



POTENZIAMENTO METAPONTO - SIBARI - PAOLA (BIVIO S.ANTONELLO): FASE PRIORITARIA

Quick Appraisal Report

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QUICK APPRAISAL REPORT

**POTENZIAMENTO METAPONTO - SIBARI - PAOLA (BIVIO
S.ANTONELLO): FASE PRIORITARIA**
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Unit G4

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1 INTRODUCTION

1.1 Project Appraisal Fundamentals

This Quick Appraisal (QA) is prepared in accordance with the “QA Check List” for the assessment of applications for funding of major transport projects, agreed with the EC – Directorate General Regional Policy Financial Greffe REGIO.

The objective of this QA is to support a constructive dialogue between the EU and the Applicants providing recommendations and suggestions, based on an in depth analysis of the application form and annexed documentation.

The structure of this report is in line with the sections and headings of the Quick Appraisal Check List and the Investment Application Form.

Along with the description of the findings of the analysis in each Chapter or Section of Chapter in relation to which: a) the quality of the information provided and available is not satisfactory, or b) the quality of the project is deemed to be improved, or c) the methodological and technical solutions adopted to undertake the CBA analysis, demand studies and project design are deemed as not adequate or reliable, the comments are highlighted in a recommendations and suggestions box.

In the concluding remarks Chapter we summarize the main findings of our appraisal commenting on the essential elements of the project, and suggesting any potential solution that can improve its quality according to the findings of the analysis as appropriate. This section highlights any important issue that should be considered before the Commission can approve the project.

1.1.1 Applicant and project managing authority

The Applicant is the Ministry of Infrastructure and Transports (*Ministero delle Infrastrutture e dei Trasporti*) who is responsible for implementing the principles and objectives set in the 2007-2013 ERDF National Operational Programme ‘*Reti e Mobilità*’.

The Beneficiary of the project is the Infrastructure Manager (*RFI - Rete Ferroviaria Italiana SpA*) which is the entity responsible for the management and development of the Italian rail network.

1.1.2 Documentation available

The application documents made available in electronic format through the CIRCABC Library of the European Commission include the following:

- Application Form (Annex XXI) including Project GANTT Chart;
- Declaration from the authority responsible for the supervision of *Natura 2000* sites and related Map;
- Cost Benefit Analysis;
- Environmental Impact Assessment Screening related documentation produced by National and Calabria Region Environmental Authorities

The project dossier is complete and complies with the EC Regulations. The information provided is consistent with Art. 40 of Reg.1080/2006, Annex XXI and Commission Regulation 1828/2006.

2 PROJECT STRATEGY AND OBJECTIVES

2.1 Project description and strategic objectives of the project

The investment under appraisal regards the improvements of the *Metaponto-Sibari-Bivio S. Antonello* railway line. The implementation of this project will enhance the performance of the railway infrastructure network between the *Calabria* and the *Puglia* Regions by increasing the commercial speed of the trains and the capacity of the railway line from 17 trains/day to 61 trains/day.

The major project is one of the key actions identified in the 2007-2013 ERDF Operational Programme “*Reti e Mobilità*” and contributes to the realization of the objectives of the priority axis II – *Potenziamento delle connessioni tra direttrici, nodi e poli principali dell’armatura logistica delle aree Convergenza*. The strategic importance of the project is described in *Linea di intervento II.1 – Rafforzare le connessioni interne al sistema logistico portante e tra questo e i poli produttivi locali* – and more in detail in *Tema prioritario 1: Potenziamento dei collegamenti ferroviari*.

The project is expected to reduce travel time on the railway network, thus improving the quality of railway services in the region and therefore representing a basic condition to support modal shift from road to railway. This is in line with the White Paper *European Transport Policy for 2010: decision time* and with the Europe2020 flagship initiative – *Un’Europa efficiente nell’impiego delle risorse*. The investment represents the connection link between the TEN-T network corridors (*Corridoio I – Railway axis Berlin-Palermo* now extended to the new *Helsinki-La Valletta* corridor – and *Corridoio 21 – Motorways of the sea of South East Europe*) and also between the two regions of *Calabria* and *Puglia* – thus possibly enhancing their economic development, in any case improving the inter-connection between North and South Italy.

However, according to the *Trenitalia* rail operator web site¹, passengers train services from *Metaponto to Sibari* have been replaced by bus operated services since December 2012, with the start of the new service programme for the year 2013.

According to some information publicly available², the Transport Councillor of the *Calabria* Region – *Luigi Fedele* – declared that this decision reflects the difficult financial situation which is, in turn, the result of a significant limitation of funds granted by the State.

This spending review was imposed by the article 9 of the recent Italian law n° 228/2012 (*Legge di stabilità*) – pending for approval – which states that the Regions are requested to reorganize the public transport and local/regional railway services, rescheduling those with low demand and also replacing the transport modes with poor value for money.

More importantly, the Regional Councillor *Fedele* pointed out on the case of the *Sibari-Metaponto* railway line which had an average load factor of 30 passengers per train, and therefore did not justify the use of the railway transport mode on the basis of a revenue/cost ratio criterion.

This current scenario, if persisting, would affect the overall scope of the investment as the main strategic objectives of the project would not be achieved. It is in also worth noting that it contrasts with the assumptions adopted for the preparation of this application for funding. Although we understand that the project is also expected to be a beneficial one for freight transport, the CBA analysis shows the majority of the benefits are related to passengers’ transport.

¹ www.trenitalia.it

² <http://www.ilquotidianoweb.it/news/cronache/709465/l-treni-non-passano-piu-sulla.html>

Regarding freight trains on the line, we notice in any case that only 1 train per day is currently operated. The number of freight trains is expected to increase over time up to 7 per day although no strong and relevant information is actually provided to support this hypothesis. We assume this is related to the implementation of the *Polo logistico intermodale di Gioia Tauro* project; however this was not properly commented in the application dossier. A tender for the implementation of the *Polo logistico intermodale di Gioia Tauro* through a PPP scheme is expected to be launched. If this project will not be implemented, the strategic merit of this investment is in our opinion seriously compromised.

2.2 Project description

The *Metaponto-Sibari-Bivio S. Antonello* major project is expected to improve the effectiveness and efficiency of the train services on the railway network managed by RFI in the *Calabria and Basilicata* Regions.

The infrastructure is expected to be a beneficial one for freight operators using the railway line to move goods from the *Gioia Tauro* Port to the *Taranto* Port then continuing towards the North of Italy through the *Adriatic* corridor.

Also, the project will be beneficial to the inhabitants living in the *Cosenza* Province where the 36.5% of the total population of the *Calabria* Region is concentrated, and to the manufacturing system active in *Calabria* and *Puglia*. Actually, the investment aims to achieve greater economic competitiveness due to the increased accessibility to markets and improve the quality of life thanks to the air pollution reduction due to modal shift from road to rail.

At the current state, the project infrastructure of the *Metaponto-Sibari-Bivio S. Antonello* railway line is an electrified single track of 134 km in length which is not uniform along its sections presenting out-dated installations in-between modern ones; the improvements are aimed at modernising the whole railway line. According to the application form (page 6), the overall project of the railway line was divided into two operational phases or sub-projects (*Sottoprogetto*) which are technically and functionally independent, as appropriate. The first one – *Sottoprogetto 1* or First Priority Operational Phase – is the project subject of this appraisal whilst the *Sottoprogetto 2* consists in the construction of a new line segment out of the existing alignment – the *Roseto* rail track totalling 9 km length.

Figure 1 Rail infrastructure managed by RFI in the North of the Calabria Region



Source: RFI http://www.rfi.it/cms-file/immagini/rfi/CALABRIA_GIUGNO_2012.pdf

The First Priority Operational Phase is further split into 4 operational works or *Lotti* which are located only in the *Calabria* Region. Figure 1 above shows the rail infrastructure of the northern part of the *Regione Calabria* and Figure 2 below illustrates the entire railway line of the *Metaponto-Sibari-Bivio S. Antonello* project also highlighting in different colours the two operational phases (blue for the *Sottoprogetto 1* and red for the *Sottoprogetto 2*).

Figure 2 The Metaponto-Sibari-Bivio S. Antonello major project



Source: Annex XXI

Table 1 below summarizes the description of the investment project with the detail of the four different operational works (*Lotti 1, 2, 3 and 4*).

Table 1 *Project Description – Works under the First Priority Operational Phase*

Operational Works included in the First Priority Operational Phase	Description
Operational Work 1 (<i>Lotto 1</i>) <i>Adeguamento della Linea di Contatto</i>	Improvements of the electrified line technology from 320 sq.mm to 440 sq.mm in the <i>Castiglione Cosentino-Trebisacce</i> track (about 70 km), except for the sections affected by deviations of the track, and simplified installations in <i>Spezzano Albanese, Mongrassano and Montalto</i> .
Operational Work 2 (<i>Lotto 2</i>) <i>Adeguamento impianti Di Rocca Imperiale, Amendolara, S. Marco Roggiano</i>	Upgrade of the rail dock length (modulo) for freight trains up to 750 m in the <i>Amendolara</i> station in order to standardize the infrastructure, speed up routes to 60 km/h, building pedestrian underpass and platforms (H= 55 cm and L=150/250 m), simplified installations in the <i>Amendolara, Rocca Imperiale and San Marco Roggiano</i> stations.
Operational Work 3 (<i>Lotto 3</i>) <i>Interventi in Variante a Cassano, Tarsia, Torano</i>	<p>Track re-alignment (about 10.5 km) in <i>Cassano, Torano</i> and <i>Tarsia</i> with reconstruction of the rail infrastructure: road structure, electric traction installations (ET), rails and ties, hydraulic and drainage works, modification and upgrade of Safety, Signalling and Telecommunications equipment.</p> <p>New metal girder spans for a total of 5,260 m (on the river <i>Esaro</i> in correspondence with the track re-alignment in the area of <i>Tarsia</i>).</p> <p>Disposal of the <i>Torano's</i> level crossing and modification of existing local road infrastructure.</p> <p>Upgrade of the rail dock length (modulo) for freight trains up to 750 m in the <i>Torano</i> station; also construction of the pedestrian underpass and service platform (H=55 cm and L=50/250 m).</p> <p>Creation of the <i>Tarsia</i> railway station stop with the construction of the service platform (H= 55 cm and L=150/250 m).</p> <p>Closure of the <i>Cassano</i> installations.</p> <p>Repositioning of two level crossings in the areas of track deviation and re-alignment.</p>
Operational Work 4 (<i>Lotto 4</i>) <i>Variante di Acri</i>	Disposal of the level crossing, with modification of existing local road infrastructure, at Km 50 +056 close to the <i>PM-Acre Bisignano-Luzzi</i> railway line and adjustments of the track for about 3 Km. The current installations will be dismissed.

Source: Annex XXI

The construction works will start in 2013 and are expected to be completed by 2015 with a total investment cost of € 154.8 million. The management of the infrastructure will be guaranteed by RFI, which is the entity that performs the same functions throughout the entire network in Italy.

The identification of the First Priority Operational Phase as an independent unit in terms of engineering, procurement and contracting is acceptable. The *Metaponto-Sibari-Bivio S. Antonello* railway line – *Sottoprogetto 1* – is also assumed to be a single unit of analysis under the functional stand point, which is also sensible in our opinion.

2.3 Functional objectives of the project

The major project under appraisal regarding the improvements of the *Metaponto-Sibari-Bivio S.Antonello* railway line is deemed to have a positive impact on the development of the inter-connected TEN-T networks – Corridors I and 21 – improving the quality of the services on the main national railway network and representing a condition for the future increase of freight sustainable transport by rail in Italy.

The implementation of the four operational works (*Lotti 1-4*) part of the major project under appraisal are reasonably expected to improve the operational performance and quality of the services on the line. However the strategic and functional objectives of the project are challenged by the existing low passenger demand (30 passengers per train in the *Metaponto-Sibari* section according to a statement by the Transport Regional Councillor) leading to the replacement of train services with buses in December 2012. Regarding freight trains, we understand the demand at present is equal to 1 train per day, this figure possibly to be increased only following implementation of the *Polo logistico intermodale di Gioia Tauro* project, whose development in PPP will remain uncertain up to the completion of the tender for the selection of the private partner for its design, financing and construction (the tender is still to be launched at present).

The major project seems also to be challenged by the economic and demographic indicators for the Region as shown at Tables 2 and 3 below. The demographic structure and residential pattern represent indeed a possible risk in the increase of future demand; as well the relatively low propensity to use rail services (as demonstrated by the number of rail passengers per resident and the overall % of rail pass holders).

Even though the indicators confirm that the rail investments in the *Calabria* Region have been low in the past decade, the data also show that rail networks endowment index is higher than the average one in Italy. Again, in the last decade the rail freight traffic decreased in the region by 22% - thus contrasting with the strategic objectives and main beneficiaries of the project.

Table 2 *Main territorial, economic and demographic indicators*

	Source	Italy	South Italy	Calabria	Cosenza
Population	Istat 2011	59,433,744	20,619,697	1,959,050	714,030
Population density	Istat 2011	197.2	167.6	129.9	107.4
Resident population in mountain regions	Istituto Guglielmo Tagliacarne 2011 %	12.6	11.2	22.9	37.7
Resident population in hills	Istituto Guglielmo Tagliacarne 2011 %	39.2	49.2	62.4	55.4
Resident population in municipalities with over 20,000 inhabitants	Istituto Guglielmo Tagliacarne 2011 %	52.4	55.8	33.4	33.9
Unemployment rate 15-64 years old	Istat 2011 %	8	14	13	12
Value Added	Istituto Guglielmo Tagliacarne 2010 (€ million)	1,395,219	324,771	30,003	11,134
- Agriculture	Istituto Guglielmo Tagliacarne 2010 %	1.9	3.3	3.9	3.0
- Industry	Istituto Guglielmo Tagliacarne 2010 %	24.9	18.7	15.2	15.9
- Services	Istituto Guglielmo Tagliacarne 2010 %	73.2	78.0	80.9	81.2
GDP per capita	Istituto Guglielmo Tagliacarne 2010 (€)	25,727	17,538	16,656	16,939
Cars per 1000 inhabitants	Istituto Tagliacarne 2011	612	596	602	608
Road networks endowment index (Istituto Tagliacarne) (Italy=100)	Istituto Tagliacarne 2011	100	88	106	112
Rail networks endowment index (Istituto Tagliacarne) (Italy=100)	Istituto Tagliacarne 2011	100	82	107	108

Note: Highlighted in blue the figures higher than the data in the previous column relating to the larger regional territory in which they are included. Highlighted in red the relevant figures lower than the average data for Italy.

Although this situation may also be the result of lack of investments and attention to the railway sector, the socio-economic indicators for the area suggest adopting more conservative assumptions than the ones indicated in the application dossier (and commented at Section 3.3 below).

Table 3 *Main territorial infrastructure indicators*

Indicators	Source	Italy	South Italy	Average Convergence Regions Italy	Calabria Region
Rail network on 100 km2 endowment:	Istat 2010	100	84	106	102
- single track non electrified	Istat 2010	100	145	119	152
- double track non electrified	Istat 2010	100	186	0	0
- single track electrified	Istat 2010	100	109	105	91
- double track electrified	Istat 2010	100	66	86	74
Bus and Coach Fleet	Eurostat 2010	5	5	7	5
Length of the rail network (2010)	Pendolaria 2010	845	897	1,387	1,090
Rail network per 100 km2 (2009)	Istat 2009	5.5	4.9	5.8	5.6
Motorway Network per 1000 km2 (2008)	Istat 2009	22	19.6	23.4	19.6
PSO contract base services value (2010)	Pendolaria 2010	116.7	122	198	127
PSO contract additional services value (2010)	Pendolaria 2010	16.6	4	5.3	0
2001-2007 expenditures in additional services	Pendolaria 2010	21.9	8	11.3	1.7
2001-2007 Investments in rolling stock	Pendolaria 2010	59.7	14.5	21.2	0
2001-2010 expenditures in additional services	Pendolaria 2010	62.6	18.7	26.2	1.7
2001-2010 Investments in rolling stock	Pendolaria 2010	88.8	34	59.4	22.3
Rail Freight Variation 2007/2001 (% of in-out flows ton)	Istat 2009	-12.40%	-43.00%	-10.30%	-22.00%
Road Freight Variation 2007/2001 (% of in-out flows ton)	Istat 2009	-0.70%	-1.50%	-4.40%	-1.70%
Maritime (Cabotage) Freight Variation 2007/2001 (% of in-out flows ton)	Istat 2009	18.60%	11.70%	21.70%	12.10%
PSO Train*Km/year (2010)	Pendolaria 2010	10.9	8.2	12.8	8.5
PSO € per resident per year	Own elaboration	46.4	52.9	50.2	63.1
PSO € per pax per year	Own elaboration	2.8	9.1	7	13.6
Pax per day (2010)	Pendolaria 2010	128,619	89,943	151,250	25,600
% of 15-64 years old commuters using public transport (2009)	Istat 2009	10.9	8.5	8.2	7
Pass holders (2010)	Pendolaria 2010	35,311	42,110	72,684	15,636
Average Satisfied Users on total Variation 2007/2001	Istat 2009	-12.60%	-8.80%	-12.80%	-14.70%
People using Rail at least once per year Variation 2007/2001	Istat 2009	-2.10%	-6.30%	-6.40%	-3.70%
Commuters using Rail Transport Variation 2007/2001	Istat 2009	-3.40%	47.30%	5.80%	5.20%
Commuters using PT Variation 2007/2001	Istat 2009	1.30%	-9.80%	2.00%	-0.50%
Urban PT Lanes per km2 Variation 2007/2001	Istat 2009	3.50%	2.20%	2.70%	3.00%
Annual rail pax per resident	Own elaboration	16.3	8.4	11.1	4.7
% of rail pass holders on population	Own elaboration	1.20%	1.00%	1.50%	0.80%

Note: Highlighted in blue the figures higher than the data in the previous column relating to the larger regional territory in which they are included. Highlighted in red the relevant figures lower than the average data for Italy.

2.4 Consistency with Other Union Policies

The sources for the financing of the *Metaponto-Sibari-Bivio S. Antonello* major project are detailed at page 29 of the application dossier. The project is going to be financed only by means of public funds and the ERDF. The co-financing rate adopted in the application form is 53.35%, which is in line although not consistent with the percentage of 50% adopted in the 2007-2013 Operational Programme *Reti e Mobilità* agreed by the Italian Infrastructure Ministry – MIT – together with RFF³.

As already commented, the investment subject of this appraisal is complementary to the *Polo logistico intermodale di Gioia Tauro* project, also to be financed by the EU Commission (See page 30 of the application form).

Contrary to what stated in the application form – page 9 – the *Metaponto-Sibari-Bivio S. Antonello* project is not included in a TEN-T network. We therefore suggest revising this information.

The publicity measures, described at page 31 of the application form, have not been activated at this stage of the project. However, the Applicant and the Beneficiary commit to adequately undertake the necessary measures in order to give visibility to the major project, in line with the requirements of the EU regulation. The cost for these measures is not specified in the application dossier, although we do not expect the mentioned measures will result in relevant prices, compared to the total investment costs.

B.2 Recommendations and suggestions

The implementation of the four operational works (*Lotti 1-4*) part of the major project under appraisal are reasonably expected to improve the operational performance and quality of the services on the line. However the strategic and functional objectives of the project are challenged by the existing low passenger demand (30 passengers per train in the *Metaponto-Sibari* section according to a statement by the Transport Regional Councillor) leading to the replacement of train services with buses in December 2012. Regarding freight trains, we understand the demand at present is equal to 1 train per day, this figure possibly to be increased only following implementation of the *Polo logistico intermodale di Gioia Tauro* project. The development in PPP of this complementary major project – also to be financed by the European Commission – will remain uncertain up to the completion of the tender for the selection of the private partner for its design, financing and construction (the tender is still to be launched at present).

The project is not included in any of the TEN-T networks; we therefore suggest correcting this information at page 9 of the application form.

Also, the publicity measures, described at page 31 of the application form, have not been activated at this stage of the project. We suggest asking the Applicant and the Beneficiary a confirmation of the commitment undertaken for providing all the necessary publicity measures in line with the requirements of the EU regulation.

³ http://www.mit.gov.it/mit/mop_all.php?p_id=06459

3 TECHNICAL FEASIBILITY, PROJECT COSTS AND DEMAND ANALYSIS

3.1 Technical Feasibility

3.1.1 Feasibility Study

The technological improvements of the lines under assessment are comprised under a major programme to be implemented by RFI on the whole Italian network. Feasibility studies were undertaken in 2009, for economic purposes. The works are all related to the improvement of the existing network and do not include the construction or development of facilities outside the current alignments.

3.1.2 Technical Concept

The project is technically sound regarding the proposed design solutions and construction techniques.

Under the functional/operational stand point we suggest confirming with the Applicant and Beneficiary that the works at *Roseto* – only included in the second operational phase *Sottoprogetto 2* – are not required to attain the travel time savings indicated in the application dossier. If this is not the case, the application should be submitted including all works and costs needed to operate these trains and the CBA analysis be updated accordingly.

3.1.3 Environmental assessment

Environmental Impact Assessment. The Environmental Impact Assessment screening process was undertaken between 2001 and 2002. The Authorities consulted during preparation of EIA process were:

- The Ministry of the Environment – *Ministero dell’Ambiente e Tutela del Territorio*;
- The EIA Department of the *Calabria* Region – *Regione Calabria, Assessorato Urbanistica ed Ambiente, Nucleo VIA*.

As reported in the enclosed EIA related documentation these authorities both stated that the project, not including the construction or development of facilities outside the current alignments, was not to be subject to the EIA procedure. We however understand that these 2001-2002 EIA related decisions only involved the *Sibari-Cosenza* railway line (*Lotti 1, 3 and 4*); therefore the application dossier seems omitting the EIA certificate for the *Metaponto-Sibari* track (*Lotto 2*). We thus suggest clarifying with the Applicant and Beneficiary on the availability of the EIA certification for the second operational work – *Lotto 2*.

Given that the validity of the EIA related declarations in Italy is 5 years, we also assume the certificates for *Lotto 1* were already re-produced in 2006-2007, although we suggest confirming this interpretation with the Authorities. Finally, according to the application dossier, page 23, the EIA procedures for *Lotto 3 and 4* are still on-going – probably for the same 5-years validity reason or for changes in the scope of the project, compared to the design developed at the beginning of the years 2000. All these elements should be explained in more detail and any risk for the timely implementation of the project either regarding the completion of the public consultation process for operational works 3 and 4 or provision of updated certificates should be considered.

The costs for the identified preventive and mitigation measures were not reasonably considered due to the provisional construction phase at the worksite stage.

Strategic Environmental Assessment. The application form refers to the SEA process developed for the *PON Reti e Mobilità 2007-2013* and its related reporting. A link is provided in the application form as appropriate:

- <http://ponreti.mit.gov.it/index.php/documentazione/ambiente/valutazione-ambientale>

Natura 2000. Annex II-A to the application form contains the declaration from the environmental authority (*Ministero dell’Ambiente e della Tutela del Territorio e del Mare – Direzione Generale per la Protezione della Natura e del Mare*) for the improvements of the overall *Metaponto-Sibari-Bivio S. Antonello* project. This certificate states that the project is unlikely to have impacts on any classified *Natura 2000* Area.

3.1.4 Project implementation scheme and time schedule

According to Table D.1 of the application form, Table 4 below shows the real and planned “start” and “completion” dates of the project phases for the improvements of the *Metaponto-Sibari-Bivio S. Antonello* railway line.

Table 4 *Project Calendar*

Project Phases	Start Date	End Date
1. Feasibility Study	29/09/2002 <i>(Delibera CIPE n. 85)</i>	20/12/2004 <i>(Delibera CIPE n. 91)</i>
2. Preliminary Design	15/01/2006	18/12/2006
3. Environmental Impact Assessment (national/regional EIA)	14/11/2001	26/07/2002
Exclusion from National EIA	14/11/2001	
Exclusion from Regional EIA	26/07/2002	
4. Metaponto-Sibari-Castiglione First Priority Operational Phase – Design, Implementation and Rail Testing	07/04/2011	30/04/2012
5. Design Development	07/04/2011	10/03/2013
<i>Lotto 1</i> - Completion and Approval of the final design through Integrated Agreement	26/06/2012	18/09/2012
<i>Lotto 2</i> - Completion and Approval of the final design through Integrated Agreement (including changes to the final design for approval by Public Bodies)	02/08/2012	14/02/2013
<i>Lotto 3</i> - Final Design and preparation of Tender documentation for the <i>Conferenza dei Servizi</i>	07/04/2011	04/05/2012
<i>Lotto 4</i> - Final Design and submission to Public Entities for the <i>Conferenza dei Servizi</i>	01/11/2011	10/03/2013
6. Conferenza dei Servizi (Start - Final approval)	05/05/2012	07/09/2013
<i>Lotto 3</i>	05/05/2012	30/03/2013
<i>Lotto 4</i>	12/03/2013	07/09/2013
7. Negotiating Activities (Preparing tender documents, Tender notice and/or Invitation to tender for Companies, Verification for Commitment and Final contract stipulation)	19/09/2012	20/08/2014
<i>Lotto 1</i>	19/09/2012	29/06/2013
<i>Lotto 2</i>	15/02/2013	18/11/2013
<i>Lotto 3</i> (Open procedure)	06/05/2013	03/03/2014
<i>Lotto 4</i> (Including preparatory activities and expropriations)	08/10/2013	20/08/2014
8. Delivery	30/06/2013	20/08/2014
<i>Lotto 1</i>	30/06/2013	
<i>Lotto 2</i>	18/11/2013	
<i>Lotto 3</i>	04/03/2014	
<i>Lotto 4</i>	20/08/2014	
9. Executive Design (Including Verification)	03/09/2012	16/06/2014
<i>Lotto 1 (AI)</i>	30/06/2013	26/12/2013
<i>Lotto 2 (AI)</i>	19/11/2013	16/06/2014
<i>Lotto 3</i>	03/09/2012	05/05/2013

Project Phases	Start Date	End Date
<i>Lotto 4</i>	25/04/2013	07/10/2013
10. Construction Phase (Delivery of works included)	26/12/2013	18/12/2015
<i>Lotto 1</i>	26/12/2013	06/11/2015
<i>Lotto 2</i>	16/06/2014	30/10/2015
<i>Lotto 3</i>	04/03/2014	13/12/2015
<i>Lotto 4</i>	21/08/2014	18/12/2015
11. Activation Phase	01/10/2015	31/12/2015
<i>Lotto 1</i>	08/10/2015	06/11/2015
<i>Lotto 2</i>	01/10/2015	16/11/2015
<i>Lotto 3</i>	14/11/2015	13/12/2015
<i>Lotto 4</i>	19/11/2015	31/12/2015
12. Rail Testing	31/10/2015	24/08/2016
<i>Lotto 1</i>	07/11/2015	13/07/2016
<i>Lotto 2</i>	31/10/2015	06/07/2016
<i>Lotto 3</i>	14/12/2015	19/08/2016
<i>Lotto 4</i>	19/12/2015	24/08/2016

Source: Annex XXI

We don't have particular concern on the proposed time-schedule, which is therefore acceptable without foreseen delays, provided the EIA consultation and procedures will be successfully completed for all operational phases within the deadlines set in the table above. However, there are some inconsistencies between the application form and the CBA report regarding the scheduling of construction activities in the calendar (from December 2013) and their cost allocation on the financial and socio-economic analysis related tables from 2011 to 2015.

The project will not be implemented as a PPP scheme and the infrastructure will be managed by RFI.

B.3.1 Recommendations and suggestions

The project is technically sound regarding the proposed design solutions and construction techniques. Under the functional/operational stand point we suggest confirming with the Applicant and Beneficiary that the works at *Roseto* are not required to attain the travel time savings indicated in the application dossier. If this is not the case, the application should be submitted including all works and costs needed to operate these trains.

The EIA related certification only regards operational works 1, 3 and 4. The certificate for operational work 2 is missing. The document dates to beginning of the years 2000 and may be outdated for operational work 1. With regards to *Lotti 3 and 4*, the EIA process seems to have been re-opened and still on-going. All these elements should be explained in more detail and any risk for the timely implementation of the project either regarding the completion of the public consultation process for operational works 3 and 4 or provision of updated certificates for operational works 1 and 2 should be considered.

There are some inconsistencies between the application form and the CBA report regarding the scheduling of construction activities in the calendar and their cost allocation on the financial and socio-economic analysis related tables.

3.2 Project costs

The presentation of a detailed bill of quantity for the works under appraisal would be more appropriate for a better appreciation of the application dossier. However, based on our experience in this sector we can confirm the costs are overall acceptable and in line with similar works in the country. We suggest requesting clarifications on the high land acquisition costs (about €10 million).

3.3 Demand analysis

The description of the services currently operated on the railway line does not reflect the recent reorganisation of the services between *Metaponto* and *Sibari*. According to the new service programme for the year 2013, as also available on the *Trenitalia* rail operator web site⁴, the train services from *Metaponto* to *Sibari* were replaced by buses.

Table 7 shows the current configuration of passenger services which does not correspond to the *do-nothing* scenario presented in the CBA report (See also Table 5 and Table 6 below) and the application dossier should be revised and updated clarifying on this situation.

Table 5 *Do-nothing scenario for Metaponto-Sibari railway line*

Treni	LP		REG	MERCI	TOTALE
	ES	IC/EXP	Ale/Aln	TC/MRS	
<i>Notturni 22.00 - 06.00</i>	0	0	1	0	1
<i>Diurni 06.00 - 22.00</i>	0	0	11	1	12
					13

Table 6 *Do-nothing scenario for Sibari-Bivio S.Antonello railway line*

Treni	LP		REG	MERCI	TOTALE
	ES	IC/EXP	Ale/Aln	TC/MRS	
<i>Notturni 22.00 - 06.00</i>	0	0	1	0	1
<i>Diurni 06.00 - 22.00</i>	0	0	15	1	16
					17

Source: CBA report, page 7

Table 7 *The current do-nothing scenario for the Metaponto-Sibari-Bivio S.Antonello railway line*

CURRENT SCENARIO				
Tipologia di Traffico	METAPONTO - SIBARI		SIBARI - COSENZA	
	Diurno	Notturmo	Diurno	Notturmo
ES	-	-	-	-
LP notturni	-	-	-	-
Regionali/IR	-	-	8	-
Merci	n/a	n/a	n/a	n/a
Autobus sostitutivi	8	-	-	-
TOTALE	8	-	8	-

Source: LeighFisher based on the *Trenitalia* rail operator web site: www.trenitalia.it

⁴ www.trenitalia.it

The current configuration of rail services on the line may affect the overall scope of the project which is indeed based on wrong assumptions; the main project objectives identified in the application form (page 10) which consist in the connection between the TEN-T network corridors (*Corridoio I – Railway axis Berlin-Palermo* now extended to the new *Helsinki-La Valletta* corridor – and *Corridoio 21 – Motorways of the sea of South East Europe*) and also between the two regions of Calabria and Puglia – thus enhancing their economic development and creating a network system with the northern part of Italy – could not be achieved due to the decision not to operate train services on the *Metaponto-Sibari* railway line.

The demand analysis for the incremental scenario is also overestimated in our opinion and should be revised:

- **Passengers** – No data on the passengers currently using the train services were provided, whereas the decision by the Region and Trenitalia to replace trains with buses is also based on an average patronage per train of 30 passengers (according to the articles quoted above). 14,400 pax/day as indicated in the application dossier for the future demand seem actually not realistic; the orographic configuration of the territory, its economy predominantly based on services and the population density contrast in our opinion with any assumptions considering this investment capable of generating a significant modal shift due to improvements in the service quality (this should in any case be proved by mean of demand model simulations calibrated and validated through surveys);
- **Freight** – The application dossier assumes 6 incremental trains per day all these representing diverted traffic from road. No explanation is provided, whereas only 1 train per day is currently using the line (See Table 5 and 6 above) and the socio-economic indicators for the region actually show a rail freight traffic reduction of 22% in the last decade (See Table 3). This assumption is in our opinion reliable only in the event the *Polo logistico intermodale di Gioia Tauro* project complementary to the one under appraisal will be implemented. However this would imply this traffic being diverted from sea rather than road.

B.3.3 Recommendations and suggestions

The *do nothing* scenario does not reflect the current configuration of rail passengers' services on the line. According to the new service programme for the year 2013, as also available on the *Trenitalia* rail operator web site, the train services from *Metaponto to Sibari* were replaced by buses.

The demand forecasts considered in the *do something* scenario are in our opinion overestimated for passengers, whereas we deem the demand for freight trains reliable only in the event the *Polo logistico intermodale di Gioia Tauro* project complementary to the one under appraisal will be implemented.

4 COST BENEFIT ANALYSIS

The CBA analysis has been developed according to the European Commission Directorate General Policy “Guide to Cost Benefit Analysis of Investment Project”, July 2008.

The overall quality of the documentation supporting the financial and socio-economic analysis is appropriate for the understanding of the methodology.

Concerning the time plan assumptions, the project implementation will be completed by 2015 whilst operations are expected to start in 2016. The CBA actually considers the investment to occur in 2011, which is not consistent with the investment timetable presented in the application form (item D.1, page 13).

Also, forecasts regarding the financial and economic analysis have been carried out over a period of 35 years (2011-2045), including the 5 years construction period, which is a relatively long period. Indeed, the time horizon is not in line with the recommendations the EC proposes in its 2008 CBA Guide, according to which for the majority of rail infrastructure the time frame is 25/30 years at the most.

Regarding the general approach to the study, the *do-nothing* scenario implies that the current situation is maintained over time without the improvements, ensuring the correct level of ordinary and extraordinary maintenance of the existing railway infrastructure. However the demand analysis as well as the *do nothing* and *do something* scenarios are based on wrong assumptions since at present there is no train service in the Metaponto-Sibari railway line. The application dossier and CBA should comment on this situation and updated consistently.

As commented at Section 3.3 above, passengers’ incremental demand is in any case overestimated in our opinion and the *Metaponto-Sibari-Bivio S. Antonello* major project is in our opinion highly dependent for its strategic merit on the implementation of the *Polo logistico intermodale di Gioia Tauro* project which would effectively turn the assumption of 6 incremental freight trains per day a reliable one. Along with the recommendation of revising the application dossier giving more emphasis to this element, we would also suggest developing a comprehensive CBA for the two projects.

4.1 Financial analysis

The accountancy unit is the *RFI* (Italian Infrastructure Manager), which is the Beneficiary of the EU funds and the owner of the infrastructure of the project. This approach is consistent with the recommendations of the “Guide to cost-benefit analysis of investments projects, European Commission Evaluation Unit, DG Regional Policy, 2008”.

The discount rate is 6.0% which is acceptable. The project implementation will be completed by 2015 and the improved service will start in 2016.

Based on these assumptions, the following project cash flows have been included in the financial analysis:

- Investment costs in civil works, equipment and land;
- Residual value of the investment;
- Revenue from the incremental freight trains service;

The financial analysis is based on an incremental approach according to the EU 2008 Guidelines and in a general way, the methodology used in this analysis seems adequate.

4.1.1 Cash out-flows

The financial analysis has considered an investment cost of € 154,810,000 (VAT not included), corresponding to a present value of € 122,068,681, according to the CBA dossier. This value is consistent with the values presented in the application form, in particular the values used in the calculation of the funding gap (table E.1.2) and the calculation of the eligible costs (table H.1).

As mentioned above, the time-schedule for the construction of the project is not consistent with the one regarding the investment costs. Table H.3. should be revised.

Given that the project consists in the improvements of the railway line and installations, the CBA report does not consider any additional maintenance and personnel costs. This is considered reasonable in our opinion.

4.1.2 Cash in-flows

The project generates annual revenue because additional six freight trains are expected to be operated after completion of the railway improvements and consequently additional revenues from the circulation of these trains were properly considered in the analysis. These revenues were estimated equal to € 273,000 per year and are deemed to be correct.

The CBA analysis does not actually include the incremental revenues from the circulation of the passengers' trains. This is not acceptable in our opinion also taking into consideration the incremental number of these trains in the *do-something* scenario, resulting in 36 more trains (notwithstanding that the *do-something* scenario is not reasonable in our opinion since at present there is no train service in the Metaponto-Sibari railway line, as also pointed out above).

According to the Rail Infrastructure Manager web site⁵, we tried to calculate the estimation of the passengers' trains' charge for the *Metaponto-Sibari-Bivio S.Antonello* railway line based on the costs provided by RFI (See also Table 8 and Table 9 below).

Table 8 Train' charge for the rail operator calculated for the Sibari-Bivio S.Antonello railway line

Town of departure	Town of arrival	Type	Id	Commercial path	Speed (Km/h)	Stop (Min)	KM
SIBARI	BIVIO S. ANTONELLO	C	168	SIBARI - CASTIGLIONE	60	0	54.959
UNITARY COST		€ 2.26					
TOTAL COST		€ 124.22					

Table 9 Train' charge for the rail operator calculated for the Metaponto-Sibari railway line

Town of departure	Town of arrival	Type	Id	Commercial path	Speed (Km/h)	Stop (Min)	KM
METAPONTO	SIBARI	C	160	METAPONTO - SIBARI	60	0	79.02
UNITARY COST		€ 1.99					
TOTAL COST		€ 157.63					

Source: LeighFisher based on the RFI web site: <http://pedaggio2004.rfi.it>

The result of our estimation would give a passengers' trains revenue equal to € 2,227,262 per year, which summed up to the freight trains' revenue – € 273,000 per year – would total around € 75 million for the whole concession period, corresponding to a present value of € 25.7 million. This cash in-flow would change the results of the financial analysis and the calculation of the funding gap which would be reduced to about 78%; therefore the EU contribution would change consistently.

The analysis has also included a residual value at the last year of appraisal – € 7,741,000 – corresponding to 5% of the investment cost. This assumption can be considered a reasonable one also considering the proposed lifetime values for railway infrastructure presented in reference literature (10/50 years according to the Railway Project Appraisal Guidelines - RAILPAG).

⁵ <http://pedaggio2004.rfi.it>

4.1.3 Funding Gap and Financial Indicators

Since the project is revenue generating, the Funding Gap was correctly calculated based on the discounted cash flows and the results are presented in the table E.1.2 of the application form.

The percentage value of the funding gap rate equals 96.7%. On the basis of the comments at the previous section, this percentage should actually be reduced to a lower amount due to the incremental revenues from passengers' services to be considered in the financial analysis, together with a revision of the whole CBA.

In addition to this, it is worth mentioning that the application dossier should comment on the additional revenues that may derive from the increase in the access charges due to the improvements of the railway network. This assumption is coherent with the regulatory regime of rail infrastructure in Italy (D.M. n.43/2000).

The CBA report presents the financial indicators of the project without the EU financial aid - FNPV(C), FRR(C). By trying to replicate the calculation of the FNPV (financial net present value) and FRR (financial rate of return) – adopting the methodology suggested in the guidelines and including the additional passengers' trains charge – we find these parameters are higher if compared with our calculations. The results included in the dossier are € -118,253,555 and -8.26% respectively for the FNPV and FRR, whilst our estimations would give a value of around € -95.3 million for the FNPV and -3.2% for the FRR. We recommend checking these values.

The application form (table E.1.3 page 19) also indicates the financial rate of return of the project considering the EU financial aid – FRR(K) equals to -5.84% – and the financial net present value with Community assistance – FNPV(K) equals to -55 million – although the calculation methodology is omitted. By adopting the same calculation methodology and correctly considering the EU contribution in 2013 (see section 4.1.1), we found a positive FRR(K) equals to 0.6%; we actually also estimate a different FNPV(K) of € -28,166,328, which is not consistent with the above.

A revision on the calculation of the financial performance indicators with EU financial aid may be necessary since the results that were presented in the CBA don't seem reasonable. It is worth mentioning again that the financing calendar presented in the application form in table H.3 should be updated to before re-calculating the financial indicators with EU financing.

4.1.4 Financial Sustainability

In line with the suggestions of the 2008 DG REGIO CBA guidelines, we recommend undertaking the analysis of the financial sustainability of the project – also including in the Cash Flows the programmed and planned state subsidies required to complete the improvements of the *Metaponto-Sibari-Bivio S. Antonello* railway project.

4.1.5 Public Contribution Viability

As described in the application form, the project is financed by mean of public funds, including the ERDF. The EU financial assistance is considered essential for the realization of the project.

Table 10 *Reconsideration of the EU contribution based on our estimations*

Revision of TABELLA H.2.1.	
Investment Cost	€ 154,810,000
Funding Gap Rate	78.1%
Decision Amount	€ 120,917,379
Co-financing Rate	53.4%
EU CONTRIBUTION	€ 64,509,422

Source: LeighFisher elaboration based on Annex XXI, page 28

Regarding the determination of the EU contribution (€ 80,009,837), Table H.1 seems correct – eligible costs do not include VAT. However, table H.2.1 of the application form (page 28) should be modified in line with the revision of the financial analysis and funding gap rate. By trying to replicate the calculation of the EU contribution on the basis of the additional cash in-flows due to passengers' trains charge, we found a lower value of € 64.5 million (See also Table 10 above).

As mentioned before, we also recommend updating table H.3 of the application dossier and postponing the EU contribution to 2013.

B.4.1. Recommendations and suggestions

The demand analysis as well as the *do nothing* and *do something* scenarios are based on wrong assumptions since at present there is no train service in the *Metaponto-Sibari* railway line. The application dossier and CBA should comment on this situation and updated consistently.

The funding gap calculation and therefore the EU contribution should be revised because the additional passenger trains' charges were not considered in the cash in-flows as well as the possible additional revenues deriving from appropriate increases in the access charges to railway undertakings for the train services currently operated on the network and assumed to remain constant. By adopting these revised assumptions, we would expect a lower funding gap which would thus turn in a reduced EU Contribution.

We also suggest improving the analysis by mean of consideration of the following issues:

- The time horizon of 35 years (2011-2045) is not in line with the recommendations the EC proposes in its 2008 CBA Guide, according to which for the majority of rail infrastructure the time frame is 25/30 years at the most;
- To be more precise, the value of the FNPV(C) and FRR(C) should be checked and revised in the CBA and in the application form (see section 4.1.3), although the magnitude of the results presented is acceptable;
- The financial performance indicators with EU funds – FNPV(K) and FRR(K) – should be corrected in light of the amendments proposed in the overhead section 4.1.3;
- We recommend updating table H.3 of the application dossier and postponing the EU contribution to 2013;
- A financial sustainability analysis of the project was to be provided, although we expect the result of this analysis would remain negative thus confirming the need for EU contribution for the realization of the project.

4.2 Socio-economic analysis

The methodology used for the economic analysis was correctly based on a comparison between two scenarios, with and without the railway improvements.

The economic analysis has used a social discount rate of 5%. The 2008 EU CBA Guidelines actually suggests using a 5.5% rate for the evaluation of projects in the Convergence Regions as it is the case for the *Calabria* Region; nonetheless, we accept the explanation provided in the CBA dossier (page 17) for which a more conservative social discount rate is appropriate for the southern regions in Italy.

In addition to the project costs from the financial analysis, the CBA includes the users' benefit resulting from the travel time savings and the reduction of externalities.

As for the financial analysis, the considerations proposed at Section 4 above on the *do-nothing* and *do-something* scenario hypothesis affect the calculation of the socio-economic benefits and undermine the reliability of the positive results of the socio-economic analysis. Since the demand analysis is overestimated, the magnitude of the economic performance indicators is actually questionable.

Moreover, we are of the opinion that also the methodological approach of the benefits' calculation is not appropriate because the information on light and heavy vehicles road traffic was not provided and therefore the incremental diverted demand from road to the railway assumed as base data for the calculation of the benefits is not sensible and/or not supported by any figures. More in detail, the benefits related to freight would have been more plausible if calculated as cost savings for the freight operators instead of travel time savings; in any case 50 minutes of rail time savings with respect to the road mode are not realistic in our opinion.

In particular, according to the *HEATCO* Guidelines, the correct estimation of travel time savings' benefit should be the difference between the number of passengers/vehicles/goods traffic making a particular origin-destination trip in the *do-nothing* and *do-something* scenario multiplied for the time saving experienced by the users making that particular origin-destination trip and also for the Value of Travel Time Saving (VTTS) – thus correctly using the rule of half – and considering the modal shift due to captured traffic from road to railway related only to the investment subject of this appraisal.

As already commented above (Section 3.3) whilst we consider the passengers' trains' related demand overestimated, we also consider the demand of freight trains plausible only in the event the *Polo logistico intermodale di Gioia Tauro* project complementary to the one under appraisal would be implemented. In line with this strategic view of the investment under appraisal, we also assume the incremental freight traffic is generated/attracted by the Port of *Gioia Tauro*. According to this, the benefits related to the rail mode should be calculated also with respect to shipping rather than only to road, possibly by developing an appropriate origin-destination model. We consider indeed not plausible the future incremental 6 trains per day be generated from diverted road traffic (this hypothesis should in any case be supported by quantitative information and data on existing road traffic).

We have finally some concerns on the *reduction of externalities'* benefits generated by the project on the basis of the demand's wrong assumptions and the external unitary costs which seem overestimated. Particularly the *air pollution* unitary cost for freight was estimated equal to 0.4494 €/vkm, which is higher than the values in reference bibliography, e.g. IMPACT (Handbook on estimation of external costs in the transport sector). Moreover, the unitary cost for externalities should have been properly split in the two different transport modes in order to compare the benefits in the *do-nothing* and *do-something* scenario. All the calculations and related tables should have been provided, as appropriate.

4.2.1 Conversion of market to accounting prices

According to the 2008 DG Regio CBA guidelines, financial cash flows were converted from market to accounting prices, in order to reflect the social opportunity cost of inputs and outputs.

Table 11 Conversion factors adopted in the socio-economic analysis

Cost Item	Conversion Factor
Investment costs	
Labour	0.591
Raw material	0.909
Equipment	0.833
Land	1.00

Source: CBA dossier, page 17

Taking into account that the conversion factors eliminate any tariff or tax-distortion which does not reflect an economic cost or benefit and also include the opportunity cost of labour – the values adopted in the CBA are acceptable. However, all the conversion factors should be further explained, also mentioning the source they are based on or the methodology used to estimate them. In particular, Table 11 above highlights the conversion factors included in the CBA.

4.2.2 User benefits estimation

In what concerns user's economic benefits, the analysis has considered the reduction in passengers and freight travel times based on an incremental approach.

The rationale of this benefit is that the railway improvements will reduce 50 minutes of average time saving (0.833 hours) for the total users/goods traffic of the railway infrastructure which seems not realistic – above all for freight – and not supported by any quantitative information.

The CBA study refers that the value of time was estimated equal to 6 €/hour for passengers, which is lower than the values in reference bibliography, in particular HEATCO (Harmonized European Approaches for Transport Costing and Project Assessment). Accordingly to the latter, in Italy the value of time is 10.41 €/hour (2011) for short distances and 13.41 €/hour in average considering business, long and short distances.

Also, the value of time (*VoT*) for freight was considered equal to 2.5 €/tonnes*hour which seems a reasonable value if assuming 20 tonnes for a total of 50 tonnes capacity per 6 trains and the inclusion of driver and crew wages.

Albeit these appropriate *VoT* assumptions, the considerations on the overestimated demand analysis invalidate the results and therefore we are of the opinion that the travel time savings related benefit is not correctly estimated (€ 475,200,000 for passengers and € 82,500,000 for freight); the positive results are indeed optimistic and the number of additional passengers and freight tonnes is not realistic based on the current *do-nothing* scenario without train services on the *Metaponto-Sibari* railway line. Also, the methodological approach for the calculation of these travel time savings' benefits is not correct; we therefore suggest revising all the results on the basis of the considerations at Section 4.2.

4.2.3 External benefits estimation

The external users' benefits include the reduction of environmental pollution (with vehicle-generated pollutants PM_{2.5}, NO_x, SO₂, O₃), noise, greenhouse reduction (expressed CO₂ equivalent) and accidents.

The calculation methodology has been provided but the values included in Table 10 of the CBA report (page 19), seem overestimated, in particular freight air pollution. All the calculations and related tables should have been included to properly assess the results given that they seem overestimated.

As above described, the unitary cost for externalities should have been properly split in the two different transport modes in order to compare the benefits in the *do-nothing* and *do-something* scenario.

4.2.4 Effects on employment and other non-monetized effects

The application form (table E.2.4) presents the estimation of the number of jobs created by this project. It is expected that the project will generate 1,487 jobs during the construction phase. The economic benefits associated to the creation of employment were not considered in the CBA, as appropriate.

4.2.5 Economic performance indicators

The economic indicators presented at table E.2.3 of the application dossier indicate that the project generates significant benefits to society. The economic net present value (ENPV) results in an amount of € 514,106,551 and the economic rate of return – ERR – equals to 31% which is a percentage significantly higher than the benchmark for rail projects presented in the EU Guide (11.62%), thus suggesting that the project is producing important added value.

However, as above mentioned, these results are not reliable if considering the wrong base assumptions and overestimated benefits. We recommend revising all the CBA socio-economic analysis in light of the recommendation proposed at this Section 4.2.

4.2.6 Risk assessment and sensitivity analysis

A sensitivity analysis is included in the application form, in line with the 2008 EU CBA guidelines. The sensitivity analysis allows the determination of the 'critical' variables or parameters of the socio-economic assessment. The critical variables are those variables or parameters for which a relative variation of 1% around the central estimate produces a corresponding variation of not less than 1% (one percentage point) in the ERR and not less than 5% in the ENPV. In the case of the improvements of the *Metaponto-Sibari-Bivio* railway line, the sensitivity analysis covers the traffic independent variable. The positive result is questionable since the data inputs are not sensible, as already commented above (See Section 4.2).

The risk analysis was not carried out because no critical variables were identified from the sensitivity analysis; which is acceptable. However the explanation provided in the application form, page 21, is not plausible in our opinion.

B 4.2 Recommendations and suggestions

The presentation of the assumptions behind the calculation of the economic benefits of the project is not acceptable. The estimation of the benefits is based on wrong demand as well as *do-nothing* and *do-something* scenarios assumptions. These are overestimated and the analysis is not supported by quantitative information on existing light and heavy vehicles road traffic.

The positive result of the socio-economic analysis is not plausible due to the wrong assumptions and we are of the opinion that only the implementation of the *Polo logistico intermodale di Gioia Tauro* project would support the case for investing in the improvement of the line, the results of the CBA showing in this case added value for society. Along with the recommendation of revising the application dossier giving more emphasis to the complementarity of the two projects, we would also suggest developing a comprehensive CBA considering both investments.

5 KEY FINDINGS AND CONCLUDING REMARKS

5.1 Key questions for project appraisal

(a) Is the application dossier complete?

The project dossier is complete and complies with the EC Regulations. The information provided is consistent with Art. 40 Reg. 1083/2006, Annex XXI and Commission Regulation 1828/2006.

(b) Does the project meet the expected strategic and functional objectives?

The *Metaponto-Sibari-Bivio S. Antonello* railway line is part of the national railway network; it crosses two Regions (Basilicata and Calabria), and interconnects two large cities in South Italy: Taranto and Cosenza. As such its improvement through the works part of the major project under appraisal are deemed relevant. More specifically the major project under appraisal is expected to contribute to the specific and operational objectives of the 2007-2013 *Reti e Mobilità* Operational Programme and also to improve the performance features of the railway network infrastructure in the Calabria Region. However the strategic and functional objectives of the project are challenged by the existing low passenger demand (30 passengers per train in the *Metaponto-Sibari* section according to a statement by the Transport Regional Councillor) leading to the replacement of train services with buses in December 2012. Regarding freight trains, we understand the demand at present is equal to 1 train per day, this figure possibly to be increased only following implementation of the *Polo logistico intermodale di Gioia Tauro* project. The development in PPP of this complementary major project – also to be financed by the European Commission – will remain uncertain up to the completion of the tender for the selection of the private partner for its design, financing and construction (the tender is still to be launched at present) [See § 2.2, § 2.3 and recommendation and suggestions box B.2].

(c) Is the project consistent with the EU policies?

The project is consistent with the EU policies and requirements regarding the safe and interoperability of railway services in Europe. In contrast to what stated in the application form, the *Metaponto-Sibari-Bivio S. Antonello* railway line is not included in any of the TEN-T networks; we therefore suggest revising this information accordingly [See § 2.4 and recommendation and suggestions box B.2].

(d) Is the project technically sound?

The project is technically sound regarding the proposed design solutions and construction techniques. Under the functional/operational stand point we suggest confirming with the Applicant and Beneficiary that the works at *Roseto* are not required to attain the travel time savings indicated in the application dossier. If this is not the case, the application should be submitted including all works and costs needed to operate these trains [See recommendation and suggestions box B.3.1].

The EIA related certification only regards operational works 1, 3 and 4. The certificate for operational work 2 is missing. The document dates to beginning of the years 2000 and may be outdated for operational work 1. With regards to *Lotti 3* and *4*, the EIA process seems to have been re-opened and still on-going. All these elements should be explained in more detail and any risk for the timely implementation of the project either regarding the completion of the public consultation process for operational works 3 and 4 or provision of updated certificates for operational works 1 and 2 should be considered [See recommendation and suggestions box B.3.1].

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(e) Are the project costs reasonable?

The presentation of a detailed bill of quantity for the works under appraisal would be more appropriate for a better appreciation of the application dossier. However, based on our experience in this sector we can confirm the costs are overall acceptable and in line with similar works in the country. We suggest requesting clarifications on the high land acquisition costs [See § 3.2].

(f) Are the results of the demand analysis acceptable?

The *do nothing* scenario does not reflect the current configuration of rail passengers' services on the line. According to the new service programme for the year 2013, as also available on the *Trenitalia* rail operator web site, the train services from *Metaponto to Sibari* were replaced by buses.

The demand forecasts considered in the *do something* scenario are in our opinion overestimated for passengers, whereas we deem the demand for freight trains reliable only in the event the *Polo logistico intermodale di Gioia Tauro* project complementary to the one under appraisal will be implemented [See recommendation and suggestions box B.3.3].

(g) Are the results of the Financial Analysis acceptable?

The demand analysis as well as the *do nothing* and *do something* scenarios are based on wrong assumptions since at present there are no train services in the *Metaponto-Sibari* railway line. The application dossier and CBA should comment on this situation and be updated consistently [See recommendations and suggestions box B.4.1].

The funding gap calculation and therefore the EU contribution should be revised because the additional passenger trains' charges were not considered in the cash in-flows as well as the possible additional revenues deriving from appropriate increases in the access charges to railway undertakings for the train services currently operated on the network and assumed to remain constant. By adopting these revised assumptions, we would expect a lower funding gap which would thus turn in a reduced EU Contribution [See recommendations and suggestions box B.4.1].

The analysis should be also overall improved by mean of consideration of methodological recommendations [See recommendations and suggestions box B.4.1].

(h) Are the results of the Cost Benefit Analysis acceptable?

The positive results of the socio-economic analysis are not plausible on the basis of incorrect demand assumptions, parameters and benefits' calculations. Along with the recommendation of revising the application dossier giving more emphasis to the complementarity of the two projects, we would also suggest developing a comprehensive CBA considering both investments [See recommendations and suggestions box B.4.2].

5.2 Concluding remarks

The application for funding of the Metaponto-Sibari-Bivio S. Antonello railway line is undermined by the inaccuracy of relevant information regarding the project strategy, demand assumptions and CBA assumptions, methodology and results. The application dossier should be significantly improved and revised before its approval.

The major project under appraisal is strategically dependent upon the two following conditions:

- The implementation of the *Polo logistico intermodale di Gioia Tauro*; and
- The operation of railway passengers' services on the line (both long distance, but also and particularly regional ones).

At present both these essential conditions are pending and we would suggest the following actions for the following options:

- The *Polo logistico intermodale di Gioia Tauro* is confirmed to be implemented, but the Region/State will not commit to finance the long distance and regional services on the line: a new application for funding including the results of a detailed O/D demand study on the rail freight transport generated and attracted by the Port of Gioia Tauro should be prepared and submitted. A CBA analysis considering both investments would be more appropriate;
- The *Polo logistico intermodale di Gioia Tauro* is confirmed to be implemented, and the Region/State will commit to finance the long distance and regional services on the line: a new CBA should be submitted adopting more realistic assumptions. The results of a detailed O/D demand study on the rail freight transport generated and attracted by the Port of Gioia Tauro should be included. A CBA analysis considering both investments would be more appropriate;
- The *Polo logistico intermodale di Gioia Tauro* is not confirmed to be implemented, and the Region/State will commit to finance the long distance and regional services on the line: a new CBA should be submitted adopting more realistic passengers' demand assumptions. We would in any case doubt the CBA showing good value for money;
- The *Polo logistico intermodale di Gioia Tauro* is not confirmed to be implemented, and the Region/State will not commit to finance the long distance and regional services on the line: the strategic and functional objectives of the major project would be compromised.

While revising the Application related documentation and the CBA we also recommend considering the following:

- A declaration from the beneficiary that the works at Roseto are not required to ensure appropriate technical operation of freight trains on the entire line; If this is not the case the application should be submitted including all works and costs needed to operate these trains;
- Confirmation from the Beneficiary and Managing Authorities that the EIA related certificates are still valid;
- Revise and reconsider some inputs, parameters and calculations of the socio-economic analysis which are incorrect.

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