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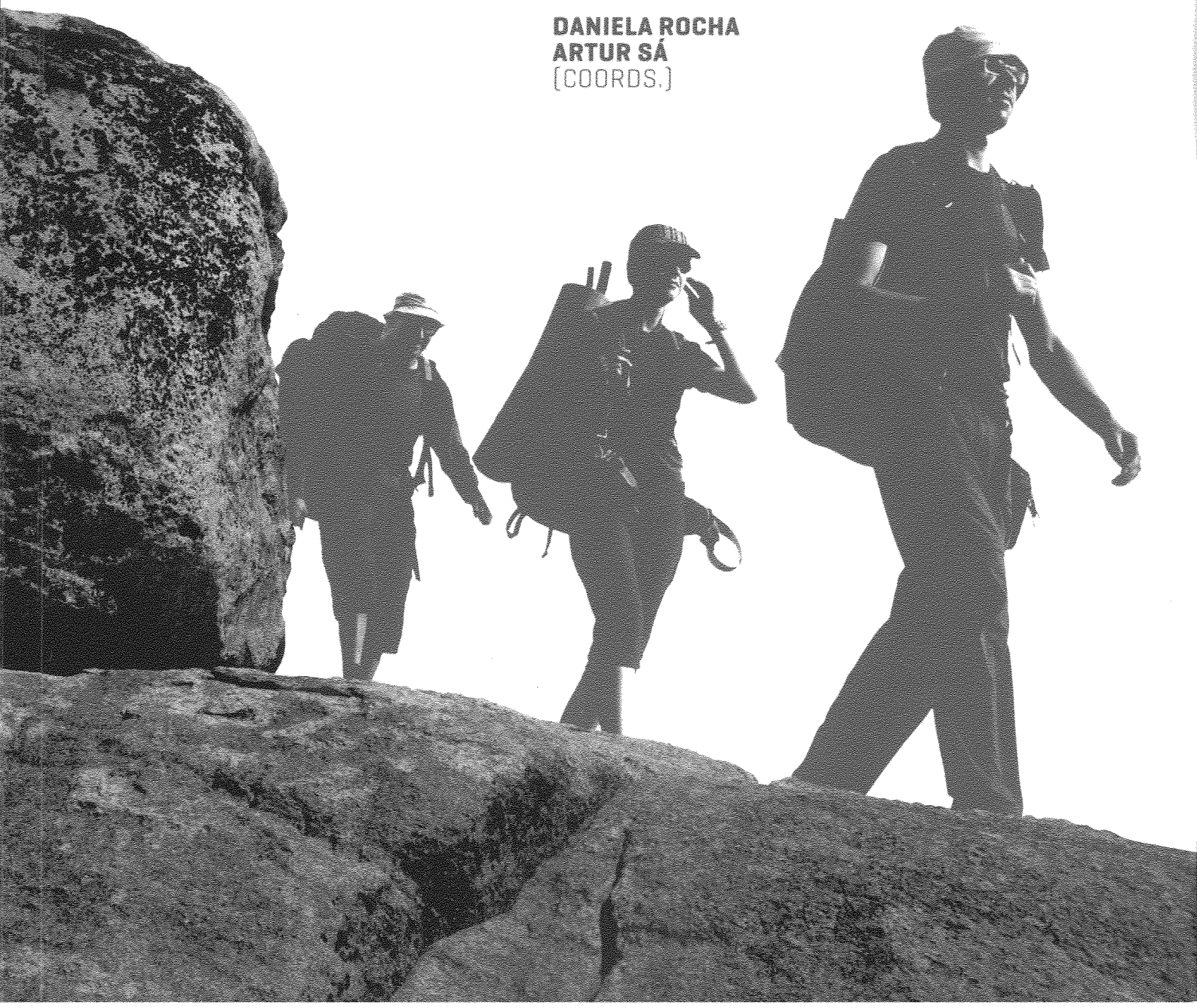
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# **Urban geotourism in Salvador (Bahia, Brazil): a strategy for the promotion of geosciences education and geoconservation**

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*ABSTRACT: In general, geotourism is still an activity not very well known in Brazil. In order to promote the geological tourism and geoconservation in Salvador city (Bahia, Brazil) an inventory of geosites is under development. These geosites, together with cultural places selected for the use of specific types of stones in historical buildings of the city centre will be the background for the implementation of an urban geotourism strategy in Salvador city.*

*KEYWORDS: Brazil, Geosciences Education, Geoconservation, Geotourism.*

## **1. INTRODUCTION**

According to Hose (2000), geotourism is the “provision of interpretative facilities and services to promote the value and societal benefit of geologic and geomorphologic sites and their materials, and ensure their conservation, for the use of students, tourists and other recreationalists”. Therefore, geotourism as a type of geoheritage use is supported on well-preserved geosites with tourism relevance. This new segment of the tourism activity is growing in Brazil since 2001 after the creation of the Geological Paths Project by the Rio de Janeiro Geological Survey (Mansur & Silva, 2011) and of the Geological and Palaeontological Sites of Paraná Project by Mineropar (Piekarz & Liccardo, 2006). Both projects promote the development of local communities seeking the territorial education, the geoheritage valuation, and the increase of the economic sector, all based on sustainability principles. Recognizing that it is impossible for communities with low educational standards to achieve a sustainable development, the United Nations have decided to promote the Decade for the Education of Sustainable Development between 2005-2014 (UNESCO Brasil, 2005). Henriques et al. (2011) have underlined the relation between geoconservation and education for sustainable development. The present work in progress in Salvador city (Bahia, NE Brazil) (Figure 1) aims the promotion of geoconservation based on the production of geotourism materials where the association between the natural characteristics of geodiversity and its use in old buildings is well documented. This strategy intends to contribute for the popularization of geosciences amongst general public and students. Presently, there are no initiatives of this kind in Bahia state. During 2004, the state geological survey had implemented some interpretative panels in some geosites. Nevertheless, after some years with no maintenance, no panels were left due to vandalism.

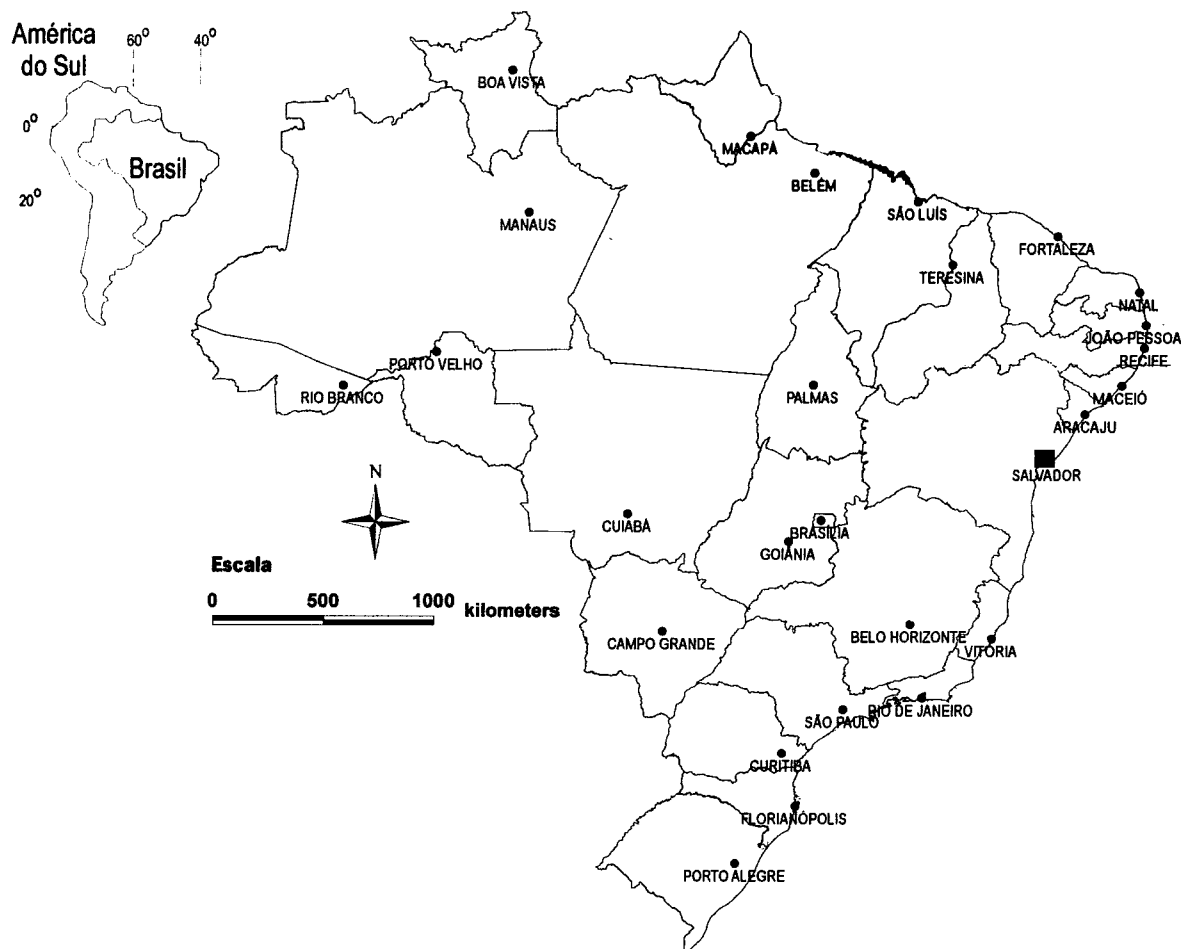


Figure 1. Salvador city location. Source: Adapted from Pereira (2010).

## 2. CASE STUDY – SALVADOR, BAHIA, BRASIL

The city of Salvador with a population of around 2.6 million inhabitants is the capital of Bahia state. It is the fifth Brazilian city with higher number of national and international tourists that seek different types of interests: the architecture of the old city centre, churches and monuments from the 16<sup>th</sup> and 18<sup>th</sup> centuries, the typical gastronomy and the local landscape. In spite of being a city with a high population density, there are still some geosites that can be identified in the area. Together with some geocultural sites, we intend to promote an urban geotourism path in order to provide tourists a better understanding of Salvador's heritage. Urban pedestrian paths are being used all over the world to promote local geology and popularize scientific concepts (for instance: Robinson 1982, Bennett *et al.*, 1996, McCann-Murray 2001, Stern *et al.*, 2006, Licardo *et al.*, 2008, Silva 2009, Caetano *et al.*, 2010, Carvalho 2010, Lamberto & Caetano 2010).

The historical city centre of Salvador assembles the richest architectural asset of colonial baroque of 16<sup>th</sup> and 17<sup>th</sup> centuries of all Latin America, which had justified its inscription in the UNESCO's World Heritage List in 1985. Beside their historical and architectural values, some churches were built with exotic stones from Europe. Pinto *et al.* (2010) made a preliminary inventory of these rocks and have concluded that they can provide a solid basis to develop geoeeducational activities based on a diversity of subjects such as petrography of different rock types (sandstones, limestones, marbles), palaeontology and application of geological materials in our daily life.

Under the geological point of view, Salvador is located on the Salvador-Esplanada belt, part of São Francisco Craton (Barbosa, et al. 2005 apud Souza, 2008) containing three main domains: i) the Recôncavo Sedimentary Basin is constituted by Mesozoic sedimentary rocks and integrates a larger system known as Recôncavo-Tucano-Jatobá bordered in the east by the Salvador fault; ii) the Atlantic Coastal Margin formed by Tertiary and Quaternary sediments (clays and sand) related with climatic changes and sea level fluctuations; iii) the Salvador High which corresponds to a horst of Archaic and Palaeoproterozoic metamorphic rocks dividing the Recôncavo Basin and the Atlantic Ocean.

The identification of geosites in Salvador area in order to complement the geocultural sites is being developed. Amongst the preliminary data, the following geosites can be referred: the Salvador Fault (originating a 74 meters high scarp along 6 km); the Mont Serrat Conglomerate; the Abaeté Lagoons, the Farol da Barra Beach; and the Forte Beach. Amongst the geocultural sites there are the Ordem Terceira de São Francisco Church, the São Francisco Church, the São Salvador Cathedral, Conceição da Praia Church, Nossa Senhora do Carmo Church, São Bento Monastery, and the Geological Museum of Bahia.

### 3. CONCLUDING REMARKS

In conclusion, we believe that the association of geosites with geocultural sites can provide a backbone for an educational strategy to promote geosciences and geoconservation. This association stresses the concept of geodiversity making in evidence its importance for the society.

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