Brazilian Navy Hydrographic Center (NHC)

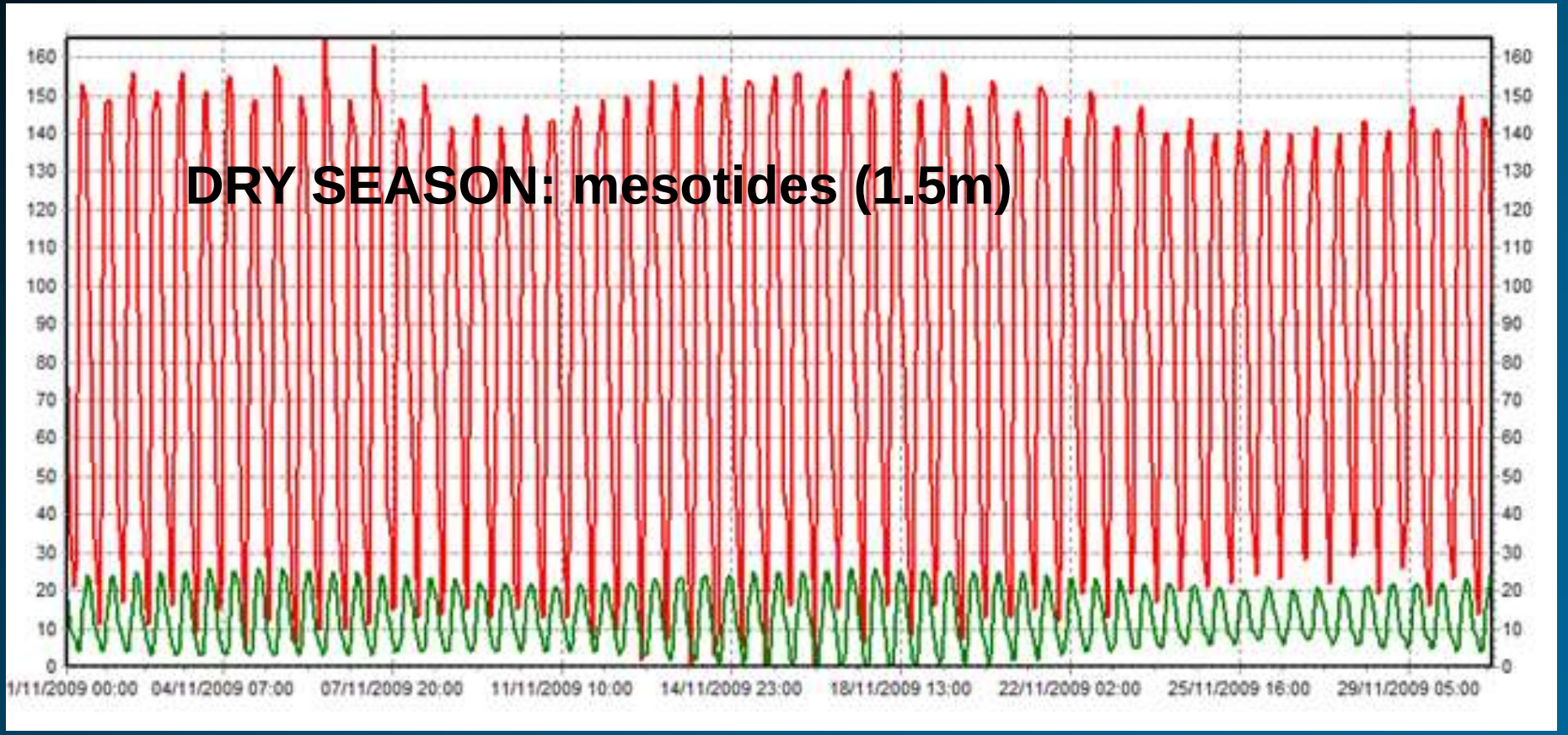
Chart Datum for Rivers in Brazil

4st Tidal and Water Level Working Group Meeting (IHO)

Brazilian Inland Waterways

1. Rivers under tidal influences

(Rivers under tidal influences)



RAINY SEASON: “microtides” (0.2m)

(Rivers under tidal influences)

Local Chart Datum = approximated MLWS

(calculated with main HC)

- Secondary rivers: derived from analyses of tidal measurements during the low river stage, over a period of 1 month.

Estuary: over long period

(Rivers under tidal influences)

Water level information for the Navigators

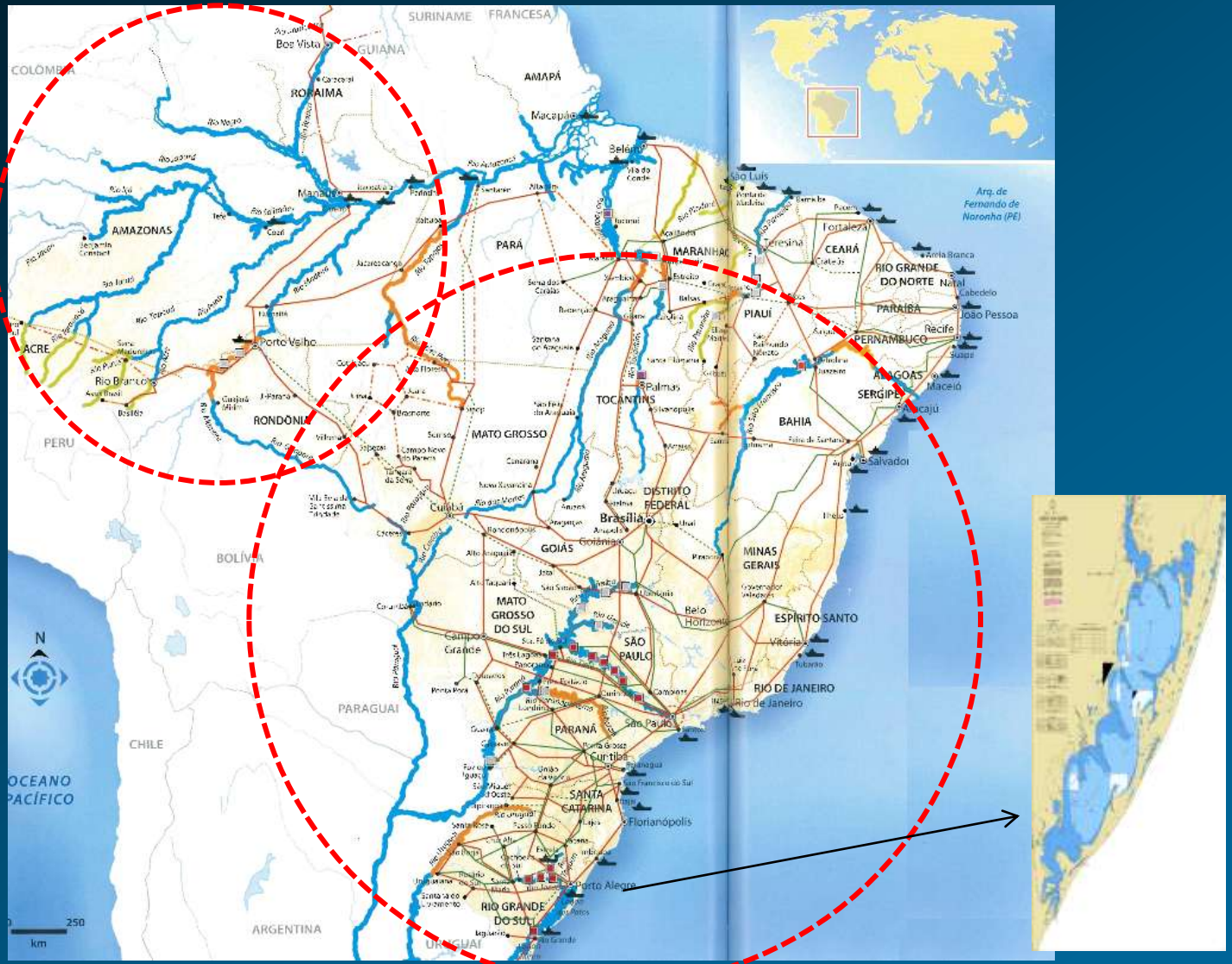
Observed data : tide staff hourly readings transmitted by local radio station

Just local companies navigate in this rivers

- Harmonic Preview doesn't work
- Forecasting models not yet implemented

It's expected to be solved by Wavelet method

2. Rivers under non tidal influences



(Rivers under non tidal influences)

Local Chart Datum = 90th or 94th Percentile

M-3 Resolution **3/1919 (A2.5)**

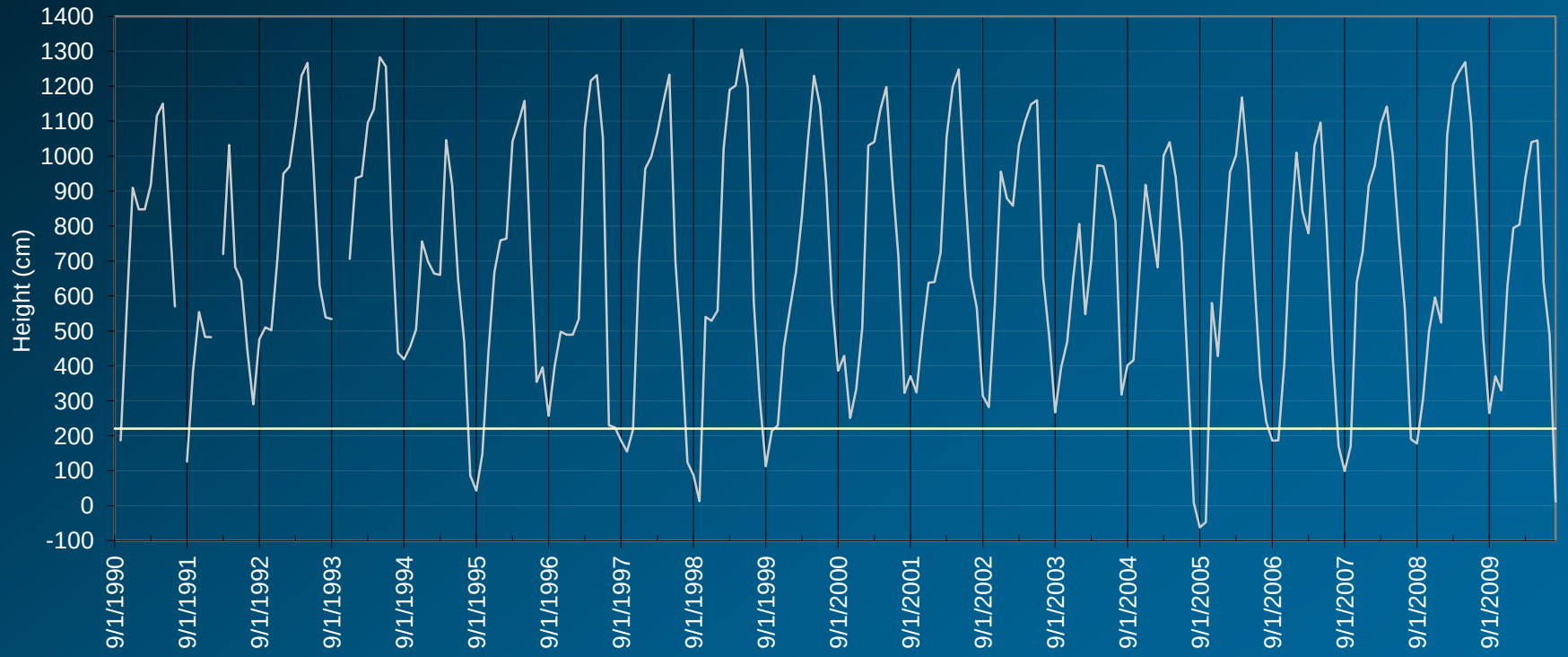
In non-tidal waters, in order to allow the development of regional solutions, it is recommended that an appropriate long term range of low/high water definitions of the lower/upper 94-100 percentile be adopted.

- Derived from analyses of water level measurements during the low/high river stages, over a period of 10 to 30 years.

(Rivers under non tidal influences)

Solimões River _ Tabatinga Station
Monthly minimum heights (1990 – 2010)

Chart Datum defined by 94th Percentile (2,10 m)



(Rivers under non tidal influences)

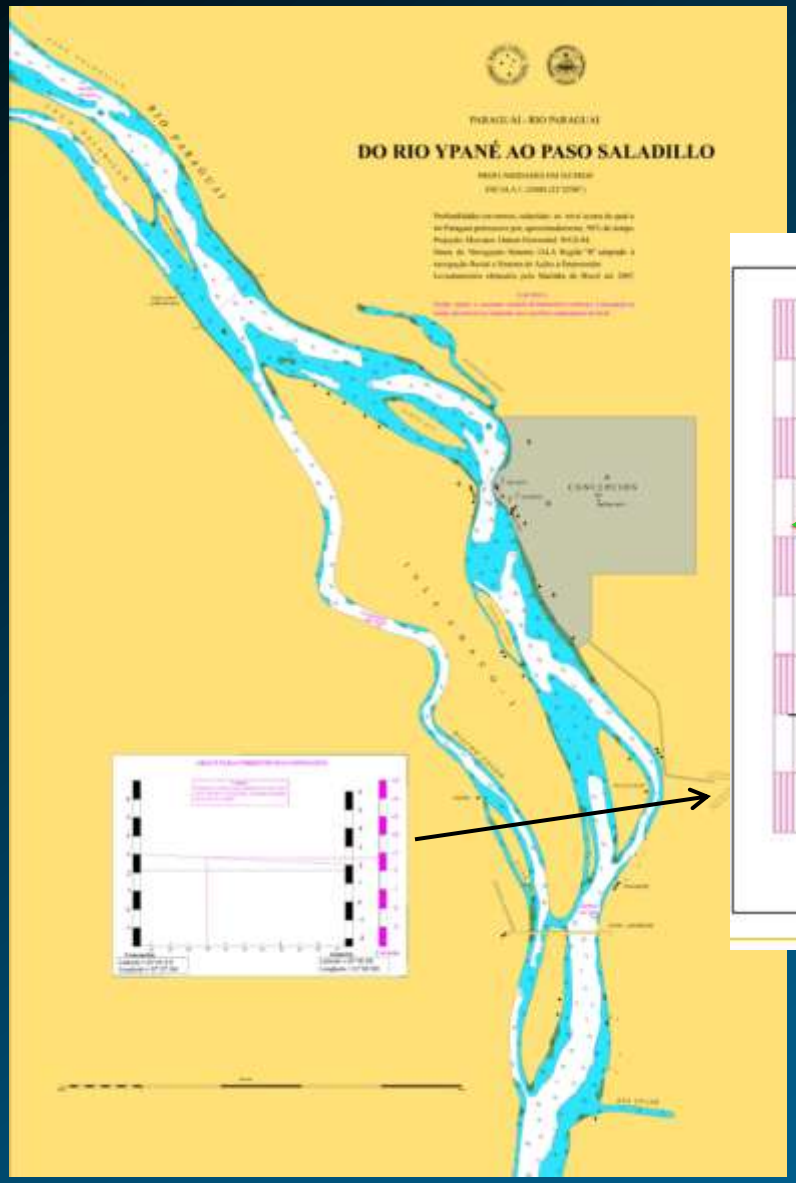
Water level information for the local Navigators

Observed data : “water level staff” daily readings

The dissemination of the readings is done
daily through the local radio stations
and
weekly through the Radio Warnings to Mariners
at the site of Hydrographic Center.

(Rivers under non tidal influences)

Water level information between two staffs



Forecasting models not yet implemented

Staff readings works well in Paraguay River