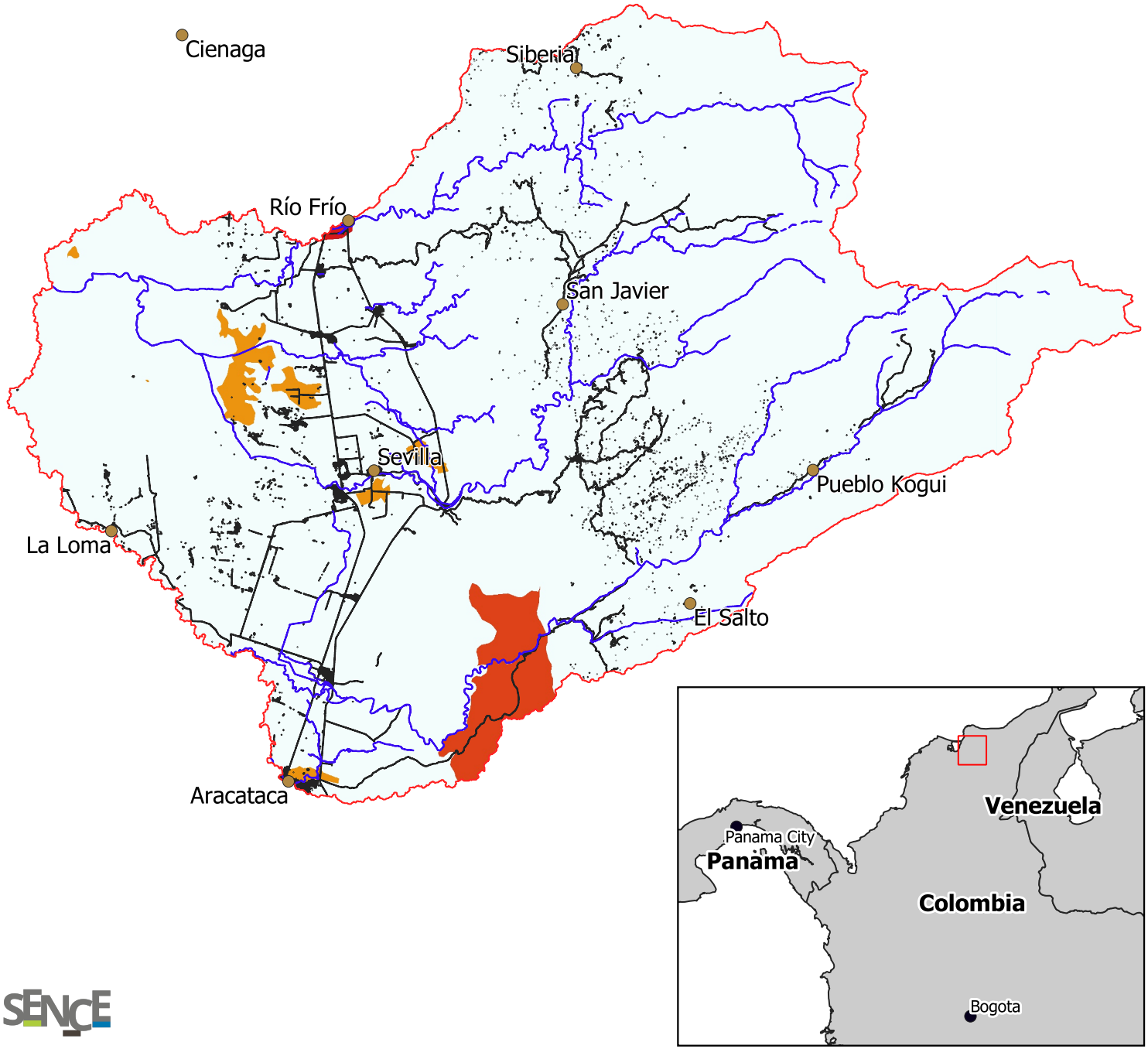
5. Risk of soil erosion caused by wind

Ecosystem services: Conservation of soil and water quality. Limiting sediment entering rivers.



How to interpret the map:
Orange colours are places where soils are susceptible to wind erosion, with dark orange places being most susceptible.

What the service is:
Topsoil erosion risk is a significant factor leading to loss of soil, soil quality degradation, reduction in agricultural productivity, and siltation of rivers and streams. Some soil types are more susceptible to wind erosion due to their texture, stoniness and organic matter content.

Why it is important:
Soil is a non-renewable resource and where it is lost through erosion, it can take hundreds to thousands of years to re-form. Losing topsoil removes a nutrient-rich growing-medium for plants, and also reduces the water infiltration capacity of the soil, leading to increased runoff. Land use management can have a large influence on wind erosion, particularly if vegetation cover is removed from dry, susceptible soils when erosive winds are likely to occur.

How the map was created:
This map is based on an analysis of soil characteristics as mapped within the Digital Soil Map of the Department of Magdalena, Republic of Colombia. Scale 1: 100,000 (2009). Soil classes and their relative abundances were assessed for their susceptibility to wind erosion, so that soils with the highest risk and which are present in over 60% of an area, are given the highest risk. Areas where the same soil type is present, but in lower proportions, are assessed as lower risk.

Legend

- Urban and roads
- Rivers

Wind erosion risk

- Soils of low susceptibility to wind erosion
- Soils of moderate susceptibility to wind erosion
- Soils with highest susceptibility to wind erosion

0 5 10 15 20 km

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Data and maps created by Environment Systems Ltd (2019)
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Soil data: Geographic Institute Agustín Codazzi