

## Dynamic Exposure Accumulation Profiling

Monitoring exposure accumulation by risk zones is very critical to understand the overall risk of the portfolio. Dynamic exposure accumulation profiling provides several features to accomplish this in an efficient manner with reports that present various insights in a way that is very easy to understand. As a first step, the user needs to upload their exposure data to PIER™ Online. Figure 1 shows the screen using which the user browses to the Excel file that has the exposure data and uploads it to the portal.



Figure 1: Portfolio exposure data upload

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Once the exposure has been uploaded, exposure accumulation monitoring can be performed. The following samples show some of the key features. Figure 2 shows how uploaded exposure can be visualized on the map. The maps could be created by state, district, pincode, historical events, modeled scenarios, etc.

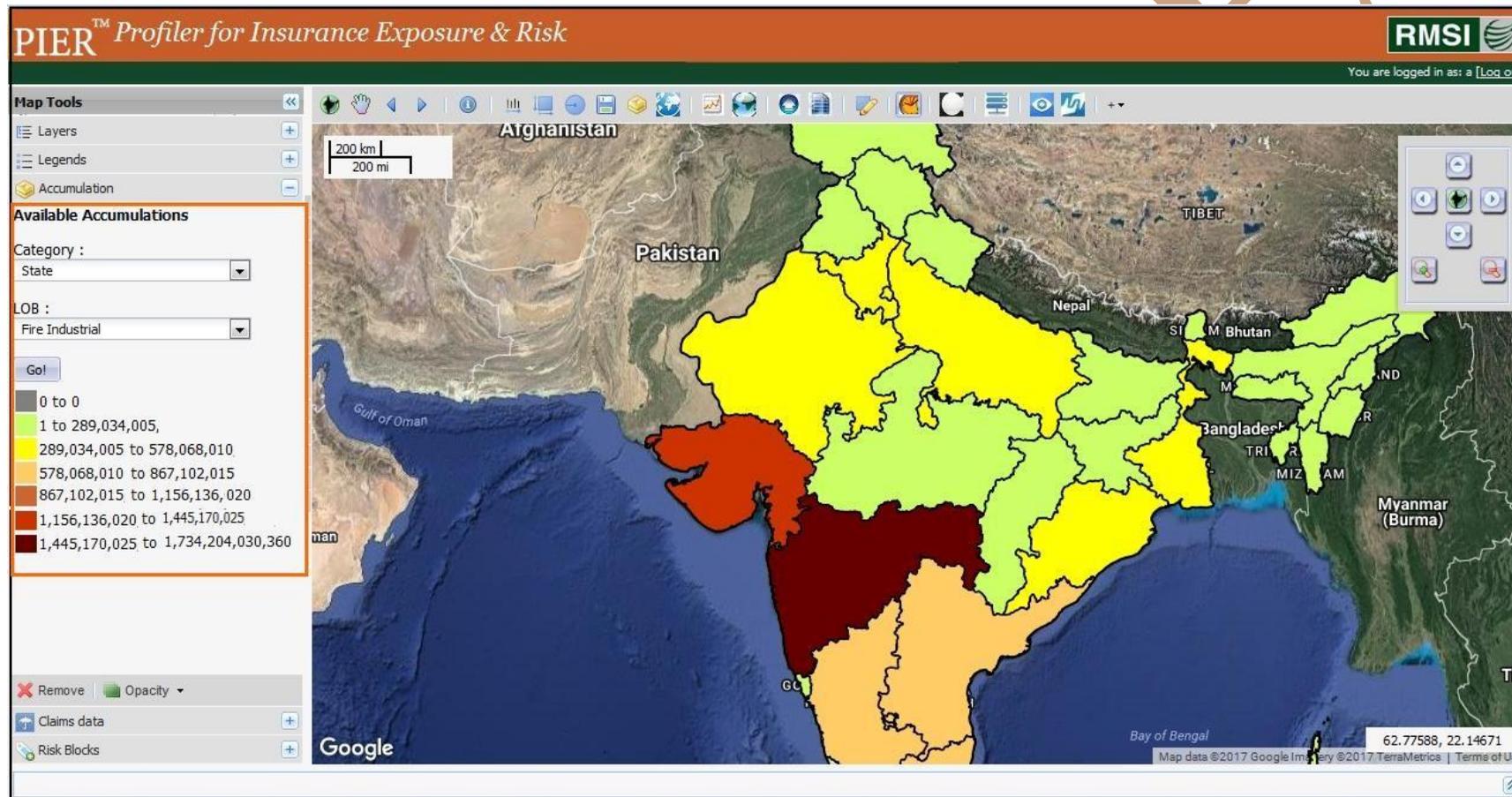


Figure 2: Exposure accumulation map at state level

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Figure 3 shows the first two pages of the exposure accumulation report that could be generated at button click once the exposure has been uploaded. This report presents the accumulation of exposure in various hazard zones.

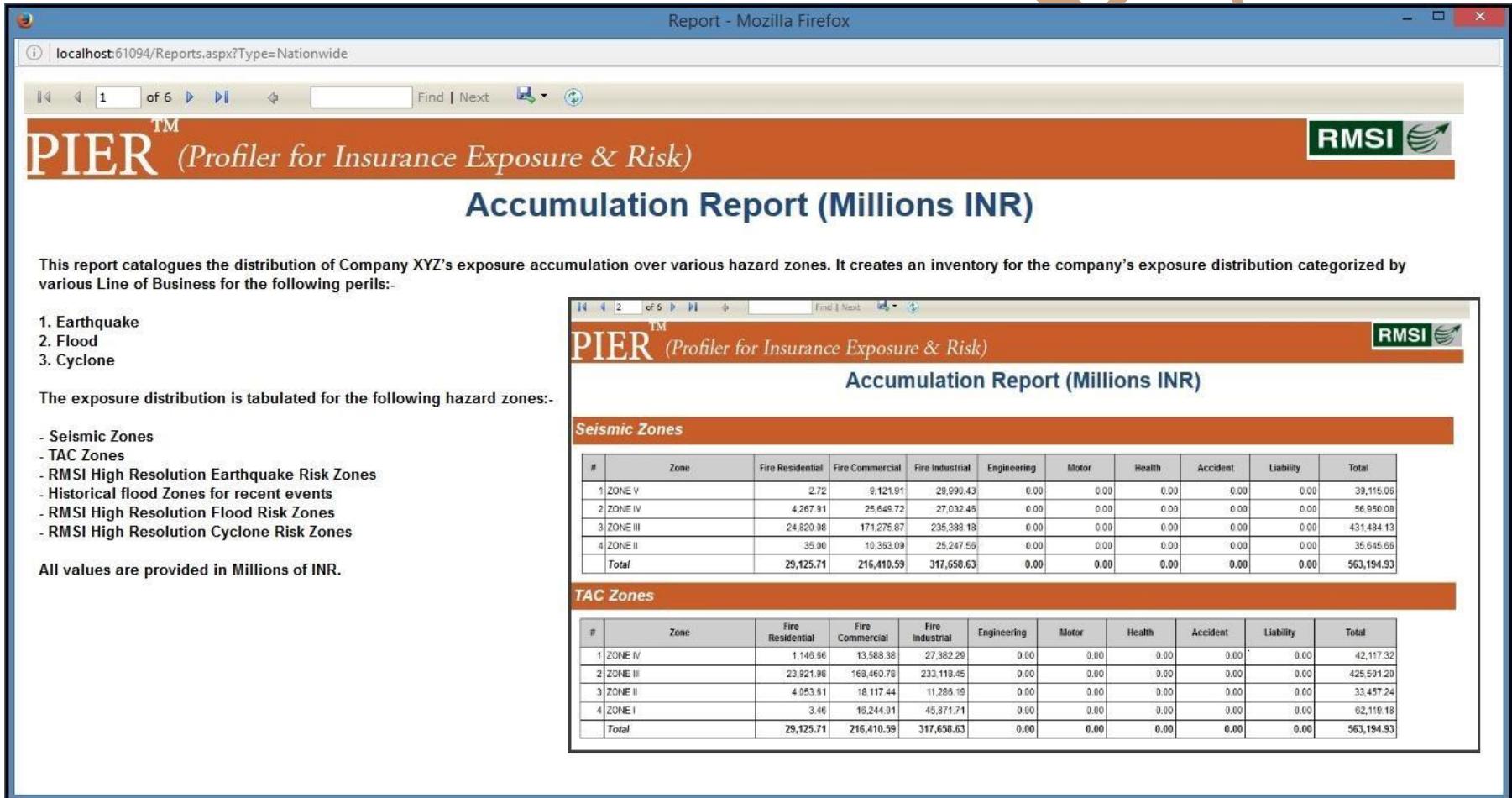


Figure 3: Exposure accumulation report

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Figure 4 shows how exposure accumulation can be performed by created risk blocks of users' choice. Every risk block represents an area on the ground where user expects to have high accumulation and hashigh risk.

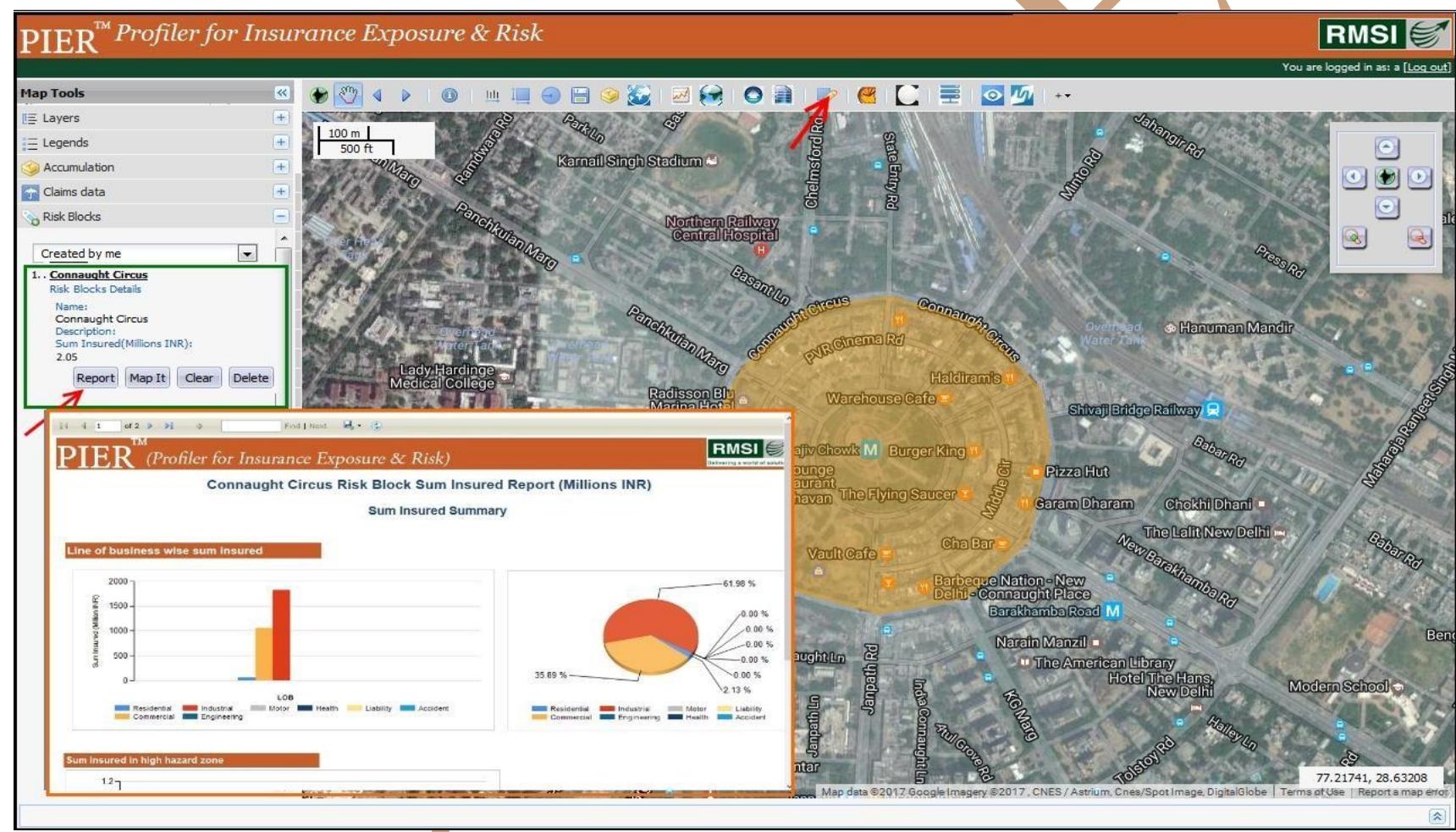


Figure 4: Exposure accumulation in a risk block - Connaught Circus in Delhi

## Dynamic Exposure Accumulation Profiling

Figure 5 shows exposure accumulation monitoring against predefined thresholds. Thresholds are defined using a rule based interface for various levels of risk. Once the thresholds are defined, threshold violation report could be generated at a button click.

The screenshot displays the PIER software interface. On the left, there is a 'Map Tools' sidebar with layers like 'Base Layers', 'Hazard Layers', and 'Administrative Boundaries'. The main area shows a map of India with a red arrow pointing to the Mumbai region. Below the map, there is a 'Map Tools' sidebar and a 'Legends' section. On the right, there is a 'PIER Exposure Threshold Violation Report (Millions INR)' window. This window contains three reports for different rules, each with a table showing State, District, and Current Exposure.

**Accumulation Threshold Rule**

Rule No	Rule Name	State	District	Threshold(Millions)	Condition	Risk Score		
173	Rule 2 - Mumbai	Maharashtra	Mumbai	1000	>	Low	Delete	Edit
181	Rule3	Maharashtra	Pune	1000	>	High	Delete	Edit
182	Rule4	Maharashtra	Pune	1	<	High	Delete	Edit
183	Rule5	Maharashtra	Pune	100	>	Medium	Delete	Edit
184	Rule6	Gujarat	Ahmedabad	1000	<	High	Delete	Edit

**Exposure Threshold Violation Report (Millions INR)**

Rule No. 173: Exposure Details for Mumbai district in Maharashtra with Exposure > 1000(Millions) at Aggregated Level and Risk Type is Low

State	District	Current Exposure
Maharashtra	Mumbai	34,594.59

Rule No. 181: Exposure Details for Pune district in Maharashtra with Exposure > 1000(Millions) at Aggregated Level and Risk Type is High

State	District	Current Exposure
Maharashtra	Pune	14,780.40

Rule No. 183: Exposure Details for Pune district in Maharashtra with Exposure > 100(Millions) at Aggregated Level and Risk Type is Medium

Figure 5: Monitoring exposure accumulation against predefined thresholds