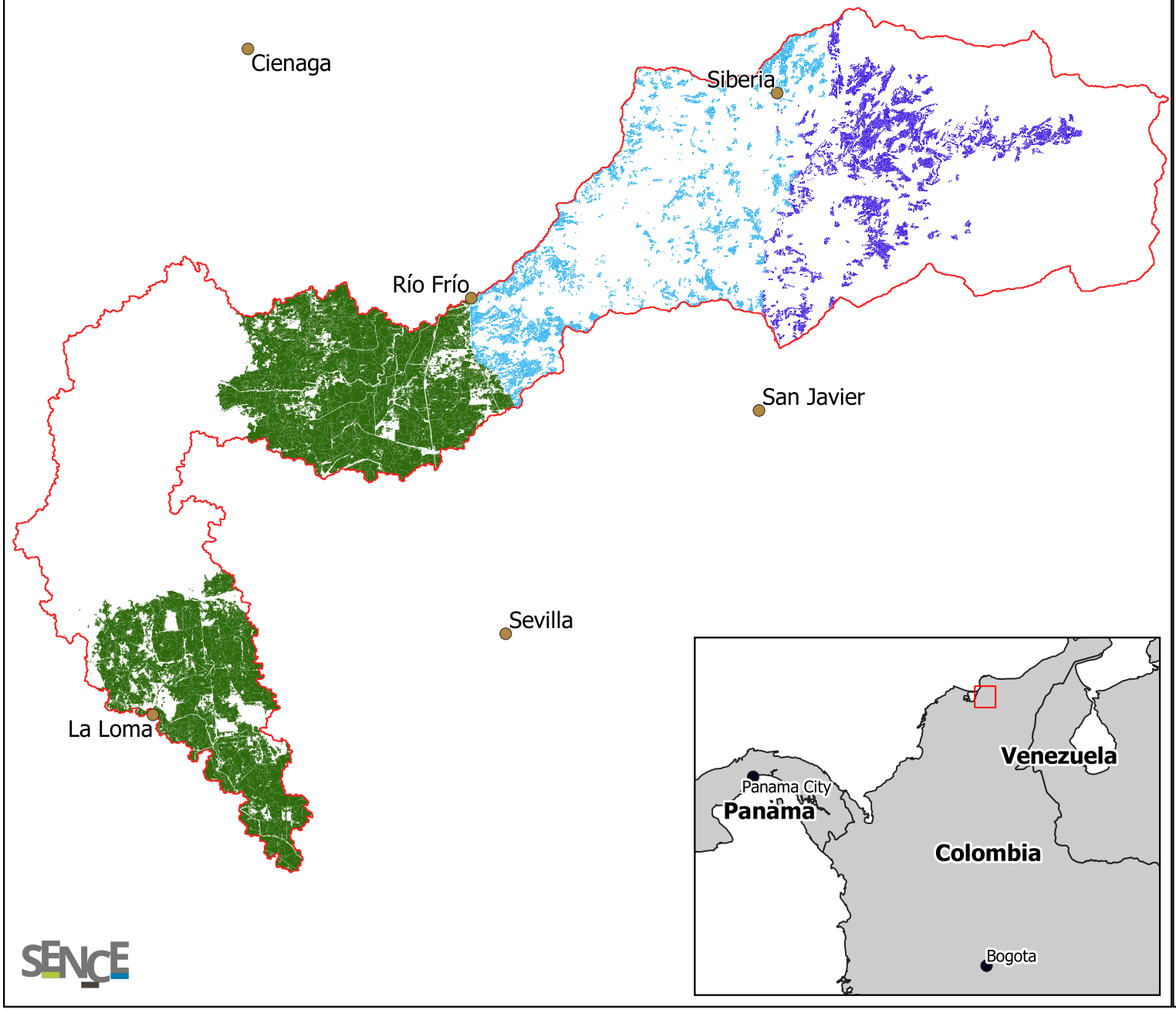
2. Opportunities to enhance surface water regulation in the Rio Frio catchment

Ecosystem service: Regulation of overland flow.



How to interpret the map:
This map shows places with agriculture and grassland where it would be possible to improve surface water regulation to slow the flow of runoff into the river Frio. Places shown in dark blue are located in the upper catchment of the Rio Frio. Places shown in light blue are in the mid-catchment, and places shown in green are in the lower catchment. All of the coloured areas on the map are hydrologically connected, and action taken in these areas should enhance the existing water regulation capacity of the land. However, the types of action that are most appropriate, and whether these are logistically possible and cost-effective, depend on the position of the opportunity within the catchment.

Why is it important:
Generally, interventions in the mid- and upper-reaches of the catchment (light and dark blue) will benefit a larger downstream area, but can be more challenging to implement, e.g. due to topography and accessibility. In the lower reaches of the catchment the effects of management intervention become more localised (as there is less downstream area), but can be easier to achieve. In the lower reaches of the river wetland creation can enhance the capacity of land to store flood waters and limit their spread, which might protect valuable assets and infrastructure. In the upper reaches afforestation can slow the volume and rate at which water enters the watercourses.

How the map was created:
This map was created by analysing the restoration potential of habitat and land use classes generated using Sentinel 1 and Sentinel 2 satellite imagery. The river basin boundary was determined by analysis of SRTM elevation data.

Legend

- Opportunity in the lower catchment
- Opportunity in the mid catchment
- Opportunity in the upper catchment

0 3 6 9 12 15 km

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