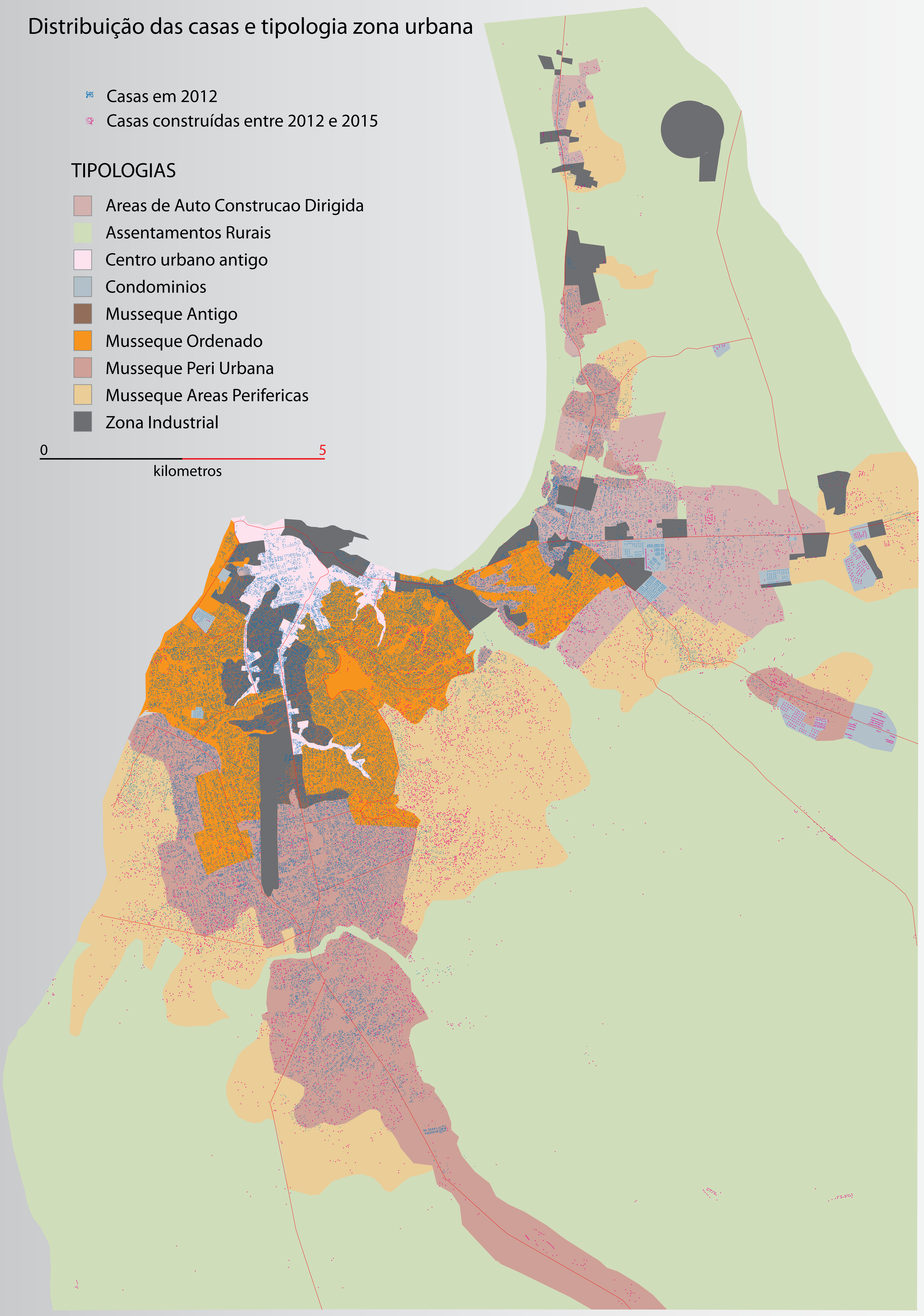
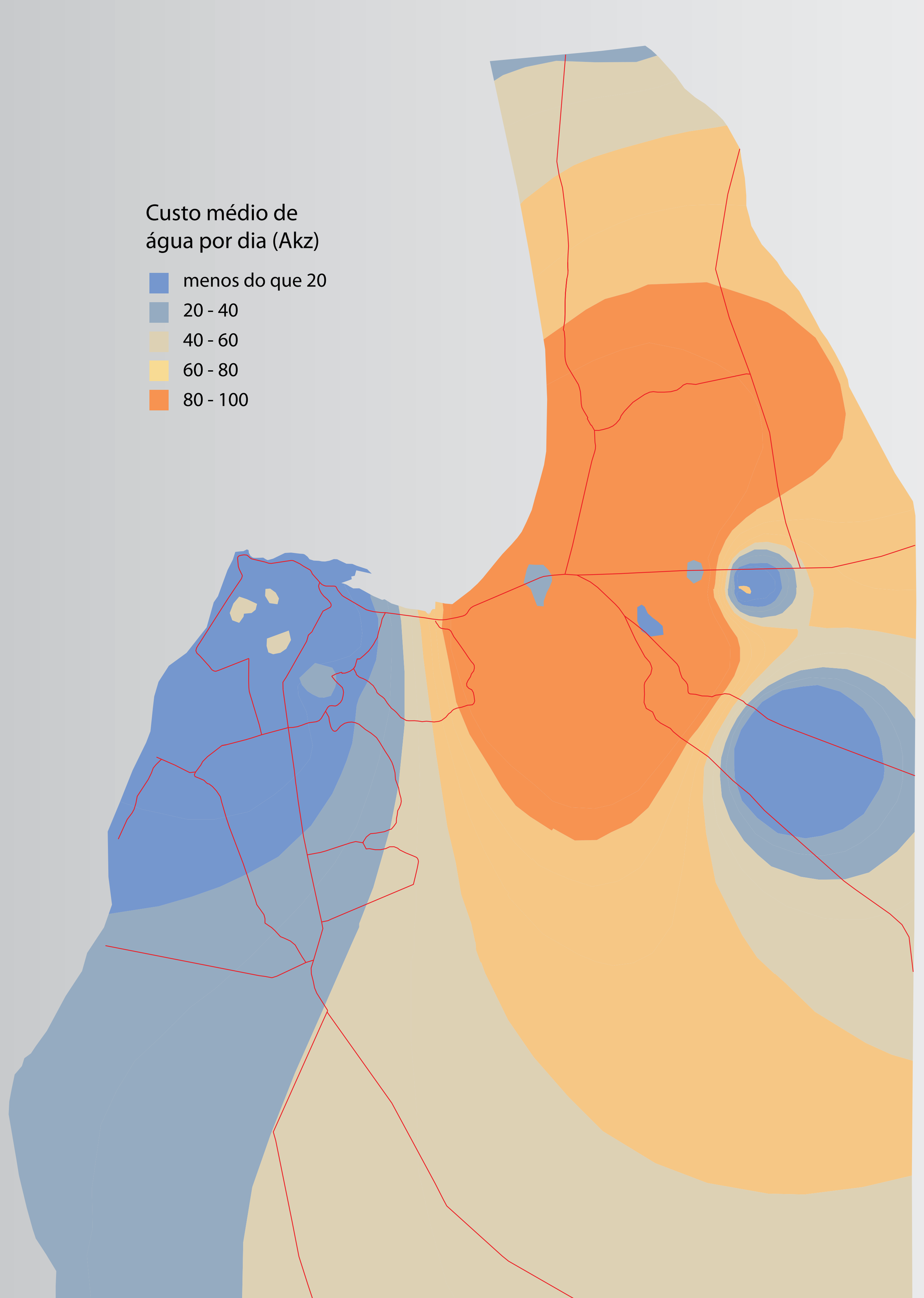
Environmental vulnerability and settlement adaptation in Cabinda

Cabinda has grown rapidly in recent years, with the number of houses increasing by about 4% each year between 2012 and 2015. Many poorer people have been forced to occupy low cost land where there is a risk of flooding and erosion. Socio-economic conditions are challenging in these low-income housing zones, and irregular, intense rains frequently lead to flooding. Climate change may result in more frequent and intense flooding, and sea level rise will pose further risks to Cabinda.



About 86% of homes in Cabinda are in musseque low-income informal housing areas. Most houses in those musseques lack access to public services, such as sewage and refuse removal, secure land tenure, clean water and electricity.



More than 50% of Cabinda's urban residents purchase water, mainly from households who do have piped water. The cost of water, usually measured as the price for a 20 litre bidon, is a useful 'proxy-indicator' of water supply and access because prices vary according to the source, quantity available, distance from source, quality of water and time taken to fetch water. Prices are generally highest in poorer musseque areas, whereas consumers in formal housing zones pay relatively little for water.

Increasing climatic variation also affects prices. When bairros are flooded, road access for water delivery becomes problematic. Flooding may also cause contamination of water supplies.

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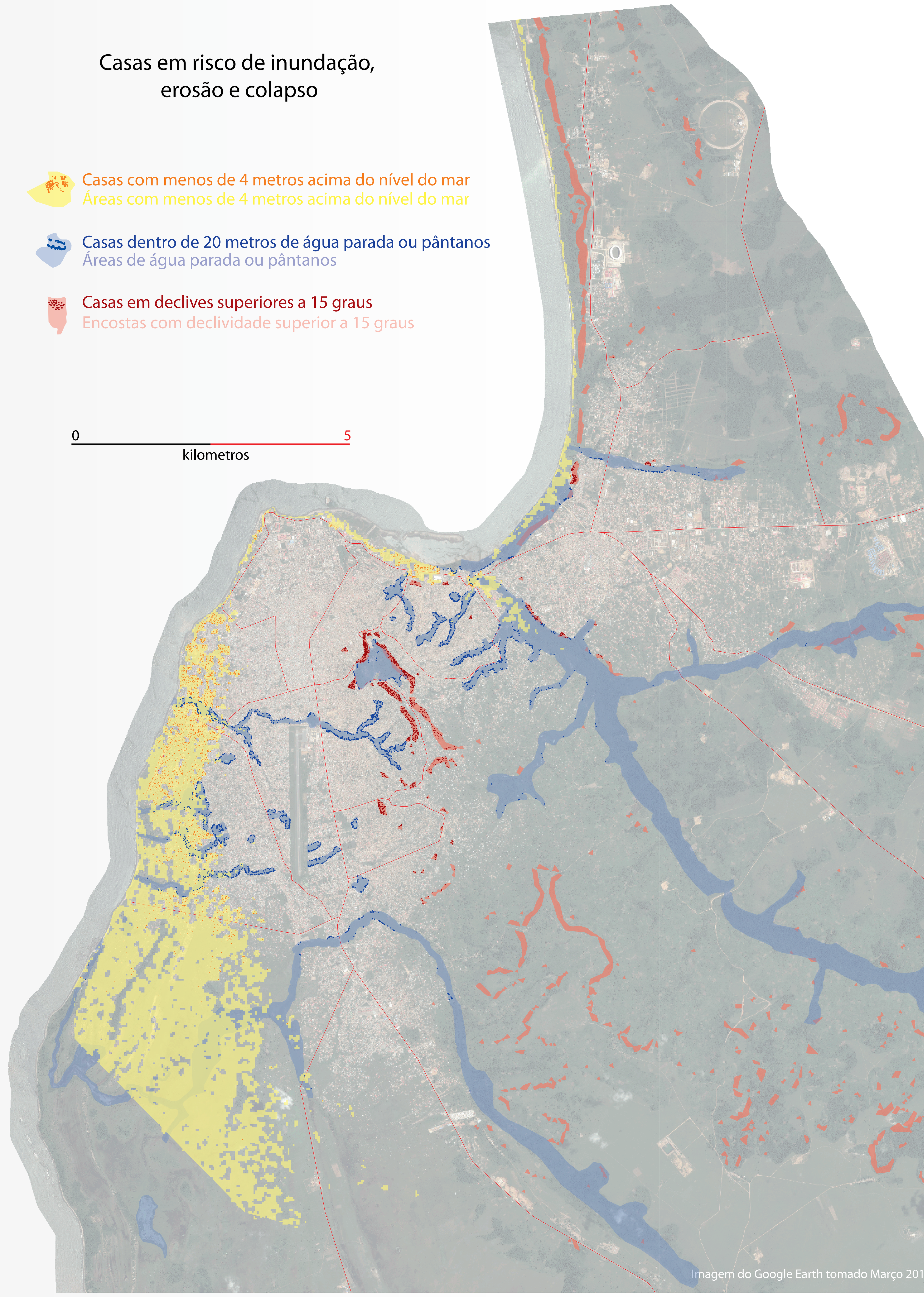

This map highlights homes at risk, providing evidence and information local governments should use to upgrade social infrastructure and develop environmental adaptation plans. The areas of environmental risk (close to sea level or rivers and marshes, and on steep slopes) are overlaid on this image of Cabinda. Houses built within those risky areas are highlighted. Socio-economic conditions in many of those homes are weak which means that their residents are particularly vulnerable to shocks and challenges.

Houses built close to the shore at low elevations may be damaged when tidal waves or storm surges occur. About 4,200 houses in Cabinda are in areas lower than 4 metres above seal level. The images on the right were taken in 2012 and 2015. Compare the number and spread of houses to see how many homes were built closer and closer to the sea after 2012.

Houses on the edges of swampy areas are likely to be flooded when rains are heavy. Examples of newly-built houses being erected on the margins of swamps are shown in the image at bottom left. In total, there were about 2,300 houses in Cabinda within 20 metres of standing water or swamps in 2015.