

New waterway link shows the way to a productive future

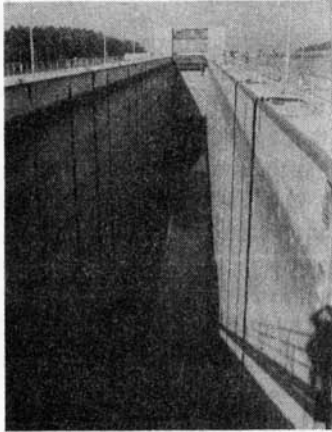
by Alexander Hartmann

On Sept. 25, Bavarian Prime Minister Max Streibl and German Minister of Transportation Günter Krause opened the Main-Danube Canal, connecting the system of waterways of western Europe with that of central and southeastern Europe, in a ceremony attended by German President Richard von Weizsäcker, heads of government or ministers of 15 nations which are bound together by the new link, and thousands of joyful citizens. In dozens of towns along the waterway, more than 100,000 people celebrated the canal's opening, making it the biggest celebration of a political event in Germany since reunification.

The new waterway is an integral part of a plan, entitled the "Paris-Berlin-Vienna Productive Triangle," authored by American economist and independent presidential candidate Lyndon LaRouche, which emphasizes investment in infrastructure in the most densely populated area of Europe—the area between Paris, Berlin, and Vienna—in order to most efficiently multiply the productive means available to maximize investment in the infrastructure connecting this area with the major population centers outside the triangle. This in turn will multiply the means to improve the economic situation in the regions between these corridors of development, through the development of secondary corridors.

If you mark on a map of Europe the area of the "Productive Triangle," the Rhine-Main-Danube waterway, and the canal, you will see that the canal is an example of exactly what LaRouche is talking about: It is situated right in the middle of the triangle; it improves the traffic conditions within the triangle, where otherwise all other transportation systems are nearing their limit of capacity; and it also connects all countries along the Danube with this central area. The reduction of the cost of production and the increased capacity to transport goods will help the German economy especially, thus increasing its ability to invest in the development of other countries, and also improve all the economies of the Danube region.

In the year 793, Charlemagne undertook construction of a waterway of a few miles length in the heart of Germany, between the Rezat and Altmühl rivers. The



The Main-Danube Canal directly links 15 nations and, through other waterways, five more. It promises to greatly accelerate the rate of economic development throughout the region. Shown here are a stretch of the canal, one of its 16 locks, and its control room.

Rezat flows to the north, and its waters end up in the North Sea after being carried by the Regnitz, Main, and Rhine rivers through Germany and the Netherlands. The Altmühl flows southeast, discharging its waters into the Danube, which today crosses Germany, Austria, Slovakia, Hungary, Croatia, Serbia, Romania, Bulgaria, and Ukraine before discharging its waters into the Black Sea. Connected to this 3,500-kilometer "water highway," through other rivers and canals, are Belgium, Luxembourg, France, Switzerland, and Moldova. Today, more than 100 million people live on either end of the canal in the basins of the Rhine and the Danube rivers.

Charlemagne did not succeed in the construction of the canal—the task was too big for the technological capabilities of his day. But the dream of completing this important link remained alive for 12 centuries. In the first half of the last century, Bavarian King Ludwig I was the first to build a canal between the Main and Danube rivers, but it was too small and had too many locks to compete with the railroads that were spreading over Germany in the decades following the completion of the canal in 1846.

Thus, in the beginning of this century, discussion started over the construction of a suitable waterway, that could be used by ships 10 times as large as the 100-ton vessels on Ludwig's canal. In 1921, the government of the German Reich and the governments of the states of Baden and Bavaria agreed on the construction of the waterway and founded the Rhein-Main-Donau AG (RMD) as a managing company to organize the construction of the 677-kilometer waterway be-

tween Aschaffenburg and Passau.

The company was given interest-free credits from the state and the right to use the power of the Main, Danube, Altmühl, Regnitz, and Lech rivers to produce electricity. Today, the RMD produces about 3,000 gigawatt-hours (GWh) per year from 57 power plants, and the proceeds of DM 60 million (about \$43 million) are used to pay back loans. In 2030, the loans will be repaid, and in 2050, the power plants will be turned over to the state. In the end, the government will not have spent a penny on construction, and in return it will receive millions of deutschemarks worth of power plant equipment and an invaluable piece of basic infrastructure for transportation of goods and delivery of water.

The motto of the celebrations in dozens of towns and cities along the canal was: "A dream has come true." The dream of a millennium was realized, and the aim of the work of the better part of our century was achieved.

What had to be done?

Three basic tasks had to be fulfilled to achieve the aim. Navigability of the Main had to be improved along 297 kilometers, a canal of 171 kilometers connecting the Main and the Danube had to be built, and the Danube had to be improved as a shipway along 209 kilometers between Kelheim and Passau. Work on the Main section started in 1926, and was completed in 1963 after an interruption of several years during World War II. Regulation of the Danube River between Regensburg and Vilshofen was completed from 1930

to 1969. In 1978, ships could go to Kelheim, at the southern end of the canal, and since 1985, some 106 kilometers of the 209 kilometers of the Danube section needed for the waterway were regulated by dams.

In 1960, construction of the canal started, and in 1972, a section of 72 kilometers of the canal was opened, ending at Nuremberg. In 1985, another 22 kilometers of the canal were finished, and on Sept. 25, the remaining 77 kilometers were opened to public use. Now, ships with 2,000 tons capacity and combines (a train of two or more barges) of up to 185 meters in length and 3,300 tons capacity can operate on the canal.

This does not mean that all the work is completed. Work still has to be done on the regulation of the Danube, and also of parts of the Main, where some of the locks that have been built in the early phase of the work (when 1,350-ton vessels were still standard), have to be adapted to the new standard. In 1976, the federal and state governments signed a contract with RMD to effect full navigability of the German part of the Danube all year round, which means that several locks and dams have to be constructed instead of the existing low-water regulation finished in 1969.

As with the construction of the canal itself, the improvement of the Danube has to be organized against political odds. Environmentalist groups that already postponed completion of sections of the canal for 17 years have pledged a fierce fight against every interference with nature, which at present does not allow full-capacity shipping during seven months of the year due to periods of high and low water.

Further down the Danube, in Austria, Hungary, and Romania, there are similar navigability problems, but only for about two months of the year. Environmentalists are trying to stop work in these countries, too, especially in Austria. There is also a diplomatic battle between Hungary and Slovakia, since the former communist governments started to build a lock and dam on the Danube, which is also the border between those countries, in a way that the Hungarian government now says affects the national border where it follows the middle of the shipway. Now, on top of the other problems, the traffic on the river is also affected by the war Serbia is waging against its former colonies, which were once part of Yugoslavia. These difficulties will have to be overcome, but obviously the opening of the canal is a big leap ahead, especially for the economies of the Danube area.

Twice as long as the Panama Canal

The canal is 171 kilometers long, 55 meters wide at the water surface and 31 meters wide on the canal bed, and 4 meters deep. About 20 million tons of goods can be transported per year, and it is expected that half of this capacity will be utilized soon. Locks along the canal are 190 meters long and 12 meters wide, enabling ships with a beam of 11.4 meters and a draft of 2.8 meters to use the canal. Sixteen locks take the ships 175 meters up from the Main, and another

68 meters down to the Danube. In three of these locks, ships are lifted nearly 25 meters, which is a record for Germany.

Approximately 93 million cubic meters of earth had to be moved, and 2.6 million cubic meters of concrete were used in construction. The construction of the canal took 32 years, and 3-4,000 workers were employed at any time in this period. About 1,000 different companies were contracted to aid in the construction. One hundred and twenty-two bridges were built across the canal, roads were moved, and many of the towns along the canal were connected up to a regional water purification system.

To pacify resistance from ecological groups, several hundred million deutschmarks were spent to protect or reconstruct areas considered to be ecological treasures. Environmentalist groups demanded that 5% of the money go into environmental efforts—RMD spent about 20% of that along certain sections of the canal. One environmentalist group wanted to demonstrate the beauty of the landscape destroyed by the canal. They made a brochure with pictures of “untouched nature” about to be bulldozed for construction. Their only problem was that they had taken pictures of a section of the canal finished years ago, and did not recognize that it was not a natural river!

About DM 6 billion were spent for the waterway, DM 4.7 billion of that sum for the canal, and another DM 1 billion went into the construction of 57 hydroelectric power plants, using the flow of the rivers. These power plants have returned DM 1.5 billion in profits already, which were used to finance the continuing construction. The power plants produce about 3,000 GWh per year, and have a capacity of 501.5 megawatts. Another power plant is under construction, and two more are planned in concert with the improvement of the Danube. At present, about 17% of all electricity used in Bavaria comes from waterpower; about one-fourth of that comes from RMD.

In addition to the transport of goods and the generation of electricity, the third major task of the canal is to bring water from the water-rich southern part of Bavaria to the dry areas of the northern part, especially the Nuremberg area, which houses about 1 million people and is one of the major industrial areas of Germany. About 150 million cubic meters of water will be transported every year from the Danube to the Main. Without the canal, the water supply of the Nuremberg area would have been exhausted in the near future, and constructing a water supply for the area without the canal would have had a price tag of at least DM 1 billion.

Economic importance

The economic importance of the canal can be understood if one compares the expenses per ton and kilometer for different modes of transportation. While the transportation cost is 12.3 pfennigs (8.2¢) using rail, and 23.3 pfennigs (15.5¢) using trucks, using a ship will average 3.3 pfennigs (2.2¢). One ship can carry the load of 100 trucks. Since there is a

How the Rhein-Main-Danube Canal complements the European 'Productive Triangle'



speed limit of 13 kilometers per hour on the canal, and each lock takes about 16 minutes of time, rail and truck transportation are obviously much faster; but for many goods, time is not of the essence—for example, for bulk goods, like coal, ores, construction materials, grains, and other foodstuffs, or materials that are needed continuously and can therefore be ordered in advance, such as parts for assembly in the automotive industries. Heavy machinery will be transported much more easily and cheaply, too.

Just a couple of examples demonstrate the benefits of the canal. A chemical plant in Kelheim at the southern end of the canal receives raw materials from Africa regularly. Up to now, these raw materials arrived by ship in Rotterdam, were reloaded onto a barge and transported to Nuremberg, where they were put on trucks for the last 100 kilometers.

One-third of the transport costs were spent on each section, i.e., the last 100 kilometers by truck were as expensive as the roughly 1,000 kilometers by barge. Transport expenses are now reduced by 30%.

Take another example: At a wharf in Deggendorf on the Danube, among ships and other machinery built there, vessels for chemical reactors are produced. Since these are too big to be carried by truck or rail, they must be loaded onto a boat and transported down to the Black Sea, reloaded onto an ocean-going ship and transported to Rotterdam, and reloaded onto a barge and brought to a chemical factory in Ludwigshafen, at a cost of DM 500,000. Now, the same tool will be put on a barge and carried up the Danube and the canal, down the Main River, and up the Rhine. The bill will amount to only DM 50,000.

Rhine-Main-Danube Canal 1,200 years in the making

793: Charlemagne undertakes an attempt to construct a canal between the Altmühl River and the Swabian Rezat River, and thus to link up the Main and the Danube.

1836: Construction begins on the Ludwig Main-Danube Canal.

1845: Ludwig Main-Danube Canal is completed.

1921: Founding of the Rhein-Main-Donau AG company.

1922: Construction begins on the first lock steps on the Main and Danube.

1924: First RMD power plant is brought on line in Würzburg.

1927: Start of the systematic Main extension, bringing on line a total of 16 power plants up to 1940.

1940: Conclusion of the Main extension up to Würzburg.

1941-47: Interruption of construction because of the war.

1954: Release of the Main up to Ochsenfurt.

1957: Release of the Main up to Kitzingen.

1960: Construction begins on the stretch of canal near Bamberg.

1962: Conclusion of the Main extension up to Bamberg.

1966: Duisburg contract for the extension of the water highway between Nuremberg and Vilshofen (Passau).

1972: Nuremberg city harbor begins operation.

1975: The Rhein-Main-Donau AG is the second largest hydropower producer of the Federal Republic of Germany.

1976: Contract for the canalization of the Danube between Regensburg and Vilshofen.

1984: Start of the earth works at the Main-Danube juncture.

1991: The 56th hydroelectric plant of the RMD comes on line.

1992: Opening of the Main-Danube Canal.

This means that the areas of eastern and southern Bavaria and Austria, which might as well have been at the end of the world until the Berlin Wall came down, will have much cheaper access to the markets north of Nuremberg.

The same holds true for the nations of eastern and southern Europe along the Danube, including Ukraine and other

nations bordering the Black Sea. Since many of these nations produce bulk goods and need to import heavy machinery to develop their economies, they will save a lot of money in transport costs, both in purchasing what they need and in delivering their products. That's why these nations were all represented at the opening ceremony: They hope to stabilize their shaky economies and political systems.

Accelerate development

German Minister of Transportation Krause pointed out in his speech at the opening of the canal that actually two dreams had come true: that the canal itself, envisioned by Charlemagne, Goethe, Napoleon, and King Ludwig, among others, had been completed; and also, three years ago, communism had fallen, the Berlin Wall and the Iron Curtain had come down, and Germany had been reunited. Now, he stressed, is the time to realize the joy that we felt while we were dreaming the dream.

In order to do that, many more infrastructure projects—other waterways, high-speed rail grids, power plants, highways, etc.—not only in Germany, but in every part of Europe, will have to be built; otherwise all the political gains of the last three years might be lost.

Krause mentioned, as an example, a modern high-speed railroad from Moscow through Berlin to Paris. Regular readers of the *EIR* will remember that this idea was circulated by Lyndon LaRouche from his prison cell, right after the Berlin Wall came down.

Krause demanded a reform of laws governing the planning of infrastructure, i.e., taking away the legal means of sabotage which the environmentalists, who have caused billions of deutschemarks worth of damage and years of delay through interminable lawsuits, have wielded. "That is why the costs of reunification run so high; we have a bureaucracy, with which we just cannot make it," he said. "We cannot wait for 15 years until we know if, and how, we can build infrastructure needed urgently."

Crisis in eastern Europe

The reason why there is no time to lose in making these investments is the deteriorating political and economic situation in eastern Europe. For its nations, communism meant no investment in infrastructure except for military purposes. Economic development was sacrificed to an ever-expanding apparatus to control internal and external opposition, and an emphasis on looting socialist economies for the benefit of the Soviet empire. Because of lack of investment, the physical base of the system eroded. At a certain point, the system was no longer able to provide even the most basic economic means of existence for its population, and lost the power to continue its control by force, both because of rising internal opposition and because of decaying means.

The collapse of communism did not happen because of external opposition, since the "free trade" governments of

the United States and the United Kingdom had long before become supporters of the failing communist regimes, in order to keep the bipolar world order that was established at the end of the Second World War alive. Gorbachov was finally dumped when it became obvious even to Moscow that the United States was in too deep economic trouble to deliver on its promises of economic assistance. Only Germany could, and after the Berlin Wall fell, this is one reason why Moscow acquiesced to German reunification.

Gorbachov's successors face not only a heritage of rubble, which is not able to support the population without, or possibly even with, foreign assistance; the question of economic assistance for these countries has been the focus of a power play between the politically and economically (and morally) bankrupt governments of the United States and the United Kingdom, mostly supported by the no less bankrupt governments of France on one side and Germany on the other.

The Anglo-American elites are afraid that Germany and the region encompassing the Productive Triangle could spark a new economic miracle together with the countries of the East, by applying methods of capitalism known as the "American System" of political economy. They fear that such a new power center, based on Eurasian economic development, will replace their "new world order."

To prevent this, the Anglo-Americans have attempted to impose the very same policies that have ruined the United States and every other country that copied their economic system, on those countries newly liberated from communism. This was not capitalism, but "free trade," including the shutdown of productive capacity in the East as part of the "shock therapy" policies advocated by Harvard professor Jeffrey Sachs and enforced by the International Monetary Fund.

The government of Chancellor Helmut Kohl chose to back this insanity after the assassinations of Deutsche Bank chairman Alfred Herrhausen and Detlev Rohwedder, chairman of the East German state holding company Treuhandanstalt (charged with integrating eastern Germany), who advocated a policy of abrogating free trade and replacing it with a dirigist policy to develop the industrial sectors in eastern Germany and eastern Europe, especially Poland. The German political elite, instead of insisting on a change in the murderous free trade policies, limited itself to paying damages to eastern Europe, which it cannot continue for long as the German economy itself is not immune to the depression.

Building a way out of the crisis

The only way to prevent a worsening crisis in the East is to intervene massively to stop the economic decay in eastern Europe. Only a visible commitment to alleviating the situation will allow the democracy movement to survive. It is necessary to end free trade, but that is not enough. Infrastructure is needed to move the power, water, and goods needed to supply the population, modernize the industries, and raise productivity

to a level where high wages can be paid. Without this, the population will not be able to purchase the goods necessary for existence and will never become a market for anyone, neither for industries at home nor foreign producers abroad. And without steps in that direction, hopelessness and desperation will lead them to support whatever promises are offered by radical nationalists or the old communist *nomenklatura*.

Building infrastructure is not only necessary to supply the population and boost production. It is also a means to develop industries around the projects, by issuing contracts to private companies supplying the construction, to enable them to purchase and use new machinery and to educate their labor force. More than 1,000 private companies were contracted in the process of the construction of the now-finished canal, for example. This will increase the productivity of the industries in these countries to a point where they no longer depend on foreign assistance.

Ending the rule of the oligarchy

Developing infrastructure will also bring about a stronger economic alliance among these countries. Such stronger ties, and especially with Germany, is exactly what the oligarchy fears, not so much from the canal itself, but from the policy it represents: It happened to them once before, in the last century. Then, the brainchild of German economist Friedrich List, a theorist in the tradition of the "American System," for the German customs union and the unified railroad grid, brought about German unification. The unifying economic forces were stronger than the centrifugal interests of the ruling class of aristocratic rulers. At a certain point, their class lost its ruling position, and their fiefdoms were molded together into a unified German nation.

The oligarchs are afraid that a process of economic development, dominated by the common interest of Germany and the eastern European nations, will continue to strengthen this new community, to the point where it will be able to contain the damaging influence of those who want to maintain the balance of power with their policy of divide and conquer, in order to continue to be able to loot through their policies of usury. That is why they insist on keeping eastern Europe out of the European Community for as long as possible. That is why they insist on the paying back of credits as a priority over that of developing the economy, even at the risk of developing military conflicts. That is why they mobilize environmentalists to try and block every initiative to improve infrastructure.

The problem the oligarchs have, is that once Germany and eastern Europe agree on a course of development along the lines of the Productive Triangle, there is only so much they can do. As was visible at the opening ceremony of the canal, the population in fact does support construction of infrastructure. As a spokesman for RMD said: "Acceptance of the canal is in the range of socialist election results: It is about 99%!"