

# Mexico's Drought Demands 'NAWAPA-Plus' Infrastructure Projects

by Cynthia R. Rush

June 10—Gov. Jorge Herrera of the Mexican state of Durango warned on May 29 of the “catastrophic” nature of the drought now afflicting 21 of Mexico’s 32 states. He spoke at a meeting of the Water Commission of the Mexican Governors Conference (Conago) and the Potable Water and Sanitation Committee of the Chamber of Deputies.

Herrera, president of Conago’s Water Commission, warned that the three-year-long drought is the longest-lasting in 100 years and has created a life-or-death crisis which threatens to exterminate, not only agriculture, but the Mexican people themselves, for whom food and potable water in the drought-stricken regions of the country have become increasingly inaccessible.

The situation could be described as “traumatic,” Herrera said. “In terms of water conflicts, fate is overtaking us. We must now think of how to finance hydraulic projects which, although expensive, must become reality.” Federico Arroyo, president of the Chamber of Deputies, added that “there is no water project more expensive than the one that doesn’t exist.” The consequences of *not building these projects* is what must be taken into account, he argued.

The outlook for 2013 is grim, the meeting’s attendees explained: 80% of cultivated land is dependent entirely on rainfall, and on the irrigated land that remains, dams are almost completely empty. In some states, such as Chihuahua, which borders the United States, there are dams only 23% full, but most are at 10-15% of capacity! Much of both rural and urban water infrastructure is dilapidated and needs to be rebuilt.

A dramatic change in public policy, with aggressive involvement by the federal government, creation of new credit mechanisms, as well as vastly increased emergency assistance to drought-stricken areas, is immediately called for, said the governors and legislators attending the meeting. Failure to find solutions, they warned, could result in “water conflicts” among communities, cities, states, and even countries—not to

mention the toll in human lives.

All true enough; but viewed from the optic of the breakdown and bankruptcy of the global financial system, the threat of thermonuclear war, and the British Queen’s drive to kill off what she considers to be 6 billion “useless eaters” on the planet, the governors’ and congressmen’s proposals in themselves cannot begin to reverse the catastrophe that Herrera described.

## NAWAPA-Plus the Only Option

This is especially the case since the government of President Enrique Peña Nieto has shown little inclination to break with the neoliberal economic framework that has dominated Mexico since the 1982 crushing of the nationalist development perspective of Lyndon LaRouche’s close ally, President José López Portillo (1976-82). Despite some efforts to increase palliative measures, the government has done little to dump the “green” policies championed in the previous Felipe Calderón Administration by then-head of the National Water Commission (Conagua), José Luis Luege Tamargo, an agent of the British monarchy’s fascist World-wide Fund for Nature (WWF). The emphasis is still largely on “managing” and “adjusting to” scarce resources.

In an interview with the daily *El Universal* published May 4, current Conagua director David Korenfeld reported that plans for water rationing are already in place, slated to begin first in rural areas and then, “if the emergency persists, move to urban areas.”

The only viable programmatic approach to addressing the existential crisis facing the Great American Desert, of which north-central Mexico is a part, to be achieved through a series of sovereign treaty arrangements, is the project known as “NAWAPA-Plus”—the North American Water and Power Alliance, combined with Mexico’s long-planned North West Hydraulic Plan (PLHINO) and the Northern Gulf Hydraulic Plan (PLHIGON)—which would create a single, integrated



*Drought in Sonora and elsewhere in Mexico is devastating livestock and crops. Below, wheat under drought stress near Ciudad Obregón, Jan. 26, 2013.*



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North American water project.

LaRouche and his associates have elaborated this project in great detail over a period of years (see following article). Complemented inside Mexico with other major infrastructure projects, including the construction of dozens of nuclear plants for electricity generation and desalination, PLHINO and PLHIGON would transport water from Mexico's south to the water-starved north, and through the hookup with NAWAPA, transform these parched lands into areas capable of producing bountiful quantities of food.

These projects are not unknown to some of Mexico's elected leaders. In fact, in a July 27, 2012 press conference, the same Governor Herrera who described Mexico's current crisis in such stark terms threw down the gauntlet to then-President-elect Peña Nieto and, without naming it, called for building the PLHIGON.

"We have to bring water from [the southern states of] Chiapas and Tabasco," he said, "where, unfortunately, a large number of cubic meters of water are wasted because of its abundance, to the states of the center-north. . . . If these droughts are recurrent, we have to think of a solution that goes to the root of the problem. . . . These are long-term projects, but it will be a challenge facing the new federal government and the new Chamber of Deputies, to carry out studies and make investments. . . . We have to get going; although they are long-term projects, they can be the solution. Their cost is nothing compared to the lack of water and the dramatic consequences."

Herrera explained at that time that his proposal was

to build "aqueducts, which would help to fundamentally mitigate the grave problem of drought which the region is suffering, and which is leaving millions of people defenseless." He added that this project would be a "bridge" to unite Mexico's regions, and bring greater economic growth, employment, and welfare to families, and that five regional meetings would be held in different states during August.

During the May 29 gathering, Congressman Oscar Cantón Zetina of the southeastern state of Tabasco offered his state's water supply for the nation's development, given that Tabasco possesses 30% of Mexico's surface water and experiences annual floods. If we build pipelines for gas, oil, and their derivatives, he asked, why can't we do the same for water? We must invest in transporting the water and making it potable, he said. Tabasco can provide much of this water to the entire nation.

In March of this year, Energy Minister Joaquín

Coldwell, called for a full discussion of nuclear power as a viable, “clean” answer for Mexico. “It’s a discussion we have to have in the energy sector,” he said. “We should move towards a stronger nuclear program.”

## **Mexicans Are Starving**

But as organizers of the LaRouche Citizens’ Movement (Mocila) told those attending the May 29 meeting, the fight to build these projects and secure the nation’s future cannot be won internally. Just as López Portillo did, nationalist forces and institutions must seek out and coordinate with international allies, especially with LaRouche in the United States, with a principled policy outlook that will overturn the murderous Anglo-Dutch financial dictatorship that has devastated both nations’—and the world’s—economies and populations.

This means reinstating Franklin Roosevelt’s Glass-Steagall law in the United States and passing similar legislation internationally, including in Mexico. It also means creating a Hamiltonian credit and national banking system (a tradition with strong historical roots in Mexico) that can finance great water and related infrastructure projects such as NAWAPA-Plus.

The urgency of immediate action can’t be overstated. It is estimated that 1.280 million square kilometers out of Mexico’s total national territory of 1.973 million km<sup>2</sup>—almost 65%—is affected by the drought. In several states, especially among poorer Mexicans, hunger and malnutrition are rampant.

A number of peasant organizations reported in late May that the high rates of desertification in the north have caused the loss of at least 5 million hectares that used to produce food, resulting in the importation of 34 million tons of grain that otherwise would have been produced in the country.

Food shortages affect an estimated 28 million people, or one in five Mexicans; 1.2 million children suffer from malnutrition, and 3.6 million children under the age of five do not have enough food to eat. Carlos Ramos Alba, a member of the executive council of the peasant organization National Council of the Plan de Ayala National Coordinator warned at a May 20 press conference that the food crisis is so severe that “trying to eat three meals a day becomes a punishment, when there is nothing to put in your mouth.”

Add to this the ruling PRI party’s criminal decision to remove from its national political platform the clause that opposes any application of a Value Added Tax

(VAT) to food or medicine. With that last defense of Mexicans’ welfare gone, what are poor Mexicans to do? asked Leopoldo González, Vice president of the National Chamber of the Bread-Producing Industry, speaking with Entornointelligence.com in early May. “They are forbidden to eat or get sick!”

Over the past 18 years, he said, the cost of the basic market basket has increased by 582.4%; a 16% VAT tax will place the most basic food staples and medicines out of reach. Several Mexican dailies reported on June 4 that in the month of April, Mexico had the highest rate of food price inflation—9.5%—of all members of the Organization of Economic Cooperation and Development (OECD).

## **A National Security Threat**

The drought has hit Mexico’s northern region the hardest, followed by the central region. According to the national Forestry Commission (Conafor), of the country’s 22 cities considered to be most important in size and economic activity, 17 are in arid zones, with a combined population of 48 million, or 42% of the nation’s 115 million people.

“Our country is now suffering the consequences of desertification, at the same time that drought and water scarcity are affecting worrisome [land] extensions due to over-exploitation of aquifers,” Conafor said in a late-May statement. “The North of the Country Is Dying of Thirst,” read a May 21 *Televisa* headline.

According to Arturo Osornio Sánchez, Undersecretary of Rural Development at Mexico’s Agriculture Ministry, 18 of Mexico’s 32 states are “collapsed” due to both drought and frosts. The National Meteorological Service had forecast that rainfall for May would be only half the average rainfall as measured for that month over the past 40 years.

Looming food shortages pose a national security threat, warned Benjamín Grayeb, president of the National Agricultural Council on May 3. Agricultural production could drop by as much as 20% this year, he added, with a particularly dangerous decline in grain production.

Mexico currently imports more than 40% of its food, while *exporting* massive amounts at the same time! It is sixth in the world in the production of beef, yet many of its small farmers and cattle ranchers are in dire straits, forced to slaughter animals prematurely or sell them off because they cannot feed them. In 2012,

Mexico produced 1,800 tons of beef and became one of the major suppliers to the U.S. market. Yet it had to import 25% of its corn consumption, 51% of its wheat, and 75% of its rice, as drought wiped out those crops in key states.

### **Sonora: a Test Case**

The fight that has erupted in Sonora, one of Mexico's most important agricultural states affected by the drought, is instructive. The LaRouche movement has been present in this important northwestern state for years, educating and mobilizing the citizenry about the urgency of solving the worsening water shortage through a combination of building the PLHINO in conjunction with NAWAPA, and nuclear desalination plants. Now, a Citizens Movement for Water, the Yaqui Indian tribe, and broader political layers in the state are demanding a sane and competent water policy, and have taken that fight to Mexico's Presidency, to force a national decision.

The current governor of the state, Guillermo Padrés, and the financial and WWF interests behind him, instead, are intent on taking water out of the already parched agricultural region in the south of Sonora, transferring water from the Yaqui River via a new aqueduct to the state capital, Hermosillo—until that water, too, runs out.

The confrontation between these forces is coming to a head. On May 8, the Supreme Court of the Nation upheld a lower court injunction against construction of the aqueduct, until the concerns of the Yaqui Tribe are taken into consideration. On May 21, the Yaqui Tribe published a letter to President Peña Nieto, as a full-page ad in the national daily *Reforma*, calling upon him to force the state government to obey the court ruling.

There is full consensus among the Yaqui people against the idea of overexploiting a water basin which is already overexploited and forecast to have a greater deficit, the letter read. "The aqueduct is emblematic of the abuse of power and disregard for the law of those persisting in carrying out to an extreme an economic policy which prevents the steps for more water, such as desalination and the PLHINO, at the same time that they try to impose speculative criteria upon a strategic resource for the development and well-being of the people."

Six days later, at a May 28 rally of over 20,000 people in Ciudad Obregón, Sonora, opposing construction of the aqueduct, attended by the mayor and other

political figures, a call by the Citizen's Movement for Water was approved for an indefinite blockade of three key tollroads in the area, until the federal government steps in on this fight.

## **Watering the Great American Desert**

*Here are excerpts from an article by Dennis Small in [EIR](#), Aug. 10, 2012.*

The Northern Gulf Hydraulic Plan, or PLHIGON, will control the historic flooding problem in the Mexican Isthmus region, produce significant amounts of hydroelectric power, and move vast quantities of fresh water northwest along Mexico's Gulf Coast, part of which will then require complementary projects that will pump it up to Mexico's north-central plateau, which is part of the Great American Desert.

The total amount of water runoff to be controlled and withdrawn for use is enormous, and dwarfs the North West Hydraulic Plan's (PLHINO's), scope of 7 km<sup>3</sup> of water withdrawn, out of a total runoff of 9.5 km<sup>3</sup>. The Southeast's four big rivers (Grijalva-Usumacinta, Papaloapan, Coatzacoalcas, and Tonalá—the first, second, third, and sixth biggest in the country, respectively) jointly produce some 204 km<sup>3</sup> of runoff, of which only 15%, or 30 km<sup>3</sup>, will be withdrawn for use in the PLHIGON. This is almost one-fifth the amount of water that will be transferred by the North American Water and Power Alliance (NAWAPA XXI)—some 165 km<sup>3</sup> per year.

In the detailed design for the PLHIGON drawn up by the respected Mexican engineer Manuel Frías Alcaraz, six major dams will be constructed on the Usumacinta River and its tributaries, some of which will involve binational projects with Guatemala. These will create hydroelectric installed capacity in the range of 9.5 gigawatts, nearly doubling Mexico's current hydroelectric installed capacity of 11 GW, out of a national total of 50 GW from all sources. It will also be necessary to increase the capabilities of the existing Malpaso and Peñitas dams on the Grijalva.

Besides producing electricity, these dams will be designed to control the rivers' runoff, and prevent future



flooding. That will allow the rich lands, in what is now a vast coastal flood plain stretching across Tabasco and the neighboring state of Campeche, to be put into agricultural production, both for crops and pastureland. Frías estimates that more than 1.5 million hectares of land can be recovered, transforming the region into the country's number-one agricultural zone. As a rule of thumb, 1 km<sup>3</sup>/year of water will irrigate some 100,000 hectares of land. That means that about 15 km<sup>3</sup> of the 204 km<sup>3</sup> of runoff from the four mentioned rivers, will be needed for the 1.5 million new hectares of agricultural land.

### Nuclear Energy Also a Must

In a second stage, an additional 15 km<sup>3</sup> of water will be transported northwestward along the Gulf coast, with dams, canals, and pumping stations built for that purpose. There are technical difficulties involved in transferring such vast amounts of water either over (or under, with tunnels) the neovolcanic knot in the center of Mexico, but these can be solved with the significant increase in power production that will come as Mexico fully develops its nuclear industry.

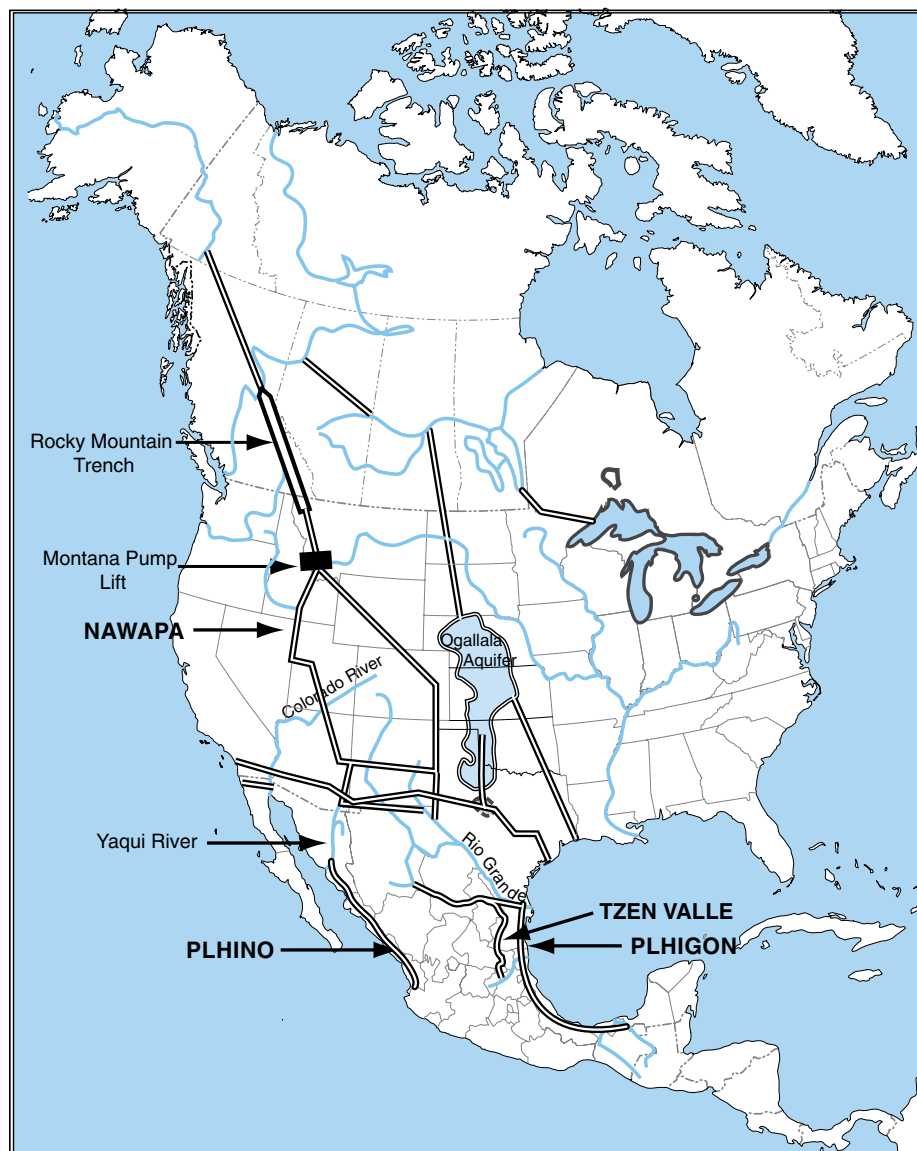
Substantial power will also be needed to pump water over the Eastern Sierra Madre into the Great American Desert region in north-central Mexico, the epicenter of today's drought.

It should be noted that neither the PLHINO nor the PLHIGON per se would carry water to that area. They would have to be complemented by other projects that would bring water up from the coasts to the central highlands. From the western side, this is not very feasible in physical-economic terms, since the Western

Sierra Madre is quite high—it reaches heights of 3,000 meters above sea level. But on the Gulf side, it is much more feasible, given that the Eastern Sierra Madre ranges between 2,000 and 2,500 meters above sea level.

One project that would be especially important for carrying water in that direction, at least as far as the city of Monterrey (which is just before you have to cross over the Eastern Sierra Madre into the highlands), is a proposal developed by Frías, which he has dubbed the

FIGURE 1  
North America: 'NAWAPA-Plus'



Sources: Parsons Company, *North American Water and Power Alliance Conceptual Study*, Dec. 7, 1964; Hal Cooper; Manuel Frías Alcaraz; *EIR*.

TzenValle System. The idea is to divert about one-third of the water from the Pánuco River (the fifth in the country, in terms of run-off) and its tributaries, where these originate in the Eastern Sierra Madre in the state of San Luis Potosí. By means of a series of dams, tunnels, and canals, located some 250-300 meters above sea level, water would be carried north, and then pumped up as far as Monterrey, which is 540 meters above sea level.

The TzenValle System would carry an additional 6.8 km<sup>3</sup> of water per year to this arid zone.

As **Figure 1** indicates, the eastern branch of NAWAPA would connect with the tributaries of the Rio Grande (Río Bravo), which forms the border between the United States and Mexico at that point. This would enable the transfer of large quantities of fresh water—some 6.8 km<sup>3</sup>—to the arid Center-North of Mexico. Here, at the Rio Grande, is where NAWAPA and the PLHIGON meet.

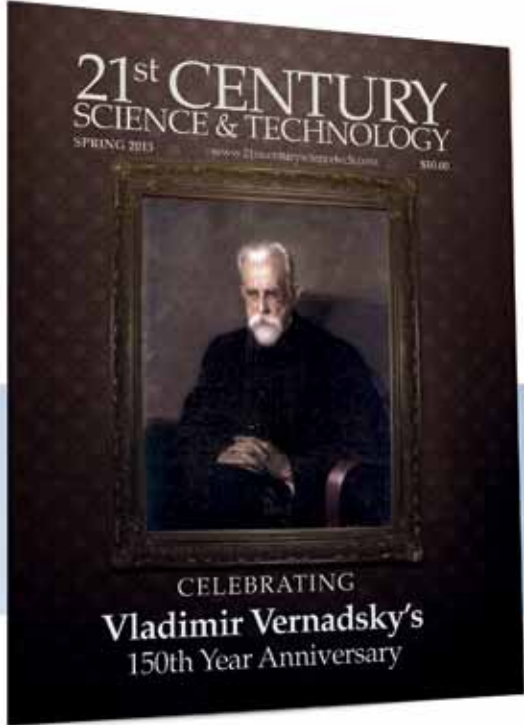
The western branch of NAWAPA would feed water across the border to the Yaqui River in Sonora, which would receive nearly 12 km<sup>3</sup> of water a year. This is where NAWAPA and the PLHINO meet.

The western stretch of NAWAPA would also supply

water to the north and center of California, and to the Colorado River, which, in turn, would carry more than 5 km<sup>3</sup> of water a year to northern Baja California, in Mexico.

Figure 1 presents the full impact of the NAWAPA-Plus projects on water availability in Mexico. For the country as a whole, there will be 68 km<sup>3</sup> of new water available. Since Mexico currently gets 36% of its total water withdrawals from aquifers, and over-exploits more than 20% of them—i.e., withdrawing more water than the amount of annual recharge—it will be necessary to use some 10 km<sup>3</sup> of the newly available water to recharge the aquifers and reverse their depletion. That will leave net new water availability of some 58 km<sup>3</sup>, a 75% increase over today's 77 km<sup>3</sup>.

This increase in water availability will allow Mexico to irrigate some 5 million hectares of new land, a 75% increase over its current 6.5 million hectares of irrigated land. Of this newly irrigated land, 0.8 million hectares will be in Sinaloa and Sonora; 1.5 million will be in the Tabasco/Campeche flood plain; and about 2.7 million will be opened up in the upper reaches of the PLHIGON, including in the currently dry central highlands.



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