



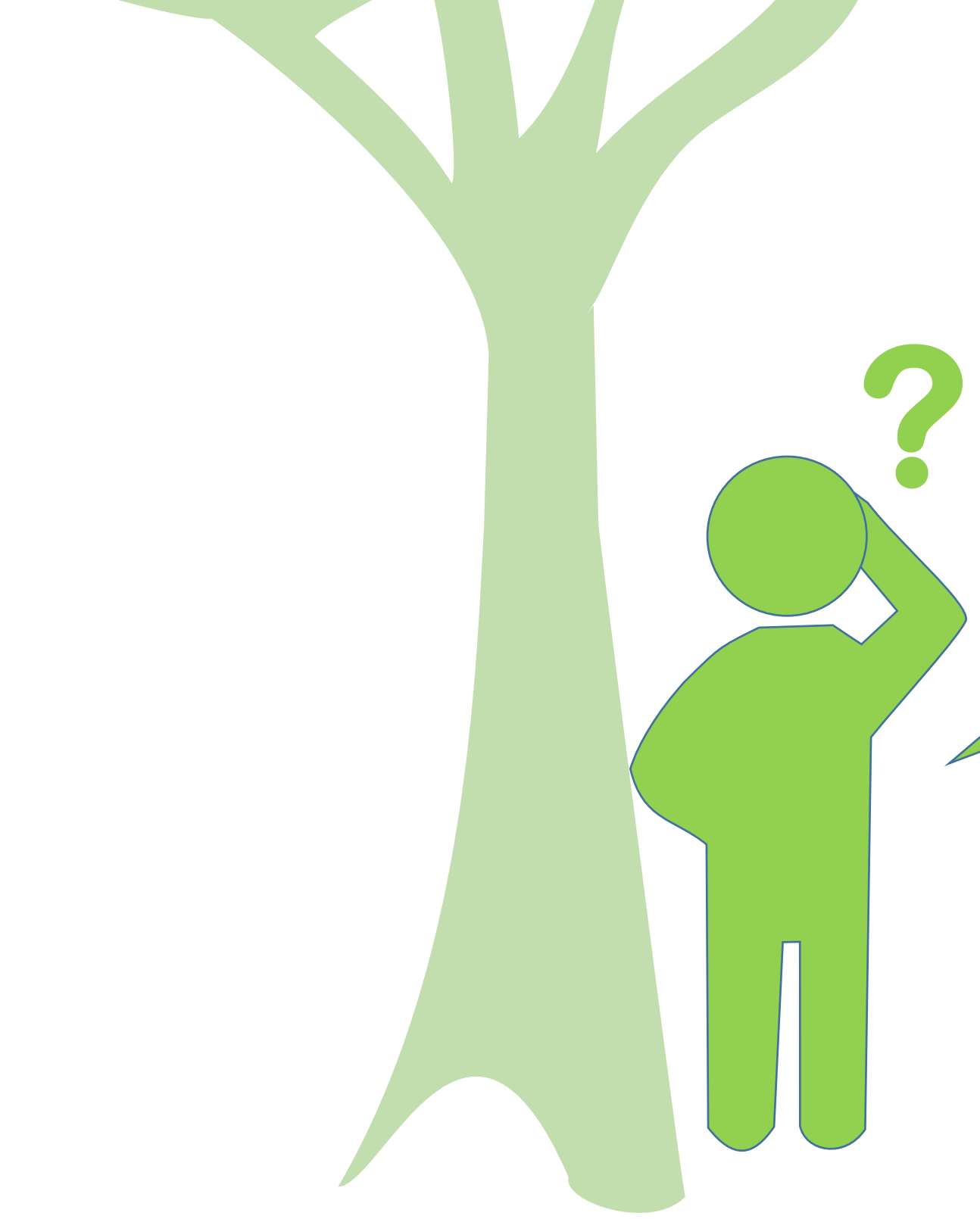
PROGYSAT

Projet de coopération Régionale d'Observation des GuYanes par SATellite

Public Policies and Forest Protection

By public policy we mean the regulations put in place by States, communities or institutions managing a territory to protect forest resources

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Protected Areas Are they effective in conserving the forest mass?

Through the compilation of Mapbiomas data, we analyzed forest loss in an automated way in two sites:

1. Protected areas of the north channel of the Amazon River (Figure 1)
2. The Guiana shield (Figure 2)

In the space-time analysis, there is a visible effect of protected areas to conserve the forest massif. In the buffer zone of non-protected areas, is where the accumulated deforestation is much greater.

Which land use are most associated with deforestation in the Guiana Shield? (Figure 2)

Brazil:
Agriculture
Suriname, Guyana and French Guiana:
Mining

Methodologies (regional and local scales):

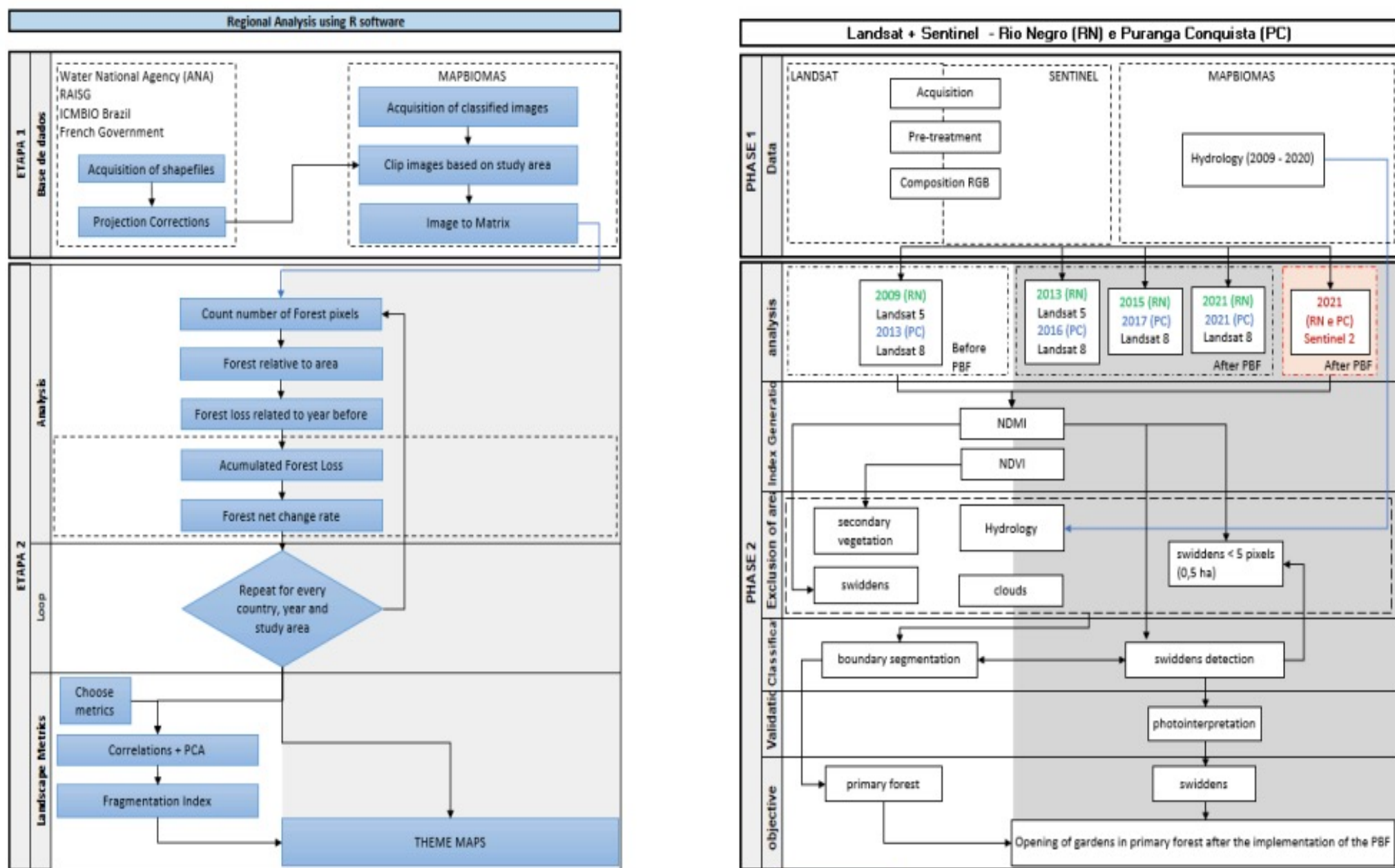


Figure 3

Local scale and "BOLSA FLORESTA" program:

Compensates local residents without any form of deforestation in primary forests. (figure 4)

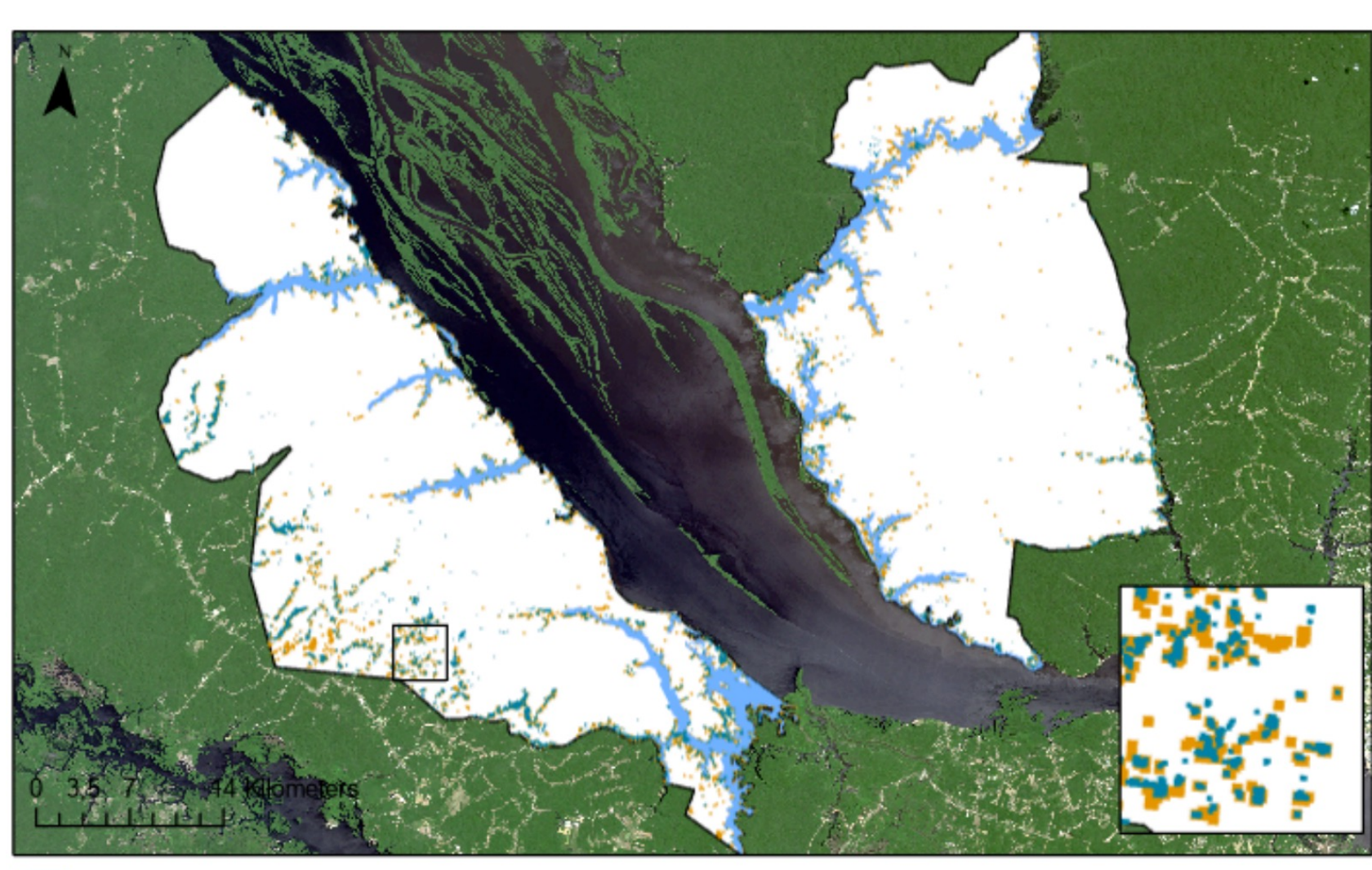


Figure 4

In Rio Negro (left) there are indications that households are actively striving to meet program requirements (similar to the previous study done in Uatumã).

Puranga Conquista (right) points to an initial effort, but with the last 5 years there has been an opening of areas in primary forests.

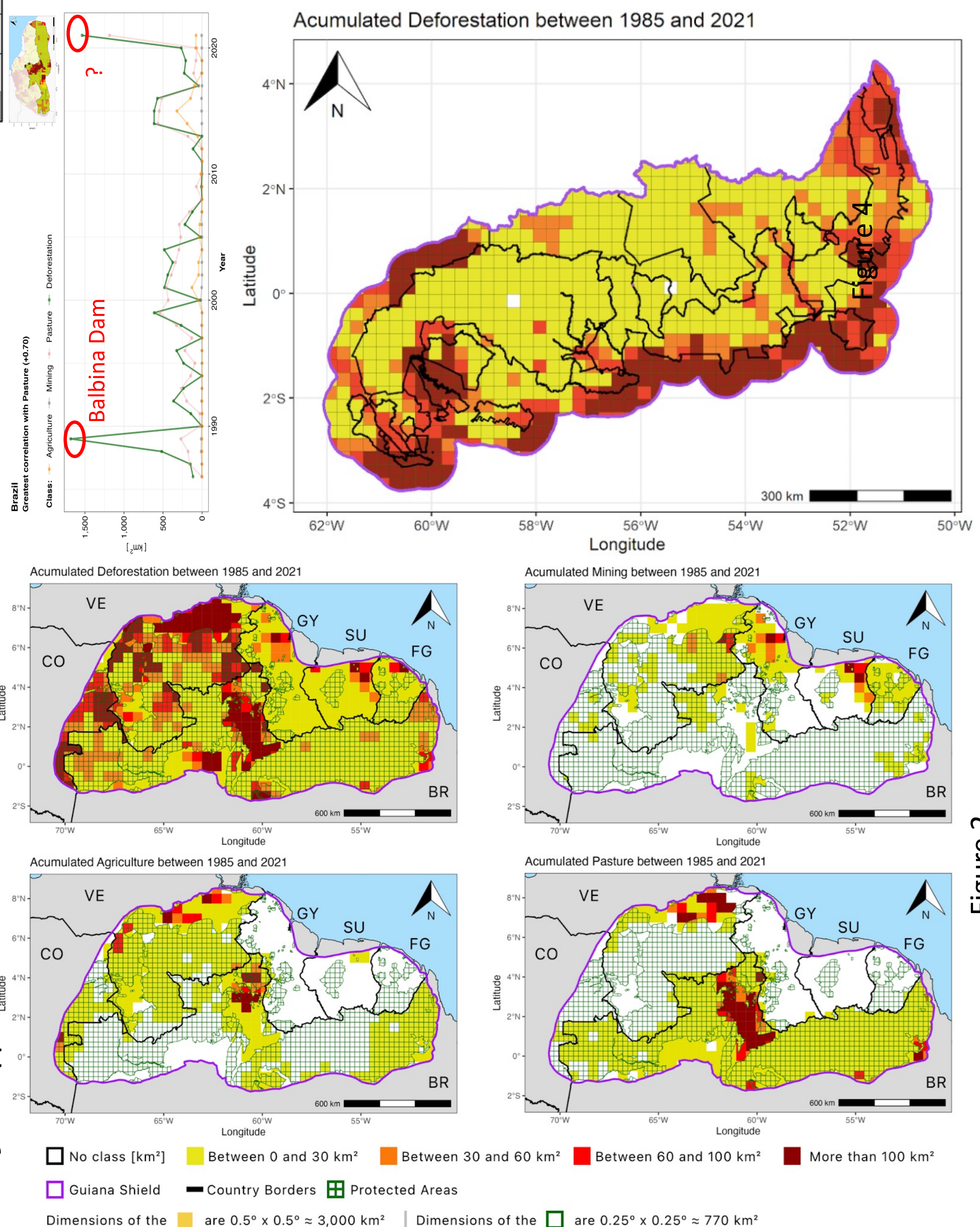
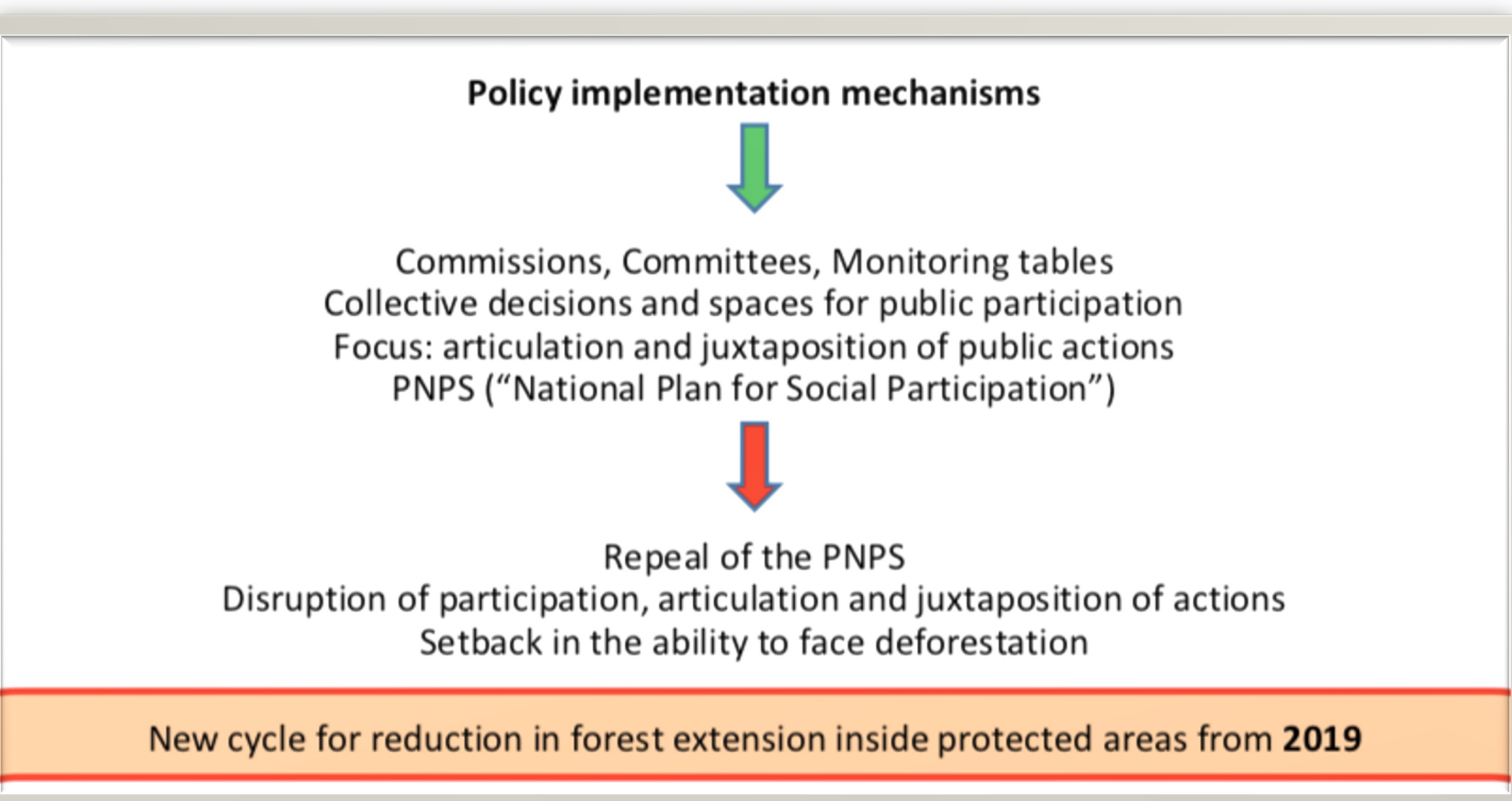


Figure 1

Figure 2

Public policy analysis and conclusions:



Throughout Jair Bolsonaro's government (2019-2022), the federal government dismantled regulatory policies and instruments in environmental sector and restricted participatory decision-making spaces by ending the National Social Participation Policy. In parallel, access to credit and the debt financing of major producers was facilitated. All these together led to the increase of deforestation levels.

```

colC_raster <- function(geo, tif, wd_output = NULL, ...){
  # require
  require(sf)
  require(raster)

  # Arquivo geoespacial sem a geometria, só como um data.frame (df)
  geo_df <- sf::st_drop_geometry(geo)

  # Fazer esse cálculo para cada linha do org. geoespacial
  for(X_interno in 1:nrow(geo_df)){

    # Cortar o arquivo tif e pegar a máscara dele
    tif_crop <- raster::crop(x = tif, y = geo[X_interno,])
    tif_mask <- raster::mask(x = tif_crop, mask = geo[X_interno,])

    # Transformar essa imagem em uma matriz e pegar uma tabela com esses dados
    tif_proxy_matrix <- raster::as.matrix(tif_mask)
    tif_proxy_classes <- base::table(as.vector(tif_proxy_matrix))

    # Criar data.frame com isso
  }
}

```

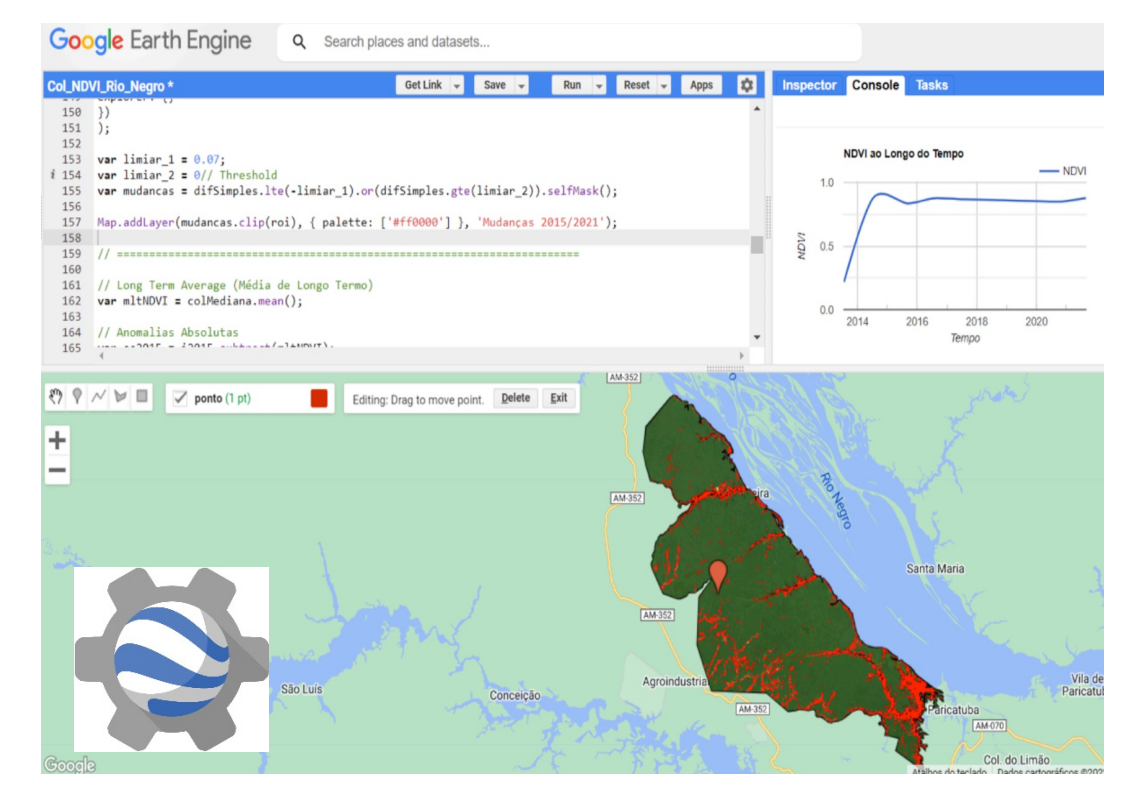


Figure 5