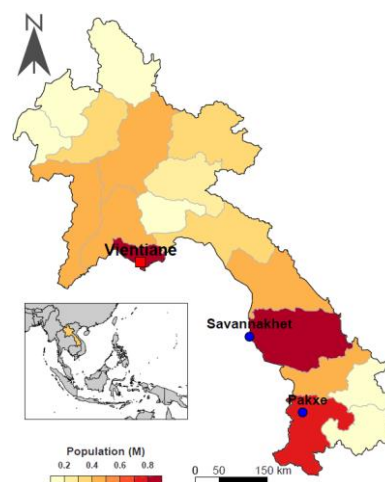


Social Indicators (2019)

Population (million) ¹ :	7.17
Population density (km ⁻²) ² :	31
Population growth rate (% yr ⁻¹) ³ :	1.57
Urban population growth rate (% yr ⁻¹) ⁴ :	4.07
Urban area growth rate (% yr ⁻¹) ⁵ :	2.88
Human Development Index ⁶ :	0.604
HDI Rank ⁶ :	140/189
Largest cities by population ⁷ :	Vientiane, Pakse, Savannakhet

Geography

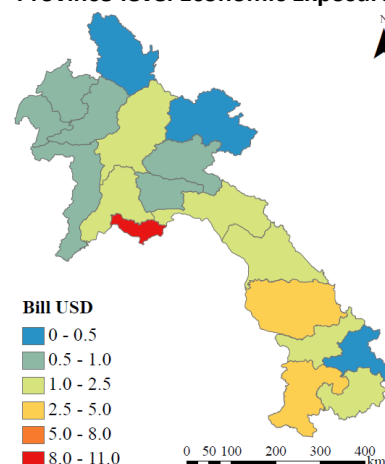
Land area (km ²) ⁸ :	230,800
Land area below 5 m MSL (%) ⁸ :	0.0 (lowest point: Mekong 70 m)
Length of coastline (km) ⁹ :	0 (landlocked)
Terrain ⁹ :	Mostly rugged mountains; some plains and plateaus
Major river systems ¹⁰ :	Ou, Ngum, Banghieng and Kong Rivers (all tributaries of Mekong)



Economic Indicators (2019)

GDP (million USD) ⁸ :	17,954
GDP PPP (million USD) ⁸ :	52,535
GDP per capita, PPP (USD) ⁸ :	7,439
Agriculture (%)	16
Industry (%)	32
Services (%)	42
Others (%)	10
Exposure (Billion USD) ¹¹ :	25.96
Primary (%)	11
Public (%)	9
Industry (%)	20
Commercial (%)	18
Residential (%)	42
Gross capital stock (Billion USD) ¹² :	41.82
Insurance density (USD) ¹³ :	8.28
(Non-life premium in USD per capita)	
Insurance penetration (%) ¹³ :	0.34
(Non-life premium in USD as a percentage of GDP)	

Province-level Economic Exposure



Description of a recent major event

2018 Floods: Lao PDR faced severe flooding in 2018 rainy season due to three major events including Tropical Storm Son-Tinh (18-19 July), followed by Xe pien-Xe Nam Noy dam breach (23-24 July), and Tropical Storm Bebinca (17-18 August). The floods caused widespread damage, affecting 132,000 households and 102,481 hectares of land in 17 provinces and Vientiane Capital, and resulted in 136 fatalities^{14,15}. Most fatalities are due to flash flood in Attapeu Province caused by the dam breach event. Within a month from the dam breach, Tropical Storm Bebinca induced severe flooding and affected 116 districts in the country and increased the total losses that year. The combined damage and losses from three events were estimated to be USD 371.5 million, with agriculture and transport sectors accounting for 90% of total losses¹⁵.

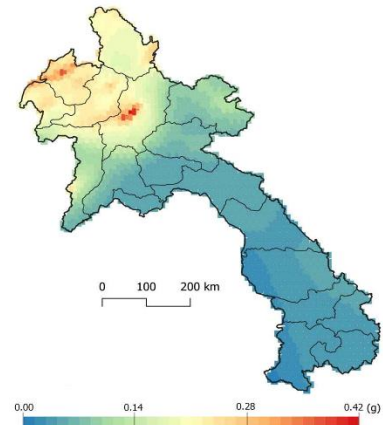
Recent Major Loss Events ¹⁴				
Year	Event	Magnitude or Affected area	Deaths	Total loss (mill. USD)
2018	Typhoon Bebinca	NA	0	225
2018	Flood; Dam breach	NA	136	NA
2015	Flood	NA	0	10
2013	Flood	NA	20	60
2011	Flood	NA	14	NA
2009	Typhoon Ketsana	NA	16	100

Major Fault Systems

Lao PDR is geographically located far away from the major tectonic plate boundary (the Sumatra-Andaman Subduction Zone) but the tectonic stress caused by the ongoing Indian-Eurasian plate collision influences areas within the plate¹⁶. As a result, Lao PDR and the adjacent areas are dominated by some inland seismogenic fault zones, such as the Dien Bien Phu¹⁷, Mae Ing¹⁸, Nam Ma¹⁹ and the Red River²⁰ fault zones. Based on instrumental earthquake records, a number of shallow crustal earthquakes have been recorded in the vicinity of Laos, particularly in the northern part, during the last three decades of 1980 – 2015, where a large number of local faults are prominent. Among these earthquake records, at least 17 large earthquakes with $M_w \geq 6.0$ have occurred, with three earthquakes within Lao PDR and the remaining in the surrounding region. Three notable major earthquakes from the surrounding region have M_w 7.0 and M_w 7.7 (1988) and M_w 7.1 (2011)²¹. The latest earthquake was M_w 6.1 that occurred on 20 November 2019 at the border with Thailand.

PGA Map

(Source: ICRM)



Meteorology

The annual percentage of rainy days in Southeast Asia varies from 30% in Central Thailand and Cambodia to 75% in Central Borneo. The rainfall variability is mainly determined by the large-scale monsoon systems, intra-seasonal oscillations, and the complex terrain. Southeast Asia experiences two monsoons: the southwest monsoon from June to September and the northeast monsoon from November to March. June-August months form the main rainy season in continental Southeast Asia, while December-February months are the rainy months south of 5°N.

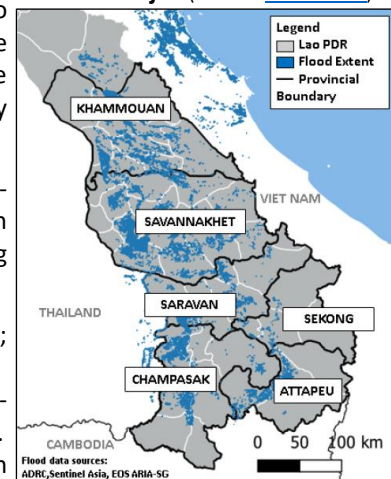
The climate is typically tropical with a rainy season from mid-April to mid-October dominated by the humid southwest monsoon, and a cool dry season from November to February. About 80% of the annual rainfall occurs during the rainy season.

Climate classification²²: Mainly tropical monsoon and savannah climate; Temperate climate with dry winter and hot summer in northeast.
Average annual rainfall^{10,23}: 2348 mm with values mostly ranging from 1400-2500 mm; High values (~3500 mm) in the central and southwest regions.
Average monthly rainfall²⁴: 20 mm (January) – 330 mm (August) – 30 mm (December)

Average annual number of rainy days²⁴: 60-120; higher values in the northeast and lower values in the south

1-day probable maximum precipitation²⁵: 375 mm north of Luang Prabang), 450 mm (central Laos), and about 400 mm (south of Pakse)

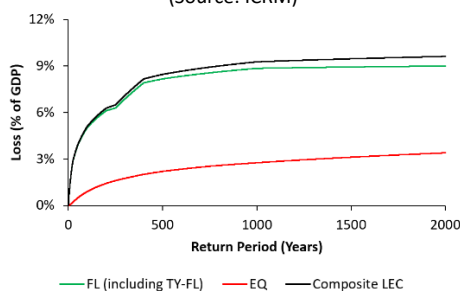
Flood extent during 2019 TS Podul and TD Kajiki (Source: AHA Centre)



2019 Loss Values

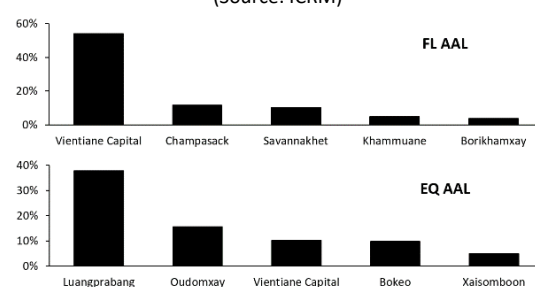
Loss Exceedance Curves

(Source: ICRM)



% of Country's AAL (Top 5 Provinces)

(Source: ICRM)



Data sources

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