

# Spatial extent of floodplain

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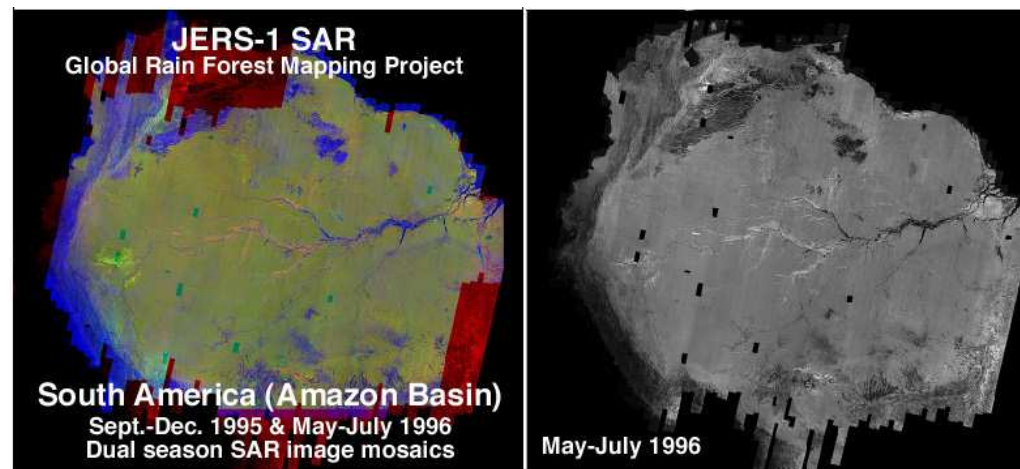
IRD

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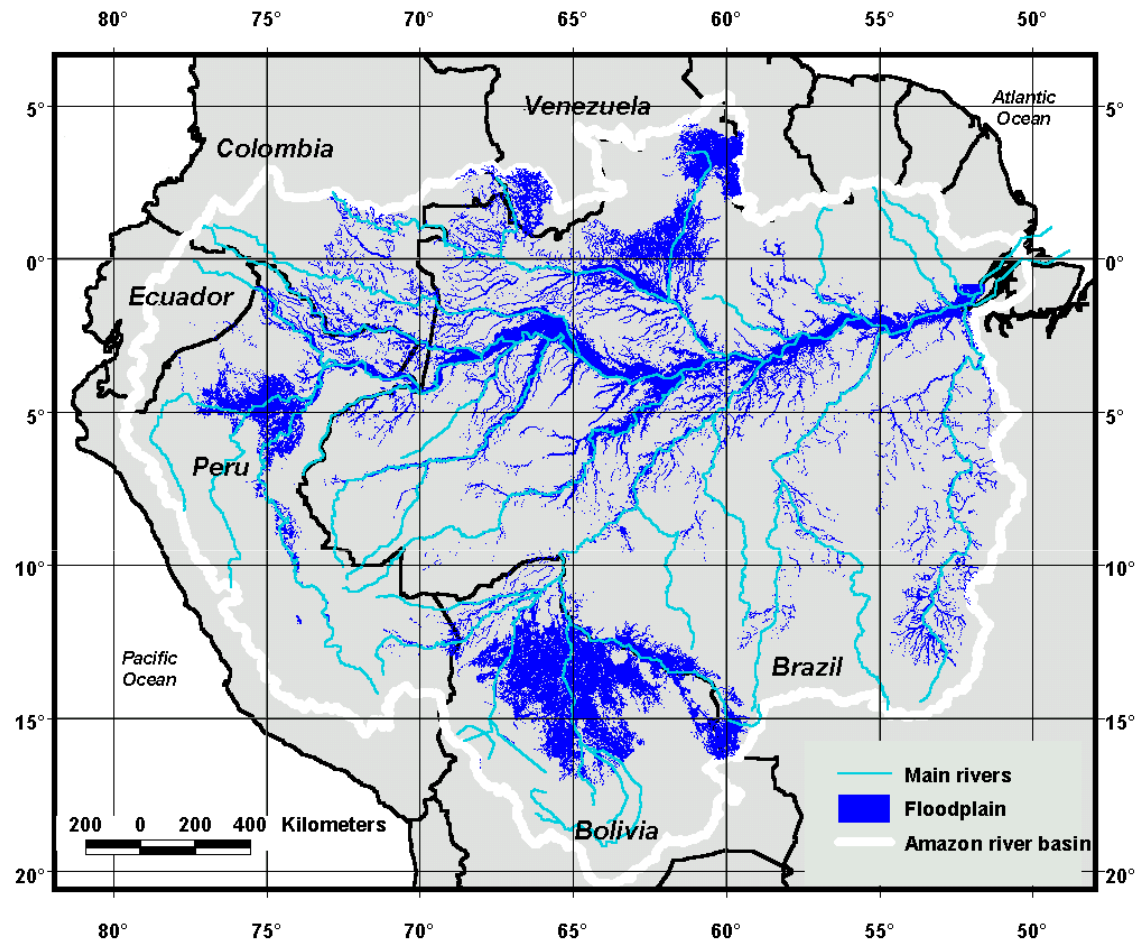
# Context

- **Floodplains** play a **major role** in the hydrological and ecological **functioning** of the **Amazon basin**
  - Stocking / Recycling / Production
- **Lot of studies on specific areas but few at regional scale**
  - Only **satellite images** offer an homogeneous dataset coupling spatial extent and temporal consistency
- Quantification of flooded areas
  - **Spatial extent**
    - Regional mapping with J-ERS mosaics : mapping of areas exposed to flood and of the main vegetation types



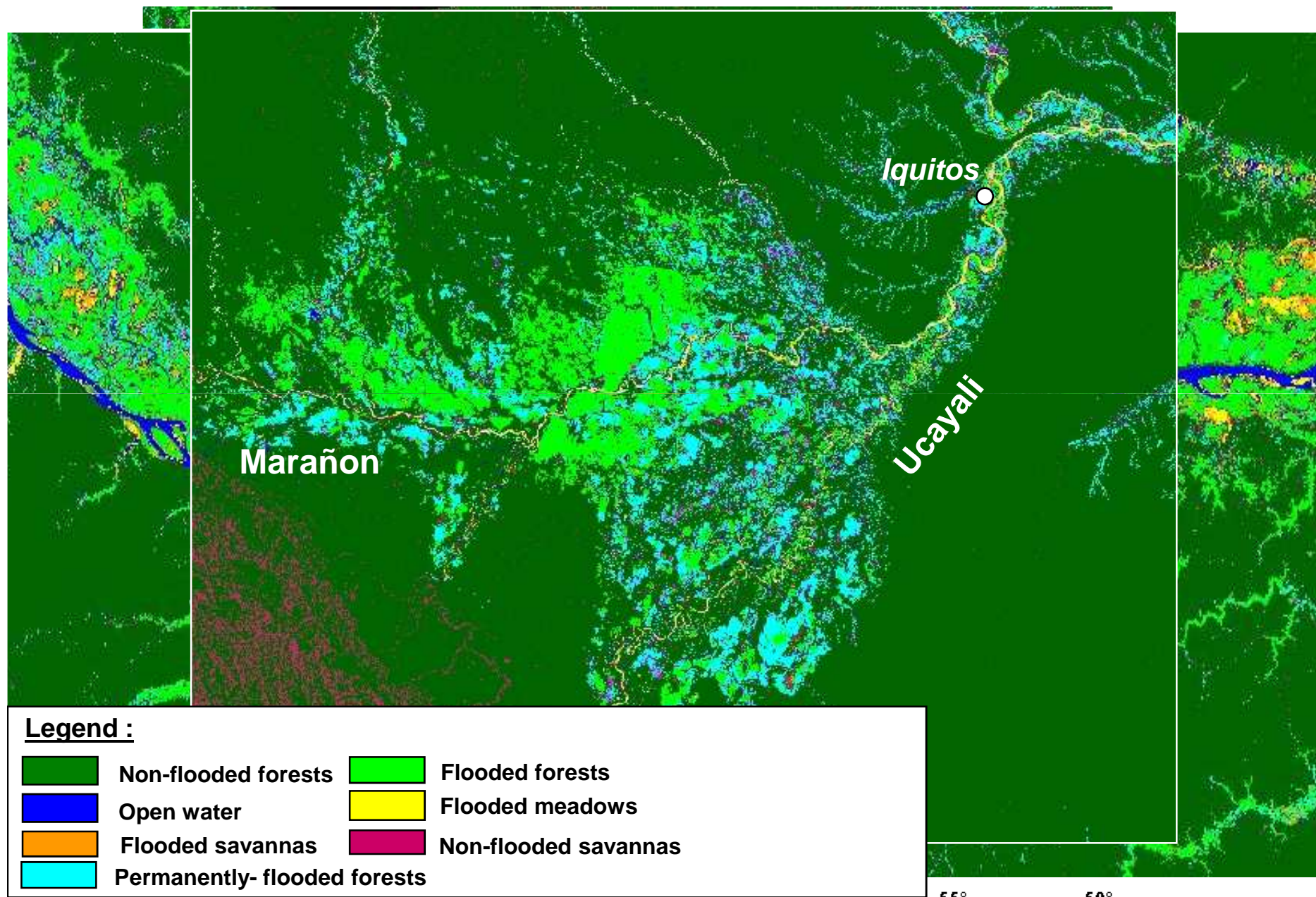
- **Temporal dynamic**
  - Study of the rinsing / decreasing flood cycle with multi-temporal image datasets

# Mapping of the areas exposed to floods in the whole basin

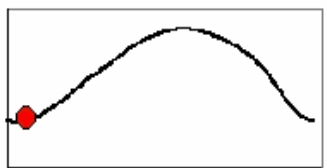
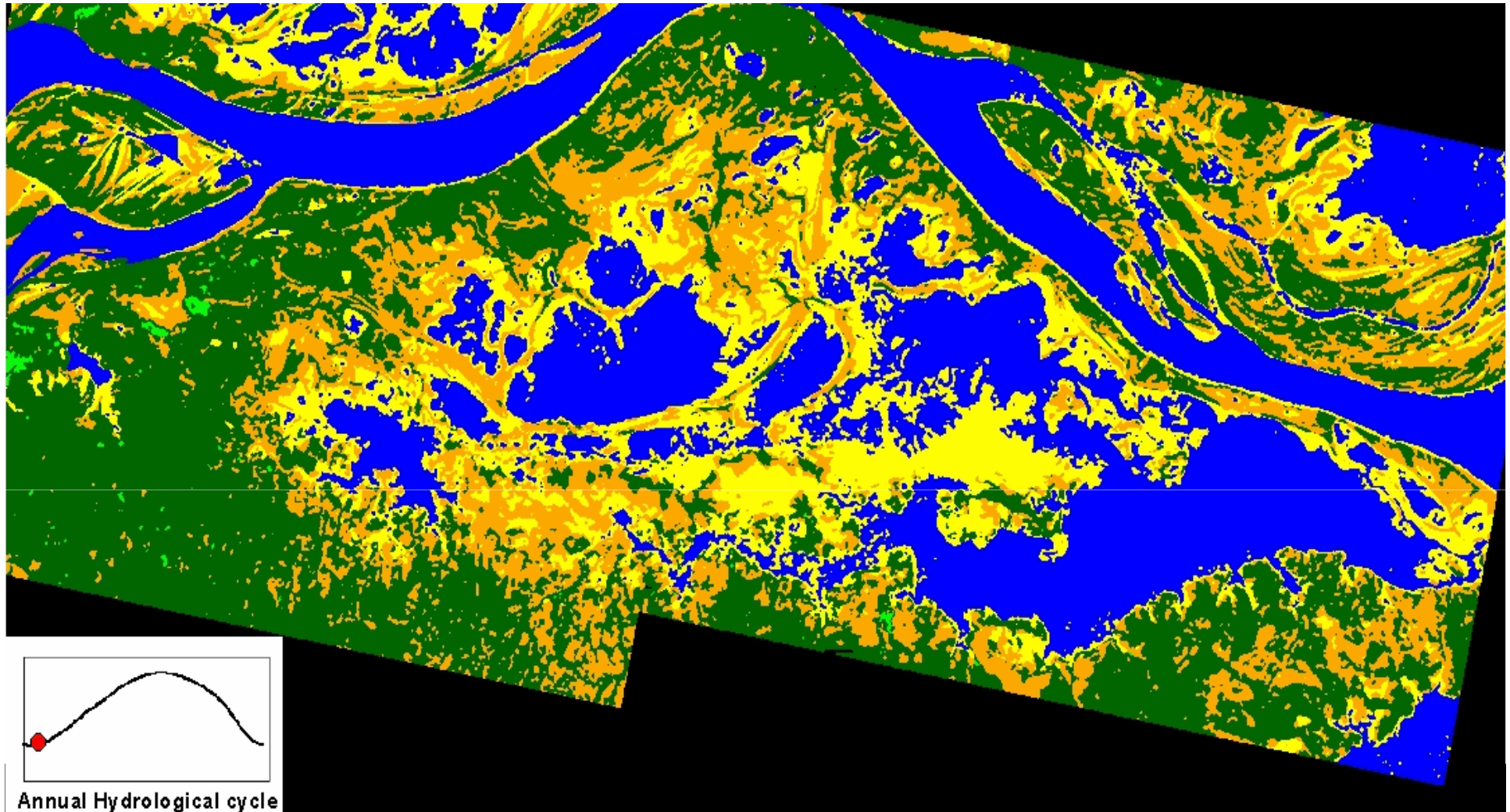


- Flooded areas (Monomodal flood) : **500 000 km<sup>2</sup> ± 50 000 km<sup>2</sup>**
- Water storage capacity of the floodplain during the flood peak
  - **2750 ± 360 km<sup>3</sup>** ( representing ~ 40 % of the Amazon annual liquid flow)

# Mapping of the main vegetation type in the floodplains



# Temporal dynamic of the floodplain



Annual Hydrological cycle

Water level measured at Curuaí station  
(ANA network)

Legend :

0

50 km



- |   |  |  |   |
|---|--|--|---|
|  Non-flooded forests |  Flooded forest |  |   |
|  Open water          |  Meadows        |  Savannas |  Floating vegetation |