2021
Response to Climate Change

Since our Taiwan HQ the publication of the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in 2017, Delta Thailand study the principle and methodology of disclosing information on climate governance, strategies, risk management, and key indicators according to the 4 elements of TCFD and partially disclose in its 2020 Sustainable Development Report that was published in 2021.

Governance

The Delta ESG Committee, under the jurisdiction of the Board of Directors, is Delta's highest-level internal climate risk and opportunity supervision body. The Committee comprises a number of board members, operational team members, Chief Sustainability Officer (CSO), regional operations directors, and functional directors. The CSO reports to the board on a quarterly basis on climate change trends and Delta's climate related management progress.

The majority of the board has a long-standing interest in climate change and has a full understanding of its importance and impact. The board takes climate change issues into account when considering major capital investment projects, including the construction of green buildings, solar energy facilities, and green energy investments

The Corporate Sustainability Development Office under the ESG Committee is responsible for following international climate change trends, as well as promoting and coordinating projects related to climate change and renewable energy. The business groups are responsible for developing various energy-efficient products and solutions, and developing products and services that contribute to climate change mitigation and adaptation. The Energy Management Service Department is responsible for providing energy efficiency improvement services.

In addition, Delta Electronics Foundation participates in important international climate change conferences each year to gain insight on the development of climate change policies and scientific research.

Climate Risk Assessment and Strategies

To understand which of the many climate change risks Delta should prioritize and address, we conduct a major survey every 3 years and a review every year to identify key climate risk items. Delta's latest company climate risk survey was completed just before the end of 2021. For this survey, our optimization measures include:

- **Collecting relevant cases from around the world and adjusting the issues to keep up with the times (as shown in the table below):** The number of policy and regulatory risks has been reduced from 12 to 8 items, technology risks from 3 to 2 items, business reputation risks from 3 to 2 items, and market risks increased from 3 to 6 items, while physical risks remain at 4. For example, in recent years, investors are actively focusing on corporate performance on climate change, so we have included "lack of contribution from company on climate change, which affects investors' and banks' willingness to invest" as one of the inventory items.

- **Redesigned risk impact level:** Quantitative thresholds are used to design the financial impact levels (including revenue, costs, and assets), and the maximum impact level is set at 0.5% to 1% of Delta's consolidated revenue.

- **New quantitative difficulty indicator added:** The availability of quantitative information will be critical to achieving the desired monetization of impacts for TCFD in the future. We have established a judgment flowchart to assist departments in considering the data that may be used for each climate change risk.

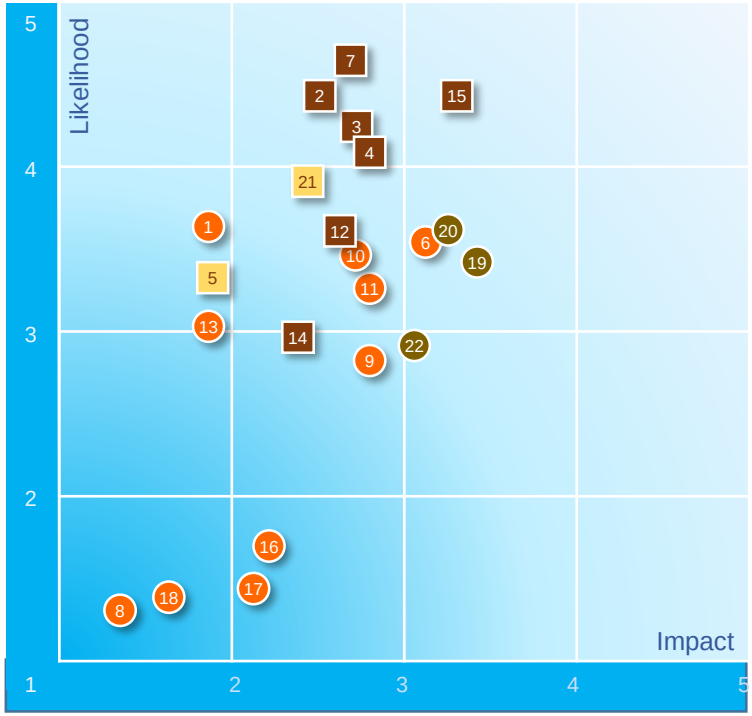
- **Using international databases:** Supplemented by an online climate risk information platform, we assess immediate and long-term physical risks on a larger geographic scale for Taiwan, Mainland China, Thailand, San Francisco of California, USA, and India.

- **Organizing TCFD education training and workshops:** Held the training and workshops in Mandarin and English, and invited Thailand to participate for the first time.

With over 70 representatives from business groups and functional groups, as well as expert opinions and external literature adjustments, the four 4 risks identified were "increasing raw material costs", "renewable energy regulations", "increasing severity of extreme climate events", and "changing rainfall patterns and severe weather patterns". The increase in raw material cost is the second time that it has been determined to be a risk of highest concern after being identified as such in the previous survey. As for the other 3 risks of highest concern, they were elevated from the second highest concern risk level in the previous survey to the highest concern risk level, indicating that the impact of renewable energy, extreme weather, and changes in weather patterns are clearly felt by Delta and require adaptive actions.

Macroscopic physical risks are very difficult to manage through quantification. Risks such as "increasing severity of extreme climate events" and "changing rainfall patterns and severe weather patterns" are more difficult to quantify than "renewable energy regulations" and "increased raw material costs". With further analysis, each business group is affected by climate change risks differently. Delta's industrial automation, fan and thermal management, and electric vehicle solutions business groups are the most sensitive to climate change risks. If we analyze the physical risk by operational location, the Yangtze River basin in China suffered more damage in 2021 due to local floods, reflecting the reason for the higher score in China, followed by Taiwan and then Thailand.

Delta Climate Risk Analysis Matrix



Transition Risks : High difficulty in quantifying impact

Transition Risks : Low difficulty in quantifying impact

Physical Risks : High difficulty in quantifying impact

Physical Risks : Low difficulty in quantifying impact

Risk Type		Climate Risk Item	Risk Group
Transition Risks	Policy and Regulatory Risks	1. International sector agreements	L
		2. Voluntary agreements	M
		3. Uncertainty surrounding regulation and policies.	M
		4. Carbon tax and related regulation.	M
		5. Requirement of decreasing greenhouse indirect emissions (water and waste reduction)	L
		6. Mandates on and regulation of existing products and services	M
		7. Renewable energy regulation	H
		8. Exposure to litigation	L
	Technology Risks	9. Substitution of existing products and services with lower emissions options	L
		10. Costs to transition to lower emissions technology	L
	Market Risks	11. Customers change supplier selection criteria.	L
		12. Customers change product specification requirements.	M
		13. Shifts in consumer preferences to low-carbon products	L
		14. Emissions reduction requirements to suppliers	L
		15. Increased cost of raw materials	H
		16. Investors evaluate climate change efforts (e.g. ESG performance) in making investment decision.	L
	Business Reputation Risks	17. Stigmatization of sector	L
		18. Corporate image affected by news about climate change.	L
Physical Risks	Immediate Physical Risks	19. Increased severity of extreme weather events as cyclones and floods	H
	Long-Term Physical Risks	20. Changes in precipitation patterns and extreme variability in weather patterns	H
		21. Rising mean temperatures	L
		22. Rising sea levels	L

Risk Item	Climate Risks and Impacts	Response and Derivative Opportunities
Policy and Regulatory Risks	Policy and regulatory risks are easier to monitor than other risks. Out of all policies, we pay special attention to Nationally Determined Contributions (NDCs) and stay ahead of policies to prioritize compliance and avoid violations. Delta's plants are currently not included within the scope of carbon taxes or mandatory carbon trading. Products are also not directly placed under management. However, once they are placed under management, it may increase operating costs, increase management expenses, and lead to the inability to implement prompt response measures or even penalties due to the inability of renewable electricity supply to meet demand or lack of transparency in policies. In 2021, more benchmark customers are asking about Delta's carbon reduction targets both in corporate level, product level and the proportion of renewable electricity. However, renewable electricity is a new challenge for humanity. With the lack of transparency in the global market and price of renewable electricity, how to obtain renewable electricity that meets the requirements of customers and international evaluation, as well as being environmentally-friendly and how to take care of ecological needs with limited land resources are some of the derivative risks that we are concerned about.	▪ Introduce internal carbon pricing and charge for greenhouse gas emissions. ▪ Joined RE100 and set renewable electricity targets. ▪ Actively pay attention to the development of international systems such as carbon border tax, renewable electricity regulations, and renewable electricity certificate system, and participate in the Power Purchase Agreement (PPA).
Technology Risks	Delta pays close attention to development in the power sector and actively pursues opportunities available to Delta in a low-carbon economy. Currently, Delta's core technology is mainly energy saving, and some of its products can be used in renewable energy-related solutions. However, the technology has not yet crossed over to carbon capture and storage, and Delta may face more challenges in technology competition if the Deep Decarbonization Pathways Project (DDPP) is implemented. However, there may be errors in judging the technology needs brought about by climate change and inability to assess the feasibility of the technology based on past experience. In addition, technology deployment requires a certain amount of time and capital investment, which may lead to misjudgment of industry trends and long payback periods. The development of new technologies requires the entire supply chain to work together in order to make commercialized products. If our existing suppliers are unable to improve their knowledge of climate change, or if their specifications and technologies cannot be synchronized with the requirements of the new technology, or if the cost of materials is too high, then the quality of the product, the commercialization process, and the overall cost will definitely be affected.	▪ Climate change is one of the factors Delta takes into consideration when laying out its technology. All the new technologies, new products, and new directions over the past few decades, such as IA, electric vehicles, batteries, building automation, green buildings, and ESG knowledge applications, are all opportunities. ▪ Take low-carbon transport as an example, Delta invested in the electric vehicle field more than 10 years in advance and is now a supplier to first-tier vehicle Manufacturers.

Market Risks	If customer or consumer demand for low-carbon products is lower than expected or if the signal is not sufficiently strong, it may lead to a delay in the launch of low-carbon products, unacceptable prices, reduced profits, or early termination. Climate change may indirectly or directly cause interruptions in the supply chain and Delta may be forced to choose raw material manufacturers with higher unit costs or change transportation routes which may increase the cost. Product materials and specifications may also increase in terms of higher temperature tolerance, salt tolerance, or energy efficiency which would increase the cost of raw materials. Delta evaluates the development of energy storage solutions by combining the NDC scenario and Beyond 2°C scenario with the current policy direction in Taiwan, and the assessment shows that Beyond 2°C will bring much greater market opportunities than the NDC scenario.	▪ Develop heat-resistant, low-temperature, and salt-resistant ventilation and cooling equipment. ▪ Introduce ESG and other related measures in advance to meet regulatory and customer requirements
Business Reputation Risks	Business reputation risks are relatively low for Delta, mainly because Delta's product portfolio is diversified and does not include high carbon emission products or businesses, so the risk of negative news on climate change is low.	▪ Continue to monitor international legislative changes and trends
Physical Risks	Physical risks could lead to disruptions in the transportation of materials and goods, disruptions in employee transportation, reduced employee productivity due to high temperatures, increased cost of chillers and other air-conditioning equipment, increased cost of flood prevention measures, increased frequency and cost of building maintenance, and disruptions to production lines due to flooding and water outages. Since self-generated solar energy is one of Delta's renewable electricity strategies, changes in sunlight due to weather changes or forest fires due to extreme temperatures can affect the efficiency of solar panels in renewable electricity generation due to increasing air pollutants. Take climate change as an example, the model results show that RCP 2.6 will have a greater impact on Delta's Thailand plant in 2030 than RCP 8.5, including a higher severity of clean water shortage and a higher rate of supply reduction due to water shortage, but a lower probability of water shortage than 8.5. However, by 2050, RCP8.5 will have a greater impact than RCP2.6.	▪ Since 2006, Delta's plants, offices, and data centers have implemented the Green Building Standard, obtained green building certificates, and calculated annual energy savings. Delta's policies and green building standards are applied to all newly-built plants with the goal of adapting to climate change. ▪ Developed a Business Continuity Plan (BCP) for floods caused by heavy rainfall and fires caused by extreme high temperatures. ▪ Delta has focused on severe water shortage events and taken measures to adapt to climate change, such as: replacing high water consumption facilities within 5 years, strengthening emergency back-up provisions and planning, as well as establishing a waste water reclamation system within 5 to 10 years to reduce demands for secondary use.

Progress in 2021 - Scenario Analysis

In response to climate change, renewable electricity is one of the options for mitigation and adaptation. However, as the proportion of renewable electricity increases, the impact on the power grid will be more pronounced, thereby creating the need for energy storage systems through operational demands.

Delta 's energy storage solutions are a key climate opportunity for Delta because the solutions can help ensure a reliable and stable power supply and support energy management functions such as demand response, peak shaving, and renewable electricity smoothing. In 2021, Delta took energy storage systems as an example and applied 2 major climate scenarios, namely Taiwan's NDC scenario and Beyond 2°C scenario, to build a TCFD scenario analysis model. The TCFD model evaluates potential opportunities for energy storage products in the Taiwan market under these 2 scenarios.

In an effort to minimize the impact on climate, Delta is devoted to green operations, energy management, carbon disclosure, and green promotion. Developing capabilities to adapt to climate change and reduce extreme weather risks is a key issue that should be included in a corporate sustainability management strategy.

Climate risk and Delta Value Chain

Megatrend

Technology breakthrough

Climate change | Rapid urbanization | Demographic change | Shift in economic power

202X Emerging risk

+ Climate Action failure
+ extreme weather events
+ biodiversity loss

Failure of tech governance

- Man-made environment damage
- Fracture of interstate relation
- Geopolitization of strategic resources eg oil, gas, mineral, water, food

Scenario

RCP 8.5

Emission continue rising at current rates
Result: Climate change as likely as not to exceed 4°C

Our potential world in 2100

- More heatwaves
- Changes in rainfall pattern and monsoon system
- CO2 concentration 2-4 time higher than pre-industry levels
- Arctic summer sea ice almost gone
- Sea level rises by half of one meter
- More acidic ocean

Impact to Delta's supply chain (Upstream)

- Worker health and safety
- Lost in revenue
- Insufficient mineral and raw material for production
- Higher operation cost eg labor, energy, logistics, legal and OHS cost

Impact to Delta

- Worker health and safety
- Lost in revenue
- Insufficient mineral and raw material for production
- Higher operation cost eg labor, energy, logistics, legal , OHS and **raw material** cost
- Industry stigmatization
- Higher evironment and industry standard
- Lower recognition and social license to operate
- Lower customer satisfaction

Impact to Delta's customer (Upstream)

- Lost in revenue
- Higher operation cost eg logistics, legal
- Lower customer satisfaction

Transition

Re-think the future

- **IEA NZE 2050** :
  The global energy sector achieved net zero CO2 emissions by 2050.
- **IEA 2DS**
  Cut annual global energy-related CO2 emissions by more than half in 2050.
- **IEA SDS**
  All countries reach net zero emissions by 2070 in the energy sector.
- **Thailand's AEDP2015**
  The share of renewable energy achieved 30% of final energy consumption by the year 2036.

Upstream Transition Risk

- Policy and regulatory risk
- Market risk
- **Financial risk**
- Technological risk
- Reputational risk
- Legal risk

Delta Transition Risk

- Policy and regulatory risk
- Market risk
- Technological risk
- Reputational risk
- Legal risk

Downstream Transition Risk

- Policy and regulatory risk
- Market risk
- Technological risk
- Reputational risk
- Legal risk

Transition

RCP 2.6

Emission halved by 2050
Result: Climate change not likely to exceed 2°C

Our potential world in 2100

- May require negative removal CO_2 from the ai –before 2100
- CO_2 concentration falling before end of century
- Climate impacts generally constrained but not avoided
- Reduced risk of 'tipping points' and irreversible change

Impact to Delta's supply chain (Upstream)

- Worker health and safety
- Growth in revenue
- Sufficient mineral and raw material for production
- Lower operation cost eg labor, energy, logistics, legal and OHS cost

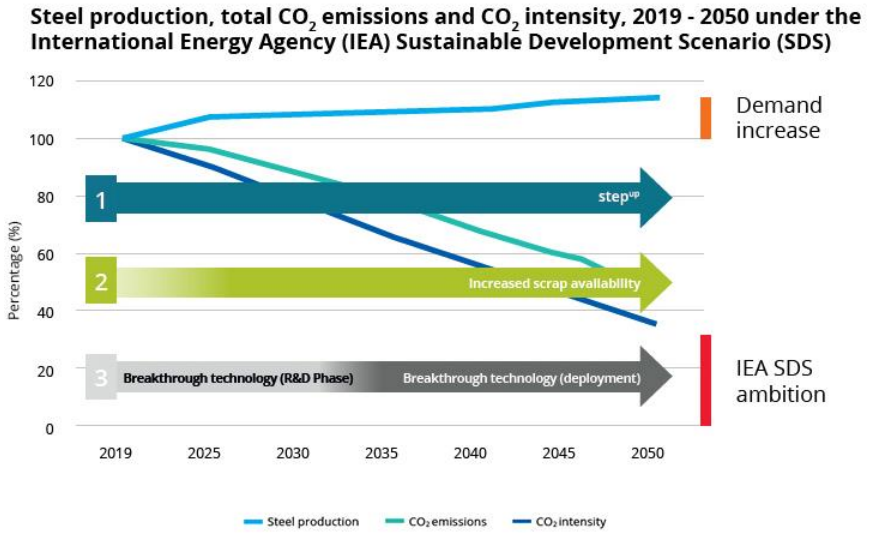
Impact to Delta

- Worker health and safety
- Achieve target revenue in long term
- Sufficient mineral and raw material for production
- Lower operation cost eg labor, energy, logistics, legal , OHS and **raw material** cost
- Leader among higher evironment and industry standard
- Achieve recognition and social license to operate
- Maintain customer satisfaction

Impact to Delta's customer (Upstream)

- Growth in revenue
- Reasonable operation cost eg logistics, legal
- Higher recognition from eco-friendly products for sell
- Higher customer satisfaction

Sample of scenario on material requirement: Iron Ore Demand and supply

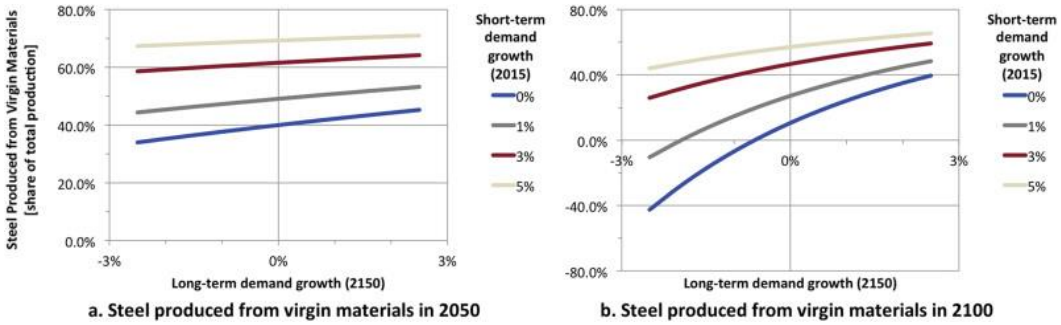


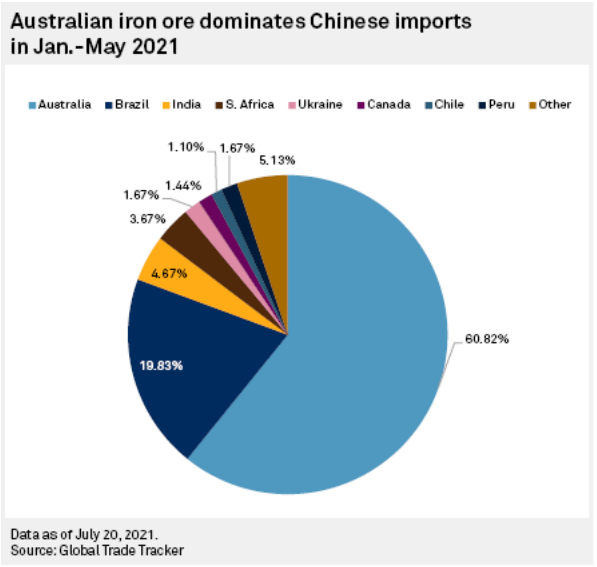
https://worldsteel.org/publications/policy-papers/climate-change-policy-paper/

The long-term demand growth has a more significant influence on steel production from virgin materials in 2100 (Fig. 3b). A negative requirement for steel production from virgin materials was actually visible for the case of reducing short-term growth to between 0% and 1% combined with a negative long-term growth (the blue and grey curves crossing the *x*-axis in Fig. 3b). In this case, the negative requirement for steel production from virgin materials indicates that society would supply steel production with recycled material to the degree of being self-sufficient without the need for virgin materials.

This confirms the conclusion of Grosse (2010), that a demand growth rate lower than 1% is required for recycling to make a difference in the conservation of the iron resource.

However, reducing global demand growth drastically in the short-term and aiming for negative growth in the long-term (i.e. for 2100 and beyond) is not plausible considering the future requirement of steel products in developing regions (Pauliuk et al., 2013). This means that even if we drastically reduce the growth of steel demand in the short-term, there would still be a significant requirement for steel production from virgin materials in 2050. Unless we aim at negative demand growth in the long-term, there will still be a requirement for steel production from virgin materials, even by 2100.



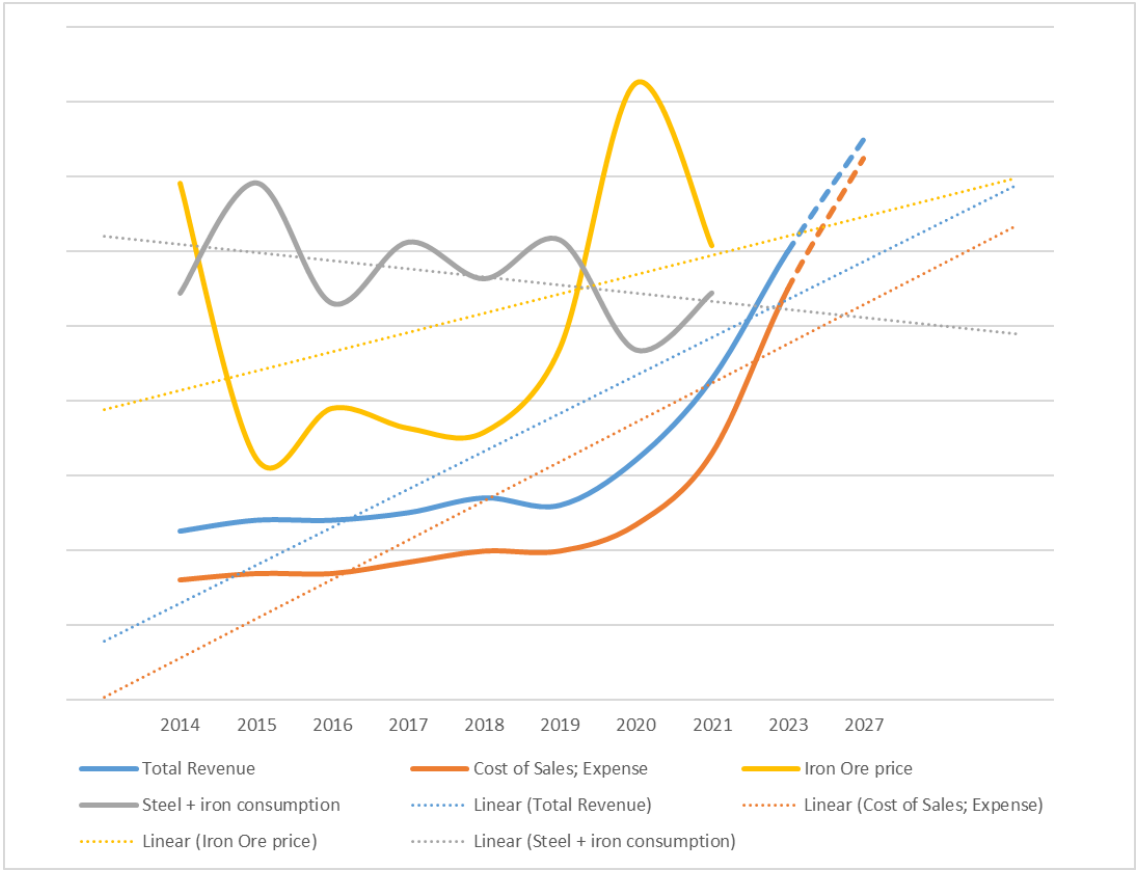


- In 2050, 50% of global steel production will still require virgin materials.
- Global climate targets strongly influence technology choice for steel production.
- Hydrogen-based steel production is an important future technology option.
- Future crude steel prices of 500 USD per tonne, provided that CCS is available.

Morfeldt, J., Nijs, W., & Silveira, S. (2015, September 15). *The impact of climate targets on future steel production e an analysis based on a global energy system model*. Journal of Cleaner Production. Retrieved February 9, 2022, from https://reader.elsevier.com/reader/sd/pii/S0959652614004004?token=40E28B0FD8BC986B2BE6C3C76A3ADFE2087FB892870C93C6025AC2460AF794C1D7F8F2BE6C861BF76FDCF13EBB11439D&originRegion=eu-west-1&originCreation=20220702061740

https://www.spglobal.com/marketintelligence/en/news-insights/blog/sluggish-iron-ore-supply-response-could-hamper-chinas-decarbonization-drive

Sample of scenario on material requirement: Iron Ore Demand and supply

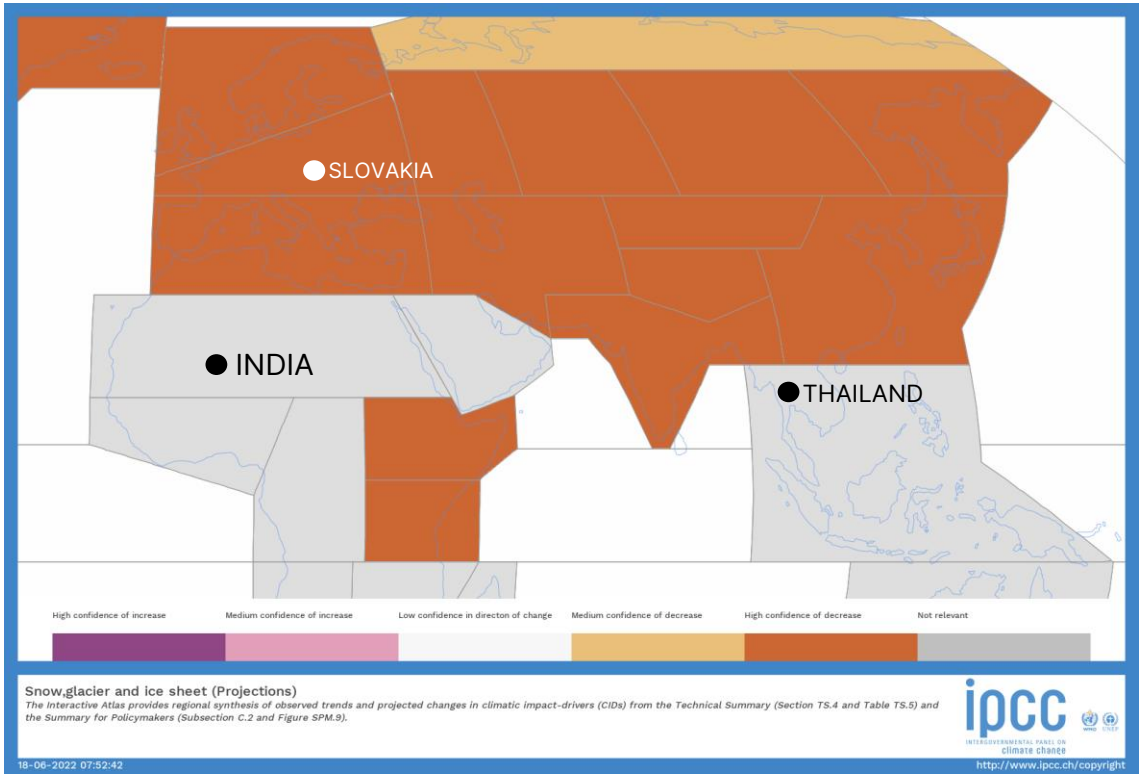


(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2021	2020	2021	2020
Profit or loss:					
Revenues					
Sales		82,994,057,065	62,341,159,107	70,909,543,246	53,700,304,852
Service income		1,324,303,410	866,851,060	72,594,708	61,451,065
Other income					
Gain on exchange		1,017,817,765	387,979,698	1,025,174,653	367,520,440
Others		442,123,356	507,435,992	361,476,931	229,066,406
Total revenues		85,778,301,596	64,103,425,857	72,368,789,538	54,358,342,763

Category of risk	Possible impacts to Delta business
Strategic	▪ Failure to implemented green revenue target ▪ Failure of supplier localization ▪ Higher importance of recycled input material development
Operational	▪ Order fulfillment disruption
Financial	▪ Failure to implemented green revenue target ▪ Higher operation cost from downstream's higher cost
Compliance	▪ Higher environmental standards
Social / Environment	▪ The cross-border mining sites

Snow glacier and ice sheet (projections)



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Contact
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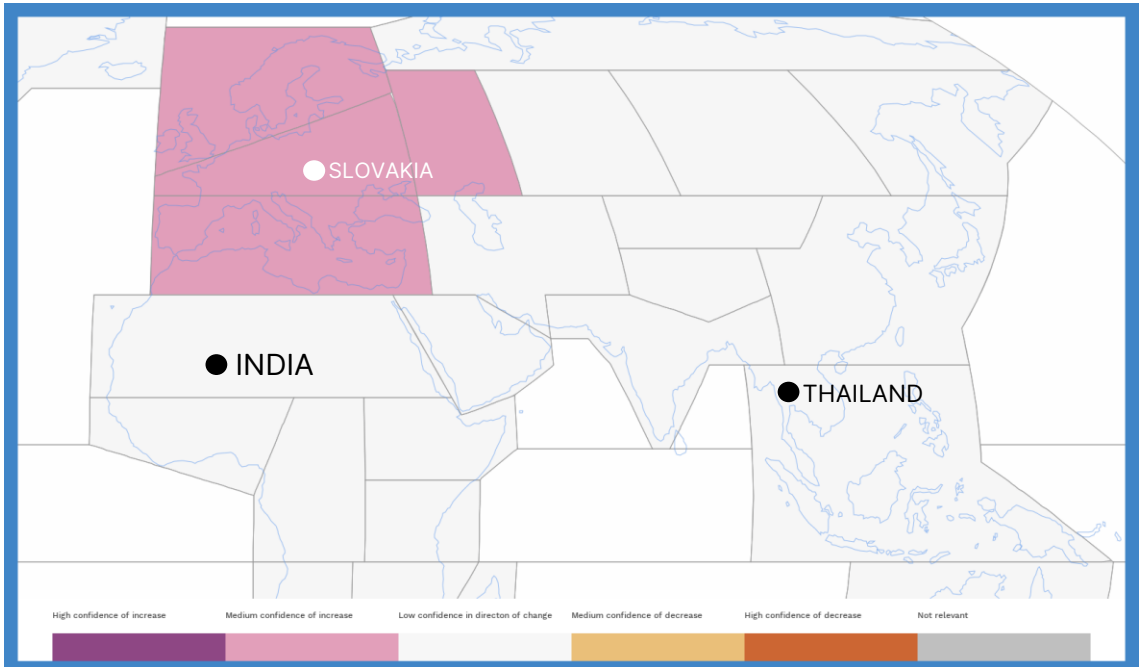
Location	Impacts level
Thailand	Not relevant
India	
Slovakia	High confidence of decrease

Category of risk	Possible impacts to Delta business
Strategic	-
Operational	-
Financial	-
Compliance	-
Social / Environment	▪ Temperature rise ▪ An increase of sickness rate

Severe wind storm (Projections)



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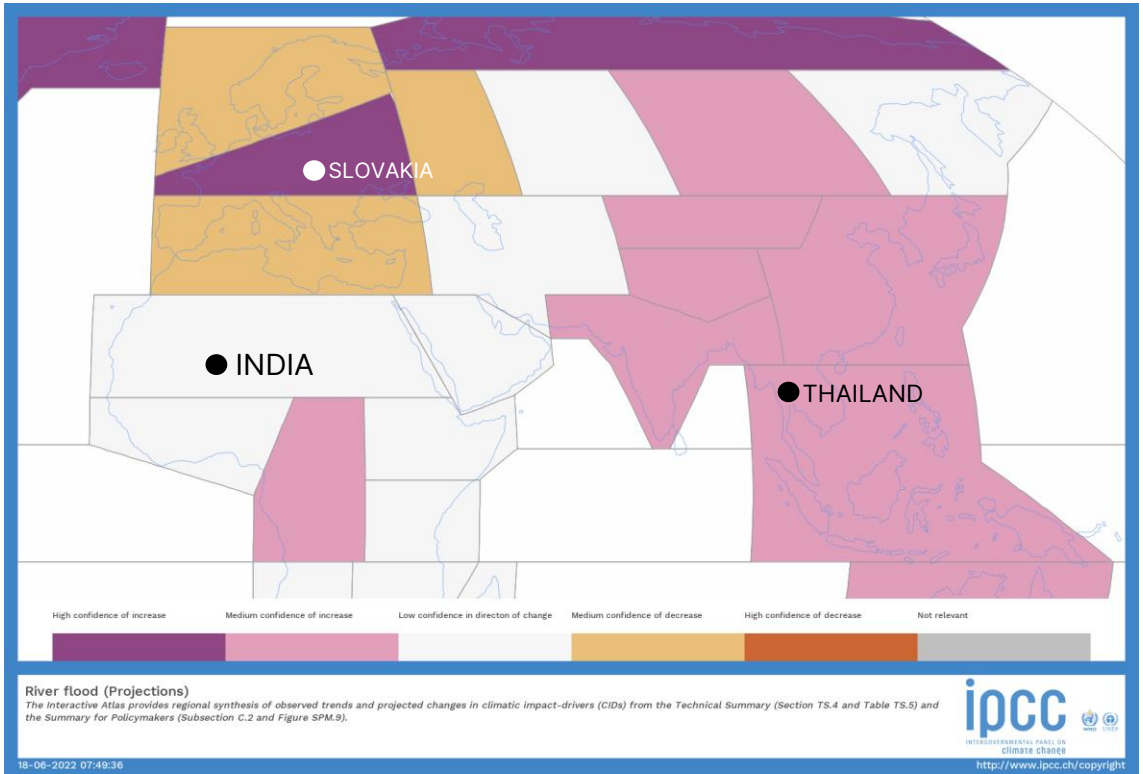
Location	Impacts level
Thailand	Low confidence in direction of change
India	
Slovakia	Medium confidence of increase

Category of risk	Possible impacts to Delta business
Strategic	▪ Logistic difficulty
Operational	▪ A power failure results in the halt of production. ▪ Lack of human labor due to evacuation.
Financial	▪ Cost of damage of raw materials and other assets
Compliance	▪ Measures to stop production due to calamities.
Social / Environment	▪ Damage to health, life, property, and environment

River flood (Projections)



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Contact
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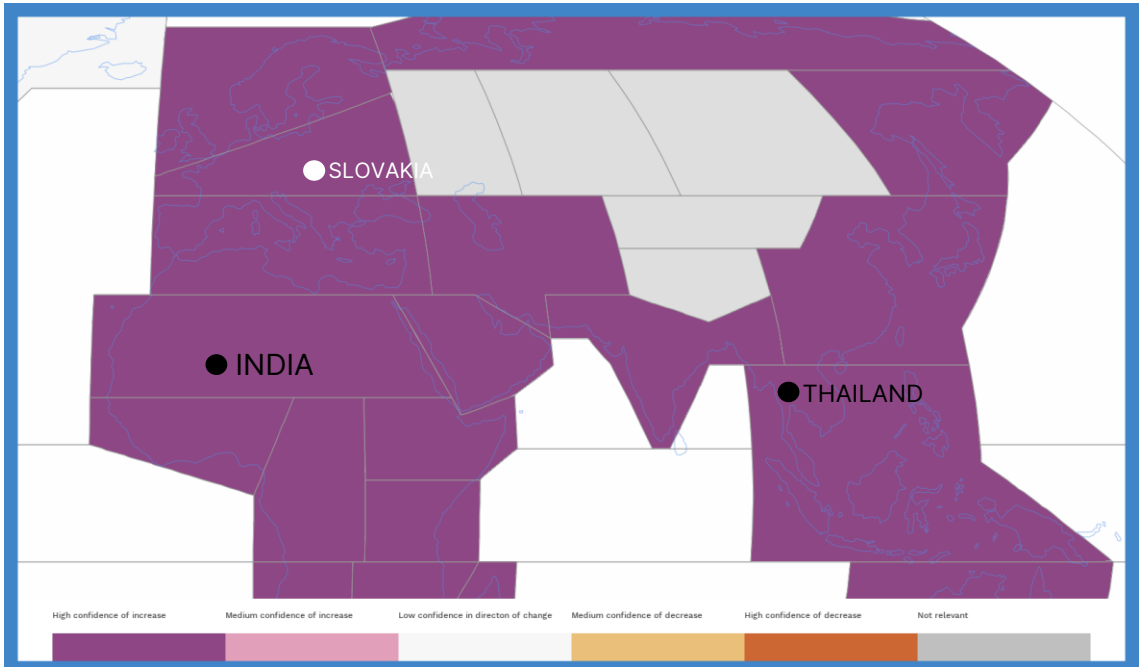
Location	Impacts level
Thailand	Medium confidence of increase
India	Low confidence in direction of change
Slovakia	High confidence of increase

Category of risk	Possible impacts to Delta business
Strategic	▪ Scarcity of raw materials ▪ Logistic difficulty
Operational	▪ A power failure results in the halt of production. ▪ Inability to transport raw materials and products ▪ Lack of human labor due to evacuation.
Financial	▪ Cost of damage of raw materials and other assets
Compliance	▪ Measures to stop production due to calamities
Social / Environment	▪ An increase in infectious diseases ▪ Damage to health, life, property, and environment

Relative sea level (Projections)



Relative sea level (Projections)
The Interactive Atlas provides regional synthesis of observed trends and projected changes in climatic impact-drivers (CIDs) from the Technical Summary (Section TS.4 and Table TS.5) and the Summary for Policymakers (Subsection C.2 and Figure SPM.9).

18-06-2022 07:54:07 http://www.ipcc.ch/copyright

Source: WGI Atlas URL: https://interactive-atlas.ipcc.ch/regional-synthesis#eyJ0eXBlIjoiQ0lEIiwic2VsZWN0ZWRJbmRleCI6InJhZGlhdGlvbl9hdF9zdXJmYWNlIiwic2VsZWN0ZWRWYXJpYWJsZSI6ImNvbmZpZGVuY2UiLCJzZWxlY3RlZENvdW50cnkiOiJHSUMiLCJtb2RlIjoiTUFQIiwiY29tbW9ucyI6eyJsYXQiOjU4NjUxODksImxuZyI6Mjk5NjE1Miwiem9vbSI6NSwicHJvail6IkVQU0c6NTQwMzAiLCJtb2RlIjoiY29tcGxldGVfYXRsYXMifX0=

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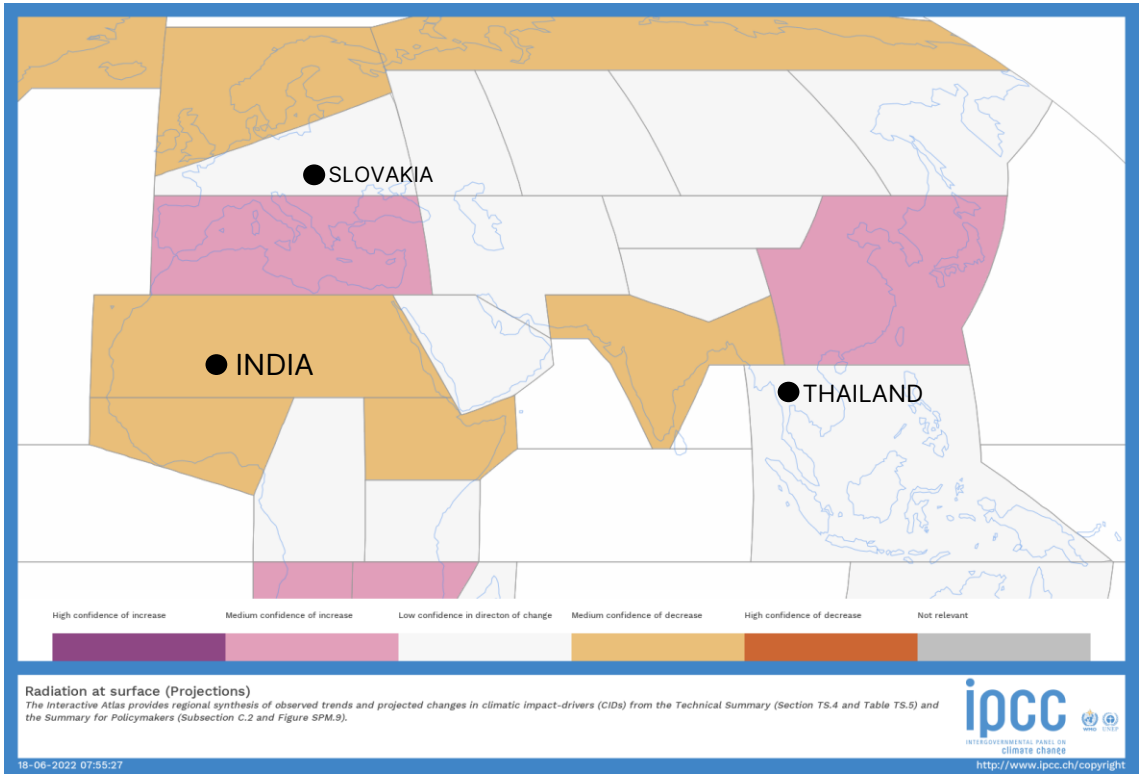
Location	Impacts level
Thailand	High confidence of increase
India	
Slovakia	

Category of risk	Possible impacts to Delta business
Strategic	▪ Scarcity of raw water
Operational	-
Financial	▪ An increase of water supply cost
Compliance	▪ Tighten water use and wastewater discharge measures from local and global governments
Social / Environment	-

Radiation at surface (Projections)



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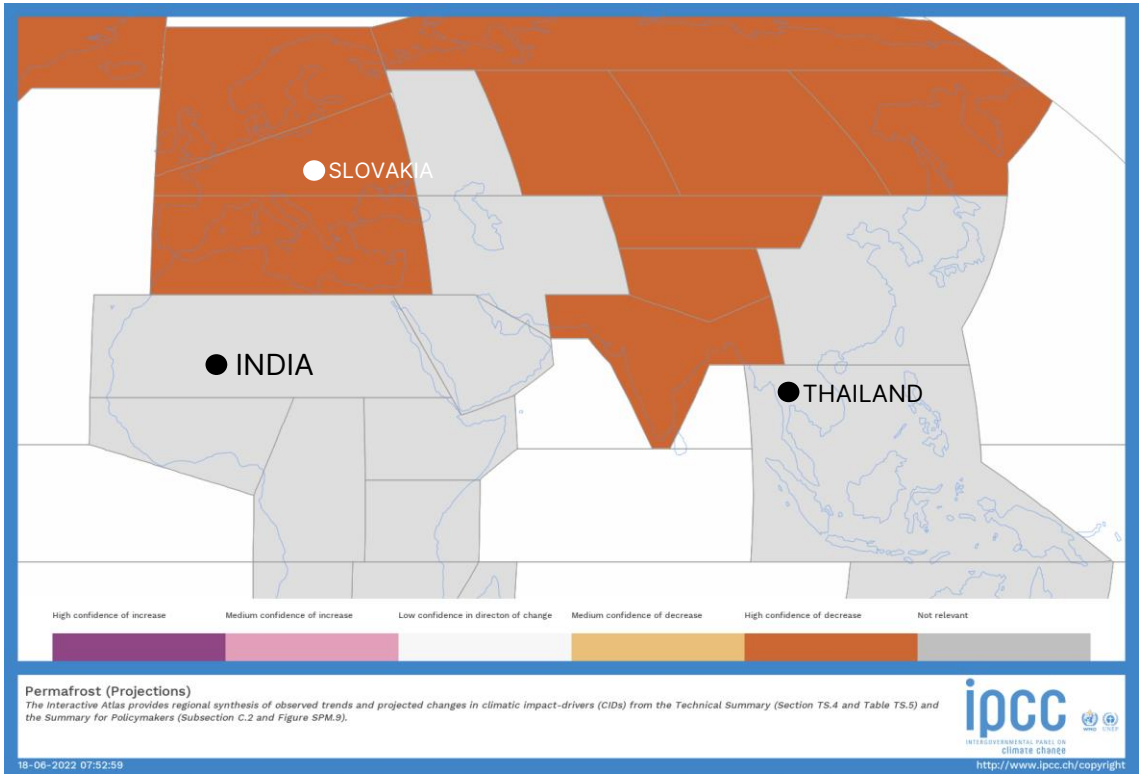
Location	Impacts level
Thailand	Low confidence in direction of change
India	Medium confidence of decrease
Slovakia	Low confidence in direction of change

Category of risk	Possible impacts to Delta business
Strategic	-
Operational	-
Financial	-
Compliance	▪ Measures to prohibit working in high-risk areas
Social / Environment	▪ Increase of sickness rate

Permafrost (Projections)



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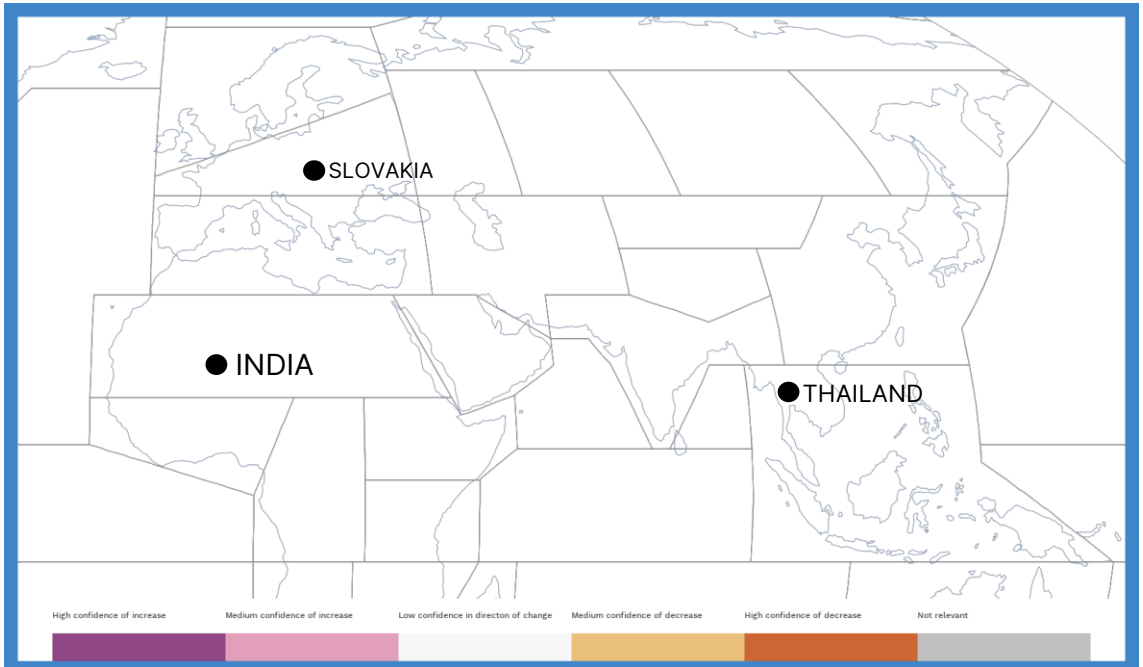
Location	Impacts level
Thailand	Not relevant
India	
Slovakia	High confidence of decrease

Category of risk	Possible impacts to Delta business
Strategic	▪ A decrease of land for business area ▪ Shortage of labor due to huge migration
Operational	-
Financial	▪ More investment on physical infrastructure
Compliance	▪ Restricting occupancy of area to business operation
Social / Environment	-

Ocean acidity (Projections)



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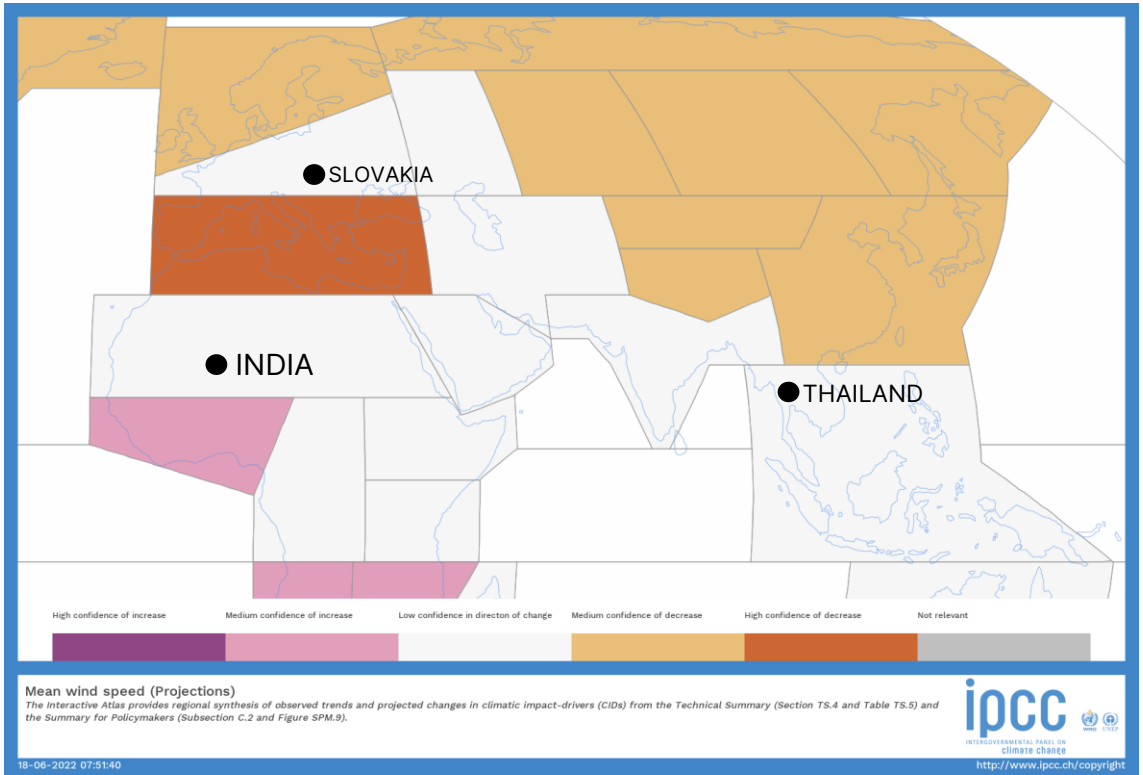
Location	Impacts level
Thailand	Low confidence in direction of change
India	
Slovakia	

Category of risk	Possible impacts to Delta business
Strategic	-
Operational	-
Financial	-
Compliance	-
Social / Environment	-

Mean wind speed (Projections)



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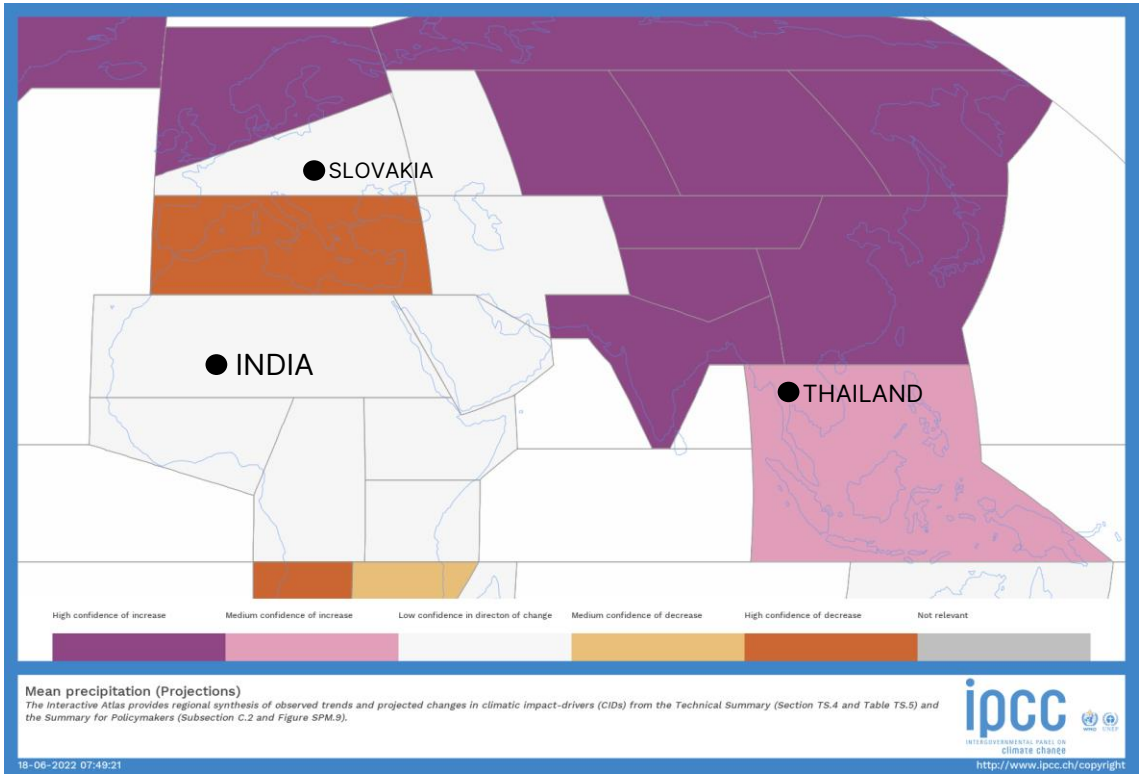
Location	Impacts level
Thailand	Not relevant
India	
Slovakia	

Category of risk	Possible impacts to Delta business
Strategic	-
Operational	-
Financial	-
Compliance	-
Social / Environment	-

Mean precipitation (Projections)



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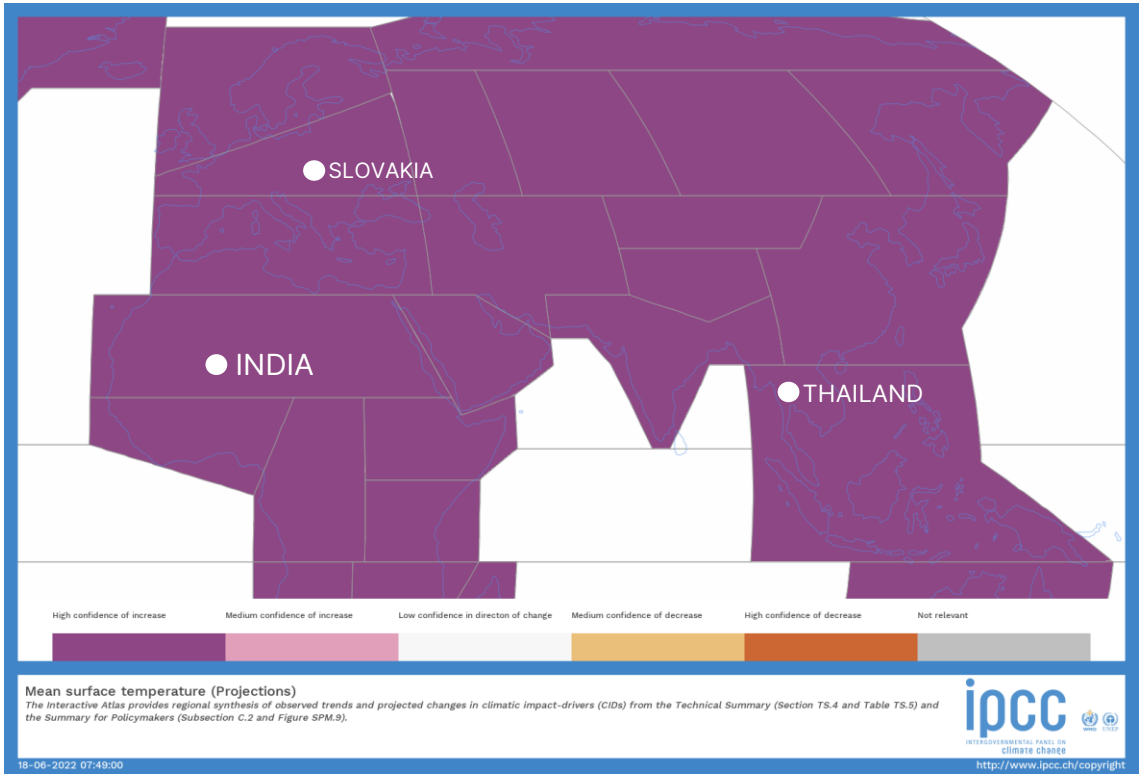
Location	Impacts level
Thailand	Medium confidence of increase
India	Low confidence in direction of change
Slovakia	

Category of risk	Possible impacts to Delta business
Strategic	▪ Logistic difficulty
Operational	▪ A power failure results in the halt of production. ▪ Inability to transport raw materials and products
Financial	▪ Cost of damage of raw materials and other assets
Compliance	▪ Tighten water use and wastewater discharge measures from local and global governments
Social / Environment	▪ An increase in infectious diseases ▪ Damage to health, life, property, and environment

Mean surface temperature (Projections)



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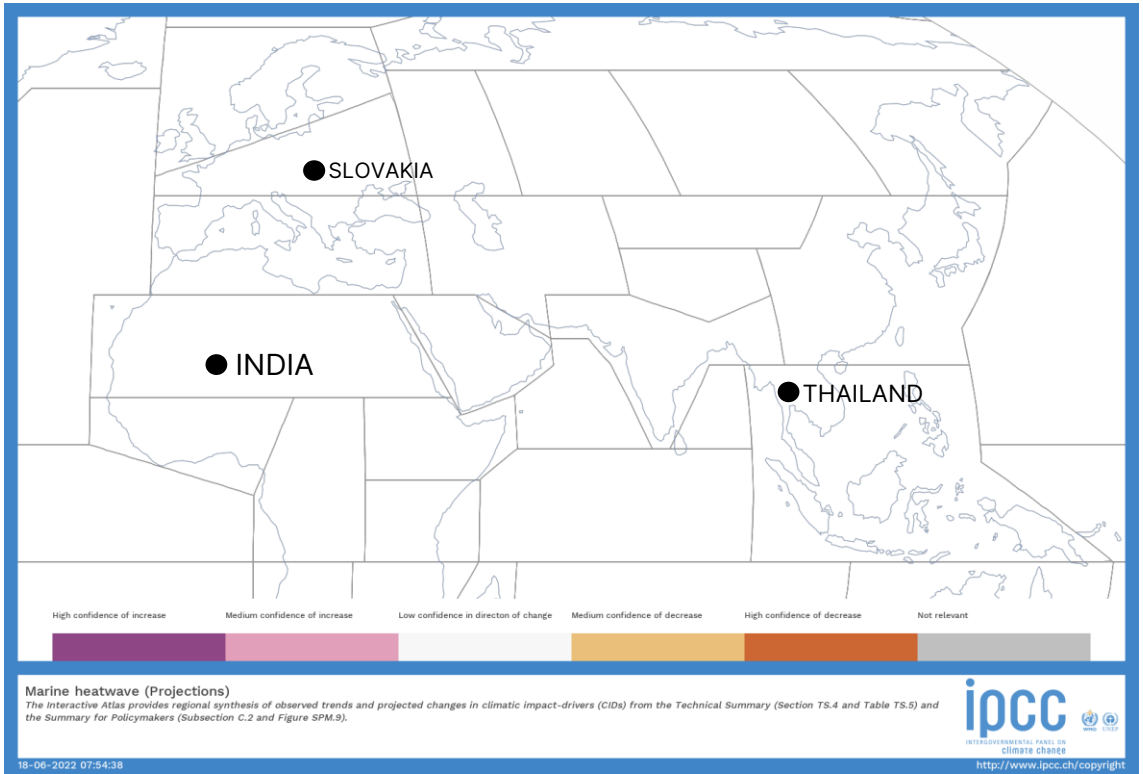
Location	Impacts level
Thailand	High confidence of increase
India	
Slovakia	

Category of risk	Possible impacts to Delta business
Strategic	-
Operational	-
Financial	-
Compliance	-
Social / Environment	▪ Temperature uncertainty ▪ An increase of sickness rate

Marine heatwave (Projections)



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Contact
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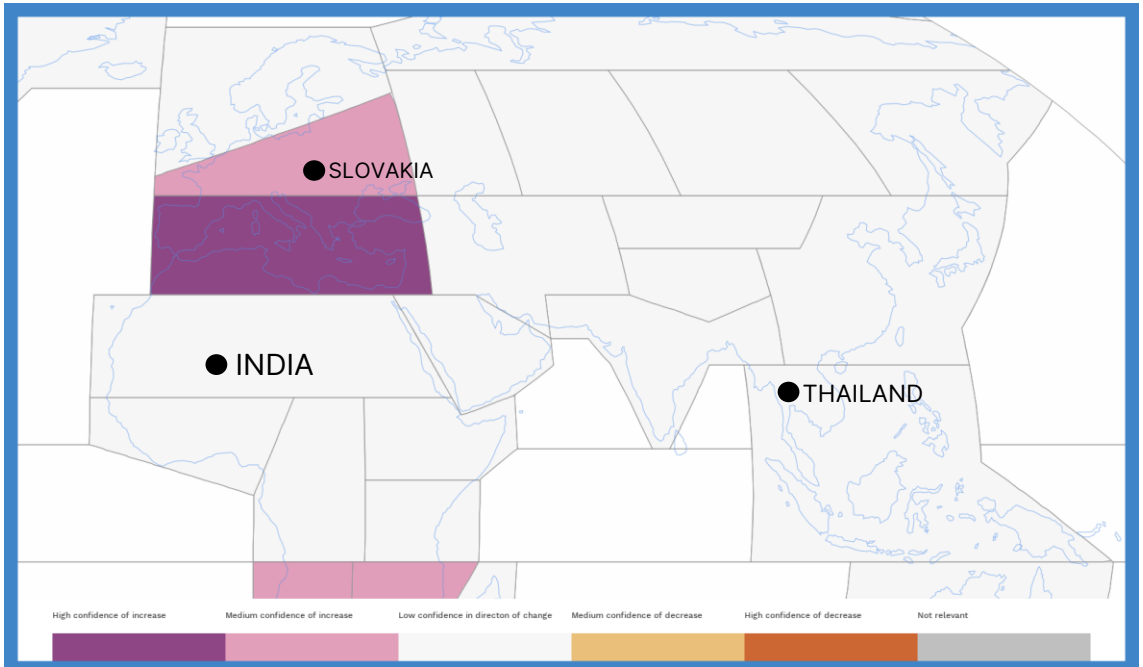
Location	Impacts level
Thailand	Low confidence in direction of change
India	
Slovakia	

Category of risk	Possible impacts to Delta business
Strategic	-
Operational	-
Financial	-
Compliance	-
Social / Environment	-

Hydrological drought (Projections)



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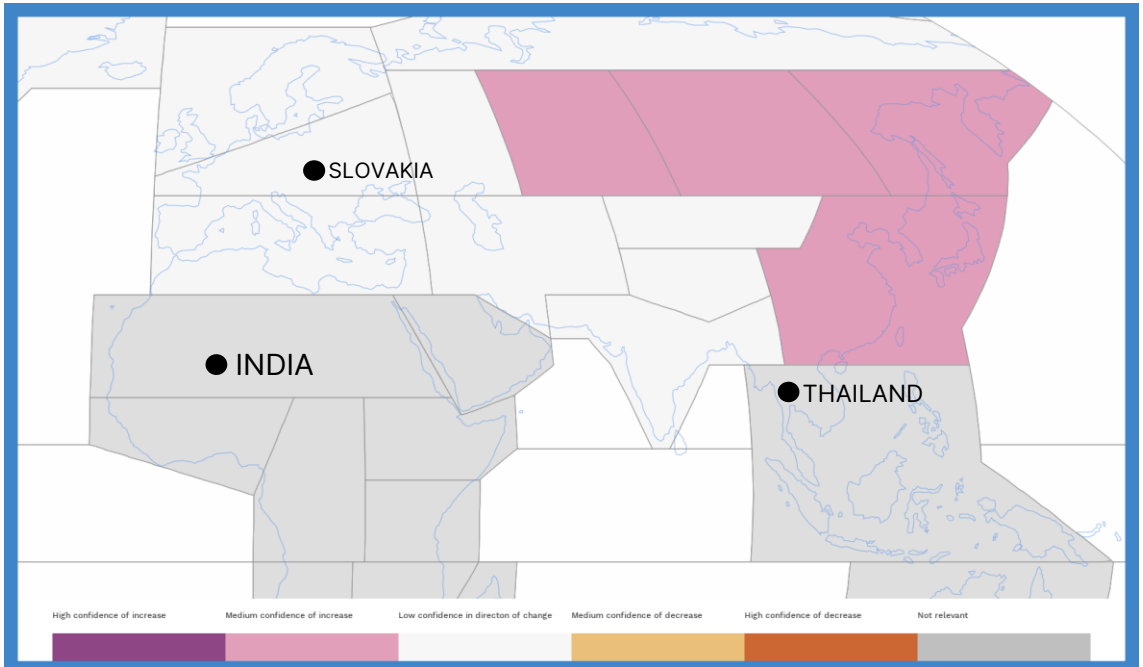
Location	Impacts level
Thailand	Low confidence in direction of change
India	
Slovakia	Medium confidence of increase

Category of risk	Possible impacts to Delta business
Strategic	▪ Scarcity of raw materials ▪ Scarcity of raw water
Operational	▪ Production was disrupted by lack of water and electricity.
Financial	▪ An increase of water supply and electricity cost
Compliance	▪ Tighten water use and wastewater discharge measures from local and global governments
Social / Environment	▪ Community lacks clean water for consumption and results in food shortages.

Heavy snowfall and ice storm (Projections)



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Contact
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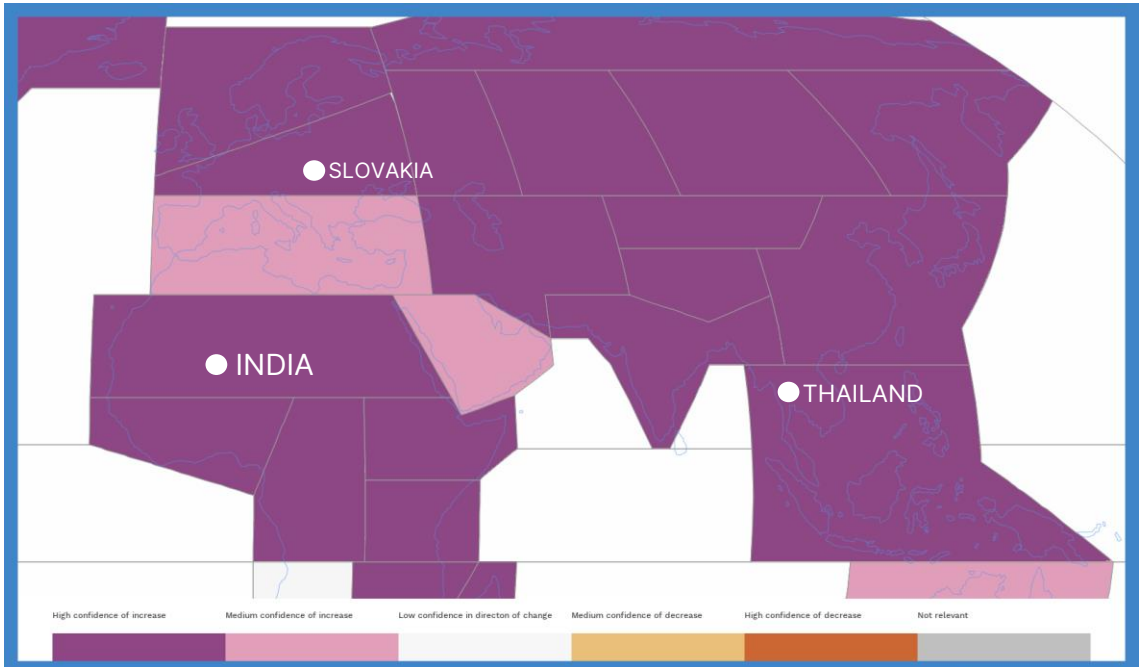
Location	Impacts level
Thailand	Not relevant
India	
Slovakia	Low confidence in direction of change

Category of risk	Possible impacts to Delta business
Strategic	▪ Logistic difficulty ▪ Shortage of human labor due to evacuation.
Operational	▪ A power failure results in the halt of production. ▪ Inability to transport raw materials and products.
Financial	▪ Cost of damage of raw materials and other assets
Compliance	▪ Measures to stop production due to calamities.
Social / Environment	▪ An increase of sickness rate. ▪ Damage to health, life, property, and environment.

Heavy precipitation and pluvial flood (Projections)



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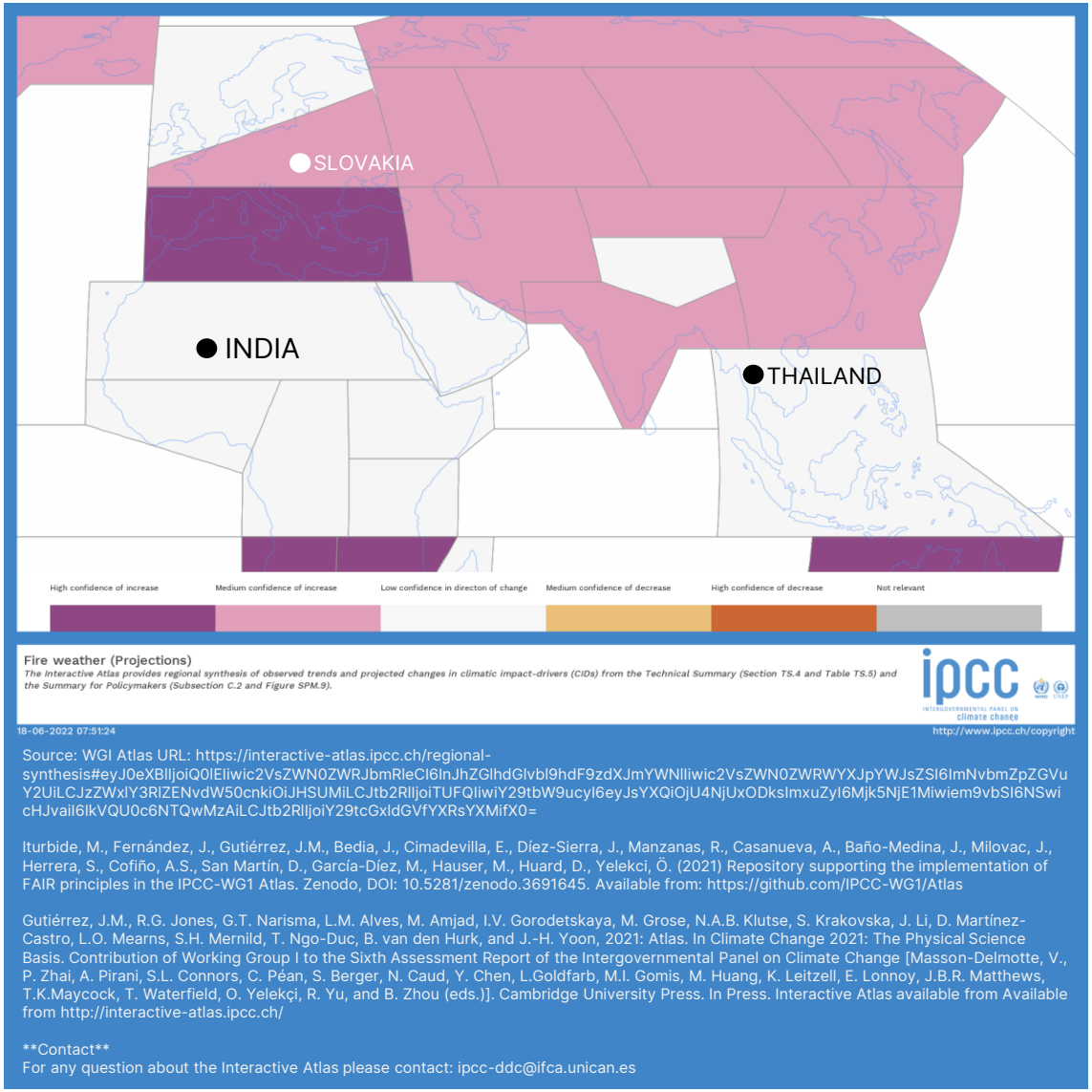
Location	Impacts level
Thailand	High confidence of increase
India	
Slovakia	

Category of risk	Possible impacts to Delta business
Strategic	▪ Scarcity of raw materials ▪ Shortage of human labor due to evacuation. ▪ Logistic difficulty
Operational	▪ A power failure results in the halt of production. ▪ Inability to transport raw materials and products
Financial	▪ Cost of damage of raw materials and other assets
Compliance	▪ Measures to stop production due to calamities
Social / Environment	▪ An increase in infectious diseases ▪ Damage to health, life, property, and environment

Fire weather (Projections)



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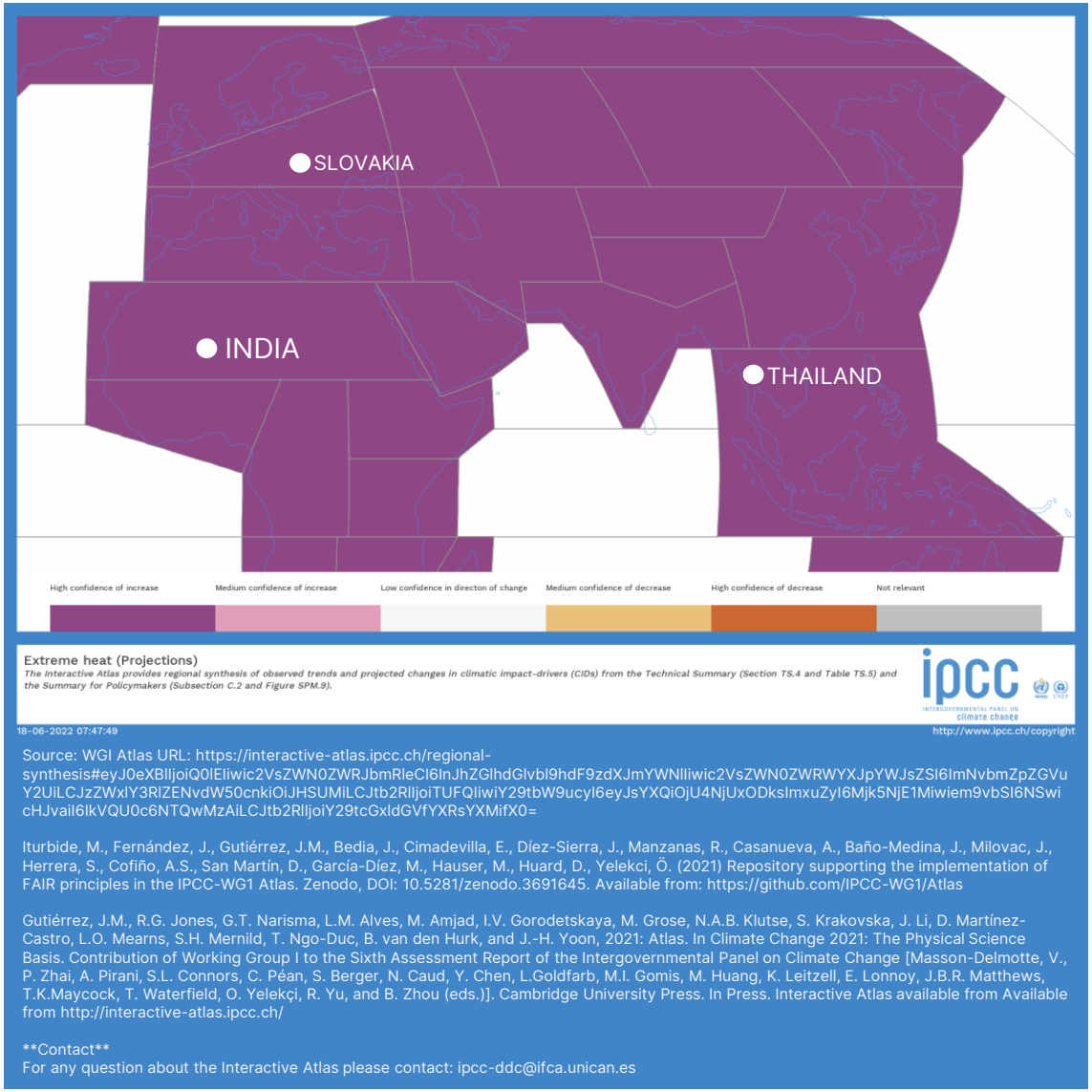
Location	Impacts level
Thailand	Low confidence in direction of change
India	
Slovakia	Medium confidence of increase

Category of risk	Possible impacts to Delta business
Strategic	▪ Logistic difficulty
Operational	▪ A power failure results in the halt of production. ▪ Lack of human labor due to evacuation.
Financial	▪ Cost of damage of raw materials and other assets
Compliance	▪ Measures to stop production due to calamities.
Social / Environment	▪ Damage to health, life, property, and environment

Extreme heat (Projections)



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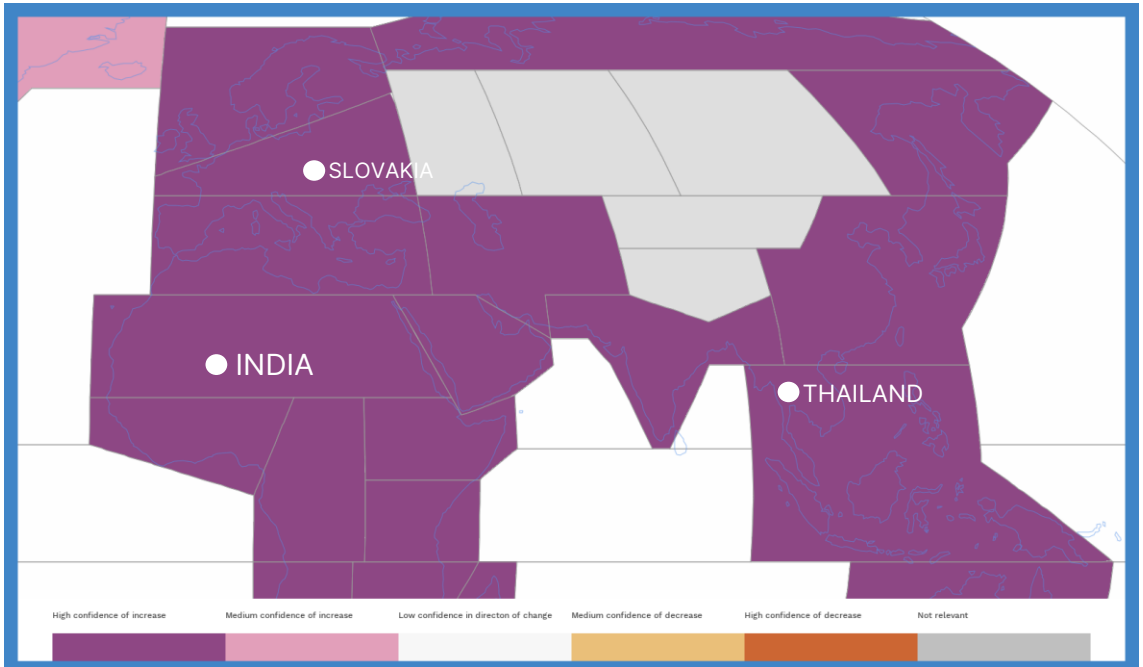
Location	Impacts level
Thailand	High confidence of increase
India	
Slovakia	

Category of risk	Possible impacts to Delta business
Strategic	-
Operational	▪ A decrease of machine efficiency
Financial	-
Compliance	-
Social / Environment	▪ Temperature uncertainty ▪ An increase of sickness rate

Coastal flood (Projections)



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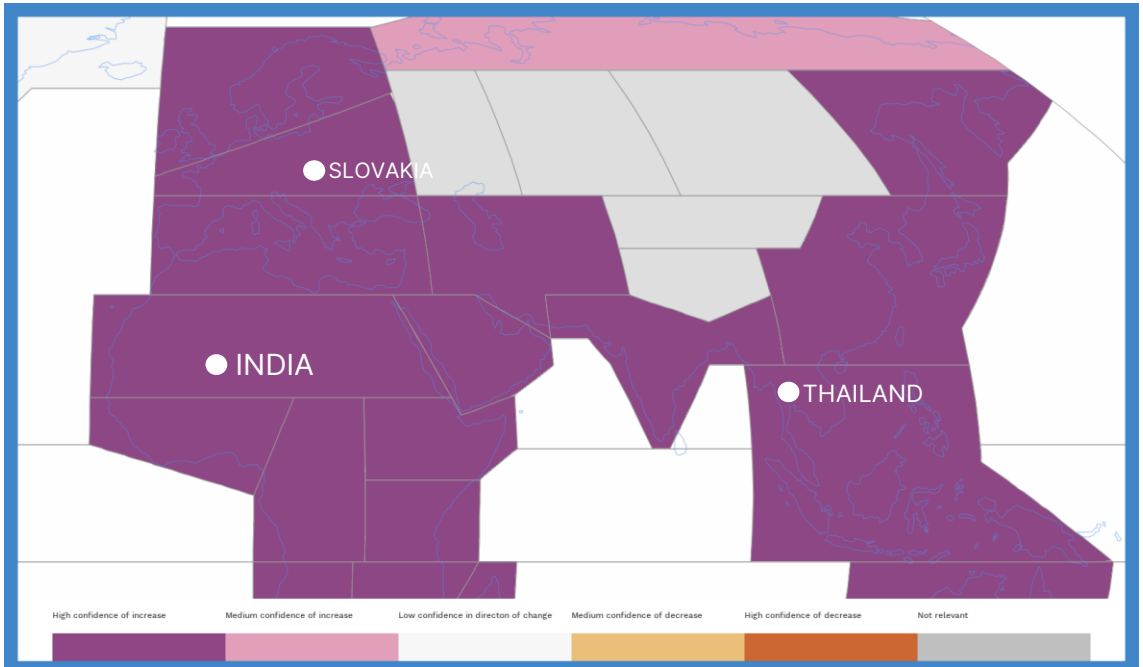
Location	Impacts level
Thailand	High confidence of increase
India	
Slovakia	

Category of risk	Possible impacts to Delta business
Strategic	▪ A decrease of land for business area ▪ Shortage of labor due to huge migration ▪ Logistic difficulty
Operational	▪ A power failure results in the halt of production. ▪ Inability to transport raw materials and products
Financial	▪ More investment on physical infrastructure
Compliance	▪ Restricting occupancy of area to business operation
Social / Environment	-

Coastal erosion (Projections)



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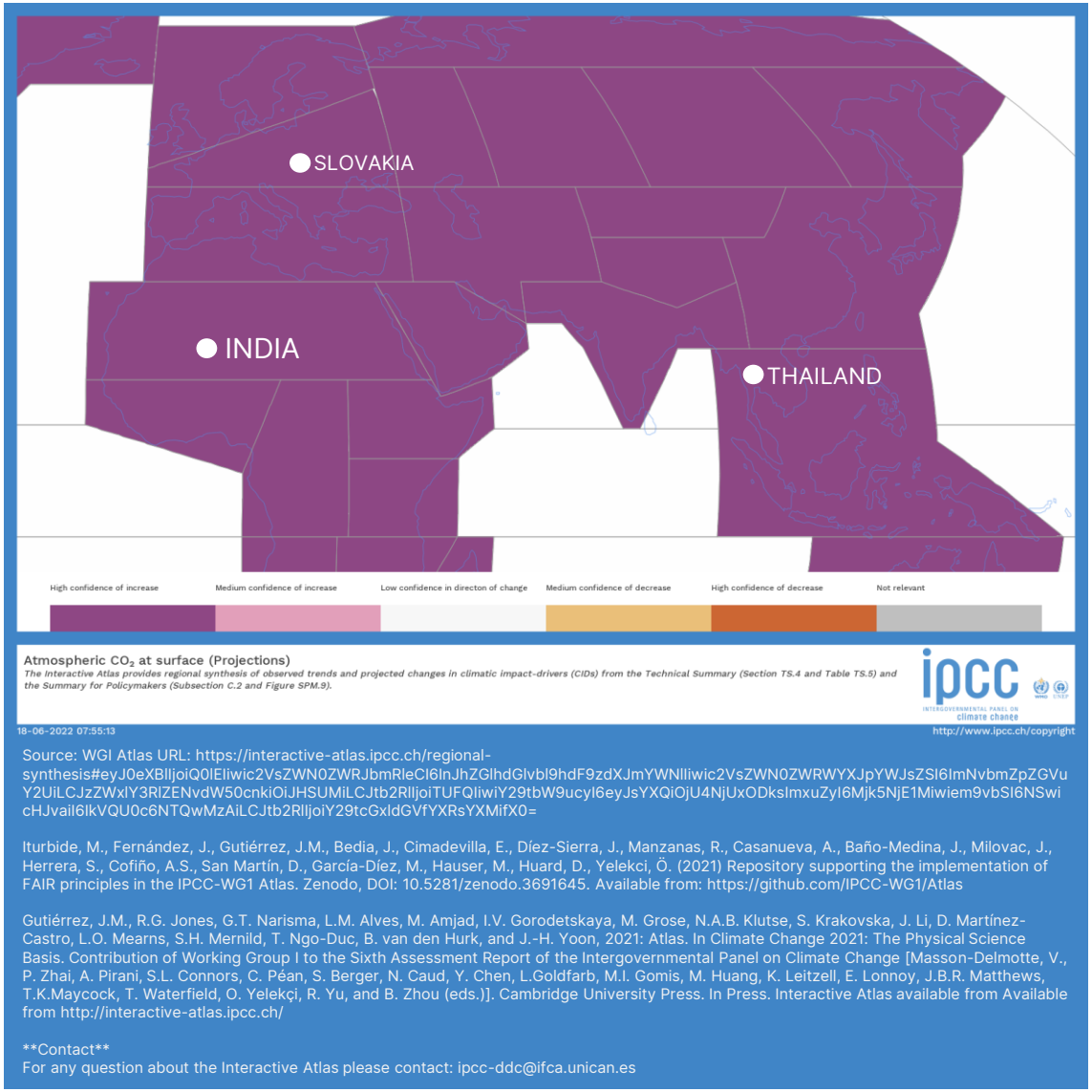
Location	Impacts level
Thailand	High confidence of increase
India	
Slovakia	

Category of risk	Possible impacts to Delta business
Strategic	▪ A decrease of land for business area ▪ Shortage of labor due to huge migration
Operational	-
Financial	▪ Increase of land rental cost for business operation
Compliance	▪ Restricting occupancy of area to business operation
Social / Environment	-

Atmosphere CO2 at surface (Projections)



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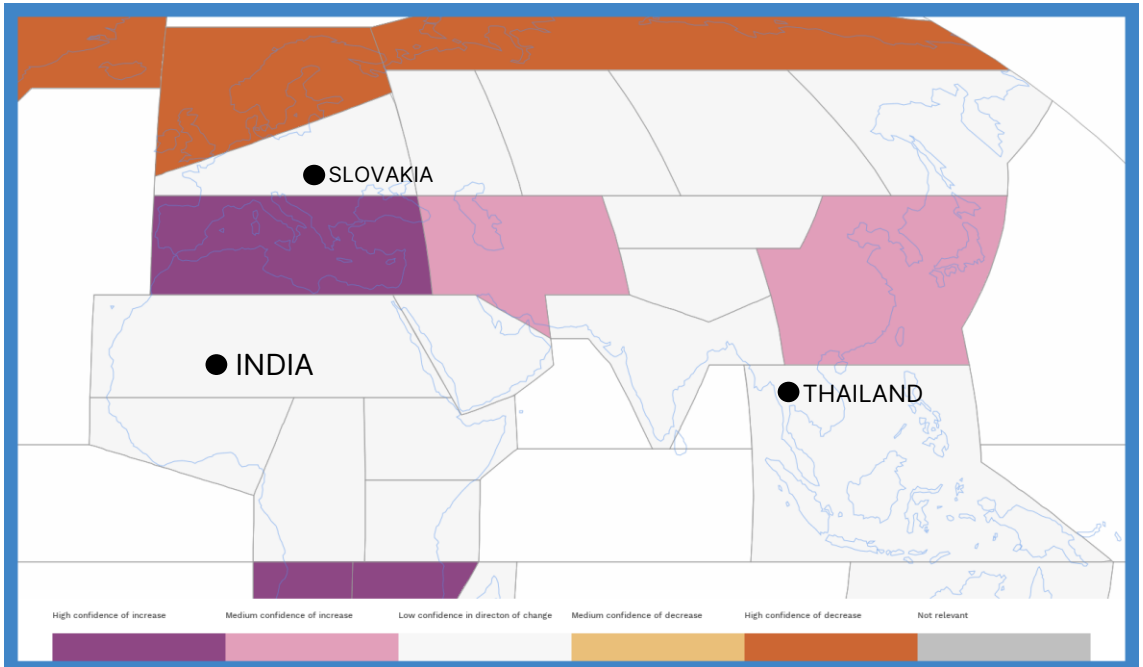
Contact
For any question about the Interactive Atlas please contact: ipcc-ddc@ifca.unican.es

Location	Impacts level
Thailand	High confidence of increase
India	
Slovakia	

Category of risk	Possible impacts to Delta business
Strategic	▪ Scarcity of raw materials and other resources ▪ Low-carbon markets emerging
Operational	-
Financial	▪ Massive shift in capital allocation and in shocks to financial markets
Compliance	▪ New measures and regulations related to carbon reduction
Social / Environment	-

Aridity (Projections)



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Location	Impacts level
Thailand	Low confidence in direction of change
India	
Slovakia	

Category of risk	Possible impacts to Delta business
Strategic	▪ Scarcity of raw materials ▪ Scarcity of raw water
Operational	▪ Production was disrupted by lack of water and electricity.
Financial	▪ An increase of water supply and electricity cost
Compliance	▪ Tighten water use and wastewater discharge measures from local and global governments
Social / Environment	▪ Community lacks clean water for consumption and results in food shortages.

2010

- Delta Thailand's fist GHG Inventory report
- Inaugurate Delta Smart Manufacturing Steering team

2011

- Thailand plants achieved ISO 50001 and 14064-1 compliance certification
- India Rudrapur (LEED-INDIA Gold)
- Delta Thailand join CDP disclosure for the first time

2012

- Thailand's Prime Minister Industry Award for Outstanding Energy Management
- India Gurgaon (LEED- INDIA Platinum)

2013

- Participation of Thailand's Voluntary Emission reduction Program

2014

- 100% of Delta's main production plants have achieved ISO 14064-1 certification
- Co-work with Taiwan HQ to Researched and developed the science-based target and methodology
- Inaugurate Delta Volunteer to educate the risk and importance of Climate Change

2015

- Delta Thailand Carbon credit recorded by TGO for further offset
- Setting Group-wide comparison base year for electricity intensity reduction

2016

- Expanded the scope of energy saving to new plants, buildings, and data centers
- SET up green revenue target
- Low Emission Support Scheme (LESS)
- Carbon Footprint Reduction Award (CFR)

2017

- Thailand plants acheive LEED Gold
- India Mumbai Building (LEED Platinum)

2018

- Achieved Delta's SBT in the first year
- First EV charger donation to Thailand EVAT

2019

- Delta Thailand Solar Rooftop 3.2MWp
- Adopt SCADA and Industrial Automation solutions to improve energy performance at Delta Thailand HQ

2020

- Announced Internal Carbon Pricing target & methodolody
- Announce RE100 participation target
- Thailand - DET Plant 7 Gets LEED Gold Certification from the U.S. Green Building Council
- Delta Thailand Receives the 2020 and 2021 Thailand Energy Awards from the Ministry of Energy
- Include EI reduction as president KPI

2021

- India Mumbai Building (LEED Platinum)

2022

- Achieved UL 2799 ZWTL
- Participate Thailand Carbon Neutral Network
- Achieved Climate leader Asia Pacific List by the Financial Time and Nikkei Asia

Photo by Jeremy Bishop on Unsplash

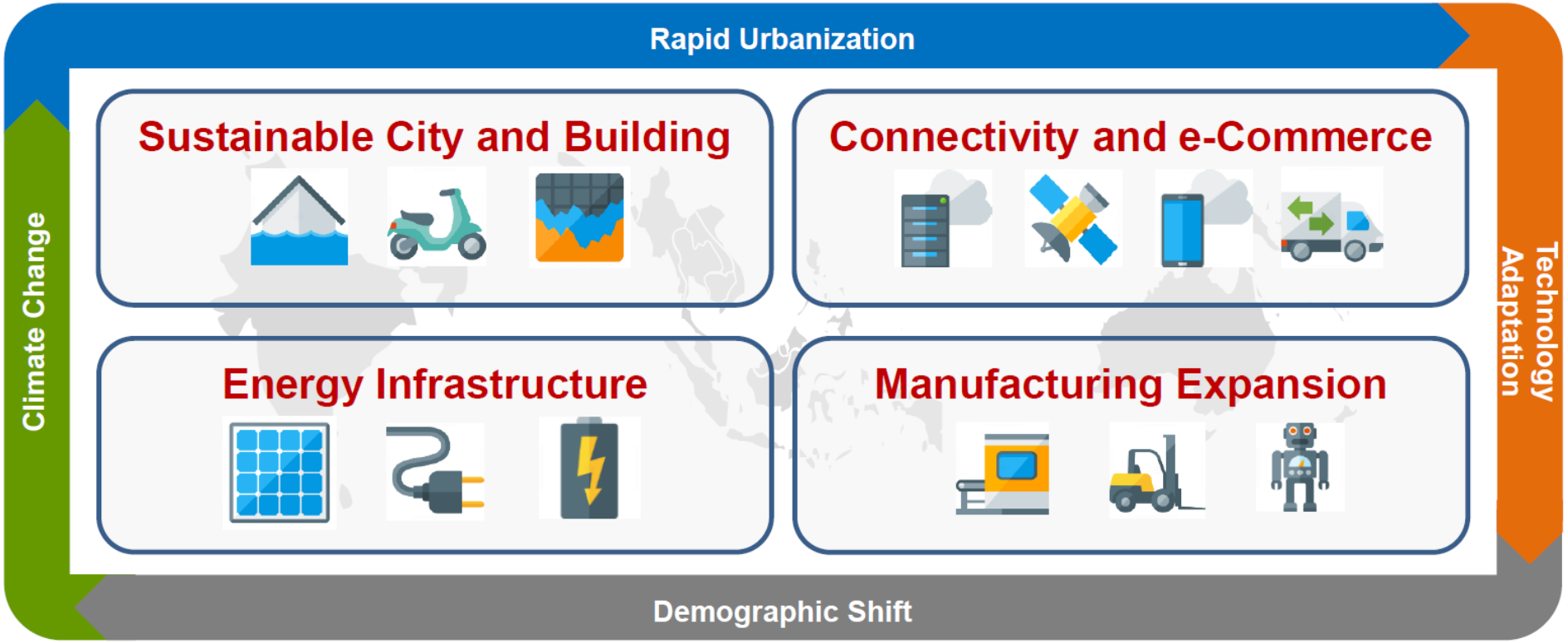
Our implemented Response to Climate Change

As a company with a long-term focus on climate change and energy efficiency as its core business, climate change has been integrated into Delta's business strategy and sustainability goals. However, as global warming gradually impacts on the global economy and climate change becomes a global risk, we are not only concerned about the direct and indirect impacts of climate change, but also how to respond more proactively to the coming era of climate change.

- Green Operations
- Performance Disclosure
- Recognized standard compliance, award and recognitions

Opportunity arising from Climate Change

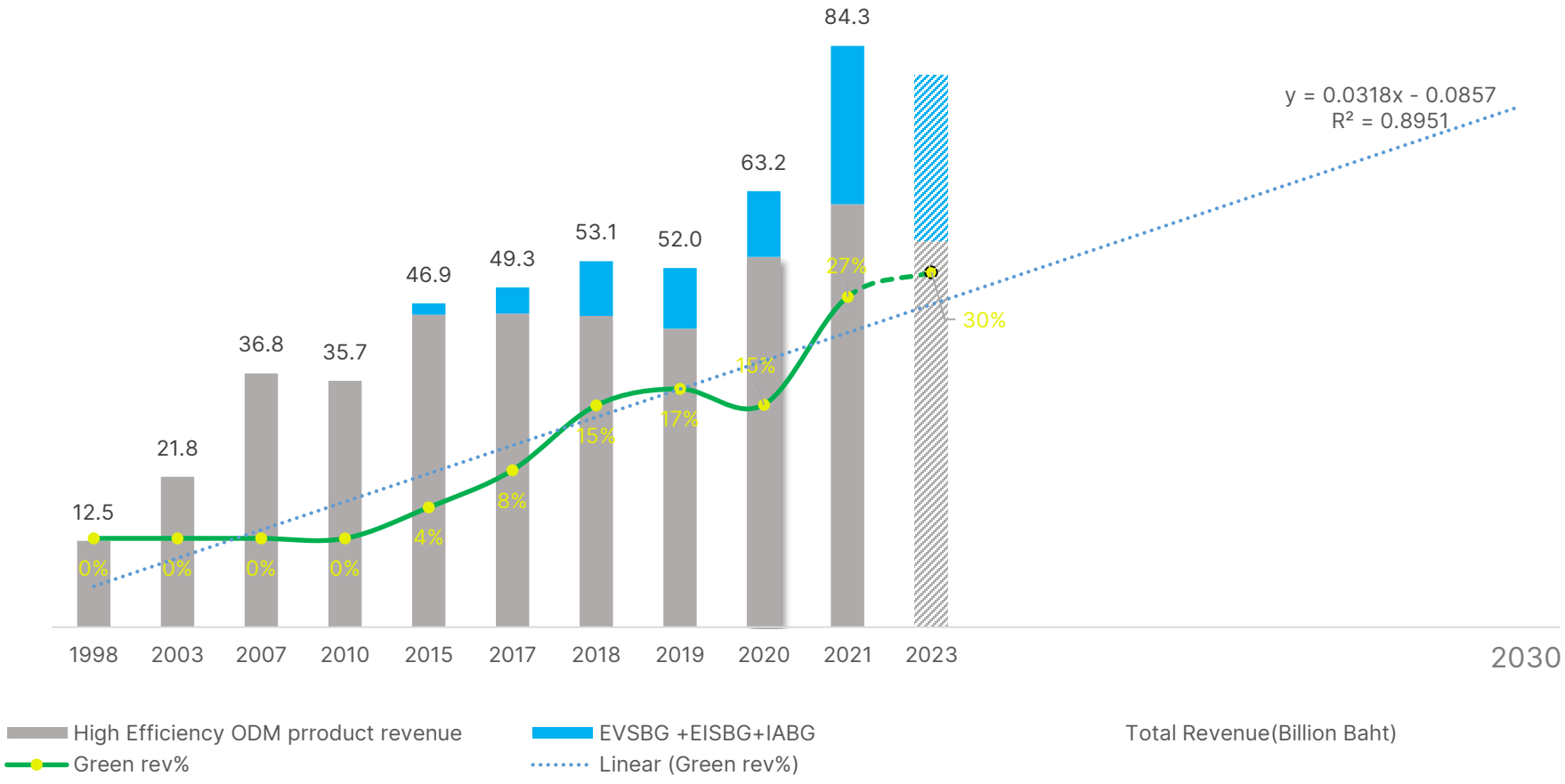
Mega Trends Implications for Regional Development



Delta Green Solutions

Industrial Automation	Data Center	Telecom Energy	EV charging	Display & monitoring	Building Automation	Smart Energy
• Factory automation solutions • Machine automation solutions • Process Automation Solutions	• Micro data center • POD • Containerized data center • Power container	• Outdoor ECO cooling enclosure • Renewable energy power system • Outdoor telecom power solutions • Site monitoring and control system	• Residential charging • Commercial charging • Public charging	• Display system solutions • Display system integration	• Building automation • Lighting design • Smart street light • Connected lighting • Smart surveillance & Delta SmartPass • UNO Indoor Air quality monitoring	• PV solutions • Energy storage solutions • EV charging solutions • Energy IoT solutions

Proportion of Green Revenue to total revenue
(Billion Baht)



What's next?

RE35

- Target RE35 for Delta sites in Thailand (35 percent of renewable energy in total energy consumption) by the year 2025.

56%

- Target to reduce GHG intensity 56.6 percent by the year 2025 (compared with the base year 2014).

30%

- Target to increase green revenue from products and solutions portfolio up to 30 percent of total revenue by the year 2023.
- Target to have 30% of recycle input material of total purchased material by the year 2025.
- Target to reduce 30% of VOC intensity by the year 2023 (compared with the base year 2019).
- Target to reduce 30% of non-hazardous waste for disposal by the year 2023 (5% yearly from the base year 2016)

20%

- Target 20% reduction of energy intensity by the year 2025 (compared with the base year 2020).

10%

- Target to reduce 10% of water withdrawal intensity by the year 2025 (compared with the base year 2020).

5%

- Target to reduce 5% of hazardous waste intensity by the year 2023 (compared with the base year 2019.)

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