W A T E R I N T A K E

3/2016

Mai - Juni

30.06.2016

April 25-28

… fourth Security Jam, organised in cooperation with the U.S. European Command, the European External Action Service, IBM and a coalition of over 50 partners. It presents insights from 48 VIPs and close to 2,500 participants from 131 countries on global security challenges, from early-warning and radicalisation to climate change, Middle East security and the future of policing …… will feed into the EU's thinking on a new Global Strategy on Foreign and Security Policy and into NATO's upcoming Warsaw summit … recommendations will be shared with decision-makers and experts around the globe …
http://www.friendsofeurope.org/security-europe/report-2016-security-jam-beyond-conventional-security-challenges/
… identified the Jam's top 10 recommendations:
… **7. Mainstream climate change into the security debate**
Climate change is the one threat facing all of humanity, be it in intensifying conflicts, resource competition, population movements or natural disasters. Climate change must therefore feature in all discussions on security …
http://www.friendsofeurope.org/security-europe/10-steps-for-a-safer-world/
30.06.16 **Report of the global online brainstorming**
Full report: pp 47-50: … It is time to face up to climate change as a serious security threat; not just a question for environment or agriculture ministries, but a catalyst for conflict over ever-scarcer water, land and food resources; forcing mass population movements; and precipitating natural disasters … Water diplomacy should be stepped up given the risk that climate change will increase uncertainty over the availability and quality of freshwater along the 260 river basins which are shared by one or more states. States not yet parties to UN Conventions that promote cooperation over shared water resources should be encouraged to join …
http://www.friendsofeurope.org/media/uploads/2016/06/SECJAM_REPORT_full_report_WEB1.pdf
Executive Summary.
http://www.friendsofeurope.org/media/uploads/2016/06/SECJAM_REPORT_Executive-summary_WEB1.pdf

WASSERSTANDSMELDUNGEN

Wasser-Gewinnung - Nanostäbchen ziehen Feuchtigkeit aus der Luft
29. Juni 2016 Es ist eine Zufallsentdeckung, die noch wichtig werden könnte: Nanostäbchen nehmen je nach Dichte Wasser aus der Luft auf - das danach trinkbar ist … Eigentlich arbeiteten die Forscher an magnetischen Nanodrähten, doch die gewünschten Ergebnisse blieben aus. Bei der Analyse in einem Verdampfer stellten die Wissenschaftler fest, dass sich das Gewicht des Materials in Abhängigkeit von der Luftfeuchtigkeit veränderte. Aufschluss brachten Aufzeichnungen aus dem Mikroskop. Die kohlenstoffhaltigen Nanostäbchen können Wasser speichern. Bei bis zu 50 Prozent Luftfeuchtigkeit binden die milliardstel Millimeter kleinen Stäbe das Wasser aus der Luft. Bei 50 bis 80 Prozent Luftfeuchtigkeit gibt das Material Wasser in Form von Dampf ab. Gewöhnliche Materialien reagieren umgekehrt. Sie nehmen mehr Wasser auf, je höher die Luftfeuchtigkeit ansteigt. Aus dieser zufälligen Entdeckung ergeben sich praktische Anwendungsmöglichkeiten für die Wassergewinnung sowie -reinigung in trockenen

Regionen der Erde. Zum einen muss kein Wasser aus Flüssen oder Seen in der Nähe sein. Das Wasser wird aus der Luft gewonnen. Zum anderen funktioniert die Methode mit geringem Energieaufwand …
http://www.wiwo.de/technologie/green/tech/wasser-gewinnung-nanostaebchen-ziehen-feuchtigkeit-aus-der-luft/13804878.html

Russian and Kazakh experts discuss transboundary water cooperation
27 June 2016 … Russian and Kazakh experts met in Astana to discuss the first results of assessments of transboundary rivers Ural and Kigac [Volga]. Final results will be presented at the annual meeting of Russian-Kazakh Intergovernmental Commission on Joint Use and Protection of Transboundary Water Courses in autumn of 2016. If deemed necessary by both countries, it may lead to new arrangements on how to manage and share water resources in two basins. Joint Kazakh-Russian technical examinations at Ural and Kigac rivers were initiated in January 2016. This work aims to assess the state of the basins of Ural and Kigac rivers and to provide input for further development of transboundary cooperation. In the framework of the assessment experts analyze the current state of the water quantity of transboundary waters, taking into account the impact of economic activity on the water flow; review methods for calculating ecological river flow applied in Kazakhstan, Russia and other countries; and explore hydrological, economic, social and legal issues of Ural and Kigac river basins management … Assessments of Ural and Kigac rivers are conducted in the framework of National Policy Dialogue and supported by the Joint EU/UNDP/UNECE project "Supporting Kazakhstan's Transition to a Green Economy Model" …
http://www.unece.org/info/media/news/environment/2016/russian-and-kazakh-experts-discuss-transboundary-water-cooperation/doc.html

Water's Worth
June 17, 2016· Lesotho is locked into a long term deal to sell its water to South Africa. But what happens when its wells run dry? A country has to sell what it's got. Lesotho always had more rain and snow than it knew what to do with. So Lesotho made a deal with its neighbor, South Africa, to buy the water. The country moved rivers and built one of the most impressive water projects in Africa to deliver it. All over Lesotho, the grass is dry. The corn is stunted. And cows are dying. Yet the water deal with South Africa still holds. Lesotho promised to sell the water and it has to keep delivering it. On the other side of the water tunnels is the city of Johannesburg, one of the economic engines of Africa. The metropolis grew on water from Lesotho and needs even more of it in the future. And they'll do just about anything to keep the water flowing …
http://www.npr.org/sections/money/2016/06/17/482459229/episode-706-waters-worth

African women are breaking their backs to get water for their families
16 June 1 Four years after the United Nations announced that it cut the number of people without access to cleaner water by half, getting to that water is still a major hardship for much of sub-Saharan Africa … backbreaking work falls mostly on women and children in 24 countries carrying buckets that weigh as much as 40 pounds each. The result … is "fatigue, musculoskeletal damage and early degenerative bone and soft tissue damage" on water bearers who are often frail to begin with … the time and toll of water collection by children and women should be taken into consideration when measuring the progress of making water available, as well as the benefits of sanitation and hygiene … Even in a more developed country like South Africa, more than half of water bearers were adult women — 56 percent. Female children followed them at 31 percent, male children at 31 percent, and finally adult males at 3 percent …
https://www.washingtonpost.com/news/energy-environment/wp/2016/06/01/the-crushing-toll-african-women-pay-to-collect-cleaner-water/

A smart water grid for the Indus Basin
June 16, 2016 The historic gardens of the Mughal Empire in India and Pakistan first drew James Wescoat to the Indus Basin four decades ago. A landscape architect and professor in the Aga Khan Program for Islamic Architecture in the MIT Department of Architecture, Wescoat has returned to the region many times for research that spans studies of 17th-century waterworks and 21st-century water systems, policy analyses, and multilateral water agreements. With his interconnected webs of relationships and knowledge, Wescoat has

assumed a pivotal role in the cross-disciplinary, multinational study of water in the Indus Basin. Of a climate change study he led for the Pakistan Water and Power Development Authority and the U.S. Environmental Protection Agency, Wescoat says, “We were a team of archeologists, historians, hydrologists, and water engineers. We were able to think broadly and deeply about the Indus Basin as one of the world’s great laboratories of water management.” … Wescoat’s ability to connect teams in an array of disciplines is encouraging synergies among researchers who envision a better future for the Indus Basin and its people through smart, sustainable water management practices, policies, and technologies … His partners in Pakistan include the new Centre for Water Informatics and Technology (WIT) of the Lahore University of Management Sciences (LUMS) … WIT’s monitoring and control technologies can help to turn Pakistan’s power and irrigation networks into more reliable and productive infrastructures. And real-time, precise operational data can enable researchers to better assess impacts of climate change in the Indus Basin and guide adaptations to ensure its future health …
http://news.mit.edu/2016/smart-water-grid-indus-basin-0616

Israel denies cutting water supplies to West Bank
15.06.16 Utility company says there has been broad reduction in water supply to large parts of Palestinian territory … Israel's national water company has denied cutting crucial water supplies to large parts of the occupied West Bank during the Muslim holy month of Ramadan, saying there was only broad reduction in water supply to the Palestinian territory. "As a result of the shortage of water supply in the West Bank ... we have made a broad reduction of the supply to all residents in the area," utility company Mekorot … "All the facilities are working and the capability to supply is less than the rate of consumption. The water authority recently approved a master plan for the water sector and accordingly we will build the systems that will meet the West Bank's required consumption" … water was totally siphoned off in some Palestinian areas before and during Ramadan days … Authorities in the city of Jenin, which has a population of more than 40,000 people, said its water supplies had been cut by half, and warned that it would hold Mekorot solely responsible for any tragedies resulting from water shortages during the hot summer months … An Israeli military coordinator in the occupied West Bank told … that a pipe that supplies water to various villages had burst, causing shortage of water … Since 1967, Israel has limited the water available to Palestinians in the West Bank and the Gaza Strip since its forces occupied the territories. Israelis, including settlers, consume five times more water than Palestinians in the West Bank, 350 litres per person per day in Israel compared with 60 litres per Palestinian per day in the West Bank.
http://www.aljazeera.com/news/2016/06/israel-denies-cutting-water-supplies-west-bank-160615215243834.html

Water-Rich Colombia Still Faces Water Stress
June 8, 2016 Colombia has made great strides in advancing peace talks with the Revolutionary Armed Forces of Colombia (FARC), improving the prospect of peace with the guerrilla movement and finally settling the country's longtime security threat. But another crisis of sorts is seeping through the country, based this time on the vulnerability of a precious resource: water. With nearly 50,000 cubic meters of water available per person each year, Colombia is technically one of the most water-rich countries in the world. But pollution, inadequate infrastructure, unequal distribution and extreme variability in annual rainfall leave an otherwise abundant resource susceptible to water stress. A drought, influenced by the El Nino weather pattern, has only exacerbated the situation. Despite peace talks progressing and stabilizing the country, sustained low oil prices will limit Bogota's ability to invest in and expand water infrastructure. And without investment and greater enforcement of existing policies, access to Colombia's water resources will remain uncertain for many. By definition, if a resource is abundant, it is counterintuitive that it could simultaneously be scarce. Yet this is exactly Colombia's water situation. Colombia is awash with water resources but is facing economic water scarcity, which is when demand for water outstrips the inadequate capacity caused by insufficient infrastructure. So even when water resources are in physical abundance at a local or national level, there are still constraints, similar to periods of water stress. In Colombia, the location of much of these resources does not match up with the majority of the population. The Magdalena and Cauca river basins support more than two-thirds of the country's population but contain only 13 percent of the

country's available water … Moreover, when there is access to water, conservation efforts are hampered by lack of information and extremely low water rates, which encourage people and businesses to use water without much cost. Rural areas have further limited access to water because of insufficient infrastructure. Understandably, Colombia will need to build new and expand existing infrastructure to lessen future water stress. But it requires greater revenue and investment to do so.
https://www.stratfor.com/sample/image/water-rich-colombia-still-faces-water-stress
Karte:
https://www.stratfor.com/sites/default/files/styles/stratfor_full/public/main/images/colombia-water-scarcity%20%281%29.png?itok=rKo0PfL9
[*Danke für diesen Hinweis nach Berlin-Mitte.* J.B.]

Drought-parched Zambia turns to the sun to keep water flowing
Jun 8, 2016 - Munji Malambo and his younger brother used to wake up at 5 a.m. every day to fetch water for their family and livestock. With the nearest working well over two kilometers away, the boys often missed school as they carried enough water home … That changed when, earlier this year, the government installed a solar powered-borehole at Malambo's school, the Simukombo Primary School, in southern Zambia's drought-prone Kazungula District … Now the local community has quick and easy access to clean groundwater. And Malambo, 16, and his 200 classmates can spend their days learning instead of toting water …
http://www.reuters.com/article/us-zambia-solar-water-idUSKCN0YU1J6

Selling Clean Drinking Water Is A Business Opportunity In East Africa
06.13.16 After working for years in international development, Galen Welsch wanted to try something different. He was fed up with the "patronizing approaches" of aid projects, he says, and frustrated about not having enough money to pay people … That's why Jibu, Welsch's Uganda-based water business, is unashamedly for-profit. Business is the best way to incentivize people to work with you … Jibu works in African cities where people have a water supply but can't depend on it for drinking. Welsch licenses water filtration equipment to local entrepreneurs who bottle up cleaned water in thick, exchangeable bottles. People, therefore, don't have to boil their water using charcoal or gas and can save money … So far, 23 entrepreneurs have bought into Jibu's social franchise system … Welsch, who's 28 and originally from Colorado, runs Jibu out of an office in Kampala, with outposts in Rwanda and Kenya. Jibu is part of Spring, an accelerator for startups empowering girls and young women, funded by the U.K. and U.S. governments, the Nike Foundation, and Girl Effect. Jibu hires girls as "micro-entrepreneurs" who distribute water on behalf of each franchisee. Welsch hopes the girls will graduate to buying their own equipment soon … Selling bottled water might strike some people as terrible for the environment. But he says not burning charcoal and gas for boiling water more than compensates …
http://www.fastcoexist.com/3059964/world-changing-ideas/selling-clean-drinking-water-is-a-business-opportunity-in-east-africa

Russland warnt: Wasserkraftwerk in Mongolei kann Baikalsee austrocknen
24.05.2016 Die Errichtung eines Wasserkraftwerkes (WKW) am Fluss Selenga, dem wasserreichsten Zufluss des Baikalsees, in der Mongolei wird sich negativ auf den Zustand des Sees auswirken … Dem größten Süßwasserreservoir der Erde könnte gar die Austrocknung drohen. Laut Medienberichten suchen russische Behörden nun nach einer alternativen Versorgung des südlichen Nachbarlandes in Mittelasien mit Strom … Die Errichtung von Wasserwerken könne zur Änderung der Wasserqualität führen sowie die Eisführung der Ströme und deren Temperatur beeinflussen. Außerdem könne es zur vermehrten Bildung von Treibhausgas kommen, was wiederum sowohl den globalen Klimawandel und die Überflutung nahegelegener Gebiete nach sich ziehen könne. Auch die Tierwanderung, darunter von seltenen Fischarten, würde von ihren gewohnten Routen abweichen. Ebenso seien verstärkte seismische und epidemiologische Risiken nicht ausgeschlossen …
http://de.sputniknews.com/panorama/20160524/310075365/baikalsee-wasserkraftwerk-bau-folgen.html

Peruvian farmers harvest water from fog

May 20, 2016 If you live halfway up a mountain in rural Peru, and if you have no access to running water, farming can be a difficult task. In a town called Villa Lourdes, villagers receive deliveries of fresh drinking water three times a week from Lima—and they used to have to schlep a good deal of that water up the hill to irrigate their crops. That's until a different, all together more elegant solution presented itself: Using 'Atrapanieblas'—large nets erected on the hillside—farmers … take advantage of the daily fog to capture condensation, harvesting between 200 and 400 liters a day from each panel—which is then stored in tanks, and gravity-fed to the crops below. It's efficient. It's resilient. And it's a hell of a lot more economical than paying truck drivers to bring water each day …
http://www.treehugger.com/corporate-responsibility/peruvian-farmers-harvest-water-fog.html

The Future of Fresh Water

16 May 23·… Water stress—the measure of demand relative to supply in a given place—will likely increase rapidly across the globe in the next few decades, as more people compete for ever more limited surface-water supplies. When people think about water stress, they often think of major changes in supplies—years-long droughts, or dry monsoon seasons. Such events will play a significant part, and their consequences will be severe. What we've found, though, is that rapidly growing demand for water actually drives the greatest increases in water stress. Major climate-driven shortages in water supply, where they do occur, will be concentrated around mid-latitude regions. These lie between the equator and the 30-degree north and south latitude lines, and extend to North Africa, southern Texas, and China in the Northern Hemisphere, and northern Chile, Argentina, and South Africa in the Southern Hemisphere … Both a 30 percent increase and a 30 percent decrease in surface-water supply within the next three decades, for example, are in the realm of possibility in areas including Southern California, according to climate models. The only sure thing is more extremes, and more unpredictability. If rainfall does decline over the coming decades in these areas, critical irrigation sources could dry up, leaving subsistence farmers hungry and governments facing millions of citizens dependent on emergency aid to survive. South Africa, Angola, Ethiopia, and Zimbabwe were among the African nations facing emergency situations after an extended El Niño- influenced drought in late 2015 and early 2016. Energy and municipal water supply sectors face critical risks as well. Hydropower plants in places like Brazil could be forced into production cuts because their reservoirs are too low, destabilizing the electrical supply for millions—a risk São Paulo faced during its historic drought in 2014 and 2015. The regions at highest risk for future water stress are clustered around these areas: the Mediterranean, the Middle East, western North America, eastern Australia, western Asia, northern China, and Chile. The emerging middle class in developing countries is expected to double by 2025, with an associated lifestyle that demands far more water. Water withdrawals for energy production are expected to increase by about 20 percent between 2010 and 2035, but consumption will rise by a more dramatic 85 percent … If leaders are to take steps before a crisis hits, they will need better and more sophisticated water data. Improved data would also allow stakeholders to hold governments and businesses accountable for their water management. Continuing technological innovation, such as new membrane technology to reduce the cost of treating saline water, is also essential. Demand-driven future water stress, in particular, can be managed. Australia, which suffered a severe 15-year "Millennium Drought" starting in the 1990s, for example, rapidly implemented demand-reduction measures that more than halved per-capita residential water use. A new water-trading program increased the efficiency of agricultural production in the Murray-Darling River basin, the country's agricultural lifeline. Population growth and climate change are creating a new, more challenging world. Let's be ready.
https://psmag.com/the-future-of-fresh-water-84248495d3c8#.yrydanoly

Celebrating 10 years of successful UNECE support to water policy reform in Eastern Europe, the Caucasus and Central Asia in Paris

13 May 2016 A decade of efforts by UNECE and the Organization for Economic Cooperation and Development (OECD) to support countries of Eastern Europe, the Caucasus and Central Asia to modernize the management of their water resources have paid off. Successes include the adoption of a water sector reform programme in Tajikistan, the reshaping of water tariff policy in Armenia and Kyrgyzstan, the development of new water legislation in Georgia and the setting of targets under the Protocol on Water and Health in a

number of countries. These success stories were presented and discussed at a meeting organized by UNECE and OECD under the EU Water Initiative in Paris on 12 and 13 May 2016 … A broad range of achievements were discussed, covering legal and institutional reforms, managing water for green growth, the water-food-energy nexus, and transboundary cooperation. Representatives of the European Commission reconfirmed the Commission's commitment to provide core funding of €24 million for the next four-year phase of the EU Water Initiative in the Eastern Partnerships countries — Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova and Ukraine. UNECE, OECD and a group of EU member States will jointly implement the activities. Support for activities in Central Asia will also be continued with practical arrangements still under preparation … National Policy Dialogues (NPDs) … are currently under way in 10 countries of these countries: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan and Ukraine. Experts from Belarus and Uzbekistan also attended the Working Group meeting. The next meeting of the Working Group will be hosted by UNECE in October 2016 in Geneva.
http://www.unece.org/info/media/news/environment/2016/celebrating-10-years-of-successful-unece-support-to-water-policy-reform-in-eastern-europe-the-caucasus-and-central-asia-in-paris/doc.html
For more information, please visit: www.unece.org/env/water/npd

NORD -AMERIKA

Scientists just found a huge reservoir of water below California
28 JUN 2016 Researchers have just found a huge reservoir of groundwater below California - making the supply of water below the state three times larger than previously estimated … won't solve the state's crippling drought, but the discovery suggests that more freshwater might be hiding in deep aquifers around the world than we think, and we need to figure out how to protect it … Stanford team have now analysed data from more 34,000 oil and gas wells in California, and estimated water volume all the way down to 10,000 feet (3,00 metres), and calculated that the reservoir actually contains 2,700 km3 - almost triple initial estimates … the reason the water was so hard to find the first time is it's incredibly deep - most of it was estimated to lie between 1,000 and 3,000 feet (300 and 900 metres) below the surface … newly found groundwater is already at risk of contamination from oil and gas extraction … the main reason it won't help today's drought is that we're going to need to preserve it for the future, when water shortages are predicted to get even more extreme … discovery … sheds some light on the fact that these deep aquifers exist, and suggests that we might be able to find similar last resorts of water below other drought-prone regions, such as Australia and Africa …
http://www.sciencealert.com/scientists-just-found-a-huge-reservoir-of-water-below-california

What drought? Many Californians no longer required to curb water use
24.06.16 After a year of mandatory water conservation that shortened showers and faded lawns, millions of drought-weary Californians will no longer be required to aggressively cut back their use. In order to comply with the state's latest emergency regulation, local water providers this week submitted documents intended to demonstrate whether their agencies have enough supply to meet customers' demands for another three severely dry years. The State Water Resources Control Board has not publicly posted the documents. But officials at several Southern California water providers said that they have enough water to pass the board's "stress test." Those agencies subsequently determined that no mandatory water conservation will be necessary over the next seven months … Water districts are inherently interested in selling more water — not less … And history has shown that voluntary conservation isn't typically effective …
http://www.latimes.com/local/lanow/la-me-ln-water-conservation-20160624-snap-story.html
Siehe auch:
Can California's water agencies keep up the conservation momentum?
June 1, 2016 Without mandatory regulations, some local districts fear a return to water waste. California's historic drought has led to immense pressure to conserve water, and during the last year, most Californians stepped up to the task. State "water cops" issued warnings and fines, people stopped washing their cars, and towns let their parks fade from

green to brown. After El Niño this winter, some regions received enough precipitation to replenish reservoirs and aquifers, so in May, Gov. Jerry Brown lifted the statewide ban on excessive urban water use, giving over 400 water districts the power to develop individual conservation standards. It was a controversial decision, because sweeping rules had finally moved people to take the drought seriously. Water policy experts fear a let-up in conservation, even though nearly 70 percent of the state remains in extreme drought. That concern isn't unwarranted. Although some districts want to keep enforcing strict mandates, others have been fighting for months to put a cap on them … Since more extreme droughts are inevitable … water agencies should keep up strong conservation efforts and focus on in-depth reports for the state …
https://www.hcn.org/articles/can-californias-water-agencies-keep-up-the-conservation-momentum
May 20, 2016 **California's Water Future** … Dr. Gleick pointed out — a call for voluntary cutbacks had little effect. The drought "was an opportunity to put in place smarter management policies," he said. More broadly, it was an opportunity for the state to get ready for the more frequent and severe droughts it is likely to face as the global climate changes. California can't afford to lose sight of that future just because it got a little rain.
http://takingnote.blogs.nytimes.com/2016/05/20/californias-water-future/?_r=0
05/20/2016 **Fixing California's Water** … Felicia Marcus … A philosophical person in a potentially bureaucratic position … has a lot of ideas about water governance and management … As the job title suggests, Marcus is responsible for all manner of water issues, from quality to quantity and from infrastructure to emergency regulations. While that makes common sense, California has localized the management and governance of water. There are more than 3,000 agencies, bureaus, irrigation districts, flood control boards, utilities and so forth just in California. As such, consistency is hard to achieve, but, even so, Marcus prefers to leave each locality with full autonomy, stepping in only when necessary ... Marcus described how she came to override her preference for local control and what the trigger was. Leaning on the models she knew from Israel and Australia, Marcus and the state Water Resources Control Board decided to take action - just in case the drought was worse than expected. Restrictions were imposed. Now, with conservation efforts resulting in a significant drop in water usage, thanks to those politically tough moves (and some robust rainfall), the state restrictions have been lifted … The solution to California's water problems won't come until farmers get more water and the environmental community gets the water it needs to protect endangered species …
http://www.huffingtonpost.com/seth-m-siegel/podcast-working-title_b_10027194.html
16 May 28 **Drought hasn't lifted, but California's water restrictions just did** … In the face of historic and extended drought, state officials warned that this was Californians' new reality when they imposed the harsh water restrictions on municipalities last June. But their tough talk did not last long. Two weeks ago, the State Water Resources Control Board voted to end those restrictions and let 408 water districts decide how much water their customers should conserve … Lax enforcement of customer water use has been a standing concern for years, critics note. Some say the loss of millions of dollars in revenue because of the restrictions is why many water authorities pressured the board to reverse course. "I don't agree with the decision. I think it was premature," said Peter Gleick, president and co-founder of the Pacific Institute … "It's too soon to talk about going back to our old wasteful patterns of water use. I think we're sending the wrong message to water users" …
https://www.washingtonpost.com/national/health-science/drought-hasnt-lifted-but-californias-water-restrictions-just-did/2016/05/28/bb555dec-22bd-11e6-8690-f14ca9de2972_story.html

Bill to Aid Water Supply by Restoring Forests
Jun. 23, 2016 A bill in the California Legislature aims to improve water supplies by restoring key watersheds in the Sierra Nevada and Cascade ranges. Critics say that's an important step, but the bill needs to go further … It has been estimated that more than 60 percent of California's freshwater comes from mountain storm runoff and snowmelt. Yet these mountain watersheds have never been officially recognized for their role in delivering and filtering this enormous share of the state's vital water supply. That may change soon. A bill in the state Legislature … would officially recognize five critical Sierra Nevada and Cascade watersheds as important pieces of the state's water infrastructure. It would enshrine in state policy the importance of restoring forests, meadows and streams in these watersheds, and make such projects eligible for state water-project grant funding … some studies have suggested the

Sierra could deliver more water if forested areas were cleared to create open space. The reasoning is that these areas would accumulate snowpack that would otherwise evaporate from the tree canopy. But the science on this is not robust, and it doesn't take into consideration other effects on the ecosystem. Clearcuts also cause snow to melt too fast, because they are exposed to the sun, thereby generating more erosion … The move to begin protecting Sierra watersheds got a boost last year when the Association of California Water Agencies (ACWA) released an important policy document. It recognizes the importance of mountain headwaters to the state, and calls for focused restoration efforts. The report is significant, because ACWA represents hundreds of water agencies that deliver 90 percent of California's urban and agricultural water supplies …
https://www.newsdeeply.com/water/articles/2016/06/23/bill-to-aid-water-supply-by-restoring-watersheds

Should California limit the number of small, new water systems?
06/20/2016 … Large urban areas, from the Bay Area to Los Angeles, asked residents to conserve, raised rates to buy water from other places and generally have gotten by without much inconvenience, other than brown lawns and shorter showers. But communities served by smaller systems, from farm towns to forest hamlets -- often lacking money, expertise and modern equipment -- have struggled and, in some cases, nearly run out of water entirely. Now, a bill by a Bay Area state lawmaker aims to slow the spread of little "mom and pop" water providers by making it very difficult to create new ones. The problem, says state Sen. Bob Wieckowski, D-Fremont, is that California has 7,642 water systems. Some serve only campgrounds, prisons or schools. Of the ones in communities with full-time residents, 63 percent have 200 or fewer connections. Many have no permanent employees. Some own only one well and have leaky, aging pipes and tanks. State records show they have far more health violations than large city water districts, involving everything from arsenic to bacteria levels in drinking water … Under current law, in much of California anyone can create a private company or a new public agency to set up a water system with a vote from local officials, such as the county … the debate, pitting environmentalists against business interests, is raising questions about whether bigger is better, and how much local control matters …
http://www.mercurynews.com/drought/ci_30036196/should-california-limit-number-small-new-water-systems

Surprising Way Climate Change Is Impacting Water
Jun. 14, 2016 Hydroclimatologist Bruce Daniels has analyzed 85 years of rainfall data collected all over California … to help Californians understand future water availability by examining 85 years of daily precipitation records. His analysis has shown that water managers (and the rest of us) have some reason to be concerned …found out that the groundwater recharge over the next 30 years would be reduced by 7 percent … Every time the temperature goes up 1 degree, the potential evaporation increases by 4 percent and in fact, some of the scientists looked at that drought that we had and they estimated that something like 20 percent of the drought was caused not by lack of rain but by the fact that we had that temperature which caused the rain we did get to evaporate … If things are changing, you need to know what those changes are, otherwise you can't plan how to adapt to those kinds of things … There was a paper a couple of years ago by three climate scientists; it was peer-reviewed, and they were saying that in the last half of this century there is a greater than an 80 percent chance of a 35 or more year drought, twice as extreme as we've seen in the last 1,000 years. People who have never thought about doing desal, maybe they need to. People who never thought about doing [water] recycling, maybe they need to. People who never thought about using stormwater runoff, maybe they need to. It's shocking and surprising and slow to seep in but it's the kind of thing that all of us need to be thinking about. The way things have been is not the way things are liable to be. And the way things are liable to be is going to be pretty spartan and tough to handle. So, let's start thinking about it now ... The typical thing for urban water systems is you restrict the water that your customers use – you raise the price, you put fines on people who use too much. That has been helpful this time in certain areas … customers heard the cry and they reduced it by 35 percent ... There were some areas that didn't meet the 25 percent asked of them … We're in bad shape. We have salt water intrusion all around us. For 30 years the boards in the past have pumped and pumped and pumped great deficits. The groundwater levels in

many places in our district are below sea level, which is just drawing the salt water in … If we get these big storms that lots of people are predicting, you can put in reservoirs and holding tanks and even furrows to slow water as it goes down the hill and give it a chance to soak in. Those are the kinds of things we can do to compensate for some of the climate change effects that are going to happen. Basically, the more we know, the better we can do. There are things that can be done. We have to be clever, we have to be hardworking, we have to invest in these kind of things. I think we can do the things we need to do to make this work. It's not going to be easy, but what's the alternative?
https://www.newsdeeply.com/water/articles/2016/06/14/surprising-way-climate-change-is-impacting-water

Water Conservation Saves Energy in California
June 9, 2016 California is moving away from mandatory water conservation rules. At least for now. Gov. Jerry Brown enacted mandatory 25 percent reductions across the state that went into effect last June, but this spring the State Water Resources Control Board moved to give local water agencies authority to determine how much conservation is needed. The latest numbers from April show a hopeful sign that perhaps conservation is becoming a way of life in California – even without government mandates. The Water Resources Control Board reported that Californians cut water usage by 26.1 percent in April compared to the same month in 2013. That's a reduction from 104 gallons (394 liters) per person a day to 77 gallons (292 liters). Nearly 60 percent of California remains in severe drought, so diligence on water conservation is still pertinent. But the benefits extend beyond just water. Because it takes energy to move and treat water (and wastewater), water conservation also translates to energy savings … research also turned up interesting information about how water and energy conservation efforts stack up. Between July and September 2015 – the only period for which researchers could get overlapping water and energy data – they found that the water conservation measures resulted in a savings of 460 gigawatt hours (GWh). That's almost identical to the amount of energy saved (459.4 GWh) through all the energy conservation programs put in place by the state's biggest investor-owned utilities … The key to converting the water conservation savings to energy savings is in figuring out the energy intensity of water supplies … How much Californians continue saving water, and therefore energy, remains to be seen as water suppliers are back in the driving seat when it comes to conservation rules now …
http://ww2.kqed.org/science/2016/06/09/water-conservation-saves-energy-in-california/

For some Native American communities facing water problems, hope circles the drain
June 16, 2016 ... Many homes on rural Native American reservations and in Alaskan Native villages lack access to clean water or sanitation … Nearly 30 percent of Native Americans and Alaska Natives lived in poverty in 2014 – approximately double the nation's overall poverty rate. And about 7.5 percent of Native American and Alaska Native homes did not have safe drinking water or basic sanitation as of 2013, according to the government's Indian Health Service … Tribes have spent years lobbying the government for adequate funds to improve impoverished living conditions and to recover from crises such as exposure to water poisoned by uranium and arsenic, but they often have difficulty competing for aid compared with places like Flint, Michigan, which has received extensive media coverage and subsequent aid to solve its lead crisis … Navajo Nation President Russell Begaye says the national attention and resources given to the 100,000 Flint residents marks a "day-and-night difference" compared with the response to mining pollution that in August contaminated water in the San Juan River used by his tribe. "It indicates to us that we are not a priority," Begaye says. "Maybe it is because we don't have the voting influence that Michigan has. Whatever the factor is, we definitely have been ignored"…
http://www.usnews.com/news/articles/2016-06-16/some-native-americans-lack-access-to-safe-clean-water

Canada's First Nations face systemic water crisis
8 June 2016 Report says that water in Canada's First Nations communities is contaminated and hard to access, rights group says … Canada is violating its international human rights obligations by failing to provide adequate, sanitary water supplies to First Nations communities, several of which are facing a "broader systemic crisis" … Finding alternative sources of water has placed an added burden on First Nations communities already

struggling with inadequate access to services, including healthcare and high poverty rates. Little access to clean water has also exacerbated the housing shortage on reserves, as many houses are overcrowded and new homes cannot be built without better water and wastewater systems … Human Rights Watch … called on Canada to develop a long-term plan - beyond the government's five-year funding period - to address water and sanitation problems, and establish an independent First Nations water commission to track Ottawa's performance. It also recommended that Canada consult with First Nations on the cultural importance of water, and how cultural traditions can serve as the basis for a more sustainable water policy …
http://www.aljazeera.com/news/2016/06/canada-nations-face-systemic-water-crisis-160607125748375.html

California Tribes Push Back on Water Issues
Jun. 7, 2016 California Tribal Policy Advisor Anecita Agustinez explains how Native American communities are impacted by some of the state's most pressing water issues. Implementation of California's groundwater law is a big focus for the state's tribal communities … Anecita Agustinez advises California's Department of Water Resources on concerns affecting the state's Native American communities. (DWR): … It is a whole new game for Tribes because it's the first time in any type of water history when some of their concerns were totally reviewed and looked at. Previously, Tribes haven't had access to state funds because they are not a water agency (as defined by the water code); therefore, they weren't eligible to receive state funds. But Proposition 1 allows for Tribes to be a direct applicant and eligible entity for its funding ... we want to make sure that if there are good tribal projects out there to be funded, that they get looked at. We are working on how to make sure Tribes understand that and are able to work collaboratively with their local water agencies and their funding regions in their surrounding areas … California Water Fix affects Tribes' ancestral territorial use and cultural resources. There are tribal concerns that ground disturbance [from building the tunnels and related infrastructure] may impact sacred sites or cultural areas. We are doing a series of consultations at the department with Tribes who may have an interest in that – not only on California Water Fix, but on Delta levy issues, too. The area is very significant for a lot of California Tribes – not only Tribes with traditional boundary areas, but Tribes throughout the state because it is a historical natural confluence area for travel, trade and resources … The key would be to develop a collaborative process between Tribes and the local water agencies and the agencies that are forming groundwater sustainability agencies … most local water agencies and other local authorities have not established a history of cooperative or collaborative processes of working with Tribes in their areas of jurisdiction … At the Department of Water Resources, we are trying to get to that point through working with Tribes and creating a Tribal Advisory Group, which has provided technical advisory information and serves as a conduit for messaging these important issues and concerns ... It's water policy management over the next 20 years that has to be looked at, and it's a great opportunity to understand that you can't be independent on some of these water issues. Water doesn't have boundaries – it's going to flow through tribal and non-tribal lands.
https://www.newsdeeply.com/water/articles/2016/06/07/california-tribes-push-back-on-water-issues

This Supreme Court decision has the potential to weaken the Clean Water Act
May 31, 2016 Mining companies want the right to challenge the government over what lands have protected waters — it has the potential to save them hundreds of thousands in permitting fees … the Supreme Court obliged with US Army Corps of Engineers v. Hawkes Co., ruling that federal determinations of protected waters are subject to judicial review, potentially weakening the government's ability to protect the nation's waters under the Clean Water Act … The US Army Corps of Engineers is responsible for determining whether a property has "waters of the United States," or "navigable waters" — waters that are protected by the federal Clean Water Act … The high court agreed, finding that because the Clean Water Act "imposes substantial criminal and civil penalties for discharging any pollutant into waters covered by the Act without a permit from the Corps," it should allow the checks and balances provided by a court. This case has the potential to weaken the Clean Water Act … This is not the first time the Clean Water Act has been questioned in the Supreme Court, and it likely won't be the last. The Clean Water Act has long been poked and pushed: There have

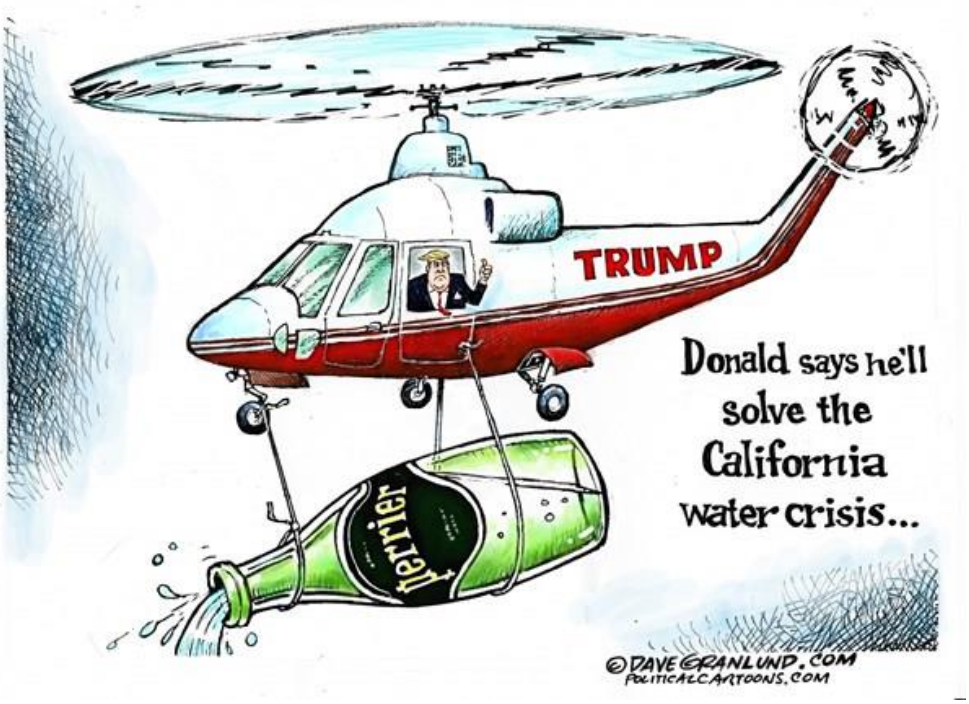
been nine Supreme Court cases either involving the corps or the Environmental Protection Agency in the past 30 years. Strategically, there are strong incentives for land developers to repeatedly question the Clean Water Act's procedures, and for the EPA and USACE it's "incredibly threatening, because it is a procedure that has already come under court scrutiny" … In 2006, the Supreme Court split on Rapanos v. United States, which questioned whether a Michigan wetland was protected under the Clean Water Act. Justice Anthony Kennedy, the swing vote in the case, didn't clearly define "navigable waters" or property rights in the case, and the laws since have becomes increasingly vague … Whether fighting for the ability to overturn a JD or just having the ability to stall a permitting process, USACE v. Hawkes Co. is simply part of that larger trend …
http://www.vox.com/2016/5/31/11656624/united-states-army-corps-of-engineers-vs-hawkes-clean-water-act-supreme-court

Fixing America's Water Crisis
05/31/2016 Let's face it: our water infrastructure is crumbling. The American Society of Civil Engineers estimates that there are 240,000 water main breaks in the United States each year, averaging to about 700 each day. Leaky water pipes and other water waste accounts for the loss of an estimated 7 billion gallons of clean drinking water each day … Across the U.S. there are over 90,000 schools and over 500,000 childcare facilities that aren't required to test their water for lead; potentially leaving America's most vulnerable citizens—our children—exposed to lead poisoning. The communities exposed to the potential consequences of lead poisoning are increasingly coming into focus. Cities like Washington, D.C. and Newark, New Jersey, are taking action to address elevated lead levels in their school water supplies … We would be remiss not to mention that repairing America's water infrastructure would create and sustain quality jobs across the country. Every $1 invested in upgrading water infrastructure in America result in increases by more than $3 to national economic benefits (accounting for multiplier effects of activity through all sectors of the economy). In the wake of the events in Flint, the U.S. Senate Environmental, and Public Works Committee took action to help repair water infrastructure in communities across the nation—recently approving legislation to reauthorize the Water Resources Development Act or WRDA … Fixing our water infrastructure will ensure all Americans have access to clean, safe drinking water, will protect public health, and will create good jobs rebuilding the systems meeting our nation's water needs. Congress needs, now more than ever, to work together to pass a strong WRDA bill with critical infrastructure investments. If we don't do something now, the problem is only going to get worse. The question is: how much worse does it need to get?
http://www.huffingtonpost.com/kim-glas/fixing-americas-water-cri_b_10150168.html

What California Can Learn From Israel About Water
May. 31, 2016 Could Israel's innovative use of water provide the answer for California and other water-strapped areas of the world? … With the formation of Israel in 1948, and a postwar exodus that drove up population in the region, Israel deepened its focus on water … For the production of food, especially, efficient use of water, and producing more where resources lagged, were essential … other arid economies look at Israel as a model and follow the young nation's path toward water security … . Its climate is dry – similar to that of California. However, whereas large rivers run through the arid regions of America's most populous state, Israel's surface water supply is scant. On top of that, its human population has boomed. Israel was home to about 800,000 people in 1948. Today, its population is 8 million. That's roughly a quarter the population of California crammed into a land area one-twentieth California's size. Moreover, Israel's "annual rainfall – not generous to begin with – has dropped by more than half" in the past several decades … Israeli leaders were forced to make almost immediate innovations. The nation employed scientists and engineers to design ways to reduce its demand for water, increase efficiency and create more usable water. In the 1950s, as parts of the developed world began cautiously discussing the novel idea of treating sewage water before discarding it, Israel was already contemplating treating and reusing its sewage water for irrigation. Today, 95 percent of its sewage water is treated to high levels of purity, and 85 percent is reused. In Israel agriculture consumes the majority of fresh water – as in California. The country has streamlined its farming systems … An Israeli invented drip irrigation … not a single farm in Israel uses flood irrigation – still standard practice in much of California … Desalination, perhaps more than any other technology, has

created autonomy for Israel from its neighbor nations … to make up 94 percent of household water use … However, desalination – though it seems a miracle – is not in itself a solution to a nation's water woes … Desalination is also an extremely energy-intensive process, and one that perhaps cannot – or should not, anyway – be sustained … Changing water demand is just as important as supply, as Israel has also shown … The parallels between Israel and California are well worth considering as water security emerges as a threat to the environment and the global economy. Israel and California are both agricultural powerhouses. Each is on the coast with, in theory, all the water it could ever want at hand. Each has large arid areas. Each has experienced a massive population boom over a brief span of time. The chief difference, perhaps, is that California, thanks to its unique geography of high mountains and large rivers, has had the liberty to wait on innovating advanced water-supply solutions …
https://www.newsdeeply.com/water/articles/2016/05/31/what-california-can-learn-from-israel-about-water

Water managers look to Alpine Lakes for more water
May 29th 2016 - Seven spectacular high-country lakes in the Alpine Lakes Wilderness for decades have helped irrigate hundreds of acres of pear, apple and cherry orchards in the Wenatchee Valley and supplied water to a federal hatchery. Now, with increased pressures on water supplies, managers are looking to tap more from those reservoirs to satisfy the needs of Leavenworth, Chelan County, agriculture and fish. Environmental groups and others, however, are worried the projects - including a $1.6 million proposal to rebuild a collapsed dam - would substantially impact the pristine wilderness area enjoyed by thousands each year. A coalition of groups says more conservation measures should be considered before new water supplies are tapped …
http://komonews.com/news/local/water-managers-look-to-alpine-lakes-for-more-water



160531 Grundland_Trump_and_CA_water_crisis

Donald Trump: "There is No Drought" and Other California Water Inanities
05/28/2016 Peter H. Gleick Today in a rally in Fresno, California, Donald Trump made a few comments about water. They were all inanities, parroting old Republican mis-statements and misrepresentations about the causes of California's water challenges. Apparently, he was fed these lines and comments in a meeting with some representatives from the agricultural sector right before his Fresno rally ... It was painful to listen to and his style and grammar are pretty non-linear. The gist of Trump's mostly content-less statements is:
(1) There apparently isn't a California drought (though, look here).
(2) The entire water problem is the fault of environmentalists and California's senators who "shove" all the water out to sea to protect "a three-inch fish" (referring to the endangered Delta Smelt).

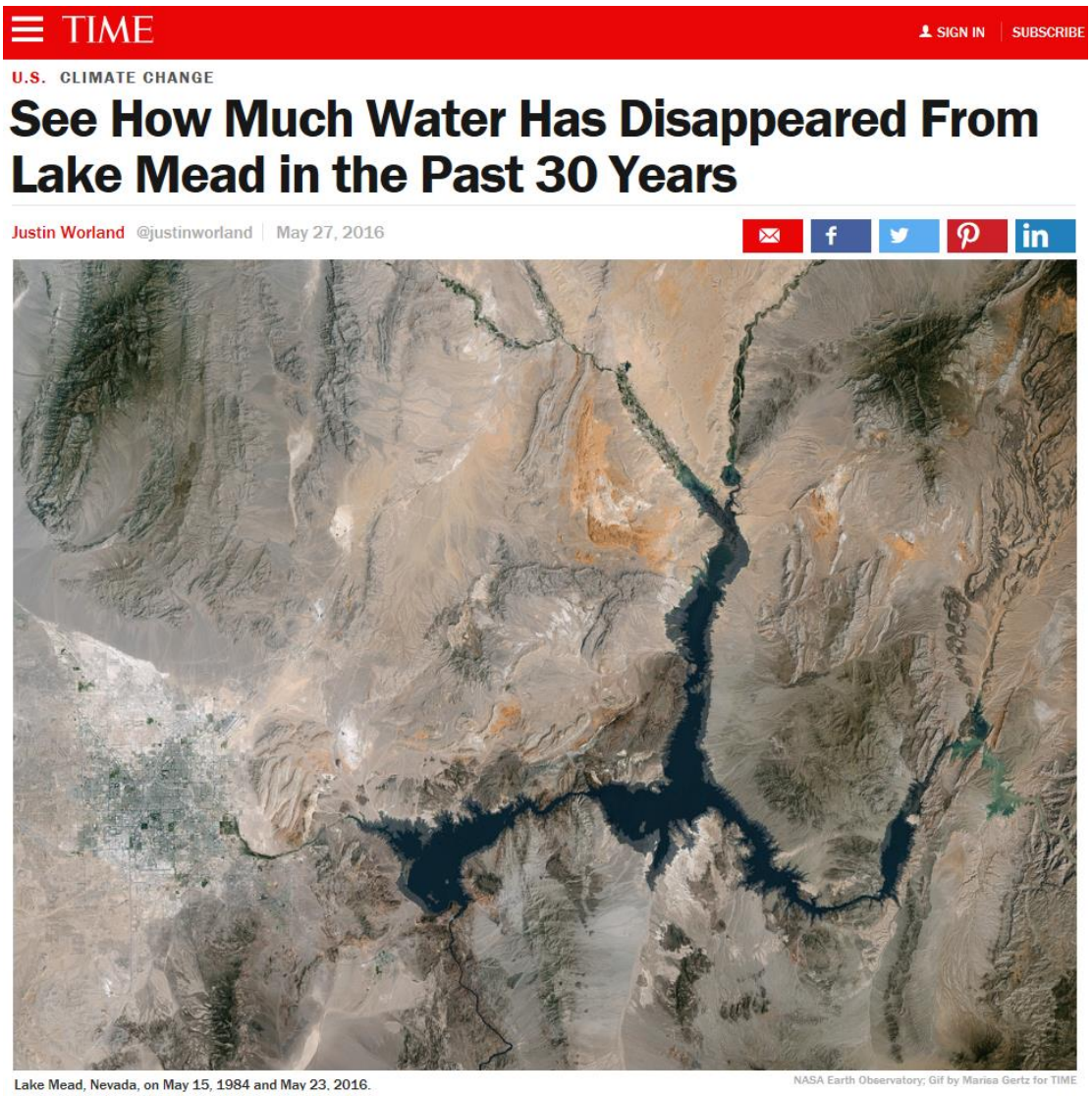
(3) And when he “wins” he’s going to come back to California and “start opening up the water.”
… Here are the highlights of Trump’s disjointed, factually wrong, and weirdly self-congratulatory comments…
-“There is no drought. They turn the water out into the ocean.”
-“We’re going to solve your water problem. You have a water problem that is so insane. It is so ridiculous. Where they’re taking the water and shoving it out to sea.”
-“I said, oh, that’s too bad, is it a drought? “No, we have plenty of water” and I said well what’s wrong and they said well we shove it out to sea. And I said why? And nobody even knows why and the environmentalists don’t know why. Now they’re trying to protect a certain kind of three-inch fish. But no, no think of it. So nobody even knows why. And by the way the environmentalists don’t know why.”
-“And you know I should say this, I’ve received many, many environmental rewards. You know, really. Rewards and awards. I have done really well environmentally and I’m all for it.”
-“You know my environmental standard is very simple and I’ve said it to everybody: I want clean air and I want clean water. That’s what I want. Clean air, clean water.”
-“Very, very simple. So anyway so we’re going to be back up here. If I win, believe me, we’re going to start opening up the water so that you can have your farmers survive. So that your job market will get better” …
http://www.huffingtonpost.com/peter-h-gleick/donald-trump-there-is-no_b_10176882.html

Donald Trump sides with agriculture over environmentalists in California water clash
May 27, 2016 Donald Trump cast the unending controversies over California’s water supply as a fight between farmers and environmentalists … and he took the side of agriculture … Without mentioning their names, he cast California’s Democratic senators, Dianne Feinstein and Barbara Boxer, as adversaries of farming who try to “play both sides” … “When you’re with the senators, they want you,” he told the crowd, including many waving “Farmers for Trump” signs. “And then they go over to the environmental side, and they want them. And then you say, ‘Gee, that’s strange. They’re for me. We want the water, but the environmentalists just endorsed them. I wonder why ”…
http://www.latimes.com/politics/la-na-trailguide-05272016-donald-trump-sides-with-agricu-1464378718-htmlstory.html

House wading into California's long-running water war
May 25, 2016 … Wading into a longstanding California water war, the House … endorsed a Republican plan to shift more water to San Joaquin Valley farmers and cut the flow for threatened fish and growers in another part of the state … Battles between Republicans controlling the House and California's two Democratic senators have for years prevented Congress from acting on the state's water issues …
http://www.usnews.com/news/politics/articles/2016-05-25/house-wading-into-californias-long-running-water-war

Lake Mead helps supply water to 25 million people. And it just hit a record low.
May 23, 2016 … Last week, Lake Mead — a key reservoir that helps supply water for 25 million people in Nevada, Arizona, and California — shrunk to its lowest level ever. And the question of how to grapple with water scarcity is making headlines yet again. Back in the 20th century, the United States built an army of dams across the West to tame rivers, generate electricity, and store water in reservoirs for cities and farms. This intricate system is why metropolises like Los Angeles, Las Vegas, and Phoenix have been able to survive in what's basically a desert. Large-scale farming is really only possible in California's Imperial Valley or central Arizona because of these dams. But rising demand and 16 years of drought have put a severe strain on this system … If water levels at Lake Mead continue to plummet, the federal government could declare an official water shortage and force (potentially) painful cutbacks … So what would an official "shortage" mean in practice? … at Lake Mead under current rules would mainly affect Arizona … Under the 1968 agreement, Arizona has to cut back on water use before anyone else. And … the state does have a plan for this. The Central Arizona Project would continue to keep water flowing to cities like Phoenix and Tucson, Indian tribes, and high-priority agriculture. But it would cut back on "low-priority" agriculture and delay refills to groundwater storage … Next comes Nevada. Las Vegas — which gets 90 percent of its water from Lake Mead — is likely to be okay for the time being

… Las Vegas has also been building costly new water intake systems so that it can keep drawing water from Lake Mead even if water levels keep dropping further … Finally, there's California. Under the original 1968 agreement, California wouldn't see any cutbacks from the Colorado River until the Central Arizona Project went dry. In the event of an official shortage, Los Angeles, San Diego, and the Imperial Valley would continue to get their full share of Colorado River water for years to come. But those are the current rules. More recently, officials in Arizona, Nevada, and California have been discussing a brand new agreement that, they hope, would divvy up the Colorado River's increasingly scarce water in a fairer and more sensible way. Under a renegotiated deal, Arizona and Nevada would cut back even more sharply in the event of a shortage — but California would also have to start sharing the burden and make some sacrifices of its own ... Up until now, there's always been plenty of water from the Colorado River to go around. It's increasingly difficult to take that for granted.
http://www.vox.com/2016/5/23/11736340/lake-mead-water-drought-southwest
siehe auch:
May 23, 2016 **Going There: The Future Of Water** … Colorado River has been a major source of water in the Southwestern United States region, but many worry that it's beginning to dry up …
http://www.npr.org/2016/05/23/478568014/going-there-the-future-of-water



http://time.com/4350964/lake-mead-water-level/

INDIEN

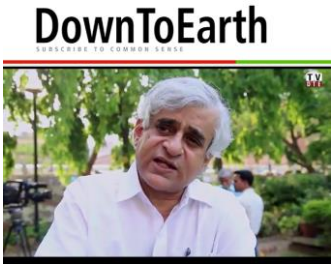
Traditional irrigation keeps water flowing in drought-hit India
Jun 21, 2016 Ask the farmers in remote Baksa district, in the northeast Indian state of Assam, whether they are affected by climate change and they usually respond with a look of surprise. Across much of India, farmers are struggling to adapt as their crops fail season

after season as a result of increasingly unpredictable and often dry weather. But in Baksa, along Assam's border with Bhutan, farmers have never seen their harvest ruined by drought or delayed rainfall, despite having no access to irrigation pipes or water pumps. Their secret is a 100-year-old indigenous irrigation system called dong bandh – a network of canals that uses the downhill flow of the area's rivers and streams to bring water to villagers and their fields. Built, monitored and maintained by locals, the system gives the district's residents access to clean water even as droughts devastate many other areas of the country … farmers a century or more ago found a way to make the land work for them. They built small dams on the rivers and routed the water through canals to their paddy fields and household ponds … The irrigation system uses canals dug from a nearby river and then smaller sub-channels that carry the water to fields and villages. The 50-member committees put one member in charge of each sub-canal, with the job of monitoring it every day and reporting to the committee about any damage or other issues … While the dong bandh system was created before the world recognized the effects of climate change, people in Baksa see it as a prime example of how communities can work together to overcome the challenges of their environment ...
http://www.reuters.com/article/us-india-irrigation-water-idUSKCN0Z70RD

INDIA - Draft water bill proposes 'water for life' for all
June 3, 2016 Draft law says water shall not be denied to anyone over inability to pay, being proposed as model legislation for states. A proposed new law on water promises to give every person the right to a minimum amount of "safe water", while making the state "obliged" to "protect" and conserve water. The draft National Water Framework Bill says every person would be entitled to "water for life" that shall not be denied to anyone on the ground of inability to pay. It defines this "water for life" as that basic requirement that is necessary for the "fundamental right of life of each human being, including drinking, cooking, bathing, sanitation, personal hygiene and related personal and domestic uses". This would also include the additional requirement for women "for their special needs" and the water required by domestic livestock … Draft Bill seeks right to water,25 litres daily for each … A separate draft Bill for 'Conservation, Protection, Regulation and Management of Groundwater' has also been prepared and put in the public domain for suggestions … The ministry has said there was a need for a "broad national consensus" on issues related to water. Divergences of policies on water were "inevitable" and "acceptable" at the level of states, but these need to be within "reasonable limits" set by this national consensus … A "binding" national water quality standards for every kind of use is proposed to be introduced. A "binding" national water footprint standards for "every activity or product" are also sought to be evolved. The draft law says it would be the "duty" of everyone to strive towards reducing their "water footprint" … To deal with inter-state water disputes, the draft law proposes the establishment of "appropriate institutional arrangements". "The upper basin state shall adopt a cautious and minimalist approach to major interventions in the inter-state rivers…," it says, while stressing that none of the states in a basin "owns the river".
http://indianexpress.com/article/india/india-news-india/save-water-water-resource-ministry-draft-water-bill-proposes-water-for-life-for-all-2831551/

Indien - Dramatische Folgen von Wassermangel
28.05.2016 In Indien haben die Menschen in der Region Marathwada mit katastrophaler Wasserknappheit zu kämpfen. Neben einer langanhaltenden Dürre sind fehlendes Umweltbewusstsein und falsche Produkte in der Landwirtschaft für die Katastrophe verantwortlich. Die Regierung will den Wassermangel mit Flusserweiterungen und zusätzlichen Kanälen bekämpfen - doch auch dafür reicht das Wasser nicht ... Zuckerrohr wächst gut, braucht aber unendlich viel Wasser. Nicht zufällig finanziert die Familienstiftung eines inzwischen verstorbenen Politikers der Kongress-Partei, der Partei der Ghandis, den Wassertransport innerhalb der Stadt. Der Familie gehören die meisten Zuckerrohr-Plantagen sowie die Zucker-Fabrik in der Stadt. Und viele in und um Latur erreicht selbst diese Hilfe nicht. Wer nur wenige Kilometer vom Zentrum der 350.000 Einwohner-Stadt entfernt lebt, bleibt buchstäblich auf dem Trockenen … Die Regierung von Premierminister Modi plant, Flüsse in den Dürreregionen zu verbreitern, Wasser über Kanäle umzuleiten – als wenn es Wasser genug gäbe. Gibt es nicht, der Grundwasserspiegel sinkt immer weiter, die geplanten Kanäle, fürchten Umweltschützer, werden tief in den Lebensraum der Tiere in und an den Flüssen eingreifen. Ihre Hoffnung: die Pläne bleiben auf dem Papier und werden nie

umgesetzt ... Für die Bauern um Latur ist die Lage katastrophal. Sie verdienen kein Geld und müssen häufig Schulden zurückzahlen, die sie aufgenommen haben, um Saatgut zu kaufen … Die Äcker sind vertrocknet, und der Monsunregen ist noch lange nicht in Sicht. Das Vertrauen in die Regierung, in deren Fähigkeit, das Problem zu lösen, ist nicht groß. … http://www.deutschlandfunk.de/duerre-in-indien-dramatische-folgen-von-wassermangel.799.de.html?dram:article_id=355425



VIDEO
04.05.2016 Mismanagement of water bigger reason for drought …
http://www.downtoearth.org.in/video/mismanagement-of-water-bigger-reason-for-drought-p-sainath-53831

WASSERQUELLEN

UN-WATER
The full picture - a holistic water goal
07.06.2016 - For sustainability over time, it is essential to look at the water cycle in its entirety, including all uses and users. Building on the traditional representation, this illustration shows how the targets within SDG 6 cover the whole holistic water cycle in an integrated manner … Building on lessons learnt from the MDG period where the focus lay on drinking water and basic sanitation, this is a first step towards addressing sector and regional fragmentation …
http://www.unwater.org/news-events/news-details/en/c/417707/
Water Cycle in SDG (Grafiken)
http://www.unwater.org/fileadmin/user_upload/unwater_new/docs/SDG6_watercycle_UN-Water_highres_web.pdf
http://www.unwater.org/fileadmin/user_upload/unwater_new/docs/SDG6_targets_UN-Water_highres_web.pdf

SWP
Die Umsetzung der VN-Agenda 2030 für nachhaltige Entwicklung - Welche Signale Deutschland jetzt international setzen sollte
März 2016 Beim Nachhaltigkeitsgipfel der Vereinten Nationen (VN) im September 2015 haben die Staats- und Regierungschefs und -chefinnen aller Mitgliedstaaten die 2030-Agenda für nachhaltige Entwicklung verabschiedet … Die SDGs führen alle Themenbereiche der MDGs weiter, darunter Armutsbekämpfung, Hunger, Gesundheit, Bildung, Geschlechtergleichstellung, Wasser- und Sanitärversorgung. Neu hinzu kommen Ziele zu Energie, Wirtschaftswachstum und menschenwürdiger Arbeit, Infrastruktur und Innovationen, zur Stadtentwicklung und ein Ziel zur Verringerung von Ungleichheit. Umweltschutzaspekte sind durchgängig viel stärker inte-griert und auch von eigenen Zielen zu Klima, Meeren, Landökosystemen und Biodiversität abgedeckt. Ein Novum ist SDG16 zu Frieden und Governance. Neu ist auch, dass sowohl unter allen SDGs als auch in einem eigenen Ziel (SDG17) die Mittel für die Umsetzung gleich mitverhandelt wurden … Die Mitgliedstaaten sind aufgefordert, ihre Nachhaltigkeits- oder Entwicklungsstrategien und Planungsprozesse entsprechend neu auszurichten. Doch wirft schon dieser erste Schritt Probleme auf. Wie motiviert man alle Ressorts dazu, mitzuarbeiten? Wie lassen sich Parlament und kommunale Verwaltungen sinnvoll einbeziehen? Wie kann die regionale Ebene eingebunden werden, vor allem wenn auf ihr – wie im Falle der EU – relevante Kompetenzen angesiedelt sind? Die Bundesregierung hat entschieden, die seit 2002 verfolgte deutsche Nachhaltigkeitsstrategie entlang der SDGs neu auszurichten, samt der darin verankerten bislang 21 Ziele und 38 Indikatoren. In New York hat sich die Bundesregierung verpflichtet, alle 17 Ziele zu bearbeiten, inklusive aller 107 inhaltlichen Unterziele und der 62 Ziele, welche die Mittel für die Umsetzung betreffen … Bereits jetzt beklagen Vertreter der VN-Mitgliedstaaten, dass es

schwer sei, die gesamte Regierung und Verwaltung für die Umsetzung mit ins Boot zu holen. Das aber ist Voraussetzung für eine umfassende Neuorientierung von Politiken … Nur wenn es gelingt, die Ziele für nachhaltige Entwicklung in allen Ressorts und Politik-bereichen zu verankern, gibt es eine Chance, dass der transformative Anspruch der Agenda eingelöst werden kann …
http://www.swp-berlin.org/de/publikationen/swp-aktuell-de/swp-aktuell-detail/article/die_umsetzung_der_vn_agenda_2030_fuer_nachhaltige_entwicklung.html
english version:
Reviewing the Implementation of the 2030 Agenda for Sustainable Development - »Early Movers« Can Help Maintain Momentum
http://www.swp-berlin.org/en/publications/swp-comments-en/swp-aktuelle-details/article/reviewing_the_implementation_of_the_2030_agenda_for_sustainable_development.html

Greenpeace
The Great Water Grab - How the Coal Industry is Deepening the Global Water Crisis
29 March, 2016 … focuses on energy-water conflicts which are linked to the coal industry's impact on current and future water demand … study features five case studies of water conflicts due to coal expansion and identifies regions in which already existing and planned coal plants will further aggravate water scarcity … with several recommendations for policy makers on how to avert a more severe water crisis in the future by investing in less water-intensive forms of energy generation …
Why coal is so thirsty
Modelling the coal industry's water demand
Country cases: water conflicts due to continual coal expansion
- South Africa: Coal expansion prioritized over air quality and water security
- India: Intensifying competition for water pits coal power plants against farmers
- Turkey: Coal Rush set to deepen water crisis
- China: China's legendary rivers straining to keep up with energy and industrial expansion
- Poland: The world's most coal-dependent nation needs an urgent energy policy rethink
Ways of averting the water crisis
Conclusion: moving away from the coal - water crisis
https://www.greenpeace.de/sites/www.greenpeace.de/files/publications/coal_water_report_2016.pdf

WATERWISE

Water Alternatives 9(2)
http://www.water-alternatives.org/index.php/current-issue

Water, Infrastructure and Political Rule: Introduction to the Special Issue
… Karl Wittfogel published his signature book Oriental Despotism. A comparative study of total power in 1957, his 'hydraulic hypothesis' on causal linkages between large-scale irrigation systems and autocratic leadership has attracted massive attention … 'hydraulic thesis', which has – for all its faults – continued to inspire and provoke scholars to tussle with the relationship between nature, technology and society for decades … we bring together leading water researchers with different disciplinary roots and epistemological perspectives to revisit the relationship between water, infrastructure and political rule … can be re-interpreted and explained from the vantage point of contemporary scholarship …
… Politics of water: Critical water studies, too, emphasise the inherently political nature of water. They explicitly look at the power and politics at play in water resources situations … Water politics here refers to water use, management and governance as processes of contestation, in which different actors negotiate and struggle in a variety of ways over meanings of, rights to, use of, benefits derived from, and many other aspects of water. One way to identify different types of water politics is to distinguish different domains of it – each with their own stakeholders, stakes and modes of engagement … In 'everyday politics' local actors contest the daily use and management of water itself. In the 'politics of policy' decision-makers, social movements, researchers, and other actors contest the normative frameworks that inform policy and the institutional arrangements for their effectuation –

traditionally in the arena of the state, but also in corporate and civil society arenas. In 'hydropolitics', the water version of transboundary resource governance, different actors, mostly still state actors, negotiate water allocation and derived benefits and costs, and through that broader issues like national security and geopolitical relations. In the domain of 'global politics', which has emerged in the past decades as part of the general growth of global environmental governance, international agencies, national governments, multinational corporations and various advocacy groups and expert organisations attempt the framing of global rules and regulation mechanisms for water use, management and governance …

Water governance: Studies using a governance concept focus on (institutional) actors and institutional levels. Governance can be seen in the context of various institutionalist theories and is nowadays a central subject of social science research. The concept aspires to overcome the exclusive concentration on formal governments (elected or not) and to take into account all actors involved in the making of policies, including private stakeholders, municipal authorities or NGOs but also family clans and patron-client networks. Typically, governance studies are concerned with the delivery of services in the spheres of security, rule, and welfare, explaining the circumstances under which these services can be provided effectively and legitimately … One of the points of criticism raised against the governance concept is that the discussions centring on it use the terminology of modern, developed statehood. Often Western-determined notions of private and public, state and non-state etc. do not necessarily fit non-Western examples. In "spaces of limited statehood" central elements of statehood cannot be taken for granted, and non-state actors are involved very much in political guidance … On the one hand, governance studies tend to regard non-state regulation very positively as 'new' forms of governance being effective and contributing to general welfare. On the other hand, studies operating with the governance concept often devote themselves to developments in authority fragmentation that frequently evoke criticism of lack of transparency, lack of accountability, clientelism and the like … Studies of water governance pay particular attention to issues of integration between different territorial orders (international, national, regional, municipal, basin, etc.) as well as between different levels of institutions, from micro to global institutions … The study of power in relation to water (infrastructures) has targeted a variety of political regimes. Historians, in particular, have demonstrated how power has been legitimised, represented and sustained through the materiality of infrastructure and the metabolism of water in highly diverse political orders … First, in imperial, colonial and postcolonial regimes water usage and water infrastructures have played an important role in imperial integration. Hydro-engineering constructions such as dams have produced and manifested imperial and colonial power. Social and material inequalities of the colonial period have been cemented by water infrastructure projects and thus prolonged into the post-colonial period … Second, nation-building and nationalism can be very fruitfully analysed through water-related infrastructural projects as demonstrated in the influential study … on the "making of modern Germany" … presents various landscape transformation projects including land reclamation in the Oder Marshes, the 'correction' of the Rhine, and the (National Socialist) plans for the colonisation of Eastern Europe. All these endeavours, he argues, were formative for and indicative of the (Prussian-)German nation building from the 18th to the 20th centuries but also represent other political ideas like democracy or communism. Third, state-building and state operations are an important political context of water infrastructure projects in very different settings. The seminal study Seeing like a state … has directed our attention to the modern state’s quest for 'legibility' of nature and populations … terms 'high modernism' regimes, authorities and planners cooperate and realise grandiose schemes of social and natural engineering which ultimately have to fail because of their neglect of local and ecological conditions … inspired research and reflections on the nexus between water infrastructure and state politics, especially for non-European settings … Next to state authorities and planning agencies, non-state actors such as hydropower corporations and international investors come into play in the process of state-making as well … Even the weak and failing state is concerned with hydro-infrastructures … The rulers’ 'hydro-agricultural mission' can be traced from the colonial period to the present Al-Ingaz regime. While the Sudan state is "centralised, weak and violent", it still functions as an agency for "elite accumulation and control". The state building efforts are concentrated in the riverine heartland by the Nile. Power is accumulated in the centre while the peripheries are exploited … Fourth, socialist and postsocialist settings have been the object of water-related research. The analysis of large dam construction and also of

irrigation in Russia, Siberia, Slovakia and Soviet Central Asia has demonstrated how tightly water infrastructure projects and irrigation construction systems were interwoven with socialist visions of remaking landscapes and society ... Research on the post-1991 period shows how difficult and disillusioning the transformation of irrigation agriculture has turned out to be after the collapse of the socialist regimes … Finally, contemporary Western societies and neoliberal tendencies, primarily privatisation and globalization, have become another nucleus of research. Marxian perspectives argue that nature's relationship with capitalism is deepening … Nature is reconfigured, conceptually, semiotically, and materially, to be integrated into new accumulation regimes … financial crisis has attracted a growing number of financial investors to the water sector; water is becoming increasingly financialised ... A global movement to increase the involvement of the private sector in water supply and distribution began in the late 1970s, culminating in the 1990s in a paradigm shift towards privatisation … Empirical studies since then have generated a substantial body of scholarship refuting many of the claims made in favour of privatisation/private-sector participation. These relate, for instance, to the loss of influence of water users in England and Wales …, the effect on water pricing … or the increasing role of transnational water companies … At the same time, research is also highlighting how water privatisation has unwittingly mobilised considerable opposition and, with it, alternative models for the collective organisation of water supply services … ask whether debates on privatisation are missing the point, and answer in the affirmative. Commenting on recent developments, anthropologists remind us that long-lasting cultural values, worldviews and social norms exert a powerful influence over water management decisions and thus have to be taken into account …
http://www.water-alternatives.org/index.php/alldoc/articles/311-a9-2-1/file

Platform for exchange on environment, conflict, and cooperation (ECC).
Security Implications of Climate Change in Fragile States
30 March, 2016 Stéphane Dion, Minister of Foreign Affairs, Canada
… Five years ago, when hundreds of thousands of Egyptians filled Tahrir Square during the Arab Spring, they were not shouting "climate change." They shouted "down with injustice, corruption and poverty." But the motto on the square was "bread, freedom, social equality." Bread. It accounts for almost 40 percent of the Egyptian diet. And food accounts for roughly 40 percent of Egyptians' household budget. With serious land and water scarcity issues, the country cannot produce enough wheat for domestic demand. Egypt is the world's largest wheat importer. In the winter of 2010 and 2011, China – the world's second-largest wheat producer – was struck by a "once-in-a-century" drought. At the same time, wheat production in Russia, Ukraine, Australia, Pakistan and Canada also fell dramatically due to drought, wildfires, floods and abnormal weather … The 2007-2010 drought in Syria was the worst drought on record, causing widespread crop failure and a mass migration of farming families to urban centres. A United Nations Development Programme report found that nearly 75 percent of farmers in northeastern Syria experienced total crop failure and herders lost 85 percent of their livestock. Another United Nations report found that more than 800,000 Syrians lost their entire livelihoods as a result of the droughts. This environmental disaster and resultant migration put significant strain on Syria's economically and water-stressed cities. Displaced farmers had to compete for jobs, housing and services. Egypt, Syria, the list goes on: 14 of the world's 33 most water‑stressed countries are in the Middle East and North Africa. Climate change did not cause the Syrian civil war; climate change did not cause the Arab Spring; climate change did not cause the Egyptian uprising. The cause of the political turmoil was multi-faceted, with a democratic deficit playing the leading role. But climate change amplified the risks. It exacerbates droughts and other disruptive natural phenomena … water management disputes. Historically, water disputes are resolved diplomatically. In fact, through mediation they have proven to be a source of peace- and confidence-building. However, that may change because most water agreements fall short on dealing with climate challenges such as flood management, water flow and volume for hydro generation, agriculture and human consumption … Finally … the unintended negative consequences of some climate policies and programs. A classic example is addressing water shortages through irrigation improvements, to the disadvantage of communities downstream, without a keen attention to a conflict-sensitive approach. Climate change will not create these conflicts, but it is very likely to multiply them … We need action. And action in an integrated way. Addressing climate change in fragile states requires us to move out of our professional

comfort zones, the silos within which we each often work, and focus on truly interagency, cross-sectoral and multilateral efforts … Prime Minister Justin Trudeau has asked all his ministers to work together on this issue, not only the environment and climate change minister, the Honourable Catherine McKenna, but also the international development minister, the defence minister, the public safety minister, the foreign affairs minister and in fact, the whole cabinet … This holistic approach is what we need within our countries, but also between countries … That is the right approach. That is the way for developed countries to engage fragile states on adapting to climate change now, before they fall into chaos and become failed states. As the rest of the world marches forward with adapting to climate change, we should not leave fragile states behind … In conclusion, the day when climate change is as mainstream for security experts as arms control is, as the evolution of interest rates is for economists, as the weather is for farmers, then we will be much better equipped to meet our objectives … But we are not there yet …
https://www.climate-diplomacy.org/news/keynote-security-implications-climate-change-fragile-states

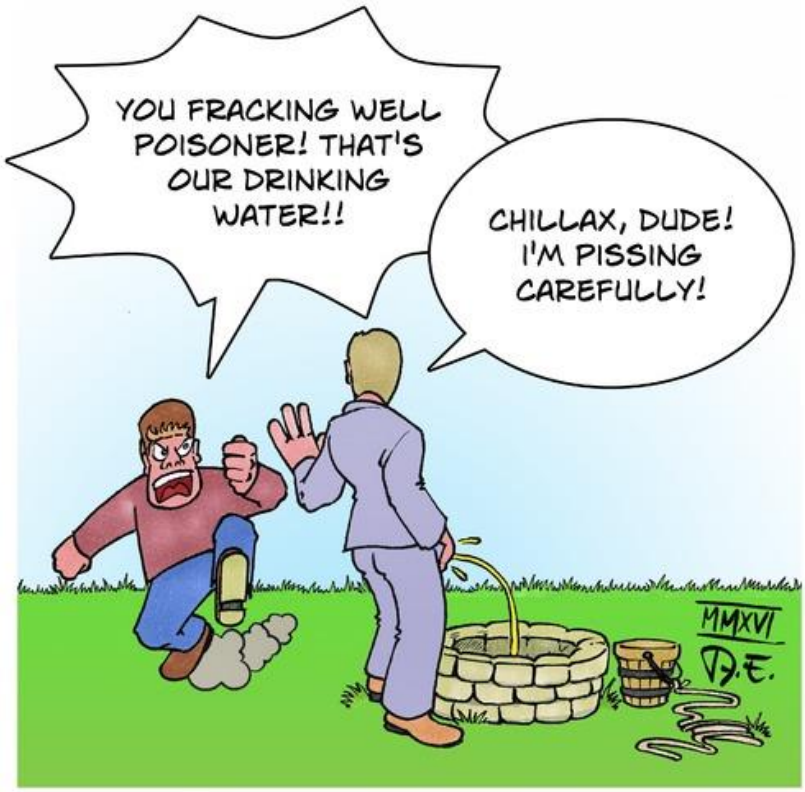
Disaster Risk Reduction: a Task for Military, Intelligence and Diplomacy?
10 June, 2016 … What the intelligence and military communities can do is give a very realistic assessment of the vulnerable points and the critical nodes in the system. We need to focus on those critical nodes. We also need to be able to identify the early-warning signals. Specifically for disasters, two types of those can be defined: discrete disasters that require traditional responses (e.g. typhoon in the Philippines, which leads to the responsibility of the US to send in the 3rd Marine Expeditionary Unit) and complex disasters, in which multiple things happen simultaneously. For the latter, we need to ensure that our allies are not overwhelmed by these issues and have the confidence that they will get assistance. It is also crucial to work in advance … The projects that the US Pacific Command has worked on for years are a good example. The aim of these projects is to do disaster scenarios in advance and invite all countries from across the Pacific to work together so that ahead of time all parties know who has the capabilities to respond in case of a disaster. Those discussions in advance not only help increase disaster response capabilities but they also have diplomatic benefits of countries talking to one another about technical issues. Climate security is not only about coping with destabilisation and conflicts. If we start acting ahead of time, we can create dialogue and form the structures and networks that can help prevent the conflicts. Important things can be done in advance to strengthen governance (e.g. signing transboundary water agreements, agreements for intervention in airfield use, etc.). Only the diplomatic corps or related agencies can do this. The military may have a role in warning about what might happen in the future and advise on the actions needed, but the confidence-building and the formation of diplomatic networks are the tasks of other agencies, such as the Foreign Ministries, the US State Department and so forth …
https://www.climate-diplomacy.org/news/21-role-military-intelligence-and-diplomacy-disaster-risk-reduction

WASSERKUNST

Mit Christo über das Wasser wandeln
18.06.2016 … "Verpackungskünstler" Christo hat der Welt wieder eine faszinierende Großinstallation beschert: Bei seinem Projekt "Floating Piers" können Menschen auf orangenen Stoffbahnen über das Wasser eines Sees in Norditalien wandeln. Hunderttausende werden dazu erwartet … Der 81-jährige Künstler und sein Team hatten in den vergangenen Monaten Schwimmwürfel aus Kunststoff zusammengeschraubt und dann mit dem leuchtenden Polyamidgewebe überzogen, dessen Farbe je nach Lichteinfall changiert. Der Stoff wurde in der Nähe von Münster hergestellt und in Lübeck konfektioniert und vernäht. Insgesamt kostete das Projekt, das für jedermann rund um die Uhr gratis zugänglich ist, 15 Millionen Euro … Die Stege, die nicht schaukeln, sondern die Bewegung des Wassers gewissermaßen in sich aufsaugen und nachempfinden, wurden von Tauchern mit 190 tonnenschweren Ankern auf dem Grund des Sees befestigt …
http://www.haz.de/Nachrichten/Kultur/Uebersicht/Kunstprojekt-Floating-Piers-in-Italien-Mit-Christo-ueber-das-Wasser-wandeln

17.06.2016 VIDEO: Christo geht übers Wasser
http://mediathek.daserste.de/Mittagsmagazin/Christo-geht-%C3%BCbers-Wasser/Video?bcastId=314636&documentId=36039940

… dann war da noch:



160626 Essner fracking

Beste Grüße von der Elbe!

Jörg Barandat
editorial@waternews.de

„… Handled correctly, collaboration over water management could be a trigger for wider cooperation and reconciliation among countries, notably in the Middle East. Jörg Barandat, a lecturer at the German Armed Forces Command & Staff College, pointed to Central Asia as another area where the EU and OSCE could work to boost cooperation on water, energy and climate change, possibly improving relations with Russia and China. “Water can change from an object of conflicts to a catalyst for cooperation,” he wrote …"
2016 Security Jam Report, p 49
http://www.friendsofeurope.org/media/uploads/2016/06/SECJAM_REPORT_Executive-summary_WEB1.pdf

---

Info: Zusammenfassungen der WATERINTAKE-Newsletter sind abgelegt in: >WASSER: Ressource - Risiken – Chancen<:
https://www.xing.com/net/libinter/wasser-ressource-risiken-chancen-by-joerg-barandat-22145/

Der aktuelle >**W A T E R I N T A K E**< wird jeweils im Massenbach-Letter geposted:
http://udovonmassenbach.wordpress.com/
… der letzte > 2/2016 < vom 16.05.2016
https://udovonmassenbach.wordpress.com/2016/05/17/joerg-barandat-waterintake-22016/
pdf: https://udovonmassenbach.files.wordpress.com/2016/05/05-16-16-waterintake-02_2016.pdf