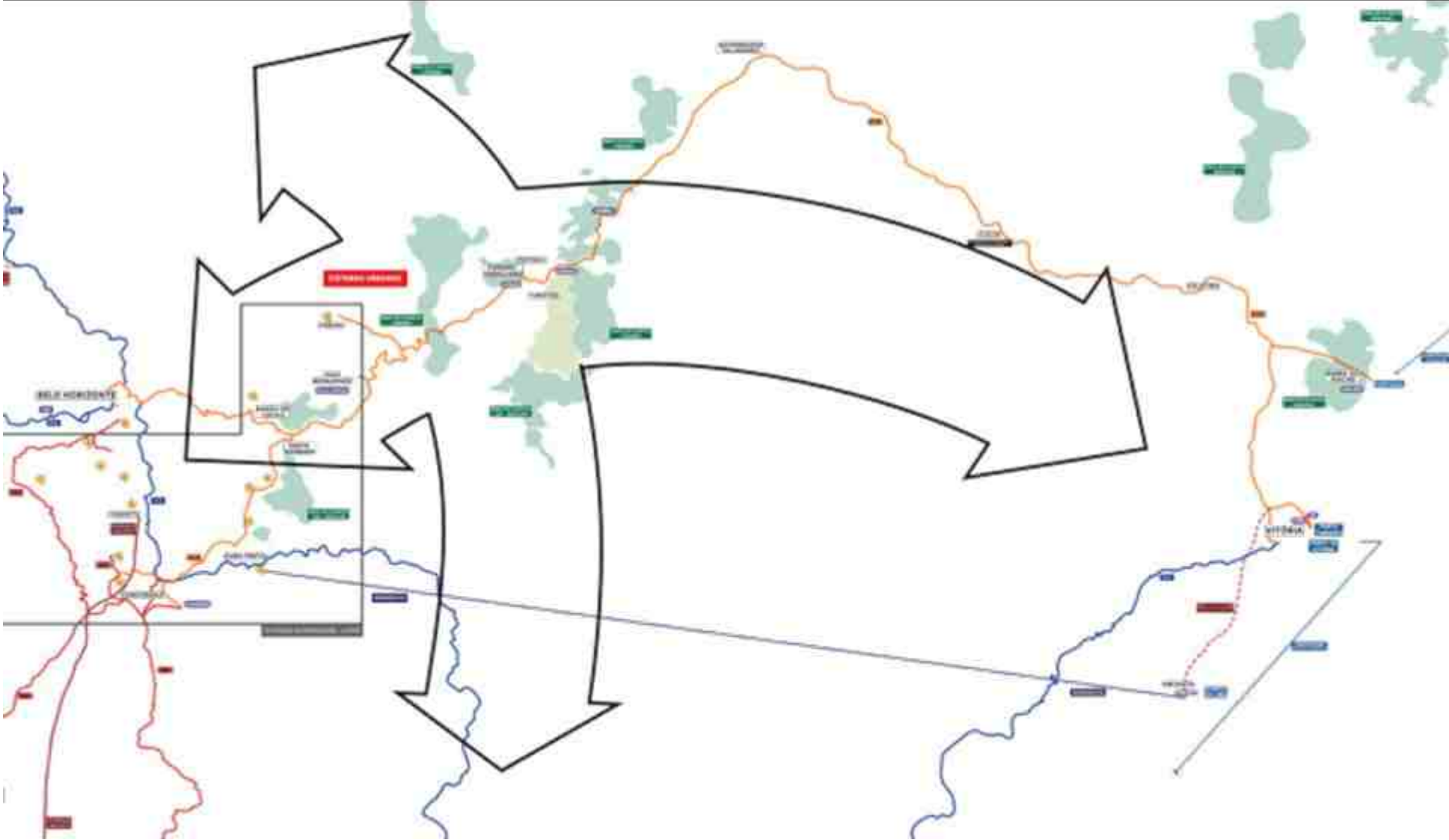
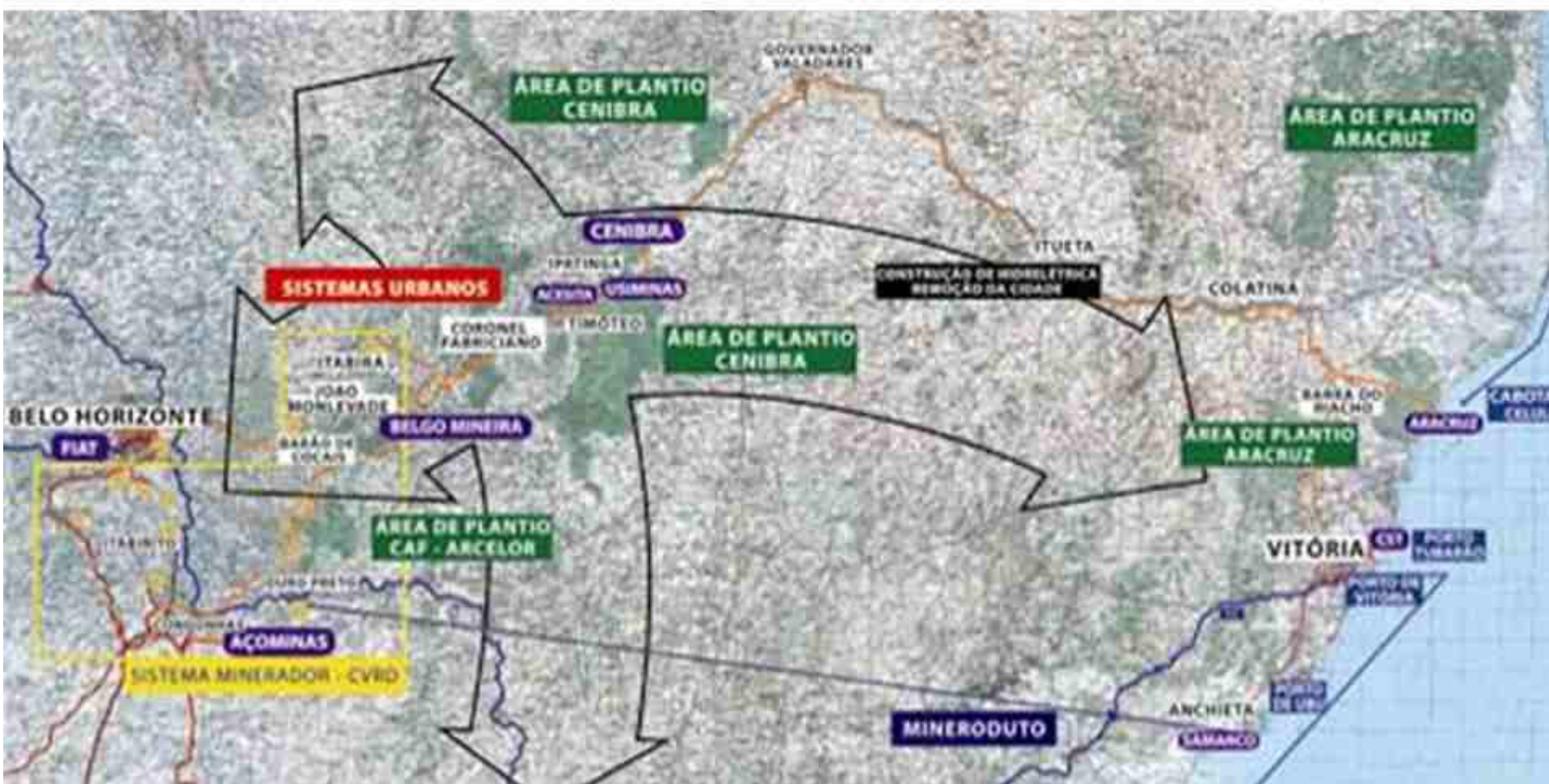


Project MG/ES



Project MG/ES

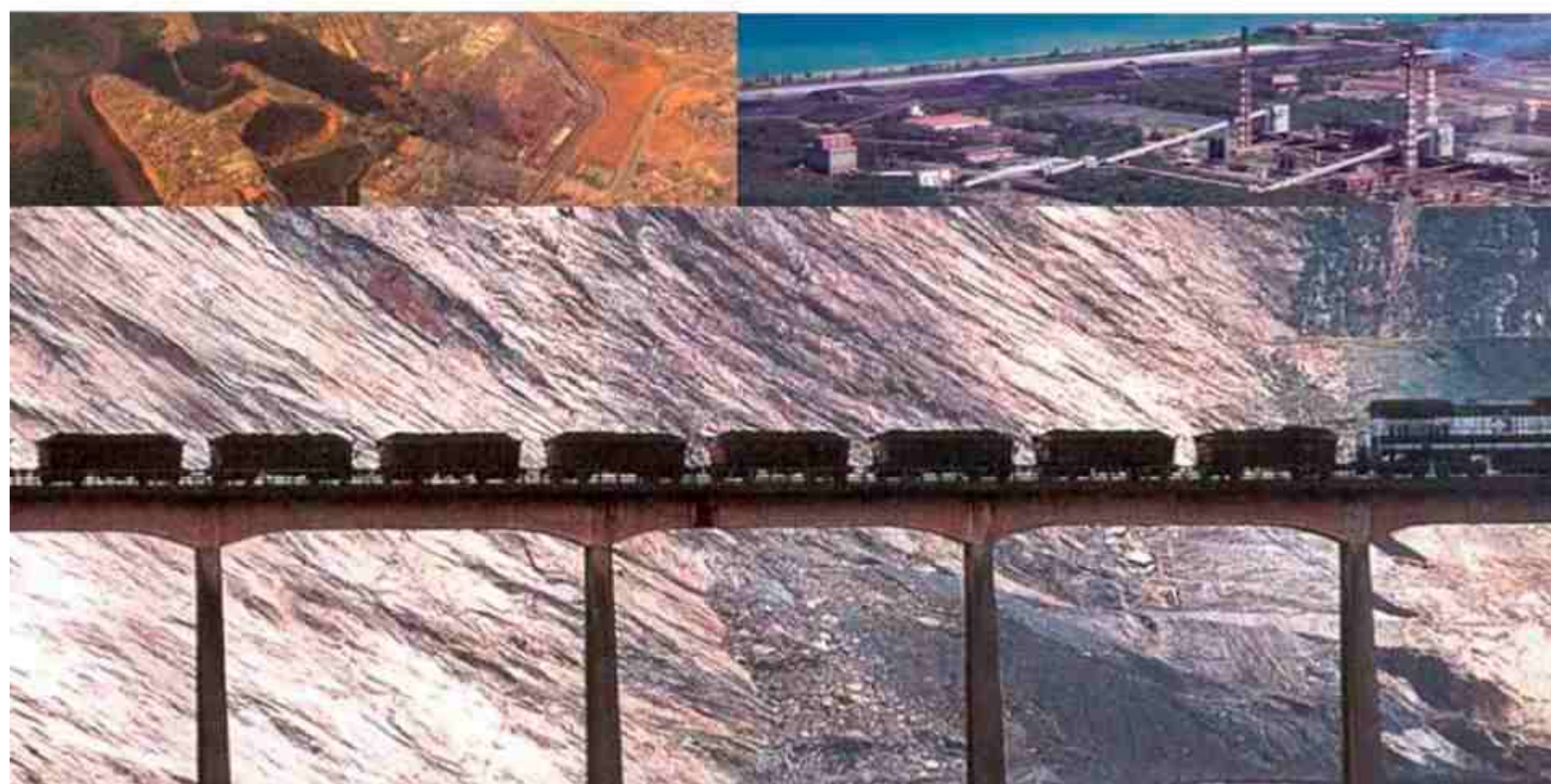
aims at to investigate and develop strategies and proposals for the macro-region between Belo Horizonte (MG) and Vitória (ES)



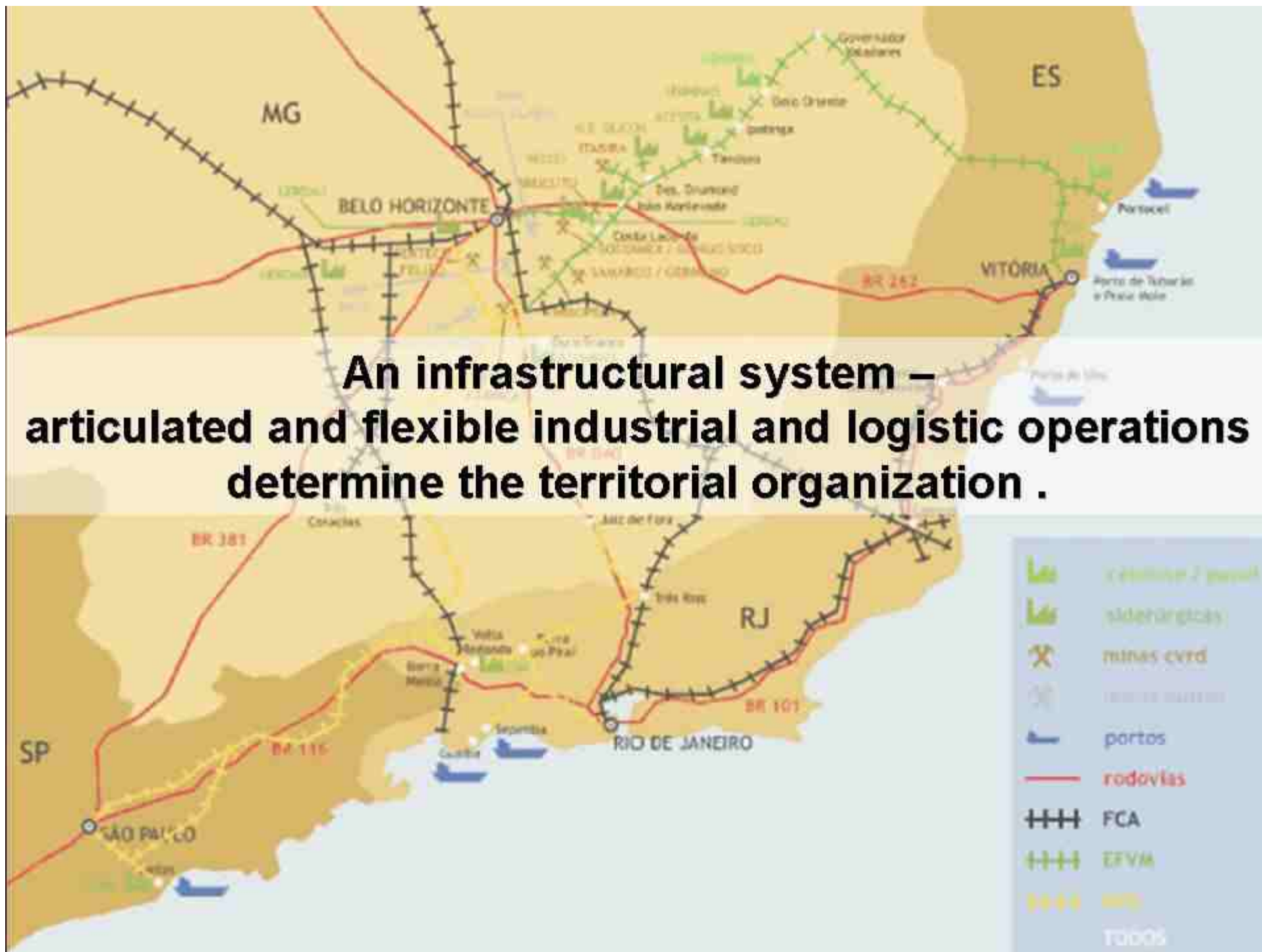
A region created by the productive chain of **mining, siderurgy** and **cellulose** and by the industrial and logistical **infrastructure** in large scale, producing **new urban and territorial configurations.**



The introduction of new forms productive management and logistics, the reorganization of railway and port infrastructure and the creation of exportation corridors cause a deep reorganization of the region territorial and social structure .




An infrastructural system – articulated and flexible industrial and logistic operations determine the territorial organization .



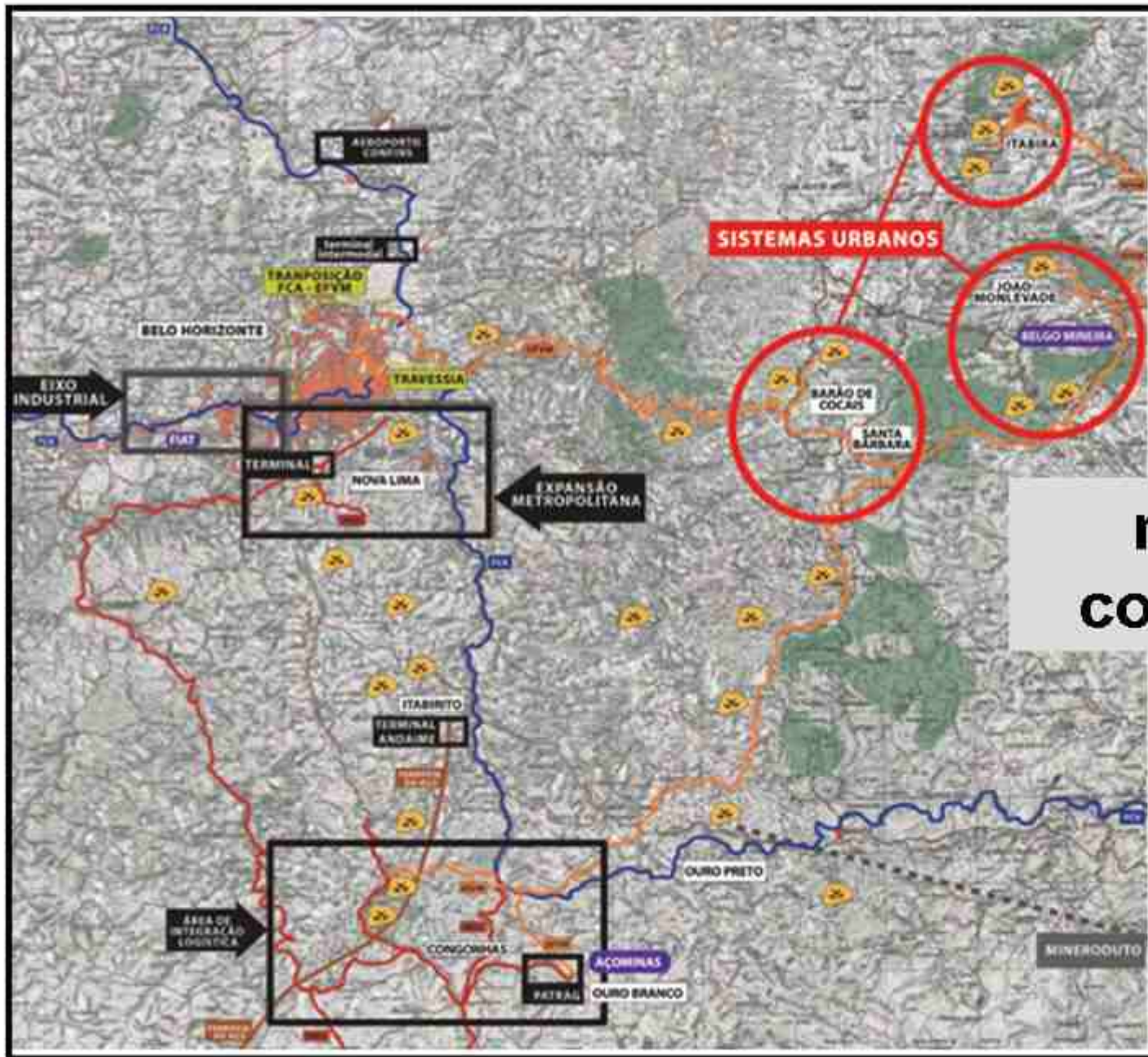
A platform for global integration, based on exportations and multinational investments .



The impact of these industrial and logistic devices produces new urban and territorial conditions.

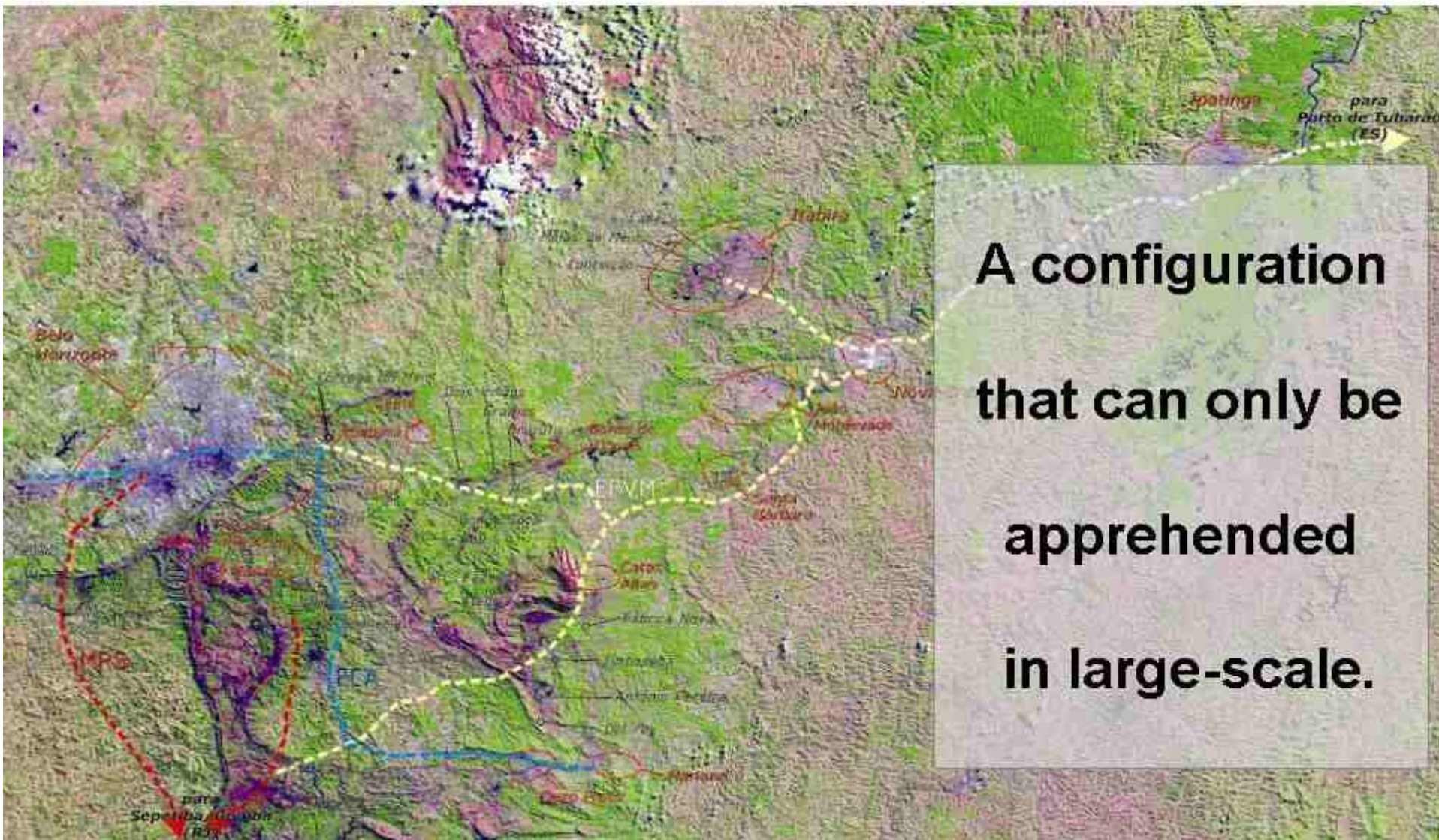


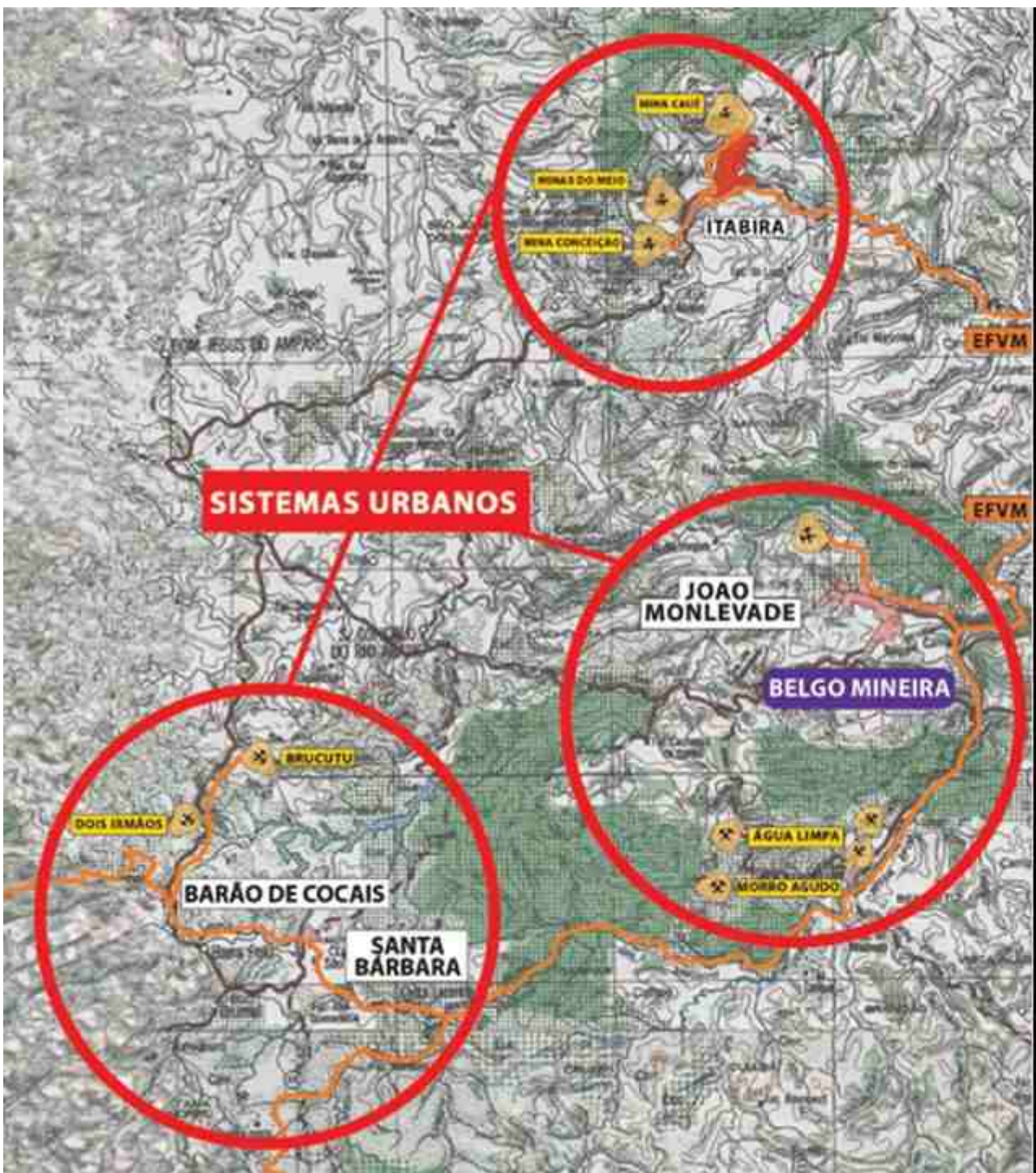
How to apprehend the emergency of new configurations due to the dynamic transformations of this system?



**new regional
configurations**

**The system redefines the whole territory,
articulating or excluding regions.**





new
urban
systems

New logistic devices modify the nature and function of the infrastructure.

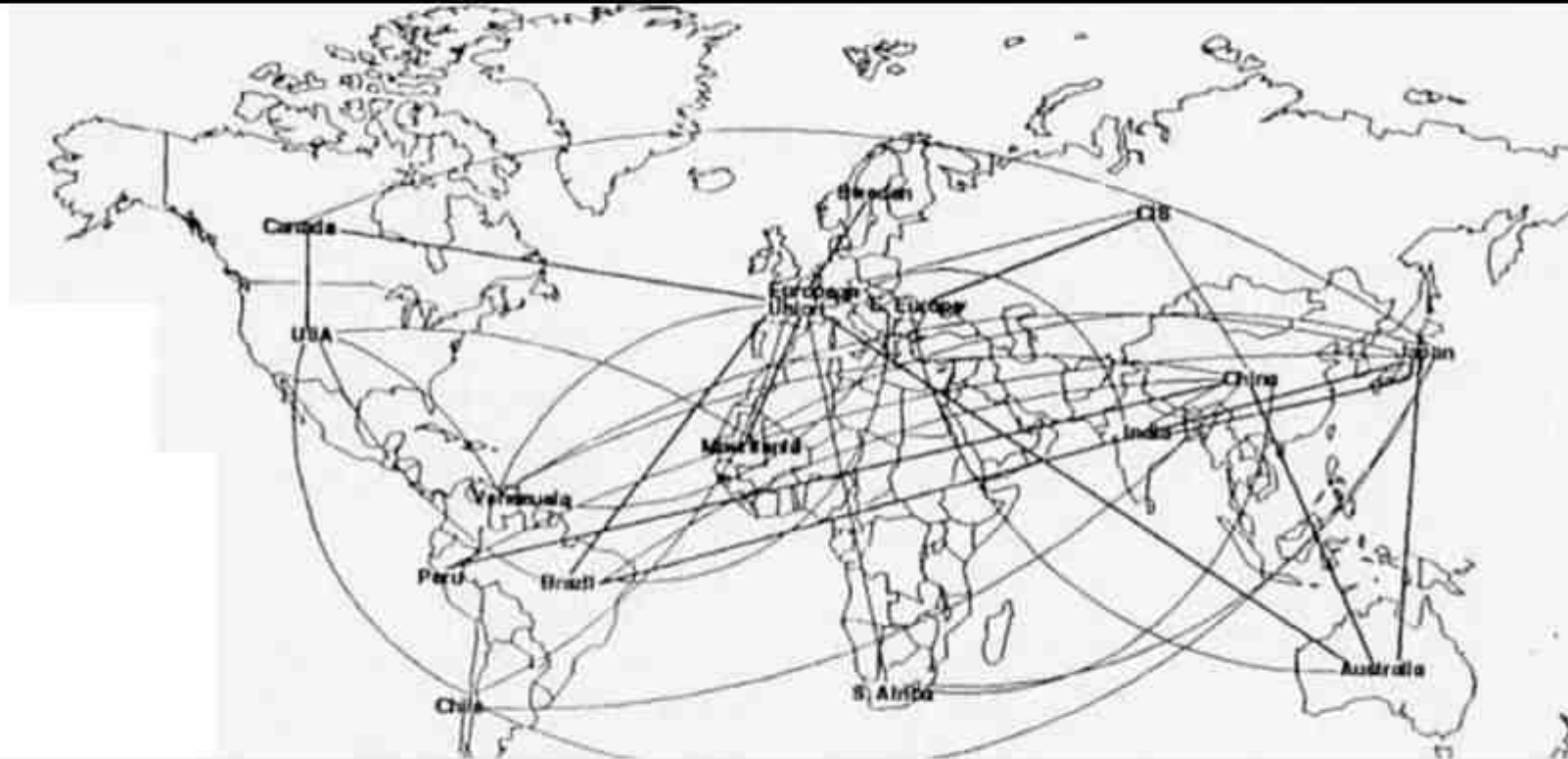


**It is intermodal and competitive,
configuring a dynamic system.**



**Great
industrial
projects
demand
flexible
devices,
spread out on
the territory.**

A complex topography, where local situations are articulated with the global space.



How to instrumentalize the territory for globalization?

A new repertoire for large territories management and cities planning,



developed
with
governments,
companies
and
communities.

BA

The 50's: Brazil-Japan agreements had made possible the iron ore exportations by Company Vale do Rio Doce - CVRD to Japanese steel plants. A logistic device was created to bind the mines to the port, through EFVM.



The complex mine - railroad - port - navigation articulated by CVRD anticipated problems placed today by logistics and globalization.



The question: how to transform physical distance into an economic distance.

Compress space.

**In the 60 and 70's,
the bilateral
collaboration
between the two
countries would lead
to a world-wide
revolution in the long
distance transports,
with the construction
of the port ofTubarão
and supergranary
ships for the ore
transport.**



O CRESCIMENTO DO MERCADO TRANSOCEÂNICO DE MINÉRIO DE FERRO

AMÉRICA DO NORTE

01	05	Δ
15	17	+2

EUROPA OCIDENTAL

01	05	Δ
124	128	+4

LESTE EUROPEU

01	05	Δ
8	10	+2

Brazil is the biggest world-wide producer and second exporter.

ÁSIA / OCEANIA

	01	05	Δ
CHINA	92	135	+43
JAPÃO	123	116	-7
OUTROS	67	69	+2
TOTAL	282	320	+38

AMÉRICA DO SUL

01	06	Δ
5	6	+1

ÁFRICA / O. MÉDIO

01	05	Δ
16	20	+4

TOTAL

01	05	Δ
450	505	+55

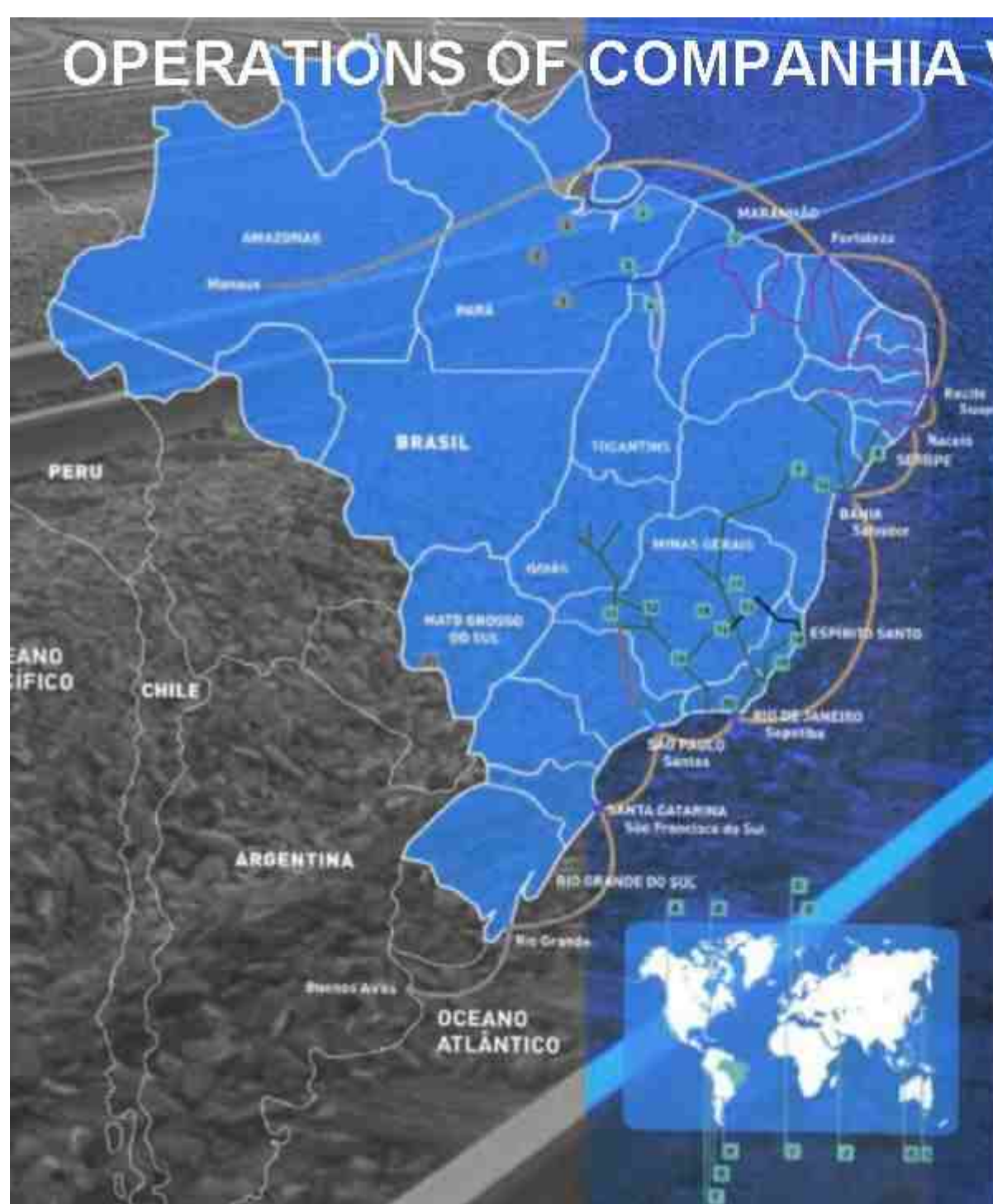
Iron ore world-wide market demands today 500 million annual tons.



The Company Vale do Rio Doce - CVRD is the world greater iron ore producer and exporter, with 16% of the international market.

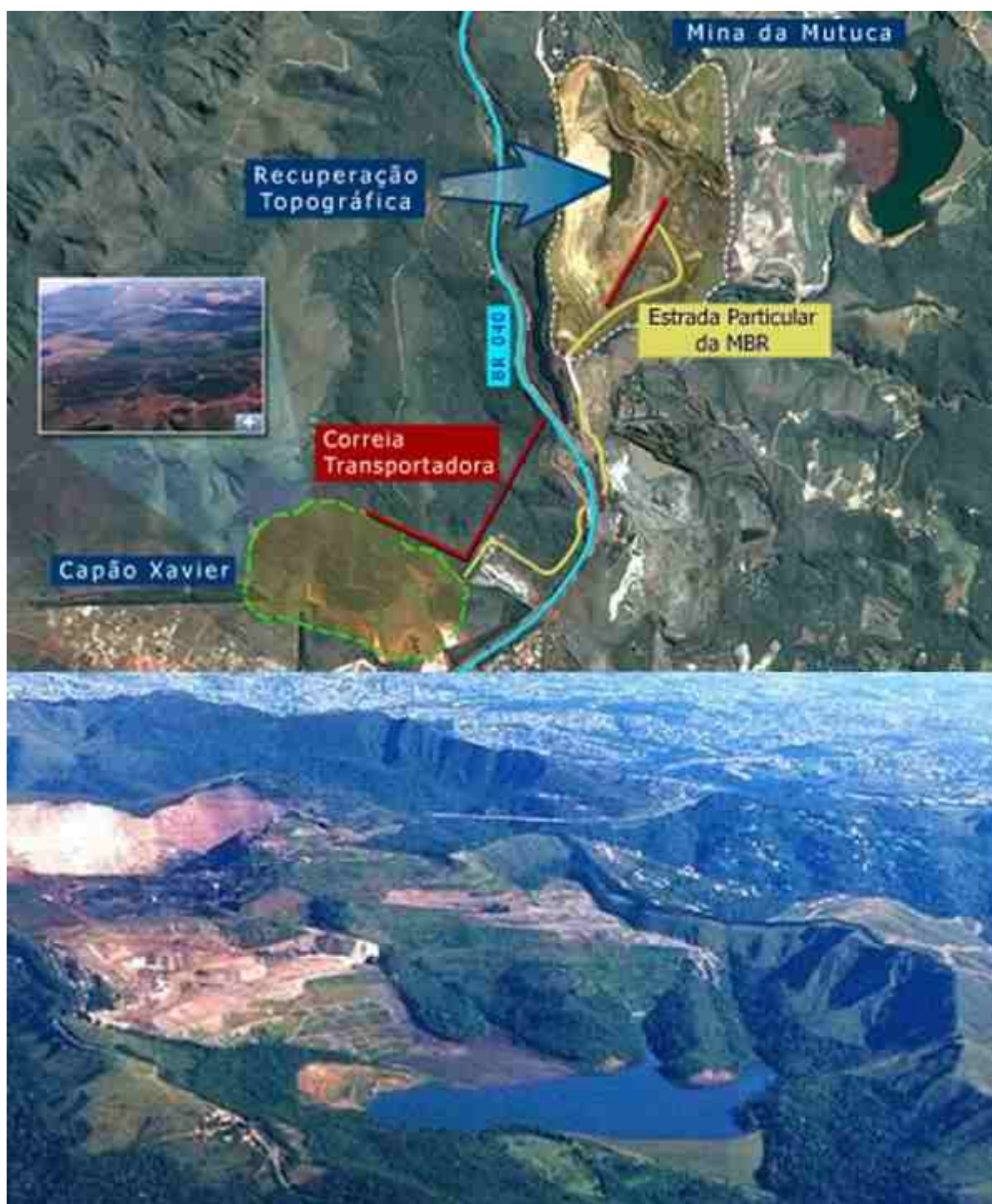


OPERATIONS OF COMPANHIA V



CVRD is also a large logistic company. Owner of railroad and cabotage enterprises, the company also has ports and maritime terminals.

mining territory



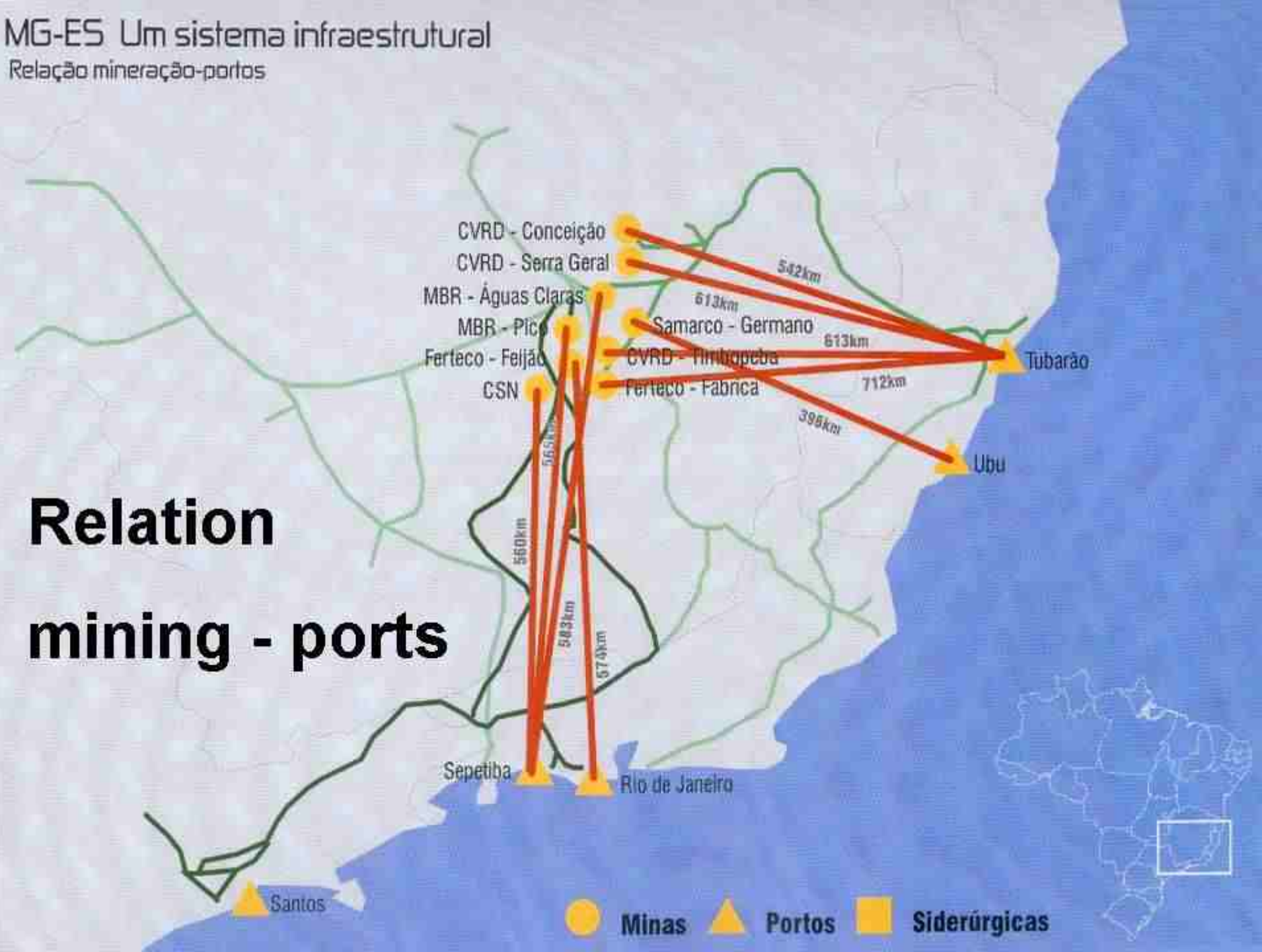
MBR, subsidiary of CVRD, is opening new mines at south of Belo Horizonte, extending the mining territory.

The mines location forms a dynamic geography.

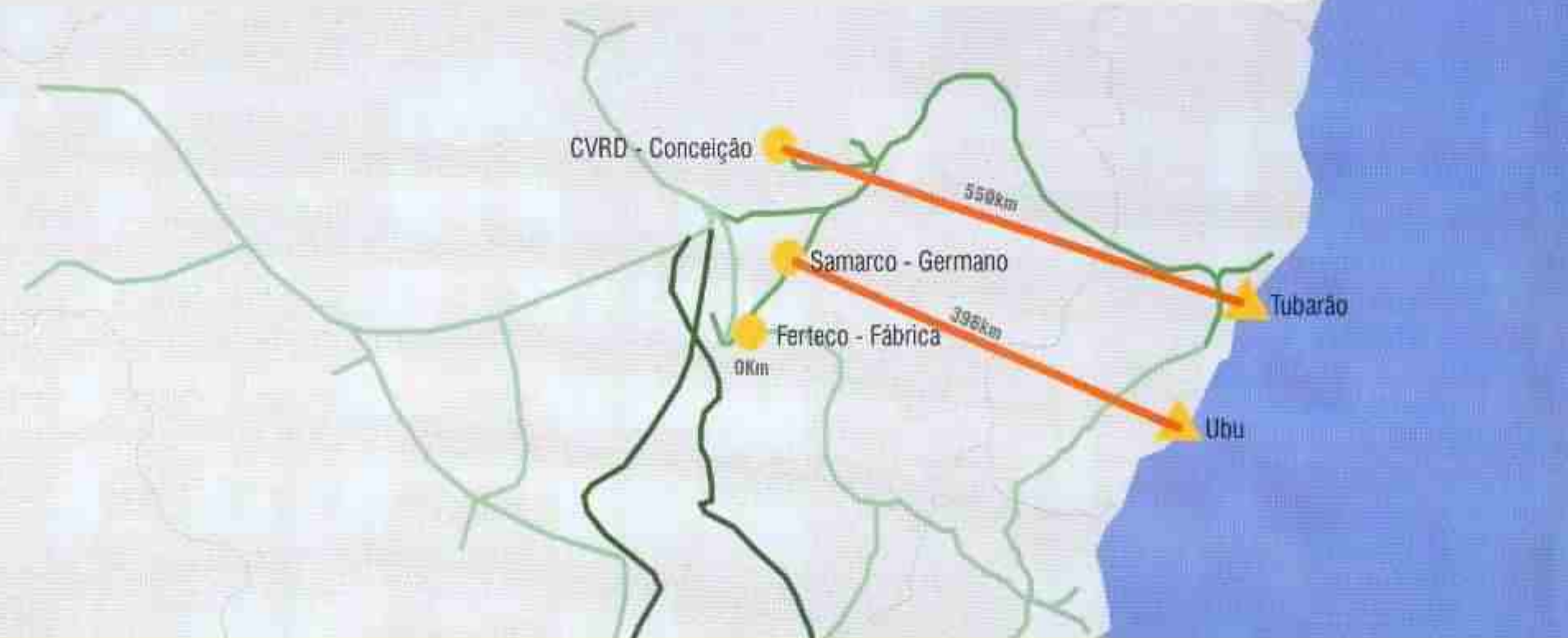


A continuous rearticulation of the territory.

MG-ES Um sistema infraestrutural
Relação mineração-portos



Technological and logistic innovations, allowing locational flexibilization, affect the organization of the mining territory.



The pellets plants, in ES, had modified the geography of the mining process.





Also the steel plants – mine location standard is modified.

Belo Horizonte :
metropolitan expansion and
opening of new mines.

disactivated mines
converted into real estate
enterprises.

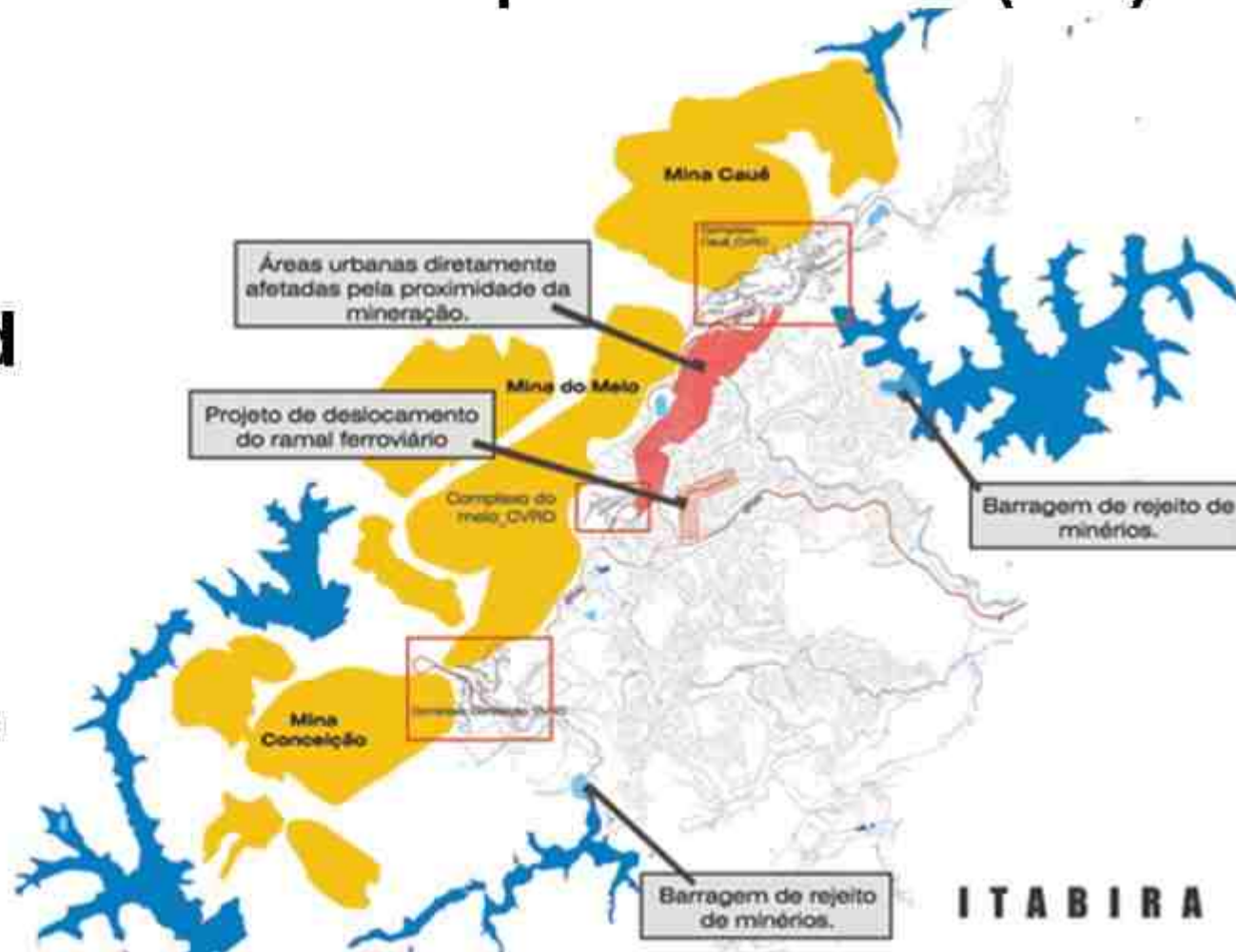
A new paradigm of the
relationship between
mining and urban
condition.



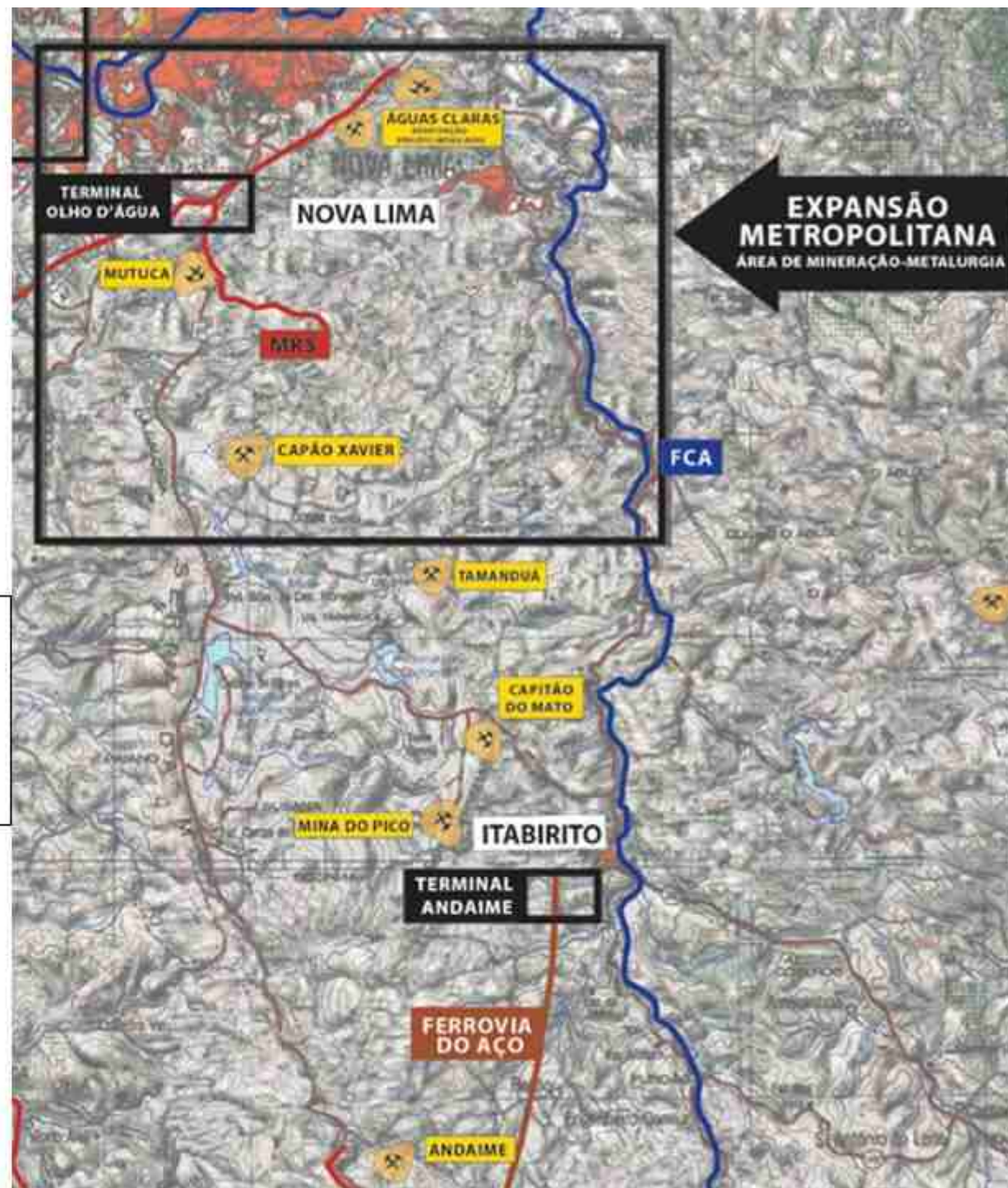


CVRD organizes the urban space at Itabira (MG).

**Mines,
deposits,
barrages and
railroad
branches
disrupt the
urban fabric.**



Metropolitan expansion



The railroad sector was reorganized during privatization.

Mining and steel companies acquired the concessions.

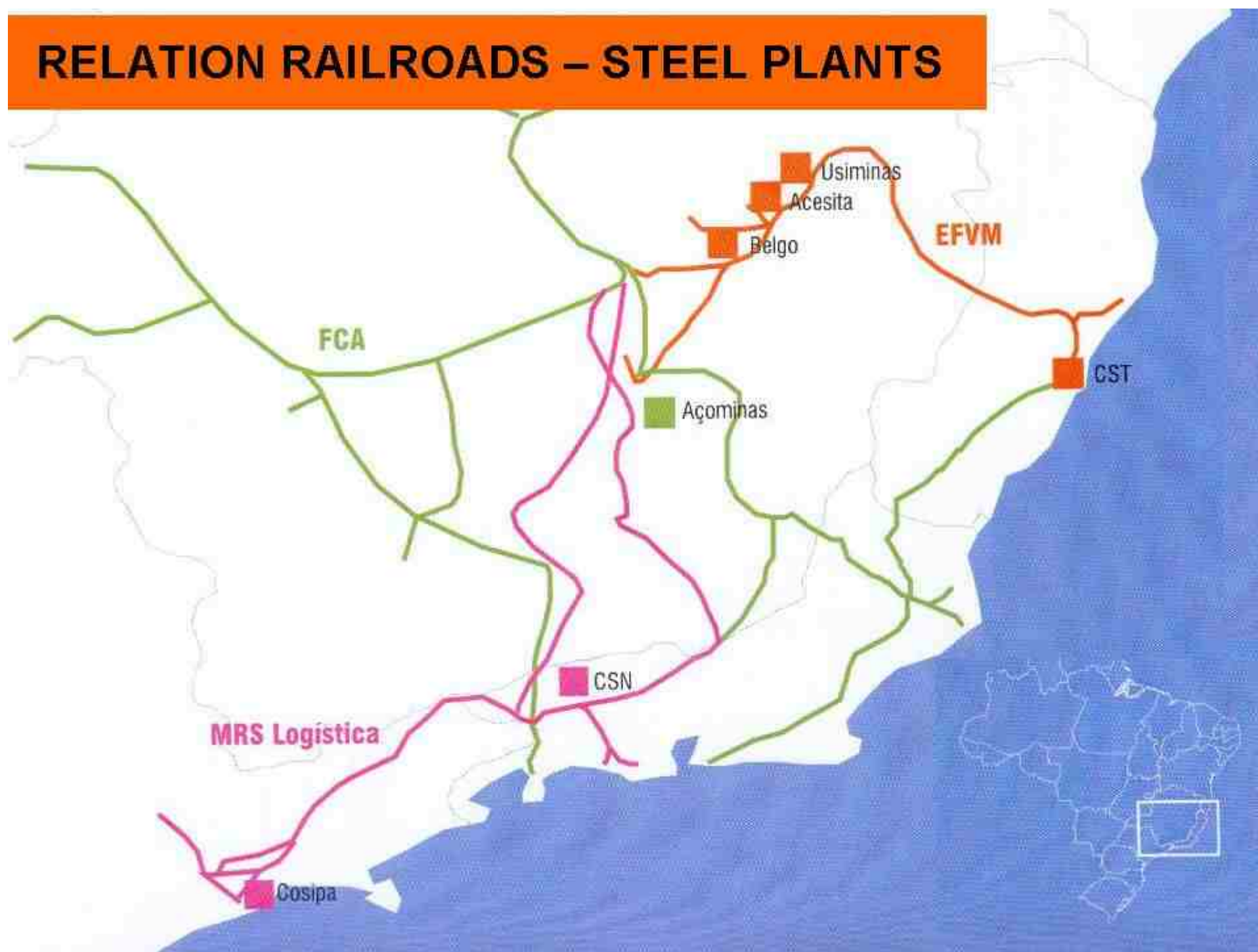
The biggest railroad customers took control of the new companies.

LEGENDA

- Hidroviás
- Capitais
- Cidades
- E.F. Carajás
- E.F. Vitória-Minas
- FCA
- Fepasa Bitola estreita
- Fepasa Bitola Larga
- Ferroeste
- Ferronorte
- Ferrovia Norte-Sul
- FSA
- Cia. Ferroviária Nordeste
- MRS Logística
- Novoeste
- Teresa Cristina



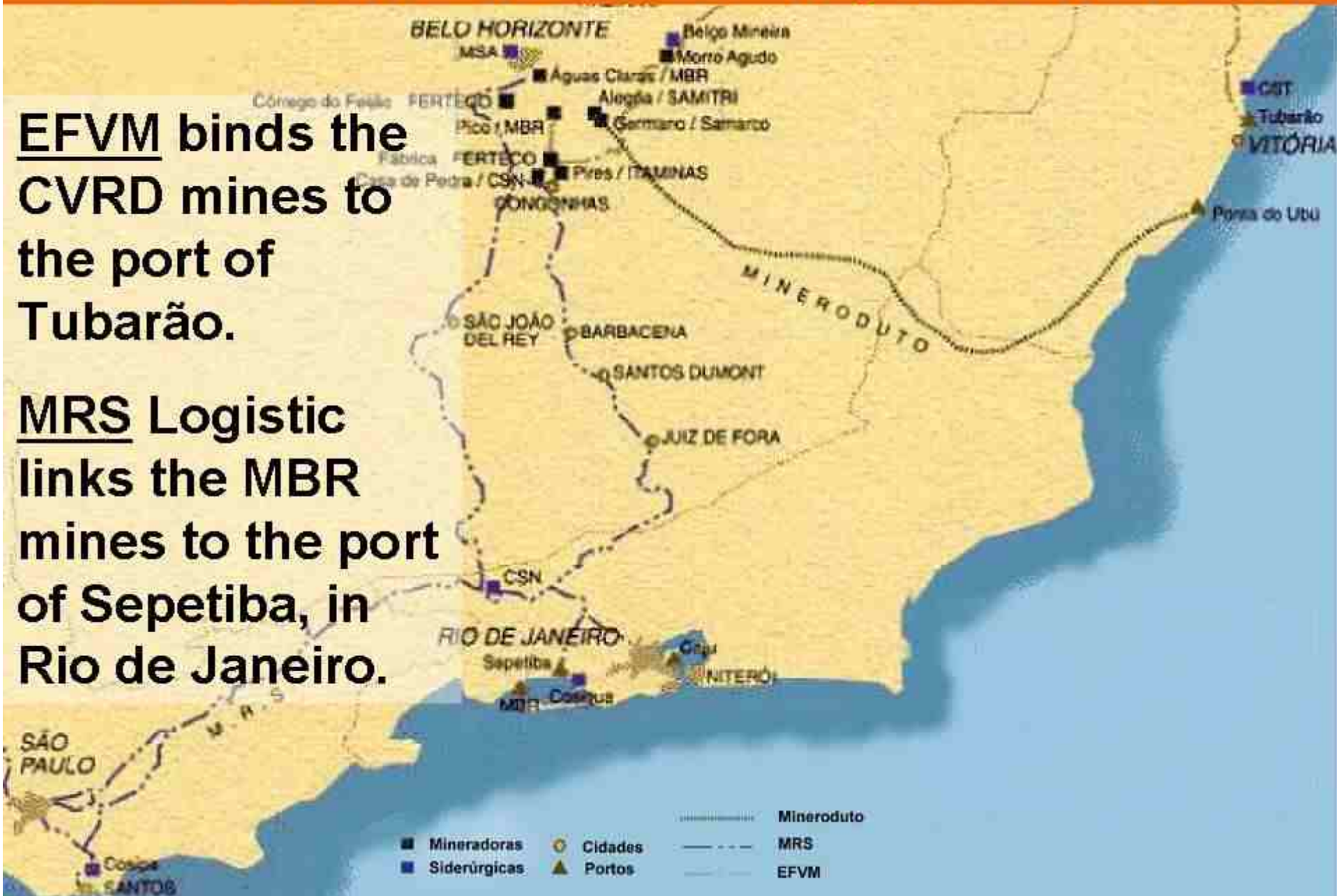
RELATION RAILROADS – STEEL PLANTS



In Minas Gerais, there are two railway routes for iron ore

EFVM binds the CVRD mines to the port of Tubarão.

MRS Logistic links the MBR mines to the port of Sepetiba, in Rio de Janeiro.



Belo Horizonte



Intense railroads load traffic crossing the city.

Old tracing of the branches forces the speed reduction of the trains.

Tracks domain taken by irregular housings.



Local situation conflicts with large-scale logistic device.

**New railroad
variants to
eliminate the
bottlenecks of the
exportations
corridors**

**The displacement
the branches
produces a large
territorial
reorganization of
the cities.**



The renewal of the railway network, to intensify the exportation corridors, implies in the displacement of the branches out of the cities. The railroad becomes part of a larger device, not local anymore.

How to rethink the relation of the cities with the infrastructure of transports?



Gerdau, Usiminas and CSN

The biggest national steel groups.



Arcelor

The greater world steel conglomerate controls

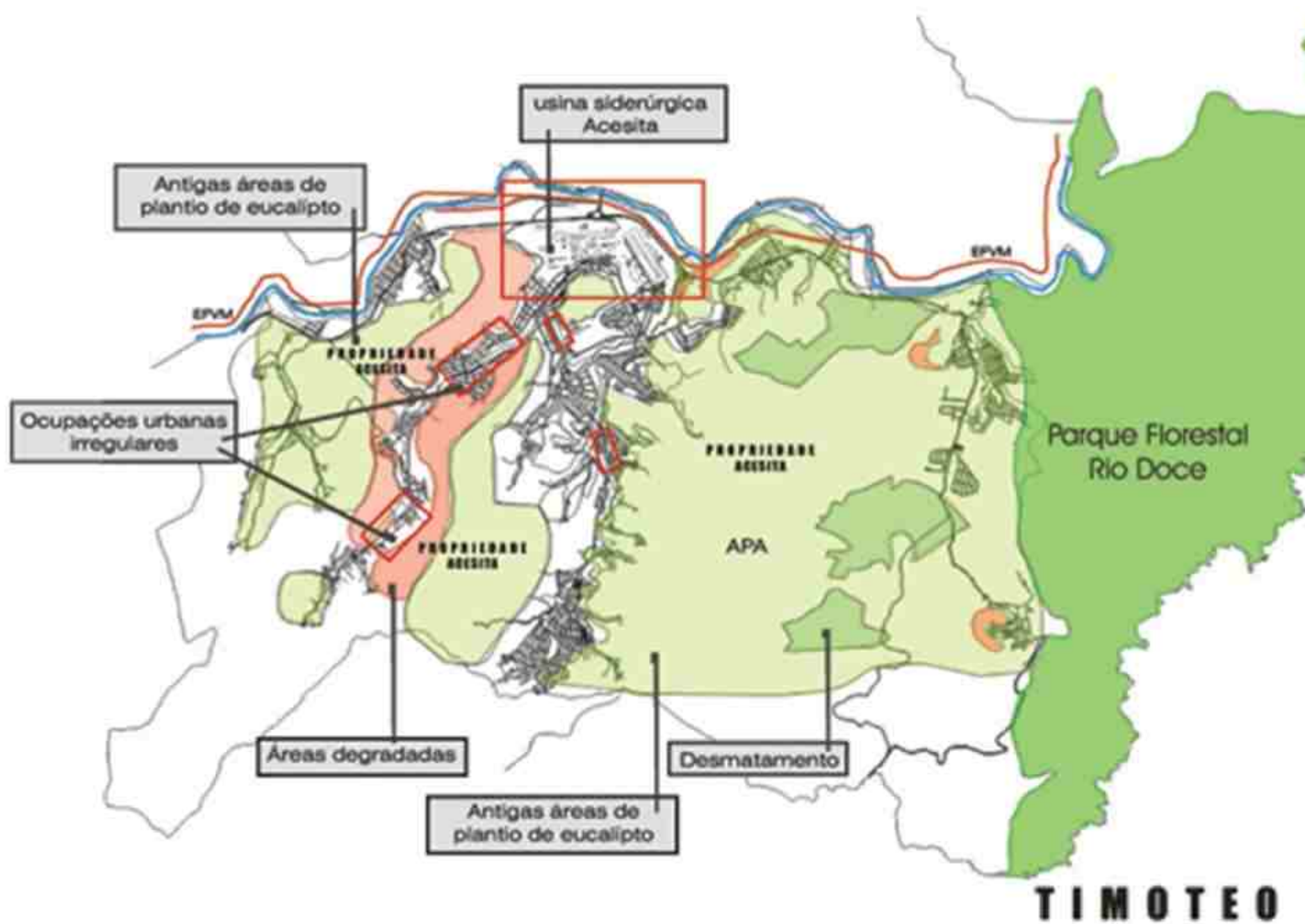
Belgo-Mineira, Acesita and CST

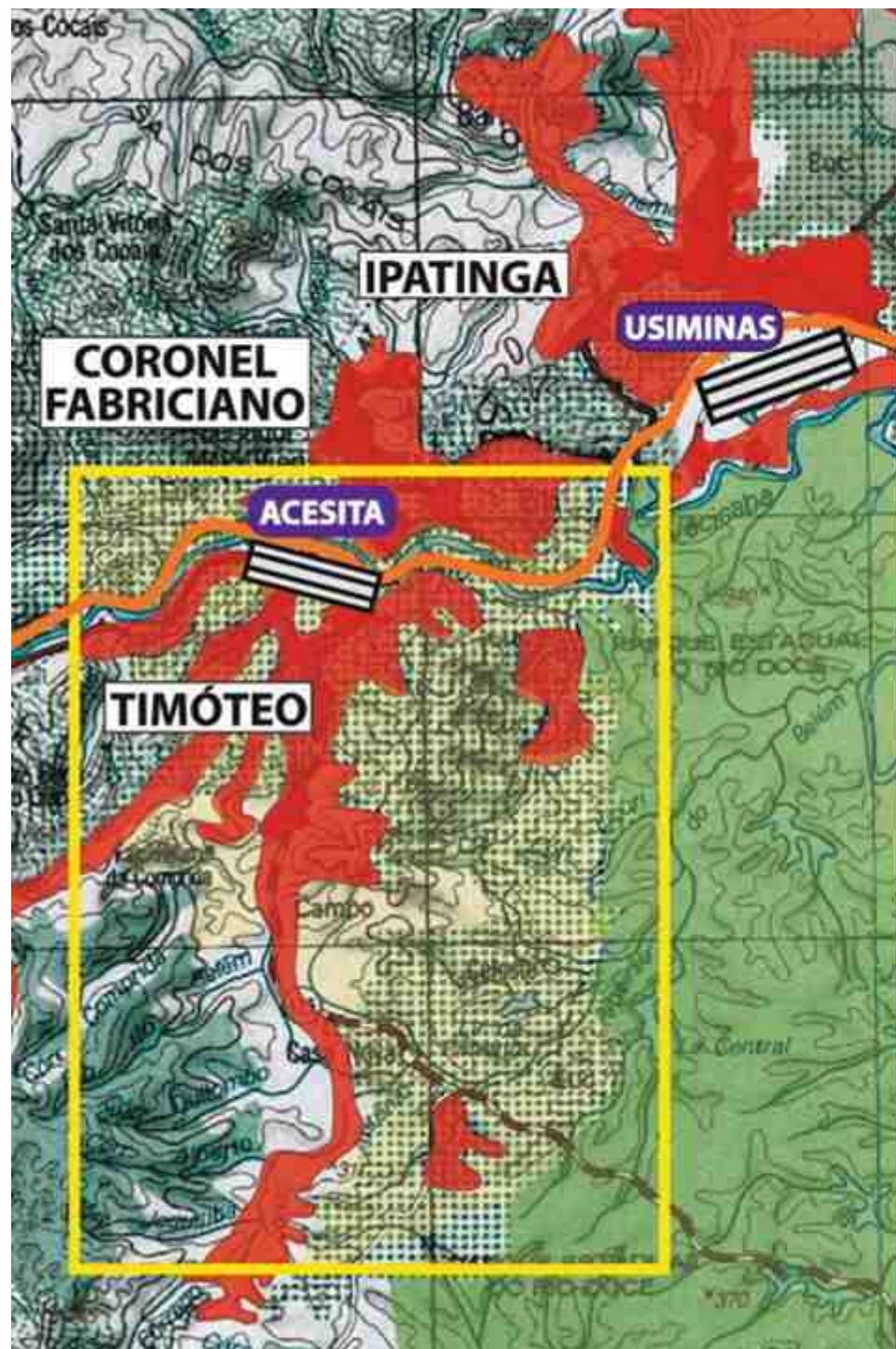


In the Steel Valley, urban emptiness indicates the complex and unstable occupation of the territory.



**Empty areas are propitious
for the development of new configurations
in the urban environment.**





Timóteo

Urban area
compressed by the
large land extensions
belonging to Acesita.

Lands compromised by
intensive eucalyptus
exploration and
uncontrolled urban
occupation.

The region has the two world bigger cellulose companies:

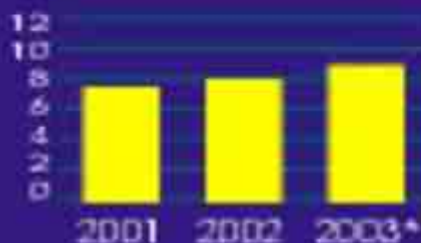
Cenibra and Aracruz .

Both export most of their production.

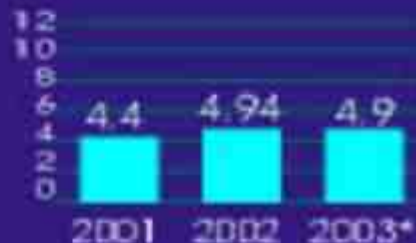
They have in partnership a port,

Portocel, at north of Vitória/ES

Produção
Em toneladas/milhares



Consumo Aparente***



Ranking dos Maiores Produtores do País**
Em toneladas/milhares





CELLULOSE PRODUCTION

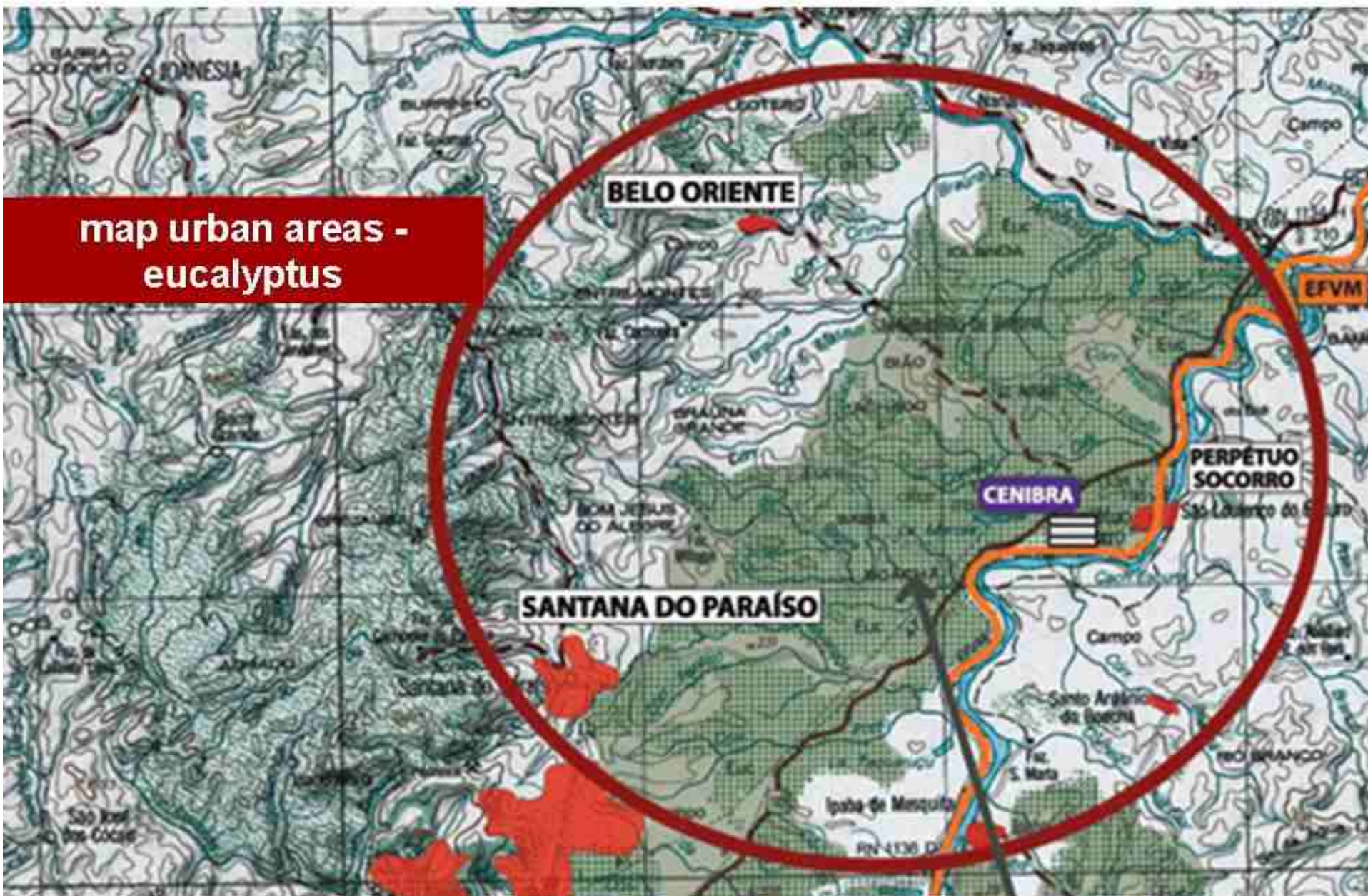
**Spatial de-concentration
of the industry.**

Transport System.

**Flexible organization of
the production.**

**New territorial
organization.**

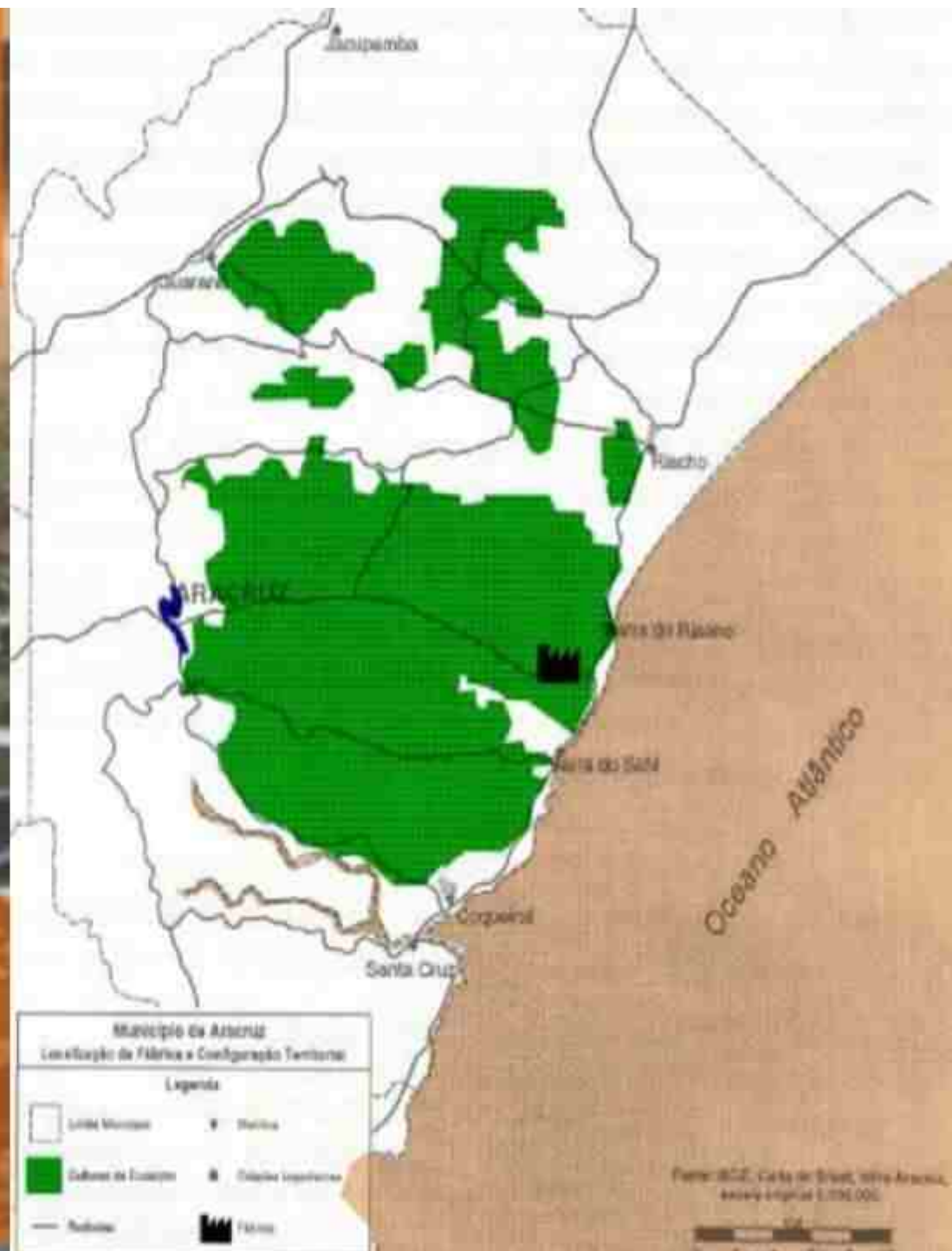
map urban areas -
eucalyptus

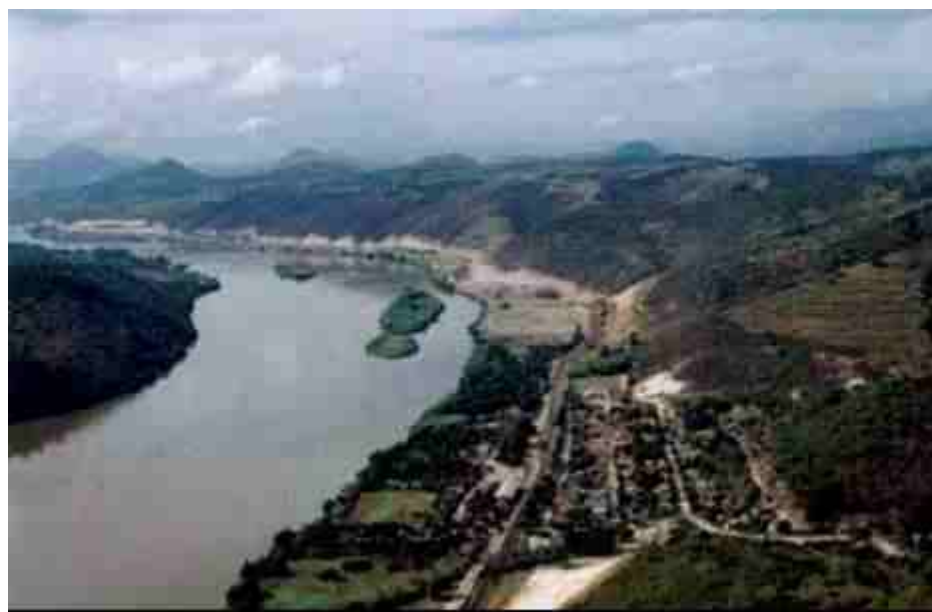


**Aracruz Cellulose
occupies
203,000 hectares,
in the north of ES.**



**Its occupation strategies
of the territory produce
new space and
infrastructural
configurations.**

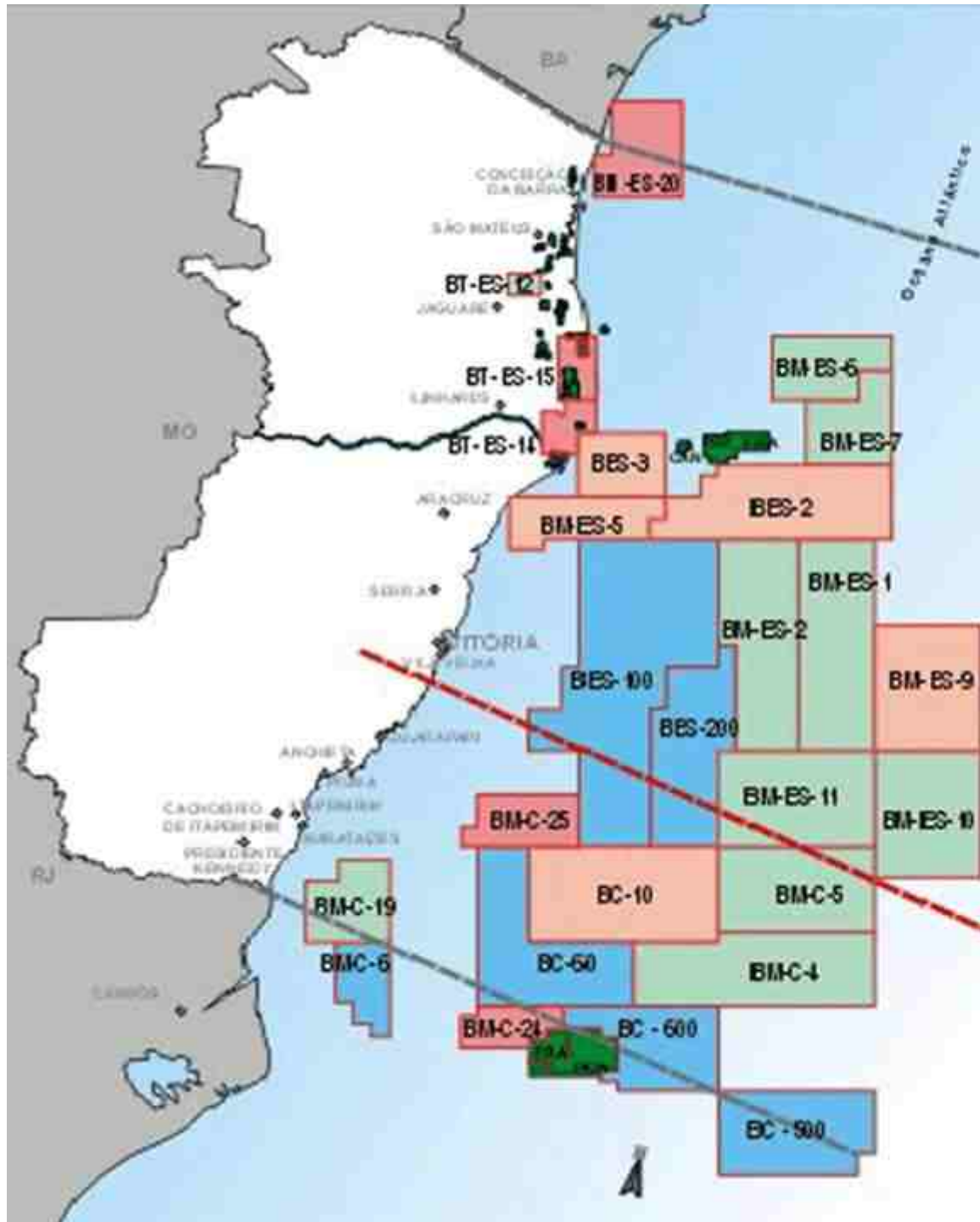




**The city of Itueta is being relocated,
redesigning the local territory**



**Aimorés power-plant:
flooding urban and agricultural areas.**



Oil and natural gas exploration in Espirito Santo - Petrobras.

Large deposits had been recently discovered, located 84 km south of Vitoria.



Petrobras is constructing branches of gas-line for the Steel Valley, where big steel plants are located.



**Railway, industry and
port redesign the
metropolitan region of
Vitória.**

**The mining-steel
complex logistic
infrastructure creates
a new vector of
occupation in the
territory.**

The port complex of ES extends for 100 km, articulated by railroads.

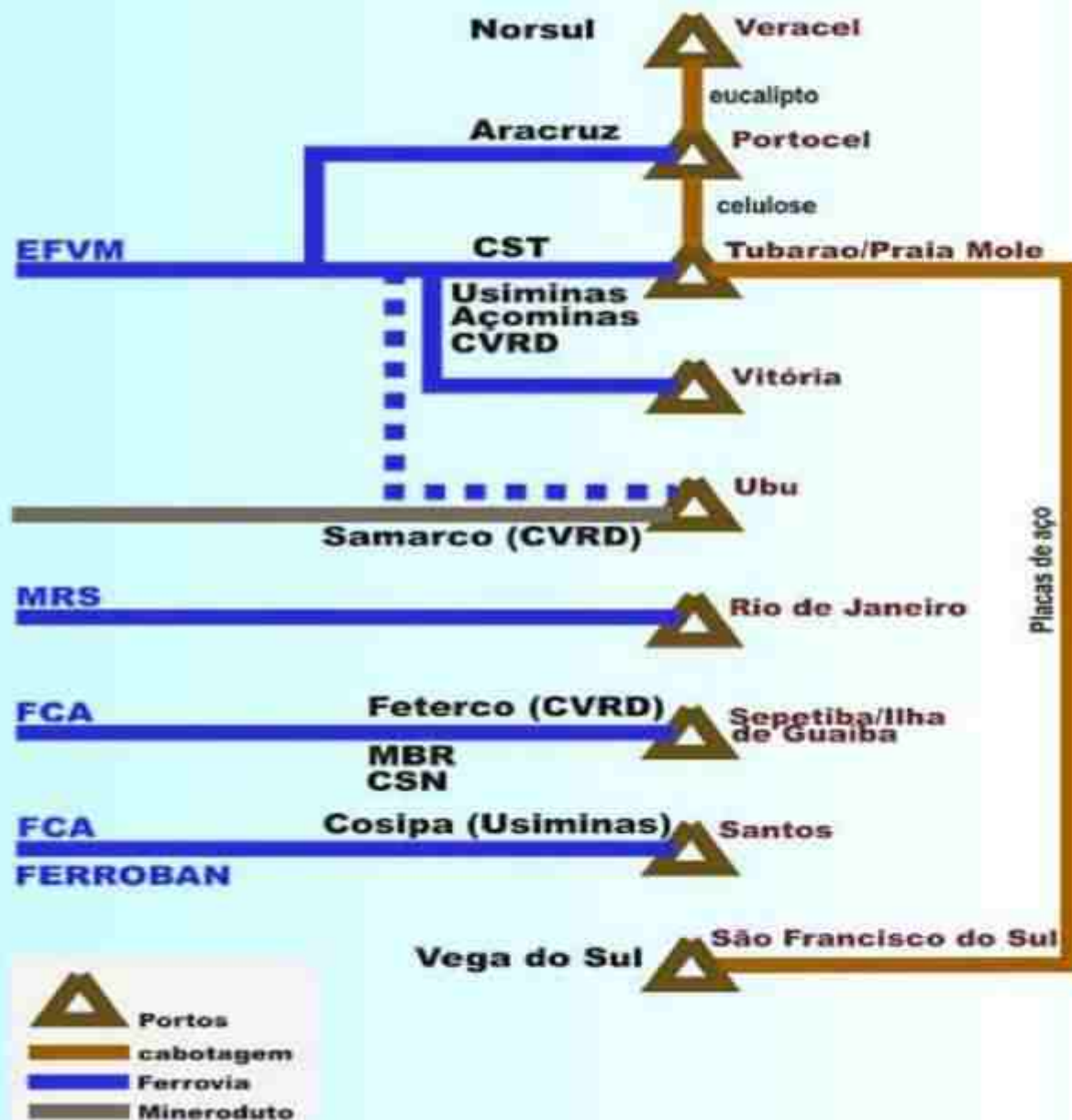
Several logistic companies transform the metropolitan area into a platform for exportations.



The port complex of Espirito Santo is constituted by six ports.

The Port of Vitoria works with containers and general load.





RAILROAD AND MARITIME CORRIDORS.

METROPOLITAN ARC

CARIACICA

SERRA

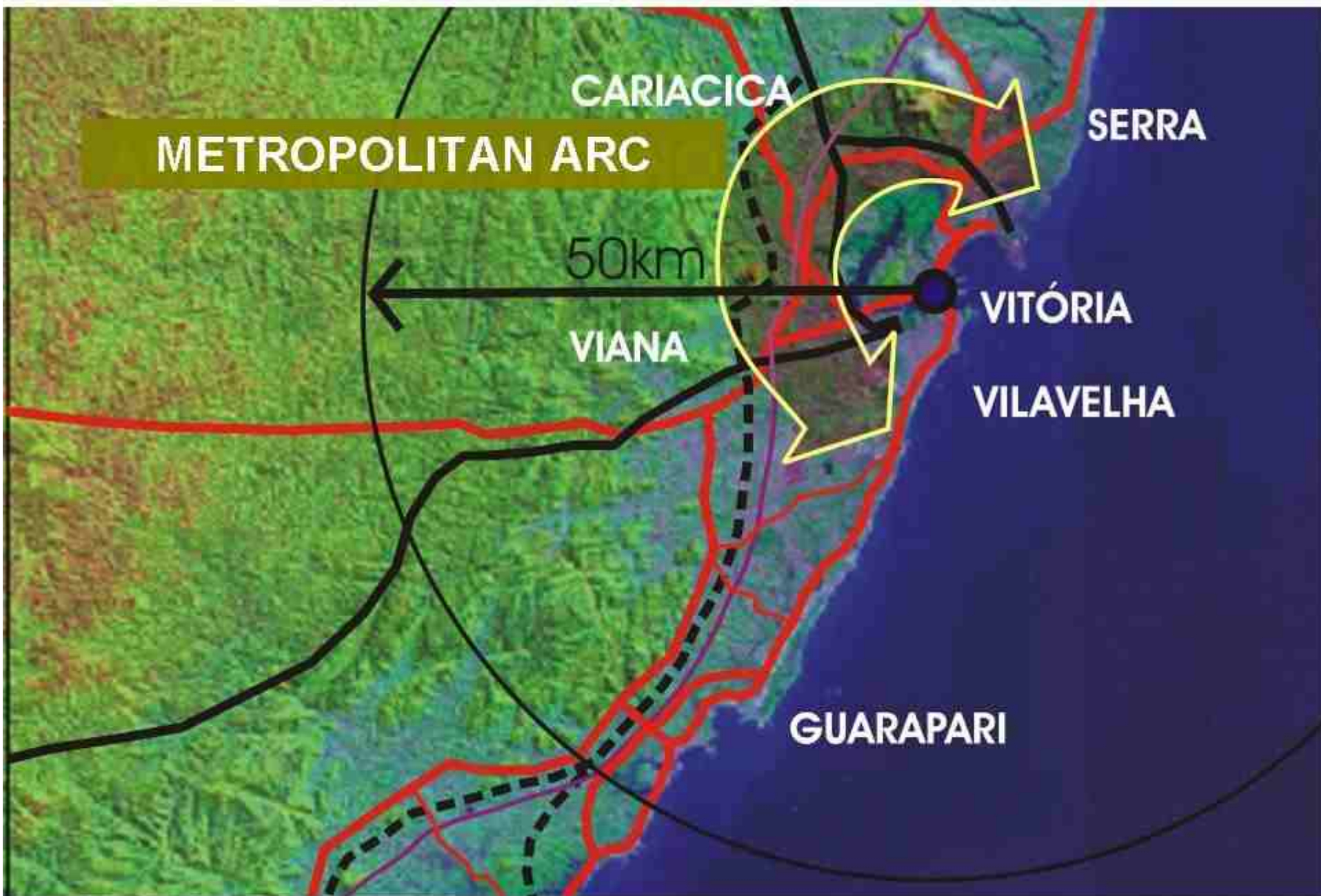
50km

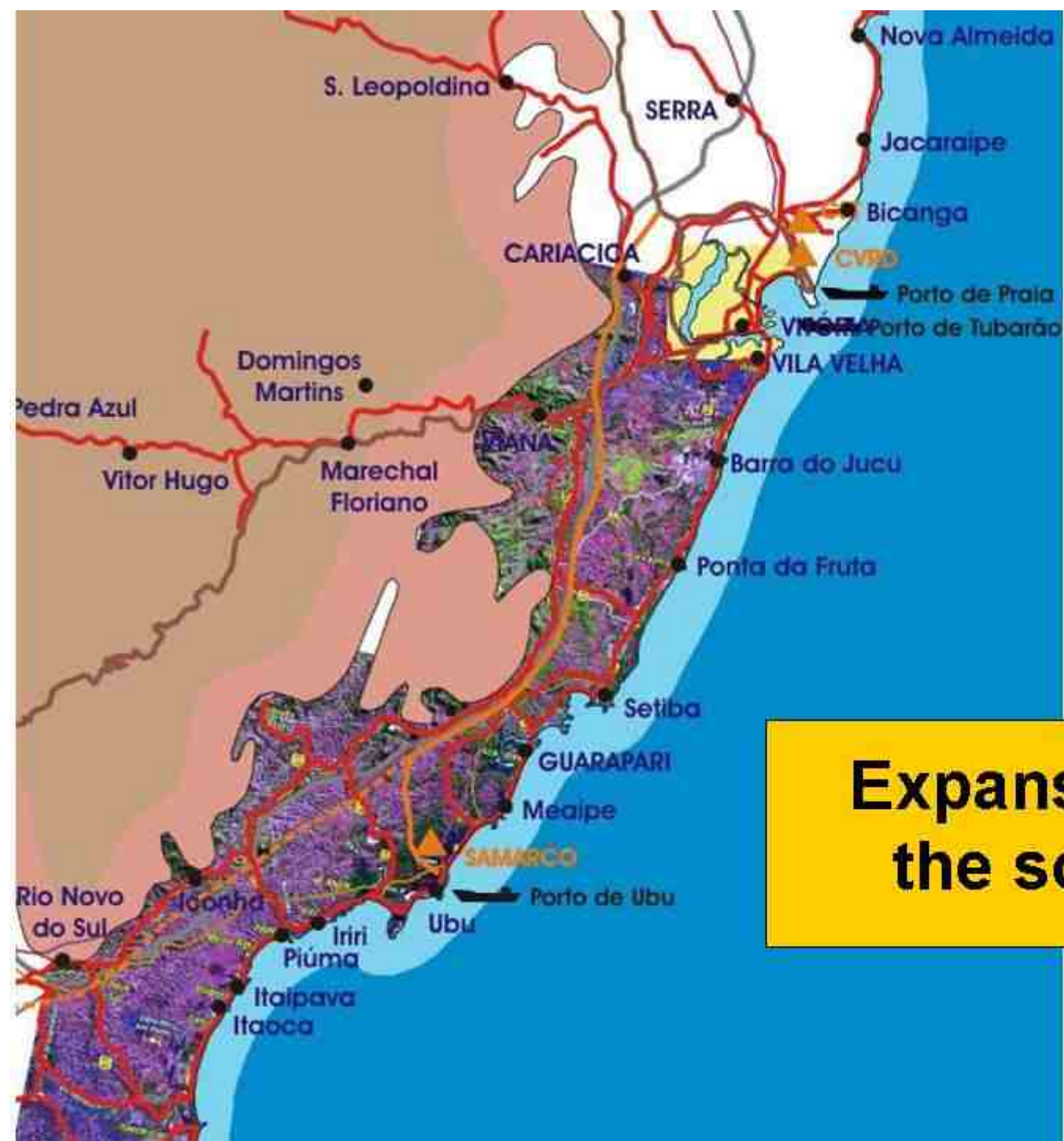
VIANA

VITÓRIA

VILAVELHA

GUARAPARI





**Expansion through
the south littoral**

The ports and airport extension and the industrial and intermodal implantations configure a new frame of the logistics in ES.



How the diverse infrastructural devices interact with the surrounding urban areas?

Serra

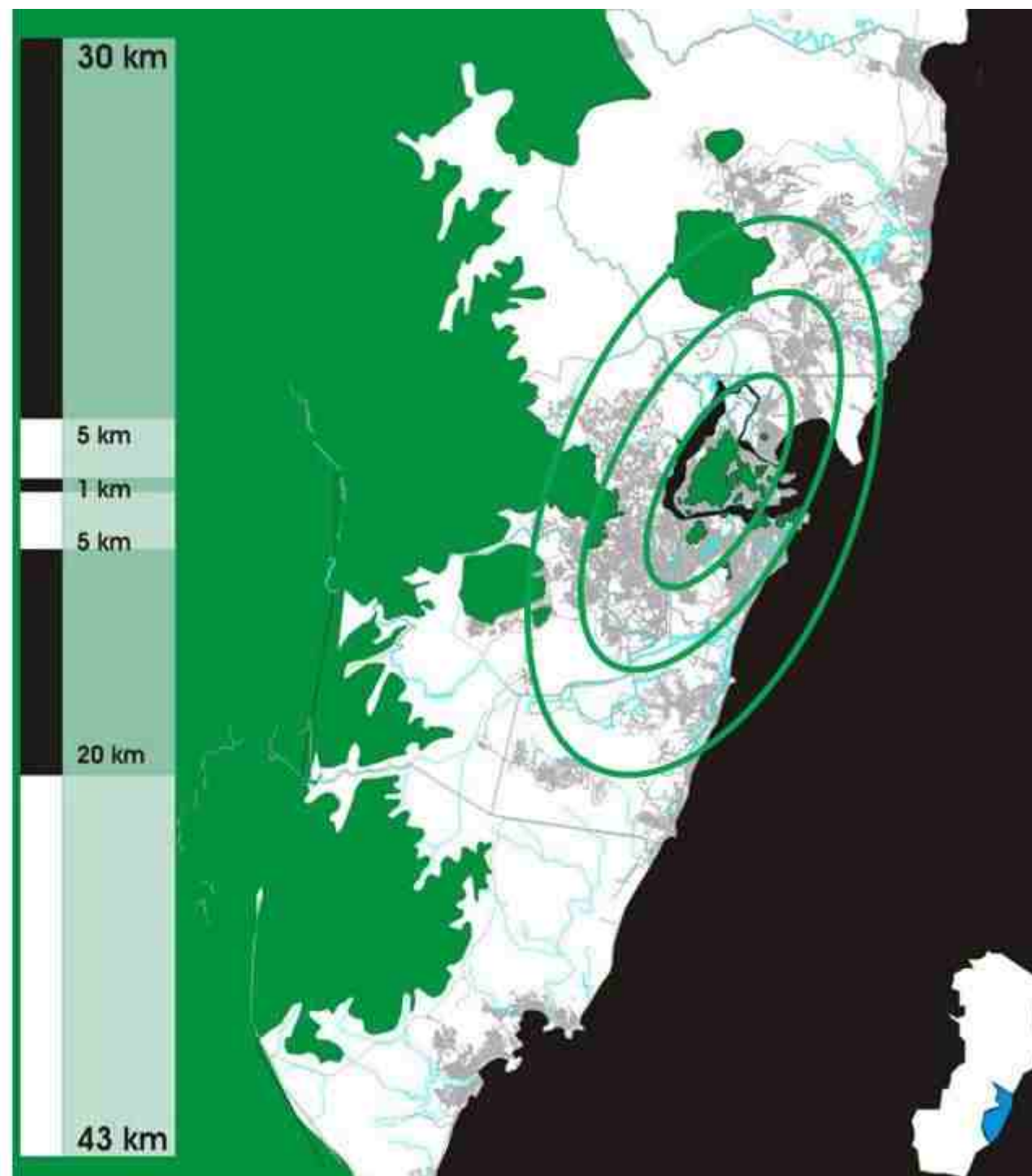
Big industrial projects engender migratory flows and the construction of popular quarters.

Urban policies had created poverty areas and environmental disbalance.



Given the physical limitation of the center of Vitoria, the city has expanded to northeast.

Since the decade of 1970 the region presents signs of abandonment and degradation of the central areas.



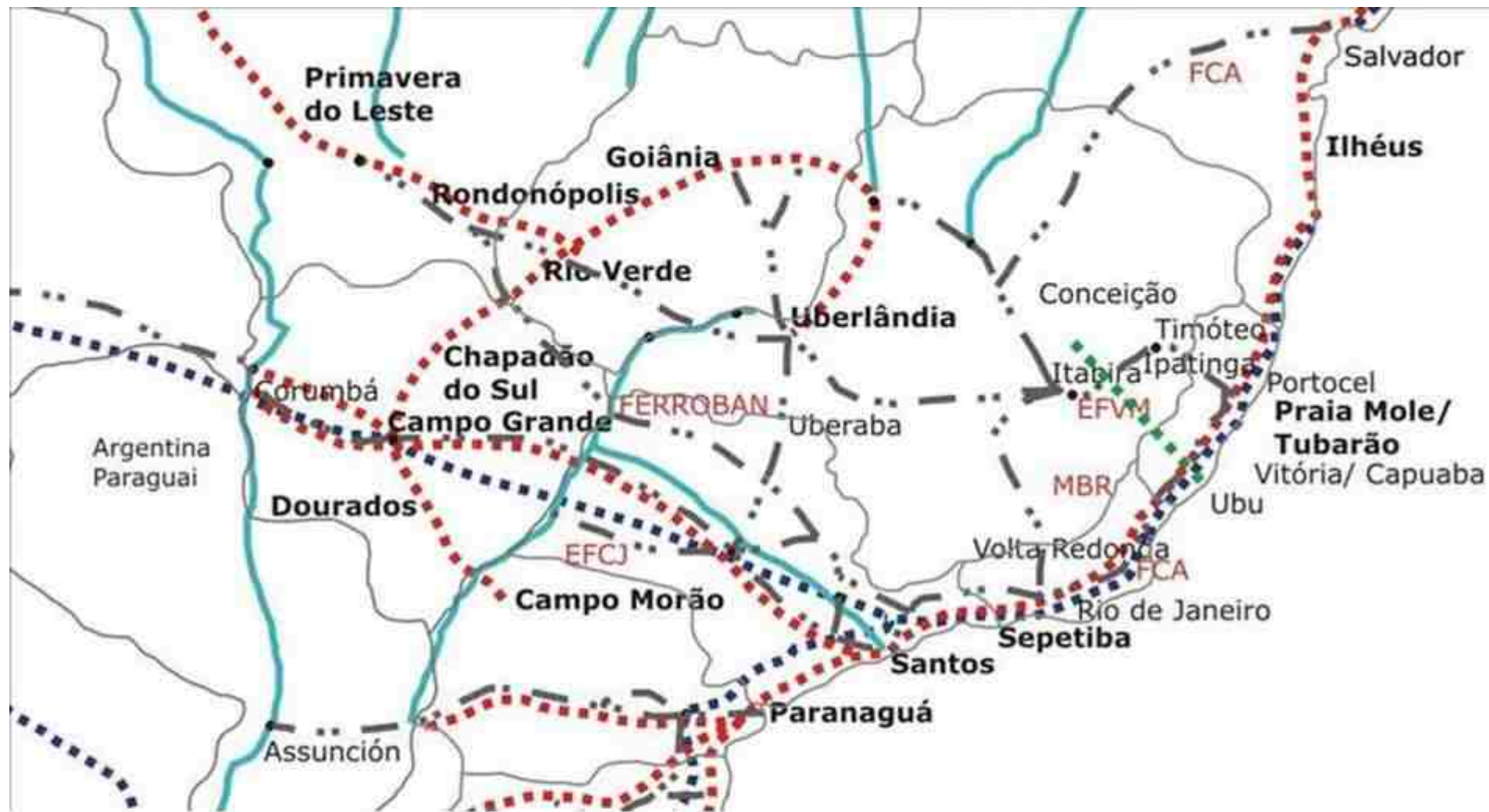
Port sector of Vila Velha and Cariacica

Densely populated areas
with intense load traffic.

Expansion of the informal
occupation.

Reserves for location of
productive activities.

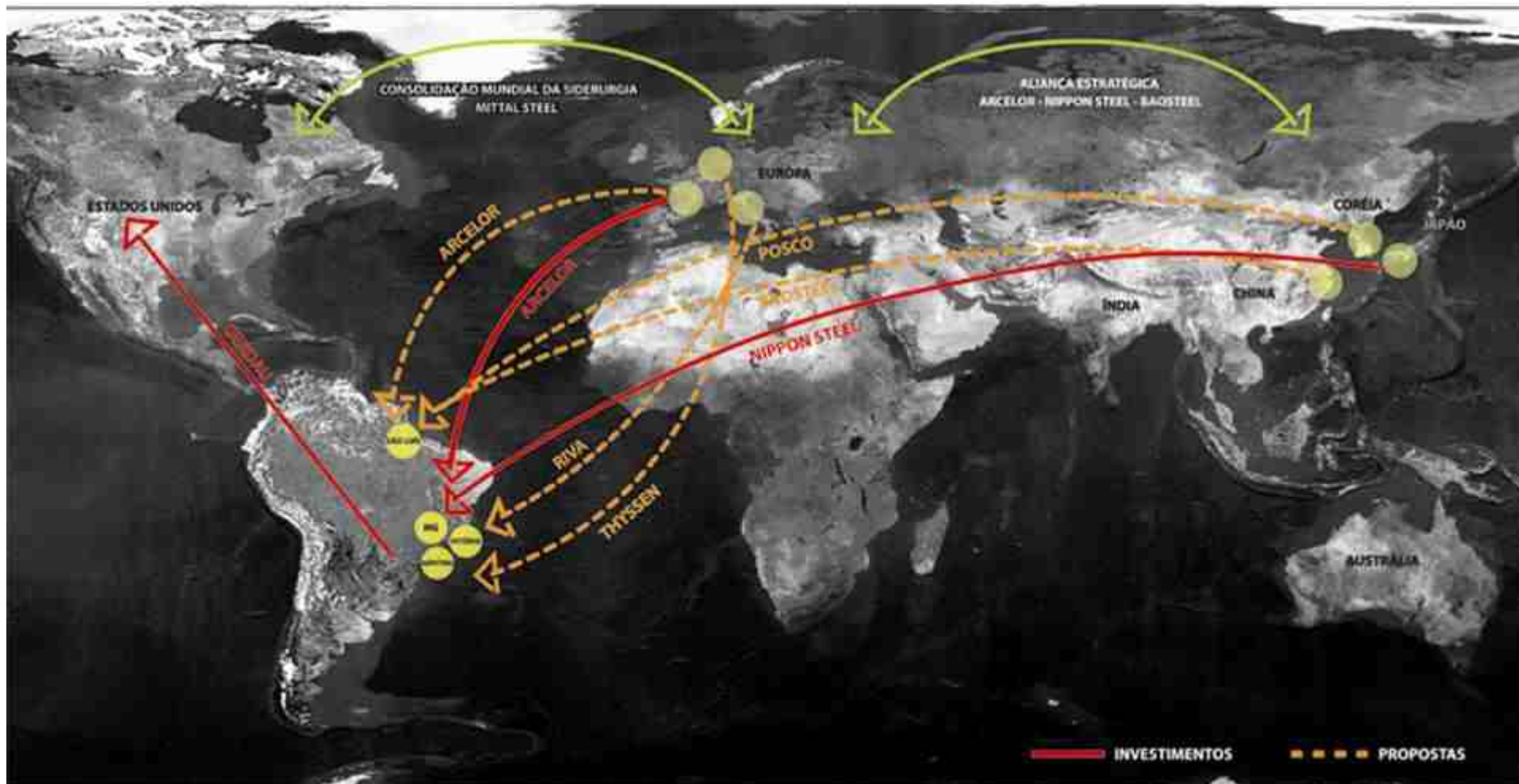




Impacts of the agribusiness exportations in the MG/ES region.

The draining of the grains production through the railroad and port systems, creates a new territoriality, at national scale.

The MG/ES system can only be understood within its international articulations. The technological, financial and commercial operations that set an intricate and changeable network, enlarged in global scale.



www.mges-brasil.org