

SECTOR IN-DEPTH

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Regional & Local Governments – Italy

Hydrogeological risks mitigated by central government support, but funding uncertain

Measures to prevent hydrogeological risks, such as floods, landslides, coastal erosion and avalanches, could cost Italian regional and local governments (RLGs) an estimated €26 billion in additional capital spending over the next couple of decades, or 14% of their total regional budgets, according to Italy's central government. Since 2015, the cost of these prevention measures has been mitigated by higher central government funding for RLGs facing these risks, in addition to the existing support provided in the case of natural disasters. However, although support from the central government is credit positive for Italian RLGs, the funding of these projects remains uncertain. While the different exposures and varying progress with remedial measures are already factored into our credit ratings for RLGs, inactivity or a lack of significant progress to tackle such risks would be credit negative for the most exposed RLGs.

- » **RLGs' cost of preventing high hydrogeological risks estimated at €26 billion.**
 Italian RLGs will require an estimated €26 billion in additional capital spending to prevent flooding, landslides, avalanches and coastal erosion, according to Italy's central government. Floods and landslides remain the key risks facing most RLGs.
- » **Central government support plan in place, but availability of funds is uncertain.**
 Around €8 billion of the required €26 billion is already available through a mix of European Union funds, central government transfers and European Investment Bank (EIB) debt. EU funds, which have already been allocated over the period 2014-2020, represent a stable source of funding. However, funding from Italy's central government is less certain, as this is subject to annual allocations, with the recently formed government focused on other priorities. Italian regions are also subject to stringent budgetary constraints, which curb their ability to make infrastructure investments and take on additional debt.
- » **RLGs in central and southern Italy face greatest risks, requiring higher funding.**
 Central and southern Italian regions, such as [Molise \(Ba1 RUR\)](#), [Basilicata \(Baa2 RUR\)](#) and [Abruzzo \(Baa3 RUR\)](#), have the highest spending needs, representing 73%, 65% and 36% of their annual budgets, respectively. In contrast, regions in the north, such as [Lombardy \(Baa1 RUR\)](#) and the Autonomous Provinces of [Bolzano \(A3 RUR\)](#) and [Trento \(A3 RUR\)](#) will face negligible costs of around 1% and 4% of their budgets. The higher costs facing RLGs in the south of the country is the result of their failure to invest in prevention measures in the past, thereby creating an infrastructure backlog. For those regions that have a greater need to spend on prevention measures, inactivity or a lack of significant progress to ameliorate these risks would be credit negative.

RLGs' cost of preventing high hydrogeological risk is estimated at €26 billion

According to Italy's central government,¹ Italian RLGs need an additional €26 billion in capital spending to prevent hydrogeological risks such as flooding, landslides, avalanches and coastal erosion. This corresponds to one and a half times their annual capital spending in sectors such as healthcare, transportation, roads and education. Climate change will create new challenges for Italian RLGs, which will face an increasing likelihood of sudden climate shocks as well as more gradual long-term climate trends that will test the sector's ability to adapt. In many cases, climate change is forecast to not only disrupt economic activity but also cause damage to property and infrastructure.





Hydrogeological risk is a significant environmental threat facing Italy: the country has the highest exposure to landslides in the EU, accounting for 75% of all such incidents.² Moreover, floods and landslides remain the key risks facing most Italian RLGs (see Exhibit 1). The country's National Plan Against Hydrogeological Risks is already in operation and contains a living map of the many risks facing different regions across the country. Crucially, the magnitude of the infrastructure needs identified by the plan is beyond the capacity of any RLG to handle on its own and could only be funded with help from the central government or the EU over a number of years, if not decades.

The first few, albeit limited, infrastructure projects, worth €1.3 billion, are already under way in the most exposed metropolitan provinces. Large, urban areas such as **Genoa (unrated)**, **Milan (Baa2 RUR)**³ and **Florence (unrated)** have begun long overdue flood prevention infrastructure projects. In other areas, particularly in the south, risk maps are not sufficiently detailed to identify required interventions, largely because of an overall underestimation of these risks or delays in submitting the risk evaluations.

Since 2015, the cost of prevention measures has been partly covered by higher levels of funding from the country's central government via the new national operating and financial plan, which introduced specific ongoing support for Italian RLGs facing these risks. This is in addition to the existing support provided in the case of natural disasters, although prevention measures should lower the required capital spending after natural disasters have occurred. Over the course of the next few years, funding from the central government will be vital for Italian RLGs to address these capital spending needs.

Exhibit 1

Floods and landslides are the main risks and require the most interventions

	Type of risk	Number of interventions	Total Cost (€ billion)
	Floods	3284	€ 13.8
	Landslides	4828	€ 7.7
	Coastal Erosion	227	€ 0.1
	Avalanches	555	€ 1.3
	Mix of risks	503	€ 2.8
	Total	9397	€ 25.7

Source: Italiasicura 2017

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Central government support plan in place, but availability of funds is uncertain

Around €8 billion of the required €26 billion is already defined and will be disbursed over the next five years through a mix of EU and central government transfers and EIB debt. EU funds, which have already been allocated over the period 2014-2020, represent a stable source of funding. However, funding from Italy's central government, which should form the largest share, is less certain because it is subject to annual allocations. Moreover, Italy's recently formed national government has not yet defined its policy priorities with regard to hydrogeological risk.

National government priorities compete for funding allocations, which means that available funds for these measures may be diverted towards other, more urgent projects. If the funds are delayed or become unavailable, Italian RLGs will have no alternative means with which to carry out these projects given that they are subject to stringent budgetary constraints. Legislation limits the ability of Italian RLGs to take on additional debt to fund their increased capital spending on these projects.

In addition to funding challenges, nearly 90% of the infrastructure projects considered in the plan do not yet have an initial feasibility study,⁴ which adds further delays to their planning, design and completion. A lack of technical skills and historically weak multi-level governance among RLGs represent further constraints. Coordination between local government officers and civil engineers over the preparation and execution of these projects will be essential in the future.

RLGs in central and southern Italy face greatest risks, requiring higher funding

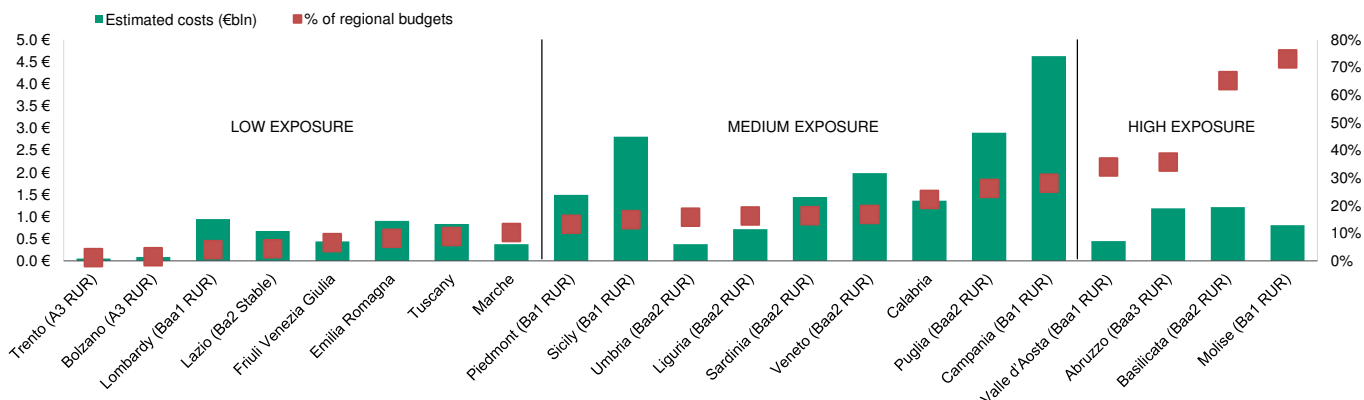
Regions in central and southern Italy, such as Molise, Basilicata and Abruzzo, have the highest funding needs, representing 73%, 65% and 36% of their annual budgets, respectively (see Exhibit 2). Although this amount will be shared with local governments within their territory, it remains high when compared with RLGs' rigid budgetary structures and limited own resources. The three largest regions in the south, [Campania \(Ba1 RUR\)](#), [Sicily \(Ba1 RUR\)](#) and [Puglia \(Baa2 RUR\)](#), account for €10.3 billion, or 40%, of the total required amount for the prevention and mitigation of hydrogeological risks. In contrast, regions in the north, such as Lombardy and the Autonomous Provinces of Bolzano and Trento, face negligible costs of around 1% to 4% of their budgets.

More generally, RLGs with a solid budgetary performance, low debt levels and high available resources, such as Lombardy, Bolzano and Trento, are less exposed to these risks. Higher levels of prior spending on infrastructure and, in some cases, a more benign topography reduce the need for significant prevention works with a correspondingly lower impact on the RLGs' future budgets.

The higher costs facing RLGs in central and southern Italy is driven by their greater exposure to hydrogeological risks and a failure to invest in prevention measures, which has created an infrastructure backlog. The need for greater funding over and above the resources already disbursed by the central government and the EU for reconstruction following earthquakes is driven by these regions' ongoing high exposure to seismic activity, which has caused significant damage in the recent past.

Exhibit 2

Vulnerability chart shows higher burden for regional budgets in the south of Italy



Source: Corte dei Conti, Moody's, *Italiasicura* 2017

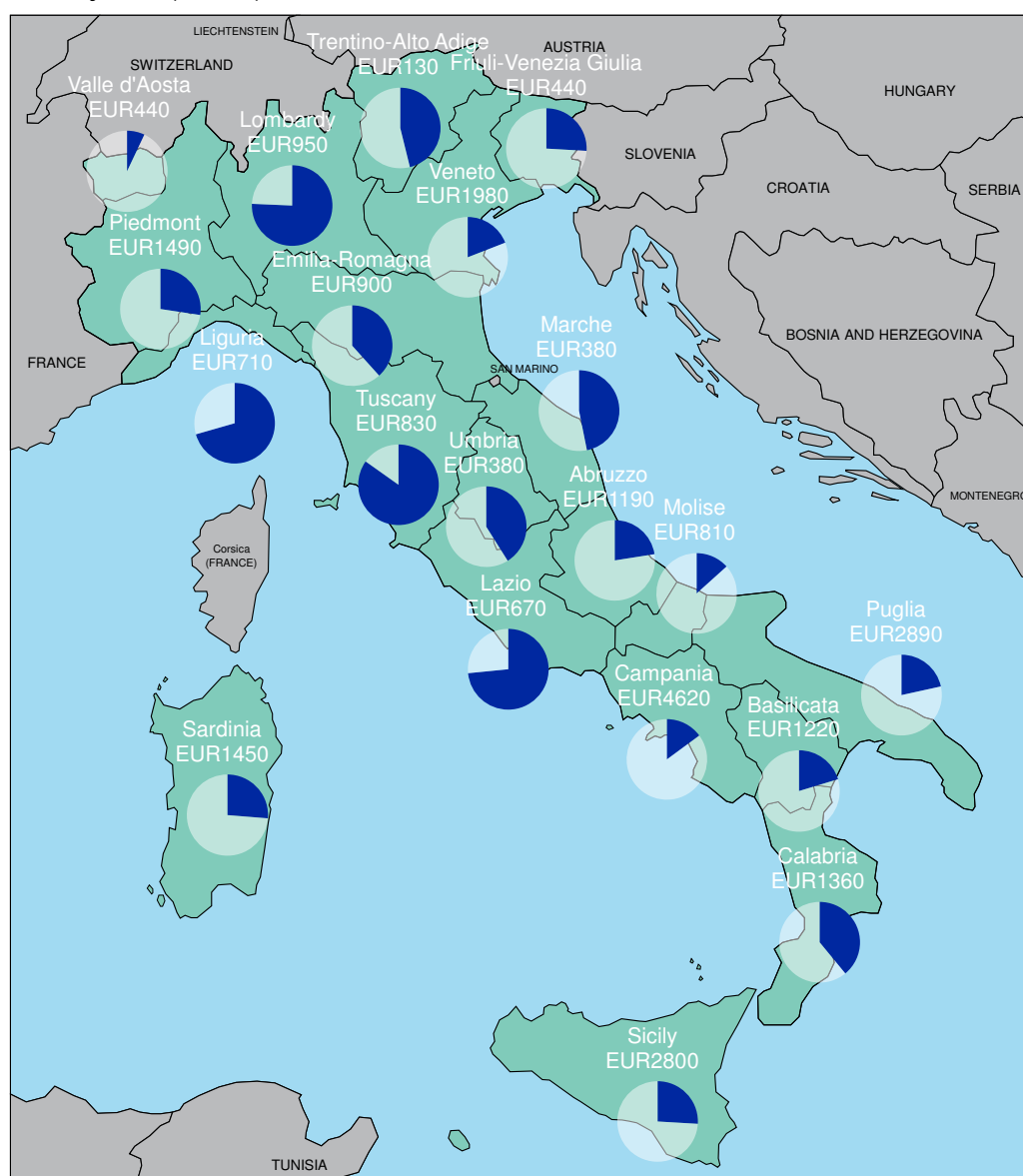
Despite greater hydrogeological risks and a corresponding urgency to tackle these with additional capital spending, RLGs in Italy's central and southern regions have barely started prevention work (see Exhibit 3). With the exception of Calabria, where work in progress has reached 39% of the total estimated cost, the work completed or underway in other central and southern regions accounts for a low 13% to 26% of the total estimated cost. In comparison, regions in the north – such as Liguria, Tuscany, the Autonomous Provinces of Bolzano and Trento and Lombardy which face lower risks and urgency – have completed between 46% and 85% of prevention work. Tuscany is in the lead, with 85% of work completed or underway, followed by Lazio with 75% completed or underway.

The different exposures to risks and varying levels of progress with capital spending by RLGs are already factored into our credit ratings. However, for those regions with a greater need to spend on prevention measures, inactivity or a lack of significant progress to address these risks would be credit negative.

Exhibit 3

Northern regions have made more progress with prevention projects

Works completed or underway in blue (€ million)



Source: Italiasicura 2017.

A new approach to mapping hydrogeological risks

In 2014, Italy's national government revised its traditional top-down approach (according to which decisions are taken at the highest level of government) and shifted away from devising large-scale theoretical scenarios and idealized infrastructure needs towards estimating specific hydrogeological risks.

Instead, the new bottom-up approach incorporates a detailed mapping of specific interventions needed for individual regions and cities, prepared with the collaboration of local civil protection departments. This step-by-step planning approach, based on quantitative cost-benefit analyses, led to the creation of risk maps that are live and continually updated. The need for and the cost of each intervention is then evaluated with a view to other infrastructure needs in the same area to maximize efficiency in the planning and execution phases and minimize costs. The central idea is that funds should be used to prevent or mitigate hydrogeological risks rather than to pay for reconstruction work after a hydrogeological event. Every €1 spent on prevention corresponds to €100 saved in repair work, according to statistics.⁵

Based on this risk mapping, the central government set up a prevention plan on a national scale, simplified the bureaucracy and started to remove legislative obstacles that stood in the way of planning and executing prevention works. This process is shared with the regions, research institutes and local authorities and is subject to updates as risk maps become increasingly defined at a more granular level over time (especially in the south because of delays and a lack of detailed reports).

Related publications

- » 12 March 2018. [Cape Town, Spending and borrowing set to increase as city battles water crisis, introduces new initiatives to bolster supply](#)
- » 5 March 2018. [Germany's high court rules in favor of diesel ban, a credit positive for German cities](#)
- » 5 February 2018. [France's regional and local governments are being flooded with new costs from severe weather](#)
- » 12 December 2017. [Climate change will pose increasing credit challenges for cities](#)

Endnotes

[1](#) Source: Italiasicura 2017 (Italian Government)

[2](#) Source: Italiasicura, 2017

[3](#) RUR stands for Ratings under review. On 29 May 2018, Moody's placed the ratings of Italian RLGs on review for possible downgrade, following the corresponding action on Italy's government bond rating (Baa2/RUR), on May 25. This reflects the close institutional, economic and financial links between Italian RLGs and the central government

[4](#) Source: Italiasicura 2017

[5](#) Source: Italiasicura 2017

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