

Greece and a Marshall Plan For the Mediterranean Basin

by Dean Andromidas

June 4—It has become a cliché to say that the treatment of Greece under the brutal policy of the Troika (ECB/EC/IMF), memorandum is an injustice to a nation which was the cradle of Western civilization, but it's true—and the same is true of the Mediterranean basin as a whole. Western civilization was born in the Mediterranean basin because, as a people of the sea, those who lived there were in communication with peoples and cultures far distant from their homelands. The Mediterranean Sea brought together the civilizations of the broad expanse of Eurasia, from the Atlantic islands to the Pacific. To the south it brought in all of the African continent, since it served as a hub of the global trade routes, such as they existed.

Egyptian civilization not only was connected economically deep into Africa along the Nile River, but also, via the Red Sea, to the Indian Ocean, and even beyond, to the west coast of the Americas. To the north, through its relations with the maritime states of the Aegean, better known as the lands of the Hellenes, Egypt had a trade window into the northern regions of the Eurasian landmass, as witnessed by the fact that amber, originating in the Baltic states, has been found in the ancient tombs of the Pharaohs.

Greece drew into itself the trade and cultural influence of its huge hinterland, the so-called Scythians, identifying a region that now encompasses the Balkans, Ukraine, and part of Russia, reaching up into the Baltic Sea. To the east, the conquests of Alexander the Great encompassed a region that was in communication with Greece for thousands of years before his army marched into India.

By the same token, Rome, or more broadly, the civilization of the Italian peninsula, had all of western Europe as its hinterland.

These large regions comprised trade routes which brought in new types of raw materials, such as tin, required for converting soft copper into a much harder

and durable bronze, from outside the Mediterranean.

But the most “durable” of resources that came into circulation throughout the Mediterranean basin were new ideas and conceptions of man and the universe, as most dramatically witnessed by the impact of Egyptian science and philosophy on that of Greece. Greek temples were designed on the same principles as those of Egypt: that is, as astronomical instruments. The difference was that Greek temples were far more beautiful, and it was that conception of beauty which became the foundation of what we call Western civilization.

The collapse of the Greek and Roman Mediterranean civilizations was followed by the rise of Islamic civilization, which carried forth the ideas of the ancients, and helped to kindle the European Renaissance.

But then, the shifting of economic development to the north, accompanied by the transmutation of the Venetian Empire into the East India Companies, and finally into the British Empire, relegated the Mediterranean to backwardness, and Africa to the ravages of colonialism. The lack of economic development of this region has led to the most important deficit to civilization as a whole, the generation of new ideas.

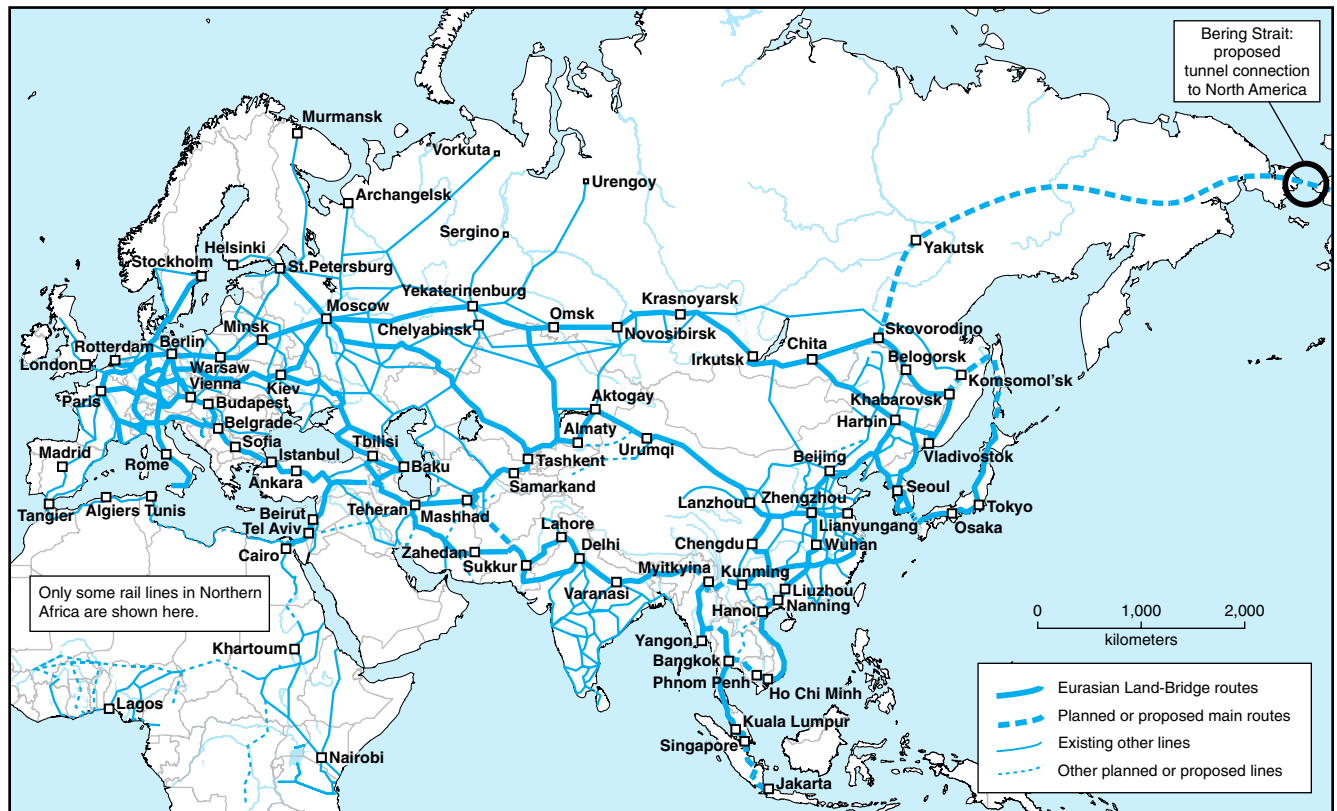
The Eurasian Land-Bridge

The future of the economies of Greece and of all the Balkan countries lies in reviving their geostrategic location in the eastern Mediterranean as the economic development gateway to Eurasia to the northeast, Southwestern and Southern Asia to the east, and Africa to the south. This historic role of Greece will resume with full-scale economic development under a new Mediterranean Marshall Plan.

The principal, intercontinental vectors of these connections are shown in **Figure 1**. The Balkan peninsula is at the eastern Mediterranean juncture of these routes, and with full intermodal development for trade and transit—rail, road, waterways, air, ports, and sea—the

FIGURE 1

Eurasia: Main Routes and Selected Secondary Routes of the Eurasian Land-Bridge



Source: EIR.

critical geo-position of Greece and the Balkans will be maximized for the benefit of all.

First, consider in brief the vast intercontinental corridors connecting through the Balkan peninsula. Then, as we cover in more detail below, look at a few of the priority regional corridors across the Balkan peninsula itself, centered on rail, road, waterways, and port development. There are the two main north-south axes defined by the peninsula—on the west, the Adriatic Sea corridor; on the east, the Aegean Sea corridor, proceeding inland, northward at the port of Thessaloniki, through the Axios/Vardar-Morava rivers corridor.

1. Greece and the Balkans connect to the north, into the full Eurasian east-west land-bridge development corridor. To the west, via the Rhine-Main Canal, there is the connection to the international ports of Antwerp, Rotterdam, and Hamburg. To the east, via the Danube corridor, there are links into the Black Sea basin. This continues eastward to the Dnieper River, the Don-Volga

Canal, and deep into central Asia and western Siberia, via the Caspian Sea. Greece and the Balkans will thus be integrated into the trans-Eurasian rail corridors spanning the landmass.

2. Greece and the Balkans connect to the east/south-east by railway corridors leading into Turkey, across the Anatolian peninsula, then branching eastward into South Asia through Iraq, Iran, to the Indian subcontinent.

3. Greece and the Balkans connect to Africa. By land surface, the connection runs through Turkey, south through the trans-Jordan, across the Sinai, into north and east Africa.

The connections by sea in the Mediterranean are self-evident, but the ease of sea transport extends worldwide, through the Suez Canal and across the Atlantic Ocean.

All along these intercontinental routes—including maritime routes—there are gaps, and links that were proposed long ago but never built, especially in Africa,

so that the question of a new Marshall Plan for Greece, the Balkans, and the Mediterranean, puts these projects front and center on the agenda for world reconstruction:

- In the Mediterranean, the Gibraltar Tunnel is pending, plus a new, widened Suez Canal.
- In Eurasia, the eastern Siberian rail connection and Bering Strait Bridge/Tunnel must be built.
- In Africa, a trans-continental rail grid is urgent. The water shortage in the Sahel Desert can be reversed, by diverting part of the Congo River flow northward into the Chad basin.

In all areas, a crash program for nuclear power is essential.

A TVA Approach to the Balkans

In this larger context, the many priority development tasks in Greece and the Balkan peninsula become clear.

The geo-formation of the peninsula is defined by the Balkan Mountains in the far northeast, in Bulgaria and Serbia; the Rhodope Mountains immediately to the south of the Balkan Mountains in Bulgaria; and by the Dinaric Alps in the northwest. In Greece, the mountainous character is manifest both in the Pindus Mountains on the mainland, and in its 2,000 islands. This gives Greece its fabulous natural asset of 14,480 km of coastline (9,000 miles), 4,830 km (3,000 miles) of seacoast on the mainland, another 9,655 km (6,000 miles) on the islands, and a long, rich maritime history.

The same ridge and upland valley character extends throughout the Balkan peninsula, until its northern border with the great Hungarian Plain. The map definition of the Balkan peninsula is shown by water on three sides—in the west, the Adriatic Sea and Ionian Sea; in the south, the Mediterranean; and in the east, the Aegean Sea, the Marmara Sea, and the Black Sea. The northern boundary is often shown as the Danube, Sava, and Kupa rivers. The combined land area is 490,000 km² (189,000 square miles).

Greece is about 100,000 km² (38,600 sq mi), slightly larger than the state of New York, but with a population of 11 million people, barely half that of New York State. Considered as a region, however, the Balkans have 42 million people.

This entire region was thrown into chaos and misery during the civil war years of the 1990s and NATO bombings, including the destruction of the already inadequate infrastructure—power, water, and transportation links.

Former Yugoslav Republic of Macedonia

(FYROM): 2.06 million

Albania: 2.9 million

Serbia: 7.3 million

Kosovo: 2 million

Bosnia and Herzegovina: 4.6 million

Montenegro: 0.66 million

Croatia: 4.5 million

Bulgaria: 7.4 million

The population has been in decline since. What little reconstruction has taken place has been carried out in a European and worldwide context of globalization and austerity, with the effect of suppressing industry and agriculture that should have been fostered for the benefit of the region. In Serbia, for example, cheap-labor textile production, for garment exports, has been fostered for the multinational retail trade.

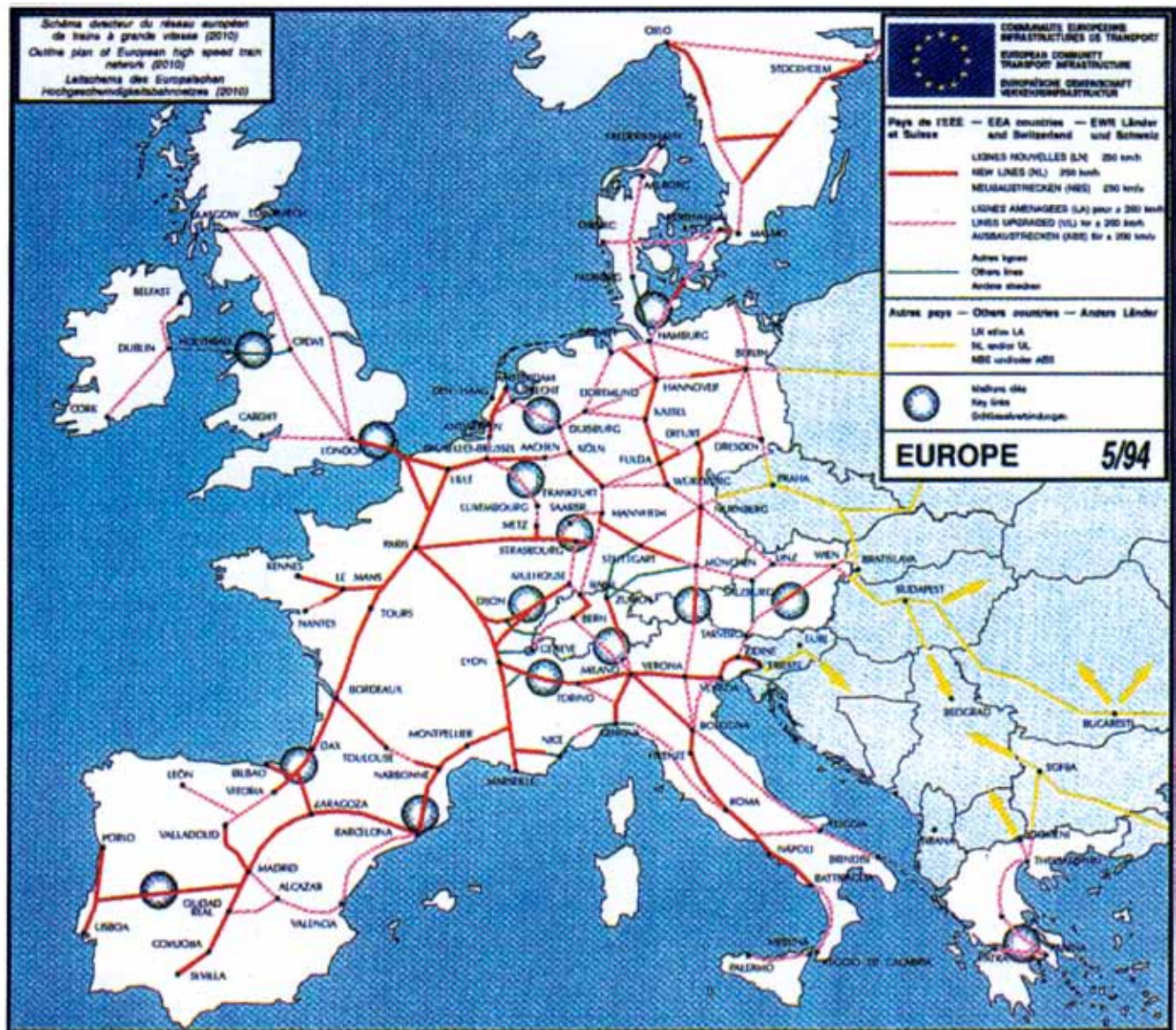
What is required is a top-down approach, in the spirit of the famous Tennessee Valley Authority, for actual high-technology agro-industrial development. To remind readers, the TVA is a federally owned corporation in the United States, created by Congressional charter in May 1933, to provide navigation, flood control, electricity generation, fertilizer manufacturing, and economic development in the Tennessee Valley. The TVA was envisioned not only as an energy provider, but also as a regional economic development agency which would use the electricity produced and Federal experts to rapidly modernize the region's economy and society. The area involved was defined by the watershed of the Tennessee River and its tributaries (comprising parts of seven states), and was developed as a whole. The great science center of Oak Ridge, Tennessee, famous for nuclear technology, was established. High-tech farming and industry grew, as intended under Franklin Delano Roosevelt's policy.

The Balkan peninsula, though very different in specifics—with its multiple, smaller watersheds, higher, rugged mountains, historic cities, and ancient sites, not wilderness—is nevertheless, entirely appropriate for the *principle of the TVA*, whose drainage basin of 105,868 sq km (40,876 sq mi) is larger than Greece.

Extending the TVA form to a multinational authority or corporation that would be based on a treaty or corporate organization, where the authority is jointly owned and managed by the states concerned, might be

FIGURE 2

1994 European Community Infrastructure



Source: EU.

politically attractive for delimited, shared waterway and transportation corridors, or even for larger regional development zones.

The Balkans and Greece must have a completely upgraded platform of power supply, transportation, urban and rural medical and residential services, sanitation, plentiful water, and not only flood control and irrigation, but also defenses against earthquakes and volcanoes. Educational and science centers are crucial.

Peninsular Corridor Priorities

First, consider transportation. A quick overview of the priority transportation/development routes and regions across the Balkans and Greece can be obtained by starting with the picture over 20 years ago, of what were identified as “priority corridors” for modernized rail-lines (and implied, related road, water, and other infrastructure), stipulated by transportation ministers at the March 1994 Second Pan-European Transportation Conference on the island of Crete. There were 10 Euro-

FIGURE 3

The Rhine-Main-Danube Canal and 'Productive Triangle'-Paris, Berlin, Vienna



Source: EIR, 1992.

pean corridors designated, of which five traverse Greece and/or the Balkans.

Figure 2 shows a May 1994 European Community Transport Infrastructure map, from the Crete meetings, presenting an “Outline Plan for a European High-Speed Train Network—2010.” Besides a high-speed rail line shown for Greece itself, vector-arrows elsewhere in the Balkans show the direction of other routes to be worked out.

Needless to say, very little indicated on the envisioned “2010” map has materialized, with one of the

few exceptions being the historic completion in 1992 of the Rhine-Main-Danube Canal, creating a waterway corridor all across Europe, from the Black Sea to the North Sea, as first envisioned over a millennium ago by Charlemagne.

Figure 3 shows this cross-nation canal route (mapped as of 1992), and the strategic location of the Balkan Peninsula, in relation to the eastern Mediterranean. However, the connecting intermodal corridors across the Balkans, including Greece, to the Aegean and the Adriatic Seas, and thence to the continents of

Asia and Africa, have yet to be built.

This development perspective must be reactivated on an emergency basis. The specific Balkans priority transportation links, as first proposed at the 1994 Pan-European conference, out of the 10 designated corridors are:

Corridor 4. On the major west-east link across Europe, going from Berlin to Istanbul (Berlin/Nuremberg-Prague-Bratislava-Gyor-Budapest-Arad-Craiova-Sofia-Istanbul), there must be branch links between Sofia and Thessaloniki.

Corridor 5. On the major west-east link between northern Italy and Ukraine, there are important branch links into the Balkans. The main corridor is: Venice-Trieste/Koper-Ljubljana-Budapest-Uzhgorod-Lviv, extended through Rijeka-Zagreb-Budapest and Ploce-Sarajevo-Osijek-Budapest.

Corridor 8. The Adriatic Sea to the Black Sea, from Albania to the ports of Varna and Burgas on the Black Sea. Durres-Tirana-Skopje-Sofia-Plovdiv-Burgas-Varna.

Corridor 9. Going from Greece to Moscow, beginning at the easternmost Greek port of Alexandroupolis to Dimitrovgrad-Bucharest-Chisnau-Lyubaskeva-Kiev-Moscow.

Corridor 10. From Salzburg to Thessaloniki (Salzburg-Ljubljana-Zagreb-Belgrade-Nis-Skopje-Veles-Thessaloniki). The ancient Roman Via Egnatia, from the Adriatic to the Bosphorus, is a priority redevelopment route.

The Aegean North-South Axis

The Aegean north-south axis, beginning in the south with the port of Piraeus (**Figure 2**), and proceeding northward, via Thessaloniki, to the Danube valley, encompassing the routes designated above in Corridors 4 and 10, is a powerhouse for development.

The port of Piraeus, at Athens, was until the current crash, the tenth-largest container port in Europe and its largest passenger port. Up until now, it has been Greece's only major port, with little transshipment. But its potential to serve as an international entrepôt is clear.

China has been quick to recognize the strategic location of Piraeus, and the China Ocean Shipping Co. (Cosco) has leased one of its two container terminals for 35 years. Piraeus serves as a hub for China's exports into Central and Eastern Europe.

What is required now, is a master plan for expand-

ing and modernizing the port facilities, from their present condition, in order to transform Piraeus into the Rotterdam of the eastern Mediterranean—an idea already long popular in Greece. Any local limitations on port expansion are no real constraint, as there are numerous other potential deep-water sites, which could be developed and operated as one maritime authority, for domestic and international transshipment.

This throws into focus the need to upgrade the entire rail and road grid of Greece and the Balkans, to allow fully intermodal freight traffic. The roads northward from Athens/Piraeus have been improved, the railways not. Prior to today's crisis, there was a project to double-track the entire length between Athens and Thessaloniki, which requires construction of several tunnels through the mountains. This was part of the plan to develop high-speed train connections, which would cut travel time between the two cities from six hours to less than three; but the work was suspended. Moreover, Greece was ordered, under the terms of the 2012 austerity memorandum of the Troika, to shut down its rail service going outside of Greece!

These projects must be resumed immediately. This north-south Greek railroad is a trunkline for development throughout the Balkans and beyond.

Thessaloniki is Greece's second-largest city. Before World War I, it was considered the cosmopolitan center of the Balkans, but following two World Wars and the Cold War division of Europe, it lost much of its prominence. As a transport hub, it can once again play a crucial role. For example, Thessaloniki provides Sofia, Bulgaria, with even closer access to the sea than the Black Sea ports of Burgas and Varna.

Realizing this potential—and that of the many other ports in Greece suitable for upgrade to serve a thriving Mediterranean economy—will take infrastructure improvements of the inland routes. One example makes the point, for all the many other river corridors in the Balkans: the Axios/Vardar-Morava Valleys.

Running upriver northwest of Thessaloniki is the Axios River, which becomes the Vardar in the Former Yugoslav Republic of Macedonia (FYROM). Where the watershed divide exists between the Vardar and the northward flowing Morava River, rail and road lines already cross this boundary, going on to Nis and Belgrade in Serbia. The importance of this corridor for the development of all countries involved should not be underestimated.

There has been a project on the drawing boards for decades for connecting the Axios-Vardar River and the Morava, which enters the Danube east of Belgrade. The realization of such a waterway connection has been blocked by the substantial costs and engineering challenges, beginning with the fact that there is no navigation now on either of these rivers, despite the fact that they form the central axis of both FYROM and Serbia. Thus there is no waterway that links the Rhine-Main-Danube waterway complex with the Mediterranean, from either the Adriatic or the Aegean; there is only the Black Sea route back to the Mediterranean. This limits the transshipment of bulk cargo.

There are good arguments against a trans-basin canal in this corridor, including the excessive number of locks required and similar considerations, but now the proposal should be properly assessed in light of modern technology and the needs of the region.

At the same time, the watersheds of the Morava and Vardar (Axios, in Greece) rivers require full-set infrastructure in their basins, for all purposes—flood control, drinking water, irrigation, and navigation where possible, etc., as do similar, mostly smaller, river basins in the Balkans.

The Adriatic Axis

The development of Greece's infrastructure facing the Adriatic is important for the region, especially Albania. The Pan European Plan (Corridor 7 described above), traces the priority route for modernized rail, to connect this region into Eurasia (**Figure 4**).

On the Adriatic coast of Greece is the port of Igoumenitsa, one of the most important ports in the region, with more than 200,000 passengers and 120,000 trucks passing through annually in recent years, and with a major ferry connection linking mainland Greece, the Greek islands, and Italy. There is a project underway to further develop the link between the port of Taranto, Italy's second-largest, and Igoumenitsa, and then through the Egnatia Odos Motorway, across northern Greece, linking it with the ports of Thessaloniki, Kavala, and Alexandroupolis, and then with Istanbul. Thus it would provide access to all the Balkans, including Albania, the FYROM, and Bulgaria.

To the south, there is the port of Patras on the north-western tip of the Peloponnese, with its recently completed South Port, and the new Rion-Antirion Bridge across the Gulf of Corinth, which has enhanced the

port's strategic location. Further south is the port of Kalamata, the southernmost port in Greece, facing Libya. This has been designated as a priority, named the Ionian/Adriatic Intermodal Corridor, which will link Kalamata, Patras-Igoumenitsa, and Thessaloniki, via a rail and road network. But, although these are labeled priority, little to nothing has been done, and nothing at all since the crisis.

Power, Water, Agro-Industry

We have concentrated here on crucial transportation routes and development corridors, plans which presuppose that full emergency action is taken for vast increases in power and water supplies, building industrial capacity, and modernizing agriculture.

Power. There is a deficiency in power generation throughout the region that needs to be seriously addressed. There are no nuclear power stations in Greece, nor in the former states of Yugoslavia, and their near-future construction will be key to providing cheap and plentiful electricity for the industrial renaissance our plan aims at creating, and in particular, for expanding seawater desalination to increase water supplies.

Other sources for energy include natural gas, which is now being provided to a very large extent by Russia, which currently dominates the market; this already serves to integrate the region into Eurasian developments. The entire region supports the South Stream gas pipeline project being promoted by Russia, which will traverse the Black Sea and supply gas to all the countries of the Balkans, as well as Italy and Western Europe.

Agriculture. Greece and the Balkans are now food-import dependent, not because of limited potential, but as a result of the globalization of agriculture imposed under the EU and World Trade Organization regime. As much as 40% of Greece's food is imported, and that supply is now in jeopardy. Measures must be taken to quickly reverse food-import dependency, and increase agriculture productivity and domestic food output. One policy matter, is to shift the cotton-for-export production, into food crops.

Greece and much of the Balkans are home to what agronomists term the "Mediterranean agro-climate," which means there are very favorable conditions for citrus, olives, grapes, and similar crops. There are also zones suited for cereals—wheat, maize, and barley. The land area of the Mediterranean agro-climatic zone is limited by the mountains, with their cooler elevations

FIGURE 4

Greece and Trans-European Project 29



Source: EU.

and shorter growing season, but all this can be compensated for, by making best use of each existing type of land and growing season, through more irrigation, advanced technology, high-yield crop genetics, and live-

stock systems. In total, only 20% of the land area of Greece is suitable for agriculture, but there are pasturelands, hill farms, delta lands, and coastal plains in the inventory, all of which can be made highly productive.

In this respect, there must be full application of space-based infrastructure, comprising satellite and remote-sensing technologies that can monitor the water resources, the soil, and help to determine how to fully develop agriculture potential in the various regions. What is called “precision farming”—global positioning monitoring, sensing, and data storage—will help the farmer maximize yields, by precise application of fertilizers and water, and efficient tillage, planting, and harvesting. Greek agronomists have already done all the groundwork. What is required is full-scale deployment of these potentials under the Mediterranean development drive. This all can be integrated into regional development authorities, such as a Morava-Vardar/Axios Basin Authority, or even a Lower Danube Basin Authority.

Water. The water resource base of the Balkan peninsula must be up-

graded in volume, reliability, and flood prevention, by going ahead with the many indicated river basin, and inter-basin projects of dams for water storage and flow regulation.

The annual average rainfall is heaviest on the Adriatic side of the peninsula, at 1,016 millimeters (40 inches), on the western slopes of the mountains, but the largest farmland regions are eastward, where average annual precipitation is 760 mm (30 in), or even down to 380 mm (15 in) or less.

At many locations, the water level in storage dams has been declining, including in the Drin River valley (not to be confused with the Drina), which parallels the Vardar to the west. The Drin basin includes Albania, FYROM, Serbia, and Montenegro, including the trans-boundary Lake Ohrid, shared between FYROM and Albania. These systems are important sources of water for the countries concerned, and are inadequate at present.

Navigation potential exists in some areas. But in all locations, water management is essential for flood control. The full hydro-power potential of the region has not been realized. Waste-water treatment systems are also sorely required.

Seawater desalination is a priority, especially for Thessaloniki and other Aegean coastal centers in the low-rainfall zones. Nuclear-powered desalination is the only efficient method for large-scale installations. (See Spain section for details.)

Greece, a Merchant-Shipping Giant

Greece has the world's largest merchant fleet. In addition to what this signifies for general economic activity, it also involves a precious resource of skilled labor in the maritime, industrial, and machine-tool sectors, and a shipbuilding capacity capable of tooling up for high-tech tasks. This resource is vital for the Mediterranean development drive overall.

Greek-owned shipping companies controlled 3,325 vessels with a total capacity of 226.92 million dead-weight tons (dwt) in 2011. The Greek-flagged fleet amounted to 2,014 vessels with a capacity of 43.39 million dwt, constituting 39.52% of European Union capacity. As of December 2009, Greek shipping companies ordered 748 new ships amounting to 64.9 million dwt. The related shipbuilding and repair facilities are among the largest industrial establishments in the country, whose capabilities can be deployed for the full range of tasks necessary for integrating Greece into Eurasian and African development.

In Piraeus, there are 1,200 shipping companies, with over 250,000 Greeks earning their living directly or indirectly from the industry.

Greece devotes a sizable shipbuilding capacity to

producing smaller craft, such as fishing boats and coasters, since inter-island transportation is extensive. Nonetheless it has four to six large shipyards capable of building and repairing ships over 20,000 tons. Three of these can build ships over 100,000 tons. There is plenty of room for expanding production, since these yards have underutilized capacity because of the crisis.

All this shipyard capacity also provides machine-tool capacity for fabricating metal for any kind of structure. Elefsis Shipyard is a case in point: It has not only produced state-of-the-art ships, including naval ships and fast modern ferries for the Greek market, but it has also produced rail cars for the Greek National Railways. Thus the shipbuilding industry along with several other large and sophisticated Greek industrial enterprises, are capable of building every aspect of Greece's terrestrial infrastructure, including components for railways, roads, bridges, dams, hydro-electric and other power generation, desalination plants, and petrochemical facilities.

One notorious, negative feature of the Greek shipping sector should be identified, however: The industry is historically an integral part of the financial complex of the City of London, in service for decades to the British Empire. But now, with the crash of the monetarist system, this British-centered nexus of insurance, shipping, and commodity control is in chaos.

Under the new Mediterranean Basin Marshall Plan approach, the valuable Greek shipping capacity can be redirected into heavy-duty service for development, and end its decades of subservience to the London cartel networks, which chartered Greek vessels for global shipments of oil, food, and other commodities under (rigged) free trade.

Seafarers, Looking to Space

The ancient Hellenes were the original "Peoples of the Sea," as immortalized by Homer's *Iliad*. That most famous of poems also documented the alliance between the Peoples of the Sea and the civilization of Egypt, both being navigators and astronomers. It was out of this scientific "alliance" that the great Classical culture of Greece's tragic poets and Platonic philosophy developed, culminating in the conquest of the Persian Empire and the spreading of Hellenistic culture throughout the Mediterranean and deep into central Asia.

Our Marshall Plan will begin the process of transforming Greece from a nation of seafarers into a nation

of spacefarers, in that it will participate directly in the great extraterrestrial imperative for man's future: the Moon-Mars project, and on to our galaxy. In a sense, this has already begun.

It is unlikely that the shipbuilding industry can produce spacecraft, but in one case it has already been marshalled into producing a specialized vessel for Greece's small, but in many respects state-of-the-art, space research program.

The Elefis shipyard built the DELTA-BERENIKE, a self-propelled special purpose vessel that is being used as a stable platform form to build the Cubic Kilometer Neutrino Telescope, one of only four that exist in the world today. It has been erected at a depth of 5,200 meters, the deepest point in Europe.

The site of the telescope is 17 km off the coast of the Peloponnese. The headquarters of the project is in the small city of Pylos on the Bay of Navarino. Ancient Pylos, which is a few kilometers from the modern city, is the location of the palace of Nestor, of *Iliad* fame, giving the name Nestor to the project. The Bay of Navarino was the site of the famous sea battle by that name in 1827. Since modern times, Pylos has been a sleepy city frequented by tourists, but now it is being transformed into the headquarters of one of the most sophisticated research projects in Europe, which also specializes in deep-sea research. It is considered the best location on the planet for such a project, as these researchers, operating from the deepest part of the Mediterranean, will be ultimately exploring the deepest parts of our galaxy.

This brings us to the most important part of our plan for Greece and the Mediterranean: bringing these countries into the front lines of the world extraterrestrial imperative. This can be incorporated into the fundamental project of creating the infrastructure for the Russian-proposed Strategic Defense of Earth (SDE). Much of this infrastructure will be "dual purpose," such as the erecting of 50 stations in the seismic region of Europe to monitor earthquake precursors, and the positioning of 10 satellites as part of an earthquake warning infrastructure, which, at the same time, will provide necessary data for the study of cosmic radiation. The ultimate design of the integrated infrastructure would be the mission of a Manhattan Project-type program that

would entail setting up a number of research centers on the scale of Los Alamos and Oak Ridge National Laboratories. Athens' old airport could provide an ideal site for one of these laboratories. (As it is, the airport is now up for sale, under the Troika's Memorandum demanding privatization!)

Greece is well placed to participate in such a program from the highest scientific standpoint. There are now 12,000 Greek scientists working outside the country, and the number is increasing every day. While Greece spends less per capita on research than almost any other country in the EU, the research that is being done and the researchers themselves are among the best in Europe. They are concentrated at a handful of research centers, notably the National Observatory in Athens, the National Center of Scientific Research Demokritos, institutes at the big universities of Athens and Thessaloniki, and several others.

Founded in 1842, the National Observatory has five programs, including the Institute for Astronomy, Astrophysics, Space Applications, and Remote Sensing. The Nestor project was a spinoff from the National Observatory. The Observatory already has programs for Solar Terrestrial Physics, including space weather studies. The Remote-Sensing program already has applications for earthquake studies. Although the institute has expanded in the last decade, it is still relatively small, but sufficient funding could scale it up rapidly.

The National Center of Scientific Research was founded in the 1950 as the Nuclear Research Center of Demokritos, with a boost from the U.S. Atoms for Peace program, from which it received an experimental reactor. The founding of this institute initiated a wave of repatriation of scientists who had been conducting research abroad because of the total lack of opportunities in Greece.

Today, the institute is involved in a broad range of basic research, with a staff of about 1,000 researchers and administrators. Therefore, the foundation for a large, integrated National Laboratory is there, to be built upon.

Greece can become a scientific gateway, serving as an international center with a specific mission of attracting students and researchers from the Asia-Pacific, Balkan, African, and Eurasian regions.