

Synergies between the Mediterranean Corridor and the Trans-Maghreb Multimodal Corridor

Josep Vicent Boira, Comisionado del Gobierno para el Corredor Mediterráneo, Gobierno de España
Matteo Berzi, Oficina del Comisionado del Gobierno para el Corredor Mediterráneo, Gobierno de España

Introduction

In this contribution the authors explore the potential synergies between the Mediterranean Corridor, developed within the Trans-European Transport Network and Trans-Maghreb Multimodal Corridor (TMC) in the post COVID19 Era. Firstly, both Corridors are presented, stressing on the importance of railway as an efficient and sustainable transport mode for freight and passengers. The importance of Morocco and Spain for both Corridors will also be highlighted. Secondly, the potential synergies between Mediterranean Corridor and TMC will be proposed according to three complementary geographical scales: the Alboran Sea as an emerging geo-economics maritime space, the Spanish-Moroccan Cooperation and, finally the EU-Maghreb role in connecting transcontinental flows.

The Mediterranean Corridor: towards a resilient transport network

The Mediterranean Corridor is one of the 9 main corridors designed by the European Union within the Trans-European Transport Network (TEN-T). It is conceived as a multimodal corridor that crosses 6 countries (Spain-France-Italy-Slovenia-Croatia and Hungary) along 3,500 km. It will provide multimodal links from the ports and terminals of the Western Mediterranean to Central and Eastern Europe. The Med Corridor is interconnected with other 7 corridors and it provides an efficient, sustainable, and fast link between the main European markets and the Spanish Mediterranean economic system (Figure 1 and 2). TEN-T network is therefore a strategic scheme to ensure and enhance the mobility of both people and goods, as declared in the Schengen Treaty.

The regulatory framework is defined in Regulation 1315/2013 (EC, 2013), which establishes the guidelines for the development of a Trans-European Transport Network, determining the projects of common interest and specifying the requirements that must be met. To achieve those goals, the Commission introduced the Connecting European Facility Fund (CEF) through the Regulation 1316/2013. Furthermore, other EU funding programmes support TEN-T development like the European Fund for Strategic Investment (EFSI), Horizon 2020 (for research and development projects), Cohesion Fund (CF) and the European Regional Development Fund (ERDF).

The European Corridors seeks to achieve two basic pillars, **interoperability** and **intermodality** through the coordinated execution of works and projects. Indeed, the appropriate planning of the Trans-European Transport Network is crucial to enable efficient and long-distance transport operations. Regarding the railway system, the main goal is to achieve the full connection between the main nodes (*Core Network*) of each Corridor by 2030 in accordance with the following requirements:

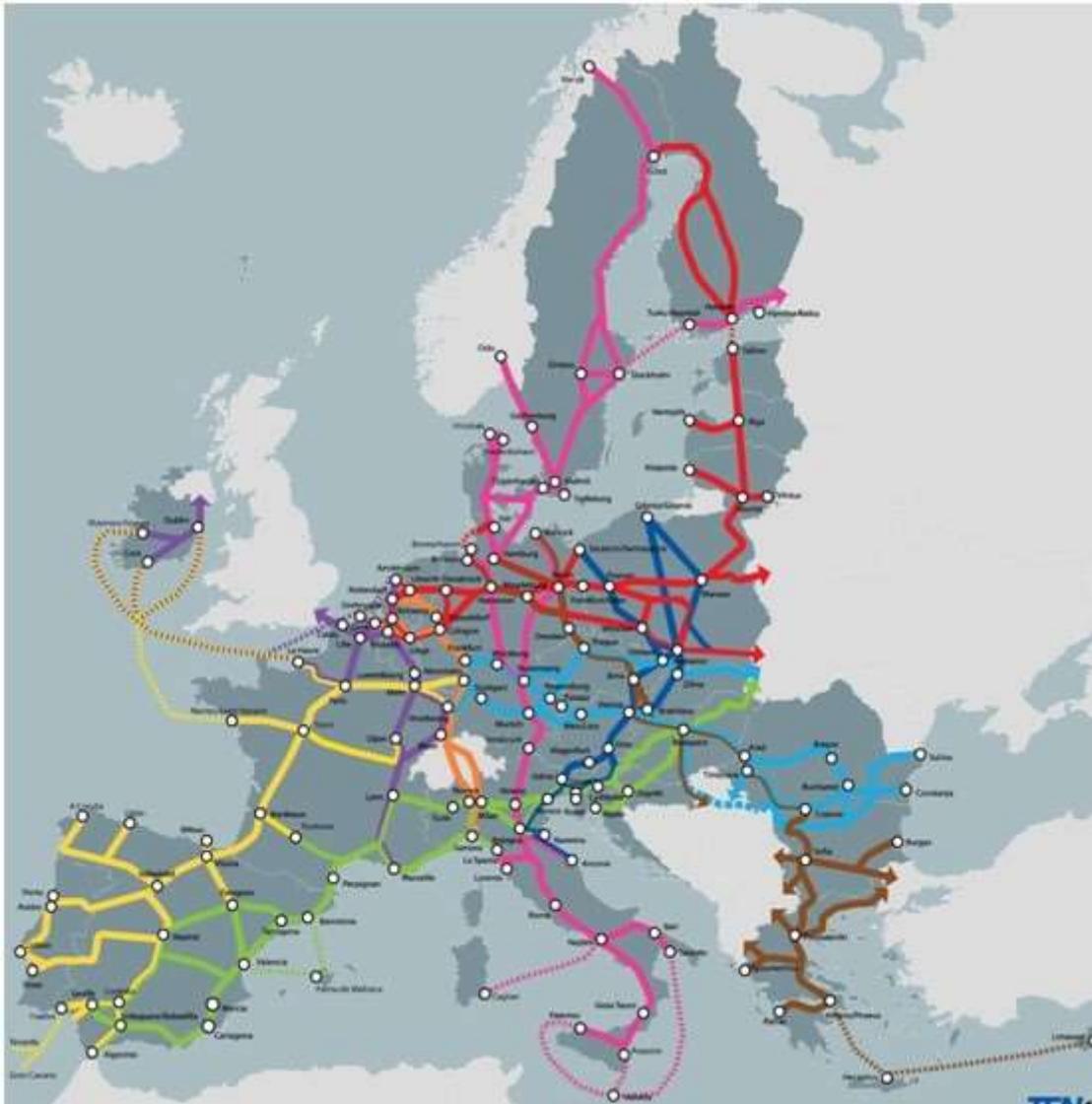
- Implementation of Standard track gauge (1435mm)

- Train length > 740 m
- Electrification 25Kv
- ERTMS Communication System
- Axle loads \geq 22.5 tons
- Improve rail connections with ports and terminals.

The Mediterranean Corridor is much more than a railway infrastructure. It is a large multimodal transport project which also includes roads, ports and airports in a more sustainable and competitive way. Beyond the infrastructural improvement, it is important to promote operations and services for passengers and freights. In this sense, the new sections should be complementary for both uses. Another important challenge is the development of a wide logistics strategy linking ports, airports, Rail-Road Terminals, and industries together. Not surprisingly, the Mediterranean Corridor will develop its full potential when its different modes of transport are connected. That is why we need to redefine logistics to boost the growth of intermodal terminals and port connections.

Finally, it is necessary to better integrate the infrastructure in **urban nodes**. For example, in Spain between Barcelona and Almeria there are more than 11 cities with more than 100,000 inhabitants, which requires specific attention to how the corridor crosses densely populated areas. But all these efforts will not be enough without the accurate planning of passenger and freight services, which aims at providing fast and effective transport. To achieve this goal, it is fundamental that infrastructure development is based on reliable and truthful analysis.

Figure 1: Transeuropean Transport Network (TEN-T)



Source: European Commission

Figure 2: The Mediterranean Corridor in Spain



Source: own elaboration

The Transmaghreb Multimodal Corridor: multi-scale territorial project

The Transmaghreb Multimodal Corridor (TMC) is the most ambitious project of multimodal corridor of the Southern Mediterranean Shore, from Mauritania to Libya, passing through Morocco, Algeria, and Tunisia, that is, the countries that make up the Maghreb. This East-West link is one of the most important in Africa (African Development Bank Group, 2015), like the TEN-T network, aims to connect the main cities and the strategic nodes for freight transport of the involved countries through the modernization of road and rail infrastructures. Among the most important there are the ports of Nouadhibou and Nouakchott (Mauritania), Tangier Med, Nador, Casablanca and Agadir (Morocco), Oran, Arzew, Annaba, Alger, Djen-Djen and Skikda (Algeria), Tunis-Radés (Tunisia). Regarding the rail corridor, the total length would reach 6,700km for freight traffic and 5,400 for passengers, 4,000km would be shared between both modes (CETMO, 2019). However, significant works for the modernization and extension of the infrastructure are needed to become an efficient, safe, interoperable and intermodal transport system. Investment for the rail mode of more than 50,000 million Euros was estimated in 2018 (more than 4,000 million €/year).

Beyond the Mediterranean scale, TMC represents an opportunity to connect Sahel countries with the core of Europe in a more efficient, sustainable, and safe way. Like all commercial and transport interconnection projects at the international level, it is expected that the TMC will promote a certain political stabilization and improvement of international relations in both the Maghreb and the Sahel. Influential exponents of the business sector have already expressed their support to such an ambitious initiative (Figure 3).

Figure 3: Position of Issad Rebrab, President of the Algerian industrial group Cevital, in favour of the development of a transcontinental rail corridor in Africa.



Source: Twitter, Issad Rebrab (@IssadRebrab) March 21, 2017

On the global stage, this project is strategic for the Belt and Road Initiative (BIR), promoted by the Chinese government, who's industrial and transport investments will improve logistics and multimodal freight transport (especially railways) in the countries of the TMC (Zulfikar Rakhmat, 2014). Some of the most interesting initiatives are:

- The Construction of the Cité Tanger Tech Mohammed VI (Morocco), a new industrial, logistics and technological centre (2000ha) which is expected to generate more than 100,000 jobs (CGNT Africa, 2020). The new port will have a capacity of 9 million containers.
- New car factories and car components industries in Morocco (Eliason, 2019).
- The construction of the port of el-Hamdania (Algeria), which will be the second largest in the Mediterranean after Tanger-Med (CGNT Africa, 2019).
- A 1.000ha new logistics zone in the port of Zarzis, (Tunisia).
- The new railway line Zarzis-Gabès (Tunisia);
- The new Tunisian car factory of SAIC– the Chinese state automobile manufacturing company (Ecofin Agency, 2018).

Morocco as key player for TMC

Within this project, the country with the most advanced railway infrastructure is surely Morocco. 60% of its rail network is electrified and freight transport is comparable, in terms of total tons, to Spain and

other European countries (Table 1). 70% of the traffic goes to sea ports and passes through the dry ports of Casablanca, Fez and Marrakech. The destination is especially the port of Tanger Med, the largest in the Afro-Mediterranean area and the 35th in the world by volume of traffic. In January 2021, the third terminal was inaugurated, increasing Moroccan leadership in maritime traffic. Within rail freight transport, a strategic activity is car transport. In 2017, 334,000 cars were transported by rail (ONCF, 2018), that is, half of the total cars transported throughout Spain in the same period. These flows are explained by the recent establishment of European automotive factories (Renault, PSA, Fiat) and China (BYD) and it is expected a substantial increase in the future, as 90% of this production is exported (Oxford Business Group, 2021). Within the framework of the Belt and Road Initiative, the Memorandum of Understanding (MOU) signed between Morocco and China has already generated important results: two factories for aluminium car components have been recently built and they are the first of their kind in Africa. As a result, the logistics sector will be a priority for the Moroccan economy and the railway will play an important role in a multimodal perspective. Substantial advances have also been made for passenger transport with the Tangier-Kentira High-Speed Line in 2018, the first section of the Moroccan High-Speed Line (HSL) ‘*Al Boraq*’, aimed at connecting Casablanca with Tangier (338km) in 1.30h (estimated by 2022 or 2023). Furthermore, Morocco planned to connect its main cities with the HSL by 2035. It is the first high speed line in Africa.

Table 1: Comparison between rail infrastructure and rail freight transport between Spain and Morocco

	<i>Spain</i>	<i>Morocco</i>
<i>Total length</i>	15.904 ⁵	2.295
<i>Of which electrified</i>	63,7% ⁶	64%
<i>Main Track Gauge</i>	1.668 mm	1.435 mm
<i>Electrification</i>	3kv	3kv
<i>Transported goods (thousand. tonnes)</i>	28.251 ¹	27.000
<i>Cars Transported</i>	757.000 ²	334.000
<i>Wagons</i>	11 292 ³	5.498
<i>Rail-maritime traffic</i>	7% ⁴	70%

Sources: Morocco ONCF (2017); Spain: 1, 3, 5, 6 EU Statistical Pocketbook 2019 (2017 data), 2 Anfac (2019), 4 OTLE, 2019 (2018 data)

Synergies between Mediterranean Corridor & Trans-Maghreb Corridor

Synergies and Complementarities between the Mediterranean Corridor and the Trans-Maghreb Multimodal Corridor can be explained at **three different scales**: regional (Alboran Sea), bilateral (Spain-Morocco) and Euro-Mediterranean (EU-Maghreb). The **common denominator** among all these all these scales is the **railway**, conceived as intermodal transport network, interoperable, competitive, and environmentally sustainable.

Regional Scale: complementarity in the Alboran Sea

The Alboran Sea represents a **shared maritime space** between Morocco, Algeria, and Spain in the westernmost of the Mediterranean Sea. The main maritime flows are concentrated between Tanger-Med and Algeciras for obvious geographical reasons: the Port of Algeciras is a true economic engine for Spain and for the Mediterranean basin, being one of the busiest ports of Europe and in the world. Nonetheless, according to a regional perspective there are other **important ports** for the exchange of freight and passengers, such as Almería, Motril, Cartagena, Málaga, Melilla, Nador and Oran. Some of them are part of the TEN-T Network and they will be a competitive option for multimodal transport (Almería and Motril). Those on the southern shore of the Mediterranean are already included in the TMC.

The **Alboran Sea is truly emerging geoeconomic space**, where the **complementarity and optimization of the existing infrastructures** should be enhanced. Alboran ports act both as attractors of global maritime flows and as poles of regional redistribution and mutual exchange (Figure 4). Among them, RoRo traffic is of primary importance. In this sense, it is not difficult to imagine a scenario in which those ports will exchange rail-port flows in a competitive way, thanks to the interoperability of both railway infrastructure and the interconnection with other ports and urban nodes in Spain and in Maghreb. A **study on the enhancement of logistics and multimodality in the Alboran Sea** would be very useful to foresee future synergies and to boost the development of both corridors.

Figure 4: Main ports of the Alboran Sea and railway connections



Source: own elaboration

Strengthen Spain-Morocco Cooperation in railway development

The Trans-Maghreb Multimodal Corridor is as strategic for **Morocco** as the Mediterranean Corridor is for **Spain**. Both countries need to promote their rail freight transport for domestic and international

markets. Their railway networks are the **links between the Sahel and Europe**. Moroccan rail freight transport is above many European countries and at the same level of Spain (in terms of total annual tons). We believe that it is necessary to **strengthen mutual trade relations**, specifically **multimodal services**, through a **coopetition approach**: cooperate bilaterally to compete globally. It will be interesting to focus on potential Spanish Moroccan railway operation, sea-short shipping (Table 2) and on **the removal of technical and administrative obstacles**. The study of bilateral trade relations prepared by CETMO (tab.2) constitutes a good starting point. At a financial level, attention should be paid to European Multiannual Framework 2021-27: the **reactivation of the Spain-Morocco cross-border cooperation program** could be a good opportunity to finance pilot projects. Interesting initiatives have been funded by the EU Program POCTEFA – Cross-Border Cooperation Program between France, Spain and Andorra, like the TRAILS Project (Batlle, 2020).

Table 1: main maritime relation between Med Corridor ports and Maghreb (import)

Port	Origin (MAIN flows)
<i>Algeciras</i>	<i>Morocco, Mauritania, Algeria</i>
<i>Valencia</i>	<i>Algeria, Morocco, Tunisia</i>
<i>Barcelona</i>	<i>Algeria, Morocco, Tunisia</i>

Source: CETMO (2019)

MEDC and TMC: intercontinental connection between Africa and Europe in Post-Covid era

CETMO, as well as other institutions and research centers, have demonstrated how Euro-African freight flows have been growing constantly in the last ten years (before the outbreak of the pandemic crisis). Many African countries supply European markets and its industries with raw materials such as energy products and raw minerals. Conversely, Europe provides semi-finished products and basic agricultural or industrial products to African countries. Many of these products are **compatible with rail transport**. In this sense, the two corridors play a fundamental role in capturing and distributing such goods. The Mediterranean Corridor represents the fastest, most efficient, and environmentally sustainable way to reach the economic heart of Europe (Prytherch, & Boira, 2011; Libourel, 2017; Loyer 2020). The ports of Andalusia, Murcia, Valencia, and Catalonia will be connected in the medium term with the standard gauge, so that a part of these flows could be routed by freight trains to France, Germany and the other countries without interruptions or train changes. The Mediterranean Corridor already counts with the only Spanish port that is fully interoperable and already connected to Europe, that is the Port of Barcelona.

In the Post-Covid-19 Era, Governance is a crucial dimension for the achievement of the objectives of both Corridors. The pandemic has unveiled the fragilities of the pre-covid transport sector, namely the lack of digitalization, of infrastructural interoperability, and of synergies between all modes. Transport and logistics need to be more **resilient**. In this sense, we think it is strategic to **align the Trans-Maghreb**

Multimodal Corridor to the TEN-T scheme as established in Regulations 1315/2013 and 1316/2013: similar objectives, requirements, deadlines, financing opportunities and governance approaches could be also implemented in the southern shore of the Mediterranean Sea. In this sense, the MEDA TEN-T project developed by CETMO is a good starting point. Thematic Working groups could be also set up to strengthen cooperation networks, to tackle common challenges and to **exchange good practice** on specific topics such as last mile connection, bottlenecks removal (Medeiros et al, 2021) and cross-border cooperation and urban nodes. A **TMC Coordinator** could also be defined as well as **National Coordination Offices** for each state involved and a **general Workplan could also be developed**. Last but not the least, the **pedagogical aspect of TMC** should be promoted to the citizenship, being the **infrastructural backbone of the Maghreb**, a true **Euro-African gate**. A Geographic Information System (GIS) could be a suitable instrument for this task. Based on our experience, an **open GIS** with up-to-date information on both infrastructure and services is highly demanded for civil society, media, and industries.

References

African Development Bank Group (2015), Les Infrastructures ferroviaires en Afrique. Les options de politiques de financement. Abidjan: Banque africaine de développement. Retrieved from https://knowledge.uclga.org/IMG/pdf/les_infrastructures_ferroviaires_en_afrique.pdf

Battle, S. (2020, March), Project TRAILS, an example of cross-border cooperation. Retrieved from <https://piernext.portdebarcelona.cat/en/mobility/project-trails-an-example-of-cross-border-cooperation/>

CETMO (2019), Documentación analítica socioeconómica y de transporte del Estrecho de Gibraltar 2000- 2017. Edición 2019

CGNT Africa (2019, July). Algeria ratifies BRI agreement with China, Retrieved from <https://africa.cgnt.com/2019/07/10/algeria-ratifies-bri-agreement-with-china/>

CGNT Africa (2020, December), Opinion: The Cité Mohammed VI Tanger Tech: a model of active cooperation between Morocco and China. Retrieved from <https://africa.cgnt.com/2020/12/15/opinion-the-cite-mohammed-vi-tanger-tech-a-model-of-active-cooperation-between-morocco-and-china/>

Ecofin Agency (2018, September). *SAIC Motor to build a car manufacturing plant in Tunisia* Retrieved from <https://www.ecofinagency.com/finance/0509-38919-saic-motor-to-build-a-car-manufacturing-plant-in-tunisia>

Eliason, M. (2019, June). Kenitra: Car Component Manufacturer CITIC DICASTAL Opens its First Factory in Africa. Morocco World News. Retrieved from <https://www.moroccoworldnews.com/2019/06/276920/citic-dicastal-morocco/>

European Commission (2019), Statistical Pocketbook 2019. EU Transport in Figures. Luxembourg: Publication office of the European Union. Available at https://ec.europa.eu/transport/facts-fundings/statistics/pocketbook-2019_en

Libourel, E. (2017). *El corredor mediterráneo: desencuentro político y territorial* (Vol. 16). Universitat de València.

Loyer, B. (2020), La relation entre la politique des transports et les mouvements nationalistes de la côte est de l'Espagne : le cas du corridor méditerranéen d'infrastructures, *Géocarrefour* [En ligne], 94/3 | 2020, mis en ligne le 21 septembre 2020, consulté le 01 février 2021. URL : <http://journals.openedition.org/geocarrefour/16038>; DOI: <https://doi.org/10.4000/geocarrefour.16038>

Medeiros, E., Ferreira, R., Boijmans, P., Verschelde, N., Spisiak, R., Skonieczki, P., ... & Berzi, M. (2021). Boosting cross-border regions through better cross-border transport services. The European case. *Case Studies on Transport Policy*.

ONCF - Fret en chiffres. Chiffres clés 2018. Retrieved from <https://www.oncf.ma/fr/Fret-et-logistique/Savoir-faire/Fret-en-chiffres> [01/02/2021].

OTLE - Observatorio del Transporte y de la Logística en España (2019) Informe anual. Available at https://observatoriortransporte.mitma.es/recursos_otle/informe_otle_2019_1.pdf

Oxford Business Group (2021, January). The Global Car Industry Is Finally Set To Rebound. Retrieved from <https://oilprice.com/Energy/Energy-General/The-Global-Car-Industry-Is-Finally-Set-To-Rebound.html>

Prytherch, D. L., & Boira, J. V. (2015). Mediterranean regionalism from territory to trains: spatial politics and planning of macro-regions and transport networks in Spain. *Space and Polity*, 19(2), 110-131. <https://www.tandfonline.com/doi/abs/10.1080/13562576.2015.1050844>

Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU Text with EEA relevance. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1315>

Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010 Text with EEA relevance. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1316&from=EN>

Zulfikar Rakhmat, M. (2014). China and Tunisia: A Quiet Partnership. *The Diplomat*. Retrieved from <https://thediplomat.com/2014/06/china-and-tunisia-a-quiet-partnership/>