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# Task Force on Climate-Related Financial Disclosures

# Task Force on Climate-Related Financial Disclosures (TCFD)

**The following section addresses Zain's response to the Task Force on Climate-Related Financial Disclosures (TCFD) in alignment with the guidance of the framework. The section represents a detailed response on Zain's approach towards TCFD's recommendations. The information covers the year 2021 in alignment to the CDP disclosure cycle.**

## Zain's Climate Action Journey

**2012**

- ✓ First Sustainability Report

**2016**

- ✓ Completed first five year target cycle

**2017**

- ✓ Aligned the CO2 emission factors for IEA Standards.
- ✓ Set new CO2 emissions reduction targets for 5 years.

**2018**

- ✓ Updated Zain's Environmental and Social Management Plan to include IFC recommendations.

**2019**

- ✓ Became a member of the GSMA Climate Action Task Force.
- ✓ Disclosed to CDP - private.

**2020**

- ✓ Disclosed to CDP - public.
- ✓ Established a Climate Action Committee (CAC)

**2021**

- ✓ Achieved A- score (leadership) through CDP.
- ✓ Plan to introduce Internal Carbon Pricing (ICP).
- ✓ Plan to commit to SBTi.
- ✓ Published Zain's Climate Change Policy

**2022**

- ✓ Developed the Climate Change Compliance Framework (approved by the BOD).
- ✓ Formal commitment letter approved by SBTi and received acceptance letter on January 6, 2023.
- ✓ Set new CO2 emissions Targets for 5 years

# Governance:

## A. Describe the board's oversight of climate-related risks and opportunities:

On annual basis, the company reviews its 5 years business plan to align future investments with its strategic direction. The revised 5 years business plans and the annual budgets are consolidated and submitted to the Board for approval at the end of each year. These plans and budgets include Capex requirements for the implementation of energy saving initiatives, which have a direct impact on the company carbon footprint. The BoD reviews and approves the business plans and budgets which become the reference for the execution of the company's strategy. The BoD, through the Group CFO , monitors the implementation of all initiatives including those related to climate change mitigation & adaptation. The Group CFO has given the responsibility of the day-to-day climate related issues management to the Chief Sustainability Officer (CSO) who chairs the Climate Action Committee (CAC), and whose role is to make sure that those issues are identified, monitored, & controlled as part of a plan that is approved by the BoD. The CAC of Zain Group is a cross-disciplinary team appointed after an internal consultation process, with the purpose of providing the BoD with an oversight on climate-related matters. The CSO ensures that quarterly environmental audits are performed, and climate related risks and opportunities are identified. Through the CSO, the CAC provides recommendations to the BoD on how to manage climate related risks and opportunities. The BoD reviews and approves the recommendations from the CAC for climate-related issues. The approvals by the BoD are reflected by the CAC in the Company strategy for identifying, assessing and managing climate related risks and opportunities. The CSO in coordination with other members of the CAC, ensures that the Company capitalizes on climate change related opportunities while mitigating the risks when they materialize. The CAC meets on a quarterly basis and as frequently as needed to discuss climate related risks and opportunities. Climate related issues reported by the CAC during their meetings are reported to the BoD through the Group CFO who provides recommendations and guidance. The formal reports to the BoD by the CAC are done during the regular quarterly meetings held by the BoD to discuss all management issues including climate related matters. The quarterly reviews focus on ensuring that the Company is meeting its climate specific Key Performance Indicators (KPIs) in terms of Greenhouse Gas (GHG) emissions levels, fuel and electricity consumption, waste management, recycling and public awareness on climate change. By monitoring such KPIs on a quarterly basis, the BoD can assess, evaluate, and support the company's performance when it comes to climate-change related issues. In addition, the BoD would have a clearer viewpoint of the progress the company is making towards its climate-related targets.

## B. Describe management's role in assessing and managing climate-related risks and opportunities.

In 2022, a major milestone was achieved when the BoD approved the company's climate change compliance framework that sets a clear direction for an organizational transformation to address climate change. This framework clearly outlined Zain's ambition to become Net Zero by 2050 and builds on key strategic energy efficiency related initiatives. Subsequently, the Group CFO made the decision to submit a commitment to setting science-based targets to SBTi which will set the Company on the path of limiting global warming to 1.5°C compared to pre-industrial levels as aimed by the Paris Agreement. The Company's new CO2 emission targets set in 2022 are aligned with the requirement of an annual reduction of 4.2% as recommended by SBTi for a transition to Net Zero by 2050.

The BoD through the Group CFO sets the direction that shapes the strategy of the Company for addressing climate change. All management issues including climate related issues such as the company's CO2 emission reduction targets status, the risks associated with ambient temperature increase, the possible changes in precipitation pattern as well as the transition to new technologies due to climate change are the responsibility of the Group CFO who delegates the day-to-day operations and control of the climate related issues to the Climate Action Committee chaired by the Chief Sustainability Officer.

## Strategy:

### A. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.

*The information included below reflect figures and analysis for the year 2021.

| | FROM (YEARS) | TO (YEARS) | COMMENT |
|---|---|---|---|
| **Short-term** | 1 | 3 | This definition follows our business planning process. Our short-term business plan considers this period for the operational risks arising due to climate change events that need to be addressed to enhance our services to remain competitive in our markets. The normal lifetime of some of our assets such as Diesel generators used on off grid sites is around 3 years. Hence, we consider 3 years to be a reasonable period for assessing the impact of physical risks on such assets. From a financial and strategic perspective, our short-term horizon is focused on development and achievement of revenue forecasts, cost targets and profitability targets based on existing Consumer and Enterprise Business portfolio. |
| **Medium-term** | 3 | 5 | Our medium-term business planning process uses a 5-year horizon this period for the operational risks arising due to climate change events. This period is also in line with the lifetime of other assets such as the deep cycling batteries, which are used to mitigate the risks associated with some of the physical and transition risks. Our 5-year business plan is prepared every year while monitoring the progress of the previous year's 5-year plan's execution. The business plan is updated with actuals of the first year and revised forecast for 4 years, subsequently an incremental year is added. |
| **Long-term** | 5 | 15 | Our long-term business financial planning process is planned over 5 years and 15 years to align with our goals of Climate change initiatives. This is the time frame that gathers a big portion of the company assets such as the cooling systems, the DC power systems, the radio systems and other active equipment in transmission and core sections. The impact of physical risks on such assets is evaluated and mitigated to ensure that the company remains competitive in its markets of operation. From a strategic perspective, our strategic business plan entails the long-term horizon and is focused on forecast of cashflows and revenue potential from the initiatives that we identify as part of our organization strategy. |

## Risks identified:

### TRANSITION RISK: INCREASE IN FUEL AND ELECTRICITY TARIFFS

During the assessment of climate related risks for our core site, offices, and base stations sites' facilities, we identified that there could be an increase in operational expenditure due to tariff hikes of fuels and grid power unit in our areas of operations.

Energy prices are subsidized in our oil rich operations in Kuwait, KSA and Bahrain. Our total energy consumption in 2021 was 1099 MWh up by 6% from 2020. With our long-range planning process of 15 years, we estimated that energy operating costs could increase by over 120% at USD 387,177,592. The breakup of 2035 estimated energy costs of USD 387,177,592 between the 2 risks is the following:

USD 30,313,022 due to increase in cost of cooling for 2C temperature rise and USD 356,864,570 due to increase in unit economics of energy prices for both Grid Power and Diesel fuel. The estimated figures factors in the underlying per unit grid power and diesel fuel hikes as per macroeconomic indicators due to inflation and gradual reduction of subsidies. We took the Net Present Value with a discount rate of 10% to arrive at USD 61,122,941 which when compared to 2021 EBITDA will be graded in HIGH category due to a substantive financial impact of 2.8% to 2021 EBITDA figure of USD 2.16 B.

Scope: All Markets – Kuwait, KSA, Bahrain, Iraq, Jordan, Sudan and South Sudan
Time Horizon: Long-Term

### CHRONIC PHYSICAL: RISE IN MEAN TEMPERATURE

An increase in average temperature could impact our operating costs and result in more energy consumption for additional cooling requirements.

In 2021, the cost of cooling for office premises, data centres and radio equipment across our operations was USD 73,301,502 which is lower than 2020 figure of USD 81,697,053. However, if we exclude the currency devaluation Sudan in mid-2021, the figure would have been USD 90,072,605.

As per RCP 8.5, we have projected a 2°C rise of mean temperature by 2035 for our Operations in Kuwait, Kingdom of Saudi Arabia, Bahrain, Iraq, and Jordan. For South Sudan, the projection has been kept at 1°C.

The total energy cost in 2035 has been estimated as USD 387,177,592. Out of this, estimated increase in cost for cooling would be USD 30,313,022.

Scope: All Markets – Kuwait, KSA, Bahrain, Iraq, Jordan, Sudan and South Sudan
Time Horizon: Long-Term

### ACUTE PHYSICAL: INCREASED SEVERITY AND FREQUENCY OF EXTREME WEATHER EVENTS

With the incident reports from the network monitoring systems, we estimated the outage or downtime in minutes for the respective sites affected by the floods and estimated the revenue opportunity loss after multiplying the average revenue per minute with the outage as reported from the monitoring systems.

We aligned the estimated impact to our risk matrix to classify the risk profile. To this effect, our 2021 Earnings before Interest, Tax, Depreciation and Amortization figure was USD 19.97 M or SSP 8 B. As per our climate risk analysis, the impact of floods which was USD 22,300 will be graded in Low category due to a minor financial impact of 0.1% to 2021 EBITDA. In financial terms, the impact may be low, however the severity has been increasing year on year, hence we continue to monitor this risk. Further, this risk is also one of the top 10 risks in the register for South Sudan.

The impact estimation due the precipitation in South Sudan was based on the historical pattern. In future, we shall be disclosing the forecasted impact on operations based on climate studies.

Scope: South Sudan
Time Horizon: Short-Term

## Opportunities identified:

### 1. INCREASE IN ADOPTION OF RENEWABLE ENERGY SOURCE

We deployed green power solutions such as battery-hybrid solutions, solar systems, outdoor equipment, connection of base station sites to the grid and performed sites sharing with other MNOs. The strategy followed by Zain is to transform the identified physical and transition risks into opportunities by responding in a way that helps reduce our operating costs with payback periods that do not exceed 6 years. The implementation of energy efficient solutions (solar solutions, battery hybrid power, outdoor cabinets and small shelters) has led to a reduction of our Opex of USD 1.969M in 2021. The benefits of such initiatives will continue for at least 5 more years (during the lifetime of the equipment that were deployed). The initiatives have also helped Zain reduce its $CO_2$ emission by 10,.484 metric tons in 2021.

Scope: KSA, Bahrain, Sudan and South Sudan
Time Horizon: Medium-Term

### 2. PRODUCTS AND SERVICES: ABILITY TO DIVERSIFY BUSINESS ACTIVITIES TO ELECTRONIC CHANNELS

We are witnessing steady growth in adoption of digital channels and target to achieve 85% of recharge transactions over digital by 2025 in our markets.

Zain Jordan is the first and only mobile operator who implemented paperless systems in the shops, franchisees and point of sales. Digital Contract transformation for Zain Shops that modernize and digitize the contract management cycle starting from Customer signing to reviewing and archiving the contract. Business modernization was essential to fit with the digital cycle. Customers will sign the contract on a tablet instead of paper and receive it by email or SMS and the rest is digital. Better customer experience, Digital look, Cost saving, Operational efficiency, and Environmental effect are some of the advantages we gained out of it.

Scope: Jordan
Time Horizon: Long-Term

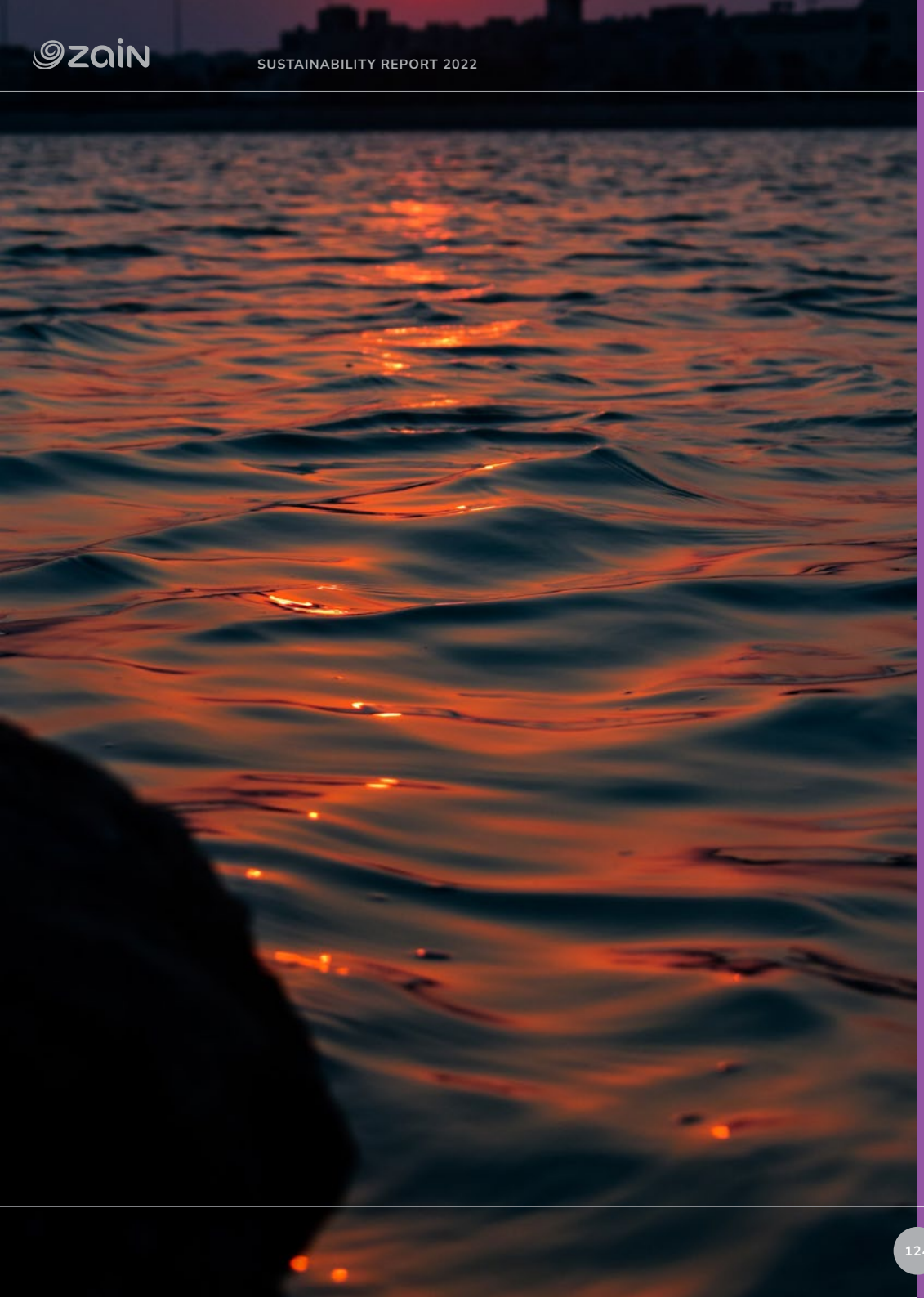
## B. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

The success of risk management will depend on the effectiveness of the management framework providing the foundations and arrangements that will embed it throughout the organization at all levels. Our Risk Management framework assists in managing risks effectively through the application of the risk management process at varying levels and within specific contexts of the organization. The framework ensures that information about risk derived from the risk management process is adequately reported and used as a basis for decision making and accountability at all relevant organizational levels. The Group Enterprise Risk Management team develops an annual risk calendar plan to include all Zain Operations for the purpose of scheduling periodic risk identification through risk assessment exercises. During the assessment for a particular Operation, Commercial Divisions, Technology, and Corporate Divisions' leadership define their risk attitude in relation to the major risks including climate change risks that may affect their business, against which assessed risks severity is reviewed to ensure alignment and acceptability. As per our Risks Management methodology, our risks assessment impact matrix has a 5-point scale based on the financial indicators namely Revenue, Capital Expenditure Intensity and Operational EBITDA Margins. The highest impact grading which is "Extreme" would be applicable for a risk event when its financial impact exceeds the most significant thresholds. For substantive financial impact, we have identified thresholds to determine if a risk has the potential to significantly affect the company and needs to be reported. Our Risk Management corporate policy defines an acceptable risk as the degree of exposure that the company is ready to accept in as much as it allows the creation of value, achieving the right balance between growth, performance & risk. This threshold is considered when reviewing our strategy to ensure we operate within the established risk appetite. Following are the thresholds for substantive or High financial impact as per our Risk Matrix: -Whenever there is a risk that results in an impact of our Gross Revenue: >2% of Operating Company's (OpCos) Annual Revenue; -When Capital Expenditure Intensity planned for the fiscal year exceeds 10% (where Capital Expenditure Intensity is the ratio of Capital Expenditure to the Gross Income) - When the impact of the risk event exceeds Earnings Before Interest Tax Depreciation and Amortization (EBITDA) Margins of the OpCos by > 2%.

## C. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

| CLIMATE-RELATED SCENARIO | SCENARIO ANALYSIS COVERAGE | PARAMETERS, ASSUMPTIONS, ANALYTICAL CHOICES |
|---|---|---|
| **Transition Scenario IEA 450** | **Company-wide** | Temperature alignment: we explored changes in energy costs under one of the IEA scenarios namely the IEA 450 which is aligned with temperature increases to or below 2°C compared to pre-industrial level. Parameters, Assumptions, and analytical methods: increases in energy tariff will lead to an increase of energy costs for the operation of our telecom/IT sites. During the assessment of climate related risks for our core site, offices, and base stations sites' facilities, we identified that there could be an increase in operational expenditure due to tariff hikes of fuels and grid power unit in our areas of operations. Energy prices are subsidized in our oil rich operations in Kuwait, KSA and Bahrain. Our biggest operating costs are energy costs to cater for cooling requirements for our telecom and IT systems that need 25°C which is much lower than ambient temperatures in our operations. Our total energy consumption in 2021 was 1,099 MWh up by 6% from 2020 where it was 1,031 MWh and 158.3 M liters of diesel up by 3% from 153.4 M liters of diesel in 2020. The 2021 overall energy cost including diesel cost was USD 176,164,623. With our long-range planning process of 15 years, we estimated that energy operating costs could increase by over 120% at USD 387,177,592. The estimated figures factors in the underlying per unit grid power and diesel fuel hikes as per macroeconomic indicators due to inflation and gradual reduction of subsidies. The estimates are based on the 2021-year end consumption. The increase in costs is primarily due to two main variables: 1. rise in energy tariffs due to inflation and reversal of subsidies in some of operations and 2. Rise in mean temperature We aligned the estimated impact to our risk matrix to classify the risk profile. To this effect, our 2021 Earnings before Interest, Tax, Depreciation and Amortization figure was USD 2.16 B. As per our climate risk analysis, the delta increases due to RCP 8.5 scenario for 2035 on account of increased grid and fuel costs is estimated at USD 211,012,969. We have chosen the RCP 8.5 scenario to estimate the likely outcome if the governments in our operating countries do not make concerted efforts to cut greenhouse gas emissions. We took the Net Present Value with a discount rate of 10% to arrive at USD 61,122,941 which when compared to 2021 EBITDA will be graded in HIGH category due to a substantive financial impact of 2.8% to 2021 EBITDA figure of USD 2.16 B. The transition from current power generation solutions to solar and DG Battery hybrid solutions is estimated to cost more than USD 400M by 2035. |

| CLIMATE-RELATED SCENARIO | SCENARIO ANALYSIS COVERAGE | PARAMETERS, ASSUMPTIONS, ANALYTICAL CHOICES |
|---|---|---|
| **Physical Climate Scenarios RCP 8.5** | **Company-wide** | This business-as-usual scenario assumes temperature increases by 2°C by 2040 and 3°C by 2059 compared to pre-industrial level. Parameters, Assumptions, and analytical methods: Zain relies on the World Bank Group (WBG) forecasts, who uses data from the CMIP5 models included in the IPCC - AR5 as a reference to help project climate change states for the entire company. Two times' horizons were considered: 2020 – 2039 and 2040 – 2059. These two horizons are the default horizons proposed by the WBG using the CMIP5 models for climate change projections. Within these horizons and considering a linear progression, a 15-years climate change analysis from 2020 to 2035 (our main time horizon) was derived to align with our corporate risks' management process long-term risks timescale and the life cycle of our assets. We explore both physical and transition risks for our base stations, Data Centers, and Office Buildings. As per RCP 8.5 Ensemble, there will be an average temperature increase of 2°C by 2035. A vulnerability assessment of our operations revealed that some of our assets in all our 7 operating countries such as the equipment premises will consume more power to maintain the same level of temperature because of the positive correlation between external temperature and the energy consumption. We estimate the rise in mean temperature will have an impact of additional USD 30.3M on cooling energy costs, and an anticipated increase of 120% of energy cost, an impact of USD 211M by 2035. After mapping these costs to our corporate risks' identification and management matrix, the rise in mean temperature was categorized as a high risk for our business. We also found that there will be some changes in the precipitation pattern from 2021 to 2035 with some consequences felt in 2021. Our operations in Sudan and South have witnessed some unprecedented flooding resulting in fiber cuts in Sudan and delayed services rollout in South Sudan. Using 2020 as a baseline, we established a relationship between the level of precipitation and revenue loss. Flooding was found to be a medium risk for our Businesses in Sudan and South Sudan. Hence, the change in precipitation became one of our physical risks. To reduce the energy consumption due to increased cooling requirements, a set of initiatives have developed under one of our company strategic pillars which is "operational effectiveness". These initiatives have led to a reduction of 3,864 metric tons of $CO_2$ emission in 2021. |



| CLIMATE-RELATED SCENARIO | SCENARIO ANALYSIS COVERAGE | PARAMETERS, ASSUMPTIONS, ANALYTICAL CHOICES |
|---|---|---|
| **Physical Climate Scenarios RCP 1.9** | **Company-wide** | Temperature alignment: Our ambition is to be net zero by 2050. To understand the impact of such move on our business, we tried to uncover all the associated costs. This analysis is based on RCP 1.9 pathway that limits the rise in mean temperature to 1.5 °C compared to the pre-industrial era. Parameters, Assumptions, and analytical methods: The parameters considered in this analysis are the number of sites, the energy consumption per site, and the share of renewable power. We projected our energy consumption based on the number of sites at the horizon of 2050. We then laid down a set of initiatives ranging from the deployment of battery hybrid solutions, outdoor cabinets and solar power solutions. While we observed that our energy consumption is likely to increase, the fact that the share of solar based power increases at a faster rate helps foresee substantial reductions in CO2 emissions. It is assumed that solar plants will be deployed in our operations in Bahrain, Sudan, South Sudan, Kuwait and Jordan for us to be able to achieve 80 – 90% reduction of CO2 emissions by 2050. The remaining 10 – 20% of the emissions will be offset through carbon sink and the implementation of carbon capture solutions. |

Note:

RCP 8.5: This is Business as Usual (BaU scenario). It was selected because of the need to project our operating costs considering that we continue to do business as usual. This reference scenario is used to assess to impact of the identified physical risks on our current operating costs when performing business as usual.

RCP 1.9: This is the scenario that was close to a transition to Net Zero by 2050. It was selected because Zain wants to assess the impact of an adoption of clean energy sources on its operations. This scenario is then compared to the BaU scenario to see the real impact of climate change on our business. The Operating costs (energy costs) under both RCP 8.5 an RCP 1.9, cost implications are compared to see whether there is a difference to allow for possible adjustments in the way we do business.

The IEA 450: This transition scenario was selected because the adoption of clean energy would require a transition to more energy efficient solutions and therefore lead to additional Capex for our business. This scenario allows us to assess the additional Capex that would be required if we have to transition to a low carbon economy.

# Risk Management:

## A. Describe the organization's processes for identifying and assessing climate-related risks.

We recognize that climate change poses several physical and transition-related risks for our business.

We identified three risks in line with Task Force on Climate Related Financial Disclosures guidance. We quantified the business impacts of all climate-related risks under each scenario over different time horizons.

Key risk and opportunity areas arising from the scenario base climate risk and opportunity assessment are as follows:

- Physical Risk: Rise in mean temperatures that could negatively impact margins and operating costs.
- Physical Risk: Increase in frequency and impact of extreme weather events to disruption of services.
- Transition Risk: Increase in unit economics of energy costs.

The scope of the risk assessment processes includes all people, processes and technology within Zain group and its operating countries.

Our risk assessment process consists of the following steps:

### Risk Identification

Risk Owners and the Risk Management team review the risks specific to the Division and identify any emerging risks based on changing market conditions and business dynamics.

### Risk Analysis

For the identified risks, likelihood for each risk based on the probability of occurrence and the impact severity based on the identified consequences are determined.

### Risk Evaluation

For the identified risks, the Management team assigns Risk owners to perform detailed root cause analysis of their respective risk, build actionable steps considering the following risk mitigation strategies based on Risk Management policy. The risks are quantified based on the likelihood and impact as per our established risk management criteria for Revenue, EBITDA, and other metrics.

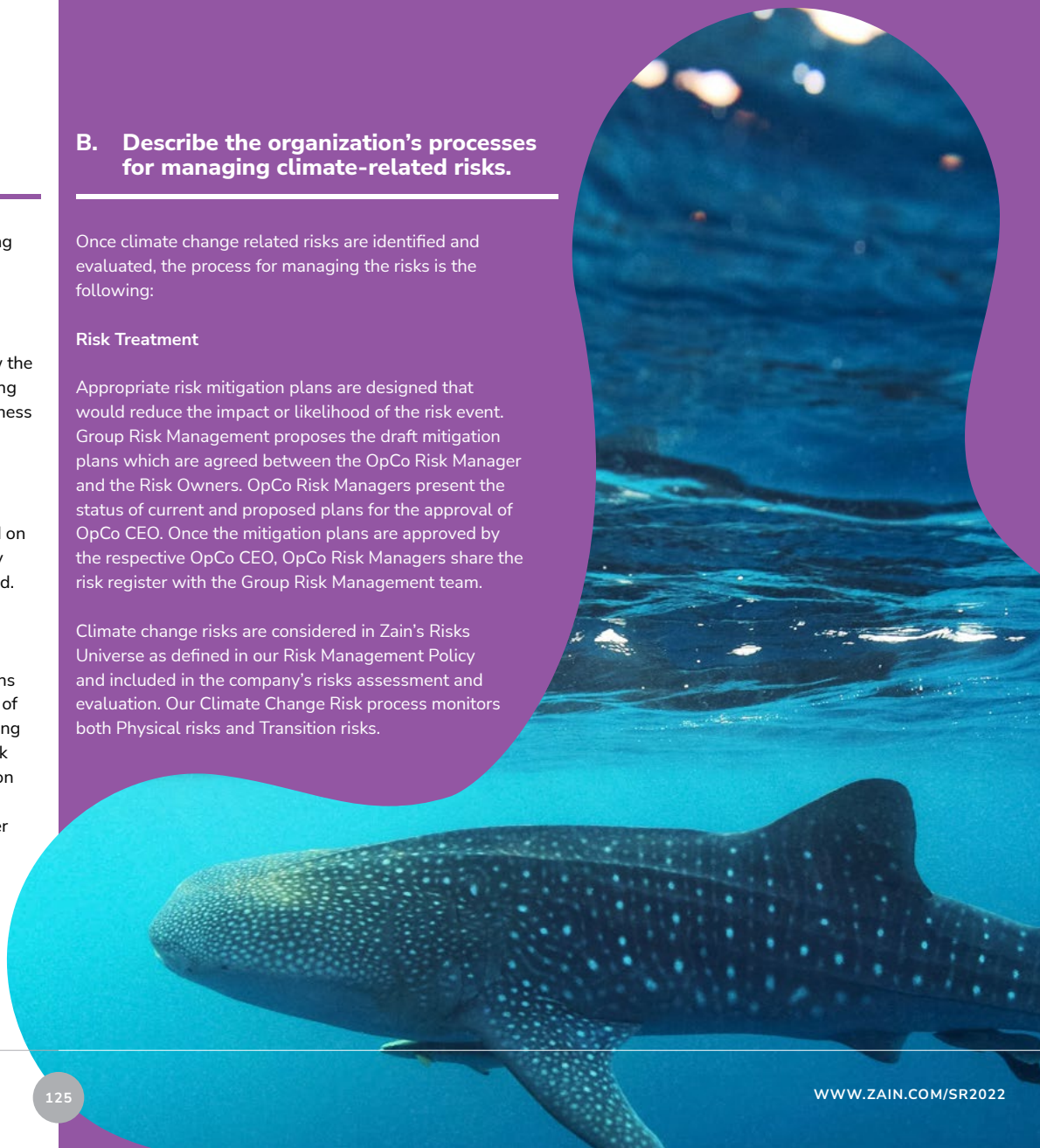
## B. Describe the organization's processes for managing climate-related risks.

Once climate change related risks are identified and evaluated, the process for managing the risks is the following:

**Risk Treatment**

Appropriate risk mitigation plans are designed that would reduce the impact or likelihood of the risk event. Group Risk Management proposes the draft mitigation plans which are agreed between the OpCo Risk Manager and the Risk Owners. OpCo Risk Managers present the status of current and proposed plans for the approval of OpCo CEO. Once the mitigation plans are approved by the respective OpCo CEO, OpCo Risk Managers share the risk register with the Group Risk Management team.

Climate change risks are considered in Zain's Risks Universe as defined in our Risk Management Policy and included in the company's risks assessment and evaluation. Our Climate Change Risk process monitors both Physical risks and Transition risks.



## C. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

Climate change risks are considered in Zain's Risks Universe as defined in our Risk Management Policy and included in the company's risks assessment and evaluation. Our Risks Management and Sustainability Chiefs are part of the Climate Action Committee (CAC) and always in constant engagement on the evolving climate change related risks. Our Climate Change Risk process monitors Physical risks and Transition risks that are likely to affect our OPCOs.

Through our climate risks and opportunities identification process, we conducted a review with our Commercial Divisions in our Operations, we identified that there is a need to maintain a safety stock of our consumables. This is due to the anticipated delay from the current 2 months lead time between ordering and delivery of sim cards and recharge vouchers. During floods, supply chains might get impacted due to inaccessibility of roads and the airport. Hence, the decision to maintain an adequate safety stock. This shall ensure continuity of sales through uninterrupted availability of stock during climate change events such as floods caused by excessive precipitation. This risk is prevalent in Sudan and Iraq which are more prone to floods due to their precipitation receipt patterns. As per Coupled Model Intercomparison Project, Phase 5 (CMIP5) models included in the IPCC's Fifth Assessment Report (AR5), annual precipitation will rise by 13.89mm in 2040-2059 (RCP 8.5, Ensemble). Our operations in South Sudan continued to face the impact of excessive rainfall. In December 2021, profuse and continuous rainfall in South Sudan caused a devastating flood reaching water levels not seen for nearly a century. It ranks among the most severe floods recorded in the region. Due to 2021 floods, 159 sites were switched off due to power disruption and were not accessible because of the excessive rainfall and floods. As a telecom service provider, we have two categories of retail customers – post-paid and prepaid. For prepaid customers to ensure validity of their lines, they need to recharge their account balance on a periodic basis which is usually on a monthly cycle. We have made this recharge service available through offline (paper recharge voucher) and online channels (website, mobile app, bank recharge, smart branch etc.). As per OCHA situation reports, we have observed severe floods in these markets due to excessive rainfall as per their climate patterns which has in the past affected clearance of shipment from customs and delivery to point of sales from warehouse. We also referred to the TCFD's Aqueduct Global Flood Risk Country Rankings by Population Affected, where Iraq, Sudan and South Sudan are ranked in the top 10% quartile in the study of 163 countries. As per our risk assessment plan, we performed a review with our Commercial division to estimate the impact of non-availability of vouchers due to exhaustion of existing supplies at warehouse and due to disruption of shipments from airports due to calamities. Based on the consumption pattern of the recharge vouchers for various denominations and the estimated lead time from time of ordering to delivery of shipment, we observed that there should be sufficient stock as buffer to be kept at the warehouse for adequately servicing our sales channels. Our approach to mitigate this problem was to build a safety stock of 180 days from the previous 90 days of Recharge vouchers and which should always be maintained at all times of the year. We arrived at the figure of 180 considering the delay in the average lead time of 60 days from our suppliers due to the supply chain disruptions. Monthly reviews of stock levels are performed by our logistics teams. Further, we are promoting social media campaigns to educate customers in these markets to gradually adopt online channels. This is also in line with our digital strategy which will result in lower operating costs due to lesser printing cost incurred on recharge vouchers. Our safety stock policy has been implemented and has proven effective during the flood calamities. Our digital channels are also seeing good customers. We are witnessing steady growth in adoption of digital channels and target to achieve 85% of recharge transactions over digital by 2025 for the above markets. Post-paid payments and recharge transactions comprised 20% of the value share in Sudan which is steadily increasing to more than 30% in Q4-21. This is because of our continuous push to digitize the sales channels and encourage our customers to adopt digital channels for their telecom needs.

# Metrics and Targets

## A. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.

Metrics used by Zain include emissions, energy consumption, capital deployment.

| METRICS | PERFORMANCE |
|---|---|
| Energy | |
| **Diesel Fuel Consumption (Liters)** | *Excluding South Sudan as it has a smaller base and as the consumption de-grew by 20% YoY due to electrification by the Government, the average increase in consumption across the operations was 5.33%.* |
| **Grid Consumption (KWh)** | *Excluding South Sudan as it has a smaller base and as the consumption rose by 300% YoY, the average increase in consumption across the operations was 8.83%.* |
| **Average Fuel price per Liter** | *Except Jordan 13% YoY increase, the average fuel price was unchanged across the 6 other Operations for 2021 over 2020.* |
| **Average Grid unit price** | *The average grid price in terms of 1 KW h was unchanged across the 7 other Operations for 2021 over 2020.* |
| Capital Deployment | |
| **Investment in climate adaptation (total capital invested in networks)** | USD 17.106 M USD across Iraq, Bahrain and KSA<br>*129 sites infrastructure sharing for a cost of USD 1.385M,*<br>*the deployment of 553 outdoor cabinets for a cost of USD10.102M,*<br>*and the deployment of 319 smaller size diesel generators, the implementation of 31 solar polar solutions & 55 battery hybrid solutions as well as the connection of 58 sites to commercial power for an estimated cost of USD 5.619M* |
| **Investment in climate mitigation** | SSP 1,130,116 – South Sudanese Pound<br>*cost of response to the mitigation includes repair of Diesel Generators SSP 1117890 or USD 2780 and contamination removal costs SSP 192226 or USD 478 due to mixing of water with fuel* |

## B. Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.

Metrics used by Zain include emissions, energy consumption, capital deployment.

| SCOPE OF EMISSION | UNIT | TOTAL |
|---|---|---|
| **Scope1 emissions** | tCO2e | 411,484 |
| **Scope2 emissions** | tCO2e | 651,376 |
| **Total Scope1 & 2 emissions** | tCO2e | 1,062,860 |
| **Total Scope3 emissions** | tCO2e | 496,624 |

Emissions risks:

| SCOPE | RELATED RISKS | SUMMARY |
|---|---|---|
| **Scope1 emissions** | Increase in consumption of Diesel. | Sporadic availability of Grid across Operations due to natural or man-made events may entail an increase in Diesel consumption as a backup energy source.<br>As 5G is launched across the operations and coverage of 4G sites increases, there could be an increase due to the demand of fuel for the greenfield sites. |
| **Scope2 emissions** | Increase in consumption of Grid Power. | As 5G is launched across the operations and coverage of 4G sites increases, the primary energy source is Grid power and this could lead to further increase in consumption and hence incremental emissions. |
| **Total Scope3 emissions** | NA | As Scope 3 is not in the ambit of Zain's initiatives for climate change, it would be difficult to quantify and articulate the risks from value chain. As a general principle, we advise our suppliers to assist Zain through deployment of energy efficient solutions. |

## C. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

| INITIATIVES | TARGET | NARRATIVE |
|---|---|---|
| **Enhance share of renewable Power source** | 2.5% increase per year | The current energy source mix between fossil fuel and renewable sources is 97.5% and 2.5%. We intend to increase this mix by 2.5% annually to reduce the Scope 1 and 2 emissions. |
| **Scope2 emissions** | 4.2% $CO_2$ emission reduction per year | As 5G is launched across the operations and with the addition of 4G for enhancing cellular coverage, the primary energy source through Grid power will witness additional demand and this could lead to further increase in consumption and hence incremental emissions. |
| **Virtualization of Core Network** | 75% in Core | Core Network equipment such as CS Core, PS Core (2G,3G, 4G) and IMS for VoLTE require to be powered on 24*7.<br>The migration from legacy bare metal system design to virtualized core entails benefits of approximately 40% reduction in energy consumption as smaller equipment footprint translates to lower cooling and power consumption. |
| **Digitalization** | 2.5% every year | The current mix for prepaid recharges and postpaid payments between online and traditional channels is approx. 35:65. We want to enhance the online segment as this will entail a reduction of branch operation costs due to savings in energy costs at the branches for lighting and aircon. |