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**Conference Paper**

## Transport organization and economic development of an European peripheral region: the case of Sicily

43rd Congress of the European Regional Science Association: "Peripheries, Centres, and Spatial Development in the New Europe", 27th - 30th August 2003, Jyväskylä, Finland

**Provided in Cooperation with:**

European Regional Science Association (ERSA)

*Suggested Citation:* Ruggiero, Vittorio; Scrofani, Luigi (2003) : Transport organization and economic development of an European peripheral region: the case of Sicily, 43rd Congress of the European Regional Science Association: "Peripheries, Centres, and Spatial Development in the New Europe", 27th - 30th August 2003, Jyväskylä, Finland, European Regional Science Association (ERSA), Louvain-la-Neuve

This Version is available at:

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43rd Congress of the European Regional Science Association  
27 - 30 August 2003, Jyväskylä (Finland)

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TRANSPORT ORGANIZATION AND ECONOMIC DEVELOPMENT OF AN EUROPEAN  
PERIPHERAL REGION: THE CASE OF SICILY\*

Abstract: Transport and communication are the pivots of the socio-economical development and, in particular, of the tourism increase, in such a peripheral area as Sicily. The most recent changes in the transport sector are: a) the creation of integrated trans-national networks, based on specific systems such as the inter-modality transport one and the hub and spoke one; b) the solution of the conflicts between transport development and environmental impact. These changes lead to the constitution of global logistics networks which encourage the competitiveness between regions and local systems. In this paper the authors focus on the measures Sicily has adopted to cope with the effects of these changes and to modify its economy in the context of the Euro-Mediterranean area. Moreover, they analyse the influence of the EU political choices on Sicilian plans and how Sicilian people responsible for these projects can employ the EU funds.

1. Post industrial economy and post-modern society have deeply affected the territorial organization, changing its traditional polarized structure. These changes have produced systems of relations which extend all over the territory like networks, connecting the local and regional levels to the global one. The structures allowing the development of such systems of relations are the “real” and “virtual” networks (transports, communications, telecommunications) which, with their access nodes play a strategic role, contributing to the redefinition of urban and rural spaces and their relations. The regional and local networks are connected to the global ones through the intermediary

role of the higher level nodes, where the functions of excellence are concentrated (OECD, 2002).

The reticular paradigm, however, doesn't extend throughout a continuous Euclidian space, which is made up of relations of contiguity and proximity, but throughout a discontinuous space. This new pattern involves places, which are linked by functional, long distances services, giving rise to flows of different kinds. A space which is "geometrically variable", i.e. a space which varies with the variations of the nature and features of the networks. The networks, in their turn, develop continuously under the pressure of innovations and new technologies, which on the one hand dramatically reduce the distances and the costs of transport, on the other foster centrifugal and centripetal forces.

The centrifugal forces stimulate the development of the networks and the thickening of both the number of the nodes of the network and the local and regional links. This widespread expansion of networks and links covering the territory provides new opportunities to the peripheral and marginal areas, contributing to:

- a) the decentralization of intermediate and lower level activities, functions and services;
- b) the reduction of hierarchical dependences;
- c) the functional specialization of intermediate and lower levels centres.

The centripetal forces, on the other hand, foster the processes of selective centralization, thus strengthening the role of the strategic nodes of interconnection with the global networks. These nodes correspond to higher level towns, which have authority and leadership functions and provide technologies innovations, financial, cultural and rare services. The possession of all these functions increases the importance of the towns and allows them to achieve a global dimension.

The establishment of this reticular paradigm has some direct consequences: first of all, the relations among the nodal centres depend lesser and lesser from the distance and more and more from their ability to interact; secondly, the central or peripheral role of a region depends lesser and lesser from its geographical position and more and more from:

- a) the presence of nodal centres;
- b) their hierarchical level and their relations inside the network;
- c) the possibility and the ability to access to the highest level nodes.

Moreover, as to the transport, it is essential to remark that the fundamental tendencies, which are already being carried out, lead to the constitution of local, regional and global logistic networks, that is complex systems which have an important role in the development of competitiveness and efficiency in a territorial system. These logistic networks are organized according to the big sectors they serve, and their evolution is the result of the following processes:

- a) integration of transports, telecommunications, infrastructures and services, including manipulation, stockpiling and storage of the goods;
- b) development of the cooperation between public and private participants, deregulation, privatisation, and competitiveness.

Other important innovations contribute to the development of these logistic networks, including:

- a) the technical improvements of the means of transport and the infrastructures;
- b) the development of the complementarity's synergies among the different means of transport;
- c) the development of the interconnections, the multi-modalities and the inter-modalities;
- d) the technical standardization of the infrastructures (which improve the interoperability among the networks);
- e) the concentration of the interventions on main roads and railways (multi-modal passages) and the constitution of *hub* and *spoke* systems;
- f) the increase in efficiency which leads to the improvement in transport sustainability and the decrease in the conflicts between development and environmental protection.

In this context, which is marked by a fast and continuous evolution, Sicily has to increase the quality of its services, in order to get out of its peripheral position: the strategies to improve the transport and the regional communications should develop together with the processes concerning the Euro-Mediterranean networks and their nodes of excellence (Benhayou, Menipaz, Lheritier, 2001). These economic, political and technological processes depend, most of the times, on the choices made by the European Union. At the same time, Sicily has to rise the level and the ability of interconnection among its nodal centres, in order to get out of their marginal role in the context of the national and Euro-Mediterranean networks. The alternative provided for

Sicily is to remain not only peripheral as to Europe but also to the Mediterranean where the island, from the geographical point of view, occupies a central position. We can't ignore, in fact, that Sicily is now excluded from some of the most important Euro-Mediterranean multi-modal corridors and land-bridge (European Communities Commission, 2002; Ridolfi, 1996).

The changes which are being carried out both in the global context and the Mediterranean region can provide elements which are undoubtedly positive to re-launch transport in Sicily, giving the Island new opportunities.

In particular, the shifting of the economical core from the Atlantic to the Pacific and the political and economical growth of the countries near the Mediterranean, have fostered the regional Mediterranean trades and the amount of goods in transit. The new central role of this area, where cabotage and international intra-Mediterranean trades grow rapidly and where, at the same time, the functions of transit among Far Eastern, Australia, the Persian Gulf and Europe and between Europe and the U.S.A. extend, provides Sicily with the opportunity to find its old vocation again, being the island the crossroad of three continents (Kopecky, 2002; Campione, 1996).

Not to mention the development of the tourism in the Mediterranean area. Unfortunately in Sicily, cruise and pleasure boating tourism in particular can't expand because the calls are not well equipped; they lack of structures and services and the indispensable reciprocal synergies are not well developed.

The new central position of the Mediterranean is confirmed by a the fact that inter-modal trades and structures built to store the big, transatlantic, *round- the World* container ships, the *transshipment* are now extending in the Mediterranean, while in the past these services were only concentrated in the regions facing the Atlantic and the North Sea, i.e. regions with a particularly developed hinterland. Indeed, an increasing number of Mediterranean seaports, first of all Algeciras, Barcelona, Marseille, Genoa and Leghorn but also Gioia Tauro, Taranto and Cagliari have already developed a multimodal system involving harbours, inland terminals, teleports, airports and the main road and rail networks. These towns, now, ask for their integration in the multi-modal system called *Trans-European Network* and in its inter-modal corridors, in order to balance their traffic in relation to the harbours in the North Sea (European Communities Commission, 2002).

In this changing context, even the biggest Sicilian harbours have taken advantages: in the last years their traffic (especially container's traffic) has been continuously

increasing, especially the passage of the container ships. Further remarkable advantages, however, can be taken if only we raise the planning and the organizational level of the system of transport in the Island. Sicily should be equipped with at least, two pivots: two “Multi-modal platforms having complex functions”, that is endowed with highly integrated structures (harbour, airport, interports, road-rail inter-modal systems) and having an entrepreneurial organization, in order to reduce the risk of intermediate reloading and carry out nodal functions in the context of the multi-modal national and Euro-Mediterranean corridors.

The urge to create infrastructures of this kind but also to start a serious planning to guarantee a constant development is particularly relevant, especially if we consider that Sicily hasn't taken advantages from the political choices of the European Union so far. Moreover, at the moment, the most important criteria of revision of the European Union policy, which are expressed in the *European Transport Policy for 2010: Time to decide*, don't suggest substantial changes.

Sicily, in fact, hasn't been included so far in the studies started by the Commission concerning the planning of new multi-modal corridors of transport along North/South and East/West directions (ten multi-modal corridors have been planned; two of them include Italy but none includes Sicily).

Therefore, it's clear that the dangers of marginalisation which threatens Sicily don't come from its geographical position and distance but rather from the lack of planning aptitude and from the inability to turn the projects into concrete actions. Operative projects should be developed in order to connect the Sicilian inter-modal nodes to the big system of networks (which are being created or consolidated), linking Europe to the Mediterranean. Moreover, the inter-modal nodes should be also increased so as to include, on the one hand, local and regional functions and, on the other, be linked to the big Euro-Mediterranean networks. In addition, we must mention the problems Sicily shares with other European peripheral areas, concerning the standardization of the existing infrastructures, the delays in building new structures and the vulnerability of the links in a time of deregulation, competitiveness, and privatisation (the carriage of goods by rail in the European Union countries will be soon liberalized completely, while the liberalization of the transport of passengers has been postponed to 2008).

We can't ignore, furthermore, that Sicily has been cut off from the national Frame Programme about High Speed Trains: it means that the island, for at least a decade, will be excluded from the work to build the new high speed railways and, as a consequence,

from all the other agreements connected to that Programme, such as the reclamation of the urban railway areas and the functional integration of the nodes among the metropolitan and suburban lines of public transport.

The opportunity to improve this difficult position, in the context of the Trans European Networks and the High Speed Trains, is partially provided to Sicily by the Interreg III (2000-2006) programmes, which concern the planning of the territory and the social and economical cohesion. The objectives of this programme, in general, are to increase both competitiveness and a balanced development of the European space. A particular importance is also given to the trans-European cooperation, according to the Scheme of Development of the European Community Space (SDEC), which aims at the creation of a polycentric Europe. These programmes include:

- 1) the trans-frontier cooperation among neighbouring regions (*Interreg III A*);
- 2) the trans-national cooperation (*Interreg III B*);
- 3) the inter-regional cooperation (*Interreg III C*).

However, the most important project involving Sicily is the trans-national cooperation in transport system, whose aim is to strengthen the South Mediterranean part of Europe. It will support, in particular, the process for the creation of a free trade Euro-Mediterranean area, according to the programme of the Euro-Mediterranean Partnership (Declaration of Barcelona). The most important points of the plan are the followings:

- A) Interreg III B Medoc, which concerns strategies for the development of a “Western Mediterranean” space, consisting of 13 regions of Spain, 2 of Portugal, 4 of France, 13 of Italy (Basilicata, Calabria, Campania, Emilia and Romagna, Lazio, Liguria, Lombardy, Umbria, Piemonte, Sardinia, Sicily, Tuscany and Val d’Aosta), Gibraltar and 2 the Swiss Canton (being Switzerland associated to the programme);
- B) Interreg III B Archi-Med, whose general goal is to set up an international cooperation and a territorial integration of the “Middle Eastern Mediterranean” space which includes two areas:
  - 1) the Middle Mediterranean, comprising southern Italy (Sicily, Calabria, Basilicata, Puglia, Campania) and Greece;

- 2) the South- Eastern Mediterranean, comprising Cyprus, Malta, Turkey, Lebanon, Syria, Gaza, Israel, Jordan, Egypt and Libya; these countries, except Libya, have all made agreements with the EU relating to the Euro-Mediterranean cooperation.

The first programme, which has six priority sectors of Action, includes among the Measures of the group III (1, 2, 3) specific interventions in the transport system and, in particular: a) the development of systems of transport to improve the access to the territories; b) the promotion of the inter-modal transports and the conversion into means of transport which are more respectful of the environment; c) the development of the transport by sea and by river.

Also the second, Interreg III B Archi-Med, includes among the five main priorities some interventions to improve the transports and communication networks (Measures of group II). These priorities are essential for such an area as the Middle Eastern Mediterranean which, though peripheral and extremely fragmented in islands and peninsulas, is nonetheless a space of meeting and cooperation with the regions of North Africa and Middle East. The aim of the Group II of this programme is the creation of a flexible, competitive, integrated system of combined transport. The pivots of this system will be the harbours, whose role is to balance the traffic flows of goods between northern Europe and the Mediterranean. This system of transport should reduce the territorial discontinuity of the Archi-Med space and strengthen its most important nodes, in the perspective of a greater unity of this area and the development of its competitiveness in relation to the most developed European regions. As a matter of fact, one of the most important goals of Archi-Med is to improve the access of the European networks of transport, energy and information to the Middle and Eastern Mediterranean. This aim should be achieved by:

- 1) strengthening the role of the harbours and the airports, which represent the most important accesses to this area and also improving their links with the hinterland;
- 2) improving the integration among the European, national, regional and local transports;
- 3) developing combined transports and inland sea links, which connect the secondary networks and mainly the islands and the coast areas;



- 4) improving the organization of transports and communications, taking also into account the priorities of the neighbouring regions, considering that we operate in the context of an united Europe;
- 5) using advanced telecommunication services so as to cope with the problems caused by space discontinuity, isolation and distance;
- 6) improving the access to the peripheral and isolated spaces, which have maintained the attractiveness of the natural environment, in order to draw important activities of the tertiary sector.

Other opportunities will be provided by the *Marco Polo* new Community programme, which is indicated in the White Paper. Such programme, concerning the “concession of financial Community contributes to improve the environmental performances of the system of the freight”, wants to support until the year 2010 the initiatives in order to relieve the growing goods traffic congestion, through the development of the cabotage, the railway and the transport by river.

The actions supported by the *Marco Polo* programme, involving partners coming at least from two different countries, aim mainly at transferring part of the goods, corresponding to the estimated growth rate of the international transport by road, to the short-range transport by sea, inland navigation and railway. The programme includes three steps:

- 1) the support to the starting stage of new services for the carriage of goods, which are alternative to the transport by road and can become profitable in the medium-term period (actions of transferring);
- 2) the support to the launch of new services and structures of European interest for the carriage of goods (catalytic actions);
- 3) the incentives to stimulate the cooperation in the logistics market for the carriage of goods (common actions of learning).

Relevant opportunities are also provided by the programme the European Commission has included in the Euro-Mediterranean Partnership, whose aim is to achieve the goals of the Declaration of Barcelona. According to such Declaration, which was signed in 1995 by 27 countries, the Mediterranean will have to become an area of dialogue, exchange and cooperation. It also advocates the creation of a zone for the free flow of capitals, goods and services in 2010.

The Euro-Mediterranean Partnership has so far developed at a national scale, through bilateral agreements between different countries and the European Union, which are financed by MEDA funds. However, the MEDA budget, which has been established by the European Union to finance the implementation of a Euro-Mediterranean partnership, also provides local authorities with the opportunities to suggest proposals and projects. Apart from tourism, energy and environment, among the sectors of priority interventions for the economic and financial, regional Euro-Mediterranean cooperation, we can mention transport by air and by sea and, in particular, projects concerning the links between the Mediterranean and the trans-European networks and between the European Region and the rest of the world.

These priorities, and in particular the one concerning the transport, were confirmed during a Conference in Malta in 1997 held by the Foreign Ministers of the twenty seven countries which had signed the Declaration of Barcelona. They were included in the Communication (September, 6<sup>th</sup> 2000) of the European Commission to the Council and to the Parliament and approved by the IV Conference of the Foreign Ministers of the 27 countries (Marseille, 15<sup>th</sup> and 16<sup>th</sup> December 2000) and, at last, by the European Council in Nice (7-9 December 2000). In this context, the Commission has included the following measures:

- A) the support to the reform of the system of transport in the Mediterranean Third Countries (encouraging, on the one hand, the abandonment of inadequate policies, which are based on the excessive intervention of the State, on a scarce competitiveness and inadequacy of the laws and, on the other, the creation of an area that can draw private investments);
- B) the development of an efficient, multi-modal, trans-Mediterranean, integrated system of transport (both developing the infrastructures and simplifying the procedures to liberalise the services);
- C) the development of South-to-South links;
- D) the implementation of the connection and the efficacy of both the Mediterranean Transport and the Tran-European Networks ( at the moment, the only activity carried out in this sector is the extension of *Galileo* global system of navigation by satellite in the Mediterranean area. *Galileo* will have practical effects on traffic management, environmental protection, safety and efficacy of the means of transport).

In order to achieve these goals, the programme MEDA II has been established. It will finance studies to assess the feasibility of the project; while BEI will provide funds for the structural interventions.

Moreover, MEDA programme includes another project (MEDSTAT) to help the cooperation among the statistics institutes of the Mediterranean countries, which is coordinated by Eurostat (Medstat has launched a project in the Transport industry, called “Med-Trans”, in order to arrange statistical data on the transports and create a databank relating to the Transports in the Euro-Mediterranean area).

2. As to Sicily transports, we have to remark that national and regional policies have been offering some perspectives of development: the new PGT (General Plan for Transports and Logistics Services), for example, proposes strategic goals and plans to achieve them. This plan insists on the great opportunity for the southern part of Italy and Sicily to exploit the sea routes, so developing a multi-modal and inter-modal system of transport. In particular, a strategic importance has been given to the inter-modal transport, considering the very high handlings of goods on the routes in the long distance, caused by the trades in the southern part of Italy and Sicily (with high costs and reduced profit margins for the companies, congestion of the routes and motorways, increase in roads accidents, due to the growing traffic, and raise of the pollution levels). Among the above-mentioned priorities, in fact, there are some projects concerning the implementation of “Sea Motorways”, that is an integrated system of services of transport through *Ro-Ro* and *multipurpose* ships for the carriage of goods and ferryboats having different functions. These projects can be achieved by an adequate use of telecommunication and the agreement of the principal participants involved (maritime and road haulage Companies, Port and Maritime Authorities, public Administrations and local Authorities). This choice is shared by the European Union (Resolution of the Council of 14.02.2000) which, starting from the year 2003, will assign resources to the projects concerning the “Routes of the Sea”, and the development of the combined transports and the inter-modality (some projects, which are supported by the EU, have been carrying out. They concern collecting and exchanging centres, which are located near the towns and connected to logistics centres), in order to support the development of the Southern Regions and the Islands.

An important role to improve Sicilian transports is also played by: a) some of the greatest and most remarkable national infrastructures, which are included in the “law target” on public works (this law, whose final version was approved in December 2001, has completely changed the rules; it has accelerated the procedures both to obtain the authorizations to carry out the most important public works, considered as strategic targets, and the financial participation of the private investors); b) the infrastructures, that have been first financed by the Sicilian Region, according to the APQ (i.e. Frame Programme Agreements, which have been stipulated on the basis of the Institutional Programme Agreement between the National Government and the regional Council of 13/09/1999), some of which are included in the SNIT network (Integrated National System of Transport); the infrastructures included in the POR Sicily and in the programmes of the Region-Muir agreements. We just mention:

- a) the doubling of the most important Sicilian branches of the National Longitudinal Tyrrhenian Railway; the updating of both Catania, Messina and Palermo urban railway junctions and of Palermo-Cefalù-Catania railway (which should be included in the next agreement between the Region and State Railways) (SviluppoItalia, 2000);
- b) the updating of Salerno- Reggio Calabria- Messina- Palermo- Catania motorway and the finishing of Catania-Syracuse and Syracuse-Gela motorway links;
- c) the enhancing of Catania, Palermo, Messina and Pozzallo harbours and, in particular, of the structures concerning the growing Roll On-Roll Off trades;
- d) the enhancing of the infrastructures of Catania and Palermo airports;
- e) the enhancing of Catania-Bicocca and Palermo-Termini Imerese inland terminals which are considered essential for the development of the inter-modal trades and the creation of two multi-modal platforms to re-launch the logistics capabilities of Catania and Palermo (Ruggiero L., 1995).

A particular role can be assigned to these two inland terminals: they are, in fact, included not only in the PNT (National Plan of the Transports and Logistics) and in the PRT (Regional Plan of the Transports) but also in the Plans of development of the Regional Provinces of Catania and Palermo. In fact, they should become the pivots of the whole system of the Sicilian carriage of goods and the traffic of the lower level structures should be directed towards them, that is the inter-modal Centres, located at

the convergence of the other busy parts of the island, and the Customs Vehicle Inspection Areas.

Indeed, the opportunity of development for these two inland terminals are rather relevant if we consider the development of the traffic and the various functions they will carry out to enhance the trades of the specific Sicilian agricultural and industrial products (the production of citruses, fruits and vegetables and table grapes have to cover distances which are comprised between 800 and 2000 Km to reach the European and the Italian markets located in Fondi, Bologna, Verona and Milan). The inland terminals of Biccoca and Termini Imerese, in fact, should become collecting centres and also offer structures and high level services for the handling, treatment, storage and packing of goods. The functions of these two inland terminals can be summarised as follows:

- 1) to make the carriage of goods through the different means of transport fast and cheap, in order to enhance their mutual inter-connections and the specialization and efficiency of each of them ( taking advantage of the cheapness and the low environmental impact of the transport by sea and the railway on the long distance and developing the transport by road in the whole territory);
- 2) to encourage the constitution of transport companies having a strongly integrated business structure, so as to manage the whole cycle of transport; to develop the cooperation among the categories working in the carriage sector and reduce the excessive splitting of the working activities by rationalising the supply and meeting the demand in a more easily way; to attract the great national and international operators in the inter-modal sector and strength the collateral services of transport;
- 3) to allow the clearance of goods at their destination in order to expedite the administrative and custom procedures and avoid the waste of time at the frontier stations;
- 4) to facilitate the transferring of functions and activities connected to the carriage of goods (like storage, collecting, delivery, etc.) from the companies to the structures of the harbours, in order to reduce the charges and the investments of the companies;
- 5) to attract new activities which can be interested in the potential supply of services connected to the transport and strength the commercial and productive functions of Catania and Palermo's territories;

- 6) to relieve the congestion of the towns, diverting the traffic of heavy motor vehicles out of the urban areas;
- 7) to divert the services of transport so as to help the reclaiming of the peripheral and marginal areas and their economic integration;
- 8) to re-organize and rationalise the local and sub-regional system of carriage of goods, reducing times and costs, in relation to the transport of both little parcels and cargos.

In practise, the two inland terminals in Sicily should constitute the core of those Logistics Centres, which are characterised by the inter-modality and inter-operability among road, railway, sea and air networks and which are destined to play an important role in relation to the Euro-Mediterranean networks. Obviously, the creation of structures of such level causes many structural and organizational problems and, on a local level, it requires the union of entrepreneurial groups and companies which can cover the different segments in the cycle of transports, developing relationships with international operators.

The creation of these two multi-modal platforms could not only provide a wide varieties of services but it would give a contribution to the increase of new employment and the development of specific entrepreneurial abilities; it would also allow Sicily to adapt to some of the most important European Union decisions. The Union, in fact, in order to avoid the problems caused by the transports of goods by road (high energy consumption and high social costs, caused by pollution, traffic congestion and accidents) and to deal with the restrictive measures concerning road haulage in transit, taken by Switzerland and Austria (which could obstacle the development of North/South trades), has focussed on the inter-modality and the inter-connections among the networks so as to balance the trades and to make the increasing goods traffic in Europe sustainable.

Moreover, we can't ignore that the cooperation among harbours, inland terminals, airports and the most important railway and road branches, after having expanded in the European regions with a particularly developed hinterland (like the area from the Atlantic to the North Sea), is now involving the Mediterranean area. This is due to the renewed centrality of this sea, which is crossed by an increasing number of "*Round the World*" oceanic container ships. These ships call at one harbour, from where the containers are sorted out in the whole Mediterranean using cellular ships or railway and the road systems, reaching sometimes even the central Europe. The activities of these transshipment harbours is strengthened by the support of inland terminals structures

which operate in the near hinterland; they are inter-connected to both sea and air terminals, and to national and European networks of transport by road and by rail. These inland terminals have become important benchmarks for the great organizations of international transport, because it is there that the inter-exchanges of goods are carried out.

In a long-term perspective, two other infrastructures will probably give a great contribution to innovate the Sicilian transport system. They are:

- the Bridge on the Straits (which seems to be definitely approved by the Government), which should improve the traffic by road and by railway, linking the island to the continent
- the new intercontinental airport, which is now under consideration and should be built in Catania Plan. This airport, with the progressive liberalization of the transport by air, should allow eastern Sicily to be directly linked to the other Mediterranean and European regions.

Lastly, we have to mention the Regional Plan on Transport and Mobility (which is constituted of the Master Plan, the Implementation Programmes and the studies of feasibility) which confirms the commitment of the Region in relation to the principal road and railway branches of the island, the inland terminals of Catania and Palermo, the development of the inter-modality and logistics and of the “Sea Motorways”. Moreover, the Regional Plan meets the goals of efficiency, environmental safeguard and the hypothesis of privatisation and contribution of private capital.

\* Although this work is fruit of the combined research of the two writers, the first part was written by Vittorio Ruggiero, the second part by Luigi Scrofani.

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