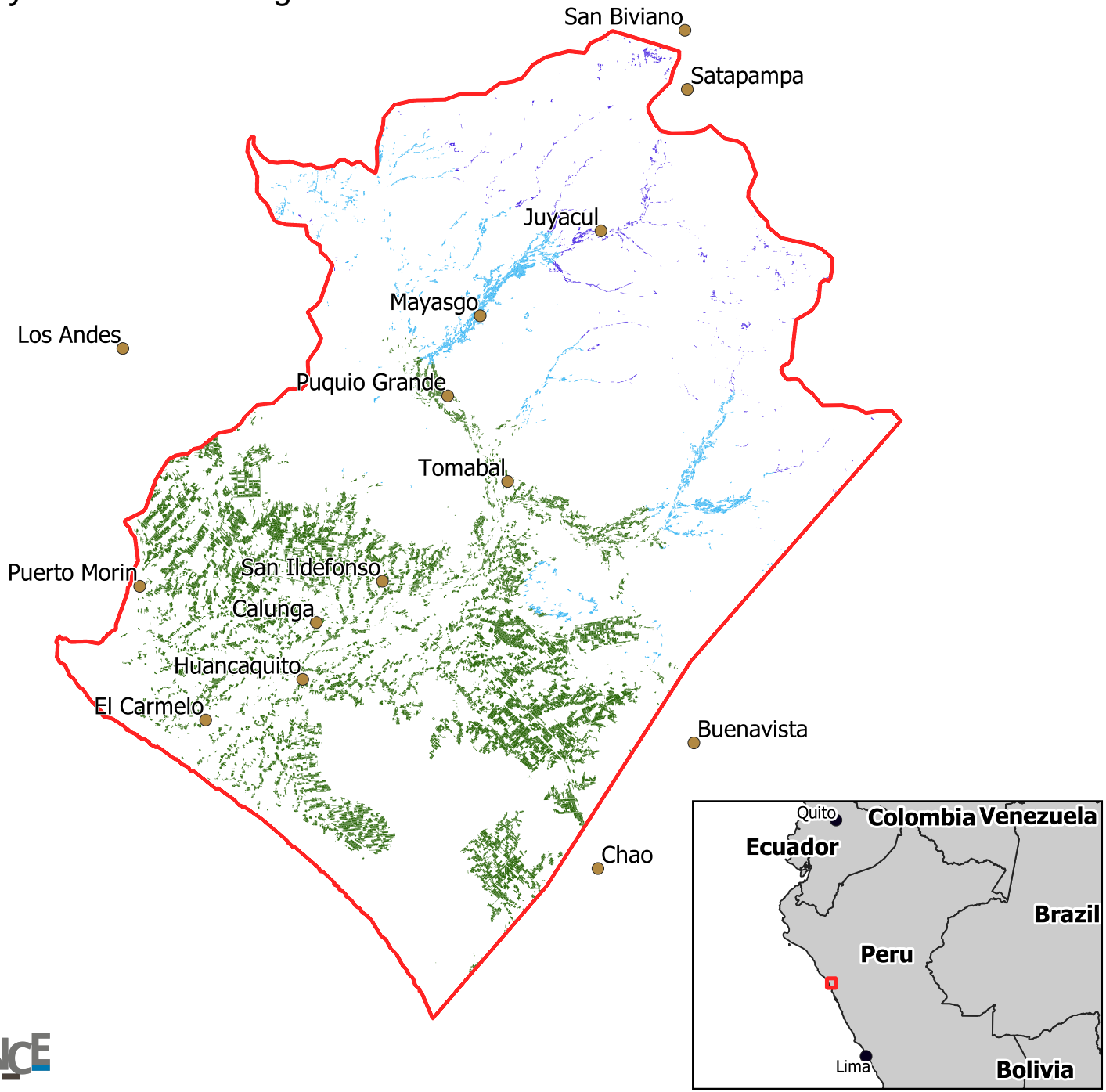
3. Opportunities to enhance surface water regulation: places receiving high volumes of surface water flow

Ecosystem service: Regulation of overland flow.



How to interpret the map:
This map shows places that are currently agriculture or erosion gullies within major flow paths, where taking action to improve surface water regulation, to slow the flow of runoff, would be most effective. These places receive the largest proportion of the runoff water and, particularly in the lower catchment, may be more likely to flood.

What the service is:
Water regulation is a form of Natural Flood Management where hydrological and morphological processes, along with vegetation type, together manage the sources and pathways for flood waters.

Why it is important:
Generally, interventions higher up the catchment should benefit a larger area downstream, 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 may be necessary to protect important assets/infrastructure. In all parts of the catchment, considering the location of major flow paths and places adjacent to channels will assist assessment of risk, and the value of benefits derived from taking action in different locations.

How the map was created:
This map was created by analysing the restoration potential of habitat and land use classes generated using Pleiades, Sentinel 1 and Sentinel 2 satellite imagery, and flow paths derived from SRTM elevation data.

Legend

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

0 5 10 15 20 km

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Derived data created by JNCC and Environment Systems Ltd.
Maps created by Environment Systems Ltd (2019).
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