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**The Mineral Sector of Suriname:
Employment Creation and Capacity Building**

by

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The views expressed are those of the author and do not necessarily reflect the views of
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The Mineral Sector of Suriname: **EMPLOYMENT CREATION AND CAPACITY BUILDING**

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**Geneva, Switzerland
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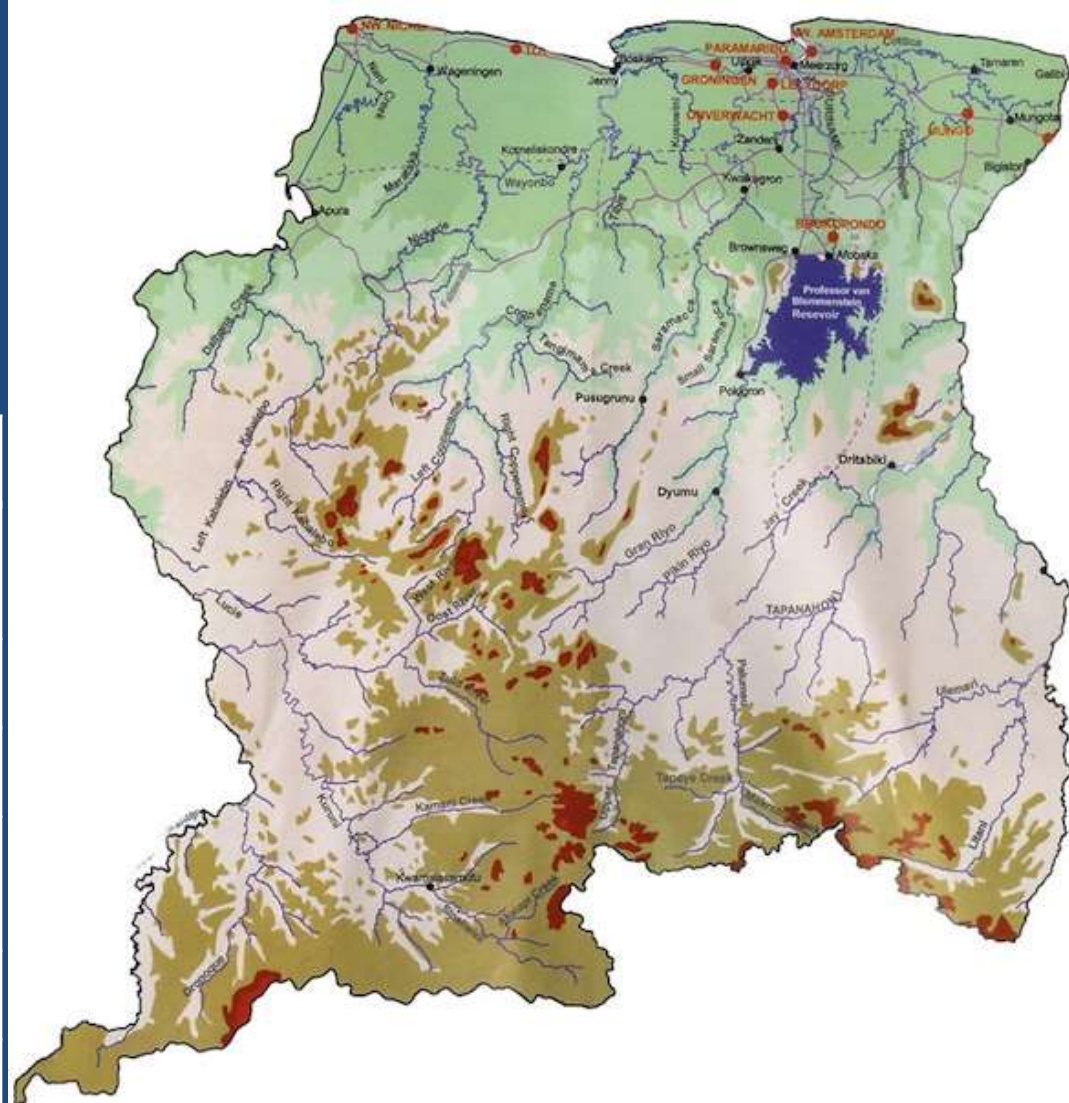
Outline

1. Suriname at a glance
2. The mineral sector & commodities
3. Employment
4. Capacity building
5. Options for employment creation
6. Options for capacity building
7. Growth
8. Sustainable development

1. Suriname at a glance

BASIC INFORMATION

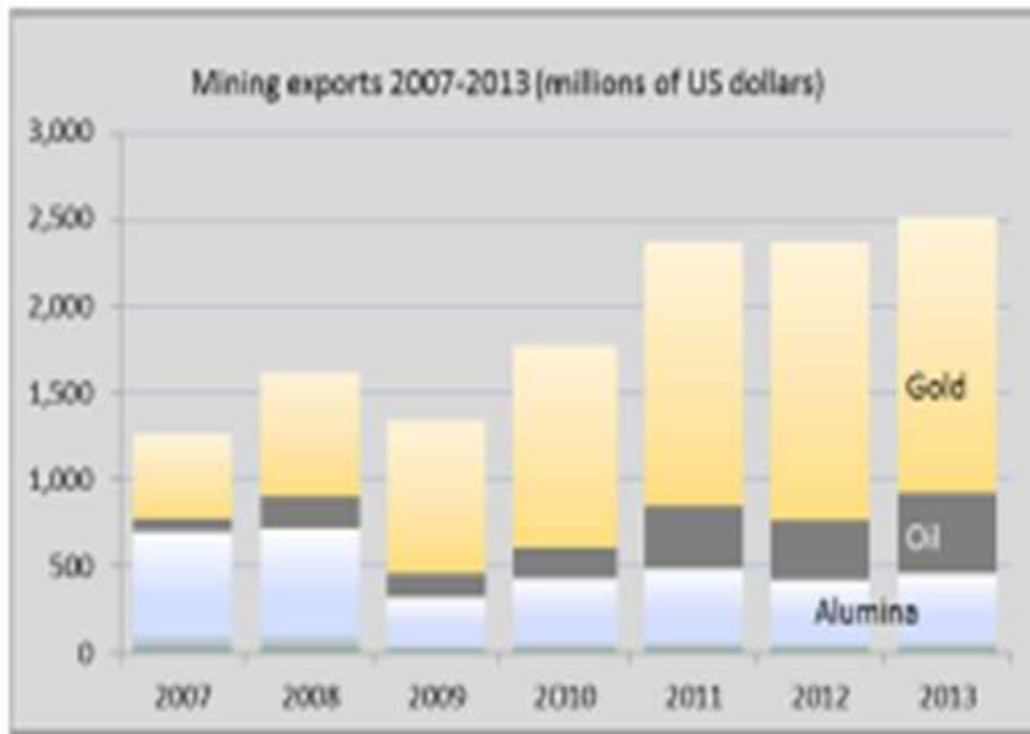
Area :	163,270 km ²
Population:	534,189
Language	Dutch + 10 more
Political system	Parliamentary/ Presidential
Literacy	90%
Per capita income	US\$ 9,100
Economy	Oil, gold, bauxite, agriculture, forestry
Power production	180 MW (100 MW hydropower)



2. The Mineral Sector & Commodities

- Hydrocarbons
- Gold
- Bauxite
- Building materials
- Kaolin
- Granite (under development)
- Educational institution
- Training Institutions

Overview Exports



- **Gold exports**

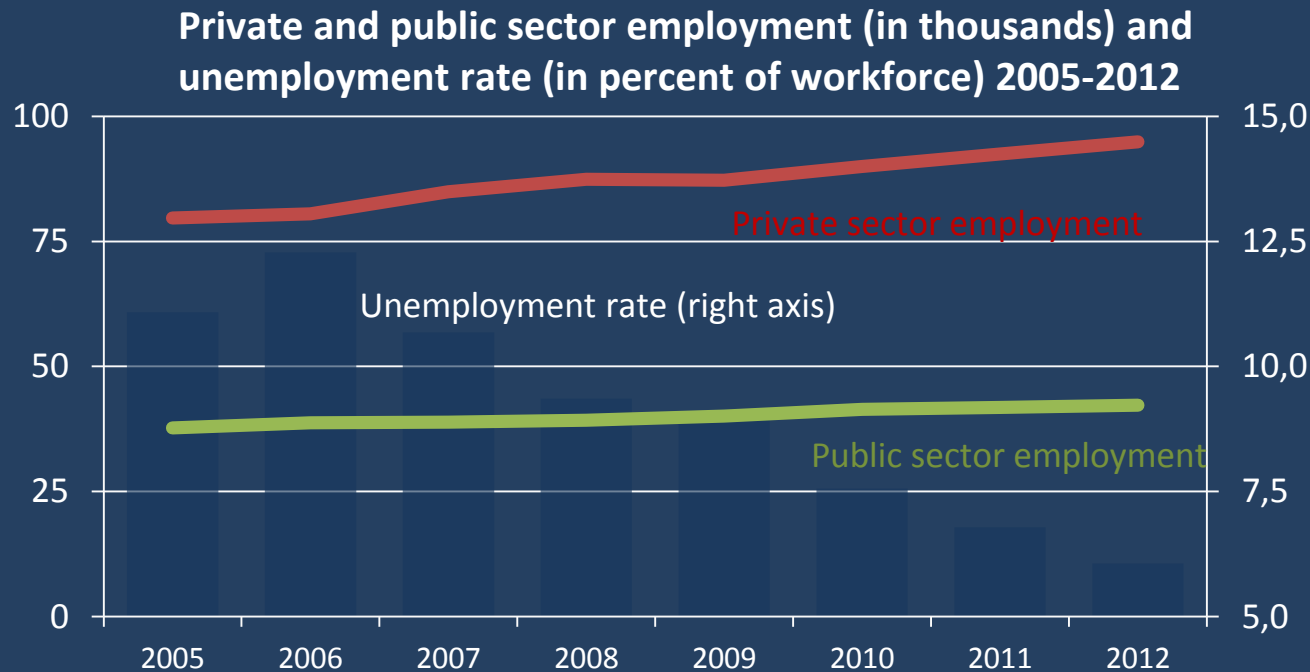
performed well in 2013 due to the high gold prices. Currently the gold price is declining which means a decline in the government's take in royalties for the year 2014

- **Staatsolie's exports and payments to the government** grew only marginally in 2012.

- **Alumina** continues to perform poorly, reflecting poor conditions in the world aluminum markets.

3. Employment

- Growth in recent years has been driven by private sector growth.
- Public sector employment has grown only moderately.
- Unemployment rate below industrialized country levels.



3. Employment/4. Capacity building

SECTOR	EMPLOYMENT	EDUCATION/TRAINING NEEDS
Hydrocarbons	1000 (1700 indirect)	University geologist & engineering, mid- and lower-level technical skills
Gold (large-scale mining)	lamgold 1200 direct, 2000 indirect (Newmont/Surgold will double this figure)	University geologist & engineering, mid- and lower-level technical skills
Gold (small-scale mining)	15,000 direct & 25,000 indirect	Small/medium enterprise management, mid- and lower-level technical skills
Bauxite	700 direct & 600 contractors	Alternative employment for about 1 thousand employees & contractors
Building materials	1000 direct and 1000 indirect	Small/medium enterprise management, mid- and lower-level technical skills
Kaolin & granite	50 & 50 indirect	University geologist & engineering, mid- and lower-level technical skills
Education/training	Tertiary 500 and Senior & junior secondary 1000	Upgrading of teaching and technical skills – advanced degrees (Ph.D.)

5/6. Options for Employment Creation & Capacity Development

SECTOR	NEW JOB OPPORTUNITIES	ACTION ITEMS
Hydrocarbons	Expanded refinery comes on line	Gasoline/diesel units added, highly skilled managers/workers needed to manage more complex plant
Hydrocarbons	Potential for off-shore discovery is high	Total transformation of sector, highly skilled policy makers, technical managers, finance managers & highly skilled workers (new off-shore industry)
Gold (large-scale mining)	Iamgold expansion and new Newmont/Surgold plant & other prospects	Highly skilled policy makers, technical managers, finance managers & highly skilled workers
Gold (small-scale mining)	Thousands of job opportunities for more sustainable mining operations	Total transformation of the sub-sector, highly skilled policy makers, technical managers, finance managers & skilled workers for mercury free mining
Other	Bauxite sector needs revival, kaolin & granite have growth potential	Aggressive revival policy & strategy, incentives to develop sectors; high level policy & investment skills training ⁸

7. Growth

- Macro-economic indicators per sector



Hydrocarbons
(State Oil Company's
Refinery)



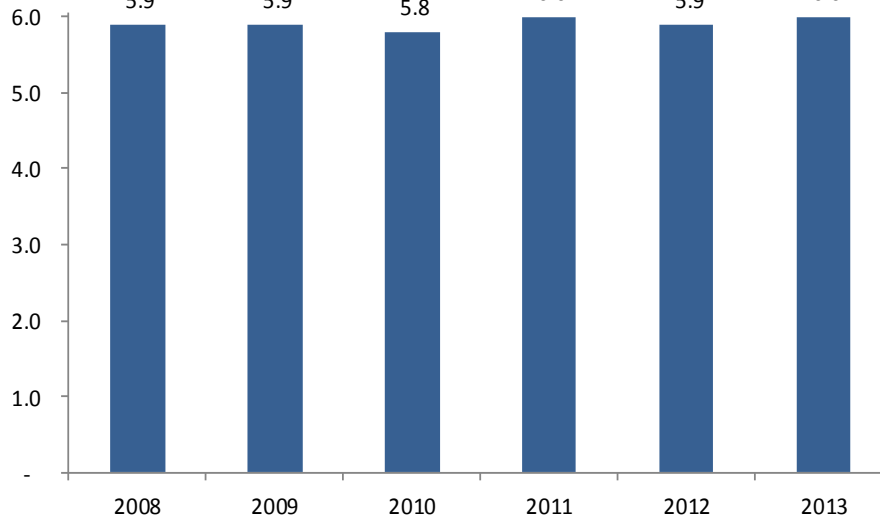
Gold (e.g. small scale
mining)



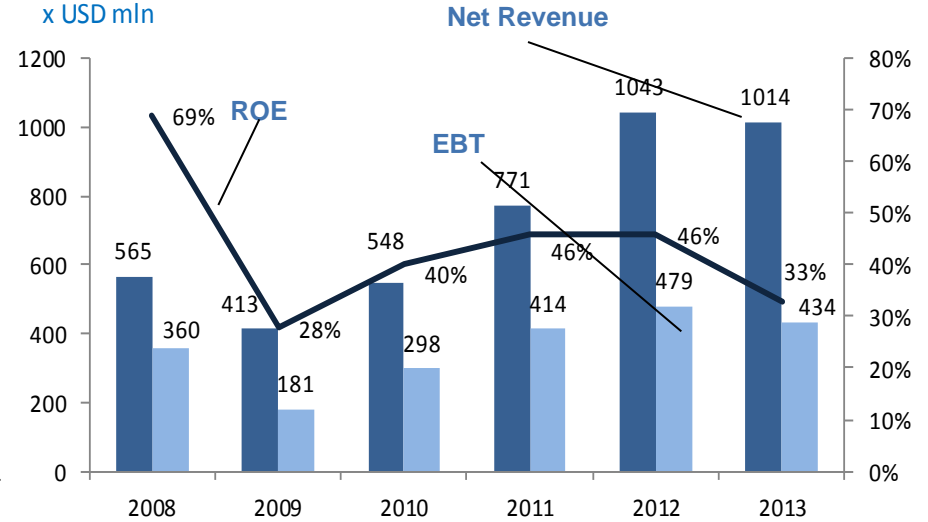
Bauxite (Suralco (Alcoa) Mine
Operations)

Staatsolie has continued to perform strongly on both operational as well as financial dimensions

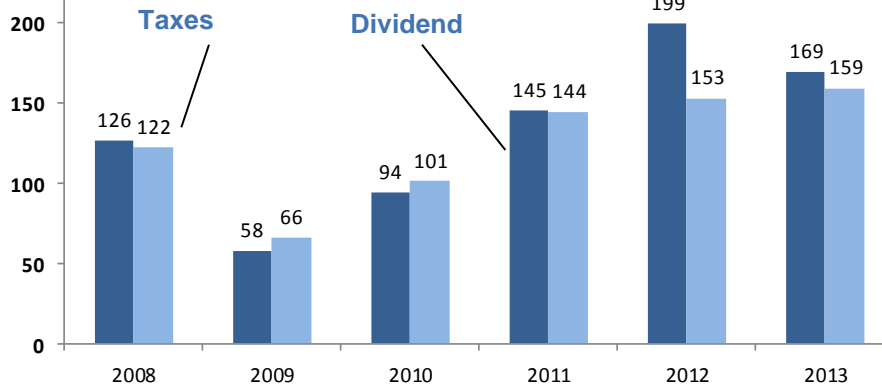
Annual crude production sustained
x 1 MMBBLS



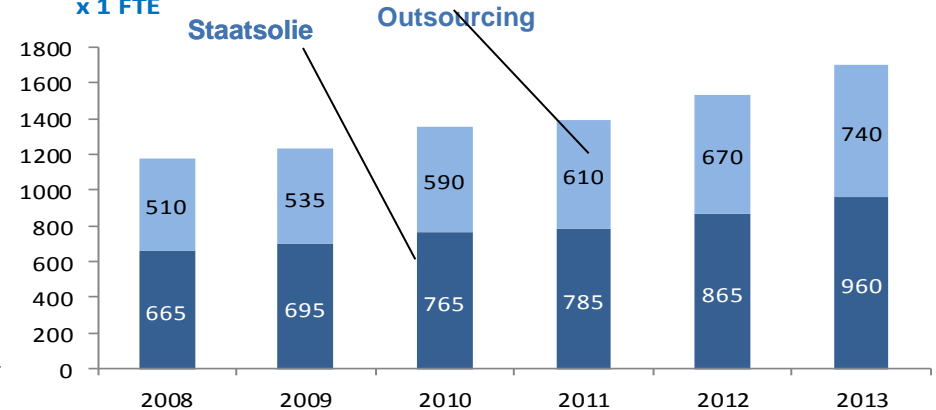
Financial Performance has continued to impress
x USD mln



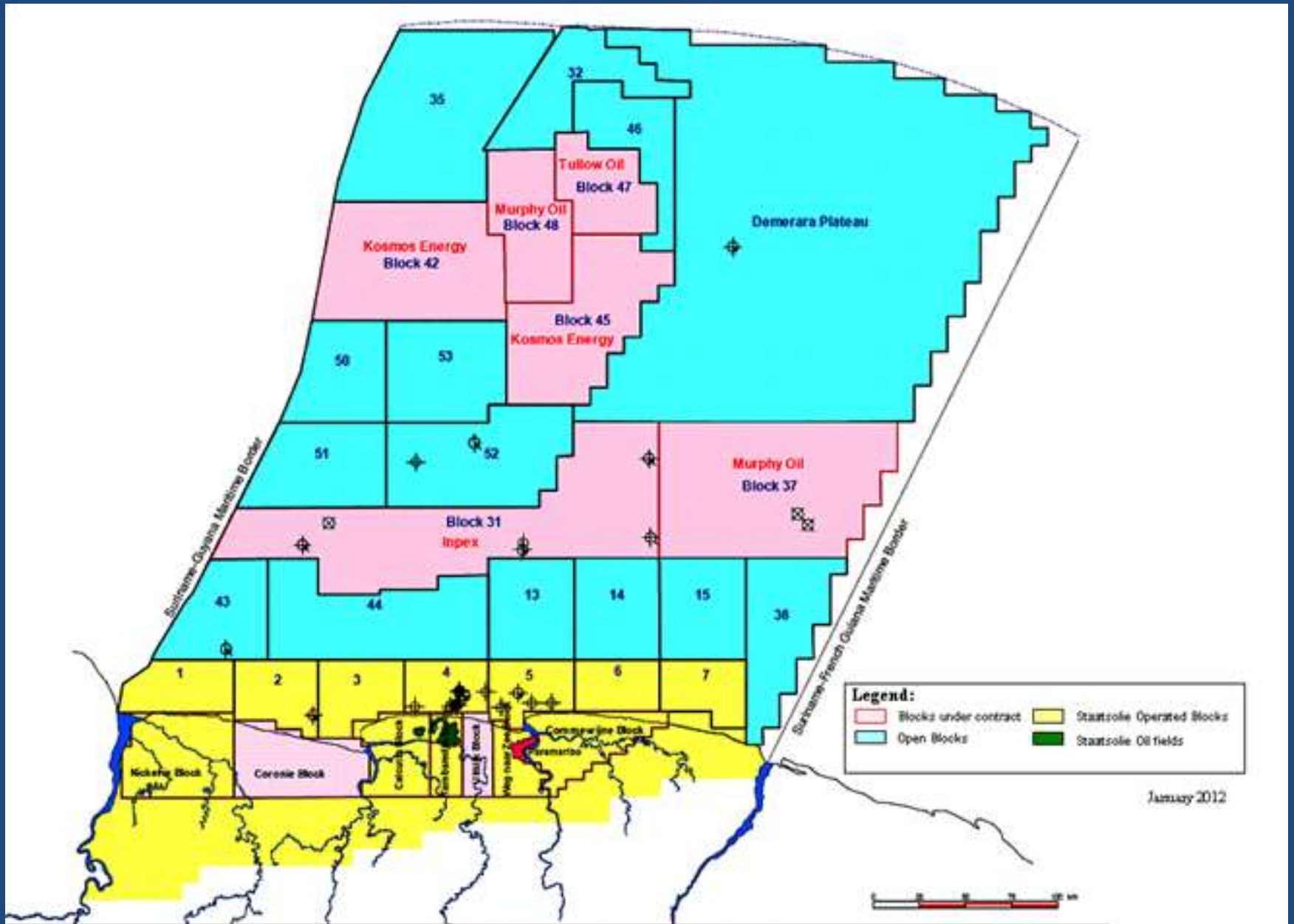
Contribution to the State has been significant
x USD mln



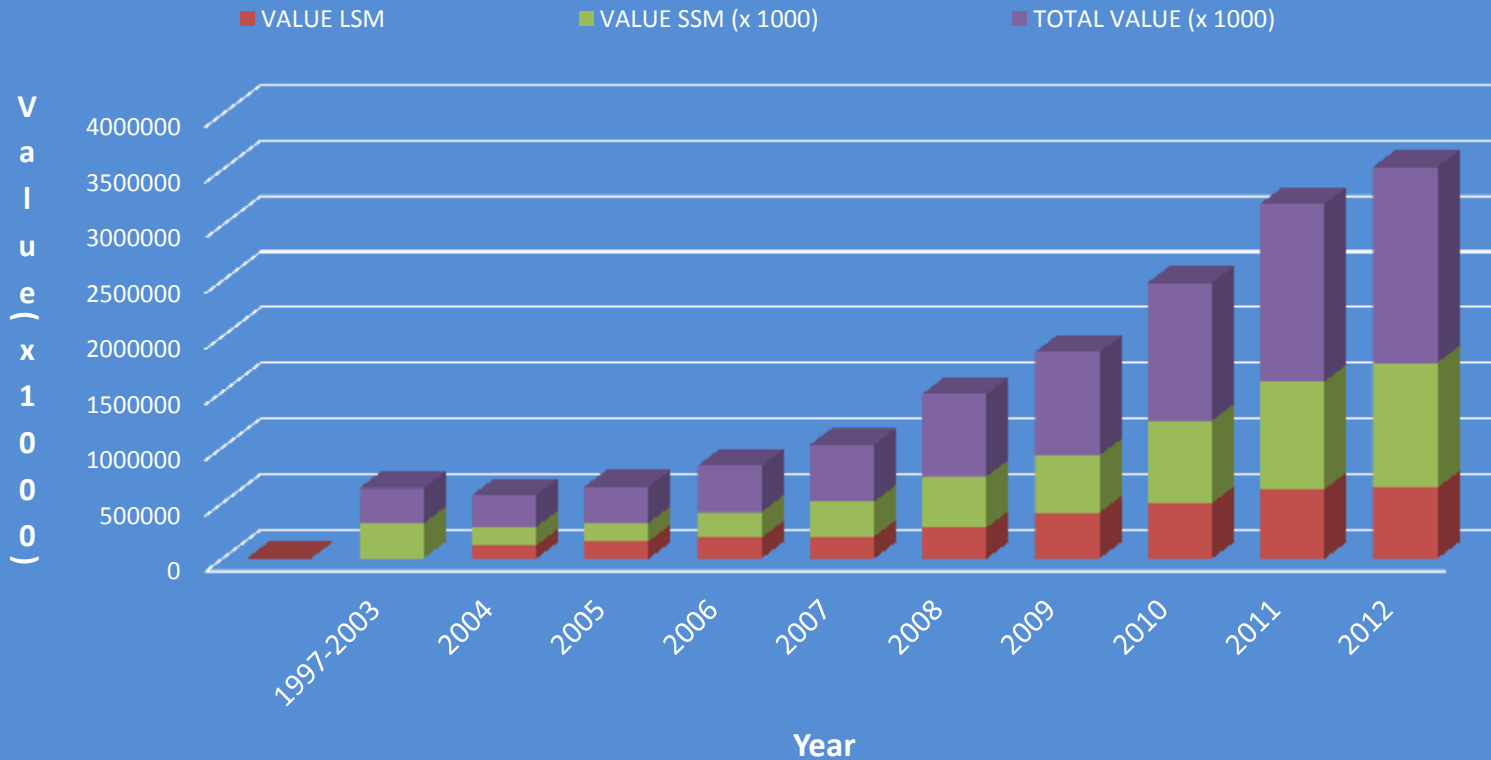
Creating increased opportunities for employment
x 1 FTE



Suriname's offshore acreage divided into blocks



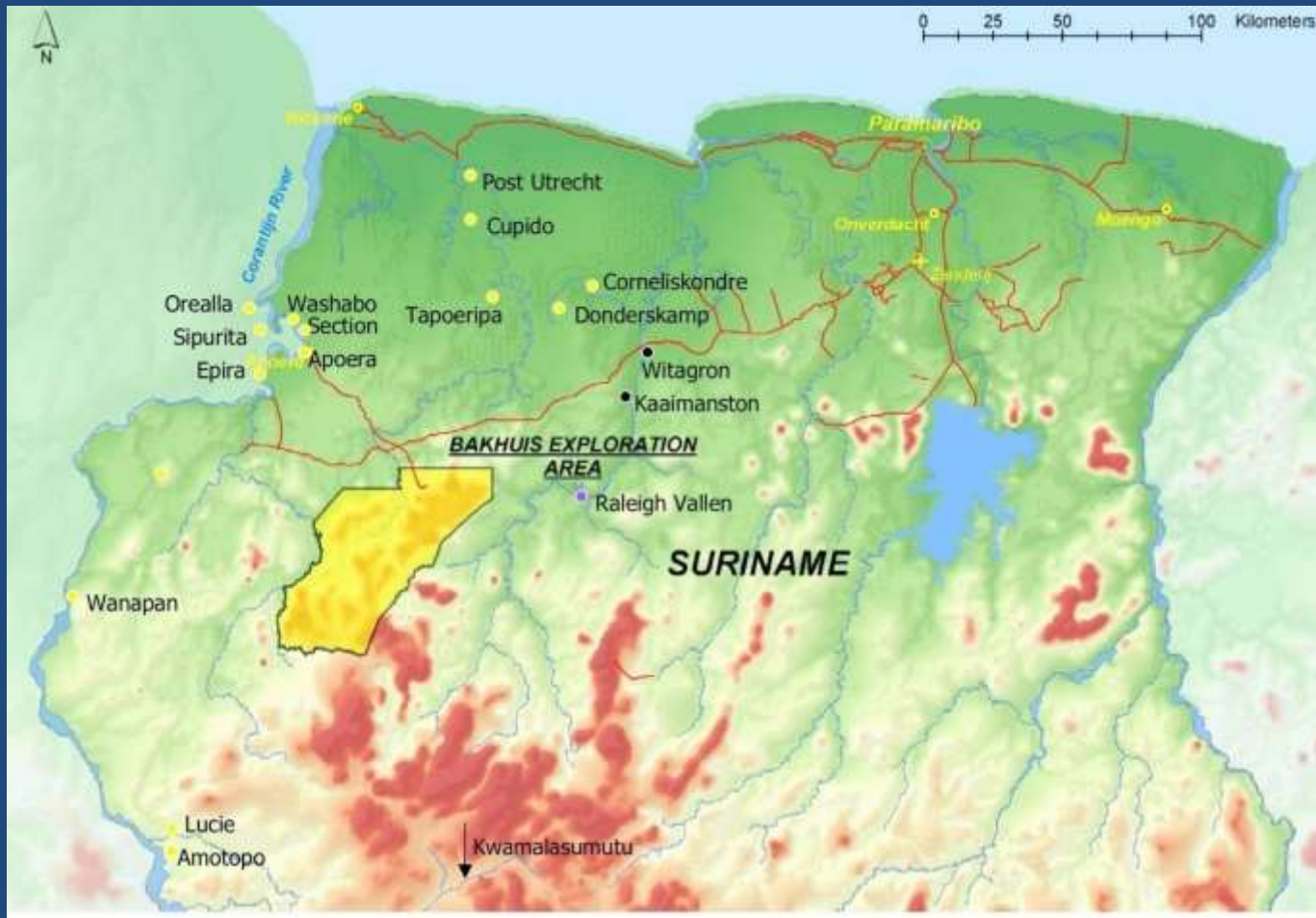
GOLD PURCHASING AND PRODUCTION IN SURINAME (Estimates based on LSM production and SSM purchasing figures)



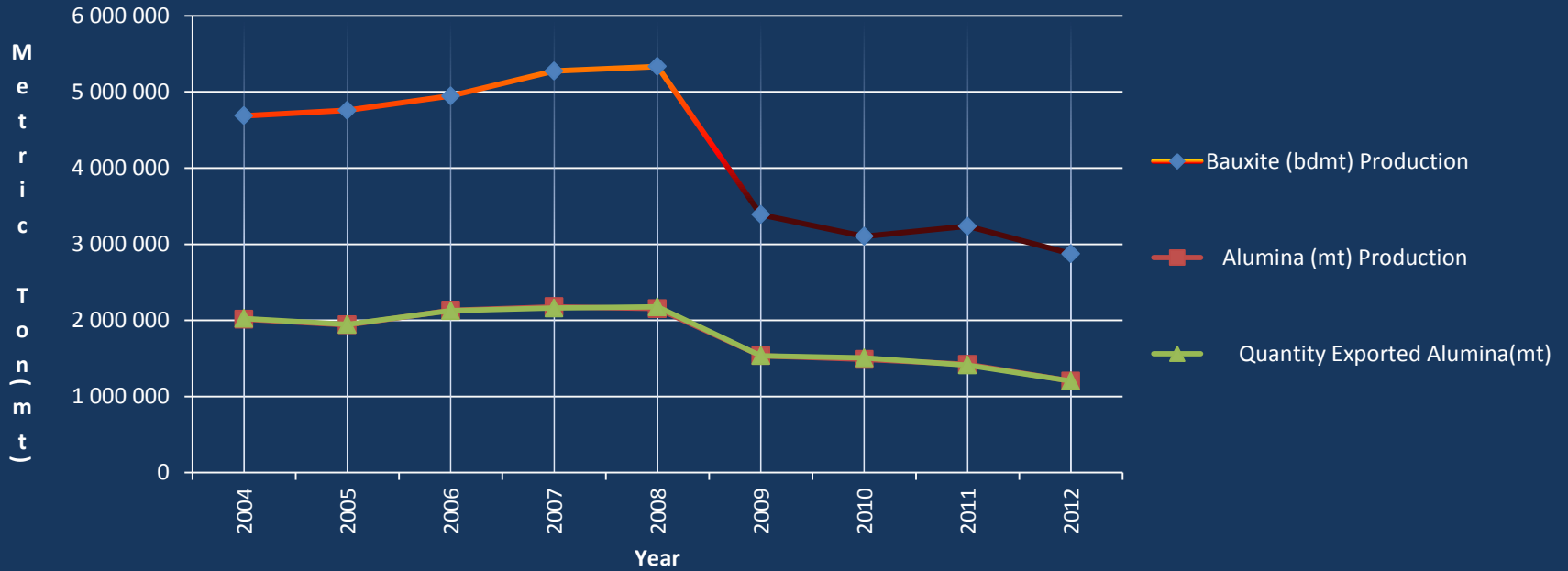
Not all SSM gold purchased by licensed gold buyers was produced in Suriname.

Rosebel Goldmines (Iam gold) started production in 2004

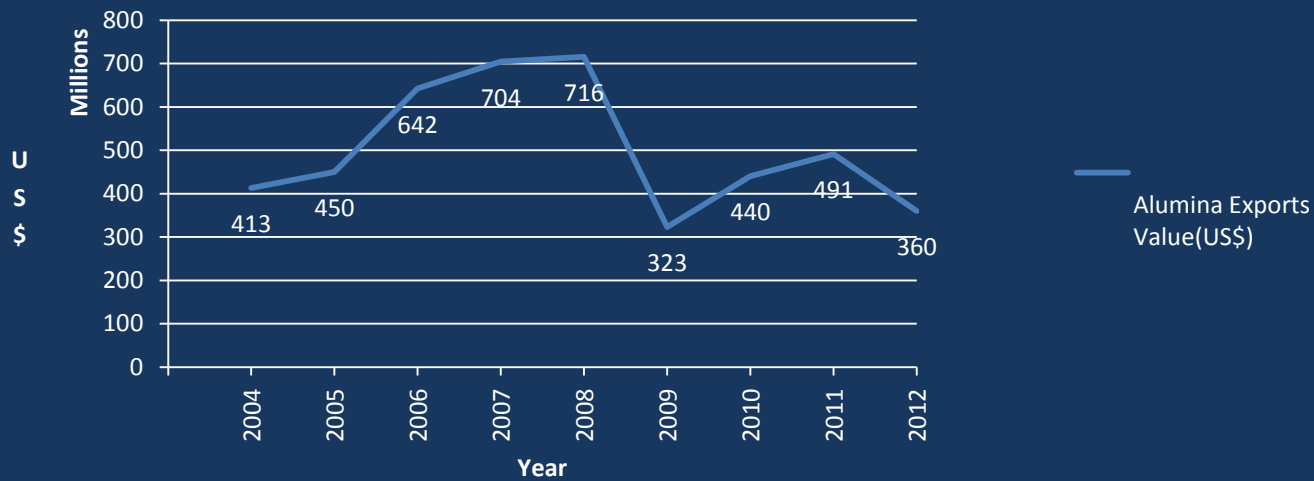
Bauxite



Overview of Bauxite & Alumina



Alumina Exports Value (US\$)



8. Sustainable Development

- Sovereign fund
- New mining law
- Environmental law
- NIMOS, National Environmental Foundation, should become a much stronger agency
- Mining Agency urgently needed
- Improved fiscal regime
- Tribal issues need to be resolved (chieftain and land rights)
- Migrant workers issues need to be managed
- Education and training – aggressive policy and actions

• SOVEREIGN WEALTH FUND (SSSF)

➤ In the future, the Government will only budget a partial and stable portion of all mining revenue.

All other revenue - with all its volatility – will be deposited into the SSSF;

➤ The SSSF law and its management and governance structures are being put in place.

- **New Mining Law:**

- Renewal of the outdated Mining Law of 1986 based upon the current and future developments in the Mining Sector.

- **Environmental Law:**

- It has been submitted to the National Assembly for approval;
- For the time being the International Standards of the World Bank are being used as guidelines;
- Suriname has signed several International Conventions regarding the environment.

- **Mining Agency:**

- Suriname is in the process of transforming the Geological and Mining Services, Bauxite Institute and the Commission of Regulating the Gold Sector into a Minerals Institute.

- **Improved Fiscal Regime:**

- Create attractive investment climate for domestic and foreign private investors for both small and large scale mining projects.

- **Tribal Issues:**

- The government is looking at ways to establish land right issues and
- to establish an economical zone (mining, forestry, hunting, agriculture) for the different tribes.

- **Migrant Workers Issues:**

- Addressing issues regarding the migrant workers in the Small Scale Gold mining Sector.

- **Education and Training:**

- Cooperation between SURMAC and NATIN for training teachers, alumna and students in heavy machinery;
- Polytechnic College is also working closely with local companies in providing special practical courses depending on their request.



Simplified Regional Geology of Onshore Suriname



Legend

Holocene

- Clay, sands & shells
- Clayey sands & sands

Tertiary

- Coarse to fine white sands

Permo-Triassic

- Quartzite, gneiss, schist, amphibolite
- Olivine and hypersthene dolerites
- Quartz-arenite & conglomerate

Lower Proterozoic

- Biotite Granites
- Pyroxene Granites
- Meta rhyolites
- Metagabbronorite, meta ultramafite
- Meta arenite, meta volcanic, meta conglomerite
- Meta graywacke, meta volcanic, phyllite
- Meta basalts, amphibolite
- Migmatitic gneiss & amphibolite

Ancient

- Chamockitic granulite

Suriname
“A Way Forward”
Thank you!!

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