

# TCFD disclosure – A growing opportunity or risk to Russian businesses?

Carbon Trust, EthnoExpert

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14/12/2020

# Welcome and opening remarks

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Natalia Loginova  
*Director of Issuers Department*

# Introduction and speakers



**Tom Cumberlege**

*Introduction and panel*



**Gregorio Giorgi**

*Panel and Q&A moderation*



**Alice Ainsworth**

*Speaker*



**Francesca Messeri**

*Speaker*

**ETHNOEXPERT**  
your sustainability consultant



**Maxim Titov**

*Introduction and panel*



**Olga Teplova**

*Speaker*

# Agenda

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- 1. Introduction to TCFD and context**
- 2. Challenges and drivers for Russian companies to implement TCFD**
- 3. Sectors deep-dive**
- 4. Panel and Q&A**

*‘Increasing transparency makes markets  
more efficient and economies more stable and resilient’*

Michael R. Bloomberg

To be part of the  
solution and not the  
problem...

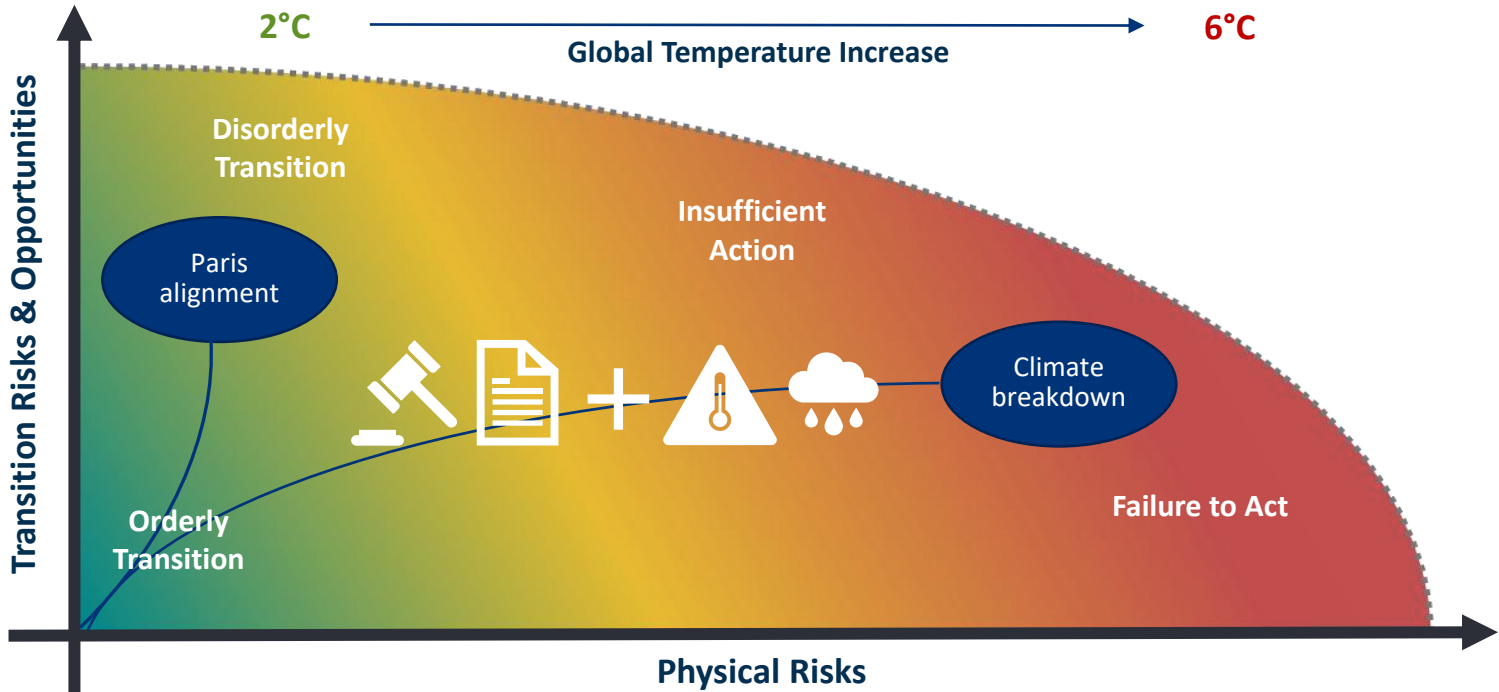
...you need to be able  
to convincingly answer  
the question:

‘How will climate-related impacts affect your current and future potential for growth?’



# How will climate change affect your business?

*TCFD encourages organisations to explore the likelihood and magnitude of financial impacts from potential climate-related risks & opportunities now and in the future*



# How will climate change affect your business?

*TCFD is a disclosure framework of 11 questions across 4 categories*



## Governance

- a) **Board oversight** of climate-related risks and opportunities
- b) **Management role** in risk assessment and management

## Strategy

- a) **Risks and opportunities** identified
- b) **Impact** on business, strategy, and planning
- c) **Resilience of strategy** to different scenarios

## Risk Management

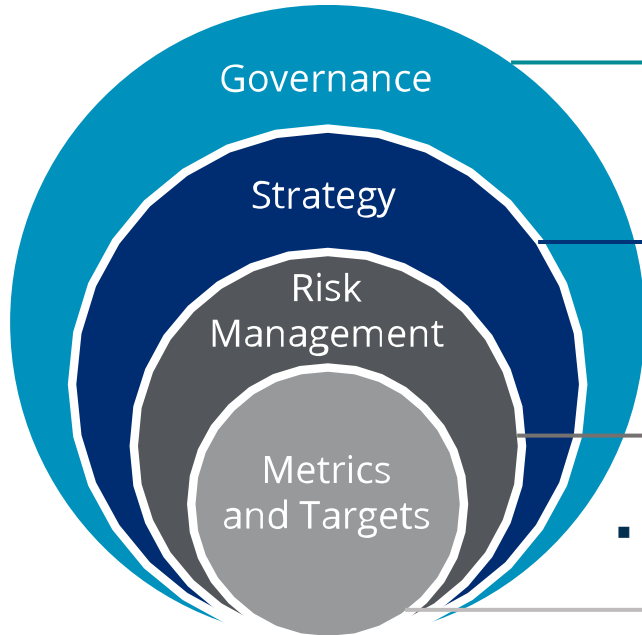
- a) Process for **identifying and assessing** climate-related risks
- b) Process for **managing** climate-related risks
- c) **Integration** with overall risk management

## Metrics and Targets

- a) **Metrics** for climate-related risk assessment
- b) **Scope 1, 2, and (if needed) 3** emissions and related risks
- c) **Targets** for risks and opportunities and related performance

# Global pace of TCFD adoption

*Take-up of TCFD disclosures is increasing and continuously improving, but scenario analysis is the main challenge*



- **Steady increase** in board oversight and management action
- **Slowly increasing** disclosure of risk and opportunity high-level impacts, led by Europe
- Testing risks through scenario analysis **still challenging**
- **Strong increase** in robust risk identification and risk management processes
- **Slower pace** of integration with overall risk management
- **Steadily increasing** use of metrics and targets, but need to check they are relevant for the identified risk and opportunities



# Current status of TCFD adoption

TCFD take-up differs among regions, but is growing everywhere

## Disclosure by Region: 2019 Reporting

Recommendation	Recommended Disclosure	Asia Pacific (346)	Europe (441)	Middle East and Africa (83)	North America (779)	Latin America (52)
Governance	a) Board Oversight	22%	36%	17%	18%	21%
	b) Management's Role	26%	47%	14%	20%	15%
Strategy	a) Risks and Opportunities	24%	43%	22%	50%	38%
	b) Impact on Organization	29%	60%	27%	25%	13%
	c) Resilience of Strategy	7%	11%	4%	4%	10%
Risk Management	a) Risk ID and Assessment Processes	25%	43%	14%	15%	27%
	b) Risk Management Processes	25%	43%	18%	15%	15%
	c) Integration into Overall Risk Management	16%	30%	10%	10%	8%
Metrics and Targets	a) Climate-Related Metrics	31%	58%	23%	25%	25%
	b) Scope 1, 2, 3 GHG Emissions	29%	49%	17%	14%	12%
	c) Climate-Related Targets	27%	52%	17%	27%	15%

The numbers in parentheses represent the size of the review population

Legend: Low to high percentage of disclosure



## Leading countries in TCFD adoption:

- North America (by number of disclosing organisations)
- Europe, followed by Asia Pacific (by levels of disclosure)
- <5 Russian TCFD supporters

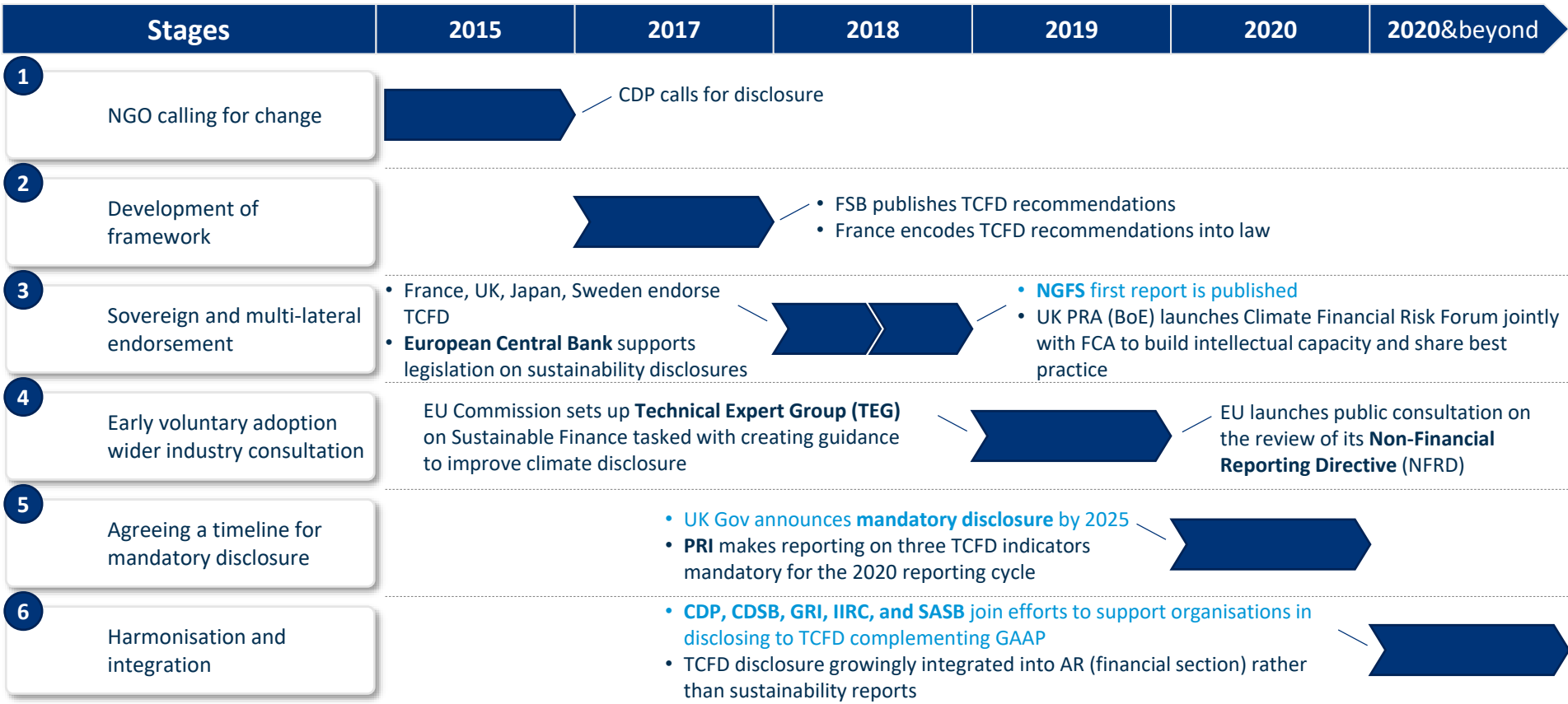
## Disclosure 'hot spots':

- Identification of risks & opportunities (North America)
- Assessment of impacts (Europe)
- Climate-related metrics (Europe)
- Climate-related targets (Europe)
- Management's role (Europe)
- *Slow uptake of scenario analysis*



# The evolution of climate-related disclosures

*Disclosure accelerated in recent years, aided by increased interest from investors and financial institutions. The European trend could have a ripple-effect globally*



# Agenda

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**1. Introduction to TCFD and context**

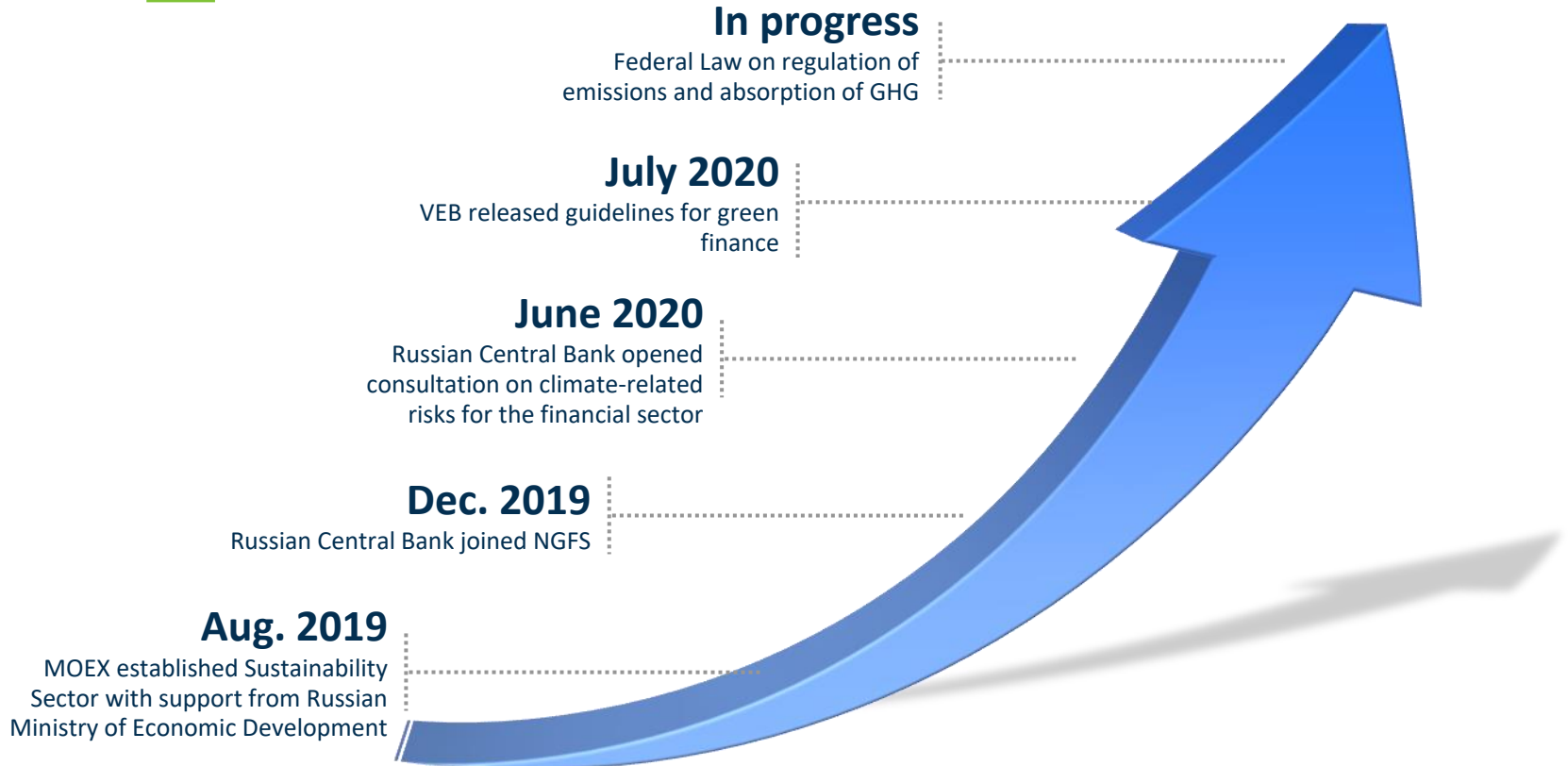
**2. Challenges and drivers for Russian companies to implement TCFD**

**3. Sectors deep-dive**

**4. Panel and Q&A**

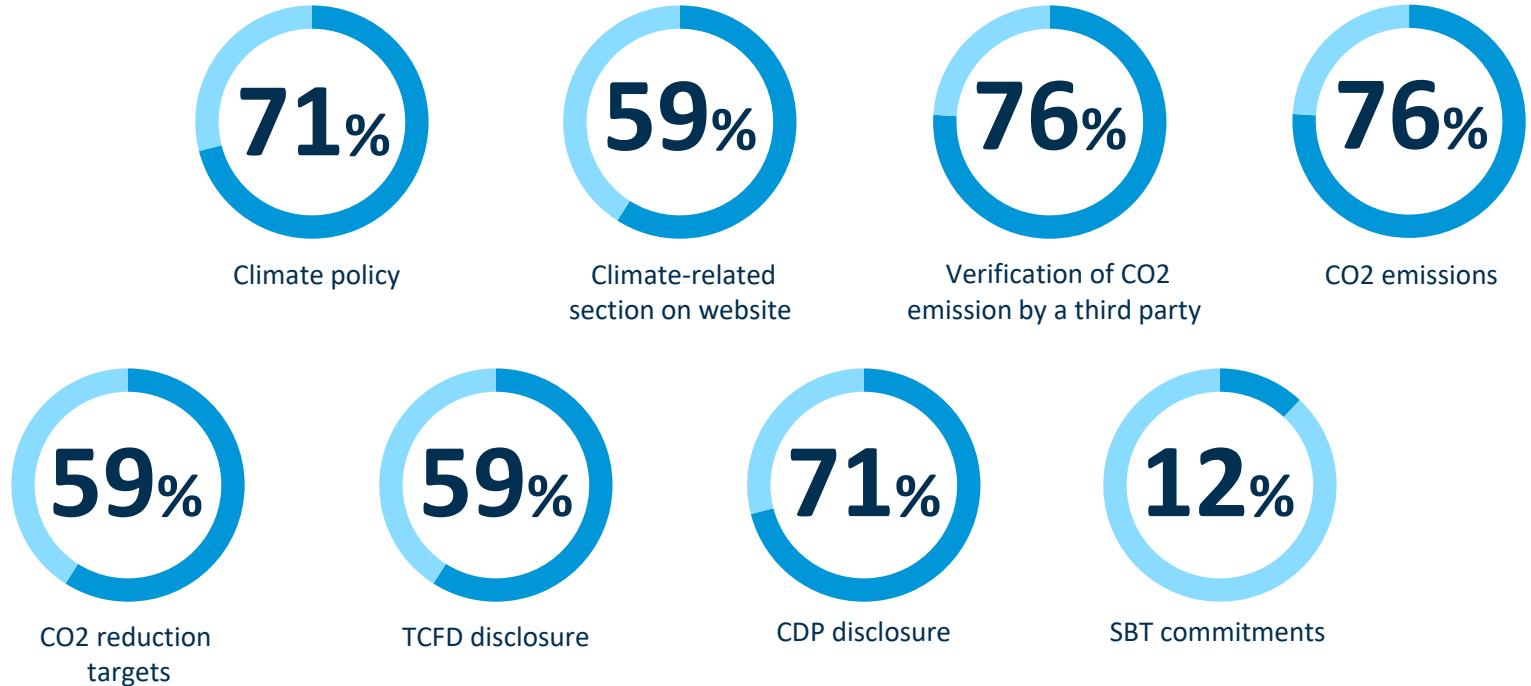
# Development of green finance in Russia

*Green finance is on the rise in Russia, but climate-related reporting is not yet widely diffused or regulated*



# Status of climate-related disclosures

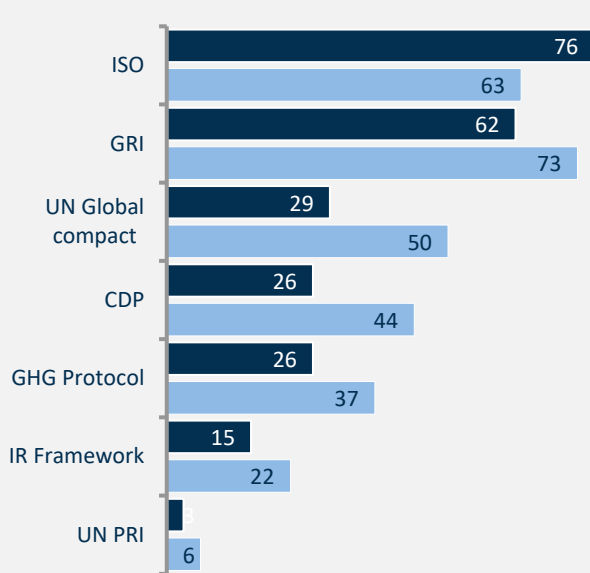
*Diffusion of climate-related disclosures among early adopters in Russia*



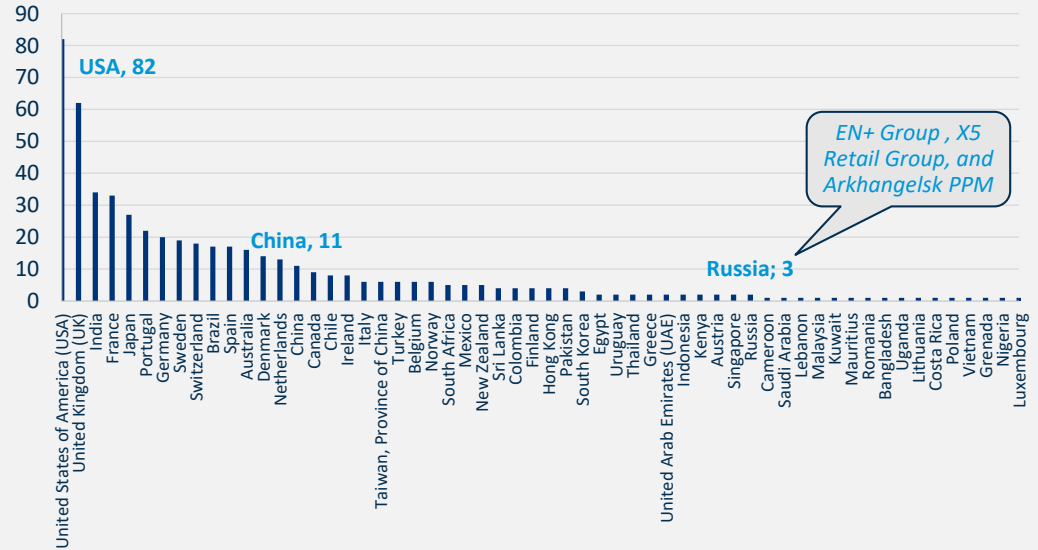
# Pace of demand for reporting and targets

*Demand is increasing, but at a slow pace*

**Standards that are used by Russian Companies (2018), %**



**Companies committed to set a science-based target by country**



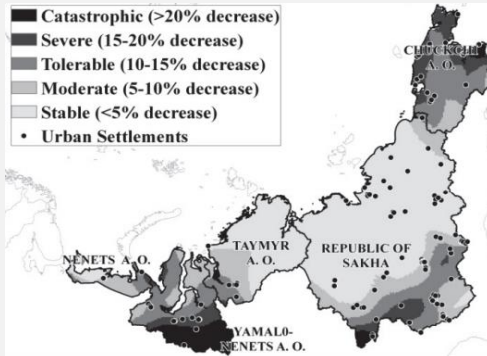
Source: [www.pwc.com/sdgreportingchallenge](http://www.pwc.com/sdgreportingchallenge)

Source: [www.sciencebasedtargets.org](http://www.sciencebasedtargets.org)

# Vulnerability to physical risks

*Climate-related physical risks in the Arctic may be under-estimated*

## Changes in bearing capacity of foundations on permafrost...



Source: Anisimov, O., Streletskiy, Dmitry (2015).  
Geocryological Hazards of Thawing Permafrost.  
Arctic. XXI Century.. Earth Sciences. 60-74.

## ...Infrastructure assets have vulnerability to these changes

Weakening bearing capacity of foundations on permafrost might lead to:

- a disruption of gas pipeline and other energy infrastructure;
- a cascading failure of a grid;
- dilapidated buildings...

## BUT

In “Socio-economic development strategy of Yamalo-Nenets autonomous district until 2030”:

**No climate-related risks are mentioned**

## Vulnerability to physical risks

*However, the need to address them is increasingly recognised by authorities*



*Under the framework of the interregional scientific and educational center, we focus on the permafrost thawing in our studies. As a result we should develop new rules and construction technologies in the North, as well as new solutions in the field of materials.*

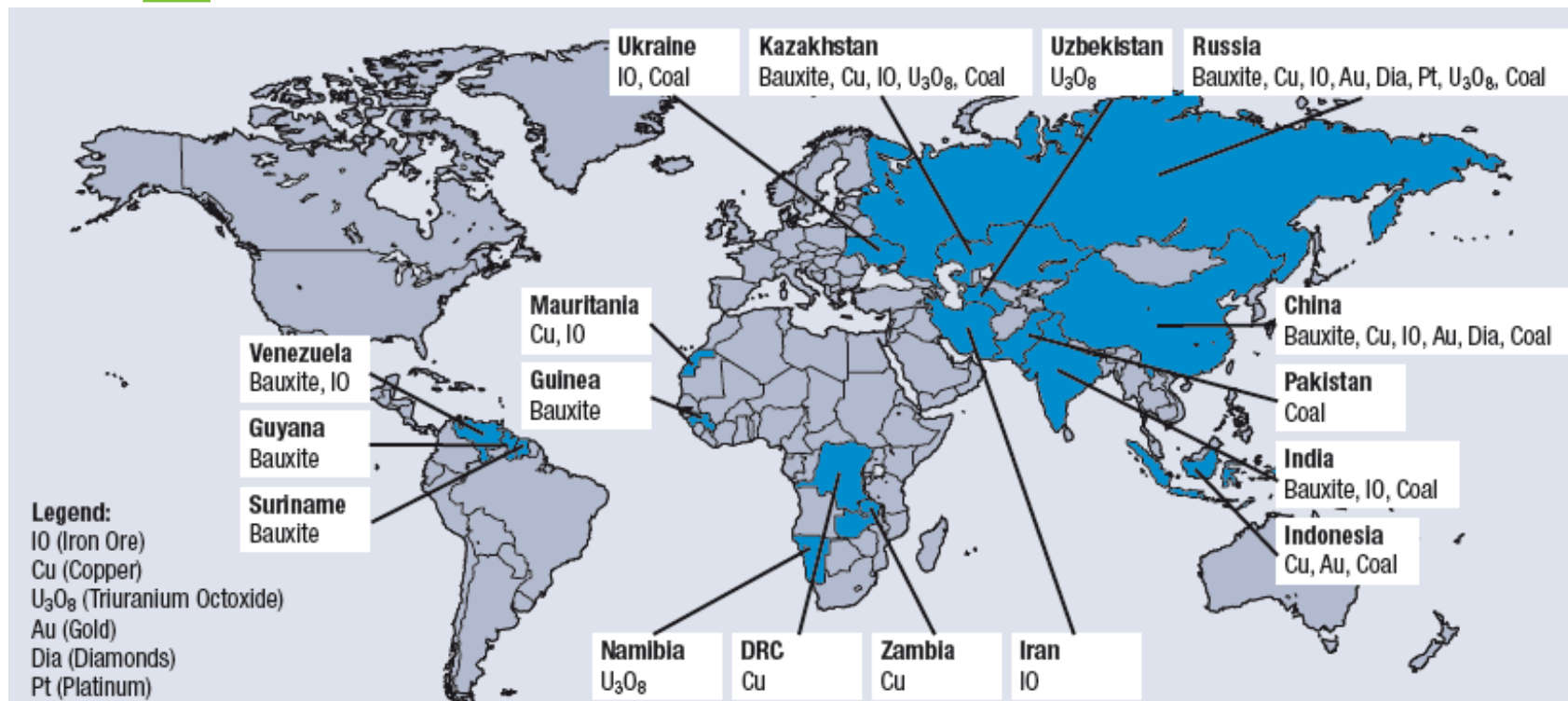


*Dmitry Artyukhov,  
Governor of Yamalo-Nenets Autonomous Okrug*



# TCFD is not only about transition risks

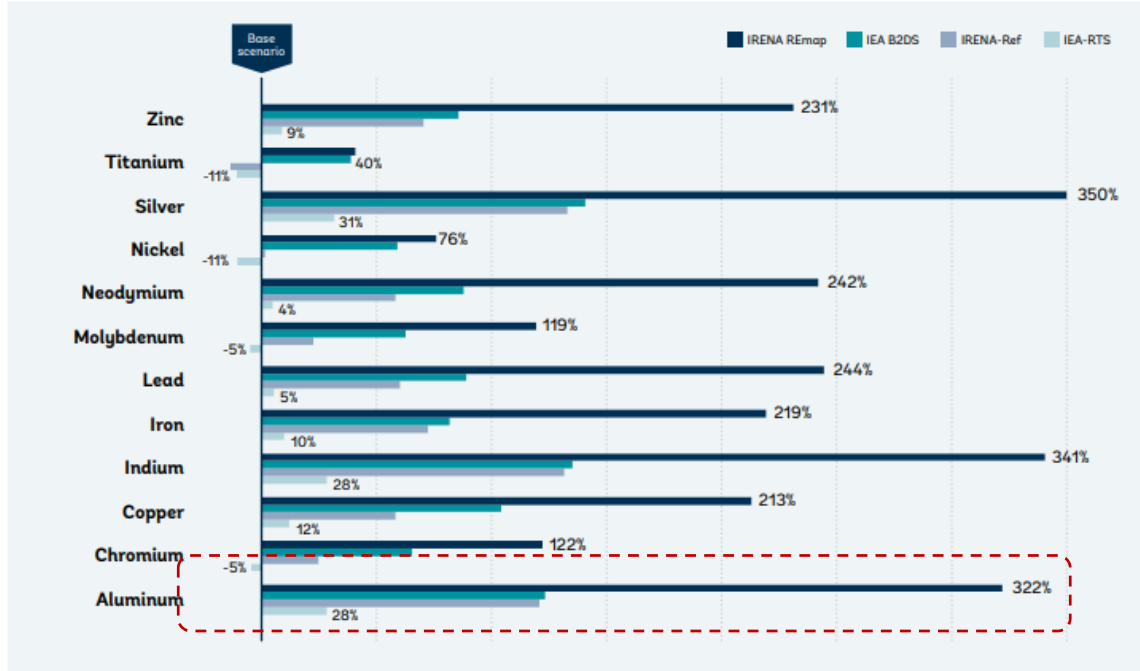
*Research identifies several opportunities, such as increased minerals demand*



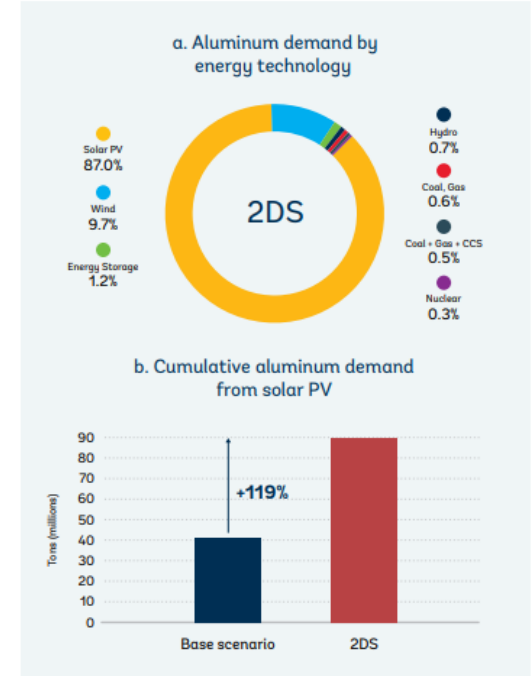
# TCFD is not only about transition risks

## Minerals demand is highest in transition scenarios

Change in demand for minerals from clean-tech under different scenarios through 2050



Note: Base scenario = 4-degree scenario, B2DS = beyond 2-degree scenario, IEA = International Energy Agency, IRENA = International Renewable Energy Agency, Ref = reference scenario, REmap = renewable energy roadmap scenario; RTS = reference technology scenario.



Note: 2DS = 2-degree scenario, CCS = carbon capture and storage, PV = photovoltaic.

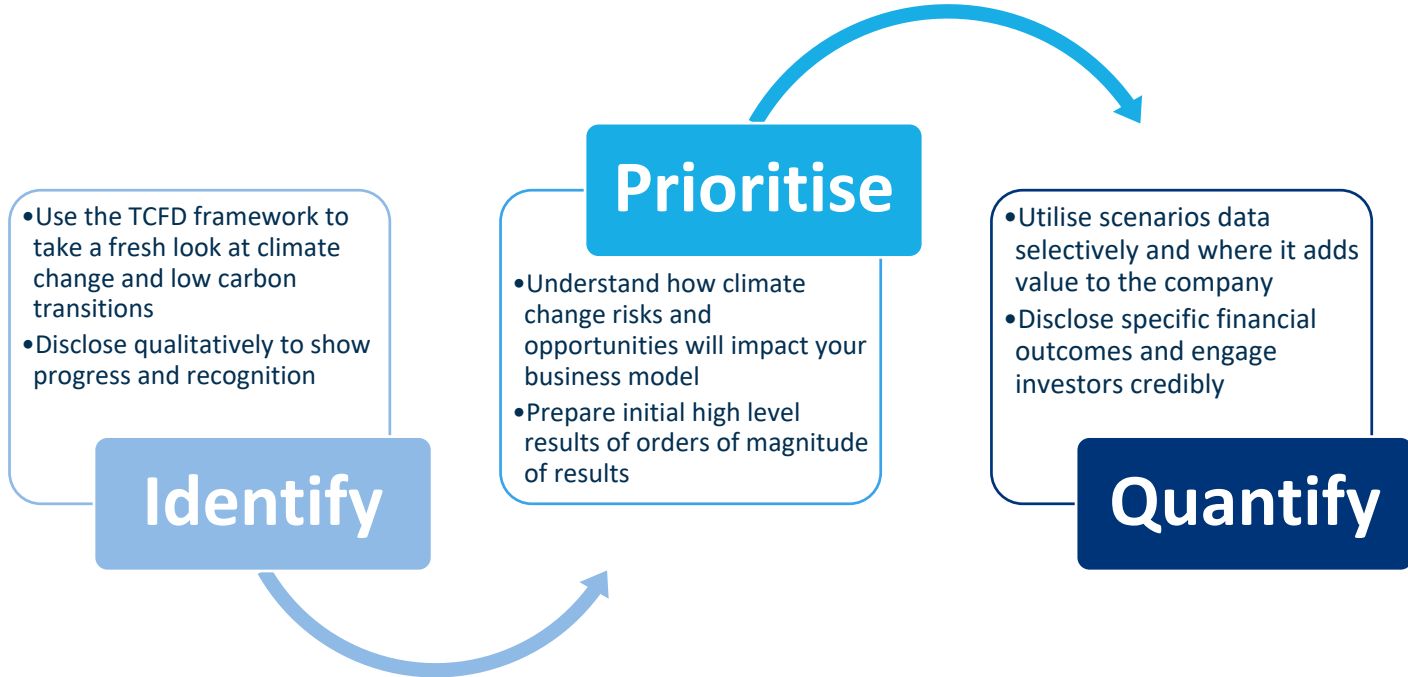
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# The process for TCFD implementation

*Climate-related risk and opportunity assessment is an iterative process*

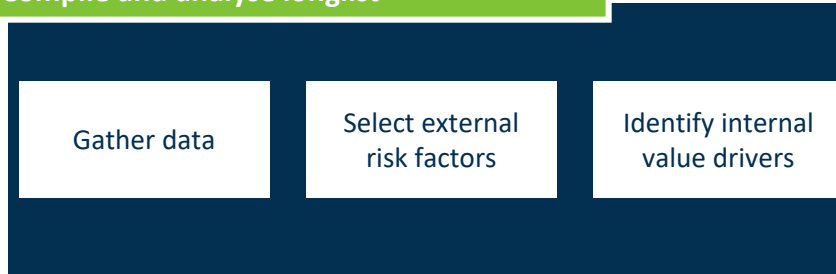


# Identification and categorisation

*Compile a longlist of climate change related risks and opportunities (CCROs)*



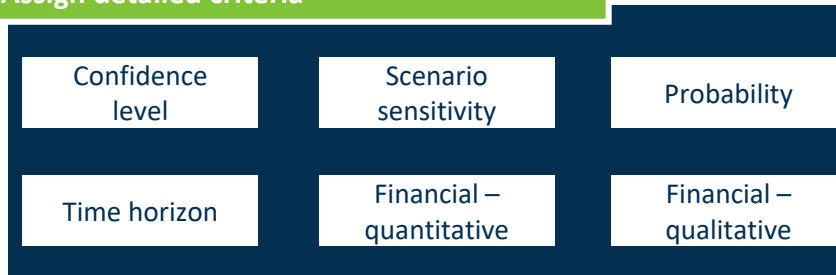
## 1. Compile and analyse longlist



### Define business context and build knowledge

- Understand the organisation's value creation model and perspective on risk
- Build the evidence base of scenario data, adding to existing known impacts

## 2. Assign detailed criteria



### Process information

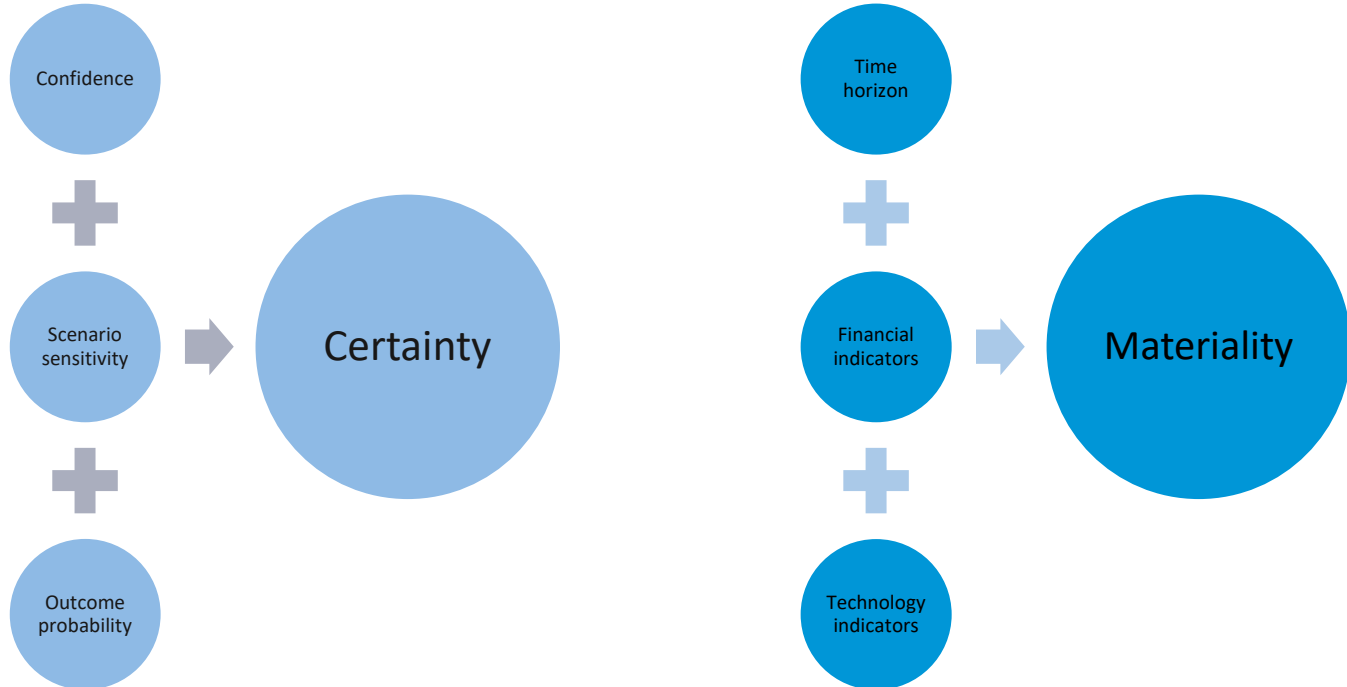
- Develop criteria that make sense for your business and leverage internal data
- Translate evidence base into accessible qualitative outputs for comparability

# Developing prioritisation criteria

*Material CCROs are prioritised based on materiality and certainty*

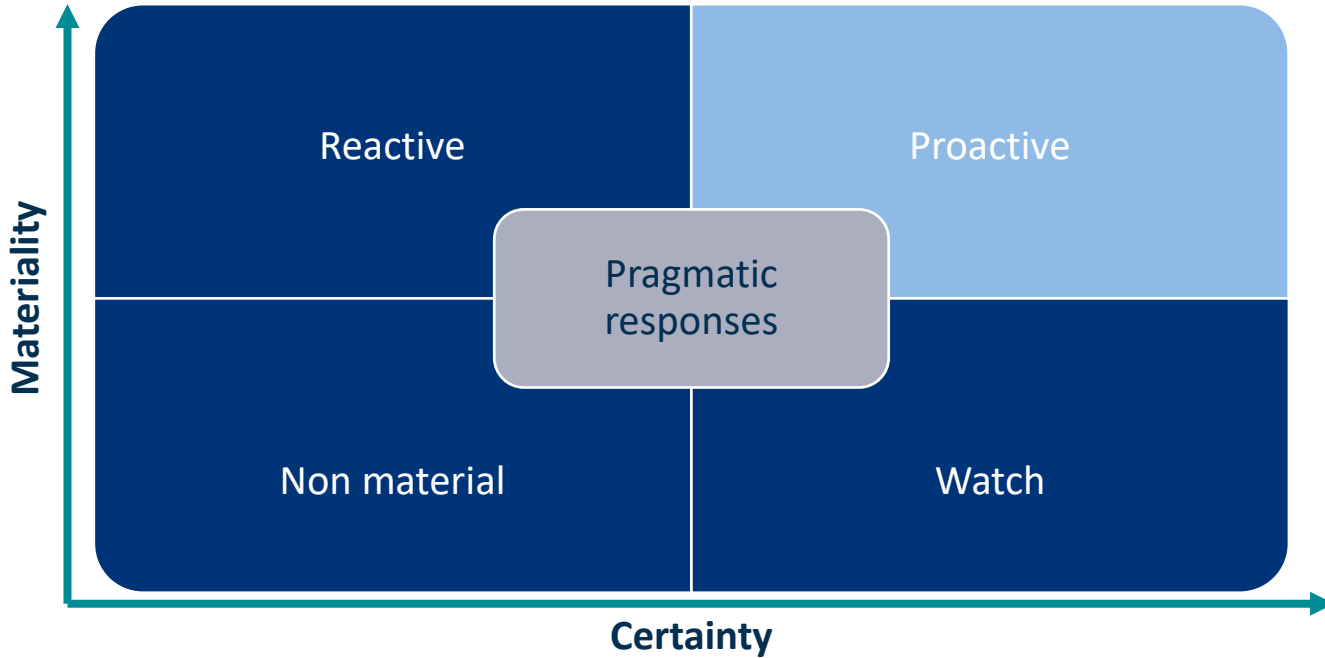


## Group descriptive criteria into prioritisation criteria



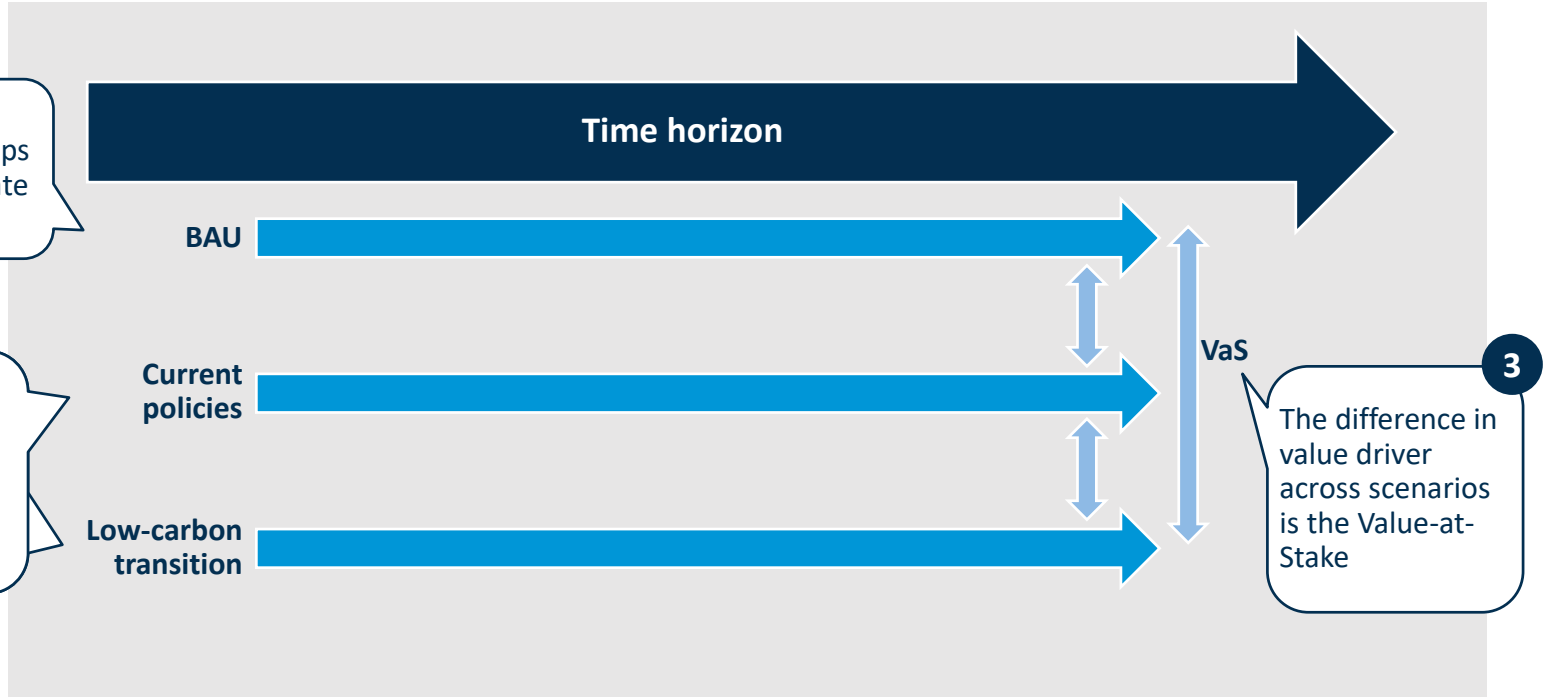
# Prioritisation

*CCROs with high certainty and materiality are consider material*



# Quantification

CCROs are quantified by calculating Value-at-Stake (VaS)





# Drivers of CCROs

*Exposure and vulnerability to CCROs depends on some key risk drivers*



## Location of production sites

*Presence in geographies vulnerable to weather events*



## Product portfolio and sources of revenue

*Product alignment to regulation and demands in a low-carbon world*



## National regulation



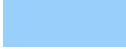
*National regulation alignment to international standards*







































## Emissions profile

*Company emissions and carbon intensity of products*








# Overview of CCROs for key sectors

Most Exposed   
 Medium Exposed   
 Least exposed 

	Power generation	Metals and mining	Agriculture	Pulp and paper	Construction materials	Financial institutions
Increased pricing of GHG emissions (e.g. EU border adjustment)						
Mandates on and regulation of existing products and services						
Increased severity of extreme weather events						
Changes to precipitation and weather patterns						
Rising mean temperatures						
New products and services and access to finance						





# Sector deep-dive

## Power generation

	Magnitude and drivers	CCRO examples	Companies affected
Increased pricing of GHG emissions (e.g. EU border adjustment)	 	<ul style="list-style-type: none"> <li>Carbon taxes levied on traditional fossil-fuel based energy generation activities</li> </ul>	<ul style="list-style-type: none"> <li>Fossil fuel based energy generation companies</li> </ul>
Mandates on and regulation of existing products and services		<ul style="list-style-type: none"> <li>National targets related to the energy transition lead to reduced demand for and phase out of traditional fossil-fuel based energy supplies</li> </ul>	<ul style="list-style-type: none"> <li>Fossil fuel based energy generation companies</li> </ul>
Increased severity of extreme weather events		<ul style="list-style-type: none"> <li>Damage to energy generation assets or operational shut-down as a result of extreme weather events such flooding or wildfire</li> </ul>	<ul style="list-style-type: none"> <li>Companies with generation assets located in areas at risk of coastal or riverine flooding</li> </ul>
Changes to precipitation and weather patterns		<ul style="list-style-type: none"> <li>Lack of water resources for use in power generation</li> </ul>	<ul style="list-style-type: none"> <li>Companies located in areas of high water stress</li> </ul>
Rising mean temperatures		<ul style="list-style-type: none"> <li>Higher air and water temperatures could reduce the efficiency with which fossil fuel power plants convert fuel into electricity</li> </ul>	<ul style="list-style-type: none"> <li>Increased operating cost for more water intensive energy generation</li> </ul>
New products and services and access to finance		<ul style="list-style-type: none"> <li>Increased demand for low carbon energy (e.g. renewable generation methods such as solar and wind) as market looks to decarbonise</li> </ul>	<ul style="list-style-type: none"> <li>Companies with generation activities aligned with a low-carbon world (e.g. wind power)</li> </ul>

# Disclosure best practice

## TEPCO and CCRO identification and analysis

		Risks		Opportunities	
		Mid-term (~2030)	Long Term (~2050)	Mid-term (~2030)	Long Term (~2050)
	Policy and legal	Policy changes (include implementing mechanisms to reduce CO <sub>2</sub> emissions)			
	Technology	Quality degradation of electric power due to large-scale introduction of renewable energies	Superiority decline of bulk energy resources due to expanding use of distributed energy resources	Further improving the efficiency of thermal power	Promotion of nuclear power Promotion of clean coal technology
	Market and Service	Changes in investment from fossil fuels to non-fossil fuel energy sources		ROI in renewable energy sources	
	Reputation	Impression that the company is reluctant to countermeasure climate change	Declining social acceptance of nuclear power	Increased customer need for renewable energy Acceleration of electrification using non-fossil fuel energies in transportation sector, etc.	
				Impression that the company is resilient to climate change issue	

Degree of risk is assessed by the Risk Management Committee

■ Risk: High   
 ■ Risk: Low   
 ■ Opportunity: High   
 ■ Opportunity: Low

Risk and *OPPORTUNITIES*

Assessed by risk committee

Under different time horizons

# Disclosure best practice

*TCFD dominates the climate-related agenda in Japan*



METI



CONSORTIUM



ELCS



MOEJ

1. METI - Ministry of Economy, Trade and Industry (TCFD Study Group)

✓ Guidance on TCFD

2. TCFD Consortium

3. MOEJ - Ministry of the Environment







✓ Practical guide for Scenario Analysis in line with TCFD recommendations

4. **ELCS - Electric Power Council for a Low Carbon Society**

- ✓ Attaining of approx. 7 million t-CO<sub>2</sub> reduction by adopting the Best Available Technology (BAT) that is economically feasible when building new thermal power plants by 2020;
- ✓ Attaining CO<sub>2</sub> emissions factors of 0.37 kg-CO<sub>2</sub> per kWh for power generation across the entire electric power industry by fiscal 2030;
- ✓ Utilizing the best available technology (BAT) affordable in new thermal power plants to secure a maximum reduction potential of approx. 11 million t-CO<sub>2</sub> by 2030.

# Sector deep-dive

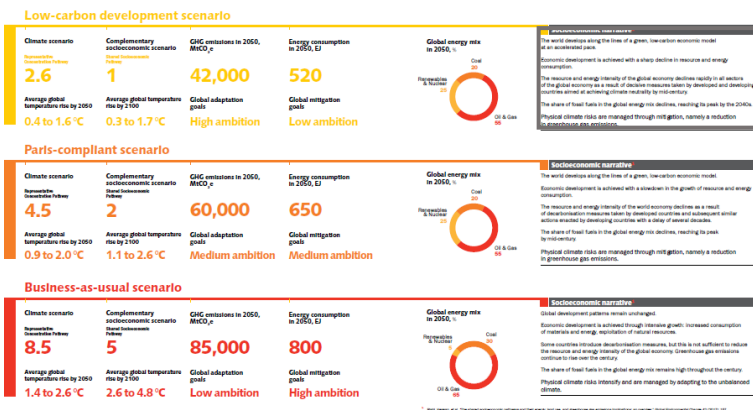
## *Metals and mining*

	Magnitude and drivers	CCRO examples	Companies affected
Increased pricing of GHG emissions (e.g. EU border adjustment)		<ul style="list-style-type: none"> <li>Carbon border adjustment for exports of coal, steel, or fertilisers</li> </ul>	<ul style="list-style-type: none"> <li>Large exporters of carbon-intensive products</li> </ul>
Mandates on and regulation of existing products and services		<ul style="list-style-type: none"> <li>Coal phase-out</li> <li>Mandatory production standards for iron and steel-making</li> </ul>	<ul style="list-style-type: none"> <li>Large producers and users of coal</li> </ul>
Increased severity of extreme weather events		<ul style="list-style-type: none"> <li>Disruption to logistics routes from extreme weather events</li> </ul>	<ul style="list-style-type: none"> <li>Companies with integrated and non-diversified logistics routes</li> </ul>
Changes to precipitation and weather patterns		<ul style="list-style-type: none"> <li>Long-term damage to mines and production sites, and consequent need to relocate</li> </ul>	<ul style="list-style-type: none"> <li>Companies with operations near water courses</li> </ul>
Rising mean temperatures		<ul style="list-style-type: none"> <li>Melting permafrost</li> <li>Increased severity and frequency of wildfires</li> </ul>	<ul style="list-style-type: none"> <li>Companies with operations in areas at risk (e.g. Siberia)</li> </ul>
New products and services and access to finance		<ul style="list-style-type: none"> <li>Commercialisation of key minerals (e.g. Bauxite, Cu, IO, AU, etc.)</li> <li>Increased demand for metals from renewables sector</li> </ul>	<ul style="list-style-type: none"> <li>Producers of materials compatible with a low-carbon transition (e.g. steel)</li> </ul>

# Disclosure best practice

## EVRAZ and scenario analysis

### Assumptions and forecasts for the RCPs and complementary SSPs for each pathway



### Socioeconomic narrative<sup>1</sup>

The world develops along the lines of a green, low-carbon economic model at an accelerated pace.

Economic development is achieved with a sharp decline in resource and energy consumption.

The resource and energy intensity of the global economy declines rapidly in all sectors of the global economy as a result of decisive measures taken by developed and developing countries aimed at achieving climate neutrality by mid-century.

The share of fossil fuels in the global energy mix declines, reaching its peak by the 2040s.

Physical climate risks are managed through mitigation, namely a reduction in greenhouse gas emissions.











Three scenarios for analysis

Some assumptions are disclosed

Socioeconomic narrative is added to provide the context

# Sector deep-dive

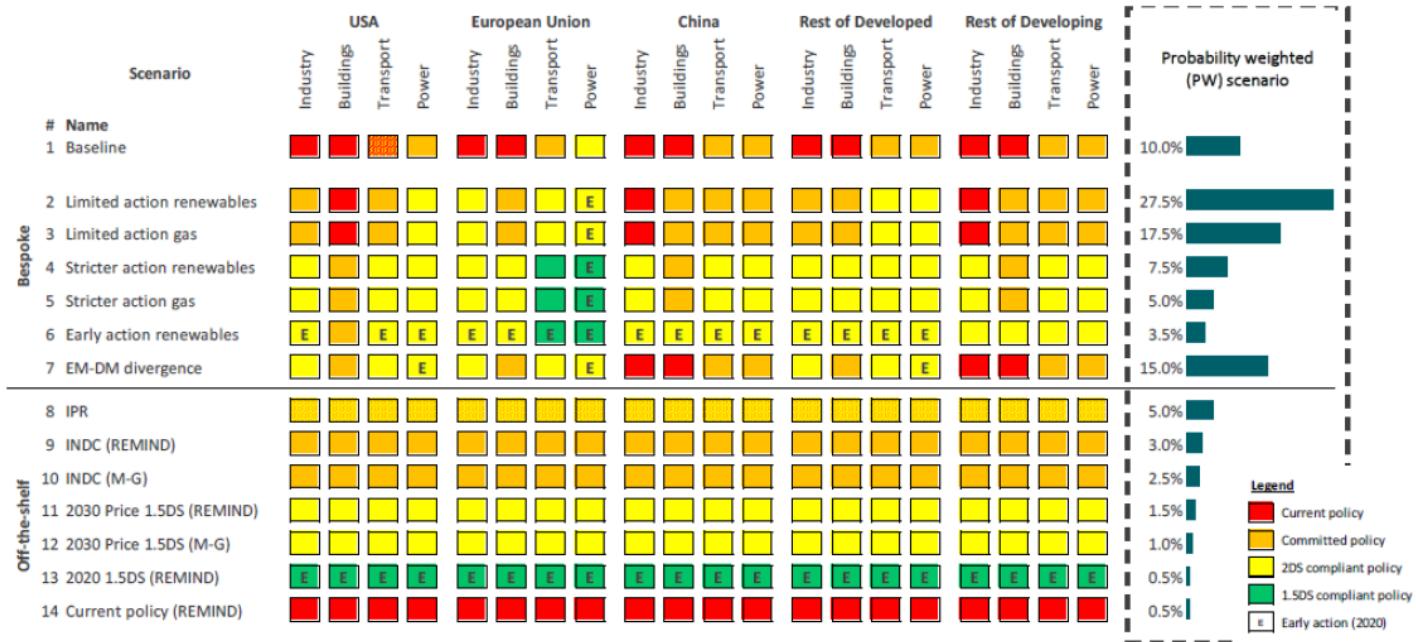
## *Financial institutions*

	Magnitude and drivers	CCRO examples	Companies affected
Increased pricing of GHG emissions (e.g. EU border adjustment)	 	<ul style="list-style-type: none"> <li>Carbon taxes increase probability of default on loans to carbon-intensive industries</li> </ul>	<ul style="list-style-type: none"> <li>Loan portfolios exposed to carbon-intensive industries</li> </ul>
Mandates on and regulation of existing products and services		<ul style="list-style-type: none"> <li>Fossil fuel phase-outs lead to stranded assets</li> <li>Regulations affect exit strategies, damaging return on equity</li> </ul>	<ul style="list-style-type: none"> <li>All portfolios exposed to fossil fuels and carbon-intensive industries</li> </ul>
Increased severity of extreme weather events	 	<ul style="list-style-type: none"> <li>Damaged assets increase claim liabilities for insurance companies</li> <li>Legal risk (e.g. electricity transmission connected to wildfires)</li> </ul>	<ul style="list-style-type: none"> <li>Insurance companies</li> <li>Holders of equity in transmission sector</li> </ul>
Changes to precipitation and weather patterns	 	<ul style="list-style-type: none"> <li>Long-term damage to infrastructure assets affects investment returns and value of collaterals</li> </ul>	<ul style="list-style-type: none"> <li>Infrastructure assets in areas at risk</li> </ul>
Rising mean temperatures	 	<ul style="list-style-type: none"> <li>Long-term environmental changes and rising sea levels deteriorate value of real estate investments</li> </ul>	<ul style="list-style-type: none"> <li>Real estate portfolios in areas at risk</li> </ul>
New products and services and access to finance		<ul style="list-style-type: none"> <li>Green insurance products</li> <li>Investments in low-carbon technologies and adaptation funding</li> </ul>	<ul style="list-style-type: none"> <li>Insurance companies</li> <li>Capital providers to relevant sectors</li> </ul>



# Disclosure best practice

Financial institutions have the added challenge to tailor scenario analysis to different sectors, Aberdeen Standard provides an approach



Note: 'E' indicates 'early action' where policies are enacted in 2020

Bespoke/Off-the-shelf scenarios

Sectoral and regional break-down

Weight assignment to scenarios

# Disclosure best practice

*Enhanced disclosures can help financial institutions mobilize capital to low-carbon solution, as set out by Morgan Stanley*



**Support the transition to a low-carbon economy** by mobilizing capital toward low-carbon solutions and publishing industry-leading research and thought leadership for an investor audience

- Morgan Stanley has committed to mobilizing \$250 billion to support low-carbon solutions, having raised \$80 billion through 2019
- The Institute for Sustainable Investing publishes frequent climate-related material, including, in July 2020, [Climate Transition in a Portfolio Context: What Matters](#) and [What to Measure](#) with MSIM



**Enhance the climate resilience of our operations** by minimizing our footprint and enhancing our operational resiliency

- Morgan Stanley is committed to being carbon neutral by 2022
- We are committed to purchasing 100% renewable energy for our own footprint by 2022



**Manage climate change risk** by integrating climate change considerations into our risk management processes and governance structures

- Morgan Stanley's FRC and CRO formally oversee climate-related financial risks
- FRM is working to develop appropriate scenarios and stress test models to inform changes to our strategy and risk management process
- Morgan Stanley will support and inform the development of methodologies, tools and frameworks to measure and manage climate change emissions and associated risks in the financial sector



**Be transparent and provide relevant and adequate climate-related disclosures** in our TCFD report and other publications

- Morgan Stanley commits to regularly publish TCFD reports, and provide interim updates in our Sustainability Report
- Morgan Stanley joined PCAF in July of 2020 and has committed to disclosing some level of scope 3 portfolio emissions within three years as PCAF's methodology is finalized

# Concluding remarks

*Momentum for disclosures is growing in Russia for companies to understand the impact of climate on future financial performance*

Demand for enhanced climate related disclosures is increasing globally  
 In Russia uptake has been slower than elsewhere but momentum is growing

Disclosure by Region: 2019 Reporting

Recommendation	Recommended Disclosure	Asia Pacific (34)	Europe (64)	Middle East and Africa (8)	North America (7)	Latin America (2)
Governance	a) Board Oversight	72%	56%	17%	16%	21%
	b) Management's Role	56%	47%	66%	20%	15%
Strategy	a) Risks and Opportunities	74%	43%	22%	50%	38%
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The numbers in parentheses represent the size of the relevant population. Legend: Green (High percentage of disclosure)

Different sectors are exposed to climate related risk in different ways

TCFD enables companies to identify opportunities within their sector and can improve access to capital

	Energy generation	Metals and mining	Agriculture	Pulp and paper	Construction materials	Financial institutions
Increased pricing of GHG emissions (e.g. EU border adjustment)	🔴	🔴	🔴	🔴	🔴	🔴
Mandates on and regulation of existing products and services	🔴	🔴	🔴	🔴	🔴	🔴
Increased severity of extreme weather events	🟡	🟡	🟡	🟡	🟡	🟡
Changes to precipitation and weather patterns	🟡	🟡	🟡	🟡	🟡	🟡
Rising mean temperatures	🟡	🟡	🟡	🟡	🟡	🟡
New products and services	🟢	🟢	🟢	🟢	🟢	🟢

TCFD aligned disclosures is a journey not a sprint

Challenges to disclosure can be addressed by building capability over time



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# Panel and Q&A



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*Introduction and panel*



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*Panel and Q&A moderation*



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*Speaker*

**ETHNOEXPERT**  
your sustainability consultant



**Maxim Titov**

*Introduction and panel*



**Olga Teplova**

*Speaker*



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