



KEY CLIMATE CHANGE IMPACTS AND RISKS REPORTED IN NATIONALLY DETERMINED CONTRIBUTIONS AND NATIONAL COMMUNICATIONS








INTRODUCTION

This document presents a climate risk landscape of selected countries' Nationally Determined Contributions (NDCs) and National Communications (NatComs), including countries from small island developing states (SIDS) and least developed countries (LDCs). A total of 49 NDCs (34 SIDS and 27 LDCs). and 45 NatComs (34 SIDS and 27 LDCs) were reviewed.






METHODOLOGY

The information was extracted through the use of a keyword search, in relation to the impacts and risks associated with climate change impacts, including extreme weather events and slow onset events. Only documents available in English were included in this desk research. For the purpose of presenting the overview below, climate impacts currently observed and/or the climate risks that countries foresee are clustered by economic and non-economic losses under various climate events with which the identified losses are associated.

SLOW ONSET EVENTS

| ECONOMIC LOSSES | | NON-ECONOMIC LOSSES | |
|---|--|--|---|
| CURRENT | ANTICIPATED | CURRENT | ANTICIPATED |
| SEA LEVEL RISE | | | |
| <ul style="list-style-type: none">Fisheries under threatThreat to economic areasLoss of property and damage to (coastal) infrastructureNegative impact on the tourism sectorNegative impact on water supply | <ul style="list-style-type: none">Risk to the tourism industryRisk to critical infrastructureThreat to settlements and livelihoods |  | <ul style="list-style-type: none">Disappearance of small islandsAccelerated coastal erosionLoss of biodiversityThreat to human lifeThreat to livelihoodsDamage to human capitalProgressive retreat and migration of wetland eco-zonesIncreased incidents of water-, food- and vector-borne diseases |
| INCREASING TEMPERATURES | | | |
| <ul style="list-style-type: none">Decrease in tourist arrivalsFisheries under threatShift in agricultural zonesLower crop productivityIncreased mortality in poultryIncreased incidents of pests/diseases in agriculture | <ul style="list-style-type: none">Water deficitsDamage to climate-sensitive crops |  | <ul style="list-style-type: none">Damage to marine ecosystemsCoral reefs bleachingIncreased incidents of fires and increased vulnerability of forests to firesIncreased spread of infectious and vector-borne diseasesImpact on healthy growth of plant speciesProjected degradation of coral reefsIncreased evapotranspiration, reduced soil moisture content and atmospheric humidity |
| SALINIZATION | | | |
| <ul style="list-style-type: none">Negative effects on irrigation waterLoss of agriculture | <ul style="list-style-type: none">Possible salinization of agriculture landsHeavy pollution of drinking water |  | <ul style="list-style-type: none">Coral bleachingDecline in mangroves |
| LAND AND FOREST DEGRADATION | | | |
| <ul style="list-style-type: none">Declining soil fertility leading to damage to agriculture | |  | <ul style="list-style-type: none">Weakening of both culture and historical heritage, partly due to environmental degradationDeath of wildlifeFurther weakening of culture and heritage, partly due to environmental degradation |
| OCEAN ACIDIFICATION | | | |
| <ul style="list-style-type: none">Fisheries under threat | |  | <ul style="list-style-type: none">Damage to marine ecosystemsProjected degradation of coral reefs |
| LOSS OF BIODIVERSITY | | | |
| <ul style="list-style-type: none">Negative impact on ecotourism | |  | |
| DESERTIFICATION | | | |
| | |  | <ul style="list-style-type: none">Loss of land-based biodiversityShrinkage of arable land |

EXTREME WEATHER EVENTS

| ECONOMIC LOSSES | | NON-ECONOMIC LOSSES | |
|--|---|---|---|
| CURRENT | ANTICIPATED | CURRENT | ANTICIPATED |
| DROUGHT | | | |
| <ul style="list-style-type: none">Fresh water shortagesSeasonal food shortagesDeclines in harvests, cattle, goats, sheep and poultryReduction in agricultural revenue | <ul style="list-style-type: none">Reduced productivity in agricultureRisk of famineLoss of wildlifeNegative impact on the tourism sector |  | <ul style="list-style-type: none">Spread of respiratory ailmentsDecrease in human well-beingConflicts and ethnic violenceForced migrationThreat to wildlifeLoss of forest productivityDried up lakes and water trenches |
| FLOOD | | | |
| <ul style="list-style-type: none">Volatile economic growthDestruction of fields and cropsDamage to water infrastructure, quality and supplyDamage to infrastructure, settlements and propertyImpact on culture fisheries | <ul style="list-style-type: none">Negative impact on fisheries infrastructureDamage to coastal infrastructureHeavy pollution of drinking water |  | <ul style="list-style-type: none">Increased deforestationHuman displacementLoss of forest due to flash floods |
| HEATWAVE | | | |
| <ul style="list-style-type: none">Fall in dairy cattle yields | |  | <ul style="list-style-type: none">Heat stressHeat-related deathsAltered rates of cardiovascular and respiratory diseasesIncreased number of heat related complaints and deaths |
| CYCLONE/TYPHOON | | | |
| <ul style="list-style-type: none">Damage to infrastructureExtensive property damageTourism sector under threat | <ul style="list-style-type: none">Damage or destruction of crops |  | <ul style="list-style-type: none">Loss of livesDisplacement of populations, which may become climate refugeesIncrease number of climate refugees or climate change displacement |
| STORM SURGE | | | |
| <ul style="list-style-type: none">Damage to coastal infrastructureDestruction and loss of propertyCoastal erosionLoss of cultural heritage sites | <ul style="list-style-type: none">Damage or destruction of cropsDestruction of property |  | <ul style="list-style-type: none">Damage to coral reefs |