



# UNOSAT

## Tropical Cyclone NOUL

### Population Exposure Analysis in Lao PDR

#### 17 September 2020

Population Exposure Analysis  
17 September 2020

Geneva, Switzerland

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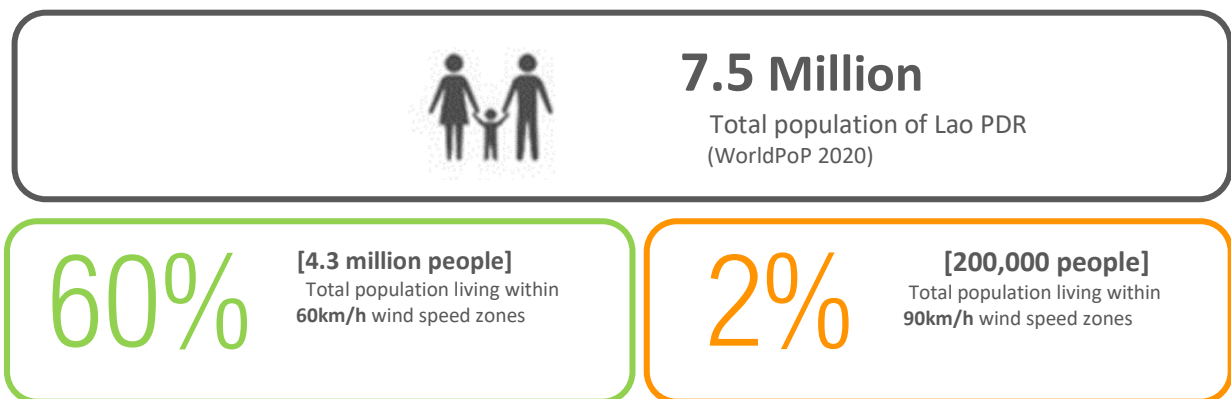


## Overview

Tropical cyclone NOUL formed on 16 September 2020 over the eastern area of South China Sea. It was strengthened and moved north-west passing south of Parcel Islands in the afternoon of 17 September 2020, with the maximum sustained winds up to 120 km/h. The category 3 Tropical Storm NOUL is forecast to reach the central coast of Vietnam in the early morning of 18 September, with maximum sustained winds up to 130 km/h and then heading to LaoPDR and Thailand from Friday to Sunday. According to GDACS, Tropical Cyclone NOUL can have a medium humanitarian impact based on the maximum sustained wind speed, exposed population and vulnerability.

Based on data of the forecasted tropical cyclone path of wind speeds zones from Joint Research Centre (Issued on 17 September 2020 00:00 UTC), and population data from WorldPop 2020, UNITAR-UNOSAT has prepared a population exposure analysis for Lao PDR. About 2%, of population of Lao PDR living inside wind speed zone of 90 km/h and 60% living inside wind speed zone of 60 km/h.

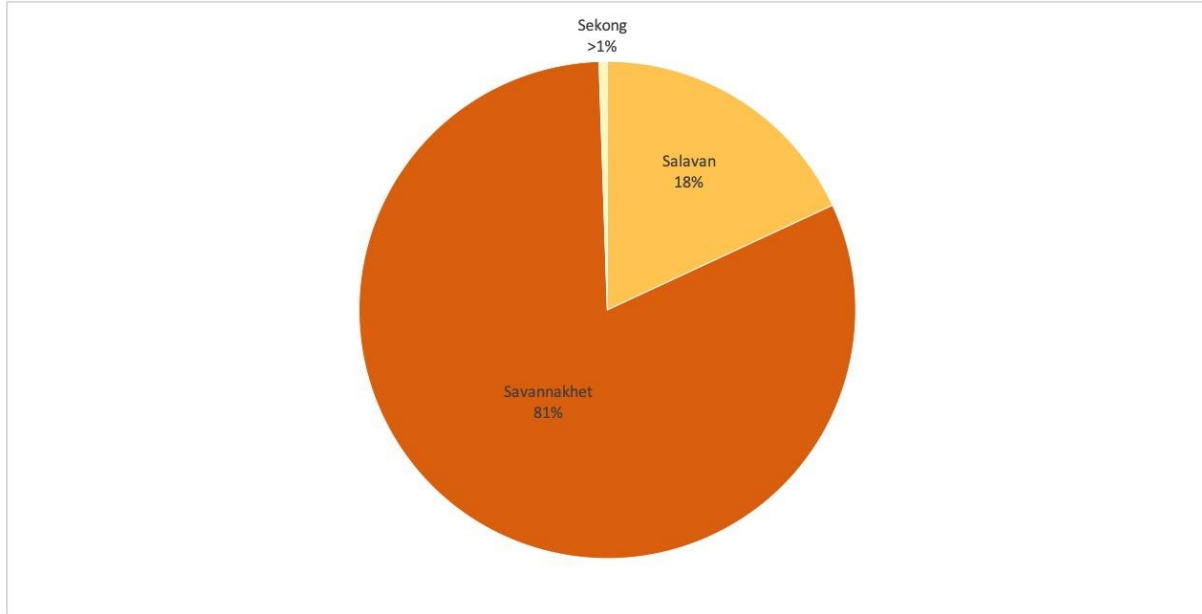
### Population & Buildings Exposure in Lao PDR as of 17 September 2020



The population exposure has been calculated using a 100m resolution WorldPop dataset.  
This is a preliminary analysis & has not yet been validated in the field.

Lao PDR population living within 90 km/h wind speed zone in each province

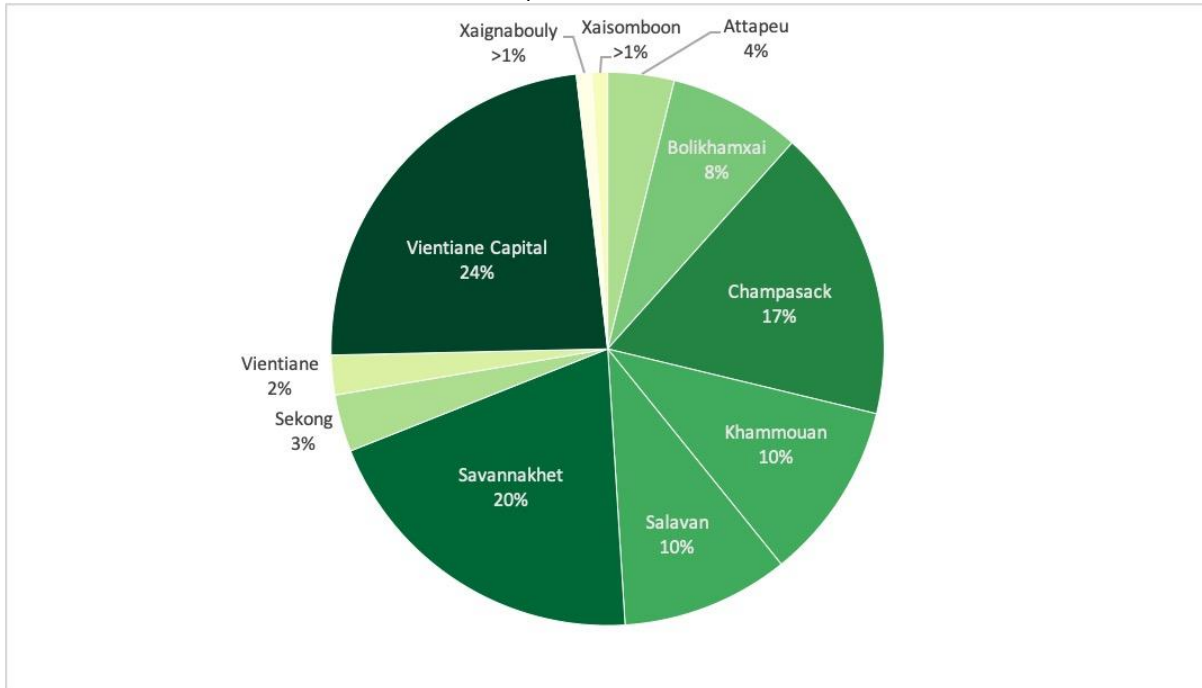
17 Sep 2020 at 00:00 UTC



Percentage of total people living under 90 km/h wind speed zone

Lao PDR population living within 60 km/h wind speed zone in each province

17 Sep 2020 at 00:00 UTC



Percentage of total people living under 60 km/h wind speed zone

LaoPDR Population Exposed to Sustained Wind Speed Zones  
Tropical Cyclone NOUL (17 September 2020, 00:00 UTC)

Province/District	Population		Total Population
	Wind Speed Zones		
	60 km/h	90 km/h	
<b>Lao PDR</b>	<b>4,321,475</b>	<b>184,782</b>	<b>4,506,257</b>
<b>Attapeu</b>	<b>170,980</b>		<b>170,980</b>
Phouvong	11,470		11,470
Samakxixay	58,717		58,717
Sanamxay	41,204		41,204
Sanxay	25,425		25,425
Xaysetha	34,165		34,165
<b>Bolikhamxai</b>	<b>340,342</b>		<b>340,342</b>
Bolikhanh	61,152		61,152
Khamkeuth	88,417		88,417
Pakkading	67,196		67,196
Pakxane	49,224		49,224
Thaphabath	25,471		25,471
Viengthong	34,777		34,777
Xaychamphone	14,104		14,104
<b>Champasack</b>	<b>754,471</b>		<b>754,471</b>
Bachiangchaleunsok	85,164		85,164
Champasack	65,764		65,764
Khong	41,919		41,919
Moonlapamok	32,084		32,084
Pakse	105,604		105,604
Paksong	106,314		106,314
Pathoomphone	68,813		68,813
Phonthong	103,462		103,462
Sanasomboon	73,889		73,889
Sukhuma	71,458		71,458
<b>Khammouan</b>	<b>459,028</b>		<b>459,028</b>
Bualapha	35,024		35,024
Hinboon	56,912		56,912
Khounkham	25,381		25,381
Mahaxay	49,258		49,258
Nakay	30,159		30,159
Nhommalath	39,341		39,341
Nongbok	41,170		41,170
Thakhek	112,217		112,217
Xaybuathong	32,684		32,684
Xebangfay	36,883		36,883
<b>Salavan</b>	<b>431,069</b>	<b>33,547</b>	<b>464,616</b>
Khongxedone	66,417		66,417
Lakhonepheng	52,042		52,042

Lao Ngarm	91,886		91,886
Saravane	129,952		129,952
Ta Oi	15,320	11,081	26,401
Toomlarn	33,130		33,130
Vapy	42,322		42,322
Samuoi		22,466	22,466
<b>Savannakhet</b>	<b>879,785</b>	<b>150,972</b>	<b>1,030,758</b>
Atsaphangthong	28,127		28,127
Atsaphone	68,588		68,588
Champhone	130,227		130,227
Kaysone Phomvihane	98,504		98,504
Nong	33	30,465	30,498
Outhoomphone	100,722		100,722
Phalanxay	43,482		43,482
Phine	11,861	57,813	69,674
Sepone	199	55,619	55,819
Songkhone	83,677		83,677
Thapangthong	48,760		48,760
Vilabuly	34,484	7,075	41,559
Xaybuly	81,276		81,276
Xayphoothong	57,934		57,934
Xonbuly	91,911		91,911
<b>Sekong</b>	<b>146,847</b>	<b>262</b>	<b>147,109</b>
Dakcheung	20,158		20,158
Kaleum	12,015	262	12,277
Lamarm	47,260		47,260
Thateng	67,414		67,414
<b>Vientiane</b>	<b>102,061</b>		<b>102,061</b>
Meun	8,047		8,047
Phonhong	27,189		27,189
Thoulakhom	46,141		46,141
Viengkham	9,570		9,570
Xanakharm	11,114		11,114
<b>Vientiane Capital</b>	<b>1,035,605</b>		<b>1,035,605</b>
Chanthabuly	78,396		78,396
Hadxaifong	102,961		102,961
Mayparkngum	65,726		65,726
Naxaithong	86,517		86,517
Sangthong	33,877		33,877
Sikhottabong	138,241		138,241
Sisattanak	83,688		83,688
Xaysetha	167,608		167,608
Xaythany	278,591		278,591
<b>Xaignabouly</b>	<b>71</b>		<b>71</b>
Kenethao	71		71
<b>Xaisomboon</b>	<b>1,217</b>		<b>1,217</b>

Home	1,078		1,078
Longsane	139		139

Download full excel table from [here](#):

Sources:

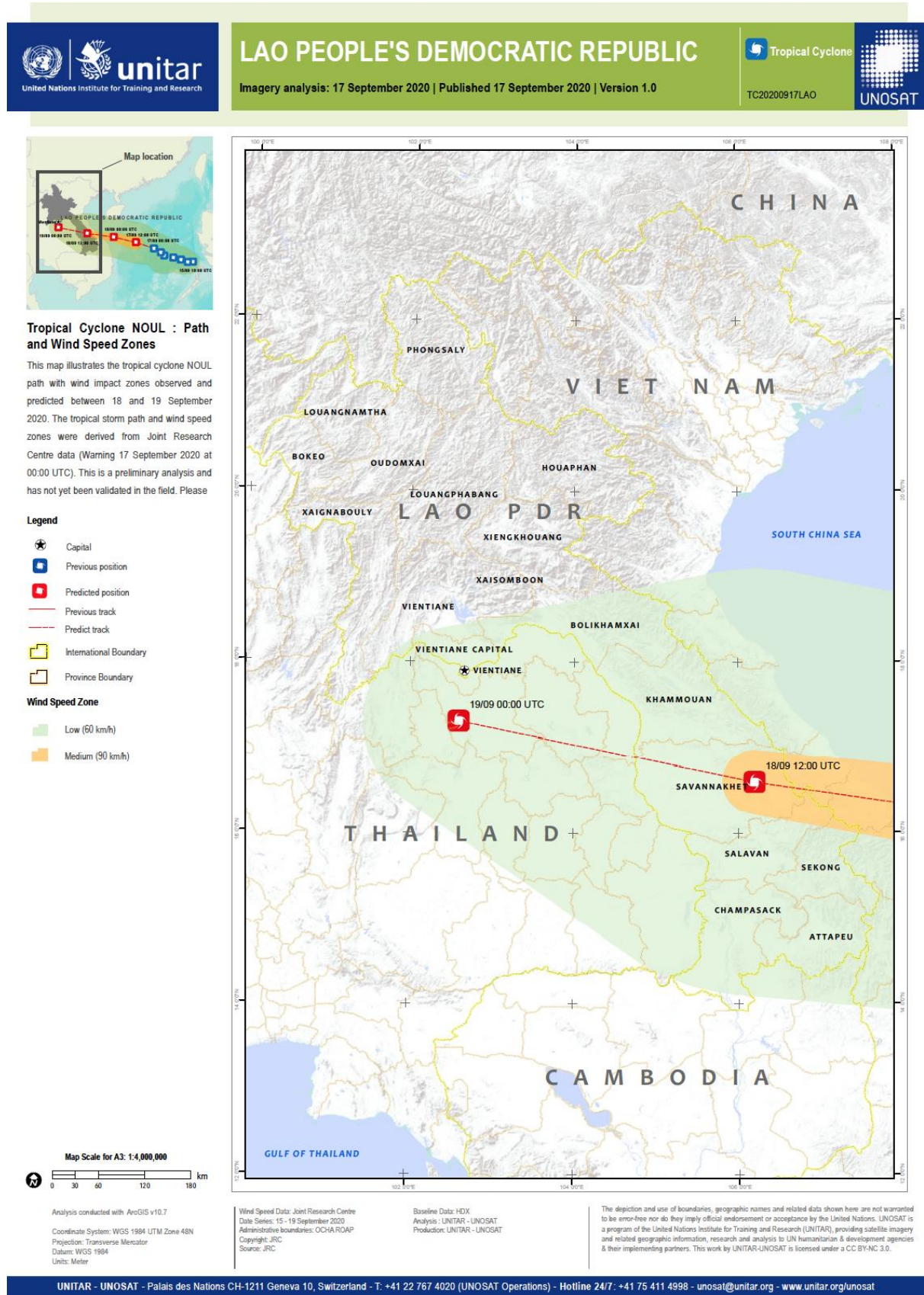
Cyclone track: Joint Research Centre (JRC) as of 17 September 2020

Wind speed zones: Joint Research Centre (JRC) as of 17 September 2020, 00:00 UTC

Administrative Levels: National Geographic Department (NGD), Lao PDR

Spatial Demographic Data: WorldPop (2020), 100 m spatial resolution

Analysis: UNITAR-UNOSAT (17 September 2020)



Map1: Tropical cyclone NOUL track with wind speed zones. Download PDF map [here](#)

