

Mozambican System of National Accounts

**Natural Resources, Environment,
and Sustainable Growth in Mozambique**

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SUMMARY

Context

Conceptual Reference

Data sources

Compilation Process

The case of mineral resources (satellite account)

System of National Accounts, SNA

- It is a coherent, consistent and integrated set of tables based on concepts, definitions and classifications and accounting rules internationally accepted
- Provides a complete and detailed record of all economic activities (industries) and its relations among economic agents
- The National Institute of statistics, INE, produces and publishes the national accounts of Mozambique. The methodology and the conceptual framework for compiling NA follow the recommendations of the 1993 United Nations system of National accounts SNA93

Compilation System Sequence

The compilation system on National Accounts starts with an identification of data sources.

The data must be:

- Analyzed
- Grouped
- Adapted and/or extrapolated

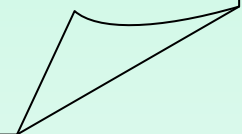
Statistical data sources

- External sources:

Ministeries of Finance, Agriculture, Fishing, Education, Culture, Health, Mineral Resources, Labor, Central Bank, and other administrative records.

- Internal sources:

Household budget surveys, Annual enterprise surveys, external trade statistics, Consumer Prices Index, among others.



Classifications

- The definition of structure is a key element in NA, because they determine the contents of the different categories in order to constitute the Accounting Systems.
- The classifications used by 93SNA are regarded to three domains:
 - products, economic activities and institutional sectors

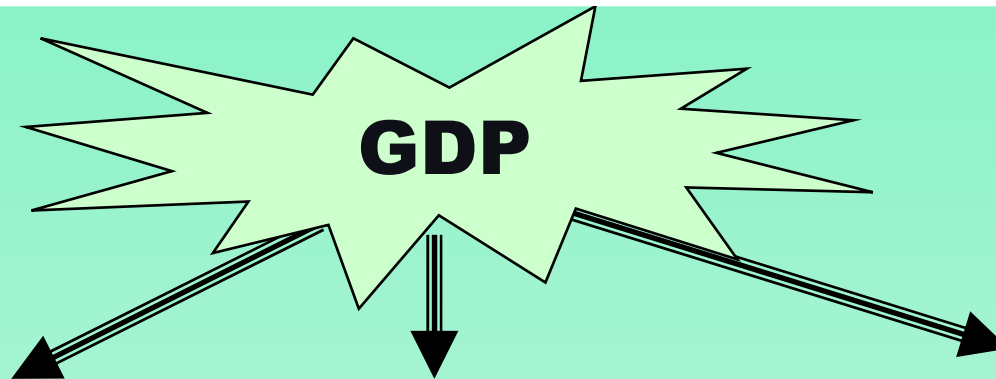
Classifications

NA has:

151 products, according to CPC

43 economics activities, according to ISIC REV4

Institutional sectors classification (5+1)



GDP

PRODUCTION

(+) P1 Production
 (-) P2 Intermediate consumption, including FISIM

=

B1b GVA

(+) D21-D31 Taxes less subsidies on products

=

B1*b GDP

EXPEDITURE:

(+) P3/P4 Final Consumption
 (+) P5 GFC:
 (+) P51 GFFC
 (+) P52 SV
 (+) P6 Export G&S
 (-) P7 Imports G&S

=

B1*b GDP

REVENUE:

(+) D1 Remunerations
 (+) D2-D3 Taxes less subsidies on products and production
 (+) B2b/B3b Operating surplus/Mixed income

=

B1*b GDP

Production Concepts and its production boundaries

- In the SNA production is classified as a physical process realized under responsibility control and management of an institutional unit, which capital and labour are used to transform intermediate goods and services to produce other good and services.
- All produced goods and services can either be sold, changed or self consumed.

Production Concepts and its production boundaries

- Some natural processes can or can not be considered as a production depending on the circumstances.
- The necessary condition of an activity to be considered as productive, is that it must be taken under control and responsibility of some institutional units that has some rights on what is being produced.

Production Concepts and its production boundaries

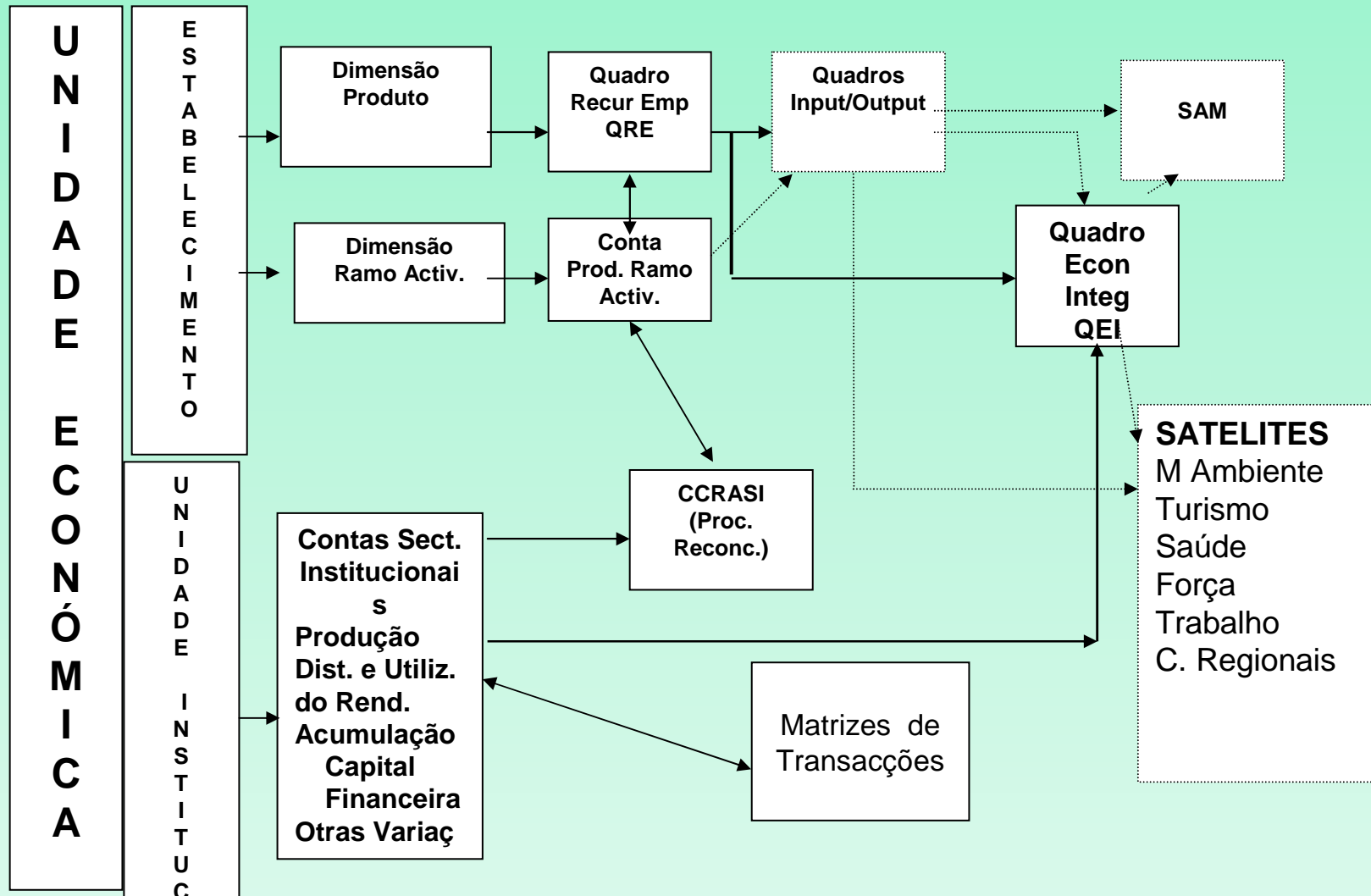
- For example:
 - The natural growth of fishes in the ocean is not considered as production, because the process is not generated by any institutional units.
- On the other side, the growth of the fishes in the container is considered as production.

Production Concepts and its production boundaries

Measuring agriculture forest and fishing according to SNA is difficult because the production process can occur during many months even years.

The growth of trees for production of wood and other cultures, fishing species and cattle for eating purposes must be treated as working in process production, i.e., as production that is not sufficiently transformed to be a proper way to be traded.

Compilation Process



Advantage and Limitations of SNA

- The SNA Central Framework presents a set of characteristics that gives it some advantage of an integrated accounting structure.
- It is an exhaustive and consistent framework of economics activities that is each unit, operation, product, and function has one and only one place in the classification. Besides, the adopted concept by the system are total coerents among themselves.

Advantage and Limitations of SNA

- This framework has some limitations regarding to information that can be directly incorporated. The framework can be used on a flexible way in other to give more or less stress on a particular aspects.
- The authorised margins in to the system does not allow the simultaneous use of contradictory methods.

Compilation Processes

- The system doesn't assume as unique the concept and categories that it contains.
- Additional or different requirements require the development of complementary concepts and categories, which is the case of satellite accounts

Some parts taken from international handbooks about the link between SNA and environment

The inclusion of environment and natural capital to the conventional system can be done through the satellite national accounts for environment.

Regarding to forests, SNA treats the growned different from ungrowned (natural):

1. For the grown forests, SNA records both production and changes in the forests stock
2. For the ungrowned forests, SNA only records the revenue coming from the cut of the trees and not the change of the stock (its benefits are not recorded).

The comum and important issue is that both of them provide mercantile and non mercantile goods and services which sometimes are not recorded in NA

Satellite Accounts Advantage

- To enlarge the coverage of cost and benefits of analyzes of human activities on mineral resources - depreciation of capital, cost of using environmental expenditures and the net environmental benefit used to adjust the GVA
- To associate accounting in monetary and physical terms – appreciation / depreciation of natural capital in quantities and values
- To use alternatives concepts and classifications to the framework of SNA

Satellite Accounts Advantage

- The satellite studies are to effectively responde two main problems in classic NA:
 - Non consideration of scarces mineral resources, which inhibits the maintainance of economic productivity
 - Degradation of environmental quality and consequentely its effect on health and human well being.

Compilation Process: Mineral resources

- The central framework of SNA recommends the calculation of GVA of economics activities by doing the difference between gross production and intermediate consumption.
- GVA is distributed between remuneration of employees and operating surplus.
- For the mineral resources case the surplus of mineral extraction is equivalent to the difference between the sales value of mineral and the costs incurred into the extraction, it ignores the value of resources (the availability of mineral resources is reduced due to its extraction).



Compilation Process: Mineral resources

- The extraction of a mineral implies a reduction in the stock (depreciation of non produced assets).
- The monetary value of this loss is contained on the owners revenue. The economic value of this loss should be taken out from the operating surplus.
- Once it ignores the value of extracted mineral resources is also not considered the depreciation of the environmental patrimony.

Compilation Process: Mineral resources

- The central framework methodology includes the estimate of degradation value of produced capital stock of an economy.
- This degradation value – fixed capital consumption– is either deducted in GDP or GVA to obtain net aggregate.
- Meanwhile it doesn't estimate the depreciation value of non produced natural assets in the economy, which is the case of mineral resources.

SNA and its Extention to Environmental Accounts

- The environmental accounting is based on the extention of cost concepts namely:
 - Imputed cost by the degradation and the end, and real costs incured as expenditures on environment protection

Additional indicators for the satellites National Accounts of mineral resources

• Defensive Expenditures

- This suggests that are excluded from the final demand all the costs incurred by the economy to fight against pollution or degradation coming from the use of mineral resources
- Defensive Expenditure are expenditures that effectively were incurred to preserve environmental degradation. They are expenditures already realized and must be reclassified. The result would be adjustment in to GVA

Additional indicators for the satellites National Accounts of mineral resources

- The objective of defensive expenditures is to avoid that the activities coming from environmental degradation, such as the instalation of anti-polluent equipment are seen as an add to national wealth
- Environmental expedintures refers to the amount that the country should pay to avoid degradation by maintaining intact the environment

Additional indicators for the satellites National Accounts of mineral resources

Depreciation of natural capital

- The reduction of reserves are seen as the depreciation of natural capital, if there is an addition of reserves it is considered appreciation of natural capital.
- The difference between the inicial stock and the end stock implies loss or gain in patrimoy

Cost of Use

- The mineral resources are assets that provide revenue while the extraction lasts. As soon as it comes to the end is considered a loss in the asset and can be compesated if the obtained revenue is directed to acquisition of new assets.

Satellite Account for Mineral Resources Structure

(Assets Depreciation-Assets Appreciation)

	Physical Accounts	Monetary Accounts
Inicial stock (reserves)	X	X
Change in reserves	X	X
- Extraction	X	X
+New discoveries	X	X
+Other volume changes	X	X
Revaluation (Only for monetary accounts)		X
Final stock	X	X

Available and relevant indicators in Mozambican SNA

- Extraction (production)
- GVA
- Exports; Imports
- Occupied Personal; Remunerations
- Taxes on products e imports
- Subsidies
- Consumption of fixed capital
- Operation surplus – Mixed income

Indicators for satellites accounts on mineral resources

- Stocks of mineral reserves
- Assets of final stocks
- Gains/losses of non produced assets
- Other assets variation of non produced assets
- Depreciation of natural capital

Conclusions

- 1. The SNA includes into production boundaries all the production addressed to the market, for sale, barter or self-consumption
- 2. The Satellite NA includes production and quantifies intangible assets
- 3. The satellite NA is an extension of central framework and both are complementaries

Conclusions

- 4. The National Statistical Institute ,INE, has the following competences:

Procede with the anotation, processing, difusion and coordenation of official statistical data

INE has an annual activities plan approved by the Government which is based in the general guidelines of national statistical activities and its priorities are defined by the High Statistical Council.

Other attributions to satisfy specifical needs of users should be specially requested and financialy covered

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