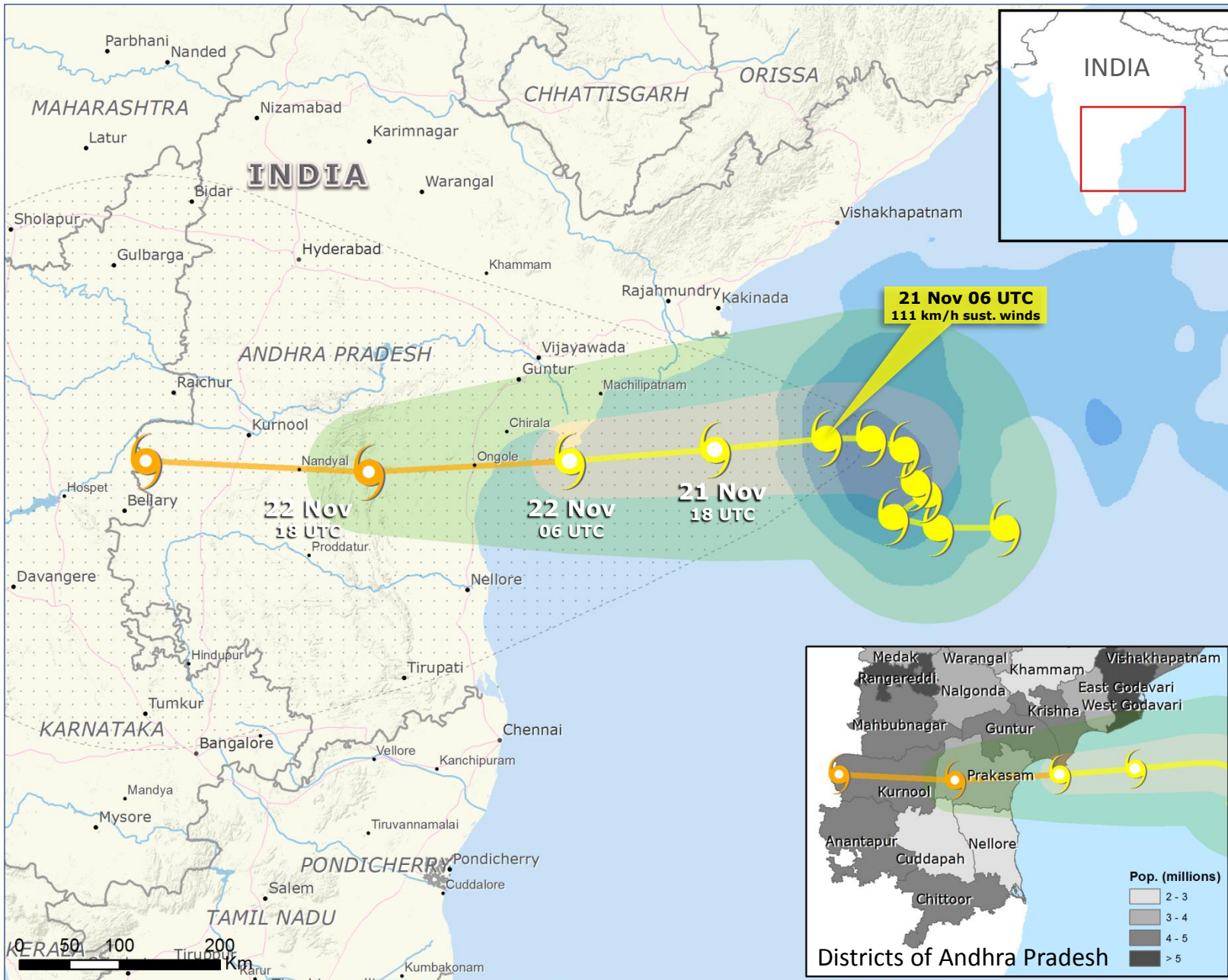


# 21 Nov 2013: India – Tropical Cyclone HELEN



## SITUATION

- HELEN is approaching the coast of Andhra Pradesh, SE India, with strength equivalent to a **Tropical Storm** (Severe Cyclonic Storm in India). At 06 UTC on 21 Nov it had a max. sust. wind speed of 111 km/h, ca. 250km from the coast. [\(GDACS\)](#)
- It is forecast to approach the coast in the morning of 22 Nov (UTC), slightly weakened, and make **landfall** near the city of **Machilipatnam**, according to [Indian Meteo Department](#).
- Heavy rainfall is expected to accompany HELEN's passage; [NASA/eTraP](#) forecasts locally amounts of more than 200mm in 24h. IMD warns for heavy to very heavy, locally extreme (> 250mm) rainfall over coastal Andhra Pradesh on 22-23 Nov, and heavy to very heavy in the area of Hyderabad and the south of the state.
- According to IMD, a possible storm surge of 1 to 1.5m could threaten the low-lying areas of Guntur, Krishna and East and West Godavari districts during landfall.
- PAST TROPICAL CYCLONES**
- The region is vulnerable to Tropical Cyclones effects: In 2010, JAL made landfall near Chennai, only as a Deep Depression. However, 54 people died in India and significant damage was inflicted in southern Andhra Pradesh, particularly in Nellore.

### TROP. CYCLONE TRACK

- Tropical Depression
- Tropical Storm
- Typhoon/Hurricane

### RAINFALL - TRMM WIND BUFFER

- (mm in 24h; 20 Nov)
- 50 - 100
  - 100 - 150
  - 150 - 200
  - 200 - 250
- 64 km/h
  - 92 km/h
  - 119 km/h
- Area of Track Uncertainty