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WATER AS A GEOPOLITICAL THREAT

HEARING

BEFORE THE

SUBCOMMITTEE ON EUROPE, EURASIA, AND EMERGING THREATS

OF THE

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WATER AS A GEOPOLITICAL THREAT

THURSDAY, JANUARY 16, 2014

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON EUROPE, EURASIA, AND EMERGING THREATS,
COMMITTEE ON FOREIGN AFFAIRS,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 o'clock a.m., in room 2172 Rayburn House Office Building, Hon. Dana Rohrabacher (chairman of the subcommittee) presiding.

Mr. ROHRABACHER. Good morning. This is the Subcommittee on Europe, Eurasia, and Emerging Threats and we are now in session. And I would first and foremost like to ask my colleagues, with unanimous consent, that Mr. Blumenauer, who has spent such considerable time and effort on this issue of water and the importance of it and world affairs today, and then the standard of living of our people, that he be permitted to participate on the same status as any other member of the committee. Hearing no objection, so ordered.

It is the Chair's intention to have a short opening statement. The ranking member will have an opening statement. And I will give also time to Mr. Blumenaurer, as well as our other members, for short opening statements.

So good morning. The subcommittee has convened and we welcome our witnesses today as part of our emerging threats which is—that is within the title in our portfolio. We examine the topic of water as a strategic resource and its potential use as a threat. Those of us who have lived around water our whole lives may be unaware of how water may be manipulated maliciously for both material gain and for political coercion. Although in our country's history, I think it is very clear that there were water wars and people in conflict or people in great accomplishments of people working together, that our country's history is filled with focusing on the issue of water.

Our witnesses today made clear such conduct is routine when it comes to countries like Communist China that routine conduct is manipulation of water for power's sake. As our witness today, Gordon Chang will explain, China's illegal occupation of Tibet puts it in control of the roof of the world and thus, the headwaters that service half the world's population. We could be confident that resulting water disputes would be handled responsibly and reasonably, perhaps solved in international forums or in agreements like many other countries do, if that is we could be confident in that if China were a country that wasn't the world's worst human rights

abuser that has had no political reform whatsoever in these last 20 years when we have seen such incredible reform in other and former communist countries.

Our Congressional Research Service testimony makes clear that most of these matters in terms of water are resolved through negotiations and peaceably and I might say remarkably these issues are solved by people acting responsibly and providing leadership and reaching out to people and to find solutions. Some of the 300 agreements over the last 70 years have unfolded in that way. Today, a warning alarm is sounding about China's control of such water resources because we have seen that China, even in the last few months, is not so reasonable when it is making its territorial claims.

China isn't the only flash point for the water issue, however, and water controversies are nothing new. Water is a volatile issue in the Middle East today, for example, but let us take a look. If you read the history, water played a very significant role in, for example, creating the environment that led to the Six Day War back in 1967. Basically, that conflict began when the Syrian Government decided to dam up waters that were flowing into Israel followed by an Israeli air attack which destroyed those dams. Then Egypt and other Arab neighbors were called into the conflict and it almost led to a superpower confrontation which would have been a disaster for the whole planet. And that all began with what, a water controversy over how much water was going to be flowing into Israel and the attempt by Syria to dam up that water.

Today, there are heartening signs, however, of cooperation in that same region between otherwise adversarial parties. The Red Sea to Dead Sea canal project is one that has potential of supplying water to Jordan, a country suffering from extreme water scarcity. Last month, Israel and Jordan and the Palestinian Authority, signed an agreement setting the path for a Red to Dead canal that would allow a desalinization plant in Aqaba, Jordan. Israel agreed to increase its fresh water that it sends to Jordan from the Sea of Galilee and the Palestinians will be able to buy cheaper water from Israel. It seems like a very good deal all the way around, but let me note it took a long time and a lot of serious negotiations and a lot of sincerity on both sides, or all three sides of that negotiating table, to reach that agreement.

And let me just note one of the first assignments, and many people know that I was a speech writer for President Reagan, and my first assignment was to welcome and work with the President on his welcoming remarks for President Hussein, King Hussein of Jordan. And King Hussein of Jordan was the first visit to the Reagan White House, the first official visit. And I was supposed to work for the President on welcoming remarks and that was the first remarks that I have ever written for a President of the United States, I might add, or anybody else.

And the State Department sent me over a stack of things to look at, like that, and their sample of what they would want the President to say which I, of course, discarded immediately. But I studied everything that was in front of me, and there was one piece of paper in that big stack of papers of things to look at that jumped out at me. And it was that there were negotiations going on about

the Red Sea to Dead Sea project that had just started at that time which was 1981 and so I looked at this and I said this is really a significant thing, that we have people who are politically so separated who are willing to sit down at a table because of how important water is and work together to try and find a solution. Perhaps we can use this as an example of the type of cooperation we should encourage.

And so I decided I was going to write that into the President's speech myself. And I had no idea that I could when I was hired on as a speechwriter that I would have this type of personal contact with the President of the United States. And it finally dawned on me when they said well, sure if you have got a good idea put it in there and we will see what the President says. And of course, he liked it very much and it was part of his welcoming remarks. But at that point, I really found out I had a pretty good job after all.

We can take a look at what has happened, however. It has taken all of these years to come to an agreement. And I will say this, we should all encourage this process between Jordan, the Palestinians, and the Israelis because it might take long, but it is symbolic, as Ronald Reagan noted in his welcoming remarks to King Hussein, it is very symbolic of what can be accomplished by people even when they have other disagreements of how they can work together.

The situation involving the basin countries in the Nile River, for example, deserves watching and we need to look at this very closely because the Nile, of course, flows through ten different countries and Egypt is one of the final ones and basically Egypt views the Nile as its primary national security and economic lifeline. So with so many countries upstream, that is an area we have got to look and try to work with these powers to make sure that there are again efforts made for cooperation, rather than confrontation.

This subcommittee held a hearing in July of last year on the dam controversy between Tajikistan and Uzebekistan and that was a controversy that is now at the high level international conference of water cooperation which opened up in August. The Uzbeks are arguing that the proposed Rogun Dam in Tajikistan would cost them some $600 million a year. Since this issue has not been resolved, we will continue to monitor it closely but that shows you again how significant just an idea of how we are going to control the flow of water can be. Six hundred million dollars to Uzebekistan means, I would imagine, it has more—whether their kids are going to get educated, whether they are going to have a proper healthcare system in that country is being challenged by the fact that water is being controlled.

One positive story deals with our border relations with Mexico. The United States and Mexico in 1944 signed a water treaty that has allowed us to resolve most of our border water issues relative to the Rio Grande and Colorado River. And let me note for the record that I have been—being from California, I have studied the—not studied as much as some of our witnesses have, I am sure—the history of water between California and the other border states and Mexico. And I think we have played pretty hardball with the Mexicans on this. And I think there have been very legiti-

mate complaints on the part of Mexico in the past that the United States was not operating with them with the same type of sincerity and the same type of respect that we should have been doing to a country that is our neighbor that we wanted to maintain a peaceful relationship with. The 1944 agreement has gone a long way to try to clear up some of those problems that were around for a long time and we still have some issues of water that we need to work out with Mexico.

Water is a significant issue and a potential geopolitical threat to much of the world. Our witnesses are a distinguished group of witnesses today. Jeremy Sharp is a specialist in Middle East affairs with the Congressional Research Service. Gordon Chang is an author and a lawyer who lived in China for many years and has traveled regularly there since. David Goodtree at the Symposium for Water Innovation from Massachusetts is certainly a guest of our ranking member. We are looking forward to his testimony. And like most Americans, I have a great admiration for our witness's father, and Maura Moynihan's dad was, of course, Senator Daniel Patrick Moynihan who my generation of Americans looked up to tremendously. He sometimes gave the Reagan White House a few fits and I remember those as well, but his opinions were always respected and he had a major influence on political thinking in the United States. He was, of course, in my way of thinking, he was a heroic champion of human rights at the United Nations and as well as an Ambassador to India. Ms. Moynihan, of course, was with him in India and has done a great deal of work on her own in terms of the issue of Tibet and China and we are very happy to have her today to share her understanding of maybe the threat that we face with China still occupying Tibet after 60 years.

So again, with unanimous consent I put the rest of the—insert into the record a bio of all of our witnesses. So ordered without hearing an objection. And I turn to Mr. Keating for his opening statement.

Mr. KEATING. Well, thank you, Mr. Chairman, and thank you for holding this timely and important hearing. I am also pleased that Mr. Blumenauer is able to join us today. Mr. Blumenauer and our fellow subcommittee member, Mr. Poe, have done an awful lot of work together on global water security, both in terms of increasing access to clean water and in promoting mitigation of conflicts stemming from water scarcity.

I would also like to join the chairman in thanking our witnesses who are appearing today, particularly Mr. David Goodtree. It is a pleasure to see him. Almost as great a pleasure to see the cap that he has brought with him and placed on the desk of the Boston Red Sox. For those of you on the panel and in the room, that is the world champion Boston Red Sox and thank you for that thoughtfulness as well. Mr. Goodtree is the co-chair and founder of the Symposium on Water Innovation in my home state of Massachusetts, an association of water technology industry executives focused on bringing clean, abundant water to global markets through technology created in the Commonwealth of Massachusetts.

Mr. Chairman, it is clearly in the U.S. interest to work and reduce tensions caused by water scarcity and promote access to clean water around the entire world. In 2011, the national intelligence

estimate, the U.S. intelligence community reported that over the next 10 years, many countries important to the United States will experience water shortages, poor water quality, floods, and other water problems that will risk instability and even state failure. It will also increase tensions between neighbors and distract partners from working with the United States on important policy objectives.

While disagreements over water are inevitable, the good news is that the international community has an impressive track record of resolving water tensions through negotiation and cooperation. In the last 70 years, there have been 37 reported incidents of water conflicts involving violence. During that same period, roughly 300 international water agreements were negotiated and signed. Indeed, recent history shows that the peaceful resolution of water disputes can be a useful diplomatic tool for building trust and cooperation.

Looking forward, the key will be to find ways to promote cooperation between countries in cases where water is or has the potential to become a source of tension. Admittedly, this is not easy. Most countries view water as a sovereign issue and there are many cases where outside intervention is not warranted at all. Moreover, water problems are often connected to a broader set of political, developmental, and financial challenges. In the future, international efforts to increase access to clean water and promote sanitation will be just as important.

According to the State Department, nearly 800 million people around the world do not have access to clean water. More than 1.5 billion still lack access to improved sanitation facilities. Each year, more than 4 billion cases of diarrhea caused 2.2 million deaths. Most are in children under the age of 5. In addition to the lives lost, the total economic losses associated with inadequate clean water supply and sanitation is estimated at more than $250 billion annually. The scarcity of clean water and sanitation disproportionately affects women and children. In many countries, women and young girls bear responsibility for meeting the water needs of the entire family. Collecting water can consume up to 5 hours a day, time that could be spent in school or improving their families' livelihoods.

Addressing water problems is a daunting challenge, but the international community's successful track record and the growth of new and innovative technologies give us even greater reason to hope. As such, I am interested in hearing our witnesses' views on the effectiveness of U.S. diplomatic and development efforts to promote dialogue, capacity building, and the development and use of new water technologies, but also welcome our witnesses' view on the role that regional initiatives could play in promoting cooperation, thereby reducing water-related tensions.

One example is the new Silk Road initiative which aims to improve energy and trade linkages between countries in Central and South Asia. With that, Mr. Chairman, I will yield back and again, thank all of you for being here.

Mr. ROHRABACHER. Thank you very much. Mr. Marino. Colonel Cook. And I would welcome remarks from Mr. Blumenauer and again, appreciate the leadership that he is showing on this issue,

not only Republicans and Democrats, trying to get us focused on this issue. Your leadership, I think, has inspired me and the ranking member to call this hearing today. So thank you very much for being with us.

Mr. BLUMENAUER. Thank you, Mr. Chairman, and I deeply appreciate the courtesy of the subcommittee for being able to join you. I guess it is obligatory in a water hearing at some point somebody has to quote Mark Twain that "whiskey was for drinking and water is for fighting." And your willingness to focus on water as an area of conflict, threat to the United States and others, is deeply appreciated. As I appreciate the support that you and the ranking member have given to the latest legislation that Judge Poe and I have introduced, the Water for the World Act which, if enacted, would help in some way address some of these issues.

It is too often a hidden issue in foreign policy and the detail that you went through, both of you went through a moment ago, I think is very important and I wish somehow that it got more attention here in Congress. And this subcommittee meeting is moving in the right direction.

The threats go beyond the shared river basin. As my friend, ranking member pointed out, in terms of the instability and threat by the staggering number of people that still, despite intensive efforts over the last 20 years, almost 1 billion with safe drinking water, more than 2 billion without access to sanitation, and the ripple effects that that can have. And I think it is so important to focus on the impact of families in these areas. And I do appreciate Mr. Keating talking about the fact that this is primarily a burden that falls on women and girls in families. There will, today, because of that up to 5 hours spent globally, 200 million hours will be spent by women and girls gathering water and putting by the way often themselves at risk as they go from the village.

The spotlight on China I think is so important and is welcome, as well as the—I didn't realize the long history of this Red to Dead, but it is an example of where these can be positive. What we are seeing in Syria today, the experts tell us, is in no small measure a result of sustained drought that drove almost 1 million farmers to migrate to urban areas, hungry, jobless, and was a flash point for that initial protest against the regime as Assad had no interest or ability to deal with it.

Over the next 20 years, we are going to see more urban instability due to population increase, disease, poverty, and social unrest. We have been working with the United States and international partners making some progress, but we risk reversing that progress that we have made due to the explosive population growth that is going to occur in sprawling urban slums which is difficult and expensive to provide sanitation, quickly leading to pollution and disease.

It was exciting yesterday to see our friends in the appropriations committee in a difficult budget climate responding to the challenge that a number of us have been working on with a 20 percent increase to give leverage to the State Department. I hope that the hearing will help spotlight what we might be able to do with the passage of the Paul Simon Water for the World Act which is also moving its way through the Senate. Elevate the existing position

of the State Department to better coordinate diplomatic policy; develop a coherent policy framework that will drive our policy in the right direction; build the capacity within the

State Department to handle both the bureau and mission level issues and make sure that water sanitation and hygiene is reflected in broader development and strategic planning documents.

The leadership of this subcommittee is deeply appreciated. It is timely and it is an opportunity for us to take an important step to encourage some of the related committees, appropriations, defense authorization, as well as foreign affairs, to refine our policies and protect our progress.

As you pointed out in your opening statement, Mr. Chairman, it is not only a threat, but it is potentially a solution and I look forward to this discussion. Thank you very much.

Mr. ROHRABACHER. I appreciate that opening statement. And I also appreciate the mentioning of Senator Paul Simon who worked so hard when Mr. Moynihan was known for his work on human rights, but Mr. Simon was a person who saw the water issue as so significant. I remember when I was a young freshman, a long time ago, I got a call from Paul Simon when I mentioned that I thought water was an important issue and he took time to call me up and talk to me on the phone about how he thought that I had some insights that would be useful and be very important to follow up on on those insights.

Mr. BLUMENAUER. Begging your leave, Mr. Chairman?

Mr. ROHRABACHER. Yes.

Mr. BLUMENAUER. And both those gentlemen were charter members of the Senate bow tie Caucus.

Mr. ROHRABACHER. All right, with that I would ask the witnesses if they could condense their testimony to about 5 minutes and then we will ask questions. We will have panel dialogue and some questions afterwards.

Mr. Sharp, you may proceed.

STATEMENT OF MR. JEREMY M. SHARP, SPECIALIST IN MIDDLE EASTERN AFFAIRS, FOREIGN AFFAIRS, DEFENSE, AND TRADE DIVISION, CONGRESSIONAL RESEARCH SERVICE

Mr. SHARP. Chairman Rohrabacher, Ranking Member Keating, and other distinguished members of the committee, thank you for inviting CRS here today. I will provide an overview of the so-called Red-Dead Canal and its potential implications for U.S. policy.

To the surprise of many outside observers, just over a month ago, the World Bank Headquarters here in Washington, Israeli, the Hashemite Kingdom of Jordon, and the Palestinian Authority signed a tri-lateral Memorandum of Understanding, or MOU. This MOU outlines a series of water-sharing agreements which includes the initial phase construction of what has been informally referred to as the Red-Dead Canal. The Red-Dead Canal is a decades-old plan to provide fresh water to water-scarce countries in the surrounding area while simultaneously restoring the Dead Sea, which has been shrinking at an alarming rate. The original Red-Dead concept was to pump water from the Red Sea and desalinate it for use by the participating countries. The leftover brine would then be

gradually channelled to the Dead Sea, helping restore the sea's receding water levels.

Regional environmentalists have long criticized plans to restore the Dead Sea using Red Sea water. They warn that the transfusion of water from the Red Sea into the Dead Sea could have serious ecological consequences that would negatively impact both Dead Sea tourism and industry. In 2005, the World Bank sponsored what became an 8-year-long feasibility study of the Red-Dead Canal concept. Almost a year ago to the day, various media outlets reported that construction firms involved in the feasibility study had declared that the project was technically feasible, although it would come with a steep price tag, costing at least $10 billion and take years to construct.

The Kingdom of Jordan has vigorously pursued the Red-Dead Canal concept. Jordan is one of the most water-deprived countries in the world and is constantly searching for new water resources. The civil war in neighboring Syria is exacerbating Jordan's water crisis as over ½ million Syrian refugees have fled to Jordan increasing the population by 9 percent within just 2 years.

In August 2013, the Jordanian Government announced its intent to construct a scaled-down version of the canal entirely on Jordanian territory. In terms of scale and cost what the Jordanians have announced and agreed on with Israel and the Palestinian Authority is far less ambitious than the initial Red-Dead concept. Estimates suggest that construction of the desalinization plan and pipeline under the new MOU may cost between $450 million to $1 billion. However, it is unclear who will pay for the new project.

In essence, under the new MOU, Israel, Jordan, and the Palestinian Authority have agreed to a water swap. Half of the water pumped from the Red Sea will be desalinated in a plant to be constructed in Aquaba, Jordan. Some of this water will then be used in southern Jordan. The rest will be sold to Israel for use in the Negev Desert. In return, Israel will sell fresh water from the Sea of Galilee to northern Jordan and sell the Palestinian Authority discounted fresh water produced by existing Israeli desalination plants. The other half of the water, or the leftover brine, pumped from the Red Sea will be channeled to the Dead Sea where its environmental impact will be monitored by an international consortium of scientists.

So what are the implications for U.S. policy and issues for Congress? With the Obama administration and Secretary of State John Kerry engrossed in seeking an Israeli-Palestinian final status agreement, the timing of the MOU could complement overall U.S. peace-brokering efforts, though the agreement was between the parties themselves with reportedly minimal U.S. involvement. According to Silvan Shalom, Israel's Water and Energy minister, "This is a historic agreement that realizes a dream of many years. The agreement is of the highest diplomatic, economic, environmental, and strategic importance."

For Jordan, the MOU could be considered a major diplomatic achievement. Though the current plan is a scaled-down version of the original concept, the Kingdom will receive additional fresh water resources at a time of heightened scarcity, owing to the Syrian civil war. Nevertheless, as the title of this hearing suggests, se-

curity and political challenges remain. Arab cooperative infrastructure projects with Israel could be possible targets for extremist violence as has been the case in Egypt, where gas pipelines traversing the Sinai peninsula to Israel and Jordan have been repeatedly sabotaged by terrorists.

In the water-scarce Middle East region, water sharing agreements in the absence of a comprehensive Israeli-Palestinian peace may be considered risky. But there are also risks associated with doing nothing. If living conditions in Jordan deteriorated further, one could argue that the stability of a dependable Arab partner for the United States and reliable peace partner for Israel would be jeopardized. It is possible that Congress could be asked to consider appropriating funds to support the implementation of the Red-Dead Canal. Lawmakers could pose the following questions among others. To what extent will the project address water needs in Jordan, Israel, and the West Bank? What are the security risks and costs? Is the cost of the project on target? How will scientists monitor the environmental impact? And is the project scalable beyond the initial construction?

Thank you. And I look forward to your questions.

[The prepared statement of Mr. Sharp follows:]

TESTIMONY OF JEREMY M. SHARP
SPECIALIST IN MIDDLE EASTERN AFFAIRS, CONGRESSIONAL RESEARCH SERVICE

"WATER AS A GEOPOLITICAL THREAT"
THURSDAY, JANUARY 16, 2014 – 10:00 A.M. – 2172 RAYBURN HOUSE OFFICE BUILDING, WASHINGTON, DC

HOUSE COMMITTEE ON FOREIGN AFFAIRS, SUBCOMMITTEE ON EUROPE, EURASIA AND EMERGING THREATS

Chairman Rohrabacher, Ranking Member Keating, other distinguished Members of the Committee, thank you for inviting CRS to testify here today. I will provide an overview of the so-called "Red-Dead Canal" and its potential implications for U.S. policy.

To the surprise of many outside observers, just over a month ago at the World Bank headquarters, Israel, the Hashemite Kingdom of Jordan and the Palestinian Authority (PA) signed a trilateral Memorandum of Understanding (officially referred to as the *Memorandum of Understanding on the Establishment of the Red Sea-Dead Sea First Phase, and on Water Solutions for the Region*). This MOU outlines a series of water-sharing agreements, which includes the initial phase construction of what has been informally referred to as the Red-Dead Canal.

The Red-Dead Canal is a decades-old plan to provide freshwater to water-scarce countries in the surrounding area while simultaneously restoring the Dead Sea, which has been shrinking at an alarming rate. The original "Red-Dead" concept was to pump water from the Red Sea and desalinate it for use by the participating countries. The leftover brine would then be gradually channeled down the canal 1,870 feet to the Dead Sea, helping restore the sea's receding water levels. Hydroelectricity generated from water coursing down this gradient would power the desalination plants.

Regional environmentalists have long criticized plans to restore the Dead Sea using Red Sea water. They warn that the transfusion of water from the Red Sea into the Dead Sea could have serious ecological consequences, including large scale growth of algae and formation of gypsum that would negatively impact both Dead Sea tourism and industry. Some of these environmentalists propose instead that countries should stop diverting water from the Jordan River, which feeds into the Dead Sea.

In 2005, the World Bank sponsored what became an eight-year-long feasibility study of the Red-Dead concept (formally known as the *Red Sea-Dead Sea Water Conveyance Study Program*). Almost a year ago to the day, various media outlets reported that construction firms involved in the feasibility study had declared that the project was technically "feasible," though it would come with a steep price tag costing at least $10 billion and take years to construct. Despite these challenges, in one key passage of a draft report, some authors of one of the feasibility studies wrote that there are few alternatives, noting:

"Whilst there are on-going negotiations for a redistribution of existing water resources there is apparently no Plan "B" for the provision of a badly needed new source of fresh water for either Jordan or the Palestinian Authority. It therefore

seems inevitable that if the proposed project proves to be not feasible there will be a significant delay in addressing the serious water budget deficit in the region."[1]

The Kingdom of Jordan has vigorously pursued the Red-Dead Canal concept. Jordan is one of the most water-deprived countries in the world and is constantly searching for new water resources. The civil war in neighboring Syria is exacerbating Jordan's water crisis, as over half a million refugees have fled to Jordan, increasing Jordan's population by 9% within just two years. In August 2013, the Jordanian government announced its intent to construct a scaled-down version of the canal entirely on Jordanian territory.

In terms of scale and cost, what the Jordanians have announced and agreed on with Israel and the PA is far less ambitious than the initial Red-Dead concept. In the end, the original plan lacked international financing commitments. Apparently, potential investors were unsure of what would result if brine was pumped into the Dead Sea beyond a certain level. The new plan does not include a hydroelectric component. Estimates suggest that construction of a desalination plant and pipeline under the new MOU may cost between $450 million and $1 billion. However, it is unclear who will pay for the new project – the Israeli or Jordanian governments, private companies investing in desalination, the World Bank, or other international donors. The reduced price tag presumably has a better chance of attracting international financial support.

In essence, under the new MOU, Israel, Jordan, and the Palestinian Authority have agreed to a water swap. Half of the water pumped from the Red Sea will be desalinated in a plant to be constructed in Aqaba, Jordan, over the next three years. Some of this water will then be used in southern Jordan. The rest will be sold to Israel for use in the Negev Desert. In return, Israel will sell freshwater from the Sea of Galilee to northern Jordan and sell the Palestinian Authority discounted freshwater produced by existing Israeli desalination plants on the Mediterranean. The other half of the water pumped from the Red Sea (or possibly the leftover brine from desalination) will be channeled to the Dead Sea.

In the first phase of the plan outlined in the MOU, a limited infusion of Red Sea water will be channeled through the canal into the Dead Sea, where its environmental impact will be monitored by an international consortium of scientists. According to the World Bank, "this phase is limited in scale and designed to accomplish two objectives: to provide new water to a critically water short region; and the opportunity, under scientific supervision, to better understand the consequences of mixing Red Sea and Dead Sea waters."

So what are the implications for U.S. policy and issues for Congress?

With the Obama Administration and Secretary of State John Kerry engrossed in seeking an Israeli-Palestinian final status agreement, the timing of the MOU could complement overall U.S peace brokering efforts, though the agreement was between the parties themselves with reportedly minimal U.S. involvement. According to Silvan Shalom, Israel's water and energy minister, "This is a historic agreement that realizes a dream of many years.... The agreement is of the highest diplomatic, economic, environmental and strategic importance."

For Jordan, the MOU could be considered a major diplomatic achievement. Though the current plan is a scaled down version of the original concept, the Kingdom will receive additional freshwater resources at a

[1] http://siteresources.worldbank.org/INTREDSEADEADSEA/Resources/Feasibility_Study_Report_Summary_EN.pdf

time of heightened scarcity owing to the Syrian civil war, and Jordanian workers also may benefit economically from the creation of new infrastructure projects in the kingdom.

Nevertheless, as the title of this hearing suggests, security and political challenges remain. Arab cooperative infrastructure projects with Israel could be possible targets for extremist violence, as has been the case in Egypt, where gas pipelines traversing the Sinai Peninsula to Israel and Jordan have been repeatedly sabotaged by terrorists.

Moreover, any uptick in Israeli-Palestinian conflict could jeopardize the project. Israeli opponents of the deal could argue that the Israeli government could act unilaterally to partially restore the Dead Sea without the need to send additional water resources to Israel's neighbors. Palestinians who reject cooperation with Israel could oppose moving the canal project forward without a conflict-ending agreement with Israel in place delineating the territorial and riparian rights some of them claim regarding the Dead Sea and its shore.

In the water-scarce Middle East region, water-sharing agreements in the absence of a comprehensive Israeli-Palestinian peace may be considered risky, but there are also risks associated with doing nothing, such as potential instability in a water-deprived Jordan. If living conditions in Jordan deteriorated further, one could argue that the stability of a dependable Arab partner for the United States and a reliable peace partner for Israel would be jeopardized. Over the past few years, rural southern Jordan has witnessed repeated protests coming from within tribal communities that serve as the bedrock of the monarchy. These areas require economic development if they are to remain stable.

It is possible that Congress could be asked to consider appropriating funds to support the implementation of the Red-Dead Canal. Lawmakers could pose the following questions, among others: To what extent will the project address water needs in Jordan, Israel, and the West Bank? What are the security risks and costs? Is the cost of the project on target? How will scientists monitor the environmental impact? And is the project scalable beyond the initial construction?

Thank you. I look forward to your questions.

Mr. ROHRABACHER. Ms. Moynihan.

STATEMENT OF MS. MAURA MOYNIHAN, AUTHOR & ACTIVIST

Ms. MOYNIHAN. Thank you so much. I have prepared a PowerPoint. First of all, I want to thank Congressman Rohrabacher for your kind remarks about my late father, Senator Moynihan, and the distinguished panel. It means a lot. He was, of course, a great supporter of the rights of the Tibetan people and he took me to Communist China in 1975 during the Cultural Revolution when Mao was alive after we had lived in India. So I had a unique perspective on the nature of the Chinese state. And I have always believed if you really want to understand the nature of Communist China, study Tibet. And so I will proceed with the PowerPoint.

Next. This is a NASA astronaut photograph of Tibet. One great success of Chinese propaganda is to persuade the world that Tibet is insignificant, that it is a lot smaller than it is, but it wasn't until the 20th century, the era of armed warfare, airplane, and the tank that Tibet could be conquered. Even Ghengis Khan failed.

So here is another NASA astronaut photograph of the Tibetan Plateau which is considered the third pole. It is the third largest ice mass concentration on planet Earth after the North and the South Pole. And in Asian folklore, it is known as the western treasure house because it is also one of the world's largest suppliers of minerals.

Next slide. This is a 1920s British map of independent Tibet and as you can see in the insert just how large the Tibetan Plateau is. Tibetan Plateau is a unique geomorphic entity with 46,000 glaciers comprising the world's third largest ice mass, but what is significant about this in the age of water scarcity is that it is the source of the great rivers of Asia, the Yangtze, the Yellow, the Indus, the Ganges, the Brahmaputra, the Chenab, the Sutleg, the Salween, and the Mekong which flow through 11 nations, nourishing 3 billion people from Peshawar to Beijing. They all rise in Tibet. And the preservation and the management of Tibet's glaciers and the rivers they sustain is one of the greatest challenges facing humanity in the 21st century because Asia is the most populist nation and industrial development and population growth is projected to double within the next 50 years. The combined effects of rapid development, decertification, and water scarcity has already create cycles of droughts and flood, food shortages and pandemics. But what is China doing about this? Shrinking glaciers, depleting aquifers.

I am going to skip over some of this in the interest of time, but it will be available. Asia is now facing a very serious water crisis. Let us move to—today, all of Asia's rivers except one, the Ganges, are controlled at their sources by the Chinese Communist party. There are very few international agreements that exist for sharing data and coordinating usage of these rivers. As developing nations manage water supplies as an economic commodity in the age of scarcity, water rights and laws must be appraises. However, China has refused to engage in any negotiations with the downstream riparian nations on the use of Tibet's waters.

Here is a map which shows where the major rivers come from. There is four that come from eastern Tibet and four that come from

western Tibet from Mount Kailash. Again, the Ganges originates just a few kilometers outside of control of the Chinese Communist Party.

Now, most maps will only show U-Tsang Province which is in yellow as being Tibet, but in the 1950s and into the early 1960s, the Chinese partitioned Tibet as it moved from east to west. Amdo Province, Kham Province have all been partitioned into Quinghai, into Ganze, into all these other provinces, but this is historical Tibet, so you can see how large it is. It comprises almost one third of Communist China's land mass.

As you can see, this is another important map. It shows China's grip on Asia and the occupation of Tibet gives China an enormous strategic and resource advantage. This is a map I got next from a Japanese Web site which—next slide, which shows the major ethnic regions. And of course, China learned a lesson from the collapse of the Soviet Union which my father predicted would happen through the forces of ethnicity. China is, in fact, a multi-ethnic state. The one star of the Han and the four stars of the other groups declares that it is a multi-ethnic state. And as you can see in yellow that is East Turkestan, the Uighur people; Tibet, Inner Mongolia, and Manchuria. So there is potential for ethnic conflict also again over exploitation of resources.

There are the three main faces of the Chinese Communist occupation of Tibet. Phase 1, 1960s, military invasion. And that is when the deforestation, especially of eastern Tibet began. Millions upon millions of acres of first-growth forest were destroyed at this time which had for many centuries functioned also as a barrier to prevent flooding into Southeast Asia and Southwest China. Phase 2, the death of Mao, the rise of Deng and these are details you can go into later when you have more time.

Now we are into Phase 3 which is mines, dams, and war games. In Phase 2, a lot of military roads were built across Tibet. I have traveled over Tibet several times. As my friend and colleague, Paul Berkowitz said, it is very, very remote and you can see that there is no one to stop the Chinese. There will be no NATO. There will no NATO troops. There will be no U.N. peacekeeping forces. They control the roof of the world. And now because of the population transfer of Han Chinese onto the Tibetan Plateau, and the military infrastructure that they installed, they have been able to now in Phase 3 build thousands upon thousands of hydro-electric dams and mines and military airstrips and military garrisons.

In 2000, China launched a vast development project called Xi Bu Dai Fa, opening a development of the western regions of Xizang and Tibet which together comprise half of Communist China's land mass. And to date, at least 131 people inside Tibet have self-immolated to protest Chinese Communist assaults on their land and culture.

Could we move to the next? Some images manage to reach the Internet, but Time Magazine described the self-immolation in Tibet as the most under reported story of 2013. Next phase, here is a farmer that has self-immolated. What is one of the sources of this conflict? It is not just assaults on Tibetan culture and the Buddhist faith, it is the desecration of Tibet's ancestral lands.

Go to the next. Here is a hydro dam on the Sengye Kabab which means mouth of the lion. Before these were Chinese rivers, Indian rivers, they were Tibetan rivers and there is an enormous body of folklore and mythology associated with all these rivers. Sengye Kabab means mouth of the lion. This is the Indus which flows through India and Pakistan. This is one of the many, many—okay, this is one of the most serious sources of conflict between Communist China and democratic India which is diverting the Yarlung Tsangpo, a Tibetan name, which is the Brahmaputra in the north-south water transfer program. The Chinese are building a tunnel to divert the waters of the Brahmaputra to northern China which has been suffering from extreme drought conditions for many, many years. And it is through an earthquake-prone zone. There are many complications. Chinese scientists have also said they——

Mr. ROHRABACHER. Could you please repeat where you said the water is being diverted from where to where?

Ms. MOYNIHAN. From the bend in the Brahmaputra as it flows down into northern India and into Bangladesh. That is where they are building this very, very long tunnel project. The Chinese are building tunnels so fast, mostly with Canadian engineers and I can go to the next. Here is some more of the dams. We can go into that more in detail. Here is a dam on the Mekong. There are over seven hydro-electric dams on the Mekong which is the main source of fresh water for all of Southeast Asia.

Mr. ROHRABACHER. Is that actually affecting the amount of water that flows into Southeast Asia then?

Ms. MOYNIHAN. Absolutely. Water flows on the Mekong are said to be down 40 to 50 percent and fish stocks have also declined dramatically. And I met with several Thai senators who were flown by the Chinese Government to northern Tibet to look at the dam projects of which they are very proud and the Thai senators——

Mr. ROHRABACHER. And that water is going to be used in China?

Ms. MOYNIHAN. Pardon?

Mr. ROHRABACHER. The water then, rather than flowing into the Mekong which is a very wide river, now you say the water is being diverted from there to and it is staying in China then?

Ms. MOYNIHAN. Yes. It is being used to create reservoirs that mostly serve southern Tibet and southwestern China and to create hydro-electric. And in the interest of time we will continue. Here is another power station on the Brahmaputra. We skipped ahead. That is okay.

This is a very important map created by my friend, Michael Buckley, whose Web site meltdown in Tibet, I encourage everybody to visit. This shows some of the hydro dams on the Drichu, the Zachu, and the Gyalmo Ngulchu which are the Mekong, the Salween and the Yangtze. Just look how many hydro-electric dams. There are dams that are 10 to 15 feet high and the tallest dam in the world is on the Mekong. The widest dam is at Three Gorges on the Yangtze. But you can ese this is creating a looming environmental crisis in all of South and Southeast Asia.

Next slide. China has over 300,000 dams. It is the world's number one dam builder. You can see most of the concentration of dams are in Tibet, the four rivers of eastern Tibet. Tibet was always called in the nation's folklore the western treasure house because

of the mineral, oil, gas, and salt deposits. Again, you can study these maps in detail.

Another important issue is the decline of permafrost in Tibet which will release methane gas and the shrinking glaciers are also of tremendous concern. If we go to the next, there is the map of the melting permafrost.

Next slide. This is a glacial lake created near the Rongbuk glacier on the northern side of Mount Everest in Chinese-occupied Tibet. In the last 90 years, the glacier's tail has lost 90 vertical meters in depth.

Go to the next slide. This was an exhibit at the Asia Society called "Rivers of Ice" by the famous American mountaineer David Breashears. You can see since the 1930s when the top photograph was taken how much ice mass has been lost on the north face of Everest. Here are some more images. I encourage you to go to the Asia Society Web site. You can see more.

Now why is this one of the most under reported stories in the world? China spends so much time attacking the Dalai Lama, the distinguished Nobel Peace Prize laureate who has lived for almost 55 years in exile in India. What has this done? It confused diplomats, but it subverts all discussions of the exploitation of Tibet's resources. My dad always said the Chinese have a perverse obsession with the Dalai Lama, but it works because it diverts everyone's attention to this strange obsession they have and we are not talking about what is going on in Tibet—next slide, please—because Tibet is a war zone.

In 2012, Chinese Defense Minister Liang Guanglie said,

> "In the coming 5 years, our military will push forward with preparations for military conflict in every strategic direction. We may be living in peaceful times, but we can never forget war, never send the horses south or put the bayonets and guns away."

So the Chinese are not about to engage in any negotiation, which you see are possible in the Middle East and other conflict zones, about the use of Tibet's waters. There is a map next of China's military investment and expansion. Tibet is also a strategic launching pad for drones. The Chinese have stolen drone technology from American firms and an American State Department official went to an air show in southern China and was alarmed to see all these drones. And they have installed many of these drones in six new military airports they have built in southern Tibet. They can reach India. They can reach New Delhi in 20 minutes.

The Chinese Communist Party, however, is facing a crisis of legitimacy at home and abroad. My colleague, Gordon Chang, can speak to this.

Next slide.

Mr. ROHRABACHER. We should probably move on to the next testimony.

Ms. MOYNIHAN. This is my last slide. What is the price of appeasement? For six decades the People's Republic of China has raped and pillaged Tibet without impediment or penalty, but the world will pay a high price for ignoring the Chinese Communist oc-

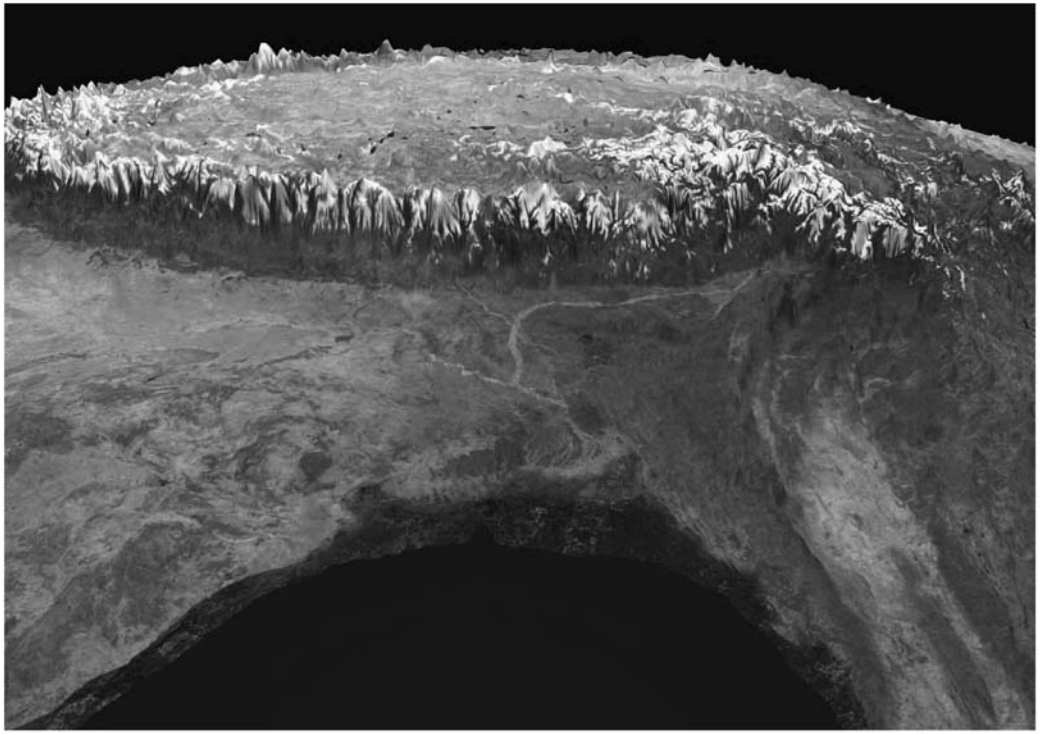
cupation of Tibet. Ghengis Khan is said to have uttered the famous phrase, "He who controls Tibet, controls the world." Thank you.

[The prepared statement of Ms. Moynihan follows:]

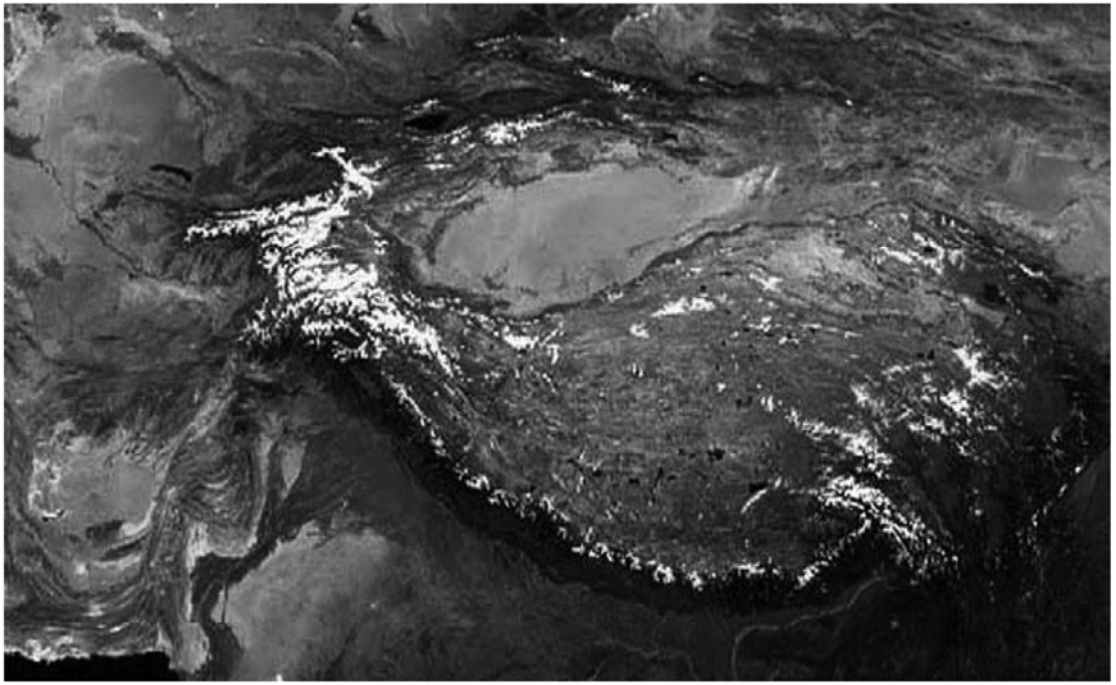
CLIMATE CHANGE IN TIBET
ASIA'S RIVERS AT RISK

Maura Moynihan 01.15.14

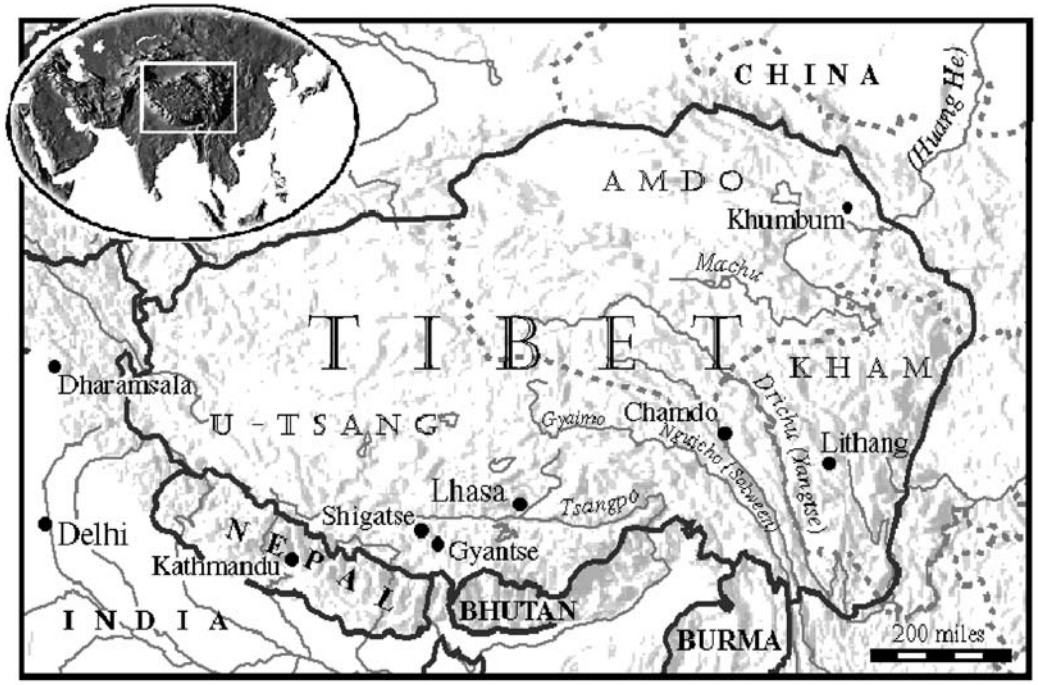
NASA Astronaut Photograph of TIBET



NASA satellite photograph of the TIBETAN PLATEAU, known in Asia folklore as the "Western Treasure House"



British map of independent Tibet in the 1920's



TIBET: PLANET EARTH'S THIRD POLE

The Tibetan Plateau is a unique geomorphic entity, its 46,000 glaciers comprise the Earth's third largest ice mass. This "Third Pole" is a vital component of the planet's ecosystem, filled with minerals, timber and above all, water; Tibet is the fount of the Yangtze, Yellow, Indus, Ganges, Brahmaputra, Chenab, Sutlej, Salween and Mekong, which flow through 11 nations, nourishing three billion people from Peshawar to Beijing.

The preservation and management of Tibet's glaciers and the rivers they sustain is one of the greatest challenges facing humanity in the 21st century. Tibet's waters flow through eleven countries, where population growth and industrial development is projected to double within 50 years. The combined effects of rapid development, desertification and water scarcity has already created extreme cycles of droughts and floods, food shortages and pandemics.

SHRINKING GLACIERS, DEPLETED AQUIFERS

- In 2009 the United Nations Inter-Governmental Panel on Climate Change reported that the glaciers on the Tibetan Plateau, the source of fresh water for a fifth of the world's population, are receeding at an alarming rate. Temperatures in Tibetan are rising 7 times as faster than in China. Scientists predict that most Tibetan glaciers could vanish by 2035 if present levels of carbon gas emissions are not reduced. Carbon emissions must be cut by 80% by 2030 to preserve the glaciers, of Tibet, the source of water for, China, India, Bangladesh, Pakistan, Burma, Thailand, Vietnam and Laos.
-
- Asia is now facing a shrinkage of river-based irrigation water supplies, which will disrupts grain and rice harvests. Overpumping is swiftly depleting underground water resources in India and China. Water tables are rapidly falling in the North China Plain, East Asia's principal grain-producing region. In India, wells are going dry in almost every state.

- The United States international climate negotiator Todd Stern stated "the science is clear, and the threat is real. The facts on the ground are outstripping the worst case scenarios. The costs of inaction-or inadequate actions-are unacceptable."

Industrial Development in an Age of Scarcity

70% of the world's irrigated farmland is in Asia. China and India, the world's most populous nations and largest grain producers, have millions of new irrigation projects that are rapidly depleting aquifers. Satellite images released in August 2009 by the National Aerospace and Space Administration (NASA) of the United States show massive depletion of groundwater storage in Rajasthan, Punjab and Haryana during the 2002-2008. Indian government data shows that major reservoirs have shrunk by 70% since 2000.

Deglaciation on the Tibetan Plateau, combined with depletion of underground water resources, could create "permanent famine conditions", as described by the environmental scientist Lester Brown in his 1995 Worldwatch Institute report "Who Will Feed China?"

China's growth has pushed rivers system to a dangerous tipping point. Two thirds of all cites in China are short of water, agricultural runoff from chemical fertilizers, industrial effluent and urban waste have poisoned reservoirs. China's Environmental Protection Administration reports that that environmental protests are rising by 50% a year. Since 1949, two-thirds of the Yangtze Valley lakes have disappeared, today the total surface area of lakes in the middle and lower Yangtze Valley has shrunk from 18,000 square kilometers to 7,000 in 50 years.

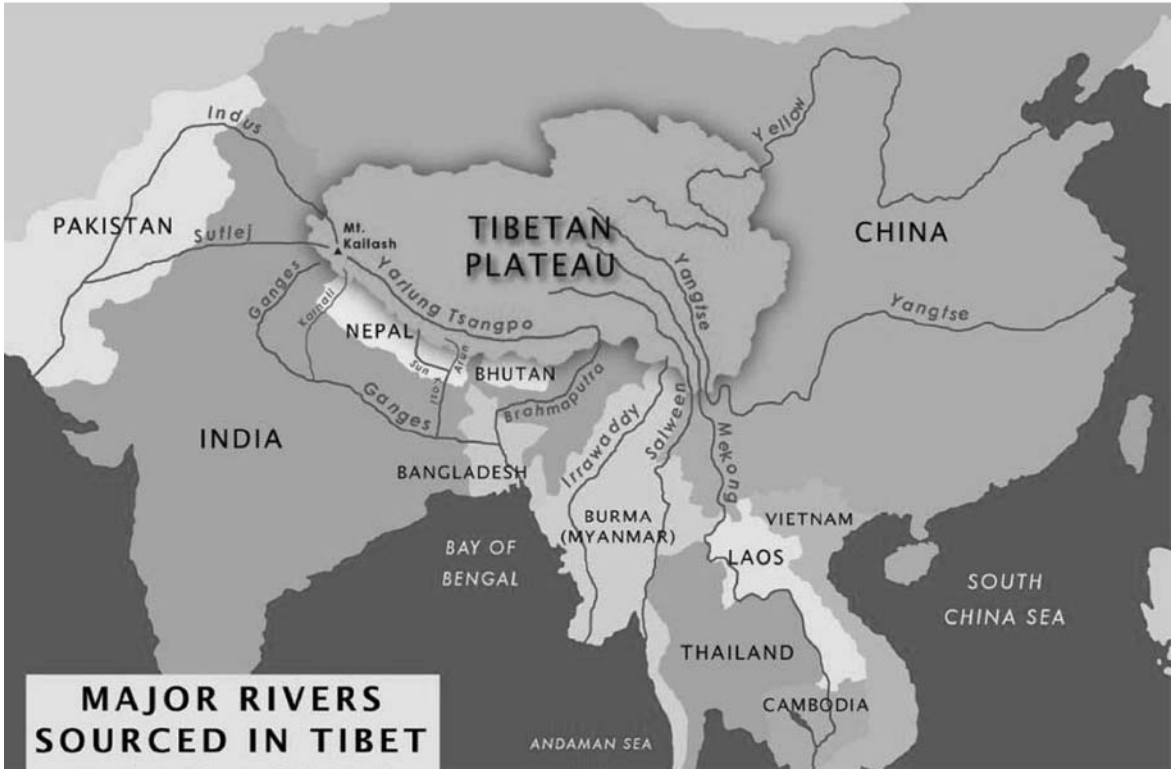
Today, all but one Asia's major rivers – the Ganges – are controlled at their sources by the Chinese Communist Party

- In a mere quarter century the People's Republic of China has risen from poverty and isolation into the 21st century's emergent superpower. China's rise as an industrial and military super power has dramatically altered the global balance of power in the quest for what remains of the planet's resources. The Chinese government dismisses concerns of its own scientists and those of neighboring states, alarmed by a sudden decline in water levels and fish stocks, caused by hydro dams. China has increased militarization of the Tibetan Plateau and strictly controls journalists, scientists and international observers who seek to research conditions in Tibet.

- Few international agreements exist for sharing data and coordinating usage of these rivers. As developing nations manage water supplies as economic commodities in an age of scarcity, water rights and laws must be reappraised in the context of the climate crisis. The effects of receding glaciers and rivers choked by hydro dams will be felt well beyond the borders of the Tibetan Plateau, with profound impacts over a wide area in Asia and great risks of increased poverty, reduced trade and economic turmoil. In the 1990's China refused to sign the UN treaty on trans-boundary rivers.

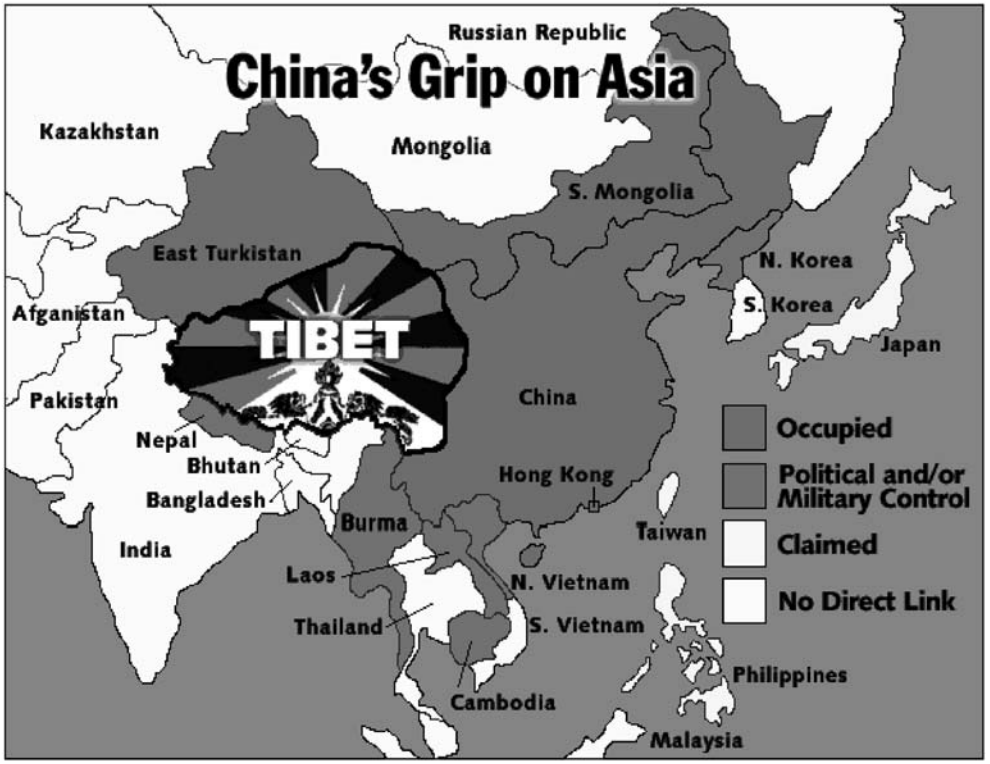
- Since Chairman Mao invaded Tibet in 1951, China has administered a huge military infrastructure across the Tibetan Plateau, which gives China a continuous border with Thailand, Burma, Bhutan, India, Nepal and Pakistan, and is now filled with military airfields and PLA battalions. **In the coming age of "water wars", China has a firm hand on the water tower of Asia**.

TIBET: ASIA'S WATER TOWER, Headwaters of Asia's Great Rivers



Chinese Communist Conquest and Partition of TIBET

The Strategic and Resource advantage of owning TIBET



MAO'S ANNEXATION of TIBET, EAST TURKESTAN and INNER MONGOLIA doubled the size of the CHINESE COMMUNIST EMPIRE. Chinese officials are intensifying military assaults on minorities who resist Sinification, citing ETHNICITY as a a large factor in the collapse of the former Soviet Union.

上記四地域の総面積	5,849,088	60.9%

THE THREE PHASES of the CHINESE COMMUNIST OCCUPATION of TIBET

PHASE 1: 1950's – 1960's: MILITARY INVASION

From 1951-56, Khampa Warriors fight back against Chinese aggression. THE PLA sends reinforcements, thousands of survivors from Kham and Amdo are driven into Utsang.

In 1957 HHDL and Panchen Rinpoche go to Varanasi for Buddha Jayanti: HHDL asks Nehru for refuge to expose Chinese atrocities in Tibet. Cho EnLai tells Nehru to send HHDL back to Tibet. Two years later, the Chushi Gandruk delivers HHDL to Indian custody. Nehru's Hindi-Chini Bhai-Bhai policy, which gave China control of Tibet, becomes one of the great blunders of the 20th century.

1959; HHDL escapes to India. PLA troops slaughter Tibetan civilians and commence looting and razing of over 6,000 monasteries. The PLA advances to the borders of India, Bhutan, Sikkim, Nepal and Ladhak.

- **In 1962 China invades India from the Tibetan Plateau** and occupies large swaths of Indian territory, India is defeated, China commences its military consolidation the plateau, unhindered.
- **1963:** Tibet is sealed behind the Bamboo Curtain and caught in the catastrophe of the Great Leap Forward, wherein 60-80 million people die under Mao's adoption of the Soviet model of collectivized farming. 1.2 Tibetans, likely more, are killed through armed conflict and famine. **NO news of conditions inside China Tibet reaches international governments or media. US launches the Vietnam War to contain Chinese expansionism, while millions in China are starving to death.**
- Chinese Military Engineers build roads across and install military bases and armed encampments across the Tibetan Plateau. Millions of acres of virgin forest is clear-cut and shipped to the mainland.

CHINA IN TIBET: Phase 2: 1970-1980's: The DEATH of MAO and the rise of DENG

- ORPHANS OF THE COLD WAR: The Tibetan people are imprisoned behind the Bamboo Curtain throughout the Cultural Revolution, which is extremely vicious in Tibet.
- 1976 Mao Zedong dies. 1981 Deng Xiaoping comes to power. Deng launches the policy of "Reform and Opening Up". China builds the Friendship Highway linking Lhasa and Kathmandu.
- 1980; Yu Habong visits Tibet and writes his famous White Paper condemning China's treatment of the Tibetan people. The Deng regime relaxes restrictions on Tibetan religion and culture. In 1981, China issues the first tourist visas to Tibet for western travelers.
- MILITARY ROADS built by the PLA across Tibet in Phase 1 of the occupation, allow massive population transfer of Han Chinese onto the Tibetan Plateau.
- The roads also facilitate a 2nd exodus of refugees to escape from Tibet: since the 1980's over 20,000 people have escaped from Tibet.
- 1987: Anti-Chinese demonstrations break out in Lhasa. For the first time since the Chinese invasion, tourists capture images of extreme military repression.
- *These images reach the international press; China's Tibet is at last EXPOSED – and CHINA DECLARES MARTIAL LAW*

CHINA IN TIBET: Phase 3: 1990's 2000's MINES, DAMS and WAR GAMES

- **1988-1989; MORE demonstrations in Lhasa are captured by tourist cameras**. China starts restricting western tourists by periodically banning western tourists.
- **1989:** The Berlin Wall goes down, but the Tiananmen Square Massacre follows: The death of Hu Yabong summons millions of Chinese mourners into the streets of Beijing. Gorbachev arrives in Beijing, students from Beijing University launch a hunger strike in support of democratic reforms in China's government. After a month-long stand-off, Deng orders PLA troops into the square to crush the protestors. Thousands of unarmed Chinese citizens are slaughtered.
- **In response to the Tiananmen Square Massacre, HH Dalai Lama is awarded the 1989 Noble Peace Prize.** The true history of the China's rape and pillage of Tibet is exposed. ***BUT as HHDLs' start rises, China cracks down harder on the people of Tibet.***
- **1995 : Despite pressure from the US congress and rights groups, US President Bill Clinton grants China MFN: Most Favored Nation Trading Status, removing all trade sanctions imposed on the PRC after The Tiananmen Square Massacre**. China implements the Strike Hard" Policy: banning all images of HH Dalai Lama, enforcing Communist Re-education at monasteries, aggressive suppression of Tibetan ethnic identity.

CHINA IN TIBET: Phase 3: 1990's 2000's Mines, Dams and War Games *continued...*

- **2000: China is grnated entry into the World Trade Organization and launches XI BU DAI FA:** "The Opening Up of the Western Regions" a vast industrial development plan, to exploit and extract Tibet's vast natural resources, facilitated by rail and roadway expansion.
- **2001: 9/11 strikes New York City**. China fades from international attention and scrutiny, and accelerates exploitation of Tibet's natural resources. Chinese engineers launch construction of huge mining operations and hydro dams on Tibet's rivers, which flow into South and Southeast Asia.
- **2006: The Qinghai–Xizang railway OPENS in LHASA, bringing millions of tourists into Tibet.** The railroad also facilitates the transport of minerals, stone and lumber from Tibet, and brings over 250,000 Chinese engineers into Tibet.
- **2010: China announces that it has built 6 military airfields in Utsang, and debuts a new fleet of drone aircraft,** with technology the US claims has been stolen by Chinese spies. A 2012 US Dept. of Defense report to Congress on China's military capabilities notes Beijing's push to develop longer-range unmanned aircraft, including armed drones, "expands China's options for long-range reconnaissance and strike."

In 2000 China launched a vast development project entitled "Xi bu dai fa", the "Opening and development of the Western Regions" of Xinjiang and Tibet, which together comprise half of China's land mass.

POPULATION TRANSTER: A massive influx of Chinese settlers, urbanization and forced relocation of nomads swiftly followed. The Xizang railway, which opened in 2006, transports Tibet's vast supplies of minerals, stone and lumber to the mainland and brings in a flood of Chinese engineers and laborers who have built at least 160 hydro dams across Tibet and have plans for hundreds more.

The Chinese government is aggressively re-settling Tibetan nomads and pastoralists into concrete housing complexes. Xinhua, the Chinese state run media, claims the resettlement is necessary to protect the source area of key Chinese rivers in north-west China's Qinghai province. Dr. Andreas Schild, the Director General of the International Centre for Integrated Mountain Development said; "Mountains without mountain people will be not sustainable."

MINES and DAMS: Chinese engineers now operate multiple dams and mines all across Tibet, polluting the rivers at their source – you can find images on Google Earth and on Michael Buckley's comprehensive website www.meltdownintibet.com

The Chinese mainland is also imperiled: in April 2013, Yangtze River water flows were at their lowest level in record. Dams and industrial waste have caused the Yellow River to dry up before it reaches the sea. Large swaths of northern China have had no snow or rain since 2008. Nearly half of China's wheat crop, covering of 9.5 million hectares, was afflicted by drought. In 2008 China's State Council admitted: " By 2030, China will have exploited all its available water supplies to the limit".

To date, at least 131 people inside Tibet have self-immolated to protest of Chinese Communist assaults on Tibetan religion and culture and the desecration of Tibet's ancestral lands.

There is another potent source of this explosion of Tibetan outrage, which receives negligible international coverage; the covert history of China's rape and pillage of Tibet's ancestral lands and waters.

The elemental facts about Tibet's size, wealth of natural resources, and its strategic location on the Eurasian Continent, are not widely understood, but satellite images, maps and environmental studies of the Tibetan Plateau reveal the enormous resource and strategic advantage gained by its capture. and explains why China refuses to enter into dialogue with the Dalai Lama, or share information with the nations of South and Southeast Asia about the exploitation of Tibet's lands and waters.

CHINA'S OCCUPATION of TIBET has created a looming environmental catastrophe for the nations of South and Southeast Asia, but China refuses to discuss its development plans with neighboring states.

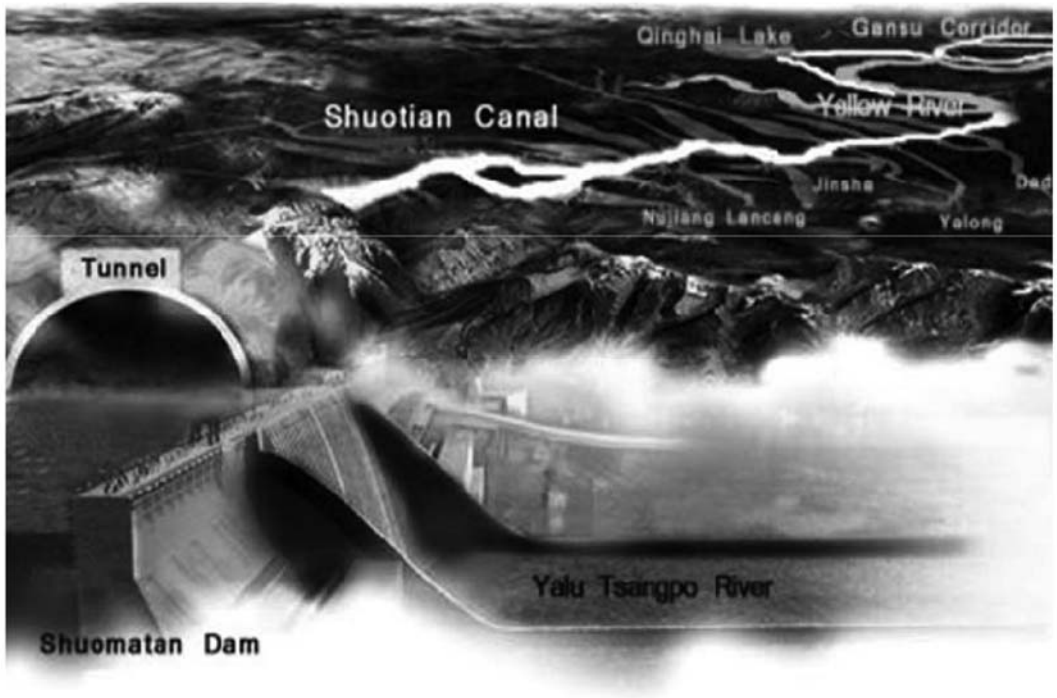
TIME MAGAZINE states that despite the wave of self-immolations in Tibet is the "Most under-reported story of 2013

Dorjee, an 18 year-old Tibetan , self-immolated in Amdo, Tibet on March 5th, 2013, to protest Chinese rule.

Sonam Dhargyal, a 44-year-old farmer, shouted for the return of His Holiness the Dalai Lama to Tibet before setting himself on fire in Rongbo in the morning of 17 March, 2012

CHINESE Hydro-dam on the Sengye Kabab....the INDUS

DIVERTING the YARLUNG SANGPO, the BRAHMAPUTRA



Xiaowan Dam, Mekong River, Yunnan(Kham)
Capacity 4,200 MW, wall-height: 292m

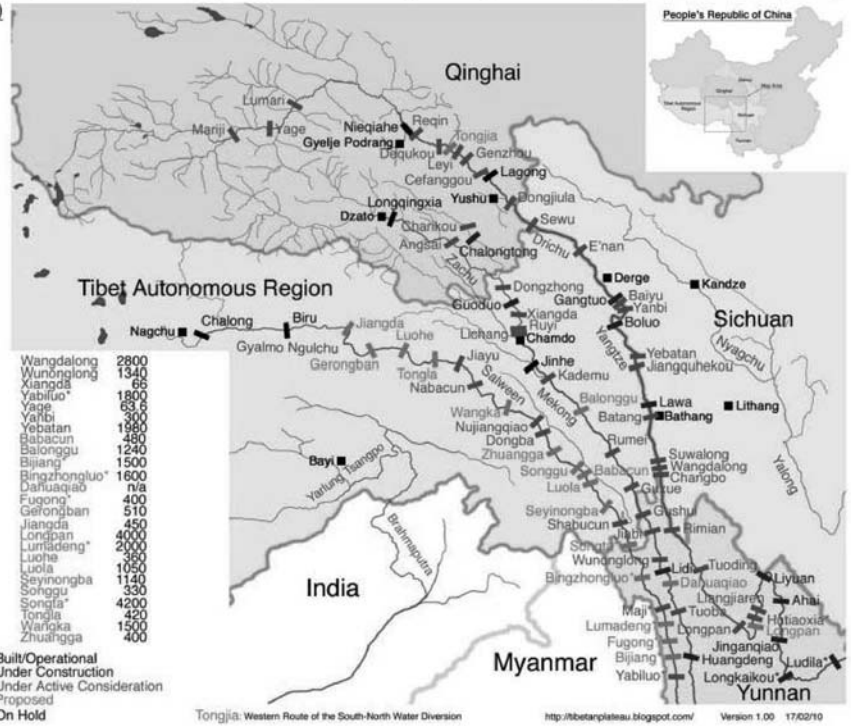
Yamdrok Tso Powerstation on Yarlung Tsangpo, Central Tibet

Manwan Dam, Mekong River, Yunnan
Capacity 1,750 MW, wall-height 132m

HYDRO-DAMS in on the Drichu, Dzachu and Gyalmo Nyulchu…

Drichu (Yangtze), Zachu (Mekong) and Gyalmo Ngulchu (Salween) Hydropower Projects

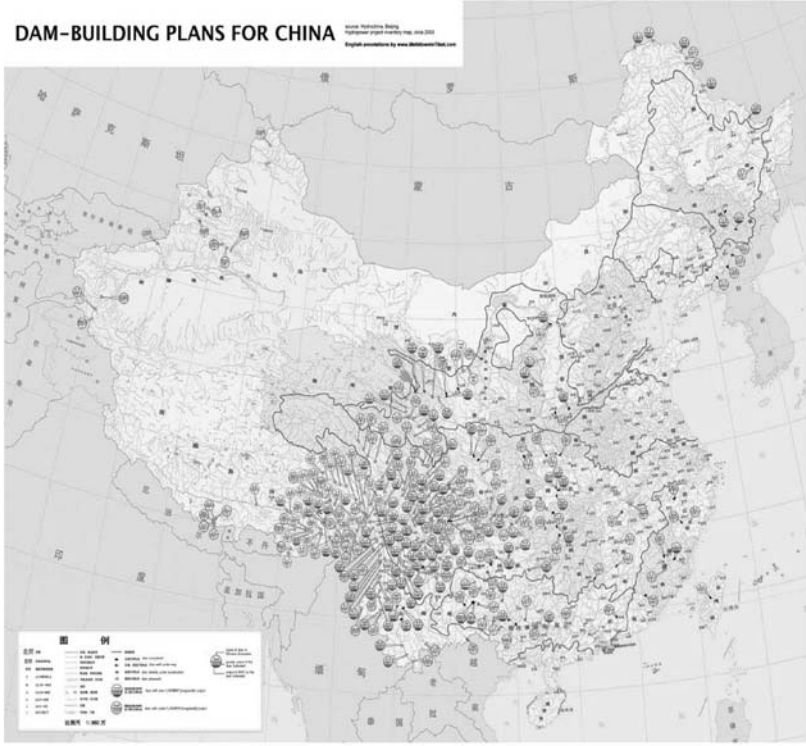
Name	Size(MW)
Biru	n/a
Chalong	10.8
Jinhe	60
Lagong	6
Longqingxia	2.52
Nieqiahe	n/a
Ahai	2160
Boluo	960
Chalongtong	10.5
Gangtuo	1100
Guoduo	150
Huangdeng	1600
Jinganqiao	465
Lawa	1650
Lidi	300
Liyuan	2400
Longkaikou*	1800
Ludila*	2280
Angsai	n/a
Baiyu	1500
Batang	740
Cefanggou	158
Changbo	1060
Charikou	36
Dequkou	276.5
Dongba	510
Dongjiula	400
Dongzhong	108
E'nan	900
Genzhou	612.5
Gushui	2200
Guxue	2800
Hutiaoxia*	4200
Jiabi	1200
Jiayu	420
Jiangquhekou	3200
Kademu	1320
Leyi	112.8
Liangjiaren	4000
Lichang	72
Longpan	2000
Lumari	75
Maji	4200
Manji	10.4
Nabacun	n/a
Nujiangqiao	800
Reqin	200
Rimian	3720
Rumei	3000
Ruyi	114
Sewu	560
Shabucun	n/a
Suwalong	1160
Tuoba	900
Tuoding	2500
Wangdalong	2800
Wunonglong	1340
Xiangda	66
Yabiluo*	1800
Yage	63.6
Yanbi	300
Yebatan	1980
Babacun	480
Balonggu	1240
Bijiang*	1500
Bingzhongluo*	1600
Dafuaqiao	n/a
Fugong*	400
Gelongban	510
Jiangda	450
Longpan	4000
Lumadeng*	2000
Luohe	360
Luola	1050
Seyinongba	1140
Songgu	330
Songta*	4200
Tongla	420
Wangka	1500
Zhuangga	400



Province
Country
City
River/Lake

Built/Operational
Under Construction
Under Active Consideration
Proposed
** On Hold

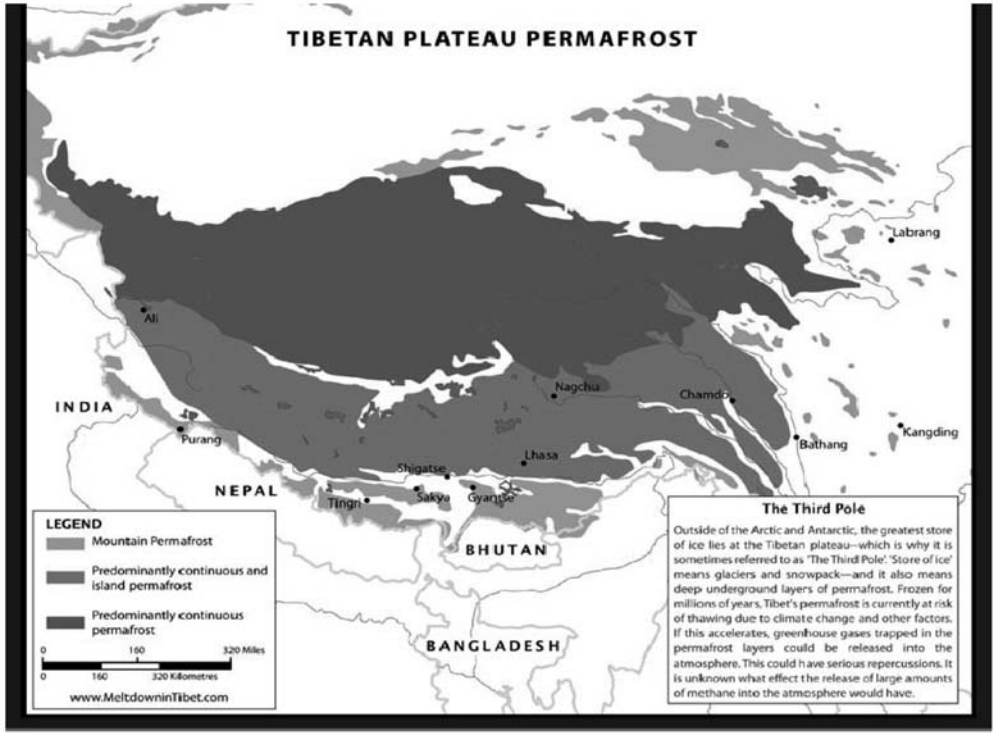
CHINA has over 300,000 dams, the world #1 dam builder...



TIBET'S UNTAPPED NATURAL RESOURCES

Mineral, Oil, Gas, and Salt Lake Deposits of Tibet

Map of permafrost in TIBET



NEW lakes caused by glacial melt near Rongbuk Glacier, north side of Mt. Everest, Tibet. In the last 90 years the glacier's tail has lost over 90 vertical meters in depth

TIBET'S MELTING GLACIERS: EVEREST over 50 YEARS, from David Breashears' exhibition "River of Ice" at the Asia Society

More images from “Rivers of Ice”

CHINA'S ATTACKS on the DALAI LAMA SUBVERT DISCUSSION of the EXPLOITATION of TIBET'S RESOUCRES

China has succeeded in its mission to isolate and discredit the Dalai Lama by punishing heads of state who meet with the Tibetan leader and threatening any institution that invites him to speak, thereby stifling any discussion of China's oppressive and destructive governance of Tibet.

A study from the University of Gottingen in Germany of countries whose top leadership met with the Dalai Lama, showed that they incurred an average 8.1 percent loss in exports to China in the two years following the meeting. Called the "Dalai Lama Effect," the found the negative impact on exports began when Hu Jintao took office in 2002.

China's obsessive demonization of the Dalai Lama, the distinguished Nobel Peace Prize Laureate who has lived in exile in India since 1959, has succeeded in subverting all rational and increasingly urgent discussion of China's exploitation of Tibet's resources, and how Chinese mining and hydro dams projects across Tibet have created a looming environmental catastrophe in Asia, the world's most populous continent.

Despite irrefutable evidence of the dangers of over-exploiting Tibet's water resources, the Chinese government will not modify or downscale plans for dams, tunnels, railroads and highways across the Tibetan plateau. Of all the countries which depend of Tibet's waters, the People's Republic of China alone, can finance any project it chooses without recourse to international lenders.

TIBET IS A WAR ZONE

In 2012, Chinese Defense Minister Liang Guanglie stated: "In the coming five years, our military will push forward preparations for military conflict in every strategic direction...We may be living in peaceful times, but we can never forget war, never send the horses south or put the bayonets and guns away."

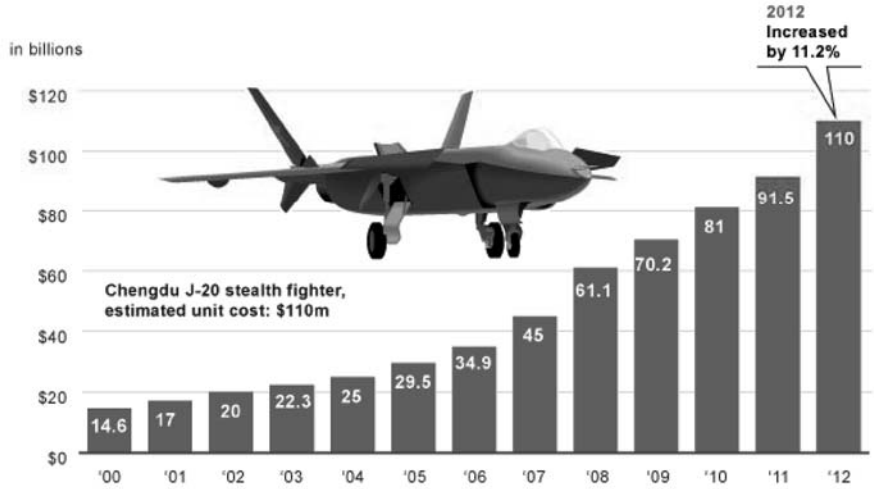
In 2009, computer analyst Greg Walton examined computers in the Dalai Lama's Private Office in Dharamshala and uncovered "**Ghost Net**", a massive Chinese cyber-espionage hacking system which penetrated 103 countries, as far as the personal laptop of US Defense Secretary Robert Gates. **Sec. of Defense Robert Gates stated that "Chinese cyber espionage intrusions into US defense networks is nothing less than an act of war".**

Tourists who have visited Tibet provide witness: A physician from Boston who went to Tibet in Nov. 2013, observed; "The Tibetan people appeared totally dominated by a chilling degree of militarization and repression. I did not see any ways or means by which the Tibetans could fight back against such overwhelming force. I could see people wanted to talk to me but were too afraid...**I have never seen such a ruthless, cruel and effective police state in my life."**

CHINESE MILITARY INVESTMENT and EXPANSION

China's military budget

China will boost military spending by 11.2 percent this year. The increase will bring official outlays on the People's Liberation Army (PLA) to 670.3 billion yuan ($110 billion) for 2012, after a 12.7 percent increase last year and a near-unbroken string of double-digit rises across two decades. READ MORE



Source: Chinese government

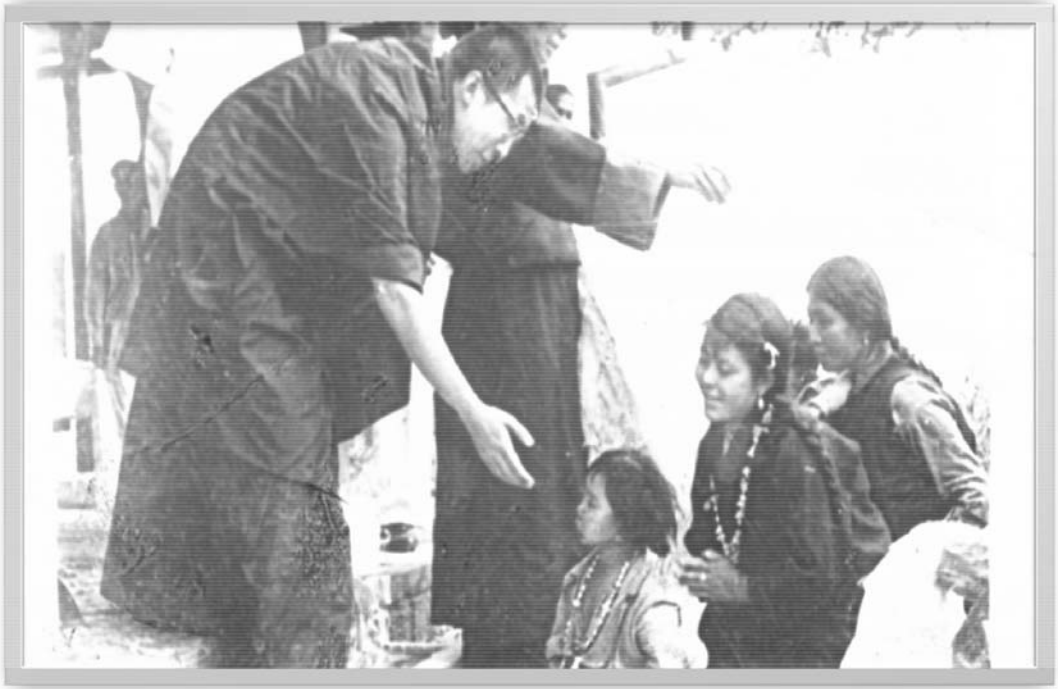
REUTERS

The Chinese Communist leadership is facing a crisis of legitimacy, at home and abroad

- **The Chinese economy is in decline .** For decades CCP propaganda has been highly effective in promoting China as the new military and economic super power of the 21st century, but financial analysts are concerned about bad debt, a real estate bubble and declining exports.
- **There are violent uprisings in China EVERY DAY**: in 2010 over 100,000 "incidents" occurred. The CCP propaganda machine is weakening. Chinese netizens are subverting Xinhua and censorship: images of police brutality are now widely circulated.
- **China's "Peaceful Rise" is now seen as a threat to global stability**. **China has installed a formidable military-industrial infrastructure across the high ground of the Tibetan Plateau, with military roads, airfields, army bases, dams, mines bordering Burma, Bhutan, Nepal, India, Pakistan.** At the ASEAN Conference in Bali in Nov. 2011, representatives from Vietnam and Cambodia vehemently criticized Chinese aggression in Southeast Asia and asked for American protection from the "Chinese Threat."

- **In 2013 Chinese Troops made over 200 incursions into Indian territory from TIBET. Chinese soldiers planted the Chinese flag in three regions of Bhutan that border Tibet, and are now claiming sovereignty over "Southern Tibet", all Tibetan cultural zones in India, Nepal and Bhutan.**

The man CHINA FEARS MOST…HH Dalai Lama with Tibetan Refugees in Dharamshala, India, 1961



THE PRICE OF APPEASEMENT

For six decades the People's Republic of China has raped and pillaged Tibet without impediment or penalty

But the world will pay a high price for IGNORING the Chinese Communist occupation of Tibet….So goes the old saying:

HE WHO CONTROLS TIBET CONTROLS THE WORLD

Mr. ROHRABACHER. Thank you very much.

Mr. Chang.

STATEMENT OF MR. GORDON G. CHANG, AUTHOR

Mr. CHANG. Chairman Rohrabacher, Ranking Member Keating, and distinguished members of the committee, thank you very much for the opportunity to appear before you today. My testimony will focus on how in a very unexpected way China's water problems are affecting the United States.

The People's Republic of China, over the course of decades, has mismanaged and misused its lakes, rivers, and streams and the resulting fresh water crisis has, in the words of senior Beijing leaders created doubt about the future of the Chinese state. As a former Chinese water minister has recently said, "To fight for every drop of water or die, that is the challenge for China."

Beijing officials, unfortunately, have been fighting their neighbors over water. As Chairman Rohrabacher noted in his opening statement, China is the source of river water for more countries than any other nation, controlling the headwaters needed by almost half of the world's population.

People's Republic of China has 14 land neighbors, 13 of them coriparians and as Ranking Member Keating has noted there are hundreds of water-sharing agreements in the world. China, however, is not a party to any of them, even refusing to begin negotiations. The Chinese have commandeered Asia's great rivers by building on average one large dam a day since 1949. And now Beijing is seeking to harness the river resources of a neighbor, Burma, for its own benefit.

Since 2009, China has been building the Myitsone Dam, located at the headwaters of the Irrawadday River. It will be the first dam on that vital waterway, part of a seven-dam cascade, a $20 billion undertaking.

Myitsone has been called China's attempt to export the Three Gorges Dam, and it is more unpopular in Burma than that massive project is in China. The country's former military government negotiated the deal with China without public consultation. So therefore, those who dislike the junta and that was the overwhelming majority of people in Burma, dislike the dam. The project has also become a symbol of China's exploitation of Burma. Now the Burmese junta renamed the country Myanmar. In a power-starved nation, about 90 percent of the electricity produced by the dam will be exported to southern China.

Now the Burmese believe that Myitsone is unpopular also for other reasons. It will displace tens of thousands of the ethnic Kachin minority. It will flood historical and cultural sites, including what is believed to be the birthplace of Burma. It will destroy one of the world's important biodiversity hot spots. It will rob the river of crucial sediments that therefore threaten the livelihood of downstream rice farms and it will sit near a major fault line. It would be hard to design a project that would be more unpopular. So it is no surprise that in September 2011, President Thein Sein suspended work on the dam.

So why do we care? Well, within days, Beijing found somebody to blame. And that somebody is the United States. People's Daily,

which is the Communist Party's flagship publication started the attack by suggesting that the United States and other Western countries had pressured the Burmese Government to suspend work on the dam. Beijing has a general view this anti-China sentiment that was bubbling up in Burma not as something that was indigenous, but was something that was a conspiracy in the West between our governments and certainly between pro-Western NGOs and we were all doing this, China believes, to undercut Beijing's national interests.

Unfortunately, the Chinese have not changed their views since then.

> "Following its opening up, Myanmar has become a main battleground for the world's major powers, and the Myitsone project has become a bargaining chip in the resulting geopolitical struggle."

This came from People's Daily on September 2, 2013 of last year.

> "Some analyses point out that Western countries, like the United States and Japan, will first have to ruin the Sino-Myanmar relationship in order to expand their influence in Myanmar and demonizing the Myitsone project is an opening."

The Chinese have still not figured out that they are operating in a new context in Burma. Instead, they see the U.S. lurking in the shadows causing it misery. Now, of course, the Myitsone project, despite what People's Daily tries to say, is not an American issue, but what is important for us though is that Beijing's first instinct was to blame the United States for its own failings in Burma. That certainly affects us and it is a warning that as long as the Communist Party rules China, it may not be possible to have good relations with the Chinese people.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. Chang follows:]

Statement of
Gordon G. Chang

Subcommittee on Europe, Eurasia, and Emerging Threats
of the
House Committee on Foreign Affairs

Water as a Geopolitical Threat
January 16, 2014

Chairman Rohrabacher, Ranking Member Keating, and distinguished Members of the Committee:

It is a privilege for me to appear before you today, and I thank you for this opportunity.

My name is Gordon Guthrie Chang. I am a writer and live in Bedminster, New Jersey. I worked as a lawyer in Hong Kong from 1981-1991 and Shanghai from 1996-2001. Between these two periods, I frequently traveled to Asia from California. I regularly go there now.

I am the author of *The Coming Collapse of China* (Random House, 2001) and *Nuclear Showdown: North Korea Takes On the World* (Random House, 2006). I write regularly about China's relations with its neighbors and the United States.

China's Water Crisis

The People's Republic of China, over the course of decades, has grossly misused and mismanaged its lakes, rivers, and streams. The resulting freshwater crisis, in the words of senior Beijing leaders, even threatens the existence of the Chinese state. As Wang Shucheng, a former water minister, tells us, "To fight for every drop of water or die: that is the challenge facing China."

Beijing officials, unfortunately, act as if they believe their overblown rhetoric and are now fighting their neighbors for water. China, the world's "hydro-hegemon," is the source of river water to more countries than any other nation, controlling the headwaters

needed by almost half of the world's population, in Central, South, and Southeast Asia as well as Russia.

The People's Republic has 14 land neighbors—13 of them co-riparians—but is a party to no water-sharing treaties, refusing to even begin negotiations on water-sharing with other capitals. "No other country has ever managed to assume such unchallenged riparian preeminence on a continent by controlling the headwaters of multiple international rivers and manipulating their cross-border flows," notes Brahma Chellaney in *Water, Peace, and War: Confronting the Global Water Crisis*. As the noted water expert reports, the Chinese have commandeered Asia's great rivers by completing on average one large dam a day since 1949.

Until recently, those dams were located inside China's borders. Now, however, Beijing is seeking to harness the water resources of one of its neighbors, Burma, for its own benefit. As it does so, it is encountering local resistance there, and as it encounters local resistance it is blaming the United States for its deteriorating relationships with that once pliant neighbor. The tendency of Chinese leaders to hold us responsible for their own failures can only worsen our ties with them in the years ahead.

The Myitsone Dam

In 2009, a Sino-Burmese consortium controlled by China Power Investment, a Chinese state-owned entity, began work on the Myitsone Dam, located at the headwaters of the Irrawaddy River. It will be the first dam on that vital waterway and a part of a seven-dam cascade, a $20 billion undertaking.

Myitsone has been called Beijing's attempt to export the Three Gorges Dam, and it is even more unpopular in Burma than that massive project is in China. The Burmese version has been called "a showcase" for the country's former military government, which signed the deal with China without public consultation. Therefore, those who disliked the junta—an overwhelming majority in the country—came out against the dam. And to make matters worse for Myitsone's Beijing backers, the project became a symbol of Chinese exploitation of Burma, which the junta renamed Myanmar. It does not help that, in a power-starved nation, 90% of the dam's electricity will be exported to southern China.

The Burmese have condemned Myitsone for other reasons as well. The dam is located in Kachin State, a minority area, and the Kachins have been uniformly against it, not just the tens of thousands who have been or will be forced to move to avoid the waters. The dam will flood historical and cultural sites, including what is considered to be the birthplace of the country. The area that will be lost has been called one of the world's "top biodiversity hotspots and a global conservation priority." Downstream rice farmers expect that Myitsone will rob the river of crucial sediments. The dam is about 60 miles from a major fault line, and if it failed, it would flood Myikyina, the largest city in Kachin State. Says Ah Nan of Burma Rivers Network, an environmental group, "People

across the country have already clearly spoken, and said that the Myitsone dam is unacceptable."

It would be hard to design a project less popular than Myitsone, and so it should be no surprise that on September 30, 2011 President Thein Sein, deferring to "the aspiration and wishes of the people," issued a statement in Parliament suspending work on the dam.

Beijing's Reaction

Burmese across the country were relieved at news of the suspension, but official China was angry. Within days Beijing found someone to blame: the United States. *People's Daily*, the Communist Party's flagship publication, started the attack by suggesting that the U.S. and other Western nations pressured the Burmese government to stop work on Myitsone. As Yun Sun, now at the Stimson Center, wrote as early as the month following the suspension, "China has viewed anti-China sentiment bubbling in Myanmar as a conspiracy stirred up by the West and pro-Western nongovernmental organizations to undercut China's national interests."

Unfortunately, the Chinese government has not changed its views since then. "Following its opening up, Myanmar has become a main battleground for the world's major powers, and the Myitsone project has become a bargaining chip in the resulting geopolitical struggle," stated *People's Daily* on September 2, 2013 in an article entitled "China's Enterprises Demonized on the Myanmar Hydroelectric Project, Sudden Suspension Causing Great Loss." "Some analyses point out that Western countries, like the United States and Japan, will first have to ruin the Sino-Myanmar relationship in order to expand their influence in Myanmar and demonizing the Myitsone project is an opening. Wikileaks disclosed that the United States has provided assistance to groups that oppose the Myitsone dam project."

Similarly, the website of China Power Investment, the dominate partner in the project, now carries an August 14, 2013 piece from *Ta Kung Pao*, the Hong Kong newspaper that often acts as a mouthpiece for Beijing. The paper, reinforcing the Communist Party's conspiratorial narrative, suggests that the Burmese government suspended Myitsone to curry favor with the West.

The Chinese, says Kelley Currie of Project 2049 Institute, "still haven't really figured out that they are operating in a new context" in Burma. They see the U.S. lurking in the shadows and believe it is determined to undermine their plans. "The Chinese," she points out, "are still holding on to this idea that we're stirring up trouble and causing problems for them and if they can just get to the right people and throw money at the problem they can fix it."

The perceptions of Beijing officials show how much they misperceive what is happening just next door to them. There has indeed been a change in context, they have failed to take into account "local sensitivities" in Burma, and they have fixated on the United

States as if Washington was the cause of their misery. Beijing's views show how out of touch authoritarian systems can be.

America's Hopes for China

For more than four decades the United States has sought to engage the Chinese and bring them into the international system, yet after all this time we are still incorrectly perceived to be an enemy. The Myitsone dam episode, therefore, suggests that America's fundamental approach to the People's Republic may be failing and that it may not be possible for authoritarian states to maintain good relationships with democratizing societies, like Burma's.

Of course, the Myitsone dam, despite how hard *People's Daily* tries to portray it, is not an American issue. What is important for us, however, is that Beijing's first instinct was to blame the United States for its own failings in Burma. That certainly affects us and is a warning sign that we may never have good relations with China as long as the Communist Party rules.

In short, the Myitsone fiasco suggests that China's problem is not just water; it is also its authoritarianism.

Mr. ROHRABACHER. Thank you very much.
Mr. Goodtree.

STATEMENT OF MR. DAVID GOODTREE, CO–CHAIR AND FOUNDER, SYMPOSIUM ON WATER INNOVATION

Mr. GOODTREE. Chairman Rohrabacher, Ranking Member Keating, and distinguished members of the committee. Thank you for the opportunity to testify before you today on about global water security.

Is the mismatch between fresh water supply and rising demand inevitable and eternal? Or can it be brought into better balance, thereby reducing a primary reason for water conflict?

While it is often taken as a given that water supply is unchangeable and that per capita demand can only increase, neither is true. Today, I would like to share with you an example of where both the supply and the demand curves for water have been bent. This new approach successfully changes the paradigm of water relationships from the historic approach of dividing up scarce resources to a new approach which achieves water independence, fosters ongoing cooperation, and enables mutual economic empowerment.

The solution I am describing is water technology or watertech. Watertech is biology, chemistry, physics, mechanical engineering and information technology deployed in novel ways to increase the supply and manage the demand of water. Watertech is a multi-billion dollar industry in my State of Massachusetts that serves global markets. I would like to speak about how our industry and countries like Israel use watertech to increase international security.

Israel has remarkably changed the supply and demand curves of water for itself and for its neighbors. Recognized as the world's leading watertech innovator, the modern state of Israel was founded in a land of sand and swamp. Famously, Israel made the desert bloom through novel water management and the creation of drip irrigation. Today, Israel exports carrots to Russia because it can do so cheaper and with less resource consumption than Russia can itself. But Israel's rapid economic growth continued to tax its limited natural water sources, while demand from its neighbors for the same water remained a serious source of conflict as mentioned by the chairman today and my distinguished fellow panelists.

Israel made the decision to satisfy all its water needs by changing the rules of supply and demand through the deployment of multiple forms of technology. Today, Israel is the world's number one recycling country, reclaiming 75 percent of its water. Number two country, Spain, reclaims 17 percent. In desalination, 85 percent of Israel's domestic consumption is supplied by turning Mediterranean sea water into drinking water and I can tell you it tastes great.

Here is the bonus of this transformation which accrues to international relations. Just last month, as ably described today, Israel, Jordan, and the Palestinian Authority announced an agreement to exchange fresh water, saltwater and desalinated water from where it exists or can be built to where it is needed. This Red Sea-Dead Sea Canal improves the lives of Jordanians, Palestinians and Israelis. There were two key enablers, going back 30 years, and more recently the will to get it done and the other enabler,

watertech. Notably, it was arranged by the principals primarily themselves without the glare of international mediators, albeit with important project finance from the World Bank. Watertech has enabled Israel to satisfy its water needs, diminished conflict, and enabled to form agreements with its neighbors based on opportunity, not just avoiding hardship.

Here is a second bonus of Israel's success that goes well beyond its borders. Israeli companies are now bringing their demonstrated expertise around the world, changing the supply-demand balance globally: Using desalination in California, drip irrigation in India and China, smart water network installations on four continents. Israeli water technology is increasing availability and quality and reducing demand, while removing the remote cause of water conflict.

A particular favorite technology of mine is that the water in most bottles of Coca Cola in Europe is purified by an Israeli-invented treatment and we know that Coca Cola is necessary for global peace.

In Massachusetts, we bring our state's strength in innovation: Our multi-billion dollar watertech industry, academic research, and dozens of watertech startups to meet the needs of a thirsty world. We believe, in Massachusetts, that watertech is both good business and a strategically important national export. In the Q and A, I will be happy to identify some non-budgetary means that Congress can consider to enable water technology in service of global security interests.

It has been appropriately noted that the American export of social media has enabled open communication among oppressed people and thereby fosters freedom. In a similar vein, I submit today that water technology sustains life by creating clean and abundant supply while enabling economic opportunity and diffusing one of the most enduring sources of human conflict.

Distinguished members, let us bend the water curve of supply and demand in the interest of peace and prosperity. Thank you for your interest.

[The prepared statement of Mr. Goodtree follows:]

Statement of
David Goodtree

Co-Chair & Founder, Symposium on Water Innovation in Massachusetts

Subcommittee on Europe, Eurasia, and Emerging Threats
of the
House Committee on Foreign Affairs

Water as a Geopolitical Threat
January 16, 2014

Chairman Rohrabacher, Ranking Member Keating, and Distinguished Members of the Subcommittee. Thank you for the opportunity to testify before you today on about global water security.

The Symposium on Water Innovation in Massachusetts is an association of industry executives focused on bringing clean, abundant water to global markets through innovative technologies created in the great state of Massachusetts.

The Water Supply-Demand Imbalance

Natural sources of water are limited and in fixed supply. Less than 3% of the earth's water is fresh water, and most of that is ice. Just 0.3% of the earth's water is surface water, the most accessible form available for human use.

Yet, worldwide demand for water is accelerating due to: 1) rising population; 2) faster growth in diets rich in proteins that depend on agricultural production, and; 3) expanding consumption of goods that contribute to standard of living, but which require water in their production, like your iPhone. This supply-demand mismatch is continually widening.

With fixed natural supply and widening demand, conflict is common. War is the most extreme result, but other serious and damaging events include border disagreements, property rights disputes, economic harm, environmental harm, and other consequences which are destabilizing at a minimum, affecting long-term relationships and trust within nations and between nations. These conflicts have taken place across the globe – between Malaysia and Singapore for example, or Tajikistan and Uzbekistan – and closer to home in the "Tri-State Water Wars" of Alabama, Florida, and Georgia, which remains unresolved to this day despite Congressional action, or the recent Supreme Court review of the Red River Compact between Oklahoma and Texas, or hundreds of other examples which have been well-documented by the State Department, UNESCO, and the Pacific Institute.

Depending upon the strength of each party in a water dispute, their aim may be to control the greatest share of water, or when addressed more amicably, to divide a finite pie fairly. Regardless, because supply is usually insufficient to meet demand, often no one is happy with the outcome. So the source of the conflict is not resolved. It comes back again another day, metastasized, while infiltrating other issues regarding political power, economic vitality, health, and even homeland security.

Can the supply and demand mismatch be brought into better balance, thereby reducing a primary reason for water conflicts?

Water Tech: Bending the Water Supply & Demand Curves

It is often taken as a given that supply *is* fixed, and demand can *only* increase. Neither is true. Today I would like to share with you two examples of where *both* the supply and the demand curves for water have been bent. This new approach

is successful in changing the paradigm of neighboring water relationships -- from the historic approach of dividing up scarce resources -- to a new approach which achieves water independence, fosters ongoing cooperation, and enables mutual economic empowerment.

The solution I'm describing is water technology, or "water tech."

> *Water tech is biology, chemistry, physics, mechanical engineering, and information technology deployed in novel ways to increase the supply and manage the demand of water.*

These two words together are not part of an everday vocabulary, because historically we look only to negotiations and agreements and dams and allocations of fresh water to solve our global water challenges. But water tech brings new tools to the table that serve thirsty populations, enable economic development, and ameliorate crises.

Water tech is a multi-billion-dollar industry in my home state of Massachusetts that serves global markets. I'd like to speak with you today how our industry, and notably Singapore and Israel use water tech to increase international security.

Case Studies: Singapore, Israel

Singapore became independent of Malaysia in 1965, but its dependence on Malaysia for water continued, which was made indelibly memorable when the Prime Minister famously threatened to cut Singapore's water supply. Without sufficient fresh water sources, and a growing economy, Singapore made a choice. It would *engineer* its water independence by increasing supply and managing demand through a program named "Water for All." It used "four taps" to do so:

imported water, new reservoirs, and two technology taps: recycled water and desalination. Singapore's *national* commitment to these technologies of recycled water and desalination changed its position within a decade from dependence, constraint, and conflict, to abundance and the absence of conflict due to water disputes. The biggest drivers of the change were the adoption of these two technologies, which now supply 40% of all Singaporean water. An extra outcome of perhaps equal significance is that Singapore has used its success to become a global hub for water industry, attracting capital and a parade of international leaders to learn its methods.

Israel has not only bent the water supply-demand curve for itself, but also for its neighbors. Israeli is recognized as the world's leading source of water tech innovation. The modern state of Israel was founded in a land of sand and swamp, and famously, Israel made the desert bloom through novel water management and the creation of drip irrigation. Today, Israel exports carrots to Russia – because it can do so cheaper and with less resource consumption, despite the fact that Russia borders the world's largest lake.

Israel's rapid economic growth however continued to tax its very limited natural water resources, while demand from its neighbors for the same water sources remained a serious source of conflict. Israel made the decision to satisfy all its water needs – and restore its lakes -- by making a national commitment to desalination and recycling. Today, Israel is the #1 water recycling country in the world, reclaiming 75% of its water, with #2 Spain coming in at 17%. And in desalination, 85% of Israel's domestic consumption is supplied by turning Mediterranean Sea water into drinking water – and I can tell you it tastes great.

Now here's the kicker. Just last month, Israel, Jordan, and the Palestinian Authority announced an agreement to exchange fresh water, salt water, desalinated water, and brine (the byproduct of desalination) from where it exists or can be built, to where it is needed. This project, known as the Red Sea – Dead Sea Canal, improves the lives of Jordanians, Palestinians, and Israelis. There were two key enablers – the will to get it done and energy-efficient desalination. Notably, it was arranged by the principals themselves, without the glare of international mediators, although the World Bank played an important role in project finance.

Israeli innovation in drip irrigation, scaled-up desalination, water recycling, smart water networks that cut water loss, novel water treatment methods, and other water tech is satisfying its water needs, diminishing a source of conflict, and importantly, enabled it to form new agreements with it neighbors based on opportunity, not just avoiding hardship.

In my written testimony, I call your attention to a Wall Street Journal editorial from this week which thoughtfully addresses this specific topic.
http://online.wsj.com/news/articles/SB10001424052702303345104579282062737273526

With its great success bending the curves of water supply and demand, Israeli companies are bringing their water tech expertise around the world, changing the supply-demand balance globally. For example, the largest desal plant in the Americas, a $1b project in California, is being designed by an Israeli firm (with project finance from a Massachusetts company), which will lessen conflict between southern California and its neighbors. And, the top drip irrigation companies are Israeli, bringing abundant food production to parched places around the world. The best regarded smart water network company, with installations from Europe to South America to Australia, is Israeli. And, the

water in most bottles of Coca-Cola in Europe is run through a treatment process using Israeli technology. And we know that Coca Cola is necessary for global peace.

In my state of Massachusetts, we see water tech as a way to solve the problem of inexhaustible demand and fixed supply of water. We bring our state's characteristic strength in innovation, and our billion-$ water tech companies, and dozens of water tech start-ups to meet the needs of thirsty global buyers. We believe that water tech is both good business, and a strategically-important national export which creates water security by bringing supply and demand in sync.

Enabling Water Tech to Serve U.S. Global Security Interests

What can Congress do to enable water tech to serve our global security interests? The US is a tough market for new water tech to succeed, and as a result, we lag behind other nations in attracting water tech and exporting water tech to help ameliorate water security crises. Here are four methods that enhance our ability to use water tech as a tool of advancing US foreign policy interests:

1) The overall US partnership with Israel around R&D is an enormous benefit to our economy, and to advancing our interests globally. HR 3683, The US-Israel Energy Cooperation Enhancement Act, expands the existing collaboration in energy R&D to now include water. The more we can leverage cooperative advances with Israel in water tech to correct supply-demand imbalances, the more we can defuse global water conflict. The bill was approved last month by voice vote in the Energy & Commerce Committee, and both the House and Senate version awaits a floor vote.

2) The Clean Water State Revolving Fund, administered by the EPA, has been enormously successful helping states to build and maintain water infrastructure. But the loan terms are understood by the states to discourage the use of new technology because penalties are assessed for approaches that fail. Without risking the water supply, terms can be made less onerous so that states will be more likely to choose new approaches that have better results, versus sticking with inefficient methods. Once proven in the US, water tech has a better chance of succeeding abroad in water conflict hotspots.

3) EPA review of new technology is a necessary to protect public health and the environment, but often the agency is unable to approve new technology because it does not have the processes to evaluate it. As a result, the US is often seen as a less desirable place to invent or deploy new water tech. To rectify the situation, EPA evaluative mechanisms can be streamlined to keep up with advancements that meet our needs at home, while being promoted abroad to increase water independence globally.

4) The Export Import Bank is an essential credit source for exporting American goods, but water tech is not identified as one of its eight key industries, and the key countries it targets do not correspond closely to where water conflict is occurring. Congress can engage the Bank to align its programs with US foreign policy interests around defusing water disagreements.

If water tech is to be seen as a worthy instrument in our foreign relations toolbox to address global water security, then leveraging U.S. R&D funds, global partnerships, project finance mechanisms, and regulatory process is essential to addressing water supply-demand imbalances and defuse crises.

It's been appropriately noted that the American export of social media has enabled open communication among oppressed people, and thereby fosters freedom.

In a similar vein, I submit today that water tech sustains life by creating clean and abundant supply, while enabling economic opportunity, and defusing one of the most enduring sources of human conflict.

Thank you for your interest.

Mr. ROHRABACHER. Thank you very much and thanks to all the witnesses today.

This has been very thought-provoking testimony and it is the Chair's intent to have 3 minute questioning of our witnesses and then we will have a second round. Votes were scheduled in about 15 minutes.

Ms. Moynihan, could you tell us what impact does China's occupation of Tibet and thus the control of this water, how does that impact on India and India-China conflict?

Ms. MOYNIHAN. Well, the north-south water diversion program that you had questioned, saw the slide, would be an absolute catastrophe for the people of India and Bangladesh because the Brahmaputra is one of the main sources of fresh water for eastern Indian and for all of Bangladesh. The Chinese, as Gordon also noted, refused to engage in any negotiations. They refused to sign any treaties for water sharing. India and Pakistan have for many years had a treaty on sharing of the Indus River. But China won't engage and they continue to demonize the Dalai Lama and I forgot to mention over 200 military incursions into India in 2013 from Tibet.

Mr. ROHRABACHER. And Mr. Goodtree, just to note that in Orange County, California, we have one of the most sophisticated, technologically sophisticated water companies, water commitments, public and private, but we reclaim our water and use it nine times before it actually goes into the ocean. That type of reclamation, is any of that going on in Jordan or any of these other places that we have been talking about?

Mr. GOODTREE. There is water reclamation certainly going on throughout the world. It requires an investment, but to your point it is reused over and over and over again. So in essence it is called new water. Singapore is a particularly excellent case that has used reclamation as one of its four taps or sources of water to reduce its dependence and separate itself from Malaysia in terms of conflict. So yes, reclamation is growing significantly. For example, in Spain, Singapore and places throughout the world including Southern California.

Mr. ROHRABACHER. Thank you very much. Mr. Keating?

Mr. KEATING. You have covered so much ground. I just want to hit on a couple of points.

Mr. Goodtree, you mentioned that the U.S. can be of assistance in non-budgetary ways. I am curious about that and also to our panelists, I am concerned, too, two of the panelists referenced natural disasters, earthquakes. Can you comment on what some of those—the results of those would be. So if I could quickly have the answers to those questions.

Mr. GOODTREE. Thank you, Congressman Keating. The U.S. is a tough market for new water technology to succeed at home. And as a result, we lag behind other nations in attracting water technology entrepreneurs and exporting water technology to help ameliorate water security crises. Briefly, here are four methods that can enhance our ability to use water technology as a tool to advance U.S. foreign policy interests.

First, the overall U.S. partnership with Israel around R&D is an enormous benefit to our economy in life sciences, information technology and social media, but not yet in water. HR 3683, the U.S.-

Israel Energy Cooperation Enhancement Act expands the existing collaboration in energy R&D to include water. The more we can leverage cooperative advances with Israel in watertech to correct supply-demand imbalances around the globe, the more we can diffuse global conflict. The bill was approved last month by a voice vote in the House Energy and Commerce Committee and it awaits a floor vote.

Second, the Clean Water State Revolving Fund, SRF, administered by the EPA, has been enormously successful helping states to build and maintain water infrastructure. But the loan terms discourage the use of technology because penalties are assessed for approaches that fail. Without risking the water supply, terms can be made less onerous so that states will be more likely to choose new approaches that have better results versus sticking with inefficient methods. Once proven in the U.S., watertech has a better chance of succeeding aborad in water conflict hotspots.

Third, EPA review of new technology is necessary to protect public heath and the environment, but often the Agency is unable to approve new technology because it does not have processes to evaluate them. As a result, the U.S. is often seen as a less desirable place to invent or deploy watertech. To rectify the situation, EPA evaluative mechanisms can be streamlined to keep up with advances that meet our needs at home while being promoted abroad.

Fourth, and finally, the Export-Import Bank is an essential credit source for exporting American goods, but watertech is not identified as one of its eight key industries and the key countries it targets do not correspond closely to where water conflict occurs. Congress can engage the Bank to align its programs with U.S. foreign policy interests regarding water security.

Mr. CHANG. Ranking Member Keating, the Myitsone Dam is just upstream from the largest city in Kachin state. There have been various estimates about the number of people who would be inundated and killed in a dam burst, somewhere to 100,000. I don't know if the numbers are reliable, but we do know that, for instance, the 2008 earthquake in Sichuan Province was undoubtedly caused by the water in reservoir very close to the fault line and that was absolutely devastating. So people expect the same thing in Burma if the dam is allowed to proceed.

Mr. ROHRABACHER. And from the testimony we have just had, we see that China is obviously being perhaps reckless in their location of these dams, much less reckless in terms of the international peace, but also for the safety of the people who live near the dams.

Mr. Marino?

Mr. MARINO. Thank you, Mr. Chairman. Mr. Chang, whereas I am not an expert on China, I have studied China most of my life, been to China. China is a very wealthy country. It has wrapped its arms around capitalism and loves it. Still a dictatorship, a brutal country. Constantly violates human rights, has no concern for the environment. Possesses one half of the U.S. outside debt, spending money all over the world, investments we should call them, building its military at an unbelievable rate and buying gold up by the boatloads.

Given all that, it is 1.3 going on 1.4 billion people, the Communist Party is still very strong and I think that in my lifetime I will not see that change. What do we do, what does the United States and its allies do to at least curtail the activities of China on a wide variety of bases?

Mr. CHANG. That is a very important question. It goes to the core of American foreign policy because right now the United States almost doesn't have a China policy. We are reacting to the belligerence that we have seen in Beijing over the last 2½ years, especially the last 3 or 4 months. But essentially what I think goes to the core of what we should be doing is to reassess our policy and approach to China because for more than four decades we have tried to engage the Chinese and bring them into the international system.

Mr. MARINO. But can we do that alone? I think not. And given the fact that the trade that goes on around the world, the United States is one of the biggest importers of Chinese products. I am at a loss at this point other than total non-trade with China to have any impact whatsoever and I don't see that in the future from the U.S.'s perspective. So what do we get down to—let us get down to the nitty-gritty, let us get down to the basics as to how do we approach this with China?

Mr. CHANG. I think we need to reassess and understand that our fundamental policies just have not been working. On a broad array of issues, there are specific things we should be doing and I would be more than pleased to work with your staff on what I think needs to be done. But certainly, we need to reassess things because China is moving in directions that are extremely troubling and have not been predicted by the architects of America's China policies.

Mr. MARINO. They are like the bully on the elementary playground. They are twice as big as everyone else. They really do not care and there is no one who can at this point step up to them and se them back.

Mr. CHANG. We can do that if we have the will.

Mr. ROHRABACHER. And Mr. Blumenauer.

Mr. BLUMENAUER. Thank you, Mr. Chairman. Again, I appreciate your courtesy. I am wondering just taking a page out of the conclusion of the chairman's opening remarks, and Mr. Marino's appropriate concern about China and what you all have said, if there would be an opportunity for the United States to focus on water technology and international agreements in South Asia that whether it is what we do with the World Bank, it is what we do in terms of initiatives through the United Nations, through bilateral and multi-lateral efforts that we try and focus more aggressive on water solutions, that we could work, again globally, on the panoply of threats, not just with climate change, but seismic events we have seen throughout the region.

Is there a way that we could just sort of zero in in a cooperative way with the partners, if as Ms. Moynihan pointed out, if India and Pakistan, for heaven's sakes, can have an agreement on the Indus River, is this an area that we could deal with the Mekong, that we could promote more cooperation and thoughtfulness and let

the force of the ideas and about 2 billion people outside China who depend on this resource to be able to build some momentum?

I welcome comments from any of you in this regard.

Ms. MOYNIHAN. The problem is that the Chinese refuse to discuss Tibet.

Mr. BLUMENAUER. I want to be clear. I am not talking about China at this point. I am talking about moving with India, with Pakistan, with Thailand, with Vietnam to try and develop both the—refine the factual elements that you talked about in terms of threats and opportunities and build some momentum and some understanding in the region and the world stage.

Mr. CHANG. I think the one thing that we can do is certainly work with the Association of Southeast Asian Nations, ASEAN, because ASEAN has been trying to find issues upon which it can cooperate. And this is one issue that affects most of them. Of course, the big country outside of ASEAN that is affected by these water-sharing issues is India, but it would be very easy for ASEAN to form a partnership with India and the United States, just as ASEAN has formed what is called ASEAN plus three which is ASEAN, China, Japan, and South Korea. So there is precedent for ASEAN to do this. It is the organization that I think is in place and is perhaps the most willing to take up issues of this sort.

Mr. BLUMENAUER. Thank you. Thank you very much, Mr. Chair.

Mr. ROHRABACHER. We will continue probably until the vote is called which should be within the 15 minutes, so we will proceed with a second round of questions. And first of all, we have noted here that India and Pakistan have been able to reach an agreement. Thank you. India and Pakistan have reached an agreement. The Palestinians, and Jordanians and the Israelis—if we can have countries with that deep a difference and that long-term conflict that has existed between these people reach agreement, that is a comment, that itself is a comment on the challenge we face with China who has been unwilling to reach any agreements with any of these countries that we are talking about. That is a comment on, I believe, the government and the attitude of the ruling clique that runs Beijing.

About technology—well, first of all, let me ask Mr. Sharp, how much water actually—fresh water, will be provided by the Dead Sea to Red Sea project in proportion, is it 10 percent of the water needs for Jordan and Israel? What are we talking about here?

Mr. SHARP. Mr. Chairman, all the information that I have been to glean about this project has been from open sources. The actual agreement has not been publicly released just yet. In essence, Jordan will be desalinating about 80 million cubic meters, using 30 of it in its own country and sending 50 to Israel.

Mr. ROHRABACHER. What is that in reference to the entire water consumption of Jordan?

Mr. SHARP. I don't know. I would have to get back to you.

Mr. ROHRABACHER. Are we talking about 5 percent or 1 percent?

Mr. SHARP. I don't think it is insignificant, but I don't think——

Mr. ROHRABACHER. You can get to me on that. I think it would be important for us to know that, if it is a significant amount.

And Mr. Goodtree, in terms of technology development and the availability of water, Lockheed Corporation, I believe it was, an-

nounced several months ago of a breakthrough of water desalinization technology. It is a new type of material that can serve as part of the membrane in water desalinization process. Have you looked at that at all and what impact do you think that will have on some of these issues?

Mr. GOODTREE. There is enormous development going on in membrane technology which enables higher through-put when the water goes through to filter out impurities. There is a number of multi-billion dollar companies in my state, Lockheed is not one of them so I am not familiar with its research. And in particular, one of the most exciting new technologies, there are a few of them. One is called forward osmosis which is a different form of desalination which is being created in my state by a company called Oasis Water. And also nanomaterial membranes, a lot of great research and some commercialization out of MIT is making a huge difference.

I would like to just state, if I can comment on Mr. Blumenauer's last question which was the idea about neighbors around China. It is not about the agreement with the Chinese or let us say whatever country is holding on to or hoarding that resource, but it is establishing water independence through establishment of new sources of water through technology, new water, which is whether desalination or recylination or lowering demand through technology again such as drip irrigation. So it is about establishing, we think, about oil independence. This is water independence through independent sources and basically break that link between the hoarding country and the needy country.

Mr. ROHRABACHER. Yes, if you can, obviously, producing more wealth is something that at least from the Chair's perspective better than the idea of trying to distribute a lack of wealth.

Mr. GOODTREE. Exactly.

Mr. ROHRABACHER. And let me just note, I am the vice chairman of the Science Committee and water is one of my top priorities in terms of my own personal priorities as you can see in this hearing.

Mr. GOODTREE. Yes.

Mr. ROHRABACHER. Let me just, Mr. Keating, you may proceed.

Mr. KEATING. Well, we are up against a rollcall, but I wanted to just give you a chance to comment on one aspect that has been touched upon, but it is very important behind this. And that is the fact that a lot of these dams that were there, they are also sources of energy, the hydro power and with the difference in technology available in our production and use of energy, could this have an effect, too, in terms of independence of these other countries? Because it is not just the water purity, it is also a source of power that this creates problems and instability in other countries. If you would just like to comment on that aspect, the energy aspect of this.

Ms. MOYNIHAN. Well, of course, the hydro dams do produce reservoirs and energy and in Chinese-occupied Tibet, most of that is going to industrial development. And there is one issue I wanted to mention is that China is also rapidly building mines at the source of a lot of the rivers so they are creating long-term pollution that will go downstream to the other riparian nations. And that could be a whole other hearing.

Mr. ROHRABACHER. But that is very relevant, extremely relevant in the discussion of water in terms of countries that are permitting that type of pollution which then again eliminates that as a source for their neighbors and thank you for bringing that up. I think it is important.

Mr. Marino?

Mr. MARINO. Mr. Chang and anyone else who wants to enlighten me on this, let us say for example we do—are able to convince India and Pakistan and Vietnam and Laos and Burma to coalesce and understand the fact that we have to have some effect on China in order to resolve this Chinese issue. What would we do collectively? Would we say we are not going to trade with you any more which I don't think is going to be too devastating to China. If you could name one or two facts or entities as to what specifically we could do with China?

Mr. CHANG. I think that if you had all of the countries in the region including India and the United States have a unified stand, maybe China would listen, but I really doubt it. Because what we have seen so far on a number of issues, some critical to the national security of the United States that we have not been able to move the Chinese in better directions. If we can't do it on those issues, it is very unlikely that countries in the region can do this with respect to China.

Right now, you have a Chinese political system in distress. You have a lot of intense in-fighting at the top and I am not so sure that Beijing can maintain good relations with other countries including the United States. So at this point, I think that basically we have to just sit by and watch

You have got to remember that the indisagreement between India and Pakistan was because India made a decision that it wanted peace. China has yet to make that decision. And until it does so, there is all sorts of things we can try, but I am sure that they will be ineffective.

Mr. MARINO. With my visits there and conversations with leaders and people in the government, they are not going to—those in control are not going to relinquish control. I mean they would take—it would take a massive civil war within China to make that change, if it could be made which I think it cannot. So my position is if and until communism is defeated in China, there is no answer to the solution.

Mr. CHANG. I agree.

Ms. MOYNIHAN. I agree.

Mr. ROHRABACHER. Just a note for my friend that those of us who spent a considerable part of our life fighting communism, I don't know any of us who predicted that the communist regime in Moscow would crumble either. Nobody thought that would happen and——

Ms. MOYNIHAN. Senator Moynihan predicted it in 1979. Left a long paper trail.

Mr. ROHRABACHER. Well said, well said. And he was making it happen, too. But it was something that many of us, I should say, if not most of us would never have predicted. When President Reagan launched what I considered to be the strategy that won that victory in the Cold War which was helping those people who

were struggling for freedom, rather than just depending on American military might to deter the leaders of the Soviet Union, we actually began supporting in a big way the Lech Walesas of the world, but also the mujahideen, also the contras in Latin American which drained all of the willpower as well as the resources from Moscow and I would suggest that perhaps a strategy of helping those people in China who are struggling for democracy may well be the best strategy and that we should put that same kind of emphasis that Reagan put on it for breaking down the Soviet Union.

Mr. MARINO. Would the chairman yield for a second?

Mr. ROHRABACHER. I certainly would.

Mr. MARINO. I would like to see that happen, too, but we are talking about two different ideologies between the then Soviet Union and China, the numbers of people, the numbers of uneducated people, the resources available, and the access to outside information to the Chinese people which really doesn't exist at this point. And given the fact that you had the right people at the right time, you had Reagan, you had several leaders in Russia, at least leaning in that direction. I see no indication of the hierarchy or the military leaders of the government leaning in any direction other than to take more control over natural resources, minerals, oil, gas, you name it, and the land is the primary goal. I yield back. Thank you.

Mr. ROHRABACHER. We will have a long talk about that some time. I am actually more optimistic because of my experience with Russia and again, just total surprise that we were able to achieve that goal in that short a period of time when President Reagan put that strategy down.

Let me just close here with a very—first of all, Mr. Keating, would you like closing statement?

Mr. KEATING. I am fine.

Mr. ROHRABACHER. Mr. Marino, would you like a closing statement?

Mr. MARINO. I am fine.

Mr. ROHRABACHER. Let me thank the witnesses today. We have heard a great deal of information coming at this issue from different perspectives and Mr. Goodtree, I certainly appreciated, you added a whole new flavor to this and we appreciate Mr. Keating inviting you and of course, Mr. Sharp, your detailing of the Dead Sea to Red Sea project is invaluable. This subcommittee will be going very shortly on a trip to Israel and that information will be invaluable to us.

And as far as Ms. Moynihan and Mr. Chang, you have detailed for us and provided us information that I hope that every Member of Congress could hear because it really does exemplify the horrific challenge that we face with this regime in Beijing that is running, bullying its neighbors, running roughshod over early concerns like how much water is going to be and even to the point that they are, as you point out, Ms. Moynihan, they are not only consuming the water and preventing their neighbors from having this, it is sort of an act of aggression, but they are also polluting the water without remorse. These are things that we need to focus on and we need to deal with them in a tough way so we can make some progress in this area. But the most important thing, the world will

be a better place when we have water and energy that will uplift all of mankind and these challenges with China and elsewhere, we need to make sure that we are increasing the supply of water for humankind and the availability of clean water to people so they can live healthy lives and that so many resources are not sucked out of a system to take care of the health of people whose health is being dragged down by improper water and by water that is not well.

I appreciate all of your insights today and this hearing is now adjourned.

[Whereupon, at 11:32 a.m., the subcommittee was adjourned.]

APPENDIX

Material Submitted for the Record

SUBCOMMITTEE HEARING NOTICE
COMMITTEE ON FOREIGN AFFAIRS
U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, D.C. 20515-6128

Subcommittee on Europe, Eurasia, and Emerging Threats
Dana Rohrabacher (R-CA), Chairman

January 14, 2014

TO: MEMBERS OF THE COMMITTEE ON FOREIGN AFFAIRS

You are respectfully requested to attend an OPEN hearing of the Committee on Foreign Affairs to be held by the Subcommittee on Europe, Eurasia and Emerging Threats in Room 2172 of the Rayburn House Office Building (and available on the Committee website at www.foreignaffairs.gov):

DATE: Thursday, January 16, 2014

TIME: 10:00 a.m.

SUBJECT: Water as a Geopolitical Threat

WITNESSES: Ms. Maura Moynihan
Author & Activist

Gordon G. Chang
Author

Jeremy M. Sharp
Specialist in Middle Eastern Affairs
Foreign Affairs, Defense, and Trade Division
Congressional Research Service

Mr. David Goodtree
Co-Chair and Founder
Symposium on Water Innovation

By Direction of the Chairman

The Committee on Foreign Affairs seeks to make its facilities accessible to persons with disabilities. If you are in need of special accommodations, please call 202/225-5021 at least four business days in advance of the event, whenever practicable. Questions with regard to special accommodations in general (including availability of Committee materials in alternative formats and assistive listening devices) may be directed to the Committee.

COMMITTEE ON FOREIGN AFFAIRS

MINUTES OF SUBCOMMITTEE ON *Europe, Eurasia, and Emerging Threats* HEARING

Day *Thursday* **Date** *January 16, 2014* **Room** *2172*

Starting Time *10:11 a.m.* **Ending Time** *11:22 a.m.*

Recesses [ ] (____to ____) (____to ____) (____to ____) (____to ____) (____to ____) (____to ____)

Presiding Member(s)

Rep. Rohrabacher

Check all of the following that apply:

Open Session [✓]
Executive (closed) Session [ ]
Televised [✓]
Electronically Recorded (taped) [✓]
Stenographic Record [ ]

TITLE OF HEARING:

Water as a Geopolitical Threat

SUBCOMMITTEE MEMBERS PRESENT:

Rep. Marino, Rep. Keating

NON-SUBCOMMITTEE MEMBERS PRESENT: *(Mark with an * if they are not members of full committee.)*

***Rep. Blumenauer**

HEARING WITNESSES: Same as meeting notice attached? Yes [✓] **No** [ ]
(If "no", please list below and include title, agency, department, or organization.)

STATEMENTS FOR THE RECORD: *(List any statements submitted for the record.)*

TIME SCHEDULED TO RECONVENE *11:22a.m.*
or
TIME ADJOURNED _____

Subcommittee Staff Director