



UNOSAT

Tropical Cyclone NANGKA

Population Exposure Analysis in Viet Nam

14 October 2020

Population Exposure Analysis
14 October 2020

Geneva, Switzerland

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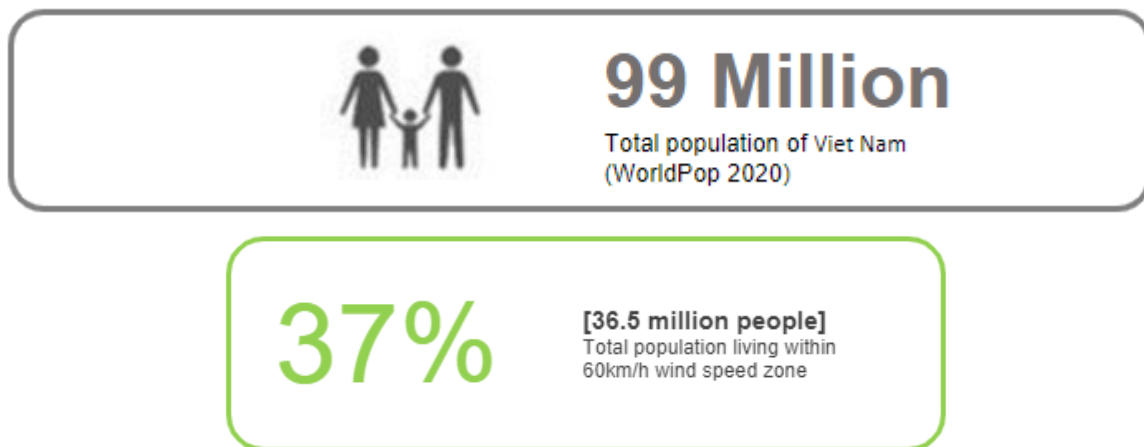


Overview

On October 11, 2020, the Tropical Cyclone NANGKA originated over the eastern area of South China Sea. As it is currently moving west, the cyclone has passed by the northern part of Paracel Islands and is at present time moving towards the central coast of Vietnam. The tropical cyclone is expected to reach the central coast of Vietnam in the early evening of October 14, with sustained winds up to 60 km/h and then head to Lao PDR on Thursday. According to GDACS, Tropical Cyclone NANGKA can have a medium humanitarian impact. This estimation is based on the maximum sustained wind speed, exposed population, and vulnerability.

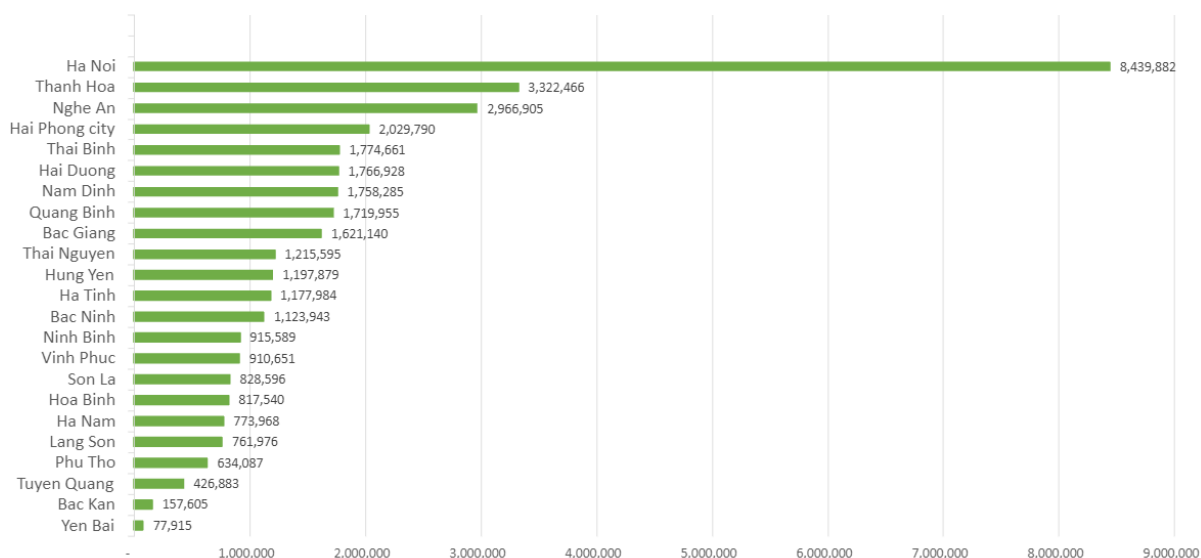
UNITAR-UNOSAT has prepared a population exposure analysis for Viet Nam. About 37%, of population of Viet Nam are living inside wind speed zone of 60 km/h. The population exposure analysis is conducted by using data of the estimated tropical cyclone path, wind speeds zones from Joint Research Centre (Issued on 14 October 2020 00:00 UTC), and population data from WorldPop 2020.

Population & Buildings Exposure in Viet Nam as of 14 October 2020



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

Viet Nam population living within 60 km/h wind speed zone in each province
14 Oct 2020 at 00:00 UTC



Viet Nam Population Exposed to Sustained Wind Speed Zones Tropical Cyclone NANGKA
(14 October 2020, 00:00 UTC)

Province/District	Population within 60 km/h wind Speed zones
Viet Nam	36,460,870
Bac Giang	1,621,140
Bac Giang	160,259
Hiep Hoa	221,508
Lang Giang	191,143
Luc Nam	206,881
Luc Ngan	213,387
Son Dong	71,687
Tan Yen	165,584
Viet Yen	166,914
Yen Dung	126,698
Yen The	97,081
Bac Kan	157,605
Bac Kan	40,074
Bach Thong	23,639
Cho Don	14,799
Cho Moi	39,396
Na Ri	39,582
Ngan Son	116
Bac Ninh	1,123,943
Bac Ninh	253,183
Gia Binh	100,985
Luong Tai	104,794
Que Vo	122,094

Thuan Thanh	158,283
Tien Du	117,692
Tu Son	153,728
Yen Phong	113,184
Cao Bang	1,970
Thach An	1,970
Dien Bien	38,677
Dien Bien	13,337
Dien Bien Dong	25,340
Ha Nam	773,968
Binh Luc	143,772
Duy Tien	124,213
Kim Bang	125,444
Ly Nhan	172,543
Phu Ly	80,726
Thanh Liem	127,270
Ha Noi	8,439,882
Ba Dinh	292,150
Ba Vi	321,948
Bac Tu Liem	274,121
Cau Giay	311,990
Chuong My	365,562
Dan Phuong	189,006
Dong Anh	437,362
Dong Da	481,461
Gia Lam	300,008
Ha Dong	360,228
Hai Ba Trung	379,417
Hoai Duc	225,267
Hoan Kiem	184,225
Hoang Mai	431,757
Long Bien	296,491
Me Linh	247,626
My Duc	223,267
Nam Tu Liem	242,424
Phu Xuyen	239,526
Phuc Tho	207,114
Quoc Oai	212,252
Soc Son	368,174
Son Tay	165,593
Tay Ho	169,978
Thach That	239,711
Thanh Oai	197,804
Thanh Tri	259,677
Thanh Xuan	296,632
Thuong Tin	282,684
Ung Hoa	236,424
Ha Tinh	1,177,984
Cam Xuyen	135,024
Can Loc	123,286

Duc Tho	100,407
Ha Tinh	85,590
Hong Linh	34,160
Huong Khe	95,147
Huong Son	113,110
Ky Anh	164,221
Loc Ha	75,109
Nghi Xuan	94,115
Thach Ha	127,878
Vu Quang	29,938
Hai Duong	1,766,928
Binh Giang	107,644
Cam Giang	132,963
Chi Linh	163,528
Gia Loc	119,513
Hai Duong	272,465
Kim Thanh	127,173
Kinh Mon	162,896
Nam Sach	84,652
Ninh Giang	146,659
Thanh Ha	158,026
Thanh Mien	126,708
Tu Ky	164,701
Hai Phong city	2,029,790
An Duong	182,195
An Lao	147,828
Bach Long Vi	650
Cat Hai	32,747
Do Son	46,522
Duong Kinh	53,577
Hai An	111,838
Hong Bang	113,891
Kien An	108,160
Kien Thuy	138,543
Le Chan	234,835
Ngo Quyen	176,506
Thuy Nguyen	335,242
Tien Lang	155,260
Vinh Bao	191,995
Hoa Binh	817,540
Cao Phong	42,684
Da Bac	52,898
Hoa Binh	94,239
Kim Boi	102,053
Ky Son	28,424
Lac Son	137,852
Lac Thuy	60,396
Luong Son	100,312
Mai Chau	54,402
Tan Lac	82,035

Yen Thuy	62,245
Hung Yen	1,197,879
An Thi	135,411
Hung Yen	119,100
Khoai Chau	192,959
Kim Dong	122,004
My Hao	99,372
Phu Cu	82,085
Tien Lu	79,878
Van Giang	104,497
Van Lam	120,934
Yen My	141,639
Lang Son	761,976
Bac Son	68,748
Binh Gia	54,402
Cao Loc	76,191
Chi Lang	77,243
Dinh Lap	27,626
Huu Lung	117,368
Lang Son	91,558
Loc Binh	81,735
Trang Dinh	57,987
Van Lang	52,564
Van Quan	56,555
Nam Dinh	1,758,285
Giao Thuy	180,474
Hai Hau	245,285
My Loc	67,001
Nam Dinh	233,742
Nam Truc	185,737
Nghia Hung	172,831
Truc Ninh	170,113
Vu Ban	125,158
Xuan Truong	159,733
Y Yen	218,211
Nghe An	2,966,905
Anh Son	101,520
Con Cuong	65,779
Cua Lo	50,581
Dien Chau	274,924
Do Luong	187,384
Hoang Mai	107,054
Hung Nguyen	103,120
Ky Son	70,840
Nam Dan	153,592
Nghi Loc	155,885
Nghia Dan	108,949
Que Phong	63,521
Quy Chau	53,697
Quy Hop	119,088

Quynh Luu	243,144
Tan Ky	132,019
Thai Hoa	77,080
Thanh Chuong	215,815
Tuong Duong	73,917
Vinh	350,610
Yen Thanh	258,386
Ninh Binh	915,589
Gia Vien	118,178
Hoa Lu	68,231
Kim Son	166,633
Nho Quan	145,970
Ninh Binh	112,836
Tam Diep	56,533
Yen Khanh	135,361
Yen Mo	111,847
Phu Tho	634,087
Cam Khe	60,855
Doan Hung	50,109
Ha Hoa	50,350
Lam Thao	50,728
Phu Ninh	43,368
Phu Tho	32,756
Tam Nong	36,604
Tan Son	36,714
Thanh Ba	51,585
Thanh Son	56,476
Thanh Thuy	36,557
Viet Tri	88,370
Yen Lap	39,617
Quang Binh	1,719,955
Ba Don	82,403
Bo Trach	126,625
Dong Hoi	838
Minh Hoa	35,830
Quang Trach	123,761
Tuyen Hoa	84,418
Ba Che	21,814
Binh Lieu	31,850
Cam Pha	199,882
Co To	4,048
Dam Ha	36,707
Dong Trieu	180,801
Ha Long	216,605
Hai Ha	58,431
Hoanh Bo	53,661
Mong Cai	99,029
Quang Yen	144,363
Tien Yen	51,090
Uong Bi	125,878

Van Don	41,923
Son La	828,596
Bac Yen	52,354
Mai Son	157,421
Moc Chau	110,996
Phu Yen	132,601
Son La	10,183
Song Ma	147,788
Sop Cop	48,861
Thuan Chau	4,747
Van Ho	78,196
Yen Chau	85,449
Thai Binh	1,774,661
Dong Hung	229,941
Hung Ha	248,213
Kien Xuong	211,098
Quynh Phu	231,673
Thai Binh	185,253
Thai Thuy	242,739
Tien Hai	206,493
Vu Thu	219,251
Thai Nguyen	1,215,595
Dai Tu	173,211
Dinh Hoa	94,352
Dong Hy	101,382
Pho Yen	149,123
Phu Binh	144,303
Phu Luong	113,599
Song Cong	54,796
Thai Nguyen	315,469
Vo Nhai	69,359
Thanh Hoa	3,322,466
Ba Thuoc	94,306
Bim Son	51,929
Cam Thuy	98,290
Dong Son	56,221
Ha Trung	106,865
Hau Loc	159,819
Hoang Hoa	197,978
Lang Chanh	44,505
Muong Lat	32,437
Nga Son	132,542
Ngoc Lac	124,440
Nhu Thanh	83,953
Nhu Xuan	63,029
Nong Cong	178,419
Quan Hoa	43,031
Quan Son	34,716
Quang Xuong	193,345
Sam Son	50,606

Thach Thanh	133,242
Thanh Hoa	371,849
Thieu Hoa	149,176
Tho Xuan	203,639
Thuong Xuan	81,865
Tinh Gia	207,295
Trieu Son	191,745
Vinh Loc	78,514
Yen Dinh	158,709
Tuyen Quang	426,883
Chiem Hoa	5,092
Son Duong	185,122
Tuyen Quang	137,024
Yen Son	99,645
Vinh Phuc	910,651
Binh Xuyen	99,091
Lap Thach	107,231
Phuc Yen	83,676
Song Lo	81,251
Tam Dao	62,213
Tam Duong	85,998
Vinh Tuong	172,355
Vinh Yen	85,629
Yen Lac	133,207
Yen Bai	77,915
Tram Tau	63
Tran Yen	8,916
Van Chan	38,846
Yen Bai	4,309
Yen Binh	25,781

Download full excel table from [here](#)

Sources:

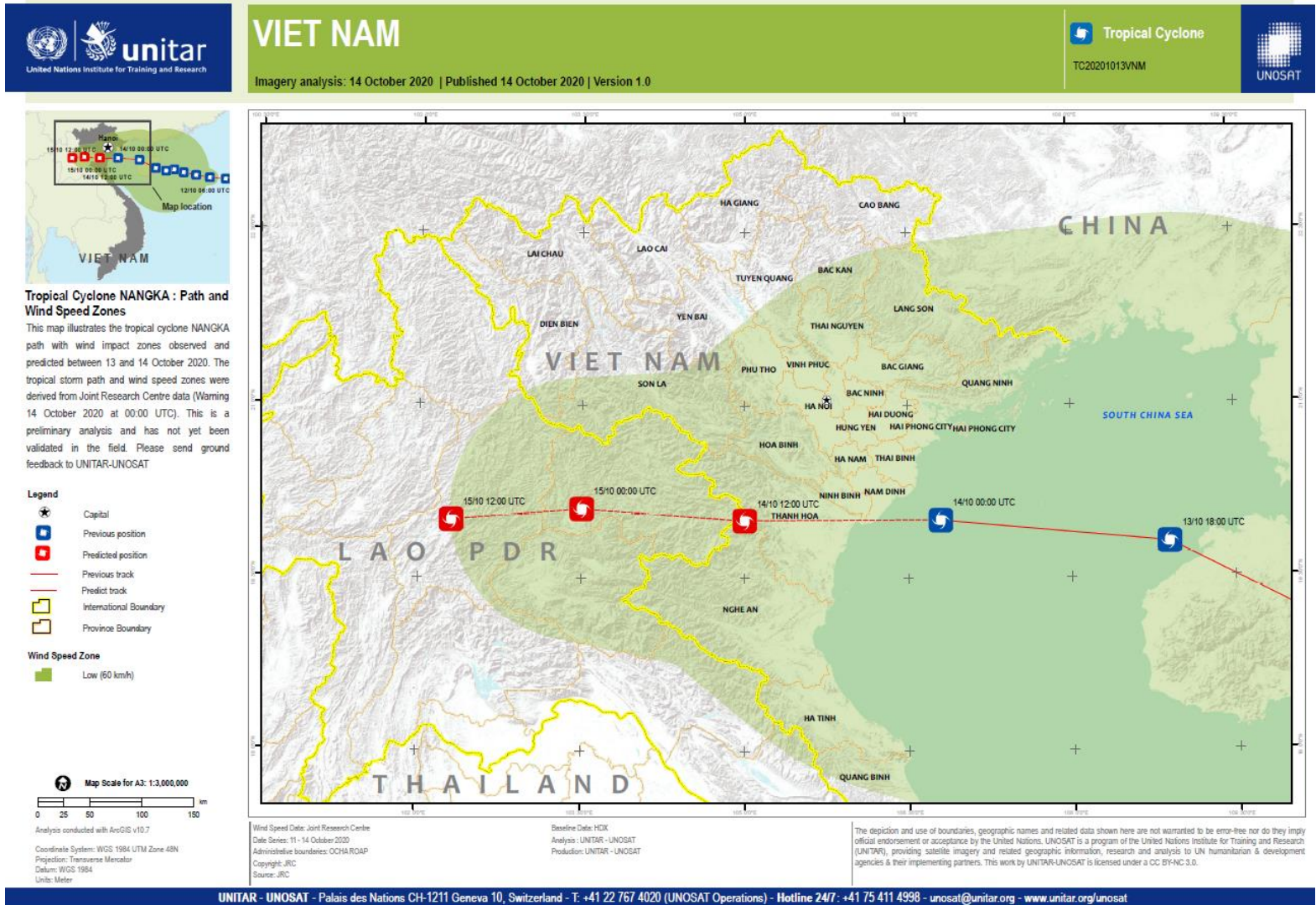
Cyclone track: Joint Research Centre (JRC) as of 14 October 2020

Wind speed zones: Joint Research Centre (JRC) as of 14 October 2020, 00:00 UTC

Administrative Levels: OCHA ROAP, HDX

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

Analysis: UNITAR-UNOSAT (14 October 2020)



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