a minimum level of government interference, the independent control of the central bank and regulation of financial institutions are limited to enforcing contractual obligations and preventing fraud. Credit is allocated on market terms, and the government does not own financial institutions. Financial institutions provide various types of financial services to individuals and businesses. Banks are free to grant credit, accept deposits, and conduct foreign currency transactions. Foreign financial institutions operate freely and are treated as national institutions.

The financial system freedom index is based on:

- The extent of government regulation of financial services
- The degree of state intervention in banks and other financial companies through direct and indirect ownership
- The level of development of the financial and capital markets
- The government's influence on credit allocation
- Openness to foreign competition

The index score ranges from 0 to 100, where 100 represents the maximum level of freedom.

## Perception of the corruption

### Perception of the corruption index

The Corruption Perception Index (CPI), published by Transparency International, ranks countries based on the perceived level of corruption in public administrations and within the political class. The CPI is a composite index, aggregating data from surveys and rating agencies. A score of 100 indicates the absence of corruption, while a score of 0 indicates systemic corruption.

## Financial secrecy

### Financial Secrecy Index

The "Financial Secrecy Index" ranks jurisdictions most complicit in helping individuals hide their finances from the rule of law. Financial secrecy facilitates tax abuse, enables money laundering, and undermines human rights.

## Money Laundering

### Basel AML Index

The Basel AML (Anti-Money Laundering) Index is an independent annual ranking that evaluates the risks of money laundering and terrorist financing worldwide. Published by the Basel Institute on Governance since 2012, this index provides risk scores based on data from 17 public sources such as the Financial Action Task Force (FATF), Transparency International, the World Bank, and the World Economic Forum. The scores range from 0 to 10: a score of 0 is assigned to countries with the most transparency and effective legislation against money laundering and terrorist financing, while a score of 10 is assigned to the highest-risk countries in these areas. The risk scores cover five areas: the quality of the anti-money laundering and counter-terrorism financing framework; the level of corruption; the level of transparency and accountability; political and legal risks.

## HUMAN-CENTRIC

### Prepare for the future

#### Fertility control

##### Total Fertility Rate

The synthetic fertility index is the average number of children a woman would have at the end of her reproductive life if current conditions remain constant throughout her childbearing years.

#### Youth

##### Share of Youth in the Population (in %)

This indicator corresponds to the percentage of youth in the total population of a country.

#### Future Prospects of Youth

##### Global Youth Development Index

The "Global Youth Development Index" assesses opportunities for youth development worldwide based on six pillars: education, employment and opportunities, equality and inclusion, health and well-being, peace and security, and political and civic participation.

##### Youth Future Prospects

This indicator corresponds to the number of people aged 15 to 24 who can read, write, and understand short statements about their daily life, relative to the total population of this age group. Generally, literacy also includes numeracy, meaning the ability to perform simple arithmetic operations.

#### Literacy

##### Adult Literacy Rate as a Percentage of the Population Aged 15 and Above

This indicator corresponds to the percentage of students in a cohort enrolled in the first year of junior secondary education, for a given school year, who dropped out of school during their junior secondary education journey.

##### Youth Literacy Rate as a Percentage of the Population Aged 15 to 24 Years

This indicator corresponds to the number of people aged 15 and older who can understand, read, and write short statements about their daily life, relative to the total population of this age group. Generally, literacy also includes numeracy, meaning the ability to perform simple arithmetic operations.

#### Education Expenditure

##### Public Expenditure on National Education as a Percentage of GDP

Public spending on education includes current and capital expenditures for education. It includes public spending related to educational institutions (public and private) and the administration of education, as well as subsidies to private entities (students/households and other private entities).

##### Public Expenditure on National Education per Student as a Percentage of GDP per Capita

This indicator corresponds to public spending on education per student, expressed as a percentage of GDP per capita, for a given financial year.

## Generalization of Schooling

### Net Enrollment Rate at Primary Education Level

This indicator corresponds to the school enrollment rate at the primary education level for children aged 6 to 11, relative to the eligible school-age population aged 6 to 11.

### Net Enrollment Rate at Lower Secondary Education Level

This indicator corresponds to the school enrollment rate at the secondary education level (junior secondary), for children aged 12 to 14, relative to the eligible school-age population aged 12 to 14.

### Net Enrollment Rate at Upper Secondary Education Level

This indicator corresponds to the school enrollment rate at the upper secondary education level (vocational education), for children aged 15 to 17, relative to the eligible school-age population aged 15 to 17.

## Student Support at Primary Level

### Student-Teacher Ratio at Primary Education Level

The student-teacher ratio is calculated by dividing the equivalent number of students attending full-time courses by the equivalent number of teachers giving full-time courses. It allows for two types of analysis. The first evaluates whether the number of teachers is sufficient (or not) to supervise the students. If the observed value of the student-teacher ratio is less than or equal to this standard, then the number of teachers is sufficient. On the other hand, if the calculated value of the student-teacher ratio exceeds this standard, the system lacks teaching staff and situations of overcrowded classes may arise.

The student-teacher ratio, secondly, highlights the differences in the allocation practices of teaching resources to schools, whereas within a country, it reveals disparities in the educational system's ability to be equitable by offering its teaching staff the same workload and its students the same learning conditions as described earlier.

## School Dropout

### Cumulative Dropout Rate at Primary Education Level (%)

This indicator corresponds to the percentage of students in a cohort enrolled in the first year of primary education, for a given school year, who dropped out of school during their primary education journey.

### Cumulative Dropout Rate at Lower Secondary Education Level (%)

This indicator corresponds to the percentage of students in a cohort enrolled in the first year of junior secondary education, for a given school year, who dropped out of school during their junior secondary education journey.

## Vocational Education

### Percentage of Students Enrolled in Vocational Education (%)

Percentage of enrollment in vocational secondary education (in %). This indicator corresponds to the enrollment for a given school year in vocational secondary education, expressed as a percentage of the total enrollment in secondary education (general and vocational).

## Quality of the Education System

### International Ranking of Morocco in PIRLS and TIMSS Tests

The international tests PIRLS (Progress in International Reading Literacy Study) and TIMSS (Trends in International Mathematics and Science Study), established by the International Association for the Evaluation of Educational Achievement, are programs that assess, respectively, the reading skills and the mathematics and science skills of students enrolled at the primary education level.

## Online Education

### Global Skills Index

This index, developed by Coursera, a global leader in online courses and training, evaluates the level of competence of learners in each country and industry (entity) and measures the skills that tend to develop globally. The 102 countries studied are rated from 0 to 100 and are classified into four categories: lagging, emerging, competitive, and cutting-edge.

## Higher Education

### Enrollment Rate in Higher Education

This indicator corresponds to the school enrollment rate at the higher education level for individuals aged 19 to 23, relative to the officially eligible school-age population at the same level.

### Number of Graduates per 10,000 Inhabitants in Engineering and Industries

Number of graduates in engineering and manufacturing and production industries, expressed per 10,000 inhabitants.

## Research & Development

### Research & Development

This index measures the human resources dedicated to Research and Development, expressed per 1 million inhabitants.

## Knowledge Economy & Innovation

### Global Knowledge Index

The "Global Knowledge Index" consists of 7 sub-indicators: pre-university education, technical and vocational education, higher education, research, development and innovation (RDI), information and communication technology (ICT), economy, and stimulating environment.

### Global Innovation Index (GII)

This index measures innovation in a broad sense, including business and social innovations, as well as scientific ones. The index aims to provide a more precise view of the innovation process and new trends in this field in different countries around the world. It ranks the innovation level of each country on a scale from 0 to 100, where 100 represents the most innovative economy. The 2014 Global Innovation Index represents the average of two sub-indices. The first is the sub-index of resources dedicated to innovation, which evaluates elements of the national economy that foster innovative activities across five pillars:

1. Institutions
2. Human capital and research
3. Infrastructure
4. Market sophistication
5. Business sophistication

The second is the sub-index of results, which reflects tangible evidence of innovation based on two pillars:

6. Knowledge and technology outcomes
7. Creative outcomes

## Global Intellectual Property Index

The American Chamber of Commerce has been publishing an index every year since 2012, aimed at ranking countries according to their level of intellectual property protection. Its calculation is based on fifty indicators measuring, on one hand, the legislative framework and, on the other hand, the enforcement of rights, awareness, and respect for intellectual property rights. The data is collected through a survey conducted among intellectual property professionals worldwide and an empirical dataset

The score obtained, ranging from 0 to 100, allows for judging the best and worst jurisdictions for intellectual property.

## **Scientific and Technical Production**

### Scientific and Technical Journal Articles Published

Scientific and technical journal articles refer to the number of scientific and engineering articles published in the following fields: physics, biology, chemistry, mathematics, medicine, biomedical research, engineering and technology, and earth and space sciences.

## **Globalizing Human Rights**

### **Human Development**

#### Human Development Index (score from 0 to 1)

Composite index measuring the average level achieved in three essential dimensions of human development: health and longevity, access to education, and decent living standards. This index represents the geometric mean of the normalized indices for each of the three dimensions.

- The health dimension, assessed by life expectancy at birth (a component of the HDI), is calculated using a minimum value of 20 years and a maximum value of 85 years.
- The education component of the HDI is measured by the number of years of schooling for adults aged 25 and the expected years of schooling for children of school-entry age. The average years of schooling is estimated by the UNESCO Institute for Statistics based on education level data from censuses and available surveys in its database. The estimates for expected years of schooling are based on age-specific enrollment at all education levels. This indicator is produced by the UNESCO Institute for Statistics. The expected years of schooling are capped at 18 years. The indicators are normalized with a minimum value of zero and maximum target values of 15 and 18 years, respectively. The two indices are combined into an education index using an arithmetic mean.
- The living standards dimension is measured by gross national income (GNI) per capita. The range for the minimum income is \$100 (PPP) and for the maximum income is \$75,000 (PPP). The minimum value of GNI per capita, set at \$100, is justified by the substantial amount of subsistence and non-market production that is not measured in economies close to the minimum value, which does not appear in official data. The HDI uses the logarithm of income to reflect the diminishing importance of income as GNI increases.

## Human Capital Index

The Human Capital Index, developed by the "World Economic Forum," ranks countries worldwide according to their ability to develop and deploy their human capital for their development.

Human capital is not a one-dimensional concept and can have different meanings for different stakeholders. In the business world, human capital is the economic value of an employee's skills. For policymakers, human capital is the ability of a population to drive economic growth. For others, it may include tacit knowledge acquired informally through experience, non-cognitive skills such as interpersonal skills, and the physical, emotional, and mental health of individuals. In this regard, the Human Capital Index aims to consider this conceptual diversity and adopts a holistic approach, while keeping a global focus on maximizing a nation's human potential.

This index is based on a set of 46 indicators divided into two dimensions for five age groups (under 15, 15-24, 25-54, 55-64, and 65 and over):

- Learning, which contains several sub-themes related to education, such as schooling and education quality, which impact the future workforce; the educational level of those already in the workforce; and workplace learning—level of opportunities in a country to acquire new skills through both formal workplace training and learning through practice, tacit knowledge, and learning from colleagues.
- Employment, which encompasses several dimensions of activity in the labor market, including economic participation, which measures the extent to which individuals, across all age groups, are integrated into a country's labor market; skills, which evaluates whether the knowledge and education of individuals are well-matched to the country's economic profile and the quality of the employment individuals have; and the sub-dimension "vulnerability," which measures the impact of abusive labor relations that stifle the long-term potential of individuals.

## We World Index

This indicator measures the inclusion of children and women worldwide. It is calculated based on 30 sub-indicators referring to 15 dimensions (two indicators per dimension), related to four pillars: health, education, economy, and society.

## Child Rights Index

The KidsRights Foundation and Erasmus University Rotterdam launched the KidsRights Index in November 2013. It is an annual global ranking of 181 countries in terms of the respect for children's rights, based on data from UNICEF, UNDP, and the United Nations Committee on the Rights of the Child.

This index serves as a means to stimulate dialogue on children's rights. It was built on five components: the right to life, health, education, protection, and an environment conducive to children's rights.

## **Women's Empowerment**

### Gender Inequality Index (score from 0 to 1)

Composite index measuring the progress deficit resulting from gender inequalities in three dimensions of human development: reproductive health, empowerment, and the labor market.

### Proportion of seats held by women in Parliament (%)

The proportion of seats occupied by women in parliament is the number of seats occupied by women in parliament, relative to the total number of seats in parliament.

### Female Labor Market Participation Rate

This indicator represents the share of women active in the labor market out of the total population of women aged over 15 years.

## Health Security

### Global Health Security Index

Developed jointly by the Nuclear Threat Initiative and Johns Hopkins University, this index provides an overview of states' preparedness for a health threat. The index is based on six criteria: prevention capabilities, detection, response, the strength of the healthcare sector, adherence to international standards, and the degree of exposure.

## Improving Quality of Life

### Prosperity and Well-being

#### Prosperity and Well-being Index

The Prosperity and Well-being Index is an annual ranking of 142 countries, developed by the Legatum Institute. It provides a unique and robust assessment of global wealth and well-being, through several key factors that form the foundation of prosperity: the economy, entrepreneurship and opportunity, governance, education, health, security, personal freedoms, and social capital. The factors comprising the index are in turn made up of quantitative and qualitative sub-variables. The value assigned to each factor corresponds to the weighted average of the variables that make up each factor.

The prosperity index value of a country corresponds to the average of its performance across all factors, equally weighted.

### Life Satisfaction

#### Degree of Satisfaction in Life

This indicator represents the average score of responses to the question from the World Value Survey: "On a scale of 0 to 10, where (0) indicates a low level of satisfaction, and (10) indicates a very high level, how satisfied are you with your life?"

## Happiness Perception

### World Happiness Index

"World Happiness," developed by the United Nations' Sustainable Development Solutions Network, ranks countries worldwide according to the subjective well-being of their populations, based on average scores derived from the Cantril scale. On this scale, interviewees from each country choose a score between 0 (the worst possible life) and 10 (the best possible life) to answer the question: "How would you rate the quality of your current life?"

### Social Progress

#### Global Social Mobility Index

The Social Mobility Index measures the changes in social status of individuals over time, as well as the differences between the social status of parents and that of their children. This mobility is typically estimated with intergenerational income elasticity (EIR).

Since data on EIR is only available after many years, the Global Social Mobility Index instead focuses on the factors that most influence relative social mobility. The model used to calculate this index is based on ten categories of factors:

1. Health: This factor evaluates the ability of countries to provide quality healthcare.
2. Access to education: This factor evaluates the ability of countries to provide access to education.
3. Quality and equity of education: This factor is based on seven indicators: the percentage of 10-year-old children who do not possess a minimum skill level, the student-to-teacher ratio in preschool, primary, and secondary education, learning outcomes, social diversity in schools, and the percentage of disadvantaged students in schools who report lacking educational materials.

4. **Employment opportunities:** This factor relates to the ability of countries to offer job opportunities to their citizens, regardless of their education level or socio-economic background. This assessment is calculated from six indicators: unemployment rates for populations with low, medium, and high education, and those living in rural areas, the ratio of female to male labor force participation, and the proportion of women in precarious jobs.
5. **Lifelong learning:** This factor measures how well countries can develop the skills of citizens throughout their lives. This assessment is calculated from five indicators: workplace training availability, active measures for the unemployed, the impact of information technologies on access to basic services, the percentage of companies offering formal training, and the digital skills within the workforce.
6. **Access to technology:** This factor concerns the level of access to and adoption of technologies among the population. The assessment is calculated from six indicators: the rate of internet use among adults, subscription rates for high-speed internet, mobile networks, and 3G technology, the rate of rural populations with access to electricity, and internet access in schools.
7. **Pay equity:** This factor relates to the ability of countries to offer fair wages to their citizens, regardless of education level or socio-economic background. The assessment is calculated from five indicators: the rate of jobs paying less than two-thirds of the median wage, the ratios of the top 10% of earners to the lowest 40%, the ratios of the top 50% of earners to the lowest 50%, the income of the lowest 40% compared to the national average income, and the share of labor income in GDP.
8. **Working conditions:** This factor pertains to the ability of countries to ensure good working conditions for their citizens, regardless of education level or socio-economic background. This assessment is calculated from five indicators: women's labor rights indices, employer-employee cooperation, the link between wages and productivity, the share of employees working over 48 hours per week, and union coverage rates.

9. **Social protection:** This factor relates to the ability of countries to provide effective social protection for their populations. This assessment is calculated from four indicators: the ratio of social assistance benefits to the median income, the percentage of the population covered by social programs, the share of GDP allocated to social programs, and an index of social protection quality.

10. **Institutional inclusiveness:** This factor evaluates the ability of countries to provide inclusive institutions and effective public services to their populations. This assessment is calculated from four indicators: indices of perceived corruption, the effectiveness of public and governmental services, the inclusiveness of institutions, and political stability and protection against violence.

### Social Progress Index

This index measures the multiple dimensions of social progress and further catalyzes human well-being. The SPI measures the well-being of a society by observing social and environmental outcomes directly, rather than economic factors.

The calculation of the index is based on three criteria: fundamental human needs, the foundations of well-being, and opportunities.

- Fundamental human needs concern the country's ability to meet the basic needs of its citizens, particularly in terms of nutrition, basic healthcare, access to sanitation and improved water resources, access to housing and electricity, and personal security and safety.
- The foundations of well-being concern the country's ability to provide its citizens with basic knowledge, information, and ensure the sustainability of ecosystems.
- Opportunities concern personal rights, individual freedom, tolerance, inclusion, and access to advanced education.



## Life Expectancy

### Life expectancy at birth

The average number of years a newborn is expected to live if the prevailing mortality conditions during the studied period remain unchanged throughout their life.

## Access to healthcare system

### Total health expenditures (% of GDP)

Total health expenditure refers to the sum of public and private health spending. It includes the provision of health services (preventive and curative), family planning activities, nutrition-related activities, and emergency health aid, but excludes the provision of water and hygiene services.

### Household health expenditures as a percentage of total health expenditures

Household health expenditures include expenses directly incurred by households, including out-of-pocket payments and in-kind payments to healthcare professionals, pharmaceutical providers, therapeutic devices, and other goods and services primarily aimed at contributing to the recovery or improvement of the health of individuals or groups of people. These are part of private health expenditure.

## Basic health: vaccination

### Vaccination: DTP1 coverage rate

The DTP1 vaccine is a mandatory vaccine that protects against 3 diseases: diphtheria, tetanus, and poliomyelitis (a viral infection). It is combined with the whooping cough vaccine for children, but not necessarily for adults. The DTP1 vaccination coverage rate is often used to assess the vaccination status of an infant health system.

## Medical support

### Medical density (number of doctors per 10,000 inhabitants)

Medical density is the ratio that relates the number of doctors to the population of a given country. Medical density is expressed as the number of doctors (for example) per 10,000 inhabitants.

### Paramedical density (number of nurses per 10,000 inhabitants)

Paramedical density is the ratio that relates the number of nurses to the population of a given country.

### Hospital bed density (number of hospital beds per 10,000 inhabitants)

Bed density is the ratio that relates the number of hospital beds to the population of a given country.

## Maternal and infant mortality

### Maternal mortality (per 100,000 live births)

The maternal mortality rate is the number of maternal deaths per 100,000 live births. A maternal death refers to the death of a woman during pregnancy or within 42 days after the end of the pregnancy, regardless of the duration and location of the pregnancy, resulting from any pregnancy-related incident or aggravated by medical care, but not related to accidental or incidental causes.

### Infant mortality (per 1,000 live births)

Infant mortality is a statistic calculated by the ratio of the number of children who die before the age of one to the total number of live births. This indicator is expressed per 1,000 live births (‰).

## Suicide

### Suicide rate per 100,000 inhabitants

The suicide rate is the number of deaths caused by suicide, per 100,000 inhabitants, in a given year.

## Fight Against Hunger

### Global Hunger Index

The calculation of this indicator comes from a weighted aggregation of 4 indicators: the proportion of the population undernourished, the prevalence of underweight among children under 5 years old, the prevalence of stunted growth among children under 5 years old, and the mortality rate of children under 5 years old.

## Poverty

### Relative poverty rate

The relative poverty rate is the percentage of the population living below the national poverty threshold.

### Multidimensional poverty rate

Multidimensional poverty expresses the deprivations affecting households in terms of health, education, and living standards. The index is based on 10 poverty indicators, hence its multidimensional nature:

1. Infant mortality (if a child has died in the family);
2. Nutrition (if a family member is malnourished);
3. Years of schooling (if no member has completed five years of schooling);
4. School dropout (if one of the children dropped out of school before the age of 8);

5. Access to electricity (if the household has no electricity);
6. Access to drinking water (if there is none within 30 minutes of walking);
7. Sanitation (if there are none or if they are shared with others);
8. The floor of the dwelling;
9. The fuel used for cooking;
10. Household goods (if there is no more than one item among: radio, television, telephone, bicycle, or motorcycle).

It is worth noting that the statistics used to calculate this index are not all from the same year, ranging from 2003 to 2007.

## Living Conditions: Access to Water and Electricity

### Access to improved drinking water sources (% of the population)

The access rate to improved drinking water sources is the percentage of the population having access to safe drinking water (connections to the network, public fountains, and improved water points) either at home or within a radius of up to one kilometer from the home.

### Access to public electricity networks (% of the population)

The access rate to electricity is the proportion of the population whose housing is connected to the electricity network.

## Living Conditions: Sanitation and Connectivity

### Connection rate to public sanitation networks in urban areas

This indicator corresponds to the percentage of urban households having access to sanitary wastewater and waste disposal facilities.

## Rural Population Access to Roads

This indicator corresponds to the proportion of the rural population served by a paved road network and those well-served by tracks.

## **Road and Rail Density**

### Paved road density in km/100 km<sup>2</sup>

This is an indicator defined by the ratio of the length of a country's road network to its area.

This indicator helps characterize the level of development of the country's road infrastructure and mainly reflects the significance of road management for the country, especially in terms of their maintenance.

### Rail density in km/100 km<sup>2</sup>

This is an indicator defined by the ratio of the length of a country's railway network to its area.

This indicator helps characterize the level of development of the country's railway infrastructure and mainly reflects the significance of railway management for the country, especially in terms of their maintenance.

## **Road Safety**

### Estimated number of fatalities in road accidents

This indicator represents an estimate of the number of deaths caused by road accidents per 100,000 inhabitants.

## **Strengthening Social Ties and Restoring Trust**

### **Attachment to the Nation**

#### Degree of attachment to the Nation

This indicator corresponds to the average score of responses to the question from the National Social Link Survey (IRES) / Institutional Profiles Database (IPD) by CEPII: "On a scale of 0 to 4, where (0) means you are not attached at all, and (4) means you are very attached, how attached are you to your nation?"

### **Importance of Family in Personal Life**

#### Degree of trust in family

This indicator represents the average score of responses to the World Value Survey question:

"On a scale of 0 to 10, where (0) indicates a low level of importance, and (10) indicates a very high level, how much trust do you place in your family?"

#### Degree of importance of family in personal life

This indicator represents the average score of responses to the World Value Survey question: "On a scale of 0 to 10, where (0) indicates a low level of importance, and (10) indicates a very high level, how important is family in your personal life?"

### **Importance of Religion in Personal Life**

#### Degree of importance of religion in personal life

This indicator represents the average score of responses to the World Value Survey question: "On a scale of 0 to 10, where (0) indicates a low level of importance, and (10) indicates a very high level, how important is religion in your personal life?"

## Political Links

### Degree of importance of politics in personal life

This indicator represents the average score of responses to the World Value Survey question: "On a scale of 0 to 10, where (0) indicates a low level of importance, and (10) indicates a very high level, how important is politics in your personal life?"

## Interpersonal Trust

### Interpersonal Trust

Percentage of respondents answering "yes" to the question from the National Social Link Survey (IRES): "In general, would you say that you can trust most people, or should you be wary of them?"

## Institutional Trust

### Degree of trust in institutions

This indicator represents the average score of responses to the question from the National Social Link Survey (IRES) / World Value Survey: "On a scale of 0 to 10, where (0) indicates a low level of trust, and (10) indicates a very high level, how much trust do you have in public institutions?"

## Institutional Solidarity

### Institutional Solidarity

This indicator, derived from the Institutional Profiles Database (IPD) survey by CEPIL, measures the strength of institutional solidarity within the country based on the level of public/private institutions' coverage of healthcare, unemployment, and retirement. The indicator score ranges from 0 (no coverage by public or private institutions for healthcare, unemployment, and retirement); 1 (low proportion of the population covered) to 4 (very high proportion of the population covered).

## Traditional Solidarity

### Traditional solidarity (0: low to 4: very strong)

This indicator, derived from the Institutional Profiles Database (IPD) survey by CEPIL, measures the strength of traditional solidarity at the country level. The indicator score ranges from 0 (low traditional solidarity) to 4 (very high traditional solidarity).

## NATURE-CENTRIC & PLANETARISATION

### Promote sustainable management of natural resources

#### Water resources availability

##### Renewable water resources in m<sup>3</sup> per capita per year

The indicator represents the total annual volume of actual renewable water resources in cubic meters per capita per year.

##### Average precipitation in mm/year

The average rainfall height is the long-term average of the height (in space and time) of the country's annual precipitation. Precipitation is defined as any form of water that falls from clouds, either in liquid or solid form.

#### Freshwater withdrawals for agriculture

##### Annual freshwater withdrawals for agriculture as a percentage of total withdrawals

Annual withdrawals of freshwater for agriculture are the annual withdrawals of water for irrigation and livestock production, not taking into account the evaporation losses from accumulation basins. However, withdrawals also include water from desalination plants in countries where they are an important source of water.

#### Endemism

##### Endemism rate (%)

Endemism is defined by the presence of an animal or plant species in a restricted distribution area, which is characteristic of that area. Here, we refer to the endemic heritage of the fauna and vascular plants of a territory.

## Exposure to Natural Disasters

### Exposure to climate change-related risks

#### Water Stress

This indicator measures the total annual water withdrawals (municipal, industrial, and agricultural), expressed as a percentage of the total annual available water. The score ranges from 0 to 5 as follows:

- [0-1]: Low risk (<10%);
- [1-2]: Low to medium risk (10-20%);
- [2-3]: Medium to high risk (20-40%);
- [3-4]: High risk (40-80%);
- [4-5]: Extremely high risk (>80%).

#### Severity of drought

This indicator measures the average duration, expressed in number of months, of droughts recorded during the period 1901-2008. The score ranges from 0 to 5 as follows:

- [0-1]: Low risk (<10%);
- [1-2]: Low to medium risk (10-20%);
- [2-3]: Medium to high risk (20-40%);
- [3-4]: High risk (40-80%);
- [4-5]: Extremely high risk (>80%).

### Global climate risk index

The index, published by GermanWatch, ranks countries based on the quantitative impact of extreme climate events (storms, floods, mass movements, etc.), such as deaths and economic losses that occurred in the country. It is important to note that the higher a country's rank, the less exposed it is considered to be to climate risks.

### Risk of marine submersion

This indicator represents the proportion of the population living at an altitude of less than 5 meters in the total population.

## Sovereignty

### Food Sovereignty

#### Cereal import dependency rate (%)

The cereal import dependency ratio is the percentage of cereals sourced from other countries. In theory, this indicator can range from 0 to 100%. A country with a dependency ratio of 0% is self-sufficient in cereals and does not import any. A country with a 100% dependency ratio imports all its cereals, with no domestic production. This indicator is calculated using the following formula:

$$\text{Cereal imports} / (\text{Production} + \text{Imports} - \text{Exports})$$

#### Sugar import dependency rate (%)

The sugar import dependency ratio is the percentage of sugar imported from other countries. In theory, this indicator can range from 0 to 100%. A country with a dependency ratio of 0% is self-sufficient in sugar and does not import sugar. A country with a 100% dependency ratio imports all its sugar, without any domestic production. The calculation of this indicator is done using the following mathematical formula:

$$\text{Sugar imports} / (\text{Production} + \text{Imports} - \text{Exports})$$

### Rate of dependency on vegetable imports (%)

The dependency rate of vegetable oil imports is the percentage of oils coming from other countries. In theory, this indicator can range from 0 to 100%. A country with a 0% dependency rate is self-sufficient in oils and does not import oils from other countries. A country with a 100% dependency rate receives all its oils from other countries, with no production within its territory. The calculation of this indicator is done using the following mathematical formula:

$$\text{Oil imports} / (\text{Production} + \text{Imports} - \text{Exports})$$

### Food Sustainability Index

The Food Sustainability Index (FSI), developed by the Economist Intelligence Unit in partnership with the Barilla Center for Food & Nutrition (BCFN), measures the sustainability of food systems in 34 countries across three key dimensions: food losses and waste, sustainable agriculture, and nutrition. The index looks at policies and outcomes related to sustainable food systems and diets through a series of performance indicators that account for environmental, social, and economic sustainability

### **Energy Sovereignty**

#### Energy Dependency Rate (%)

The energy dependence rate indicates the share of energy that an economy must import. In theory, this indicator can range from 0% to 100%. A rate of 0% signifies a country's energy independence from other countries. This indicator is calculated using the following mathematical formula:

$$\text{Net energy imports} / \text{gross domestic energy consumption}$$

### Sustainable Future Index

The "Sustainable Future Index" examines the efforts made by a country regarding investment in green energy, the development of sustainable cities and transport, and the fight against climate change.

### Energy Transition Index

Calculated annually by the World Economic Forum, this indicator compares countries based on two essential elements: the performance of energy systems in terms of security and environmental sustainability and the degree of readiness for the energy transition.

To evaluate the performance of an energy system, the World Economic Forum assesses:

- Energy security and access
- Environmental sustainability
- Economic growth and development

Regarding readiness for the future energy transition, the following indicators are assessed:

- Energy system structure
- Capital and investments made
- Regulation and political commitment
- Institutions and governance
- Infrastructure and business-innovation environment
- Public participation and human resources

### Share of renewable energy in installed electric power capacity (%)

This indicator corresponds to the percentage of renewable energy in the total installed energy capacity. Renewable energies are energy sources whose natural replenishment is rapid enough to be considered inexhaustible on a human time scale. Renewable energies primarily include hydro, wind, and solar energy, as well as biomass, geothermal energy, and marine energies.

## Reduce ecological footprint

### Ecological footprint

#### Ecological footprint in hectares per capita

The indicator represents the area of biologically productive land and marine areas that a country ideally needs to produce the resources it consumes and absorb the waste it generates.

### Natural capital: soils

#### Arable land in hectares per capita

Arable land includes land defined by the FAO as temporary crops (land with double cropping is counted only once), temporary meadows for haymaking or grazing, cropland or vegetable gardens, and temporarily fallow land. Land abandoned due to shifting cultivation is excluded from the calculation.

## Reduce the impact of the Anthropocene

### Contribution to climate change

#### Climate change mitigation performance index

The index serves as a tool to improve transparency in international climate policy. Its goal is to apply political and social pressure on countries that have so far failed to take ambitious measures for climate protection, as well as to highlight countries with the best practices in climate policies.

Based on standardized criteria, the index evaluates and compares the climate protection performance of 58 countries that are collectively responsible for more than 90% of global CO<sub>2</sub> emissions related to energy. 80% of the evaluation is based on objective indicators of emission trends and levels, and 20% of the index results rely on national and international assessments by more than 200 experts regarding each country's climate policy.

## Cost of environmental degradation

### Cost of environmental degradation as a percentage of GDP

The costs of environmental degradation can be considered as a loss of national welfare. This loss can take the following forms:

- The loss of a healthy living environment (such as premature death, severe health issues, lack of a clean environment, etc.);
- Economic losses (such as reduced agricultural land productivity, loss of tourism revenue, etc.);
- Loss of environmental benefits (such as the loss of recreational functions of a lake, beach, or forest).

## Limit artificialization

### Urban planning and metropolization

#### Urbanization rate (%)

The urbanization rate is the ratio of the urban population to the total population.

#### Urban population living in slums as a percentage of the urban population

This indicator represents the share of the urban population living in slums or non-compliant housing.

## From globalization to globalness

### Circular mobility

#### The Henley Passport Index

The "Henley Passport Index" ranks passports based on the number of destinations that can be reached using a particular country's ordinary passport without the need for prior visas ("visa-free"). The survey ranks 199 passports against 227 countries, territories, and micro-states as destinations.

### Welcoming Countries Index

The "Welcoming Countries Rank" ranks countries based on the number of passports they accept without a visa, with a visa on arrival, or with an electronic travel authorization (eTA).

### Transfer of Moroccans Living Abroad as a % of GDP

This indicator represents the weight of transfers from Moroccans living abroad in the gross domestic product (GDP) of Morocco.

## **EXPONENTIALITY**

### **Mastering Technologies**

#### **Degree of Preparation for Disruptive Technologies**

##### Network Readiness Index

The index measures countries' readiness to leverage the opportunities offered by Information and Communication Technologies (ICT). The NRI seeks to better understand the impact of ICT on nations' competitiveness. The NRI is a composite index of three elements: the environment offered by the country for ICT (market, political and regulatory infrastructure environment, etc.), the willingness of stakeholders (individuals, companies, and governments) to use ICT, and finally, the use of ICT among these stakeholders.

##### Global connectivity index

This index aims to analyze numerous indicators related to smart infrastructure and digital transformation to create a comprehensive map of the global digital economy.

This index, launched in 2014, compares 50 countries across 40 indicators related to the impact of information and communication technologies on the country's economy, digital competitiveness, and future growth.

It represents a unique quantitative assessment that comprehensively and objectively evaluates the digital industrial connectivity of countries.

### Inclusive Internet index

This index provides an assessment of internet inclusion at the national level according to four categories: availability, accessibility, relevance, and readiness. The objective is to emphasize the factors driving sustainable inclusion of this network and to perform a comparison in terms of a favorable environment for the adoption and productive use of the internet.

### Mobile Connectivity Index

This index is an analytical tool that measures countries' performance based on mobile connectivity across four indicators: mobile infrastructure, affordability, consumer satisfaction, and online services available.

#### **Degree of Preparation for Artificial Intelligence**

##### Global IA Index (Indice mondial de l'intelligence artificielle)

Artificial intelligence-related index based on three pillars of analysis: investment, innovation, and implementation.

##### Government AI Readiness Index

The "Government AI Readiness Index" measures the degree of preparedness of a government to integrate artificial intelligence into public service delivery. It is based on 3 pillars: the government's AI strategy, the advancement of the technological sector, and the availability of actionable data and adequate technological infrastructure.

#### **Robotic Density**

##### Robotic Density (number of industrial robots per 10,000 employees)

This indicator, developed by UNCTAD (United Nations Conference on Trade and Development) in its Trade and Development Report, measures the number of industrial robots per 10,000 employees.



## Qualité de la vie digitale

### E-Government development index (score de 0 à 1)

The E-government Development Index is a composite index calculated based on the average of three sub-indices: online services, human capital, and information technology infrastructure.

### Digital Quality of Life Index

The Digital Quality of Life Index is developed by the English cybersecurity company Surfshark. This index covers 110 countries, representing 90% of the world's population, and evaluates them based on five criteria related to digital well-being: internet quality, internet affordability, digital security, digital infrastructure, and digital governance.

### Global Digitalization Index

The indicator measures the level of digitalization and development of digital infrastructures across different countries. It evaluates how information and communication technologies (ICT) are adopted and integrated into various economic and social sectors. It considers several criteria, including:

1. Digital infrastructure: Level of connectivity and access to digital technologies (communication networks, fiber optics, 5G, etc.).
2. Technology usage: Adoption of ICT by individuals, businesses, and governments (e-commerce, smart technologies, etc.).
3. Digital skills: Training and education in digital technologies.

4. Digital services: Availability and use of digital services in industries, public services, healthcare, and education. The index classifies countries into three groups: Starters (beginners), Adopters (adopters), and Frontrunners (leaders), based on their level of digital maturity and their ability to leverage ICT to drive economic growth and social development.

### Global Remote Work index

The index measures the attractiveness of remote work within a given country based on four dimensions of analysis: cybersecurity, economic security, digital and physical infrastructure, and social security.

## Smart Cities

### Global Smart Cities Index

According to this index, a "smart city" is an urban environment that uses technology to enhance the benefits of digitization and mitigate the drawbacks of urbanization for its citizens. The ranking is developed by surveying a panel of citizens from various cities worldwide. The survey questions focus on the technological provisions and infrastructures of each city in five key areas: health, safety, mobility, activities, and governance.

## Intellectual Property

### Number of Patents per 1 Million Inhabitants

Patent applications are requests filed worldwide under the Patent Cooperation Treaty procedure or with national patent offices to obtain exclusive rights for an invention (a product or process) that presents a new way of doing something or a new technical solution to a problem. A patent protects the invention's owner for a limited period, usually set at 20 years.

## Cyber security

### Global cyber security index

The Global Cybersecurity Index measures national capabilities in cybersecurity development and ranks countries based on its results. It is essentially a composite indicator grouping several individual indicators. The process of establishing cybersecurity indicators can be analyzed through five main categories. Countries are ranked concerning the benchmark provided for each category. The categories comprising the index are as follows:

#### 1. Legal Framework

Legislation constitutes a crucial measure of the capacity to propose a harmonized framework providing various entities with a common regulatory basis for criminal behavior prohibitions or minimum regulatory obligations. The measurement criteria for the legal framework can include the existence and number of institutions and legal frameworks related to cybersecurity and cybercrime. The performance indicator subgroup for this category is as follows: Criminal legislation; Regulation and compliance.

#### 2. Technical Measures

Technology represents the first line of defense against cyber threats and malicious online agents. The evaluation criteria for technical measures can include the existence and number of institutions and technical frameworks approved or created by the state in relation to cybersecurity. The performance indicator subgroup for this category is as follows: Monitoring, alert, and response centers for IT incidents; Standards; Certification.

#### 3. Organizational Structures

The implementation of any national initiative requires organizational and procedural measures. The performance indicator subgroup for this category is as follows: Policy; Governance roadmap; Responsible body; National benchmark evaluations.

#### 4. Capacity Building

Capacity building is intrinsic to the first three measurement categories (legal, technical, and organizational). The performance indicator subgroup for this category is as follows: Standardization; Development of human resource skills; Professional certification; Organizational certification.

#### 5. International Cooperation

Cybersecurity, requiring information from all sectors and disciplines, must adopt a multistakeholder approach. By strengthening dialogue and coordination, cooperation broadens the scope of cybersecurity.

The measurement criteria for national and international cooperation can include the existence and number of partnerships, cooperative frameworks, and information-sharing networks. The performance indicator subgroup for this category is as follows: State-to-state cooperation; Interagency cooperation; Public-private partnerships; International cooperation.

The statistical model used to calculate the index is based on a multi-criteria analysis. This analysis establishes preferences among various options regarding an explicit set of identified objectives, for which measurable criteria are established to assess the degree of accomplishment. A simple linear additive evaluation model is applied.

The performance matrix of the multi-criteria analysis describes the options, and each column describes the performance of the options concerning each criterion. The individual performance evaluation is numeric. The comparative rating is based on the indicators below, with the same weighting applied (note that some subcategory weighting is performed at a higher level since certain indicators contain more subgroups). 0 points are allocated when there is no activity; 1 point for partial action, and 2 points for more comprehensive action.

Le nombre total de points pour chaque catégorie est comme suit :

<b>1. Cadre juridique</b>	<b>4</b>
A. Législation pénale	2
B. Réglementation et conformité	2
<b>2. Mesures techniques</b>	<b>6</b>
A. Centres de veille, d'alerte et de réponse aux incidents informatiques (CERT/CIRT/CSRIT)	2
B. Normes	2
C. Certification	2
<b>3. Structures organisationnelles</b>	<b>8</b>
A. Politique	2
B. Feuille de route relative à la gouvernance	2
C. Organisme responsable	2
D. Evaluations comparatives nationales	2
<b>4. renforcement des capacités;</b>	<b>8</b>
A. Normalisation	2
B. Développement des compétences des ressources humaines	2
C. Certification professionnelle	2
D. Certification des organismes	2
<b>5. Coopération internationale</b>	<b>8</b>
A. Coopération entre Etats	2
B. Coopération entre organismes	2
C. Partenariats public-privé	2
D. Coopération internationale	2

Notation:

$x_{qc}$  Valeur de l'indicateur individuel q pour le pays c, où  $q = 1, \dots, Q$  et  $c = 1, \dots, M$ .

$I_{qc}$  Valeur normalisée de l'indicateur individuel q pour le pays c

$CI_c$  Valeur de l'indicateur composite pour le pays c

Le critère de référence utilisé sera le score du pays hypothétique qui obtiendra le plus grand nombre de points total (34) concernant son degré de préparation. L'indice composite résultant ira de zéro (niveau de préparation le plus bas) à 1 (critère de référence):

$$CI_c = \frac{I_{qc}}{34}$$

La technique de normalisation sera basée sur une méthode de classement:

$$I_{qc} = Rank(x_{qc}).$$

## Cyber Threats Index

The "Cyber Threats Index" analyzes data from four sources to assess cybersecurity in 70 countries. It combines information from the National Cybersecurity Index (NCSI), the Global Cybersecurity Index (GCI), the Cybersecurity Exposure Index (CEI), and results from the American portal COMPARITECH.

## Humanizing the Economy

### Inequalities

#### Gini Index (Coefficient from 0 to 1)

The Gini coefficient is a measure of the degree of income inequality in a given society, developed by the Italian statistician Corrado Gini. The Gini coefficient is calculated concerning the function (whose graphical representation is the Lorenz curve) that associates each share of the population ordered by ascending income with the share of total income they represent. It is a number ranging from 0 to 1, where 0 signifies perfect equality (everyone has the same income), and 1 signifies total inequality (one person has all the income, while others have none).

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### Employment and Unemployment

#### National Unemployment Rate (%)

The unemployment rate expresses the share of unemployed individuals in the active population aged 15 and older. This rate is obtained by dividing the number of unemployed individuals by the number of active individuals aged 15 and older.

#### Unemployment Rate for Individuals with Higher Education Levels

The unemployment rate expresses the share of unemployed individuals in the active population aged 15 and older. This rate is obtained by dividing the number of unemployed individuals by the number of active individuals aged 15 and older.

## Financing the Economy

### Gross National Savings as a Percentage of GDP

Gross national savings represent the portion of gross national income that is not allocated to final consumption.

## Ensuring and Preserving Macroeconomic Stability

### Economic Growth

#### Economic Growth Rate (%)

Economic growth refers to the positive change in the production of goods and services in an economy over a given period. In practice, the most commonly used indicator to measure it is gross domestic product (GDP). It is measured "in volume" or "at constant prices" to adjust for the effects of inflation. The economic growth rate is the rate of change in GDP.

### Inflation

#### Inflation Rate (%)

The inflation rate refers to the percentage change in the consumer price index over a given period compared to the index calculated for a previous period. It is typically calculated on a year-on-year basis.

### Public Finances

#### Budget Balance as a Percentage of GDP

The budget balance is the difference between the level of resources and the level of expenditures in a country's budget. When this balance is positive, it is a surplus. Conversely, when it is negative, it is called a deficit.

### Public Debt Ratio: Direct Debt of the Treasury

The public debt ratio is the sum of external and internal debt expressed as a percentage of the country's gross domestic product (GDP).

### External Accounts

#### Current Account Balance as a Percentage of GDP

The current account balance refers to the balance of monetary flows of a country resulting from international trade in goods and services (trade balance), income, and current transfers.

#### Import-Export Coverage Rate (%)

The import coverage ratio is a ratio used in economics to express the trade balance (exports and imports of goods) as a percentage. It is an indicator of a country's economic independence.

The coverage ratio is calculated using the following mathematical formula:

$$\text{Exports (goods) / Imports (goods)}$$

#### Foreign Exchange Reserves in Months of Imports

Foreign exchange reserves are the holdings of foreign currencies and gold held by a country's central bank. The indicator "foreign exchange reserves in months of imports" reflects the number of months of imports that a country can buy with its foreign exchange reserves.

### Investment

#### Investment Rate (GFCF/GDP) (%)

The investment rate represents the relative share of gross fixed capital formation (GFCF) in GDP.

Gross fixed capital formation (GFCF) represents the value of durable goods acquired by resident producer units to be used for at least one year in their production process, as well as the value of services incorporated into these goods. It includes, in particular: - Acquisition of movable goods; - Acquisition of immovable goods (buildings and public works); - Development and new plantations; - The change, with producers, in the adult breeding or draft livestock (cattle).

## Banking Inclusion

### Percentage of Residents Holding Bank Accounts

This indicator represents the proportion of individuals in a country who have a bank account.

## Strengthening Global Competitiveness and Enhancing Attractiveness

### Global Wealth and Intangible Capital

#### Global Wealth per Capita

The World Bank defines a country's global wealth as the Net Present Value (NPV) of future consumption flows. The calculation of this wealth is made using the following mathematical formula:

$$W_t = \int_t^{\infty} C(s) \cdot e^{-r(s-t)} ds$$

#### With:

- **W<sub>t</sub>**: Current net global wealth value at time ttt.
- **C(s)**: Sustainable consumption at time sss.
- **s-t**: Time elapsed from the present moment to the origin of time.
- **r**: Discount rate (1.5%) based on the work of Pearce and Ulph, 1999.

Instead of calculating this overall value indefinitely, the authors of the World Bank method conventionally limit it to 25 years.

The global wealth per capita corresponds to the ratio between a country's total wealth and its total population.

### Intangible Capital per Capita

The intangible capital of a country consists of a set of assets, including human capital, social capital, and institutional capital. The calculation of this capital is made using the following formula:

$$\text{Intangible Capital of a Country} = \text{Global Wealth of the Country} - (\text{Natural Capital} + \text{Produced Capital}) - \text{Net Foreign Assets}$$

Intangible capital per capita corresponds to the ratio between a country's intangible capital and its total population.

### Intangible Capital as a Percentage of Global Wealth

The intangible capital as a percentage of global wealth is the weight of intangible capital in global wealth; it corresponds to the ratio between a country's intangible capital and its total wealth.

### GDP per Capita in Constant 2011 PPP Dollars (Ranking)

GDP per capita is the gross domestic product divided by the population in mid-year. This indicator is converted using the Purchasing Power Parity (PPP) rate and measured at constant prices to correct for inflation effects.

### GDP per Capita in Constant 2011 PPP Dollars

GDP per capita is the gross domestic product divided by the population in mid-year. This indicator is measured at constant prices to correct for inflation effects.

## Global Competitiveness of the Country

### Global Competitiveness Index (Score from 1 to 7)

The Global Competitiveness Index evaluates the competitiveness of institutional sectors (property rights), economic sectors (macroeconomic stability, labor market), and social sectors (health and education).

The index is based on a combination of 113 criteria in different areas (infrastructure, macroeconomic environment, health, education, etc.), of which 34 criteria are drawn from statistical databases of international organizations and 79 criteria come from responses to perception surveys among executives and business leaders from different countries.

### Global Sustainable Competitiveness Index

The "Global Sustainable Competitiveness Index" measures sustainable competitiveness.

It is based on five equally important pillars:

- **Natural Capital:** The natural environment, including the availability of resources and the level of depletion of these resources.
- **Resource Efficiency:** The effectiveness of utilizing available resources as a measure of operational competitiveness in a resource-constrained world.
- **Social Capital:** Encompassing health, safety, freedom, equity, and life satisfaction.
- **Intellectual Capital:** The ability to generate wealth and jobs through innovation and value-added industries in globalized markets.

- **Economic Sustainability:** The ability to generate wealth through sustainable economic development that leverages full potential.

- **Governance Performance:** Provides a framework for sustainable wealth generation through resource allocation, infrastructure, market orientations, and employment structure.

### Global Talent Competitiveness Index

This index provides a comprehensive comparative analysis, assessing how countries develop, attract, and retain talent in order to create an image of talent competitiveness that allows leaders to implement strategies aimed at promoting competitiveness.

This index is calculated based on 68 variables and a simple and robust input-output model.

### Doing Business Index

The "Doing Business" index measures the effective implementation of business regulations in economies and certain cities at the subnational and regional level. It allows for the analysis of small and medium-sized enterprises at the national level and measures the regulations that apply to them throughout their life cycle.

This index covers 10 areas: (1) Starting a business, (2) Dealing with construction permits, (3) Getting electricity, (4) Registering property, (5) Getting credit, (6) Protecting minority investors, (7) Paying taxes, (8) Trading across borders, (9) Enforcing contracts, and (10) Resolving insolvency.

## Change Readiness Index

"Change Readiness Index" is an index, developed jointly by KPMG and Oxford Economics Group, that measures a country's capacity – its government, private and public businesses, and civil society – to anticipate, prepare, manage, and respond to various factors of change. The index evaluates how a country proactively capitalizes on opportunities that arise and mitigates the potential negative impacts that result from them.

The index is structured around three pillars: (1) business capacity, (2) government capacity, and (3) civil society capacity. Each pillar includes a set of indicators that illustrate the country's ability to manage change.

- The indicators related to pillar 1 "business capacity" are as follows:
  - Labor market;
  - Economic diversification;
  - Economic openness;
  - Innovation and Research & Development;
  - Business climate;
  - Financial sector;
  - Infrastructure;
  - Informal sector;
  - Technological infrastructure.
- The indicators related to pillar 2 "Government capacity" are as follows:
  - Macroeconomic situation;
  - Relationship of public administration business;
  - Regulation;
  - Taxation environment;
  - Rule of law;
  - Government strategic planning and horizon scanning;
  - Environment and climate change;
  - Food and energy security;
  - Security;
  - Land rights.
- The indicators related to pillar 3 "Civil society capacity" are as follows:
  - Human capital;
  - Entrepreneurship;
  - Safety nets;
  - Technology usage;
  - Gender;
  - Inclusive growth;

- Demographics;
- Health;
- Access to information.

The data related to these indicators come, on the one hand, from primary data collected through a survey with 1,270 experts worldwide, consisting of 22 questions, and on the other hand, from secondary data composed of more than 120 variables (grouped into 73 indicators).

The secondary variables are primarily sourced from the World Economic Forum, the World Bank, the Legatum Institute, the International Monetary Fund, and the United Nations. The combination of primary and secondary data provides a comprehensive view of the readiness for change in the 127 participating countries.

The score of the index is the arithmetic average of the three pillars it consists of. It ranges from 0 (low capacity to manage change) to 1 (high capacity to manage change).

### Agility Emerging Markets Logistics Index

The "AGILITY EMERGING MARKETS LOGISTICS INDEX" measures both domestic and external demand for high-intensity commercial logistics services and the ability of each emerging market to facilitate cross-border logistics operations.

### International Index of Illicit Trade Environment

The illicit trade environment index measures a country's efforts to combat illicit trade based on the policies implemented. The index is built on four main categories: public policies, supply and demand, trade transparency, and customs environment.

### Global Entrepreneurship Index

The Global Entrepreneurship Institute has identified 14 components to assess entrepreneurial ecosystems, including: opportunity perception, startup competence, risk acceptance, networking, cultural support, opportunity perception, technology, human capital, competition, product innovation, innovation process, internationalization, high growth, and capital availability. This composite index provides policymakers with a tool to understand the entrepreneurial strengths and weaknesses of their countries, enabling them to implement policies that promote entrepreneurship. It is designed to help governments harness the power of entrepreneurship for sustainable economic development.

It measures the quality and scope of the entrepreneurial process in 132 countries around the world. It is important to note that entrepreneurship, as addressed in this evaluation, is defined as the dynamic and institutionally integrated interaction between the attitudes, capabilities, and entrepreneurial aspirations of individuals, leading to resource allocation through the creation and operation of new businesses.

### Global Retail Development Index

The "Global Retail Development Index" ranks the major emerging economies and evaluates their relative attractiveness for retailers based on a thorough assessment of economic health and stability, government policy, competition, modern trade penetration, consumer behavior, demographic factors, and social and cultural considerations.



### Share of the Global Market (%)

A country's share of the global market represents the percentage of a country's exports compared to global exports. It reflects the position a country holds in the international trade market.

### Economic Openness Rate (Goods and Services) (%)

The openness rate of an economy measures the role of the rest of the world in a country's economy. It gauges the level of external constraint and is assessed by various significant elements that inform the degree of exchange an economy has with the rest of the world. This indicator is calculated using the following mathematical formula:

$$\text{Imports} + \text{Exports (Goods and Services)} / \text{GDP}$$

### Cars Production Index

An index produced by the International Organization of Motor Vehicle Manufacturers (OICA) measuring automobile production by country of production.

### **Connectivité maritime et aérienne**

#### Maritime Connectivity Index (maximum value in 2004 = 100)

The maritime connectivity index indicates the extent to which countries are connected to international shipping networks. This connectivity index measures the regular maritime transport network of a country and its integration into global trade. It is calculated by the United Nations Conference on Trade and Development using five components of the maritime transport sector: the number of ships, their container transport capacity, the maximum size of the ships, the number of services offered, and the number of companies deploying container ships in a country's ports.

For each component, a country's value is divided by the maximum value of each component in 2004. The average of the five components is then calculated for each country. This average is divided by the maximum average in 2004 and multiplied by 100. A value of 100 is assigned to the country with the highest average index.

### Container Traffic in Ports (in Twenty-Foot Equivalent Units)

This indicator measures the capacity of ports in terms of the number of containers they hold, in millions of twenty-foot equivalent units (TEUs) – as a unit of measurement since there are various box sizes. It provides the annual ranking and evolution of container traffic at the major global commercial ports.

### International Connectivity Index

The index measures a country's international air connectivity by evaluating the number of destinations served, flight frequency, and available seat capacity. It reflects the extent and quality of air links, showing how well-connected a country is to the rest of the world.

### **Economic Transformation**

#### African Index for economic transformation

The index measures the economic transformation of 30 African countries between 2000 and 2020 based on five dimensions that reflect economic transformation: economic diversification, export competitiveness, productivity increase, technological upgrading, and human well-being.

### **Economic Complexity**

#### Economic Complexity Index

The Economic Complexity Index measures the diversity and complexity of a country's export basket. Countries with high complexity host a range of sophisticated and specialized capabilities, making them capable of producing a highly diverse set of complex products.

## Financial System

### Global Financial Centres Index

The Global Financial Centres Index (GFCI), published by Z/Yen Group, ranks international financial centers based primarily on their competitiveness.

The methodology for calculating the index relies on two distinct data sources. The first source includes 103 competitiveness indicators, divided into 5 dimensions: business climate, financial sector development, infrastructure, human capital, and reputation factors.

These indicators are derived from databases of the World Bank, the UN, the World Economic Forum, and the Economist Intelligence Unit. The second source consists of the results of surveys where financial experts assess international financial centers.

It is worth noting that the GFCI ranking is influential as it is used by multinational firms to identify financial centers that can support their regional operations.

### Africa Financial Markets Index

The index measures the strength and resilience of the financial sector based on six evaluation criteria: market depth, access to currency markets, market transparency, taxation and regulatory environment, local investor capacity, economic environment and transparency, and legal standards and their applicability.

### Stock Market Capitalization as a Percentage of GDP

La capitalisation boursière (également connue sous le nom de valeur marchande) se calcule en multipliant le cours de l'action par le nombre d'actions en circulation.

Cet indicateur correspond à la part de la capitalisation boursière des sociétés cotées dans le PIB d'un pays. Les sociétés cotées sont les entreprises inscrites qui sont cotées à la bourse d'un pays à la fin de l'année.

## Global Attractiveness of the Country

### Global Opportunity Index

The global opportunity index from the "Milken Institute" provides a broad perspective on the global investment landscape. The index integrates a variety of economic, financial, institutional, and regulatory variables and serves as a resource for businesses to assess the attractiveness of potential investment destinations.

### Baseline Profitability Index

This index, published by \*Foreign Policy\* magazine and established by Professor Daniel Altman of the "Business School" at New York University, ranks countries according to their attractiveness for foreign investment. It is an index composed of 8 factors that predict the pre-tax return on investment that investors can expect in countries worldwide, namely: economic growth, financial stability, physical security, corruption, expropriation by the government, exploitation by local partners, capital control, and exchange rate. Additionally, three other factors "that will impact the ultimate success of a foreign investment," according to Daniel Altman, are taken into account. These are: asset value growth, retention of that value while the asset is held, and ease of repatriating the sale proceeds of the asset.

### Best Countries for Business Index

"Best Countries for Business" is an index developed by "Forbes" to assess the performance of countries in the business field through several key factors that constitute its foundations: property rights, innovation, taxes, technology, corruption, freedom (personal, commercial, and monetary), bureaucracy, investor protection, and stock market performance. Data related to these factors come from various international sources:

- Taxes, investor protection, and bureaucracy are from the World Bank's "Doing Business" database.
- Commercial and monetary freedom comes from the Heritage Foundation's economic freedom database.

- Personal freedom is from the Freedom House database.
- Technology and innovation are from the "Global Competitiveness Index" database of the World Economic Forum.
- Corruption is from the Corruption Perception Index data from Transparency International.
- Property rights are from the "International Property Rights Index" data.
- Stock market performance is from Bloomberg data.

The "Best Countries for Business" ranking is obtained by measuring the average of all these equally weighted variables for each country.

### Global Manufacturing Risk Index

The objective of calculating this index is to identify the countries most conducive to industrial relocation. The index takes into account three factors: risks (economic, natural disasters...), costs (labor, electricity, construction costs...), and conditions (labor exploitation, logistics, business environment, sustainability...). To achieve this, 20 variables are considered to obtain the final 3 scores.

### Renewable Energy Country Attractiveness Index

Developed annually by Ernst & Young, the Renewable Energy Country Attractiveness Index (RECAI) is calculated based on ratings of factors such as investment climate, political and economic stability, energy market access, infrastructure, renewable energy programs, subsidies granted to these energies, technological potential, natural resources, technology maturity, ongoing projects, and forecasts. The RECAI ranks the forty most attractive countries for renewable energy investments.

### Global Outsourcing Index

A ranking that evaluates countries based on 52 criteria spread across four key dimensions: financial attractiveness, labor expertise, business environment, and digital connectivity.

### Foreign Direct Investment (FDI) as a Percentage of GDP

Foreign direct investment (FDI) refers to net inflows of investment for acquiring a lasting interest (10% or more of voting shares) in a company operating within an economy other than the investor's. It includes equity, reinvested earnings, other long-term capital, and short-term capital accounted for in the balance of payments. The "FDI share in GDP" indicator represents the weight of foreign direct investment in a country's GDP.

### Culture & Heritage Index

The "Culture & Heritage" index evaluates the richness of heritage, lifestyle attractiveness, culinary fame, beauty of tourist sites, and artistic influence.

### Best Attractive Destination by Cost

A ranking that reveals the best budget destinations for solo travelers.

### Best Tourist Destination for 2024

Ranking of tourist destinations based on the beauty of landscapes and the richness of cultural heritage.

### Share of Tourism Revenues in GDP

Tourism receipts refer to the travel expenditures made by incoming international tourists. The indicator "Share of tourism receipts in GDP" represents the contribution of tourism receipts to the gross domestic product of a country.

### **Real Estate Transparency**

#### Real Estate Transparency Index

This index evaluates the transparency of real estate markets in various countries worldwide based on several criteria such as the clarity of regulations, availability of public information, quality of management practices, and accessibility for investors.

## Reputation

### Brand Finance Nation Brands

"Brand Finance Nation Brands" is developed by "Brand Finance", a consultancy specialized in evaluating the brands of countries and companies. This index ranks countries according to the strength of their brands. The ranking is based on two main components: the country's "Brand Strength Index" and the projected revenues of the country's brands.

The "Brand Strength Index" score, which ranges from 0 to 100, corresponds to ratings from D to AAA+, and is calculated by combining over a hundred data points related to the three pillars that constitute the foundations of a country's image attractiveness: investment, social and institutional capital, and goods and services.

- Investment includes the following dimensions: regulation, taxation, infrastructure, investor protection, use of technology, research & development, ease of doing business, market development, education, talent retention and utilization.
- Social and institutional capital includes attributes such as corruption, judicial system, security, image, quality of life, business ethics.
- Goods & services include the following dimensions: trade rules, public policy on governance, market size, market competitiveness and development, tourism attractiveness, tourism infrastructure, and openness of the tourism sector.

A royalty rate is then calculated for each country based on the score it receives in the "Brand Strength Index". The higher a country's score, the higher its royalty rate.

Projected revenues correspond to the five-year forecast of revenue from all the brands in each country, replacing the country's projected GDP values. An additional rent is calculated in the last year, based on the brand's contribution to account for its perpetual value.

The final score of each country in the "Brand Finance Nation Brands" index corresponds to the net present value, calculated using each country's specific discount rate, of the product of the "Brand Strength Index" score, the royalty rate, and the projected revenues from the country's brands.

### Country Reputation Index

Reputation Lab conducts a study on the reputation of countries, based on a model inspired by measuring the reputation of companies, where the "RepScore" reputation indicator is the dependent variable explained by various attributes, grouped into dimensions. This mathematical model calculates the influence of each attribute on the reputation of the company, which rests on five dimensions:

- Quality of life.
- Level of development.
- Institutional quality.
- Human factor.
- Ethics and responsibility.

The "RepScore" indicator measures the reputation of countries by assessing the admiration, respect, good impression, and trust that one country inspires compared to another.

The attributes selected to measure the reputation of the 73 countries in the sample are as follows, totaling 22: ethics and transparency, respect for human rights, environmental protection, combating climate change, effective use of public resources, efficient government and institutions, respected leaders, social well-being, business-friendly environment, engagement with the international community, attractive lifestyle, natural environment, leisure, culture and gastronomy, safety, well-known brands and companies, cultural heritage, technological advancement, quality of products and services, sports success, educated and reliable population, friendly and kind population.

## FIFA World Rankings

The "FIFA World Rankings" is a ranking created in 1992 and introduced in August 1993 by the International Federation of Association Football (FIFA) to allow for relative comparisons between national football teams worldwide.

## Bloom Consulting Country Brand Ranking

The "Bloom Consulting Country Brand Ranking" index is developed by "Bloom Consulting," a consultancy specializing in country and business brand strategy. The index is obtained through the application of a specific algorithm developed by the firm, which combines four main variables related to the tourism sector:

- The economic performance of the tourism sector, measured through the average amount of tourism revenue and the average growth rate of these revenues recorded by each country during the period 2008-2012.
- Digital demand, measured using a tool that calculates the total volume of online searches made by tourists for the activities and attractions of each country.
- The evaluation of the branding strategy implemented by the relevant tourism authority to highlight the country's tourism offerings.
- The evaluation of digital content for each country as well as its communication performance on social media. This variable measures the digital presence of the country's brand and is assessed, among other things, by the total number of visits and the average time spent by each visitor on the official country website.

The index measures the total number of searches made by citizens worldwide towards a given country, based on 5 main dimensions: export, investment, tourism, talent, and importance (excluding national importance). It is worth noting that social media is excluded from the analysis.

## E-reputation Index

The index measures the total number of searches made by citizens worldwide towards a given country, based on 5 main dimensions: export, investment, tourism, talent, and importance (excluding national importance). It is worth noting that social media is excluded from the analysis.





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