



# 2010 Minerals Yearbook

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## INDIAN OCEAN ISLANDS

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# THE MINERAL INDUSTRIES OF THE INDIAN OCEAN ISLANDS

## COMOROS, MAURITIUS, REUNION, AND SEYCHELLES

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### COMOROS

The Comoros Islands form an archipelago of four islands—Anjouan (Nzwani), Grande Comore (Ngazidja), Mahore (Mayotte), and Moheli (Mwali)—which is located at the northern end of the Mozambique Channel about two-thirds of the way between northern Madagascar and northern Mozambique. The archipelago is the result of volcanic action along a fissure in the seabed running west-northwest to east-southeast. Comoros, which is a former French colony and one of the world's poorest countries, had few transportation links between its islands. Grande Comore is the largest and youngest of the islands (U.S. Department of State, 2010).

The country had few natural resources and did not play a significant role in the world's production or consumption of mineral resources. Mineral production data continued to be unavailable; however, mineral production was presumed to be low because no significant construction projects were reported in 2010. The mineral industry of Comoros continued to produce mineral commodities only in small quantities; in 2010, production was limited to common local building materials, such as clay, crushed stone, gravel, and sand. Comoros was dependent on imports to meet its cement, petroleum, petroleum products, and steel requirements. France was Comoros's major trading partner (U.S. Central Intelligence Agency, 2011).

Gafo Energy NZ Ltd. of New Zealand and Sinclair Knight Merz Pty Ltd. (SKM) of Australia announced that they would form a joint venture to investigate the potential for geothermal energy in Comoros. Gafo stated that it would invest €120 million (\$172 million<sup>1</sup>) in surveying and installing a geothermal project and would contribute its expertise in geothermal development. SKE would carry out the research, survey, and analysis phase of the project, which would entail fieldwork in geology and chemistry and a geophysical survey of three Comoros islands—Anjouan, Grand Comore, and Moheli (Afrol News, 2010).

Little change is expected in the foreseeable future owing to Comoros's very limited amount of mineral resources and a weak infrastructure. Import dependence and deforestation may encourage the continued development of the country's geothermal resources.

### References Cited

Afrol News, 2010, Geothermal energy great potential for Comoros: Afrol News. (Accessed June 3, 2010, at <http://www.afrol.com/articles/36254>.)

<sup>1</sup>Where necessary, values have been converted from European Union euros (€) to U.S. dollars (US\$) at a rate of €1.00=US\$1.43.

U.S. Central Intelligence Agency, 2011, Comoros economy overview 2010: U.S. Central Intelligence Agency. (Accessed May 2, 2011, at <https://www.cia.gov/library/publications/the-world-factbook/>.)  
U.S. Department of State, 2010, Comoros: U.S. Department of State background note. (Accessed May 10, 2010, at <http://www.state.gov/r/pa/ei/bgn/5236.htm>.)

### MAURITIUS

The islands of Mauritius consist of the main island of Mauritius, the smaller island of Rodrigues, and two smaller groups of islands. All the islands are of volcanic origin and are surrounded by coral reefs.

The mineral industry of Mauritius was a negligible factor in its economy. The country has few mineral resources. Historically, mineral output consisted of basalt for construction and 'agro minerals', such as coral sand, lime from coral, and solar-evaporated salt. Quantitative information on mineral production has rarely been available, and when available, has appeared to be inconsistent. All the country's demand for cement, fertilizers, iron and steel, flat-rolled metal products, and petroleum products was met through imports. Data on mineral production are in table 1.

Mauritius developed the Mauritius Freeport Authority as a building block towards becoming a regional distribution center. The Freeport is a duty-free logistics distribution and marketing hub for the region. Warehousing facilities, which are located on a site of 50 hectares of land, were available for the transshipment, consolidation, storage, and minor processing of goods. The total facilities were 180,000 square meters in size. More than 225 companies were licensed to operate in the Freeport, and the Freeport had a total trade volume of 323,200 metric tons per year of goods (Mauritius Freeport Portal, 2010b).

One of the advantages that the Mauritian economy derived from the Freeport was more trade between Mauritius and neighboring countries. Mauritius was already benefiting from trade agreements, such as the Cotonou Agreement, the Generalized System of Preferences, and the African Growth and Opportunity Act, which provide preferential access for goods of Mauritian origin to the European Union and the United States. Mauritius also offers preferential access to the 425-million-consumer market of Eastern and Southern Africa through its membership in the Common Market for Eastern and Southern Africa, and the Southern African Development Community (Mauritius Freeport Portal, 2010a).

Fuel oil was the main source of energy used for electricity generation in Mauritius; however, the use of bagasse (biomass), which is the fibrous matter that remains after sugar cane is

crushed, was expected to increase. Bagasse has the advantage of being carbon neutral and it is readily available during one-half of the year (Trade Chakra, 2010b).

Solar and wind are the renewable energy resources that can benefit most from economies of scale, and they are the best suited to the climatic conditions of Mauritius. The potential for solar (thermal and photovoltaic) and wind energy, however, had not been evaluated as of yearend 2010 (Trade Chakra, 2010a).

The likelihood that Mauritius will explore for minerals other than construction materials is negligible. The mining of coral is likely to decrease owing to environmental concerns.

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- Mauritius Freeport Portal, 2010b, The Mauritius Freeport: Mauritius Freeport Portal. (Accessed May 17, 2011, at <http://www.efreeport.com/default.aspx>.)
- Trade Chakra, 2010a, Industrial policy of Mauritius: Trade Chakra. (Accessed May 17, 2011, at <http://www.tradechakra.com/economy/mautitius/renewable-resources-in-mauritius-329.php>.)
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## REUNION

Reunion is a volcanic island located in the Indian Ocean about 200 kilometers southwest of Mauritius. Administratively, it is one of the overseas Departments of France and, as such, is part of the eurozone.

Piton de la Fournaise (Furnace Peak), which is situated in the southeast corner of the island, is one of the world's most active volcanoes. It erupted for the first time about 50,000 years ago, and records note that this basaltic shield volcano has erupted about 180 times since eruptions first began being recorded in 1640. The most recent eruption took place in 2004. Piton de la Fournaise has been monitored by scientists and Government surveillance facilities since 1980 (Reunionisland.net, 2010).

Mineral commodity production represented only a small part of the economy of Reunion in 2010, as in previous years, although little quantitative information on mineral production was available. Aggregates, cement, and seacoast coral production continued to meet local consumption needs. Reunion had no identified resources of coal or petroleum; mineral fuels and petroleum products were imported. Little change in future mineral activity is anticipated.

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- Reunionisland.net, 2010, Piton de la Fournaise: Reunionisland.net. (Accessed May 17, 2011, at <http://www.reunionisland.net/Piton-de-la-Fournaise.aspx>.)

## SEYCHELLES

The Seychelles archipelago, which comprises 74 coralline islands and the Mahe group of 41 granitic islands, lies in the western part of the Indian Ocean and was part of a former microcontinent. The coralline group is, for the most part, only a little above sea level.

Seychelles has very limited mineral resources and was not a globally significant mineral producer or consumer. Mining was limited mainly to granite quarrying and salt pans. Mineral production consisted of mostly unspecified quantities of such construction materials as clay, coral, sand, and stone. There was the occasional mining of small quantities of an organic phosphate fertilizer (bird guano) that was not reported by the Government. Seychelles had no identified sources of coal, natural gas, or petroleum. As there is no petroleum refinery, petroleum refinery products must be imported to meet the country's requirements (U.S. Central Intelligence Agency, 2010).

Although multinational companies have explored the waters around the islands off and on for several years, no natural gas or petroleum had been found as of yearend 2010. Seychelles Petroleum Co. (Sepec) announced that the largest seabed survey ever carried out on Seychelles would begin by the last quarter of 2010 to identify the offshore areas with the best prospects for drilling for petroleum in the country's exclusive economic zone (EEZ). The agreement for the survey was signed by Sepec, Fugro Data Service AG (a Switzerland-based company that provided technical services in geosciences), and Geomahakarsa Ltd. (a Hong Kong-registered company that specialized in seismic data acquisition and geophysical surveys). Sepec indicated that all the data acquired would be available for licensing to gas and oil companies interested in exploring for hydrocarbons in Seychelles' EEZ (SeychellesNation.sc, 2010). The Government is expected to continue to promote the petroleum potential of the entire Seychelles region.

## References Cited

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- U.S. Central Intelligence Agency, 2010, Seychelles, *in* The world factbook: U.S. Central Intelligence Agency. (Accessed July 24, 2011, at <https://www.cia.gov/library/publications/the-world-factbook/>.)

TABLE 1  
MAURITIUS, REUNION, AND SEYCHELLES: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons)

Country and commodity	2006	2007	2008	2009	2010 <sup>e</sup>
<b>MAURITIUS<sup>2</sup></b>					
Cement <sup>3</sup>	717,000	616,000	811,000	620,000 <sup>e</sup>	620,000
Fertilizers <sup>3</sup>	55,313	45,336	46,677	57,160 <sup>r</sup>	58,000
Salt, marine	7,408	6,650	5,042 <sup>r</sup>	2,301 <sup>r</sup>	2,400
Sand	91,422	66,850	102,972	87,506 <sup>r</sup>	88,000
Steel, rebar <sup>3</sup>	65,000	80,000	69,000	56,000 <sup>e</sup>	58,000
<b>REUNION<sup>e, 4</sup></b>					
Aggregates	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000
Cement	400,000	400,000	400,000	400,000	400,000
<b>SEYCHELLES</b>					
Aggregates	117,794	128,014	130,000	130,000 <sup>e</sup>	130,000
Dimension stone, granite	141	149	150	150 <sup>e</sup>	150
Gravel and crushed stone	142,584	135,888	140,000	140,000 <sup>e</sup>	140,000
Sand <sup>e</sup>	8,100	8,100	8,100	8,100 <sup>e</sup>	8,100

<sup>e</sup>Estimated; estimated data are rounded to no more than three significant digits. <sup>r</sup>Revised.

<sup>1</sup>Table includes data available through April 30, 2011.

<sup>2</sup>In addition to the commodities listed, asphalt, basalt, and lime are also known to be produced in Mauritius, but information is inadequate to make reliable estimates of output.

<sup>3</sup>Imports

<sup>4</sup>In addition to the commodities listed, coral and volcanic rock are also known to be produced in Reunion, but information is inadequate to make reliable estimates of output.

TABLE 2  
MAURITIUS, REUNION, AND SEYCHELLES: STRUCTURE OF THE MINERAL INDUSTRIES IN 2010

(Metric tons)

Country and commodity	Major operating companies	Location of main facilities	Annual capacity
<b>MAURITIUS</b>			
Aggregates	United Basalt Products Ltd.	La Mecque	660,000 <sup>e</sup>
Do.	Gamma Civic Ltd.	Beau Bassin and Solitude	NA
Fertilizers	Mauritius Chemical and Fertilizer Industry Ltd.	Port Louis	100,000
Salt	Mont Calme Ltd.	Tamarin	NA
Steel, rebar	Samlo Koyenco Steel Company Ltd.	Midlands	12,000 <sup>e</sup>
<b>REUNION</b>			
Aggregates	Holcim (Reunion) S.A.	Bras Panon and Saint-Joseph	1,300,000 <sup>e</sup>
Cement	do.	Le Port	400,000
<b>SEYCHELLES</b>			
Granite	Gondwana Granite Ltd.	Victoria	NA
Gravel and crushed stone	United Concrete Products (Seychelles) Ltd.	Anse des Genets	150,000 <sup>e</sup>
Do.	Civil Construction Company Ltd.	Brilliant	97,000 <sup>e</sup>

<sup>e</sup>Estimated. Do., do. Ditto. NA Not available.