

## **Chapter 2 Socio-economics and Climate-related Threats**

**“Implementing the Strategic Action Programme for the South China Sea and Gulf of Thailand (SCS SAP Project)”**

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## **Abstract**

Cambodia's socio-economic profile and climate-related threats are assessed with a focus on the four coastal provinces (Preah Sihanouk, Kampot, Kep, and Koh Kong). Rapid but uneven coastal change—population and household growth, accelerating urbanization, and the concentration of assets and livelihoods in coastal hubs, especially Preah Sihanouk—has increased exposure to flooding and climate shocks. Human development has improved (national HDI 0.606 in 2023), yet inequality and spatial disparities persist; poverty declined over the long term but remained vulnerable to reversals during COVID-19, with uneven patterns across coastal provinces. Economically, strong growth and diversification toward industry and services, including tourism and port-related activity, have raised incomes while amplifying risk where infrastructure, workers, and settlements cluster in low-lying coastal corridors. Major hazards and impacts are synthesized: floods remain the deadliest, droughts affect the largest populations, and storms and lightning add compound risks; sea-level rise and ocean warming elevate coastal flood baselines, salinity intrusion, and ecosystem stress affecting fisheries and tourism. Overall disaster risk is “medium,” but river-flood exposure is very high and coping capacity remains constrained, underscoring the need for integrated basin-to-coast risk management. Priority directions include risk-informed urban and port planning, improved drainage and early warning, protection and restoration of ecosystem buffers, drought–salinity water security, and inclusive human development and livelihood diversification to reduce vulnerability along coastal growth pathways.

**Keywords:** *Cambodia; coastal provinces; socio-economic, urbanization; vulnerability; poverty; inequality; HDI/IHDI; disaster risk; floods; drought; sea-level rise; salinity intrusion; tourism; ports and logistics; fisheries; early warning; risk-informed planning.*

## 2 Socio-economics and Climate-related Threats

### 2.1 Key Findings

- **Coastal growth is fast but uneven.** Coastal population growth from 1998 to 2019 was fast but uneven at 1.3% per year, with Preah Sihanouk concentrating the most exposed assets.
- **Urbanization is accelerating.** the urban share rose from about 10% in 1950 to 24% in 2020 and is projected to exceed ~30% by the mid-2030s and ~40% by the mid-2040s, increasing exposure to urban and coastal flooding in fast-growing towns.
- **Human development has improved but remains unequal.** Cambodia's HDI reached 0.606 in 2023, yet inequality still cuts 27–29% off the inequality-adjusted HDI, and coastal SHDI has plateaued in some provinces since around 2015.
- **Poverty dropped from 33.8% in 2009 to 17.8% in 2019/20**, but COVID-19 likely added about 2.8 percentage points and coastal poverty is uneven, with Koh Kong and Kampot showing the highest intensity and Preah Sihanouk the lowest.
- **Economic diversification is rapid.** GDP grew from US\$3.69 billion in 2000 to about US\$46 billion in 2024 and GDP per capita from US\$296 to US\$2,628, with a shift toward industry and services concentrated in coastal hubs that now combine high growth with high exposure.
- **Disaster patterns are clear:** floods are the deadliest events, major droughts (such as 2016) have affected around 2.5 million people, and storms plus exceptionally high lightning fatality rates add compound risks for ports, estuaries and tourism towns.
- **Sea-level rise and warming seas are already stressing** reefs, seagrass, mangroves and beaches, threatening fisheries and coastal tourism unless natural buffers are protected and pollution and sediment loads are better managed.
- **Country risk is classified as “medium,”** with an overall disaster-risk score around 4.4/10, very high river-flood exposure (about 8.6/10) and limited coping capacity driving vulnerability.
- **Three binding coastal gaps remain:** (i) drainage, land-use planning and basic infrastructure lag behind hazard realities; (ii) ecosystem defenses such as mangroves, floodplains, dunes and reefs are fragmented; and (iii) inequality, informality and thin safety nets leave near-poor and migrants highly exposed.
- **Priority directions** include basin-to-coast flood management and early warning, risk-informed standards for urban growth and ports, large-scale restoration of mangroves and floodplains, drought-salinity water security, and investment in inclusive human development (TVET, health and MSMEs) for a more resilient coastal economy.

## 2.2 Current Status

### 2.2.1 Demographics

#### 2.2.1.1. Population

Figure 2-1 shows Cambodia's national population grew from about 11.4 million in the late 1990s to 15.3 million in 2019 and an estimated 17.6 million in 2024, with recent growth around 1–1.3% per year; projections suggest ≈18 million by 2028 and ≈21 million by 2048 (NIS, 1998, 2008, 2019; WB–WDI, 2025).

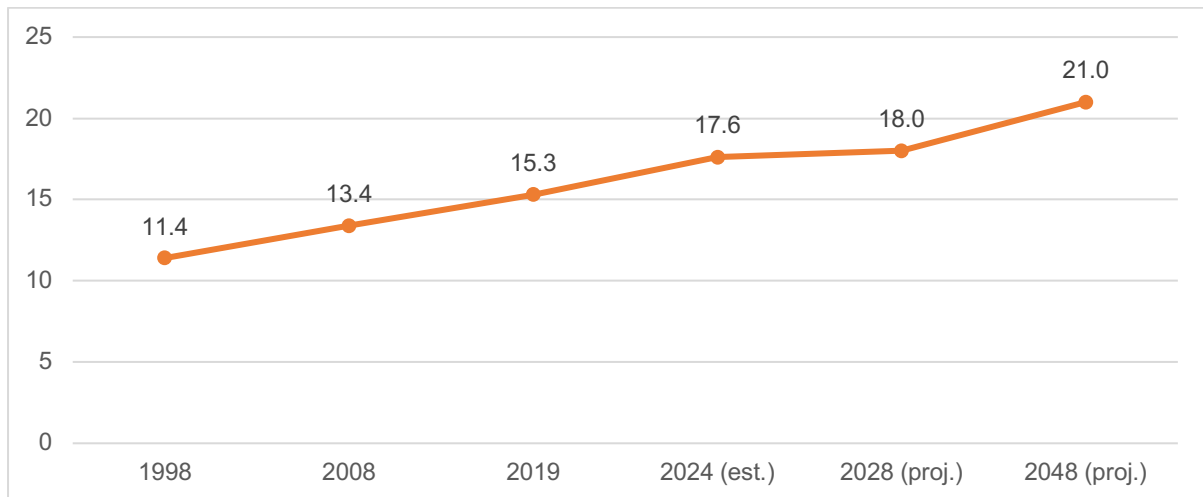


Figure 2-1 Cambodia's national population and projections (1998–2048)

Source: NIS, 1998, 2008, 2019; WB–WDI, 2025

Across the four coastal provinces (Figure 2-2), population increased from **0.845 million** (1998) to **0.960 million** (2008) and **1.072 million** (2019), while their share of the national total slipped from **7.4%** to **7.2%** to **6.9%** respectively. (NIS, 1998, 2008, 2019).

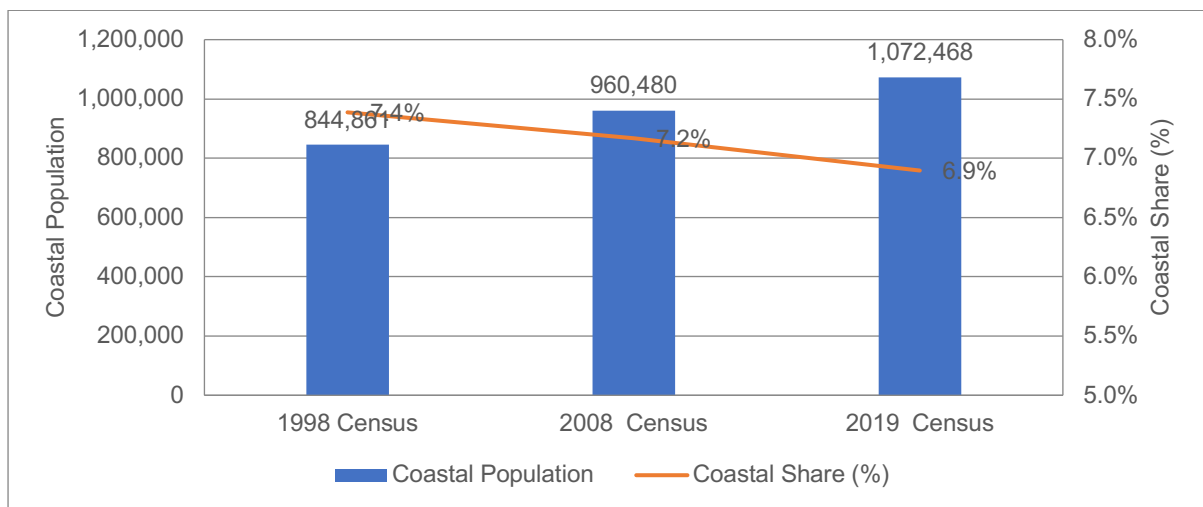


Figure 2-2 Coastal population and share of national total (1998–2019)

Source: NIS, 1998, 2008, 2019

Within the coast (Figure 2-3), Preah Sihanouk nearly doubled its population and households grew faster than people, from **163,337** to **206,868** to **228,415** (+40%), indicating sustained household formation and in-migration to coastal hubs (Brinkhoff, 2019). Kampot grew modestly but its national share fell; Koh Kong shows slow net growth from a small base; and Kep remains tiny but recorded the fastest relative population and household gains. Average household size generally fell and sex ratios diverged—male-skewed in Preah Sihanouk and Koh Kong, more balanced or female-skewed in Kampot and Kep— total shows about **0.92–0.94**, reflecting different labour markets and migration patterns (NIS, 1998, 2008, 2019).

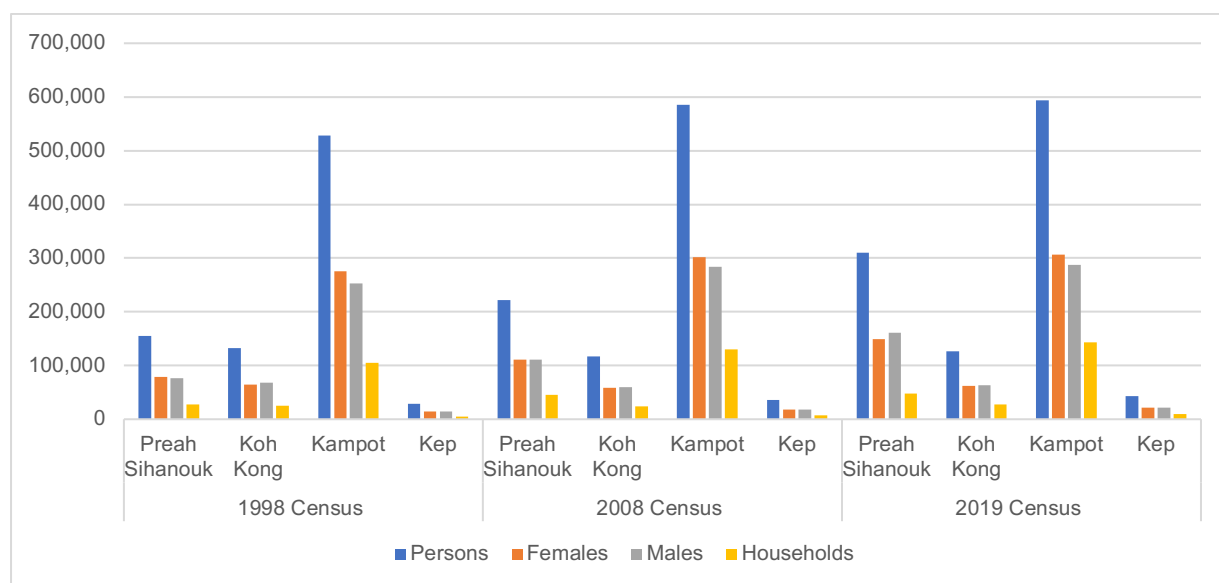


Figure 2-3 Coastal provinces – population and households (1998–2019)

Source: NIE, 1998, 2008, 2019)

### 2.2.1.2. Subnational coastal area and population densities

As show in Table 2-1, coastal provinces cover 17,237 km<sup>2</sup> (9.52% of national land), dominated by Koh Kong's large low-density area and the much smaller but denser Kampot, Preah Sihanouk, and Kep. Indicates that densities rose from 49 to 62 persons/km<sup>2</sup> (1998–2019), driven mainly by Preah Sihanouk's rapid growth, moderate increases in Kampot and Kep, while Koh Kong stayed sparse. Coast-wide population growth increased from 0.8%/yr to 1.0%/yr, led by accelerating growth in Preah Sihanouk, steady but slowing rates in Kep, minimal growth in Koh Kong, and near-zero growth in Kampot.

Table 2-1 Coastal provinces: area, density and growth

Province	Area (km <sup>2</sup> )	% of national land	Density (persons/km <sup>2</sup> )			Growth (%/yr)	
			1998	2008	2019	1998–2008	2008–2019
Koh Kong	10,090	5.57%	~12	~12	~12	0.12	0.60
Kampot	4,873	2.69%	108	120	122	1.03	0.10
Preah Sihanouk	1,938	1.07%	89	114	160	2.54	3.10
Kep	336	0.19%	85	106	127	2.21	1.60
<b>Coastal average</b>	<b>17,237</b>	<b>9.52%</b>	<b>49</b>	<b>56</b>	<b>62</b>	<b>0.80</b>	<b>1.00</b>

Source: NIS, 1998, 2008, 2019

### 2.2.1.3. Urbanization rate

Table 2-2 shows a long-term acceleration in urbanization—from roughly 10% in 1950 to 24% by 2020—with projections indicating the share will exceed 30% by the mid-2030s and could approach 40% by the mid-2040s. Growth was gradual until around 1990, then increased more rapidly after 2000, reaching 20% in 2010 and 24% in 2020.

Table 2-2 National urban share – key years and projections

Year	Urban share of population (%)	Note
1950	10.2	Pre-war baseline
1975	4.5	Conflict/forced evacuation anomaly
2010	20.3	Post-2000 acceleration
2020	24.2	Latest UN estimate
2025	26.5	Projection
2030	29.0	Projection
2035	31.8	Projection
2040	34.8	Projection
2045	37.9	Projection
2050	41.2	Projection

Source: UN DESA, 2019

Consistent with this trend (shown in Table 2-2), the national Census data (Figure 2-4) also record a sharp rise from 16% in 1998 to 20% in 2008, and then to 39% in 2019, reflecting both rapid urban expansion and intensified rural-to-urban migration during the past decade.

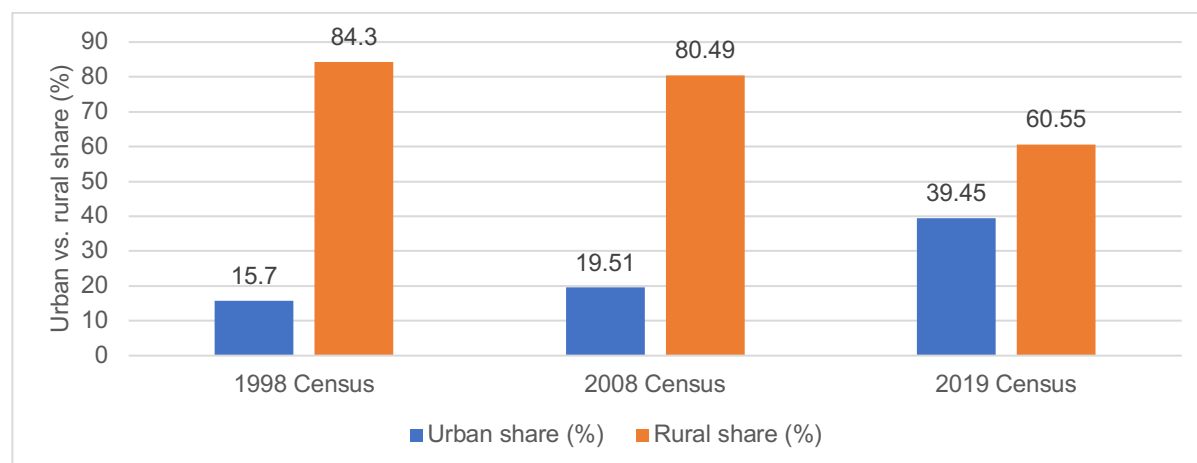


Figure 2-4 Census-based urban and rural shares – Cambodia (1998-2019)

Source: NIS, 1998, 2008, 2019

### 2.2.1.4. Built-up surface/area

Using Ouyang et al. (2016)'s 30-m urban map (Table 2-3), Cambodia's built-up land in 2010 is estimated at about 212.5 km<sup>2</sup> (≈0.12% of national area), with a likely range of 210.5–224.6 km<sup>2</sup>. This implies roughly 13,000 people per km<sup>2</sup> of built-up land. The map—combining Landsat, DMSP/OLS nighttime lights and MODIS NDVI—shows development concentrated around Phnom Penh, with comparatively modest nationwide urban expansion relative to regional neighbors.

Table 2-3 Built-up land, 2010 (national)

Indicator	Value	Note
Central estimate of built-up area	212.5 km <sup>2</sup>	30-m urban map, 2010
Likely range of built-up area	210.5–224.6 km <sup>2</sup>	Allowing for classification uncertainty
Share of national land area (approx.)	≈0.12%	Very small physical footprint
Implied population density (built-up)	≈13,000 persons/km <sup>2</sup>	Concentrated in urban cores

Source: Ouyang et al., 2016

## 2.2.2 Human Wellbeing

### 2.2.2.1. Poverty and coastal poor

Poverty declined substantially—from 47.8% in 2007 to 13.5% in 2014 (World Bank, 2014), and further from 33.8% in 2009 to 17.8% in 2019/20—yet COVID-19 likely added about 2.8 percentage points, underscoring the vulnerability of near-poor, informal, and tourism-reliant households, including in coastal provinces (Karamba & Tong, 2022). Government cash transfers delivered through the IDPoor registry helped absorb part of this shock and are estimated to have prevented additional households from falling back into poverty (World Bank, 2022). The latest IDPoor dashboard, Figure 2-5 shows Koh Kong with the highest number of poor persons (39%) and households (25%) and Kep with the least at 15% of individuals and 14% of households, being poor (MoP, 2025).

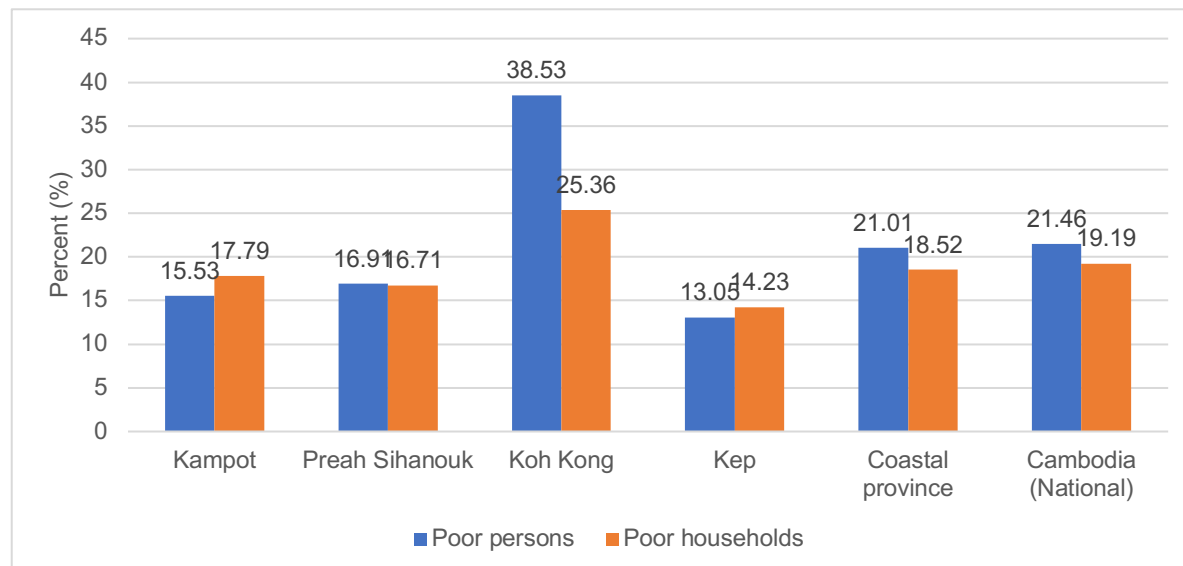


Figure 2-5 Poor rate by person and household (national vs coastal provinces)

Source: Ministry of Planning (MoP), 2025. IDPoor public data query.

Furthermore, a complementary lens from the MPI (Table 2-4) places Cambodia's national MPI around 0.070, with pronounced provincial variation along the coast: Koh Kong showing the highest deprivation (0.099), Kampot and Kep in the mid-range (0.079 and 0.075, respectively) and Preah Sihanouk the lowest (0.031), consistent with more urban/peri-urban pockets of need rather than widespread deprivation (OPHI & UNDP, 2024).

Table 2-4 Subnational (coastal province) Multidimensional Poverty Index

Subnational region	Multidimensional poverty by region			
	MPI of the country	Multidimensional Poverty Index (MPI = H*A)	Headcount ratio: Population in multidimensional poverty (H)	Intensity of deprivation among the poor (A)
	Range 0 to 1	Range 0 to 1	% Population	Average % of weighted deprivations
Kampot	0.070	0.079	19.35	40.59
Kep	0.070	0.075	19.20	39.08
Koh Kong	0.070	0.099	22.56	43.99
Preah Sihanouk	0.070	0.031	7.24	42.45

Source: OPHI & UNDP, 2024

### 2.2.2.1. Human Development Index

#### a) National HDI

Figure 2-6 indicates that Cambodia's HDI reached 0.606 in 2023, placing it in the medium human-development group and ranking 151st of 193 countries, down from 147th–148th in 2021–2022 (UNDP, 2024). The HDI has risen steadily from 0.387 in 1990 to 0.438 (2000), 0.543 (2010), 0.562 (2015) and 0.595 (2020), dipped slightly during COVID-19, and recovered to 0.602 in 2022 and 0.606 in 2023—showing long-term progress with only a brief pandemic setback.

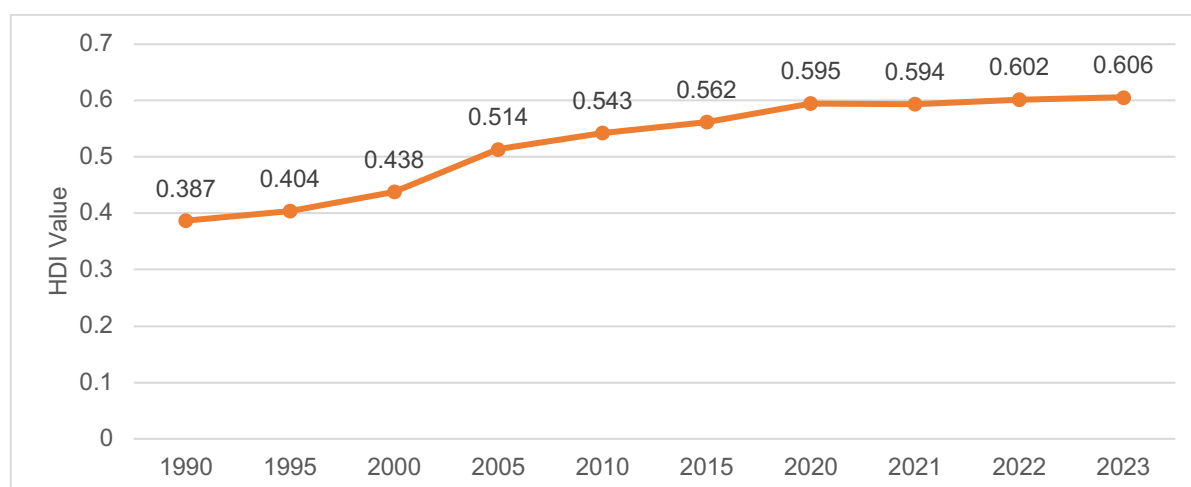


Figure 2-6 Cambodia Human Development Index (HDI) 1990-2023

Source: UNDP, 2024. Human Development Report 2023/24 – Statistical Annex. Data Center

Human development indicators show sustained long-term improvement, though several components have begun to level off (UNDP, 2024. Human Development Report 2023/24; see Annex Table 2-6 for full series and more detail).

The data shows that **life expectancy** increased from its lowest level of 55.2 years in 1990 to a pre-pandemic high of 70.1 years in 2020, dipped slightly during COVID-19 (69.3 in 2021), and reached 70.7 years in 2023, the highest on record. **Education indicators** also strengthened: **expected years of schooling** rose from a low of 6.9 years in 1990 to a peak of 11.8 years around 2014, before stabilizing at 11.2 years in 2023; **mean years of schooling** increased steadily from 2.8 years (1990) to a current high of 5.2 years (2021–2023), showing

continued gains in attained education but slower progress since 2021. **Income** growth has been especially strong, with GNI per capita (2021 PPP\$) rising from US\$1,210 in 1990 to a pre-COVID high of US\$4,415 in 2020, recovering after a mild pandemic dip to reach US\$4,931 in 2023, the highest recorded level.

Despite these advances, inequality still reduces overall achievements: Cambodia’s inequality-adjusted HDI (IHDI) shows a 27–29% loss relative to the headline HDI across the 2010–2023 period. The gap narrowed modestly—from a maximum loss of 28.8% in 2010 to 26.8% in 2023—indicating gradual yet incomplete progress in distributing health, education, and income gains more evenly.

### b) Subnational Coastal HDI

Subnational HDI data (Figure 2-7) show long-term coastal gains but a post-2015 plateau (Global Data Lab, 2025). See Annex Table 2-7 for mor full series and more detail of the subnational HDI. For **Preah Sihanouk–Kampot–Kep**, SHDI rose from 0.378 (1990) to 0.573 (2022), driven by higher life expectancy (55.2 to 68.4 years) and rising education levels. Expected years of schooling peaked in 2014 (11.8) before dropping to ~10, and life expectancy slipped during COVID-19, flattening SHDI near its recent high. For **Koh Kong**, SHDI increased from 0.368 (1990) to 0.548 (2022), with life expectancy improving (58.8 to 70.5 years) and mean years of schooling rising. Expected schooling fell sharply after its 2014 peak (12.46 to 8.35), pulling SHDI down from 0.585 (2014) to ~0.548, reflecting shorter schooling trajectories for younger cohorts and modest COVID-period mortality effects.

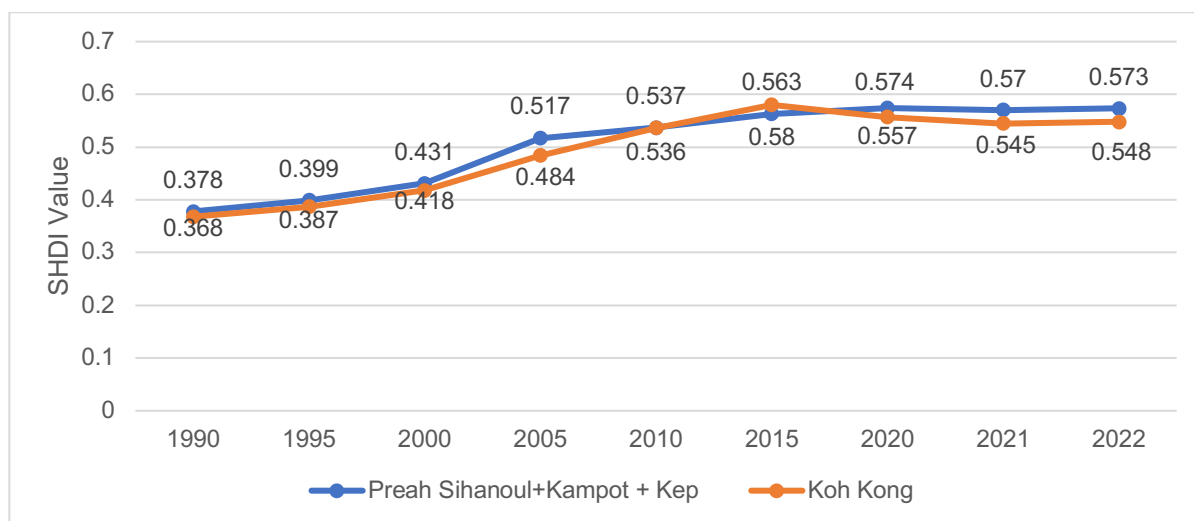


Figure 2-7 Subnational Human Development Index (HDI)-Cambodia 1990-2023

Source: Global Data Lab, 2025.

## 2.2.3 Economic Activities

### 2.2.3.1 Gross Domestic Product (GDP)

Cambodia’s economy expanded strongly, with Gross Domestic Product (GDP) rising from US\$3.69 billion in 2000 to US\$46.35 billion in 2024 (current US\$), with average annual growth at 7%. Annual growth was in double digits during the mid-2000s (9.5%–13.3% in 2004–2007), eased to high single digits through 2011–2019 (7.3%–8.8%), contracted -3.56% in 2020 during COVID-19, and then recovered at 3.09% (2021), 5.13% (2022), 5.01% (2023), and 6.02% (2024), with a 2025 projection of 4.0%. (WB–WDI, 2025).

Figure 2-8 shows Cambodia’s GDP per capita in current and 2015 US\$. GDP per capita rose from US\$296 in 2000 to about US\$2,628 in 2024, with three clear phases: a rapid rise from 2000–2007 (US\$296→732), steady growth through 2011–2019 to roughly US\$2,226, a COVID-19 dip to about US\$2,082 in 2020, and a strong rebound to new highs by 2024. Key milestones include passing US\$1,000 around 2011 and US\$2,000 by 2018, reflecting sustained structural shifts toward industry and services and a resilient post-pandemic recovery (WB-WDI, 2025).

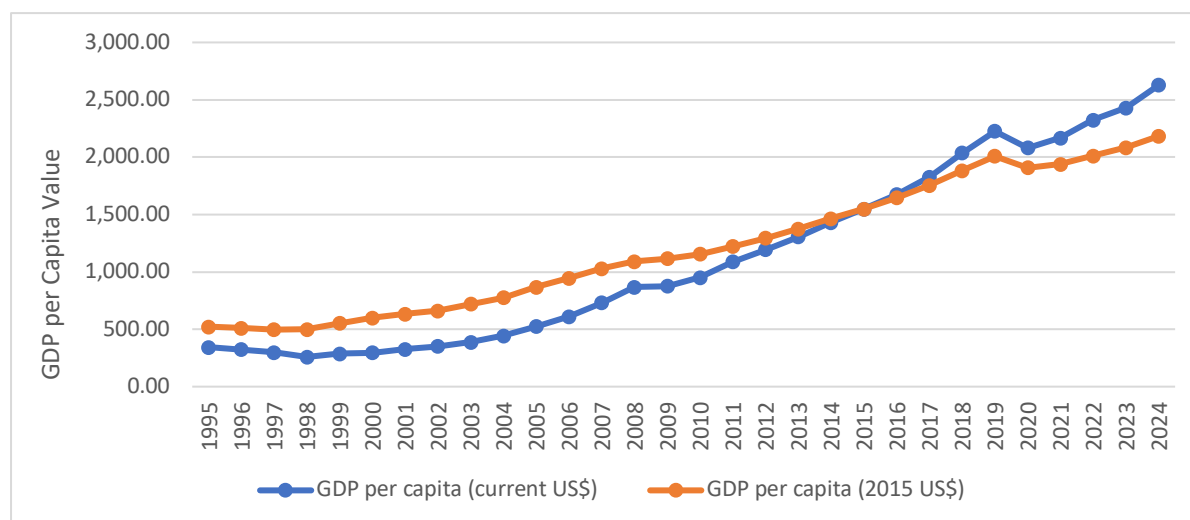


Figure 2-8 Cambodia GDP per Capita (Current US\$ vs Constant 2015 US\$) 1995-2024

Source: World Bank, 2025. World Development Indicators (WDI)

### 2.2.3.2 Agriculture, forestry, and fishing revenue

Agriculture continues to employ a large share of workers and remains climate-sensitive, while industry (especially garments/footwear) and services (tourism, logistics) continue to anchor growth. Agriculture, forestry and fishing’s share of GDP fell from 47.7% (1995) to 16.6% (2024), but real value added still climbed from US\$2.26 billion to US\$5.30 billion (WB-WDI, 2025). In other words, the sector grew in absolute size even as the broader economy diversified. See Annex Table 2-9 for more detail.

Point estimates for fisheries & aquaculture span about 1.14% of GDP in 2014 (World Bank, 2023a) to ~5% in 2019 (PEMSEA & MoE, 2019). Moreover, according to the Fisheries Administration (FiA), Cambodia produced roughly 900,000 tonnes of fish (including aquaculture) in 2018, worth about USD 1.8 billion and contributing 8–10% of GDP (FiA, MAFF, 2020). In recent years, Cambodia’s marine fisheries production value has stabilized around USD 190–200 million, contributing roughly one quarter of total national fisheries value, underscoring the sector’s continued economic importance despite signs of ecological pressure and resource decline (FAO FishStatJ, 2024). Beyond recorded trade, a sizable volume of high-value marine products, notably finfish, shrimp, and squid, reportedly moves informally across the borders with Thailand and Viet Nam and is not captured in official statistics (UNIDO/MAFF, 2015).

### 2.2.3.2 Service and tourism revenue

Services expanded from US\$1.95 billion in 1995 to US\$13.97 billion in 2024 in constant prices, around 7% real CAGR. The services share hovered near 39–42% through 2019, slipped during 2020–2021 (around 36–39%), and, despite output growth, remained lower at 35.6% in 2024, indicating the composition has not fully normalized post-pandemic (WB-WDI, 2025). See Annex Table 2-9 for more detail.

Tourism is becoming an increasingly significant part of Cambodia's economy, with beaches and offshore islands serving as major visitor magnets, mainly activity concentrated in Kampot and Preah Sihanouk. Sustained growth depends on the health of coastal ecosystems—especially coral reefs, beaches, and seagrass beds (MoE & NCSD, 2022). Preah Sihanouk hosts the main deep-sea port and a tourism hub; Kampot and Kep combine agro-processing and cultural/ecotourism; Koh Kong anchors mangrove/coastal tourism and fisheries. Ministry of Tourism reporting shows a strong rebound in coastal arrivals since 2023, led by Preah Sihanouk (MoT; WTTC). In 2016, Preah Sihanouk Province alone welcomed nearly 2.4 million tourists, which generated US\$96 million in revenue (PEMSEA & MoE, 2019). Pre-COVID, tourism averaged approximately 17% of GDP (2010–2019), reinforcing that shocks and rebounds in tourism heavily influence national cycles (World Bank, 2023).

Spalding et al. (2017) estimate Cambodia's reef-related visitor expenditure at US\$18.3 million/year, compared with US\$2.104 billion in total visitor spending—about 0.87% of national tourism spending. Using the same reference year for tourism GDP, reef tourism therefore contributes roughly 0.87% of tourism GDP and about 0.13% of national GDP. Although modest in national terms, the average value of ~US\$158,000 per km<sup>2</sup> of reef highlights the high local importance of reef sites for snorkeling, diving, beaches and reef-sheltered coastal destinations (Spalding et al., 2017, Table A1).

## 2.2.4 Climate-related Threats

Cambodia is highly exposed to floods, droughts and typhoons, which are becoming more frequent and damaging to people, infrastructure and food security (CFE-DMHA, 2024). Mortality peaks in large riverine floods, people-affected peaks in drought years, and both hazards generate major economic losses, with storms adding concentrated coastal damage. Floods mainly hit lowland basins, while droughts are geographically widespread (MoE & NCSD, 2022). Coastal provinces appear in all three hazard types, underscoring the need for an integrated portfolio of basin floodplain management, urban drainage, nature-based defenses, drought-water security and storm-resilient infrastructure and evacuation. See [Annex Table 2-11](#) for summary of major climate- and weather-related disasters in Cambodia, 2000–2023.

### 2.2.4.1 Floods

**Floods remain Cambodia's most lethal climate hazard, and the frequency of severe floods has increased over the last decade.** The largest riverine floods, especially 2000, 2011, and 2013, caused extreme mortality and widespread disruption. EM-DAT records for 2000 indicate 347 deaths and 3.45 million people affected; for 2011, 247 deaths, 1.64 million affected, and about US\$521 million in damages (about \$726.561 million adjusted); and for 2013, 200 deaths and 1.50 million affected, and \$500 million damages (\$673.276million adjusted) (CRED, UCLouvain, 2025).

The 2011 event aligns with the CFE-DM history: heavy Mekong flooding affected 18 provinces, caused ~250 deaths, displaced ~52,000 households, and produced an estimated US\$630 million in damages (CFE-DMHA, 2024). The 2013 floods impacted 20 provinces, affected more than 1.7 million people, and caused 188 deaths, with over 144,000 evacuees (CFE-DMHA, 2024). In October 2020, flash floods again underscored systemic exposure, affecting ~176,000 households across 14 provinces and damaging homes, public infrastructure, and farmland (CFE-DMHA, 2024). Although post-2015 floods have generally been less deadly, events such as 2019 and 2022 show continuing high exposure across the Mekong–Tonle Sap–Bassac system and into coastal provinces including Koh Kong, Preah Sihanouk, and Kampot (CRED, UCLouvain, 2025).

#### 2.2.4.2 Drought

**Drought produces the largest single-year populations affected and recurring livelihood shocks.** According to EM-DAT dataset, major episodes include 2001 (approximately 300,000 affected), 2002 (about 650,000 affected; \$38 million, about \$66.3 million adjusted), 2005 (approximately 600,000 affected), and a pronounced 2016 event (about 2.5 million people affected) (CRED, UCLouvain, 2025).

The CFE-DM history similarly documents 2011–2012 agricultural drought (damage to rice fields across 11 provinces) and the 2015–2016 El Niño drought affecting at least half of districts and 18 provinces, with 2.5 million people impacted and significant crop and water-supply losses (CFE-DMHA, 2024). While primarily inland, these droughts repeatedly touch coastal provinces and supply chains, underscoring needs for resilient water storage, drought-tolerant inputs, and shock-responsive safety nets.

#### 2.2.4.3 Storms & Tropical cyclones

**Storms are episodic but increasingly costly.** Cambodia experiences tropical cyclones or their remnants about six times per year between April and November (World Bank, 2023b). Even when landfall is indirect, associated floods, storm surge and lightning create compound risks for low-lying ports, estuaries and tourism towns (CRED, UCLouvain, 2025). EM-DAT notes, for example, a 2009 cyclone season with 17 deaths and 178,000 people affected, and 2020 storms causing 44 deaths, more than 750,000 affected and around US\$100 million in damage, including in Koh Kong and Preah Sihanouk (CRED, UCLouvain, 2025).

Typhoon **Ketsana (2009)** alone caused about 43 deaths, major damage to houses, rice crops and infrastructure, with recovery needs estimated near US\$191 million (CFE-DMHA, 2024; MoE & NCSD, 2022). Transboundary events such as the 2018 Xe-Pian Xe-Namnoy dam failure in Lao PDR led to evacuations and deaths in northern Cambodia without a shared early-warning system (CFE-DMHA, 2024). Recent years add storm surge and extreme lightning (e.g. 16 deaths from storm surge in 2022; over 14,000 people affected by lightning in 2023), underlining high compound risk from wind, surge, flash flooding and lightning in both inland and coastal areas (CRED, UCLouvain, 2025; AHA Centre, 2022).

#### 2.2.4.4 Sea-Level Rise (SLR)

**Cambodia's coastal zone is vulnerable to Sea-Level Rise (SLR),** seawater intrusion, storms, floods, pests in agriculture production, and contaminated drinking water (MoE & NCSD, 2022). Sea-level rise and warming seas intensify coastal risks. The handbook notes rising temperatures and changes in sea level and hydrological cycles that threaten productivity in fisheries and other climate-sensitive sectors—directly relevant to Cambodia's Gulf of Thailand coastline and coastal livelihoods (CFE-DMHA, 2024).

#### 2.2.4.2 INFORM Risk Index (mid-2025)

Cambodia's disaster risk is assessed as **“medium,”** ranking **59<sup>th</sup> of 191** countries with an overall INFORM score of 4.4/10 (mid-2025). As shown in [Table 2-5](#) the Hazard & Exposure score is moderate (3.2/10), but river-flood risk is very high at 8.6/10—the dominant driver—reflecting intense monsoon rainfall, upstream releases, and extensive floodplain settlement that ultimately connects to coastal drainage systems. Drought risk is moderate (4.2/10), while tropical-cyclone exposure remains low (1.8/10) because Cambodia typically experiences only peripheral storm effects. Coastal-flood risk is lower in the index (3.7/10) yet still consequential for ports, estuaries, and tourism towns under rising seas. Cambodia's overall rating is elevated mainly by limited coping capacity (5.6/10) and population vulnerability (4.8/10) (European Commission, JRC & IASC, 2025).

Table 2-5 Selected indicators from the INFORM Risk Index (mid-2025) – Cambodia

INFORM RISK	RISK CLASS	Rank	HAZARD & EXPOSURE	River Flood	Tropical Cyclone	Coastal flood	Drought	VULNERABILITY	LACK OF COPING CAPACITY
(0-10)	(Very Low-Very High)	(1-191)	(0-10)	(0-10)	(0-10)		(0-10)	(0-10)	(0-10)
4.4	Medium	59	3.2	8.6	1.8	3.7	4.2	4.8	5.6

Source: European Commission, Joint Research Centre (JRC), & Inter-Agency Standing Committee (IASC). (2025). *INFORM Risk Index: Results and data (Mid-2025 update)*

## 2.3 Discussion and Conclusions

### 2.3.1 Risk assessment from socioeconomic trends

**Coastal Cambodia is undergoing rapid but uneven demographic and economic change, which shapes who is at risk and where.** Population in Preah Sihanouk, Koh Kong, Kampot, and Kep rose by about 27% between 1998 and 2019, while households grew ~40%, a pattern that signals smaller family size and sustained in-migration to coastal hubs (NIS, 1998; NIS, 2008; NIS, 2019). Within this growth, Preah Sihanouk concentrates the largest bundle of exposed assets, a deep-sea port, logistics platforms, and tourism infrastructure, amid a distinctly male-skewed sex ratio linked to construction and service inflows (NIS, 2019). By contrast, Koh Kong remains ecologically extensive and low-density, where scattered settlements face long response times and reliance on river/road crossings during floods (NIS, 2019; CFE-DMHA, 2024).

**Human development has improved steadily—Cambodia’s HDI rose to 0.606 in 2023 after a brief pandemic dip—but inequality still trims ~27–29% off the headline HDI when adjusted for distribution, indicating that shocks (floods, droughts, price spikes) can push near-poor households back into poverty (UNDP, 2024).** Monetary poverty fell from 33.8% (2009) to 17.8% (2019/20), before COVID-19 raised poverty by ~2.8 percentage points, especially among informal and tourism-reliant workers (Karamba & Tong, 2022). Administratively targeted IDPoor data show coastal incidence close to the national average—about 21.0% persons vs 21.5% nationally—but with sharp intra-coastal contrasts: Koh Kong has the highest intensity, Kampot the largest caseload, Preah Sihanouk the lowest rates, and Kep small but non-trivial pockets (MoP, 2025). A complementary MPI lens confirms this spread (national MPI ≈ 0.070; Koh Kong 0.099, Kampot 0.079, Kep 0.075, Preah Sihanouk 0.031), implying different policy mixes are needed across provinces (OPHI & UNDP, 2024).

**Urbanization is rising (projected ~30% by mid-2030s and ~40% by mid-2040s), but drainage, zoning, and worker housing have not fully kept pace in fast-growing nodes,** increasing exposure to pluvial and coastal flooding (UN DESA, 2018). Economically, the national shift from agriculture to industry/services has lifted incomes—GDP per capita rose from US\$296 (2000) to US\$2,628 (2024)—but it also concentrates risk where tourism, ports, and logistics cluster along the shore (World Bank, 2025). In short, coastal risk is amplified by where growth occurs (asset concentration) and who participates (informal workers, migrants, and near-poor households).

### 2.3.2 Risk assessment from climate- and environment-related threats

**Cambodia's economic growth relies on climate-sensitive sectors**, agriculture, tourism, forestry, fisheries, and water resources. Combined with population and infrastructure vulnerabilities, this dependence makes the country highly exposed to climate change impacts, especially the natural disasters and hazards. Floods are the dominant lethal hazard. Benchmark riverine events in 2000, 2011, and 2013 caused heavy mortality and millions affected; 2011 alone led to ~247 deaths and US\$521 million in losses, while 2013 affected ~1.5 million people (CRED, UCLouvain, 2025). The CFE-DMHA history documents 2011 flooding across 18 provinces with ~US\$630 million in damages and 2013 flooding across 20 provinces with 188 deaths (CFE-DMHA, 2024). Even in recent years, 2019 and 2020 flash floods affected large populations and infrastructure, underscoring basin-to-coast connectivity (CFE-DMHA, 2024).

**Drought is the largest “people-affected” hazard**. EM-DAT records multi-hundred-thousand to multi-million persons affected (e.g., ~2.5 million in 2016 during an El Niño episode) across nearly all agro-ecological zones—impairing farm output, rural water supply, and inland fisheries that feed coastal markets (CRED, UCLouvain, 2025). CFE-DMHA similarly notes 2011–2012 agricultural drought and 2015–2016 nationwide drought affecting at least half of districts, with significant rice and water-supply losses (CFE-DMHA, 2024).

**Storms, tropical cyclones, and lightning create compound risks**, especially for ports, estuaries, and tourism towns. Cambodia typically receives fringe effects rather than direct landfalls, but six tropical cyclones on average each year pass through the broader season; in 2020, storms caused 44 deaths and ~US\$100 million in losses, and Noru (Sept 2022) caused 16 fatalities via Mekong flooding (World Bank, 2023; AHA Centre, 2022; CRED, UCLouvain, 2025). Cambodia's lightning death rate (~7.8 per million) is among the world's highest, with severe single-month clusters (CFE-DMHA, 2024).

**Sea-level rise (SLR) and warming seas** are slow-onset, system-wide threats, raising coastal flood baselines, intensifying salinity intrusion in dry seasons, and stressing coral, seagrass, and fisheries that underpin coastal livelihoods and tourism (MoE & NCSD, 2022). The INFORM Risk Index (mid-2025) integrates these drivers into a country profile of 4.4/10 (rank 59/191, medium), with very high river-flood exposure (8.6/10), moderate drought (~3.7–4.2/10), and lower tropical-cyclone and coastal-flood exposure, while overall risk is pulled up by limited coping capacity (5.6/10) (European Commission JRC & IASC, 2025).

### 2.3.3 Mitigating socioeconomic vulnerability from climate-mediated environmental change – current actions and gaps

In response to the overlapping risks, **Cambodia has begun to build a more shock-responsive social protection and disaster-risk management system**. During COVID-19, the government rapidly expanded social assistance using the IDPoor registry, delivering cash transfers to hundreds of thousands of poor and newly poor households. This helped cushion pandemic-related poverty reversals, while upgrading the social registry, payment systems, and local delivery mechanisms that can now be repurposed for future climate- and disaster-related shocks (World Bank, 2022; Karamba & Tong, 2022). These foundations are particularly relevant in coastal provinces where tourism, fisheries, and construction workers—many informal or migrant—face high income volatility during floods, storms, and economic downturns (MoP, 2025; OPHI & UNDP, 2024).

**On risk governance, institutional frameworks for disaster risk reduction (DRR) have strengthened**, notably through the **Law on Disaster Management** and the **National DRR**

**Strategy 2019–2030**, which clarify mandates for the National Committee for Disaster Management and sub-national committees (CFE-DMHA, 2024). The INFORM Risk Index reflects this with relatively lower institutional sub-scores compared with hazard exposure, indicating improving, though still constrained, coping capacity (European Commission JRC & IASC, 2025). Cambodia is also piloting impact-based forecasting and early warning with regional partners, which, if scaled, can better link hydro-meteorological information to anticipatory action in flood- and storm-prone basins (CFE-DMHA, 2024).

**Ecosystem-based adaptation is another emerging pillar.** Expansion and consolidation of protected areas and community-managed zones have reinforced mangrove, seagrass, and estuarine conservation, particularly in Koh Kong’s Peam Krasop Wildlife Sanctuary and Koh Kapik Ramsar Site, where mangroves provide critical blue-carbon storage and natural shoreline protection (MoE & NCSD, 2022). These measures, alongside community-based ecotourism and sustainable fisheries initiatives, can simultaneously buffer hazards and diversify livelihoods if backed by long-term financing and enforcement.

**Infrastructure investments are reshaping both exposure and response capacity.** Port, road, and grid upgrades in Preah Sihanouk and along coastal corridors have reduced travel time, improved market access, and enabled faster emergency deployment, especially where climate-resilient design standards are applied (CFE-DMHA, 2024; World Bank, 2023). However, as discussed below, such growth corridors also attract dense settlements and assets, increasing potential losses when risk-informed land-use planning is weak (UN DESA, 2018; NIS, 2019). Cambodia’s updated climate commitments and national strategies explicitly prioritise strengthening adaptation capacity—including DRR, preparedness, and recovery for coastal, Tonle Sap, and Mekong communities—creating a policy window to align social protection, DRR, ecosystem management, and infrastructure planning (RGC, 2024).

Despite the progress made so far, important gaps remain, as following:

**Exposure and planning:** Urban growth is outpacing drainage, zoning, and worker-housing codes in coastal towns; informal and peri-urban settlements on low-lying or steep land remain exposed to pluvial and coastal floods, landslides, and water contamination (UN DESA, 2018; NIS, 2019; CFE-DMHA, 2024). Risk information (e.g., flood maps, CCRI, hazard histories) is not yet consistently embedded in coastal SEZ plans, tourism zoning, or housing policy.

**Ecosystem buffers:** Mangrove belts, floodplains, dunes, and coral-reef systems are fragmented or stressed by sediment imbalance, wastewater, sand mining, and shoreline hardening, undermining natural protection and tourism asset quality (MoE & NCSD, 2022). Restoration projects and community conservation are expanding but remain small relative to the historical scale of ecosystem loss, with uneven enforcement outside core protected areas.

**Compound-risk intelligence and early action:** Flood and storm early-warning systems have improved, but forecast chains are not yet fully integrated: river releases, extreme rainfall, dam operations, tides/surge, and urban drainage are still modelled and managed largely in silos, limiting timely evacuation, anticipatory cash support, and port or logistics continuity planning (CFE-DMHA, 2024; World Bank, 2023). Early-warning messages often remain hazard-based rather than impact-based, and sub-national capacities to interpret and act on forecasts are variable.

**Human development and livelihoods:** Despite HDI gains, the IHDI penalty (~27–29%) and MPI disparities show that near-poor, migrants, and informal workers have thin buffers; they require predictable safety nets, skills/TVET for resilient jobs, and access to health services before, during, and after disasters (UNDP, 2024; OPHI & UNDP, 2024; Karamba & Tong, 2022). Existing programmes are still more reactive than anticipatory, and coverage of urban

informal workers and seasonal migrants in coastal areas remains incomplete (MoP, 2025; World Bank, 2022).

Indeed, progress in social protection, DRR institutions, and ecosystem conservation is real, but infrastructure, ecosystems, and social inclusion remain the binding constraints at the coast. Addressing these will determine whether coastal growth pathways reduce or magnify climate-mediated socioeconomic vulnerability.

### **2.3.4 Recommended priority actions, including regional cooperation**

#### ***a) Risk-informed urban/port resilience in coastal hubs***

Coastal cities and port zones should prioritize drainage and floodproofing by expanding separated stormwater networks, increasing detention and retention capacity, and upgrading tide valves in Sihanoukville, Kampot, and Kep, while using design floods that explicitly reflect river–rain–tide–surge interactions. At the same time, stronger codes and land-use controls are needed to enforce setbacks and elevation standards, require hotel and warehouse continuity planning, and formalize worker housing with minimum heat and flood safety provisions.

#### ***b) Basin-to-coast flood management***

Flood risk management should be strengthened through joint protocols for upstream reservoir releases and cross-border early warning—recognizing that the 2018 Xe-Pian Xe-Namnoy failure exposed current coordination gaps—paired with downstream surge and tide forecasting. These measures should be made operational through regular compound-risk drills involving ports and municipalities.

#### ***c) Nature-based defenses and blue-economy safeguards***

Risk reduction should be reinforced by restoring mangroves and floodplains, protecting coastal dunes, and improving sediment and wastewater management, alongside piloting reef-positive tourism. Together, these actions help protect the natural capital—reefs, seagrass, and beaches—that underpins the coast’s competitiveness.

#### ***d) Drought and salinity resilience***

Coastal deltas should scale small- and medium-scale water storage, establish salinity barriers and monitoring, and expand drought-tolerant crops and aquaculture. To reduce livelihood shocks during dry-season shortfalls, shock-responsive cash support through IDPoor should be maintained for near-poor households.

#### ***e) Inclusive human development and livelihoods***

Reducing the IHDl penalty requires investment in secondary and TVET completion, improved coastal health access, and MSME diversification linked to port and tourism economies. In parallel, migrant inclusion should be strengthened across early warning systems, access to shelters, and post-disaster assistance.

#### ***f) Regional cooperation (Gulf of Thailand LME & Mekong)***

Regional partners should improve hydro-meteorological data sharing and dam-release schedule transparency, align marine litter and wastewater controls, and coordinate fisheries management and blue-tourism standards, so that risk reduction and ecological quality improve together.

## **2.4 Methodology and Analysis**

### **2.4.1 Overall Approach**

This chapter applies a structured, indicator-based method aligned with the TDA framework, combining (i) secondary data review, (ii) construction of national and coastal-province indicators, (iii) trend and disparity analysis, and (iv) risk screening across exposure, sensitivity, and adaptive capacity. Unless noted, analysis covers Cambodia and the four coastal provinces (Preah Sihanouk, Kampot, Kep, Koh Kong) aggregated as the “coastal region.” A full indicator list (definitions, units, sources, computation notes) is provided in the Annex Tables.

### **2.4.2 Spatial and temporal frame**

Provincial boundaries follow the 1998, 2008, and 2019 census geographies. “Coastal total” is the sum of the four provinces; national values use official NIS and World Bank aggregates. Key time windows are: demography/settlement (1998–2019, extended to 2024/25 where projections exist); macro-economy/sector structure (1995–2024, or nearest span); human development/poverty (1990–2023 for HDI/IHDI, latest year for SHDI, MPI, IDPoor); and disaster/risk (2000–2024, harmonized to a consistent event/loss classification).

### **2.4.3 Data compilation and sources**

Data were compiled using the same approach as other chapters, drawing on official and international datasets and checking consistency (details in the Annex). Main sources include: censuses and UN WUP (demography/settlement); UNDP HDR, Global Data Lab, World Bank, IDPoor, MPI 2024 (human development/poverty); WDI and macro datasets plus blue-economy diagnostics (economic structure); labour-force surveys and MoP/MEF/partner reports (livelihoods/social protection); EM-DAT, national disaster statistics, WB Climate Portal and national hydro-meteorological services (hazards/climate); and MoE/FiA/PEMSEA assessments (coastal exposure and ecosystems). Where multiple series exist (e.g., GDP, poverty, disaster losses), a primary series is used with others for triangulation or gap-filling; full citations are in Chapter 2 references, with indicator–source–year pairs listed in the Annex.

### **2.4.4 Indicator construction and computation**

Indicators were selected for relevance to coastal vulnerability, data quality, time-series coverage, and consistency with TDA indicator sets, and grouped into: (i) exposure and development (population, density, urbanization, coastal shares, HDI/IHDI/SHDI and IHDI “penalty,” coastal–national contrasts); (ii) economic structure and livelihoods (GDP per capita, sector shares, available tourism/port measures, poverty headcounts, employment structure and dependence proxies); and (iii) risk, sensitivity and adaptive capacity (disaster frequency/impacts and proxies such as social protection, education/health access, ecosystem buffers, and basic infrastructure). Annex Tables document units, coverage, time spans, sources, and transformations; composite metrics use normalized exposure–sensitivity–adaptive capacity measures with weights and thresholds documented in the Annex.

### **2.4.5 Quality assurance, triangulation and limitations**

Quality assurance included cross-source checks for key indicators, internal consistency tests (census totals, derived rates, coastal vs national sums), outlier review for reporting/method breaks, and transparent documentation of assumptions in Annex Tables and main-text

footnotes where interpretation is affected. Limitations include uneven subnational coverage, breaks from methodological revisions (poverty lines, GDP base years, survey tools), undercounting of informal workers/migrants/seasonal labour, and ecosystem/climate indicators drawn from studies with differing methods—adequate for broad profiling but not fine-scale planning.

## Glossary

Term	Definition
<b>Adaptive capacity</b>	Ability of people, institutions, and systems to anticipate, cope with, recover from, and adapt to climate hazards and shocks.
<b>Asset concentration</b>	Clustering of high-value infrastructure, businesses, and housing in specific locations, increasing potential losses during disasters.
<b>Basin-to-coast risk management</b>	Coordinated management of flood and water risks from upstream catchments through rivers/drainage systems to coastal zones, including tide/surge interactions.
<b>Built-up area</b>	Land covered by urban development (buildings/roads), often used as a proxy for urban expansion and exposure.
<b>Climate-related threats</b>	Hazards intensified by climate variability/change (e.g., floods, droughts, storms, sea-level rise) affecting people, ecosystems, and the economy.
<b>Coastal flooding</b>	Flooding driven by high tides, storm surge, sea-level rise and/or heavy rainfall where drainage is limited in low-lying coastal areas.
<b>Compound risk</b>	Overlapping hazards (e.g., river flood + rainfall + tide/surge + drainage limits) that amplify impacts.
<b>Coping capacity</b>	Strength of systems (institutions, services, infrastructure, social protection) to manage and reduce disaster impacts.
<b>Disaster risk</b>	Potential for losses (lives, livelihoods, assets) from the interaction of hazards, exposure, and vulnerability.
<b>Drought</b>	Prolonged deficit in rainfall or water availability that reduces agricultural output, water supply, and livelihoods.
<b>Early warning system</b>	Arrangements to monitor hazards, forecast impacts, communicate alerts, and enable timely protective actions.
<b>Ecosystem buffers</b>	Natural features (mangroves, reefs, dunes, floodplains, seagrass) that reduce waves, flooding, erosion and support livelihoods.
<b>Ecosystem-based adaptation</b>	Using ecosystem protection/restoration to reduce climate risks while sustaining ecosystem services and livelihoods.
<b>Exposure</b>	People, assets, and activities located in hazard-prone areas (e.g., low-lying towns, ports, tourism zones).
<b>Riverine flooding</b>	Flooding from rivers and floodplains, typically driven by monsoon rainfall and upstream flows.
<b>Pluvial/urban flooding</b>	Flooding caused by intense rainfall overwhelming drainage systems, common in fast-growing towns.
<b>Hazard</b>	Potentially damaging event or trend (e.g., flood, drought, storm surge, sea-level rise).
<b>HDI (Human Development Index)</b>	Composite index summarizing health, education, and income dimensions of human development.
<b>IHDI (Inequality-adjusted HDI)</b>	HDI adjusted to reflect inequality in the distribution of health, education, and income.
<b>INFORM Risk Index</b>	Composite index summarizing disaster risk using hazard/exposure, vulnerability, and coping capacity components.
<b>Informal workers</b>	Workers without formal contracts or protections, often more exposed to shocks and slower to recover.
<b>Livelihood sensitivity</b>	Degree to which livelihoods (e.g., tourism, fisheries, agriculture) are affected by hazards and ecosystem stress.
<b>MPI (Multidimensional Poverty Index)</b>	Poverty measure capturing multiple deprivations (health, education, living standards), not only income.
<b>Near-poor</b>	Households just above the poverty line that can fall back into poverty after shocks (disasters or economic downturns).
<b>Risk-informed planning</b>	Integrating hazard and vulnerability information into land-use plans, infrastructure standards, and investment decisions.
<b>Sea-level rise</b>	Long-term increase in sea level that elevates coastal flood baselines and worsens erosion and salinity intrusion.

<b>Salinity intrusion</b>	Movement of seawater into rivers/canals/groundwater, especially during dry seasons and under sea-level rise, affecting water supply and production systems.
<b>Sensitivity</b>	How strongly people, assets, or ecosystems are affected when hazards occur (given their condition and dependence).
<b>Shock-responsive social protection</b>	Social assistance systems that can be scaled quickly (e.g., cash support) to help households during crises.
<b>Storm surge</b>	Abnormal rise in sea level generated by storms that can inundate coastal areas and estuaries.
<b>Urbanization</b>	Increase in the share of the population living in urban areas, often increasing exposure when planning and services lag behind growth.
<b>Vulnerability</b>	Propensity to be harmed, shaped by exposure, sensitivity, and adaptive capacity (including inequality and access to services).

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## Annex 2

### Table of Contents

<b>2 Socio-economics and Climate-related Threats</b> .....	<b>1</b>
<b>2.1 Key Findings</b> .....	<b>1</b>
<b>2.2 Current Status</b> .....	<b>2</b>
2.2.1 Demographics .....	2
2.2.2 Human Wellbeing .....	5
2.2.3 Economic Activities .....	7
2.2.4 Climate-related Threats.....	9
<b>2.3 Discussion and Conclusions</b> .....	<b>11</b>
2.3.1 Risk assessment from socioeconomic trends .....	11
2.3.2 Risk assessment from climate- and environment-related threats .....	12
2.3.3 Mitigating socioeconomic vulnerability from climate-mediated environmental change – current actions and gaps .....	12
2.3.4 Recommended priority actions, including regional cooperation .....	14
<b>2.4 Methodology and Analysis</b> .....	<b>15</b>
2.4.1 Overall Approach.....	15
2.4.2 Spatial and temporal frame.....	15
2.4.3 Data compilation and sources .....	15
2.4.4 Indicator construction and computation.....	15
2.4.5 Quality assurance, triangulation and limitations .....	15
<b>Glossary</b> .....	<b>17</b>
<b>Funding Sources</b> .....	<b>19</b>
<b>References</b> .....	<b>20</b>
<b>Annex 2</b> .....	<b>23</b>

### List of Figures

Figure 2-1 Cambodia's national population and projections (1998–2048).....	2
Figure 2-2 Coastal population and share of national total (1998–2019).....	2
Figure 2-3 Coastal provinces – population and households (1998–2019).....	3
Figure 2-4 Census-based urban and rural shares – Cambodia (1998-2019) .....	4
Figure 2-5 Poor rate by person and household (national vs coastal provinces).....	5
Figure 2-6 Cambodia Human Development Index (HDI) 1990-2023 .....	6
Figure 2-7 Subnational Human Development Index (HDI)-Cambodia 1990-2023.....	7
Figure 2-8 Cambodia GDP per Capita (Current US\$ vs Constant 2015 US\$) 1995-2024 .....	8

### List of Tables

Table 2-1 Coastal provinces: area, density and growth .....	3
Table 2-2 National urban share – key years and projections .....	4
Table 2-3 Built-up land, 2010 (national) .....	5
Table 2-4 Subnational (coastal province) Multidimensional Poverty Index .....	6
Table 2-5 Selected indicators from the INFORM Risk Index (mid-2025) – Cambodia .....	11



## *List of Acronyms*

<b>AHA Centre</b>	ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management
<b>AR6</b>	Sixth Assessment Report (IPCC)
<b>CAGR</b>	Compound Annual Growth Rate
<b>CFE-DMHA</b>	Center for Excellence in Disaster Management & Humanitarian Assistance
<b>CRED</b>	Centre for Research on the Epidemiology of Disasters
<b>EM-DAT</b>	The International Disaster Database
<b>GDP</b>	Gross Domestic Product
<b>GNI</b>	Gross National Income
<b>HDI</b>	Human Development Index
<b>IASC</b>	Inter-Agency Standing Committee
<b>IDPoor</b>	Identification of Poor Households system
<b>IHDI</b>	Inequality-Adjusted Human Development Index
<b>INFORM</b>	Index for Risk Management
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>JMP</b>	WHO/UNICEF Joint Monitoring Programme (Water, Sanitation and Hygiene)
<b>JRC</b>	Joint Research Centre (European Commission)
<b>LME</b>	Large Marine Ecosystem
<b>MoE</b>	Ministry of Environment
<b>MoP</b>	Ministry of Planning
<b>MoT</b>	Ministry of Tourism
<b>MODIS</b>	Moderate Resolution Imaging Spectroradiometer
<b>NCSD</b>	National Council for Sustainable Development (Cambodia)
<b>NDVI</b>	Normalized Difference Vegetation Index
<b>NIS</b>	National Institute of Statistics
<b>NSOC</b>	National State of the Oceans and Coasts
<b>OPHI</b>	Oxford Poverty and Human Development Initiative
<b>PEMSEA</b>	Partnerships in Environmental Management for the Seas of East Asia
<b>PPP</b>	Purchasing Power Parity
<b>RGC</b>	Royal Government of Cambodia
<b>SHDI</b>	Subnational Human Development Index
<b>SLR</b>	Sea-Level Rise
<b>TVET</b>	Technical and Vocational Education and Training
<b>UCLouvain</b>	Université catholique de Louvain
<b>UN DESA</b>	United Nations Department of Economic and Social Affairs
<b>UNDP</b>	United Nations Development Programme
<b>WASH</b>	Water, Sanitation and Hygiene
<b>WB/WDI</b>	World Bank / World Development Indicators
<b>WUP</b>	World Urbanization Prospects
<b>WTTC</b>	World Travel & Tourism Council

## Annex 2-1 Dataset and analysis framework, and complimentary note

### A. Demographic indicator

Demographic indicators describe the size, structure and spatial distribution of the population in Cambodia and its four coastal provinces. Core variables include total population, number of households, sex ratio, age structure, and population density, as well as the share of people living in urban areas and major coastal settlements. Data are drawn primarily from the 1998, 2008 and 2019 Population Censuses and official intercensal projections. Indicators are computed at national and provincial level; coastal totals are obtained by summing the four coastal provinces and, where relevant, expressing them as a share of national population. Where different classifications or boundary changes occur, the annex notes how these have been harmonised across time. Provincial-level time-series remain discontinuous—therefore comparisons rely on harmonised census rounds rather than annual estimates. Coastal totals are derived through straightforward aggregation of the four coastal provinces.

Annex Table 2-1 Demographics indicators: data sources, metadata, & assessment methods

Indicator	Definition & Unit	Spatial Coverage	Time Series Availability	Primary Data Sources	Method / Notes
<b>Total population</b>	Number of people (persons)	National; 4 coastal provinces	Census years: <b>1998, 2008, 2019</b> ; projections 2020–2030	NIS Population Census; UN WPP projections	Coastal total = sum of 4 coastal provinces. No adjustments except boundary harmonization.
<b>Number of households</b>	Total households (HH)	National; coastal provinces	1998, 2008, 2019	NIS Census	Used to derive average household size; no interpolation.
<b>Population density</b>	Persons per km <sup>2</sup>	National; provincial	1998–2019	NIS; Administrative boundary area data	Density = population ÷ land area. Coastal mean is population-weighted.
<b>Urbanization rate</b>	% population in urban areas	National (1990–2035); coastal (1998–2019)	National (annual WUP); coastal (census years only)	UN DESA World Urbanization Prospects (WUP); NIS	1975–79 values excluded due to data disruption. No extrapolation for provinces.
<b>Sex ratio</b>	Males per 100 females	National; provincial	1998, 2008, 2019	NIS Census	Reported directly; no adjustments.

Annex Table 2-2 Subnational Coastal Populations (1998, 2008, & 2019)

Pop. Census 1998	Persons	Females	Males	Households
<b>Preah Sihanouk</b>	155,690	78,750	76,940	28,015
<b>Koh Kong</b>	132,106	64,406	67,700	24,960
<b>Kampot</b>	528,405	275,320	253,085	104,993
<b>Kep</b>	28,660	14,646	14,014	5369
<b>Coastal (total)</b>	844,861	433,122	411,739	163,337
Pop. Census 2008	Persons	Females	Males	Households
<b>Preah Sihanouk</b>	221,396	110,619	110,777	45,237

<b>Koh Kong</b>	117,481	58,154	59,327	24,311
<b>Kampot</b>	585,850	301,727	284,123	130,084
<b>Kep</b>	35,753	18,079	17,674	7,236
<b>Coastal (total)</b>	960,480	488,579	471,901	206,868
<b>Pop. Census 2019</b>	<b>Persons</b>	<b>Females</b>	<b>Males</b>	<b>Households</b>
<b>Preah Sihanouk</b>	310,072	148,610	161,462	47,381
<b>Koh Kong</b>	125,902	62,458	63,444	28,027
<b>Kampot</b>	593,829	306,239	287,590	143,402
<b>Kep</b>	42,665	21,601	21,064	9,605
<b>Coastal (total)</b>	1,072,468	538,908	533,560	228,415

Source: NIE, General Population Census of Cambodia (1998, 2008, 2019)

Annex Table 2-3 Subnational Coastal Demographic indicators/data (1998, 2008, & 2019)

<b>Areas of subnational Coastal region (km<sup>2</sup>)</b>		<b>2019</b>		
<i>Coastal area</i>		17,237		
<i>Preah Sihanouk</i>		1,938		
<i>Koh Kong</i>		10,090		
<i>Kampot</i>		4,873		
<i>Kep</i>		336		
<b>Subnational coastal populations as % of national population</b>	<b>1998</b>	<b>2008</b>	<b>2019</b>	
<i>Coastal area</i>	7.30	7.20	6.90	
<i>Preah Sihanouk</i>	1.50	1.70	2.00	
<i>Koh Kong</i>	1.01	0.90	0.80	
<i>Kampot</i>	4.62	4.40	3.80	
<i>Kep</i>	0.25	0.30	0.30	
<b>Subnational Coastal region areas as % of national area</b>		<b>2019</b>		
<i>Coastal area</i>		9.52		
<i>Preah Sihanouk</i>		1.07		
<i>Koh Kong</i>		5.57		
<i>Kampot</i>		2.69		
<i>Kep</i>		0.19		
<b>Annual Subnational Coastal region population changes (%)</b>	<b>1998-2008</b>	<b>2008-2019</b>		
<i>Coastal area</i>	0.80	1.00		
<i>Preah Sihanouk</i>	2.54	3.10		
<i>Koh Kong</i>	0.12	0.60		
<i>Kampot</i>	1.03	0.10		
<i>Kep</i>	2.21	1.60		
<b>Coastal population densities (person/km<sup>2</sup>)</b>	<b>1998</b>	<b>2008</b>	<b>2019</b>	
<i>Coastal area</i>	49	56	62	
<i>Preah Sihanouk</i>	89	114	160	

<b>Koh Kong</b>	12	12	12
<b>Kampot</b>	108	120	122
<b>Kep</b>	85	106	127
<b>% of national population in rural and urban areas (%)</b>	<b>1998</b>	<b>2008</b>	<b>2019</b>
<b>Urban</b>	15.7	19.51	39.45
<b>Rural</b>	84.3	80.49	60.55

Source: NIE, General Population Census of Cambodia (1998, 2008, 2019)

## B. Human wellbeing indicators

Human wellbeing indicators capture longer-term development trends and distributional outcomes. The annex reports national and subnational Human Development Index (HDI/SHDI), inequality-adjusted HDI (IHDI), multidimensional poverty (MPI), and income/consumption-based poverty measures, together with selected social indicators (education, health, social protection coverage) where available. HDI and IHDI are taken from UNDP Human Development Reports, SHDI from Global Data Lab, and monetary poverty from World Bank and national poverty assessments, complemented by IDPoor targeting data. Methods focus on comparing coastal provinces with national averages, highlighting gaps or penalties (e.g. the IHDI “loss” due to inequality) and how these have evolved over time.

*Annex Table 2-4 Human wellbeing indicators: data sources, metadata, & assessment methods*

Indicator	Definition & Unit	Spatial Coverage	Time Series Availability	Primary Data Sources	Computation / Notes
<b>HDI (Human Development Index)</b>	Index (0–1)	National	<b>1990–2023</b> (annual)	UNDP HDR Statistical Annex 2023/24	Standard HDR methodology; no recalculations.
<b>IHDI (Inequality-adjusted HDI)</b>	Adjusted index & % “loss”	National	Latest available year	UNDP HDR	IHDI penalty = (HDI–IHDI)/HDI.
<b>SHDI (Subnational Human Development Index)</b>	Index (0–1)	Provincial	Latest available year (typically 2019–2022)	Global Data Lab	Used to compare coastal vs. non-coastal gaps; static (no historical series).
<b>Monetary poverty (national poverty line)</b>	% of people/HH below line	National & provincial	Various rounds: 2007, 2009, 2012, 2014, 2019–2020	World Bank; IDPoor; MoP	Poverty lines changed across rounds; breakpoints documented in notes.
<b>Multidimensional Poverty Index (MPI)</b>	% poor; intensity of deprivation	National; regions	Latest MPI release (2023/24)	OPHI & UNDP	Not comparable across years; interpret as cross-section.
<b>Social protection coverage</b>	% of HH benefiting from IDPoor, cash transfers or	National; coastal if available	2019–2024 (irregular)	IDPoor; MEF; MoSVY	Used as qualitative adaptive-capacity indicator.

	health insurance				
<b>Education/Health basic indicators</b>	Literacy; school attendance; child survival	National; provincial where available	Census years + select DHS years	NIS; DHS	Limited coastal disaggregation; used qualitatively.

*Annex Table 2-5 Poor data and rate by person and household (national vs coastal provinces)*

Province/Area	Poor persons	Persons rate (%)	Poor households	Households rate (%)
<b>Kampot</b>	110,044	15.53	28,743	17.79
<b>Preah Sihanouk</b>	38,775	16.91	8,445	16.71
<b>Koh Kong</b>	34,997	38.53	7,990	25.36
<b>Kep</b>	5,636	13.05	1,408	14.23
<b>Coastal (total)</b>	189,452	21.01	46,586	18.52
<b>Cambodia (National)</b>	3,348,026	21.46	751,323	19.19

Source: MoP, IDPoor Public Data Query

*Annex Table 2-6 Cambodia's HDI, 1990–2023 (UNDP HDR 2023/24 Statistical Annex)*

Year	HDI Value	Life expectancy at birth	Expected years of schooling	Mean years of schooling	GNI per capita (2021 PPP\$)	Inequality Adjusted HDI
1990	0.387	55.21	6.89	2.82	1209.60	...
1991	0.392	55.58	6.99	2.87	1241.33	...
1992	0.396	55.75	7.10	2.93	1263.47	...
1993	0.399	56.04	7.21	2.98	1250.66	...
1994	0.400	56.22	7.31	3.04	1217.33	...
1995	0.404	56.56	7.42	3.09	1228.19	...
1996	0.408	56.83	7.53	3.15	1261.15	...
1997	0.414	57.27	7.64	3.20	1299.83	...
1998	0.419	57.86	7.74	3.26	1324.98	...
1999	0.429	58.61	7.85	3.32	1449.30	...
2000	0.438	59.49	7.96	3.37	1557.66	...
2001	0.453	60.46	8.59	3.44	1650.32	...
2002	0.473	61.40	9.78	3.50	1712.62	...
2003	0.488	62.35	10.33	3.56	1836.39	...
2004	0.502	63.26	10.84	3.62	1986.09	...
2005	0.514	64.11	11.00	3.69	2196.73	...
2006	0.525	64.89	11.16	3.81	2395.49	...
2007	0.534	65.55	11.16	3.93	2611.42	...
2008	0.539	66.15	11.06	4.03	2721.60	...
2009	0.539	66.75	11.07	3.94	2674.14	...

<b>2010</b>	0.543	67.31	11.07	3.87	2820.32	0.387
<b>2011</b>	0.547	67.87	11.08	3.80	2953.15	0.397
<b>2012</b>	0.551	68.37	11.09	3.74	3096.68	0.404
<b>2013</b>	0.554	68.76	11.10	3.67	3253.89	0.408
<b>2014</b>	0.557	69.12	11.11	3.60	3437.21	0.403
<b>2015</b>	0.562	69.40	11.12	3.67	3629.06	0.407
<b>2016</b>	0.570	69.64	11.13	3.95	3839.20	0.414
<b>2017</b>	0.578	69.84	11.14	4.23	4057.35	0.421
<b>2018</b>	0.586	69.99	11.15	4.52	4284.37	0.427
<b>2019</b>	0.593	70.13	11.16	4.80	4508.79	0.433
<b>2020</b>	0.595	70.06	11.17	5.00	4415.43	0.435
<b>2021</b>	0.594	69.30	11.18	5.20	4425.37	0.434
<b>2022</b>	0.602	70.53	11.19	5.20	4612.26	0.440
<b>2023</b>	0.606	70.67	11.20	5.20	4931.02	0.444

Source: UNDP, 2024. Human Development Report 2023/24 – Statistical Annex. Data Center

Annex Table 2-7 Subnational Human Development Index (HDI)-Cambodia 1990-2023

Year	HDI Value		Life expectancy at birth		Expected years of schooling		Mean years of schooling	
	Sihanoul Kampot Kep	Koh Kong	Sihanoul Kampot Kep	Koh Kong	Sihanoul Kampot Kep	Koh Kong	Sihanoul Kampot Kep	Koh Kong
<b>1990</b>	0.378	0.368	55.17	58.76	7.329	5.427	2.913	2.51
<b>1991</b>	0.383	0.373	55.52	59.14	7.442	5.511	2.969	2.558
<b>1992</b>	0.387	0.377	55.75	59.38	7.556	5.595	3.026	2.607
<b>1993</b>	0.39	0.379	55.81	59.44	7.671	5.68	3.082	2.655
<b>1994</b>	0.392	0.381	55.76	59.4	7.785	5.765	3.138	2.704
<b>1995</b>	0.399	0.387	56.04	59.69	7.9	5.85	3.195	2.752
<b>1996</b>	0.402	0.391	56.07	59.73	8.014	5.934	3.253	2.803
<b>1997</b>	0.407	0.396	56.47	60.15	8.129	6.019	3.311	2.853
<b>1998</b>	0.412	0.4	56.75	60.45	8.243	6.104	3.37	2.904
<b>1999</b>	0.421	0.409	57.41	61.15	8.357	6.189	3.428	2.954
<b>2000</b>	0.431	0.418	58.34	62.14	8.472	6.273	3.487	3.004
<b>2001</b>	0.448	0.432	60.11	63.27	9.173	6.749	3.49	3.009
<b>2002</b>	0.471	0.45	61.8	64.31	10.46	7.65	3.494	3.015
<b>2003</b>	0.488	0.463	63.55	65.37	11.07	8.052	3.499	3.021
<b>2004</b>	0.504	0.475	65.03	66.15	11.65	8.431	3.503	3.027
<b>2005</b>	0.517	0.484	66.22	66.63	11.84	8.529	3.508	3.033
<b>2006</b>	0.526	0.499	66.54	66.84	11.95	9.077	3.637	3.148
<b>2007</b>	0.532	0.513	66.78	66.97	11.89	9.491	3.765	3.263
<b>2008</b>	0.535	0.522	67.08	67.17	11.71	9.795	3.878	3.365
<b>2009</b>	0.535	0.528	67.63	67.62	11.7	10.23	3.8	3.3
<b>2010</b>	0.537	0.536	67.47	67.36	11.7	10.65	3.745	3.256

2011	0.544	0.549	68.45	68.08	11.72	11.08	3.763	3.419
2012	0.55	0.561	69.23	68.6	11.74	11.53	3.775	3.568
2013	0.556	0.573	69.89	69.01	11.75	11.98	3.782	3.702
2014	0.562	0.585	70.59	69.46	11.77	12.46	3.784	3.823
2015	0.563	0.58	70.37	69.73	11.56	11.94	3.835	3.797
2016	0.568	0.578	70.38	70.2	11.34	11.4	4.098	3.977
2017	0.572	0.576	70.33	70.62	11.11	10.85	4.358	4.146
2018	0.575	0.572	70.03	70.79	10.84	10.25	4.615	4.305
2019	0.578	0.568	69.83	71.04	10.57	9.638	4.87	4.453
2020	0.574	0.557	69.24	70.88	10.29	9.009	5.039	4.518
2021	0.57	0.545	68.11	70.16	9.982	8.353	5.207	4.577
2022	0.573	0.548	68.41	70.47	9.982	8.353	5.207	4.577

Source: Global Data Lab, 2025.

### C. Economic activities

Economic indicators describe the structure and dynamics of Cambodia's economy, with emphasis on sectors that are important for coastal livelihoods. Key variables include GDP per capita (current and constant prices), sectoral shares of GDP (agriculture, industry, services), and, where data permit, the contribution of fisheries, tourism, ports and related coastal activities. National series are taken from World Bank World Development Indicators and national accounts; coastal insights draw on sector studies, blue-economy assessments and project documents. The annex documents how current-price values are converted to constant terms, how growth rates are calculated, and how qualitative statements on coastal economic importance are derived from available evidence.

Annex Table 2-8 Economic activity indicators: data sources, metadata, & assessment methods

Indicator	Definition & Unit	Spatial Coverage	Time Series Availability	Data Sources	Computation / Notes
<b>GDP per capita</b>	US\$/person (current + constant)	National	1995–2024 (annual)	World Bank WDI	Constant series used for long-term trends; current for comparison.
<b>Sectoral GDP shares</b>	% of GDP from agriculture, industry, services	National	1995–2024	WDI; National Accounts	Interpreted for coastal economy via sector profiles (tourism, fisheries).
<b>Fisheries contribution</b>	% GDP or value added	National (coastal relevance)	Varies by study	World Bank CCDR; FiA; PEMSEA & MoE	Not annual; compiled from specialized assessments.
<b>Tourism activity</b>	Arrivals, receipts	National; coastal inference	1995–2024	MoT; project reports	Coastal-specific tourism data limited; interpret qualitatively.
<b>Port &amp; SEZ activity</b>	Cargo volumes, employment	Preah Sihanouk; Phnom Penh	2010–2024 (irregular)	MPWT; SEZ reports	Used to contextualize coastal economic structure.

<b>Employment structure</b>	% employment by sector	National; limited coastal	LFS years: 2012, 2015, 2019, 2021–2023	NIS Labour Force Survey	Used qualitatively to describe livelihood dependency.
<b>Informality &amp; migration flows</b>	Share of informal workers; migration volumes	National	Intermittent	ILO; World Bank	No consistent coastal time-series; used as narrative support.

*Annex Table 2-9 Cambodia's economic key indicators (1995-2024)*

Year	GDP per capita		Agriculture, forestry, and fishing, value added		Services value added	
	Current US\$	2015 US\$	Constant 2015 US\$ - Billion	% of GDP	Constant 2015 US\$ - Billion	% of GDP
1995	343.49	520.93	2.26	47.72	1.95	34.192
1996	324.66	511.67	2.32	44.46	2.13	35.981
1997	297.59	496.77	2.35	44.45	2.19	35.088
1998	258.78	499.02	2.46	44.48	2.30	34.804
1999	286.75	552.90	2.55	40.90	2.63	35.442
2000	296.43	598.56	2.61	35.53	2.87	36.715
2001	327.50	632.83	2.70	32.97	3.15	38.058
2002	350.15	662.19	2.63	29.61	3.41	38.999
2003	386.69	719.33	2.95	29.47	3.72	38.730
2004	444.20	775.85	2.94	26.63	4.16	39.444
2005	525.80	866.34	3.42	27.45	4.66	39.354
2006	612.25	947.07	3.62	26.29	5.17	39.113
2007	731.69	1,030.23	3.83	25.47	5.72	39.167
2008	866.28	1,090.57	4.06	28.03	6.25	39.486
2009	875.75	1,117.26	4.28	28.09	6.52	39.788
2010	952.27	1,155.85	4.47	27.87	6.85	39.721
2011	1,088.98	1,221.39	4.58	28.04	7.31	39.083
2012	1,192.80	1,295.25	4.78	26.80	7.93	39.400
2013	1,305.66	1,376.30	4.83	24.45	8.69	40.406
2014	1,431.56	1,464.53	4.86	22.19	9.54	41.689
2015	1,547.32	1,547.32	4.87	20.14	10.20	42.206
2016	1,675.20	1,645.47	4.93	18.91	10.90	41.764
2017	1,826.35	1,753.94	5.02	17.87	11.66	41.418
2018	2,036.67	1,884.28	5.07	16.50	12.49	40.220
2019	2,225.88	2,008.32	5.05	15.44	13.30	39.138
2020	2,081.74	1,908.63	5.08	17.04	12.42	39.144
2021	2,167.40	1,938.76	5.16	16.90	12.19	36.487
2022	2,325.03	2,011.27	5.19	16.54	12.63	36.385
2023	2,429.75	2,085.06	5.25	17.08	13.39	36.152

<b>2024</b>	2,627.88	2,183.56	5.30	16.58	13.97	35.595
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Source: World Bank, 2025. World Development Indicators (WDI)

#### D. Climate-related threats

Climate-related threat indicators summarize the frequency and severity of hazard events and the underlying climate trends affecting coastal communities. They include counts of major floods, droughts and storms; associated deaths, people affected and economic losses; and long-term trends in temperature, rainfall variability and sea-level rise. Disaster statistics are compiled from EM-DAT and national disaster-management records, while climate trends and projections use the World Bank Climate Change Knowledge Portal and national hydro-meteorological datasets. Indicators are normalised where appropriate (e.g. losses per capita) and, when possible, disaggregated to coastal provinces. The annex explains event classifications, treatment of missing values, and the limitations of historical records when interpreting climate-risk patterns.

Annex Table 2-10 Climate-related threats: data sources, metadata, metadata, & assessment methods

Indicator	Definition & Unit	Spatial Coverage	Time Series Availability	Data Sources	Methods / Notes
<b>Rainfall variability</b>	Annual & seasonal rainfall (mm)	National	1960–2023	WB CCKP; hydro-met records	Variability assessed using coefficient of variation and seasonal anomalies.
<b>Sea-level rise projections</b>	cm relative to baseline	Coastal provinces	Projections to 2050/2100	WB CCKP (IPCC AR6 pathways)	Range-based (low–high scenarios); province-level interpretation.
<b>Flood events</b>	Number of events; people affected; damage	National & provincial	2000–2024	EM-DAT; NCDM	Event classification standardised; damages expressed in '000 US\$.
<b>Drought events</b>	Number of events; affected population	National & provincial	2000–2024	EM-DAT; national records	Data patchy pre-2010; descriptive trend only.
<b>Storms &amp; coastal hazards</b>	# of events; affected areas	National; coastal areas	2000–2024	EM-DAT; DRM reports	Used to identify exposure hotspots.
<b>Climate vulnerability factors</b>	Exposure + sensitivity + adaptive capacity	National; provincial	Cross-sectional	Derived from multiple indicators	Composite index (qualitative); no time-series.

Annex Table 2-11 Summary of Major Climate- and Weather-Related Disasters in Cambodia, 2000–2023 (EM-DAT and CFE-DMHA Compilation)

Disaster Subtype	Locations	Year	Total Deaths	No. Injured	No. Affected	Total Damage ('000 US\$)	Total Damage, Adjusted ('000 US\$)
<b>Riverine flood</b>	Stung Treng, Kratie, Koh Kong, Kampong Cham, Pursat,	2000	347	53	3448000	160000	291465

	Kampong Thom, Takeo, Siem Reap, Otdar Meanchey, Kampot, Svay Rieng, Kandal, Phnom Penh, Prey Veng, Kampong Chhnang, Ratanak Kiri, Preah Vihear, Battambang, Banteay Meanchey, Kampong Speu provinces						
<b>Riverine flood</b>	Stung Treng, Kratie, Kampong Cham provinces	2001	56		1669182	15000	26574
<b>Drought</b>	Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Kampot, Kandal, Kep, Koh Kong, Kratie, Phnom Penh, Preah Sihanouk, Prey Veng, Pursat, Svay Rieng, Takeo provinces	2001			300000		
<b>Riverine flood</b>	Kandal, Stung Treng, Prey Veng, Takeo, Kampong Chhnang, Banteay Meanchey, Svay Rieng, Kampong Speu, Kratie, Pursat, Kampot provinces	2002	29		1470000	100	174
<b>Drought</b>	Takeo, Kampot, Kampong Speu, Kampong Chhnang, Kandal, Prey Veng, Phnom Penh, Otdar Meanchey, Banteay Meanchey, Pursat, Battambang provinces	2002			650000	38000	66269
<b>Riverine flood</b>	Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Kampot, Kandal, Kratie, Phnom Penh, Preah Vihear, Prey Veng, Stung Treng, Takeo provinces	2004					
<b>Riverine flood</b>	Kratie, Kampong Cham, Kandal, Prey Veng, Siem Reap provinces	2005	16				
<b>Drought</b>	Kampong Speu province	2005			600000		
<b>Riverine flood</b>	Koh Kong province	2006			5000		
<b>Riverine flood</b>	Kampong Seila district (Koh Kong province), Phnom Penh, Kampong Speu, Kampot, Ratanak Kiri, Mondul Kiri provinces	2006	5		33000		
<b>Riverine flood</b>	Kampong Thom, Ratanak Kiri, Preah Vihear provinces	2007	2		19000	1000	1513
<b>Tropical cyclone</b>	Kampong Thom, Kratie, Mondul Kiri, Preah Vihear, Ratanak Kiri, Stung Treng provinces	2009	17	91	178000		
<b>Tropical cyclone</b>	Kaoh Nheak district (Mondul Kiri province)	2009	2				
<b>Riverine flood</b>	Banteay Meanchey, Battambang, Otdar Meanchey, Pailin, Preah Vihear, Pursat provinces	2010	8			70000	100700
<b>Riverine flood</b>	Kandal, Kampong Thom, Prey Veng, Kampong Cham, Kratie, Battambang, Kampong Chhnang, Preah Vihear, Pursat provinces	2011	247	23	1640000	521000	726561
<b>Flash flood</b>	Banteay Meanchey province	2012	14		71500		
<b>Riverine flood</b>	Battambang, Banteay Meanchey, Kampong Cham, Prey Veng, Kandal, Siem Reap, Kratie, Kampong Thom, Otdar Meanchey, Stung Treng, Pursat, Kampong Chhnang, Ratanak Kiri, Preah Vihear,	2013	200		1500000	500000	673276

	Svay Rieng, Phnom Penh, Takeo, Pailin, Kampot provinces						
<b>Flash flood</b>	Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Kampot, Kandal, Kratie, Phnom Penh, Preah Vihear, Prey Veng, Stung Treng, Takeo provinces	2014	45		472500	2000	2650
<b>Flood (General)</b>	Teuk Chhou District (Kampot) (Mak Prang, Kampong Kreng, Stoeung Keo, Trapang Thum and Prey Khmum communes)	2015			22000		
<b>Tropical cyclone</b>	Battambang province	2015			6300		
<b>Drought</b>	Banteay Meanchey, Battambang, Pursat, Kampong Speu provinces	2016			2500000		
<b>Flood (General)</b>	Siem Pang District, Steung Treng Town, Siem Bok, Sesan, Thalaborivat; Kampong Speu, Battambang, Koh Kong, Phreah Sihanouk, Kampot provinces	2018			5817		
<b>Flood (General)</b>	Stung Treng, Kratie, Kampong Cham and Tbong Khmum	2019	12		435000		
<b>Tropical cyclone</b>	Pursat, Battambang, Pailin, Kampong Speu, Kampong Chhnang, Banteay Meanchey, Kampong Thom, Phnom Penh, Kandal, Sway Rieng, Stung Treng, Takao, Siem Reap, Preah Vihear, Oddar Meanchey Provinces.	2020	44		759360	100000	121204
<b>Tropical cyclone</b>	Battambang, Preah Sihanouk and Koh Kong Provinces.	2020					
<b>Flood (General)</b>	Poipet and Malai districts (Banteay Meanchey Province)	2021			500		
<b>Flood (General)</b>	Kampong Speu Province	2021			225		
<b>Flood (General)</b>	Daun Kok and Anlong Svay villages, Sangkat Boeung Thom, Khan Kampoul, Phnom Penh	2021			12500		
<b>Severe weather</b>	Banteay Ampil district (Oddar Meanchey province); Battambang province; Krakor District (Pursat province)	2021	1	1	500		
<b>Flood (General)</b>	Meanchey, Oddar Meanchey Province	2022	15		167770		
<b>Storm surge</b>	National	2022	16				
<b>Lightning/ Thunderstorms</b>	National	2023			14100		

**Source:** CRED, UCLouvain, 2025. EM-DAT: The International Disaster Database [dataset]