

## THE SUN IS GETTING LAZY

# Mankind Can Now Control The Global Water System

### Part 3 of 3

#### Mankind Taking on the Role of the Sun

**W**e went through a lot of specifics here, but the point is, *this is mankind, really taking over for the role of the Sun, on the planet Earth.* That's what we're talking about; that is, I think, how Vernadsky would look at it, if he were alive today, examining this. He would say: With desalination, and with weather modification, we're looking at mankind actually creating his own cycles, which didn't exist before. And you can see it illustrated in a kind of cartoonish way here (**Figure 14**), a very significant principle. As we saw before, the entire continental water system is solely powered by the Sun. And as we then developed, that's not constant, that's changing, that fluctuates; it fluctuates in quantity, it fluctuates in distribution, so it's not a fixed input/output system, it's a changing system.

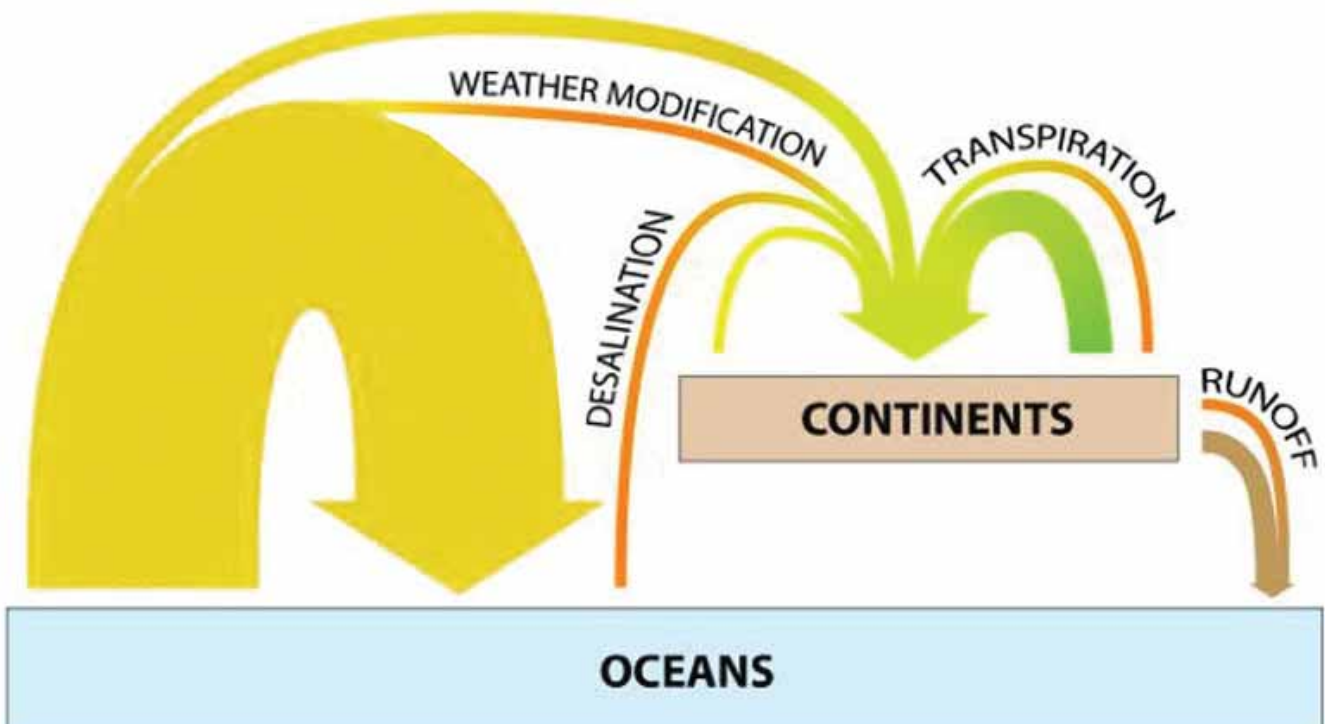
So if mankind is going to take over for the role of this weakening Sun—the Sun's getting lazy, wants us to pick up the slack a little bit—the noösphere needs to come into action, to ensure that the global terrestrial water cycle is robust, accelerating, developing and productive, we can do that with weather modification and desalination. We're actually increasing the input into the continental system. With weather modification, we're actually drawing in moisture from over the oceans, which wouldn't precipitate over land normally, and we can bring it over land, we can increase the input into the terrestrial system. With desalination, we're even

going in some degree a step further. The Sun itself is doing desalination all the time, by evaporating the water; we can begin to provide our own power source to do that ourselves, creating a whole new cycle.

And then, with this type of activity and with good management of these cycles, you increase the plant life, you increase the precipitation that plants provide, you can overall then increase the productivity and the activity of these existing cycles. And then, obviously, all that is going to increase the run-off—this is not just use, this is a cyclical system. And quite frankly, the Colorado River *should* be running off into the ocean. It should be taking salts and stuff from the soils; it should be flowing into the ocean again. The Rio Grande River should be flowing into the ocean again—these river systems, we're just tapping them out, and taking out all the water, and it's not reaching the ocean again; that's not something we should just leave as is. But the solution is not to stop using the water. The solution is for mankind to play the role as a creative force, for the noösphere to act in augmenting and creating new cycles that will support the Colorado, that will support the Rio Grande.

And again, really, this is quite literally, mankind taking on the role of the Sun. This is mankind as a creative force on the planet, the power of human thought, the power of human culture; Vernadsky called human culture a new form of energy in the biosphere on the planetary system. By employing this

**Figure 14**  
**Man Creates New Terrestrial Water Cycles**



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higher capability, mankind is quite literally beginning to take over for the Sun in controlling these types of systems.

And then, as we've discussed a lot, it obviously doesn't end on Earth. Moving out into space, asteroid

defense, beginning to manage these pesky asteroids and comets. This is mankind beginning to play the role that had been solely given to the Sun in the past, and now mankind is beginning to exert himself as a solar force, so to speak, on the level of stars, on the level of suns. And I think it's no coincidence that this also corresponds with, and is powered by, going to a fusion economy, harnessing the power of the Sun with fusion, in a controlled way, on Earth.

So our challenge, I think, is to put this level of thinking on the table: We're facing a breakdown of the existing system, but especially in the United States, people have been so conditioned to thinking so small—you know, we could see the collapse of the United States just by letting people follow their own assumptions at this point. The oligarchy's created itself in the way people think, and if we don't attack that, and don't challenge people around these ideas of environmentalism, the Green ideology, the hatred of people actually taking an active role in improving and developing the planet, we're not going to have a recovery in the United States. These other nations might move forward, but we're going nowhere but down at this point.

And so, I think our role is critical in challenging people with the top-down conception of what is, as Mr. LaRouche put in this Four Laws presentation, from the scientific perspective of Vernadsky, what is mankind's role and mission on the planet, over the coming generations and beyond, into the Solar System. So this water example is just one aspect, one critical illustration of this more general principle.

### Vernadsky: The Age of the Noösphere

**Liona Fan-Chiang:** It actually is a little worse than you have posed it, because rather than just a fixed cycle, most people think of the whole drought situation, for example, as just having "less water." Even what you presented of the global system is already bigger than what most people think of.

And so, being able to think of themselves as being able to control that, is already pretty big. But, of course, the main point is that the global system is not isolated. It is a very small part of a huge Solar System, which gets all of its energy from the Sun, and the galaxy, possibly. And so, yes, it is the ability to control it as a system, but I think the point that you're making, the point that you elaborated at the end, is the main issue, which is our own conception of ourselves. And using that, having the right conception, to the point where it creates the necessity for development. I'm not sure exactly what to say about the fact that our own visionaries right now, don't have a very far vision!

**Megan Beets:** Very near-sighted.

**Fan-Chiang:** Yes, they're very near-sighted. And even the ones that think very, very far out in time, are still taking a linear extrapolation of the type of growth we have now and



Liona Fan-Chiang (center): "Most people think of the drought situation as just having 'less water,' instead of seeing it as determined by global, and even galactic processes. Megan Beets is on the right.

extending that. Or even something that we had previously, and extending that. But that type of extrapolation doesn't have a principle behind it, it doesn't have a principle of what mankind's existence is actually for.

And that's not something that's very simple. It is something that has to be continually investigated, and I'm not going to say that I know what that is. But I do know that what we've discussed is on a much, much higher level than a lot of people who should be investigating that exact question, especially people who are leaders in society [are looking at]. If you're a leader of society and you don't know what society's purpose is, that is a problem!

**Beets:** Yes, I was just thinking about the work of Vernadsky: He died right about the end of World War II, and in 1945, he writes a very small work called, "Some Words on the Noösphere"—something along those lines. Now, you think, after World War I, most of the culture, and Vernadsky himself, were *reeling* from the destructive power that man was able to exert for the first time, with the technological capability of that war. And then, what was continued in World War II. Most of the European and world population was entering a real period of cultural pessimism.

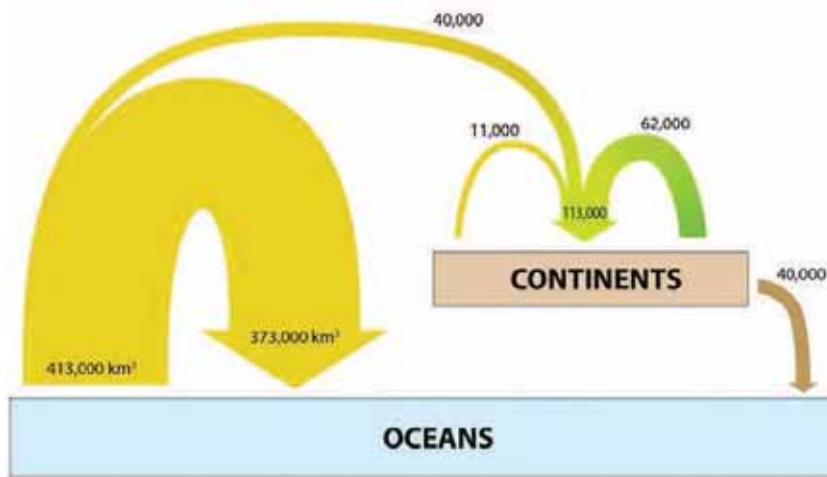
Now, Vernadsky says, okay, however, this is a sign that for the first time, man is able to exert powers on a planetary level, demonstrates to me that we've entered the age of the noösphere. And what he means by the "age of the noösphere," is that the thoughts and the work of civilisation, of mankind, for the first time, are becoming the dominant force which is organising the growth of the biosphere on the planet.

And Ben, you exhibited that beautifully, between the two graphics: first the graphic where the Sun is the main driver of the water cycle (Figure 3), and then in the second one, where you begin to see man accelerating the water cycle (Figure 14). This is exactly how Vernadsky concluded that you have to measure the development of the biosphere, and then of man's activity. He points out that the action of life on the material of the planet over time has been to accelerate the movement of materials through the different metabolic cycles, and that over evolutionary time, the rate of movement of materials, and hence the state of organisation of the biosphere, has been increasing. And he points out that for the first time, with man, you see the rate of increase within a single generation, because of the activity of technology, because of the activity of science.

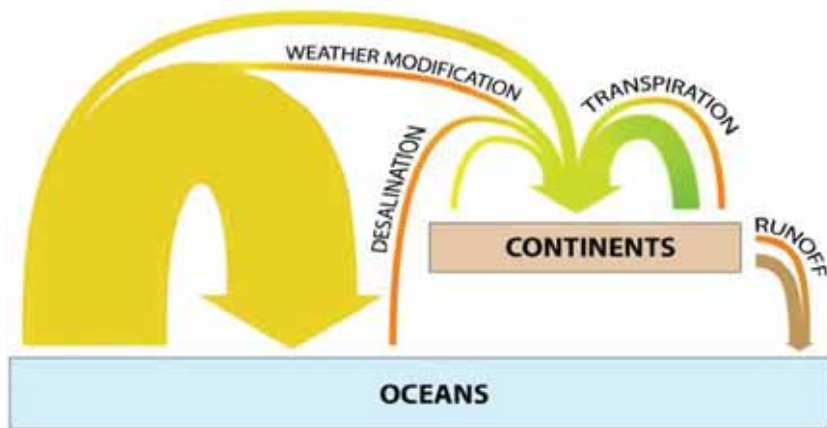
And that's exactly what you see with the example of the water cycle, that man accelerates the change in the development of the biosphere. And Vernadsky concludes,

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**Figure 3**  
**Terrestrial Water Cycle**



**Figure 14**  
**Man Creates New Terrestrial Water Cycles**



even in this period of great trauma to civilisation, this is the natural role of mankind, this is the state of nature, and that the development of the biosphere had been vectored toward creating a creature such as mankind, that could actually begin to exert scientific thought as the dominant force over—it wasn't limited to the planet, but the planet and beyond.

It seems like, in that sense, the water cycle example is very good, but it's slightly deceiving, because it's not just increasing the water cycle, because we can also desalinate water internally.

**Deniston:** Sure.

**Fan-Chiang:** And also moving the weather, moving the water within the land. But the other aspect, is this idea of creating a state of organisation that's higher. Because that is really the qualitative, or even the quantitative aspect, of why we do these things, or why those are considered higher order processes.

## The History of Life

**Deniston:** Yes, it sustains a higher anti-entropic stage. And you look at the history of life—it's a great example of this: You have an increase in the biogenic migration of atoms, you have an increase of the carbon cycle, you have an increase in the oxygen cycle. You have an increase in the energy use per organism. But the point of all that is to support a whole higher-level system, more advanced organisms, more developed

animals, leading up to the ability to create a system which could support, then, a form of willful, creative expression, qualitatively different than the animals, which is human activity.

But, yes, one of the biggest things that people have difficulty with, is what Mr. LaRouche put in this fourpoint memo quite explicitly, which is that mankind is the measure of the Earth and the Solar System, that we have to govern our actions by measuring what are the needs and activity in relationship of the noosphere to the biosphere and the Solar System as a whole. And if you ever try and take it any step lower than that, you're not going to be able to define competent policy; you're not going to define, with any competent scientific basis, what's appropriate and right for the actions of nations and economies.

**Fan-Chiang:** Right, because you're always going to be influenced externally without knowing it.

**Deniston:** Right.

**Fan-Chiang:** Yes, it does seem like, even this example, taking control of the water cycle would be a prelude, a necessary one, to space development. Because now you're taking on even a larger system. I mean, obviously understanding this system requires a Solar System view, but once you try to take on the Solar System, then you have to take a galactic view.

**Deniston:** Yes, absolutely.

**Beets:** I like this point that you guys are both making about man taking over the role of the Sun. And it really does neatly draw together this whole period from the Renaissance until now, in which you had the emergence of the system of nation-state governments, in the Renaissance because of the work of Cusa and then the following work of Kepler; for the first time, man was able to conquer the Solar System with his mind, and actually turn the movements of the stars and the planets and the Sun into a single system which was created as a thought of man, and which was valid, over which he could potentially exert power; and now we see—if we survive this current political period!—we see the potential of man, physically taking over the role of the Sun, physically controlling the Sun and taking over, becoming more powerful in his implementation, in his administration of those functions of the Sun, than the Sun itself.

And then, obviously, as you said, as soon as we do that, what does it imply? The galaxy, the entire galactic system that encompasses the Sun. And I think that just does really neatly draw this whole period together, because in that whole historical development, you also had the emergence of the system of nation-state governments, which was then oppressed by this oligarchical empire system that we're fighting today.

And if man can get free of this empire system of the current British Empire, and fully manifest this nationstate government in a world system of nation-state governments which are actually oriented toward this development of the Solar System, that's the natural condition of man. The Empire's unnatural, and the natural condition of man is to do exactly what we've been discussing today.

**Deniston:** Absolutely.

**Beets:** Okay. I think that's a good place to leave it for today.

# “Let’s adopt the mission with China—to go into the helium-3 age for mankind!”

*Postscript: The following are excerpts from the August 8, 2014, LaRouche Political Action Committee webcast.*

**Jason Ross:** Now, China has made dramatic advancements over the past several decades, from the Three Gorges Dam, to the first use of commercial, magnetically-levitated rail, to the installation of thousands of kilometers of high-speed rail, to building hundreds of new cities, to its plans to triple its nuclear capability by the end of the decade. Its EAST tokamak is one of only two fully super-conducting fusion experiments in the world. And they have plans they have announced to expand the cadre of fusion scientists and engineers by another 2,000 by decade’s end.

The New Development Bank of the BRICS, an institution to have an initial capitalisation of \$100 billion, is to be headquartered in China. The BRICS nations have seen dramatic growth rates over the past decade, compared to the decay of the trans-Atlantic world.

Even across the world, while Obama refers to plans for Coca-Cola to import more fruit concentrates from Africa, as a “food partnership” with that continent, China has proposed that the U.S. join China in financing and building real infrastructure, in Africa, and other developing nations, such as Pakistan and Nepal.

In contrast to Obama’s recent statements that China is, quote “the low-cost manufacturer of the world,” its exports are becoming increasingly sophisticated, its workforce more skilled and better paid, and its products increasingly designed domestically. A July article in the *Beijing News* expressed China’s transformation, from “technology introduced from abroad,” to “technology absorbed and digested,” to “technology sent abroad.”

Its work on high-speed rail is become its “dazzling calling card,” as they call it, reflecting the fact that China is, “no longer a taciturn worker living at a low standard of living.”

On both the small-scale of sub-atomic nuclear fusion research, as well as on the largest-scale of cosmic exploration and space technology and science, China is expanding its frontiers and behaving in a way that is suited to the ability of the human species, to socially set goals, based on the reality of what must be brought about.

As Mr. LaRouche said today, what’s real, is not what you can already do; what’s real, is what you intend to be able to do in the future. And, the world is noticing. ESA, the European Space Agency, is having some of its astronauts learn Chinese, to be able to participate in Chinese missions. Recently, mining.com and England’s *Daily Mail* are two of the most recent media outlets to cover China’s plans to return to the Moon and explore the development of infrastructure necessary to mine helium-3, which is a uniquely excellent fuel source for applications both in space and here on Earth. One ton of helium-3, which is more plentiful on the Moon than on the Earth, because the Moon does have an atmosphere or a magnetic field, one ton of helium-3 provides as much power as 50 million barrels of crude oil, which is a number that’s hard to even conceptualise how large that. But, to access this powerful resource, of course we must first return to the Moon, and at present, only China has really developed plans, in process to make that happen. ...

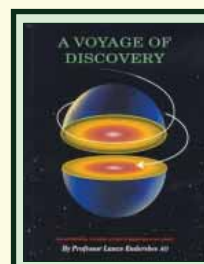
**Ben Deniston:** Now, as Jason cited, studies have indicated there’s upwards of 5 million tons of helium-3 on the Moon, and that has been said to be enough to power the entire planet

Earth for 10,000 years. Now if you think back 10,000 years, a lot has changed in 10,000 years. So if you’re talking about securing power for 10,000 years into the future, we got a lot of room to work with under that perspective.

But to put this in concrete terms that will help people conceptualise this, I mean, he cited 5 million tons—how much is 5 million tons? What does that mean? So we just did an example to illustrate one pedagogical expression of what the energy density of the power of helium-3 is, and as viewers of the larouchepac website know, we’ve been very upfront and concerned about the global water crisis. And there was recently a report on the rapid loss of water in the Colorado River Basin, that, according to studies by new NASA satellites, the rate of water loss has been significantly more than had been realised. And over the past nine years, mostly from groundwater depletion, pumping water out of the ground, the Colorado River Basin as a whole has lost about 7 cubic km/year, which is equal to about half the flow of the Colorado River itself! So for the Colorado River to supply that would require increasing its own flow by 50%. But that’s the rate at which we’ve been depleting the water availability in the Colorado River Basin.

So, now say we’re going to address this. Say we want to look at the water crisis, from the standpoint of the Moon and helium-3 fusion. Say we wanted to match this rate of water loss, which is a devastating threat to the Colorado Basin in the entire West, with desalination. Say we wanted to do with desalination with helium-3 fuel: how much helium-3 would it take per year, to match the rate of loss that’s occurring in the Colorado River Basin. Well, if you crunch the numbers, it’s one-third of 1 ton of helium-3 per year. That’s enough to fit in the back of a pickup truck, and that’s enough to power desalination to match the water loss of this entire river basin.

Again, to compare this with other sources, if you wanted to do this with coal, you could power desalination with coal. You could generate electricity and do desalination. But to match the same levels, it would take 6.7 million tons. So, one-third of 1 ton, to 6.7 million tons. Now, again, what does that mean, 6.7 million tons, when you picture 6.7 million tons? If you wanted to put that into train railcars, you’re talking about 67,000 railcars. If you go to the second graphic [Interstate 5 Across California], that’s the equivalent of the length of the I-5, stretching from San Diego to the California-Oregon border. So I imagine most people have been stopped at a railroad track, waiting for the train to go by: You better hope it’s not this train, because you’re going to be in trouble if you’re waiting for this many—for 67,000 railcars, stretching the entire length of California along the I-5, is matched by the helium-3 fitting in the bed of one pickup truck. That’s amazing, that’s some power. And if you think about it, you’re talking about, with mankind it only requires one-third of 1 ton/year, for mankind to match the requirements of an entire river basin in the United States. ...



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