

# Constraints of the Extension of the Trans-European Networks to Ukraine

*Balázs Szilágyi, National University of Public Service, Szilagyi.Balazs@stud.uni-nke.hu<sup>1</sup>*

## Abstract

European Union decisions to cooperate with third countries to promote projects of mutual interest and to ensure the interoperability of transport, telecommunication and energy networks have already been taken regarding Ukraine. Ukraine as a candidate country will need to prepare for the full implementation of the Trans-European Networks related EU legislation.

This paper examines the possible institutional, financial, geopolitical and economic constraints of surmounting the gap between EU and Ukrainian infrastructure. Apart from an analysis by the dimensions of institutions, financial resources, networks and economic growth, a horizontal approach is applied, too. A key document on the preparedness of Ukrainian institutions is the Commission's Opinion on Ukraine's application for membership of the European Union. This paper gives an overlook on the key facts and literature on the institutional capacities of Ukraine to manage EU funded infrastructure development projects. Some key factors influencing the possible financing mix of future trans-European infrastructure are collected. Possible development of the amount of EU fund for infrastructure development is indicated taken into account EU commitments and scenarios from the past.

The availability of national budget, loans and private financing is examined, too. Better Ukrainian infrastructure can better connect the existing trans-European networks with Belarus, Russia and the Black Sea. A complex analysis with geopolitical accent is given on the importance of these three directions and their future importance for the EU. The growing importance of military infrastructure development in and around Ukraine is also mentioned. The EU accession of Ukraine is perceived as a perspective for economic growth. This paper also gives some hints on the interdependence of GDP growth and the development of infrastructure: how Ukraine's catching up in economic terms and catching up in infrastructure development can go hand in hand. With more horizontal approach, the role of the Three Seas Initiative is raised, too. This initiative can be understood both complementary and critical vis a vis the practice of the development of the trans-European networks. Possible interactions of the Three Seas Initiative countries and Ukraine regarding transport, telecommunication and energy infrastructure development are analysed, too.

## Points for Practitioners

This paper helps to identify key areas where Ukraine institutional capacity might need assistance in order to be able to absorb infrastructure development related financial support. In connection with this, the availability of financial resource for trans-European network development is estimated, too. The paper also gives an analysis of opportunities and risks for EU as a possible financer of the developments, considering the specifics of geographical

---

<sup>1</sup> PhD student, Doctoral School of Public Administration, National University of Public Service, Budapest, Hungary

location of Ukraine and the key tendencies of world politics. Infrastructure development is also put in the context of macroeconomic goals. The paper helps further in judging role of the Three Seas Initiative countries in connection with Ukraine: how much these countries see Ukraine as a competitor for financial resources for infrastructure and how much they are possible beneficiaries of the infrastructure development in Ukraine, improving market access.

**Key words:** Ukraine, Trans-European Networks, transport, energy, telecommunication

## **1. Introduction**

Ukraine has been set in the direction of European integration in 2014, the country has shown a steady progress on the path that has been acknowledged by the European Council granting candidate status in 2022. EU leaders decided to open accession negotiations in 2023. The European Commission assessed Ukraine's integration progress both before granting the candidate status and before opening the accession negotiations.

This paper focuses on the Trans-European Networks (TEN) that has been an EU policy since the adoption of the Maastricht Treaty. Candidate countries must comply with the TEN acquis to become a member, they also need to prove that they have sufficient institutional capacity to develop the infrastructure in line with the TEN regulations. This paper analyses Ukraine's relevant institutional capacity with the help of Commission documents and scientific literature. The financial framework is presented with the focus of past support for Ukraine and decisions on future support, taking into account Ukraine's absorption capabilities. The paper also tries to sketch the basic determinants of the post-war financial situation. The EU decisions on the extension of the trans-European networks is displayed in a geopolitical context, assessing future needs of external network connections. Interests of Central European countries, with special regard to the Three Seas Initiative is analysed, too. Is the Ukraine related network development an opportunity for them or is there a competition for resources? Before concluding, this paper also gives an outlook on macroeconomic context based on relevant literature. Is growth a precondition for infrastructure development or the other way round?

## **2. The framework of EU-Ukraine cooperation in energy, transport and digital matters**

The main legal basis for EU-Ukraine cooperation is the Association Agreement (2014). The preamble of this document has a paragraph on energy related issues, 'development of appropriate infrastructure and increasing market integration' is mentioned there as a joint commitment. Title IV on trade and trade-related matters covers several energy related issues. Title V on Economic and sector cooperation begins (Chapter 1) with energy cooperation.

Transport, energy and telecommunication related services are widely covered by the treaty, there are some provisions for transport and energy (not for telecommunication) network, too. Chapter 11 of Title IV on trade related energy regulates important elements of the framework of energy transport, including Article 274 on 'Cooperation on infrastructure' focusing on coordinated development of gas transmission infrastructure and gas storage facilities. Articles 338 and 368-369 speak about development cooperation regarding energy infrastructures of common interests and transport network connected to TEN-T, Eastern Partnership Transport Panel, the

Transport Corridor Europe-Caucasus-Asia (TRACECA), the Baku process and ‘other transport’ initiatives are referred to. Cross-border and regional elements of transport, energy and communication networks are mentioned in Article 448 on ‘Cross-Border and regional cooperation’. Indicative maps of Ukraine’s strategic transport network are included in Annex XXXIII.

Transport, energy and telecommunication related services are widely covered by the agreement, infrastructure is less in the focus. Future special road, rail, air and inland waterways transport agreements are also foreseen by the (Article 136 of) the Association Agreement (2014). EU and Ukraine signed a common aviation area agreement in 2021, and an agreement (2022) on the carriage of freight by road.

Institutional capacities of Ukraine to participate in transport, energy and telecommunications related matters have been assessed by the opinion (Communication, 2022b) and the report (Commission Staff Working Document, 2023) of the European Commission. These documents are referred to as the ‘opinion’ and the ‘report’ in this paper. Considering finances, the Ukraine Plan (Commission Staff Working Document, 2023) is the most recent document to be studied. Regarding the extended TEN network Communication (2021, 2022a) from the European Commission and the latest draft of the new TEN-T Regulation (2024) are the key documents.

### **3. Assessment of Ukraine’s institutional capacity**

The Commission’s opinion (Communication 2022b) acknowledges the institutional strengths of Ukraine despite the war conditions. Institutional resilience and ‘ability to function’ is repeatedly stressed by the opinion, and also by the report (Commission Staff Working Document, 2023). The opinion also refers to the WEF global competitiveness index and the weak institutions behind the low rating. The opinion mentions that the clear focus of the Support Group for Ukraine is building of state institutions. Overall, a mixed but optimistic picture is given.

Ukraine has concluded agreements with several EU agencies. The most relevant are the European Union Aviation Safety Agency (EASA), the European Maritime Safety Agency (EMSA) and the European Union Agency for Railways (ERA). Transport Dialogue with the Eastern Neighbourhood started in 2018.

The Ministry of Restoration was set up to merge previous infrastructure and regional development ministries, playing a key role in infrastructure development. According to the Commission’s report, adequate staffing of the new ministry and sufficient coordination with other ministries (especially with the Ministry of Finance) is still a challenge.

The Commission’s report assesses transport related legislative alignment and institutional reforms very slow. Surilova (2020) drew attention to this already three years earlier. The National Transport Strategy 2030 and its first action plan is certainly in delay, due to the war conditions. Surilova (2021) describes the nature of administrative problems in the transport field (specifically port management). Ukraine’s observer status in the Transport Community Treaty (since 2022) may help in the adoption of the transport acquis.

In contrast to the transport sector the Commission’s opinion evaluate the results in the energy sector ‘particularly good’, especially the set-up of its electricity and gas markets, including the unbundling and certification of the gas-

and electricity transmission network operators. The High-Level Working Group on energy and Ukraine's participation in the Energy Community further supports its progress in the adoption of energy related acquis.

The Ukrainian transmission system operator (TSO) Ukrenergo joined ENTSO-E in December 2023. 16 March 2022 with the emergency synchronisation of Ukraine and Moldova with the Continental Europe power system was an important milestone of electric power system integration beginning in 2017 and ending with the successful completion of synchronisation project in November 2023.

The Commission acknowledged the establishment of the telecommunications regulator in its opinion. According to the Commission's report, 'Ukraine has launched a process to put in place legislation relevant to EU roaming that would align Ukraine's legislation with the EU telecommunications acquis'. Ukraine's achievements in the following fields are also mentioned: electronic signatures, open data policy, cybersecurity. Ukraine still does not have 5G.

Regarding the TEN itself, the report stresses the 'extraordinary resilience and capability for emergency repairs to the damaged networks'. The wording of the report ('some progress') is less sceptical than the in the case of transport market regulation, still less enthusiastic than concerning energy market. The EU and Ukraine signed a High-Level Understanding on the indicative TEN-T maps In June 2022. Ukraine has been associated to the Connecting Europe Facility since June 2023. The Indicative TEN-T Investment Action Plan with 39 priority projects progressed slowly already before the current war situation with just three projects having a feasibility study. The Commission's report criticises Ukraine's capabilities to prioritise, prepare and implement projects. Even the designation of a national authority for the Trans-European energy network was pending. The inclusion of the Trans-European energy network (TEN-E) guidelines in Ukraine's legislative framework was realised with technical assistance funded by the EU.

Ukraine does not manage EU funds directly; the development of the relevant financial institutional framework is still crucial in order to be able to manage TEN related funds in the future. The Commission provides (in its opinion and report) a detailed to do list in the field of public procurement and anti-corruption framework. As regards financial investigations, the report stresses the need of the improvement of the legal framework and institutional capacity. Fiscal risk monitoring and management has legal basis and institutional architecture, but the report does not seem to be satisfied regarding capacity tools and implementation.

According to Wise et al. (2023) the current parliament performs better than the previous ones, war is rather a condition fuelling EU related reforms than detaining. War helps the unity of political decision makers; peace may bring division. This makes the durability of the current speed of reforms questionable. As we have seen, especially transport is not the area where reforms have speeded up, anyway.

#### **4. Financing trans-European infrastructure in Ukraine**

Ukraine has participated in the Eastern Partnership since 2009, its inception. Even before this, EU funds were available in the framework of the TACIS program. For eastern partners ENPI (European Neighbourhood Policy Instrument) was available. In the 2014-2020, NIF (Neighbourhood Investment Facility) became the most

important frame of EU support with regards to infrastructure. The Commission in its Communication (2011) mentioned TEN-T related development support only in the long term.

The Eastern Partnership summit in November 2017 endorsed the '20 deliverables for 2020' agenda. The Indicative TEN-T Investment Action Plan (for the whole region) and the EU-confirm reform of the Ukrainian gas transmission system were among the achievements, plans in the digital sector were not realized by the deadline. In 2020, an economic and investment plan (EIP) was initiated. Priorities were set by a Joint Staff Working Document (2021). According to these priorities, the completion of the extended indicative core TEN-T network by 2030 would be supported by the EU and international financial institutions. The only Ukrainian investment named in this regard was the Lviv northern bypass road. Cross-border interconnectivity is vaguely mentioned among the energy targets. The digital provisions include roaming, 5G, e-governance and cybersecurity. The investment needs in upgrading border crossings under the EIP is estimated to be EUR 30 million, while for digital transformation EUR 200 million.

According to the Commission's opinion (Communication 2022b), EIB and EBRD mobilized EUR 9.5 billion in loans to Ukraine. In 2023 EIB established the EU for Ukraine Fund with EUR 400 million granted by member states.<sup>2</sup> The Commission's report mentions mobilisation of EUR 59 billion since the Russian invasion: EUR 2.3 billion in grants from the NDICI Global Europe instrument (2022 and 2023), EUR 25.2 billion of macro-financial assistance (concessional loans) as well as military assistance of EUR 25.2 billion, including EUR 5.6 billion under the European Peace Facility and bilateral EU Member States contributions. The mid-term review of the 2021-2027 financial plan adjusted the EU's budget. The Kiel Institute for World Economy has a Ukraine Support Tracker<sup>3</sup> with more details. The many gross numbers say little about the funding of Trans-European Networks in Ukraine and its perspectives.

The World Bank (2022) assessed the financial needs of Ukraine for reconstruction USD 74 billion in transport, USD 10 billion in energy sector and USD 3 billion in telecommunication already in the sixth month of the conflict. After one year the World Bank (2023) assessed these needs USD 92 in the transport, USD 47 billion in the energy and USD 5 billion in the telecommunication sector. The estimates are detailed geographically. The third assessment of the World Bank (2024) does not seem consistent with the previous ones. Daily news about the military developments on the territory of Ukraine clearly underpin that energy related reconstruction needs have increased rapidly.

According to Tankovsky (2022), overall condition for the external financing of Ukraine has improved substantially in the last two decades. Strangely, the Commission (2022b) in its opinion, did not even mention EU funds and Ukraine's ability to absorb them. The report (Commission Staff Working Document, 2023) has a chapter (Chapter 22) on regional policy and coordination of structural instruments and a chapter (Chapter 32) on financial control, both mentioning the management of EU funds. Limited progress was reported.

---

<sup>2</sup> <https://www.eib.org/en/press/all/2023-272-eu-member-states-pledge-over-eur400-million-to-the-eib-s-fund-supporting-ukraine>

<sup>3</sup> <https://www.ifw-kiel.de/topics/war-against-ukraine/ukraine-support-tracker/>

The main document on 2024-2027 EU financing of Ukraine is the council decision on the Ukraine plan, with a detailed budget plan in its Annex (2024). EU financial support is foreseen for the adoption of the revised National Transport Strategy of Ukraine until 2030 (C11.R1) in 2024, the development of border infrastructure (Development of Ukraine's export logistics potential) and EUR 350 million reconstruction investment in transport infrastructure (C11.I1) in 2026-2027. Among the many supported items in the field of energy, adoption of the Integrated National Energy and Climate Plan (C10.R1) in 2024 and EUR 550 million investment in energy infrastructure (C10.I1) in 2026-2027 might be related to TEN. Digitalization reforms appear horizontally in several sectors supported in the framework of the Ukraine Plan. Secure and efficient digital infrastructure regulation (use of radio frequencies, cybersecurity) by 2025 (C14.R1) and the adoption of the Action Plan for digitalisation of public services until 2026 (C14.R2) are the most relevant.

The Ukraine Plan also foresees the adoption of the Action plan for the implementation of the Roadmap for reforming public investment management and the medium-term state debt management strategy, these might increase Ukraine's capacity to absorb future EU funding. The Commission Staff Working Document (2024) on the Ukraine Plan expects 80% of transport investments and 60% of energy investments 'to contribute to climate change mitigation and adaptation, environmental protection, including biodiversity conservation, and to the green transition'.<sup>4</sup>

Within the 2021-2027 financial framework, EU financial aid to Ukraine will not be determinant in developing the trans-European network. Apart from some reconstruction of the transport infrastructure, EU will mainly finance energy related projects, mostly not TEN-related. The energy focus is a general phenomenon among international financial partners of Ukraine. Energy reconstruction is a key issue at conferences on Ukraine's reconstruction,<sup>5</sup> no major transport related projects are in the pipeline of donor events. At the same time, the support of digitalisation is high on the agenda of such conferences and EU financed projects.

Ukraine gets substantial macro-economic support from the EU and other international donors. Well managed state debt is a precondition for loans that will be necessary meet the TEN related investment needs. Roads, railways, waterways, ports and airports will need to be upgraded to meet TEN requirements, while the necessary financial resources will only be partly available from EU funds.

## **5. Determinants on Ukraine's trans-European network design**

The network of the main routes is determined by the regional structure and the international, geoeconomic role of the country. Based on its pre-war population data, Ukraine is an urbanised country with several large cities. In case of a successful reconstruction and repopulation, these cities can become the hubs of future networks.

According to data from the beginning of 2022, Kyiv was a city with 3 million people, Kharkiv had 1.4 million inhabitants, Odesa and Dnipro were 1 million people cities. Donetsk also had 900 thousand inhabitants. The largest city in the western part of the country was Lviv, its population was a bit over 700 thousand, just like Zaporizhzhia

---

<sup>4</sup> p. 49

<sup>5</sup> The next key event is <https://www.urc-international.com/> Ukraine Recovery Conference, 11-12 June, 2024. Berlin, Germany

one thousand kilometres away. All in all, 23 cities within the internationally recognised borders of Ukraine had at least 250 thousand inhabitants. Only five of them (Chernivtsi, Khmelnytskyi, Lviv, Vinnitsia and Zhytomyr) were to the west from the Kyiv-Odesa line.

Pan-European Helsinki transport corridors were adopted at ministerial conferences in 1994 and 1997 to set the directions of the extension of trans-European networks to Eastern Europe. Out of ten corridors, four were planned to reach Ukraine. Corridor III was intended to connect Dresden and Kyiv (via southern Poland and Lviv). Corridor V was designed to connect Adriatic ports (Venice, Rijeka, Ploče) with Lviv (and thus Kyiv via corridor III) via Budapest with a Slovakian branch from Bratislava via northern Slovakia. Corridor VII was the Danube. Corridor IX was a north-south corridor connecting Baltic ports (Helsinki, Saint Petersburg, Klaipėda and Kaliningrad) with Odessa and Alexandroupolis via Kyiv (between Saint Petersburg and Kyiv two routes – via Pskov and via Moscow – were sketched).

The current TEN transport corridors were set by the 2013 TEN-T Regulation, Ukraine related extension was added by a Commission Delegated Regulation (2014) with Map 1 and Map 2. As we can see on these maps, this is not the extension of the core network (to be ready by 2030), just the extension of the comprehensive network (to be ready by 2050). The new TEN-Regulation might be adopted in 2024, the Commission proposed Map 3 and Map 4 for Ukraine in the Annex (2022) to the new regulation.

The World Bank (2019) in cooperation with the European Commission made a proposal for TEN-T related priority projects, see Map 5. Based on these, the Ukrainian priorities were set. According to the Ukrainian national transport priorities, number one priority is the upgrade of the M-07/E373 (Kyiv-Kovel-Yagodin) road, making a shortcut between Kyiv and Warsaw via Lublin. The two top priorities in the railway sector are the electrification of the Kovel-Izov section (parallel to the top road priority) and the reconstruction of the Munkacheve-Chop section towards Hungary and Slovakia. Further bottlenecks prioritised are overcrossings within the country, all of them in the western part of the country. In longer term and larger scale, the Ukrainian government also promotes the GO (Gdańsk-Odesa, via Katowice-Lviv-Uman) project that is a road connection from the Baltic to the Black Sea.

The new TEN-T regulation will have a core network for Ukraine meaning a prioritisation of connections to be upgraded or constructed until 2030. The Commission's proposal does not prioritise M07, only the roads connecting Southern Poland, Slovakia, Hungary and Romania via Lviv. Most of the sections west from Rivne are missing. There are no highway border connections towards Belarus, Moldova and Russia either. Most of Kyiv-Dnipro, Dnipro-Mykolaiv and Mykolaiv-Mariupol highway sections are missing, too. Regarding railways, the new TEN-T includes most of the existing railway lines in the west and the main lines in the east. No high-speed railway is foreseen. According to Kurhan et al. (2022) planning high-speed railway connections between Lviv, Kyiv and Odesa would be rational. These cities are among the few hubs of the core TEN-T railway network, anyway.

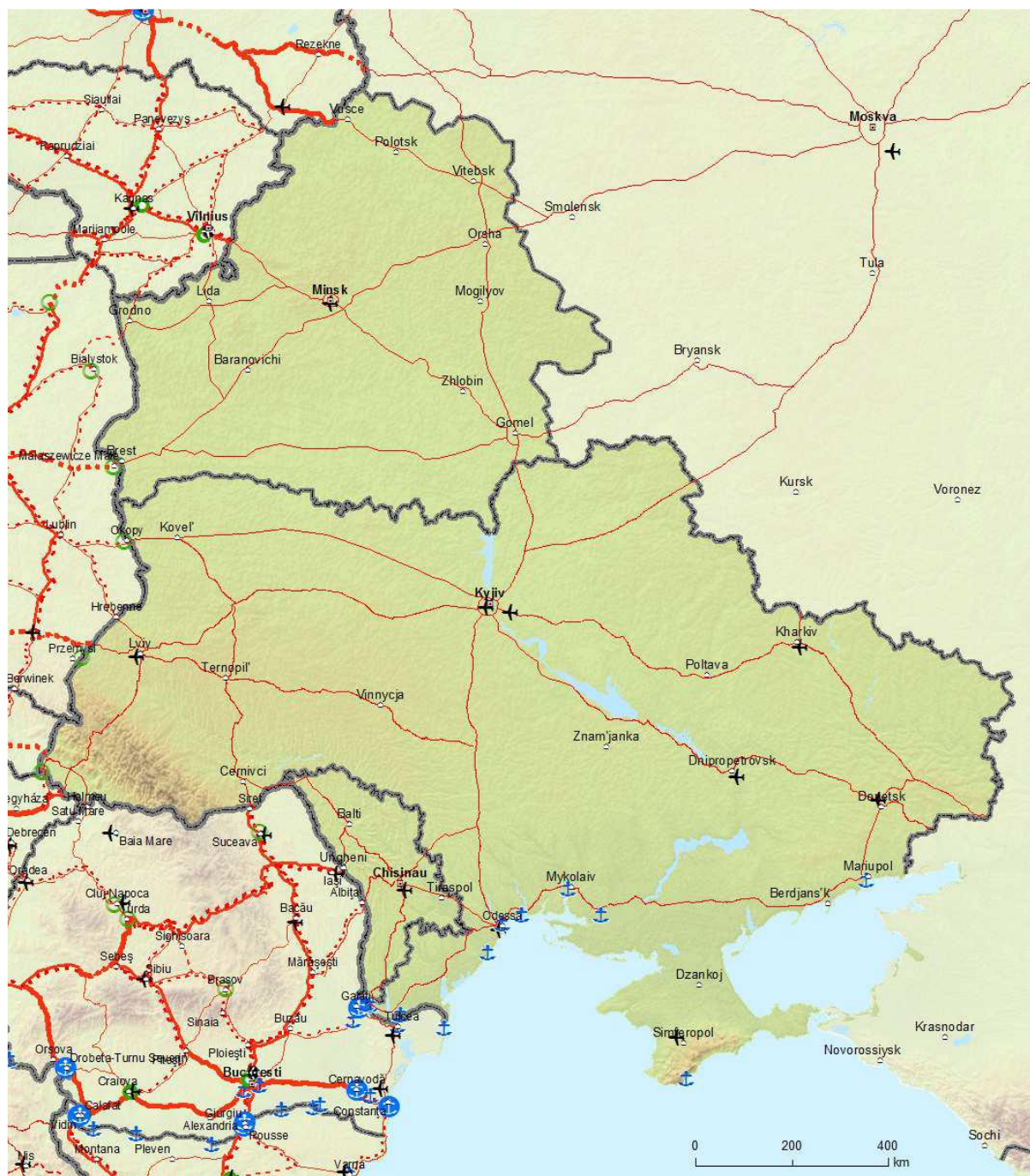
The Commission's proposals were amended based upon a high level agreement with Ukraine. As regards the road network, the upgrade of M07 was reclassified as extended core network, meaning a 2040 deadline instead of 2050, northern border sections were moved to the comprehensive network category (to be completed by 2050 instead of

2030). There is on addition to the comprehensive network: connecting Zhytomyr with Moldova via Vinnycja. In the case of railways, three section of the comprehensive network connecting Krasnohrad were added.



Map 1

Indicative Extension to Ukraine: Comprehensive Network; Roads, ports, rail-road terminals and airports



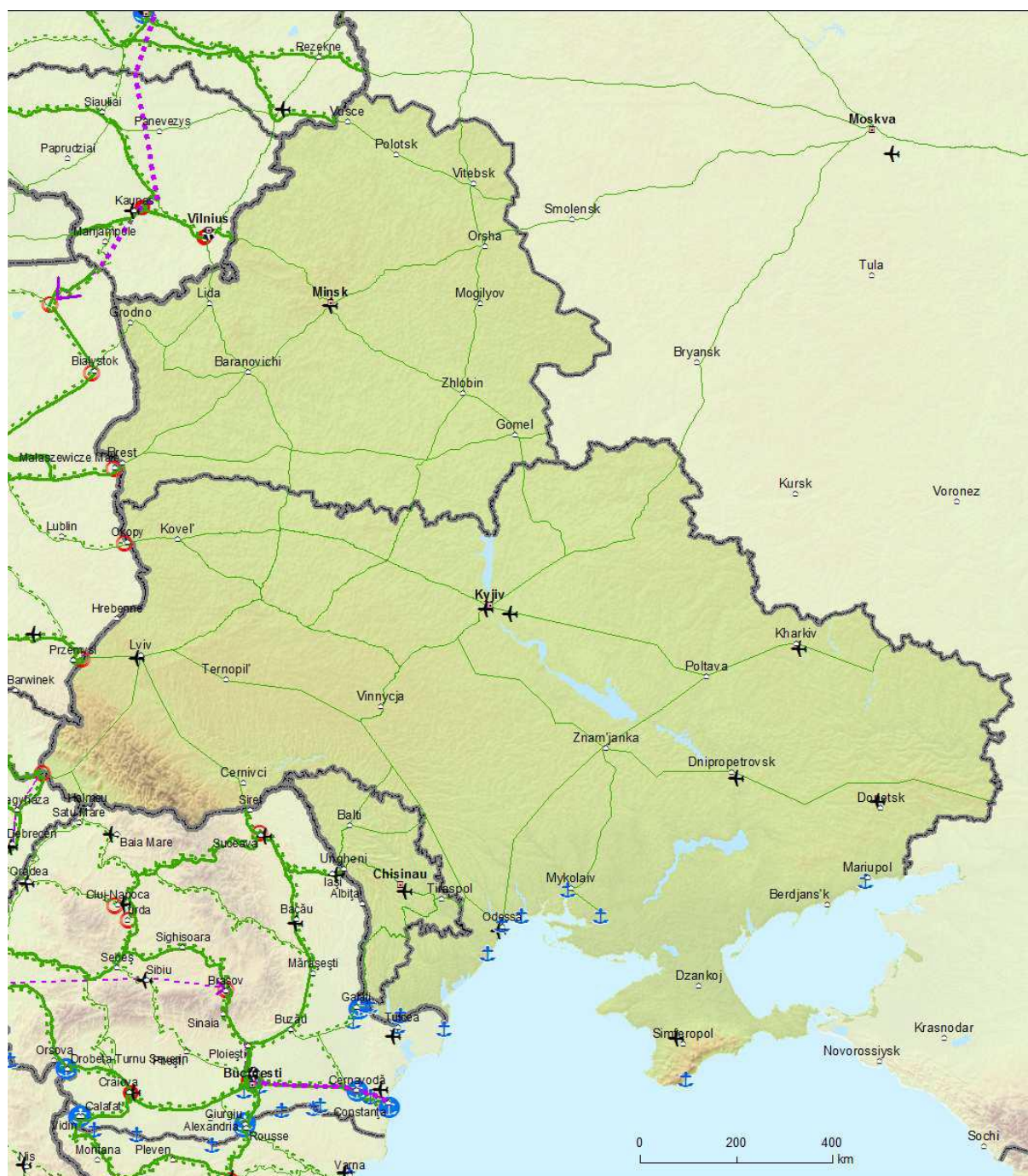
Comprehensive	Core	Comprehensive	Core	Comprehensive	Core
					Airports
Road / Completed	Road / Completed	Ports	Ports		
Road / To be upgraded	Road / To be upgraded	RRT	RRT		
Road / Planned	Road / Planned				

Source: Commission Delegated Regulation (2014)



Map 2

Indicative Extension to Ukraine: Comprehensive Network; Railways, ports, rail-road terminals and airports



Comprehensive	Core	Comprehensive	Core	Comprehensive	Core
		Conventional rail / Completed			High speed rail / Completed
		Conventional rail / To be upgraded			To be upgraded to high speed rail
		Conventional rail / Planned			High speed rail / Planned
		Airports			Ports
		RRT			

Source: Commission Delegated Regulation (2014)

Map 3

Core & Comprehensive Networks: Roads, ports, rail-road terminals and airports



Roads Core	Roads Extended Core	Roads Comprehensive	Compr	Core	Ports	Urban Nodes
— Road	— Road	— Road	⚓	⬇	⚓	● Capitals
- - Road / New Construction	- - Road / New Constr.	- - Road / New Constr.	○	●	⚓	● Urban Nodes
		↔ Projected	✈	✈	✈	






















Source: Annex (2022)



Map 4

### Core & Comprehensive Networks: Rail, ports and rail-road terminals (RRT)



Railways Core		Railways Extended Core		Railways Comprehensive		Compr. Core		Urban Nodes	
	Conventional		Conventional		Conventional				Capitals
	Conventional / New Constr.		Conventional / New Constr.		Conventional / New Constr.				Urban Nodes
	≥ 200 km/h		≥ 200 km/h		≥ 200 km/h				
	≥ 200 km/h / New Constr.		≥ 200 km/h / New Constr.		≥ 200 km/h / New Constr.				
					Projected				

Source: Annex (2022)

Map 5

Priority projects proposed by the World Bank and the European Commission



Source: World Bank (2019)

According to the new TEN-T regulation, the following transport corridors will connect Ukraine with the EU member states:

- Baltic Sea – Black Sea – Aegean Sea Corridor (Lviv-Chernivtsi-Suceava-Chișinău-Odesa road and rail branch, and the Ukrainian Lviv-Odesa rail connection);
- Mediterranean Corridor (Hungarian Border – Lviv road and rail section);
- North Sea – Baltic Corridor (Polish Border – Kharkiv – Mykolaiv – Mariupol road connections and Polish Border – Kharkiv – Mykolaiv – Mariupol rail connections);
- Rhine-Danube Corridor (Slovakian Border – Lviv road and rail section, Danube waterway).

Connecting Lviv and the Ukrainian ports with member states seem to be the priority, the main direction of the connections is East-West. As we have seen the Ukrainian government even lobbied for the delay of border section investments in the direction of Russia.

The TEN-E Regulation (2022) uses the term ‘projects of mutual interest’ (PMI) for the projects with third countries. Previously the Trans-European Energy Network was limited to the member states. The regional groups of the North-south electricity interconnections in central eastern and southeastern Europe can propose PMIs. According to the list published in the Commission Delegated Regulation (2024), currently there are no Ukraine related PMIs.

Ukraine was integrated in the Soviet energy grids but has also cross border connections to the neighbouring countries. Ukraine's electric grid operator disconnected the country's power system from the larger Russian-operated network on the 24<sup>th</sup> of February, 2022, four hours before the Russian invasion. A bit more than two weeks later the Ukrainian system was synchronized with European Union system, thanks to a five-year preparation. At the moment, no new electric interconnections are planned.

Ukraine launched virtual gas reverse flow with Hungary, Poland and Slovakia in 2020. Until 2019 Ukraine's contracts with Gazprom only allowed transit from Russia to these countries. The 2020-2024 five-year Gazprom agreement allowed this with reference to EU rules. Due to the experience of Ukraine from the 2009 stoppage of gas delivery, the country had prepared for the changes. The new concept of the EU does not regard natural gas infrastructure to be part of the TEN-E anymore, only hydrogen pipelines and electrolyzers, limiting Ukraine's perspectives to develop its natural gas connections.

According to Raik et al (2024)'s perception, EU-Russia competition can be traced back to 2004, the year of the Eastern enlargement of European Union. Until 2014, the commitment of the Ukrainian government to European integration was instable. Since 2014, Russia is under an increasing number of EU sanctions, Ukraine-Russia economic ties have been weakening. Nizhnikau and Moshes (2024) emphasises that 2022 EU sanctions on Russia restricted EU-Russia transport and energy connections. Russia has tried to diminish the role of Ukraine in the transit of goods including gas by prioritising Belarus in rail transport and constructing the Nord Stream gas pipeline.

Ukraine has had a substantial trade deficit for a longer period, this is true for the EU-Ukraine relations, too. The Association Agreement did not change Ukraine's trade position (see Ihnatenko et al, 2019). The EU accounts for less than a third of Ukraine's trade. Most of Ukraine's trade partners are best accessible via sea (in times of peace). Half of Ukraine's EU originated imports come from Germany, Poland and Italy. Hungary lags just a bit behind Italy. German and Polish interests behind the developing EU-Ukraine's transport connections are clear, Italy and Hungary are interested in the development, too. Romania's interests to connect via Chernivtsi and via Moldova are rather strategic.

The Commission Staff Working Document (2024) on the Ukraine Plan clearly speaks about 'reorientation of trade and other flows'.<sup>6</sup> In fact, Ukraine's trade with the regions outside the EU is rather limited by the Russian military activity than by economic rationale. Free trade is an important factor, but without foreign direct investments from the EU, the relevance of the EU in Ukraine's trade may even decrease.

Port development and accessibility of Ukrainian ports from the EU is a key issue that is not addressed by the TEN proposals. No shortcut in the south of the country (via the Carpathian Mountains that would certainly cost a lot) is foreseen. It would be not without a precedent if China came with offers to develop the ports and their accessibility from the West (see Soyaltin-Colella, 2023). Even for other transport connections, offers from Chinese enterprises can be expected. Wanda et al. (2022) presents experience of post-war Angola on this. No substantial role is foreseen for Ukraine in the EU-China railway connection (Pomfret 2023) that raises doubts about the profitability of railway investments.

---

<sup>6</sup> p. 48

Beyond economic aspects, TEN-T is also serving military mobility. This has been communicated since 2017 but the only legal act regarding this is the CEF Regulation (2021, Article 12). Strangely, even the draft of the new TEN-T regulation does not refer to this. There is an increasing emphasis on the dual civil and military use of the transport infrastructure. Most of the EU-Ukraine border area is rural without major cities. Transport infrastructure close to the Ukrainian border is getting more important for military mobility reasons.

EU has a clear priority of railway development. Despite the existing network, its conditions and management raise many questions (Strelko et al. 2023). It is also important to mention that as Jacyna-Golda et al. (2024) found, intermodal transport in the Ukrainian-Polish relation is marginal. Railways in Ukraine need huge investment but also a great change in management and systematic approach. At the meantime highway connections in the western part of the country are missing. Finances may be available via concessions that have a mixed history in the region.

There were some fast solutions in energy investments, where the military situation could be seen as a pushing factor. At the same time the future of the gas supply is not clear. EU has phased out support for natural gas pipeline developments.

## **6. Catching up of Ukraine – an opportunity or a challenge for Central Europe?**

In its current situation, Ukraine can be expected to be able to regain its economic strength, especially with post-war external financial support. Kravchenko et al. (2023) give a rich overview of similar historical examples. They find historic evidence to understand the post-war reconstruction as an opportunity for growth, at the same time they warn that corruption, weak institutions and the resource-based economic structure may limit the perspective of catching up to the rest of Europe.

To reach the welfare level of Western Europe may not be a realistic goal, but to approximate the development level of the closest EU member neighbours could be more in the reach. Central European countries still lag the western part of the European Union. The development of transport and energy connections are widely regarded as part of the toolkit to catch up. Among the various formats of regional cooperation, the Three Seas Initiative can be highlighted here, focusing on infrastructural issues. Colibășanu (2023) finds the Three Seas Initiative a valuable instrument in promoting Ukraine related infrastructure investments, while pointing to the instability of the ‘geoeconomic’ position of the EU.

Many scholars analysing the Three Seas Initiatives, mention the Polish mid-war *Intermarum* concept (see Ištók et al., 2018) of the revival of the medieval expansion of the territories under Polish rule. It is clear that this forum of regional cooperation was initiated by Poland, but the joint statements of the presidential summits had had almost no mention of Ukraine before 2022. The initiative gives voice to the infrastructure development needs of twelve EU member states and is supported by the Three Seas Initiative Investment Fund being far from any alternative to EU funds.

Ukraine can seek allies among the Central European countries and within the framework of the Three Seas Initiative. The extension of the Trans-European Networks to Ukraine is a mutual interest of Ukraine and the Central European countries. Discussing infrastructure development with Central European partners can also bring benefits

from lessons learnt. In times of scarcity of financial resources, competition for funding opportunities among these countries can occur, too.

## **7. Conclusion**

In the fields of transport, energy and telecommunication, Ukraine has taken obligations by signing the Association Agreement. These obligations focus on market regulation of services. Infrastructure related matters, including the Trans-European Networks are less specific in the agreement and they do not fall under the scrutiny of the European Commission. According to the assessment of the Commission and of other studies, transport related reforms are very slow in Ukraine. On the other hand, energy is a sector where Ukraine deserved acknowledgement from European partners, achieving the bidirectional connectivity of cross-border energy connections with EU member neighbours in a rapid manner. While still not having 5G, Ukraine made considerable progress in digital interconnectivity, too.

Capacities to absorb EU financial contributions to Ukraine's infrastructure are found weak. Not surprisingly, EU finances, besides urgent need due to the military situation, focus on capacity building. EU support to the development of Ukraine's transport, energy and telecommunication networks is limited. Reaching the standards of TEN-T will require substantial financing. The rapid catching up of Ukraine's road network might lead to the increase of state debt. The EU might be more willing to finance the modernization of the railways more than other transport modalities.

For historical reasons, Ukraine's east is more urbanized than the west. There has been less internal need for the infrastructure development in the areas neighbouring with the EU. Due to sanctions and hostilities, the weight of the eastern economic ties is decreasing, while trade with western partners, especially Germany and Poland but also to some extent Italy and Hungary has increased. This is reflected in the plans to extend the Trans-European Transport Network. Despite the success in upgrading energy interconnections, the development plans of the energy network are less detailed, unlike in other neighbourhood relations.

The physical integration of Ukraine to the EU by constructing and upgrading transport and energy interconnections, makes Ukraine interconnected with the closer region of the Three Seas Initiative, an area (apart from Austria) still in the phase of catching up to the EU average in terms of development. Cooperation within the region is rather loose, Ukraine joining the regional efforts of interconnectedness may gain some advantages from coordination. Ukraine can learn lessons from the countries involved but may also find rivals searching for EU funding opportunities.

## **References**

AGREEMENT (2022) between the European Union and Ukraine on the carriage of freight by road, Official Journal of the European Union, 6.7.2022 L 179, p. 4-10

ANNEX (2022) to the amended proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, on Union guidelines for the development of the trans-European transport network amending



Regulation (EU) 2021/1153 and Regulation (EU) No 913/2010 and repealing Regulation (EU) 1315/2013, Brussels, 27.7.2022, COM(2022) 384

ANNEX (2024) to the COUNCIL IMPLEMENTING DECISION on the approval of the assessment of the Ukraine Plan, Brussels, 15.4.2024, COM(2024) 172

ASSOCIATION AGREEMENT (2014) between the European Union and its Member States, of the one part, and Ukraine, of the other part, Official Journal of the European Union, 29.4.2014 L 163, p. 3-2137

Colibășanu O.-A. (2023) The EU's Evolving Economic Diplomacy in Ukraine and its Ramifications, Romanian Journal of European Affairs, Vol 23., No. 2., p. 84-104

COMMISSION DELEGATED REGULATION (2014) No 473/2014 of 17 January 2014 amending Regulation (EU) No 1315/2013 of the European Parliament and of the Council as regards supplementing Annex III thereto with new indicative maps,

COMMISSION DELEGATED REGULATION (EU) 2024/1041 of 28 November 2023 amending Regulation (EU) 2022/869 of the European Parliament and of the Council as regards the Union list of projects of common interest and projects of mutual interest

COMMISSION STAFF WORKING DOCUMENT (2023) Ukraine 2023 Report, Brussels, 8.11.2023, SWD(2023) 699

COMMISSION STAFF WORKING DOCUMENT (2024) Accompanying the document. Proposal for a Council Implementing Decision on the approval of the assessment of the Ukraine Plan, Brussels, 15.4.2024 SWD(2024) 93

COMMUNICATION (2011) FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT. The EU and its neighbouring regions: A renewed approach to transport cooperation, Brussels, 7.7.2011, COM(2011) 415

COMMUNICATION (2021) FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL on the extension of the trans-European transport network (TEN-T) to neighbouring third countries, Brussels, 14.12.2021, COM(2021) 820

COMMUNICATION (2022a) FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. An action plan for EU-Ukraine Solidarity Lanes to facilitate Ukraine's agricultural export and bilateral trade with the EU, Brussels, 12.5.2022, COM(2022) 217

COMMUNICATION (2022b) FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL AND THE COUNCIL. Commission Opinion on Ukraine's application for membership of the European Union, Brussels, 17.6.2022 COM(2022) 407

Ihnatenko P., Parkhomenko V., Tarasenko A. (2019) Ukraine in the Contemporary Integration Processes: Preconditions and Problems, Scientific Bulletin of the National Academy of Statistics, Accounting and Audit, Vol 4, p. 83-91 DOI: 10.31767/nasoa.4.2019.08

Ištók R., Kozárová I., Polačková A.: The Intermarium as a Polish Geopolitical Concept in history and in the Present , In. Geopolitics, 2018. Vol. 26, No. 1, p. 1-28 DOI: 10.1080/14650045.2018.1551206

Jacyna-Gołda I., Shmygol N., Gavkalova N., Salwin M. (2024) Sustainable Development of Intermodal Freight Transportation — Through the Integration of Logistics Flows in Ukraine and Poland, Sustainability, Vol 16, Nr. 267. DOI: 10.3390/su16010267

JOINT STAFF WORKING DOCUMENT (2021) Recovery, resilience and reform: post 2020 Eastern Partnership priorities, Brussels, 2.7.2021, SWD(2021) 186

Kravchenko O., Sergiienko L., Niameshchuk H., Mamatova T., Chykarenko I. (2024) Post-war Recovery Practices for Ukraine, based on the Experience of other Countries that have Undergone Similar Processes, Economic Affairs, Vol. 68, No. 4, p. 2277-2288, DOI: 10.46852/0424-2513.4.2023.35

Kurhan D., Kurhan M., Hmelevska N. (2022) Development of the High-Speed Running of Trains in Ukraine for Integration with the International Railway Network, Acta Politechnica Hungarica, Vol. 19(3), p. 207-218, DOI: 10.12700/APH.19.3.2022.3.16

Nizhnikau R., Moshes A. (2024) The war in Ukraine, the EU's geopolitical awakening and implications for the "contested neighbourhood", Policy Studies, DOI: 10.1080/01442872.2024.2306972

Pomfret R. (2023) Connecting Eurasian Supply Chains the Impact of Covid-19 and the Russia-Ukraine War on the EU-China Rail Landbridge, Italian Economic Journal, Vol. 9, p. 1049–1062

Raik K., Blockmans S., Osypchuk A, Suslov A. (2024) EU Policy towards Ukraine: Entering Geopolitical Competition over European Order, The International Spectator, DOI: 10.1080/03932729.2023.2296576

REGULATION (EU) 2021/1153 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 7 July 2021 establishing the Connecting Europe Facility and repealing Regulations (EU) No 1316/2013 and (EU) No 283/2014

REGULATION (EU) 2022/869 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 May 2022 on guidelines for trans-European energy infrastructure, amending Regulations (EC) No 715/2009, (EU) 2019/942 and (EU) 2019/943 and Directives 2009/73/EC and (EU) 2019/944, and repealing Regulation (EU) No 347/2013

Strelko O., Solovyova O., Berdnychenko Y., Kyrychenko H., Solovyova L. (2023) Study of the Contemporary Trends in the Development of Transport Systems of the Ukrainian Railways, *Acta Scientiarum Polonorum Administratio Locorum* Nr 2, p. 263-279. <https://www.cceol.com/search/article-detail?id=1176133>

Soyaltin-Colella D. (2023) The EU Accession Process, Chinese Finance and Rising Corruption in Western Balkan Stabilitocracies: Serbia and Montenegro, *Europe-Asia Studies*, Vol. 75, Nr. 8, p. 1311-1335, DOI: 10.1080/09668136.2022.2115013

Surilova O. O. (2020) The common transport policy of the European Union and the development of the transport system of Ukraine/Сурілова О. О. Спільна транспортна політика ЄС та інтеграція транспортної системи України у транс'європейську транспортну мережу *Наукові праці Національного університету «Одеська юридична академія»*, Том 26, p. 122-133, DOI: 10.32837/npuola.v26i0.669

Surilova A. (2021) Публічне адміністрування суден у портах. Міжнародний аспект. *Юридичний Вісник*, 6, p. 194-207, DOI: 10.32837/yuv.v0i6.2283

Tankovsky O. (2022) The Evaluation of Ukraine's Economic Integration Maturity, *Európai Tükör*, Vol 3-4, DOI: 10.32559/et.2022.3-4.2

Wanda F., Oya C., Monreal B. (2023) Building Angola: A Political Economy of Infrastructure Contractors in Post-War Angola, *Journal of Southern African Studies*, Vol. 49, Nr. 1, p. 25-47, DOI: 10.1080/03057070.2023.2192589

Wise C. R., Suslova O., Brown T. L. (2023) Ukraine's parliament in war: the impact of Russia's invasion on the Verkhovna Rada's ability and efforts to legislate reforms and join the European Union, *The Theory and Practice of Legislation*, DOI: 10.1080/20508840.2023.2299080

World Bank (2019) Indicative TEN-T Investment Action Plan, World Bank Group, Report 138289 <http://documents.worldbank.org/curated/en/577371561465720393/Indicative-TEN-T-Investment-Action-Plan>

World Bank (2022) Ukraine Rapid Damage and Need Assessment, World Bank Group, Report 175814 <http://documents.worldbank.org/curated/en/099445209072239810/P17884304837910630b9c6040ac12428d5c>

World Bank (2023) Second Ukraine Rapid Damage and Need Assessment, World Bank Group, Report 180951 <https://documents1.worldbank.org/curated/en/099184503212328877/pdf/P1801740d1177f03c0ab180057556615497.pdf>

World Bank (2024) Third Ukraine Rapid Damage and Need Assessment, World Bank Group, Report 187700 <http://documents1.worldbank.org/curated/en/099021324115085807/pdf/P1801741bea12c012189ca16d95d8c2556a.pdf>