

Nygaard Notes

Independent Periodic News and Analysis

Number 673

July 12, 2021

Drought is “The Next Pandemic”

Drought is a big deal, as a casual glance at the headlines reveals: “Drought Conditions Expanding in Iowa, Driest June in State History So Far” and “Brazil Battered by Drought” and “Western Drought Reveals Cracks in Infrastructure” and “The Drought in US Southwest Is the Worst in 1,200 Years. It Might Be Here to Stay.” These headlines are not from the Washington Post or the Wall Street Journal. They are from places like the American Farm Bureau Association, KCRG-TV in Cedar Rapids, and the NASA Earth Observatory. That last one was from the London Guardian in mid-June.

Also in mid-June—on June 17th, in fact—the United Nations Office for Disaster Risk Reduction released a major, and very timely, report entitled “Special Report on Drought 2021.” It didn’t seem to register too widely in the daily news cycle, for the usual reason: Drought is not good TV. The authors explain why: “A drought does not result in a sudden impact, unlike a flood or a storm. It is rather a slow-onset phenomenon that establishes itself over a long time period. Drought impacts are less obvious and spread over larger areas than damage resulting from other natural hazards.” In other words: Not good TV.

The evidence of drought can be found in the absence of things. No rain, no snow, no crops to harvest, no fruits on dried-up plants, fewer insects and animals that depend on those plants, and so forth. A drought is not an “event,” like a hurricane or a collapsed dam. And, of course, droughts have always been with us. But the Report reminds us that, “While drought has always been a threat, climate change projections suggest many areas will experience droughts that are more frequent and more severe.”

This 200-page Special Report on Drought helps us to understand “how well society is coping with drought,” and it doesn’t look too good. The Report puts it like this: “Traditional and existing approaches are consistently overwhelmed by the systemic nature of drought risk, and so there is a need for new ways to tackle drought based on

a systems and learning approach.” They sum it up: “With what we know, we must do better, and with what we learn, we must improve.”

In the concluding section, entitled “The Call to Action,” the Report outlines the dangers of inaction: “Droughts are so pervasive, and their impacts so significant, that failure to move to systemic drought management and adaptive governance may trigger ever more serious social, economic and environmental consequences.” That’s why they say that “A new global mechanism is required to effectively manage drought in the future at and among the international, national and local levels.”

And, as difficult as it will be to coordinate a global response to drought on all of these levels, that’s not the hardest part, as the Report tells us on the final page. “A deeper challenge,” it says, “lies in developing pathways to address drought-related risks that are underpinned by financial systems supportive of a global economic model that prioritizes optimization and efficiency above human and ecosystem health and well-being, to a shift beyond the current limited paradigm of economic growth measured solely in GDP.”

While the Report never once uses the word, that paragraph reads to me as a damning critique of the global economic order that we know as capitalism.

Referencing the current disaster that IS on everyone’s mind—COVID—the U.N. secretary general’s special representative for disaster risk reduction, Mami Mizutori, says it quite succinctly: “Drought is on the verge of becoming the next pandemic and there is no vaccine to cure it.”

In order to understand what she’s talking about, the following article presents some key points from this groundbreaking report, which I hope will help you to better understand the meaning of “drought,” and also give you some ideas as to what we might do about it. ♦

GREETINGS,

THIS ISSUE OF NYGAARD NOTES IS INSPIRED BY THE SLOWLY-DEVELOPING DISASTER KNOWN AS DROUGHT. "DROUGHT SPREADS TO 93 PERCENT OF WEST—THAT'S NEVER HAPPENED," READ THE JULY 7TH HEADLINE IN E&E NEWS. AND THAT'S JUST ONE HEADLINE. I CITE SEVERAL OTHERS IN THIS ISSUE OF THE NOTES, AND THE ENTIRE ISSUE COULD HAVE BEEN NOTHING BUT DROUGHT HEADLINES. BUT DON'T WORRY; I DIDN'T GO THAT ROUTE!

INSTEAD, I CALL YOUR ATTENTION TO A RECENT RELEASE FROM THE UNITED NATIONS OFFICE FOR DISASTER RISK REDUCTION. DESPITE THE FACT THAT DROUGHT IS IN THE HEADLINES LATELY, I THINK MANY PEOPLE FAIL TO UNDERSTAND THE SYSTEMIC NATURE OF THE THREAT POSED BY DROUGHT. IT'S SPELLED OUT PRETTY CLEARLY IN THIS REPORT, AND IN THIS ISSUE OF THE NOTES I SUMMARIZE SOME OF THE HIGHLIGHTS.

IN THE PROCESS OF RESEARCHING THIS DROUGHT ISSUE, I SPENT QUITE A BIT OF TIME LEARNING ABOUT DISASTERS, AND HOW TO THINK ABOUT AND PREPARE FOR THEM. ALONG THE WAY I LEARNED ABOUT SEVERAL ONGOING INITIATIVES THAT HAVE BEEN PRODUCED BY DIFFERENT BRANCHES OF THE UNITED NATIONS SYSTEM. I FOUND THEM NOT ONLY INFORMATIVE, BUT INSPIRING AS WELL. I SUSPECT THAT THE AVERAGE PERSON IN THE UNITED STATES KNOWS NOTHING OF THESE THINGS, SO I THOUGHT I WOULD TELL YOU ABOUT A FEW OF THEM. THAT WILL BE THE SUBJECT OF THE NEXT NYGAARD NOTES.

FOR NOW, IT'S DROUGHT. THAT MAY SEEM LIKE A DRY SUBJECT, BUT IT'S ACTUALLY VERY INTERESTING!

SILVER LINING ALERT: AMIDST THE TRAUMA AND ANXIETY EVIDENT IN OUR ONGOING STRUGGLES WITH RACISM AND CLIMATE, THERE'S SOME GOOD NEWS, TOO. AND THAT IS THAT UNTOLD NUMBERS OF PEOPLE ARE FINDING THAT THEY CANNOT UNDERSTAND WHAT IS GOING ON WITHOUT THINKING SYSTEMS. SYSTEMIC PROBLEMS REQUIRE SYSTEMS THINKING, AND MORE PEOPLE ARE STARTING TO UNDERSTAND THIS. THIS DYNAMIC MAKES IT MORE LIKELY THAT WE WILL BE ABLE TO FASHION RESPONSES THAT PROMISE REAL CHANGE. NO GUARANTEES HERE, OF COURSE! BUT KEEP THAT IN MIND AS YOU READ THIS ISSUE, AND NOTICE THAT I'M ONCE AGAIN ASKING YOU TO "THINK SYSTEMS." AS I ALWAYS DO. I'LL BET THAT, FOR MANY OF YOU, IT'S GETTING EASIER AND EASIER TO DO. THAT'S A SILVER LINING IF I EVER SAW ONE.

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The Special Report on Drought

The "Special Report on Drought 2021", according to its authors, "is structured to build broad awareness of the nature of drought and the experience across the world of living with drought. It also builds the case for a new approach to drought risk management."

It's not easy to briefly summarize a 200-page report, but I here offer a selection of excerpts that I think you will find interesting and enlightening. And challenging! I considered highlighting the points that stood out to me. But I think a better idea is that you read it and see what jumps out at YOU. Here we go, then, in no particular order...

Systems

The authors are clear that a systems approach is needed to grasp the meaning of drought: "The drought hazard and human activities (e.g. land and water management) are strongly intertwined, such that these activities can exacerbate the hazard and increase the risk of severe socioeconomic and ecological impacts."

While we city folks have a tendency to think of drought

as primarily affecting farmers (and maybe our gardens), the Report reminds us that there's more to it. Lots more: "As the Covid-19 pandemic has made tangible for so many, hazardous events that may have been thought of as being confined to a sector, or spatially and temporally limited, can quickly transform into crises with long-lasting, globally catastrophic social, ecological and economic consequences."

While the effects of drought are not limited to farming, looking at the effects on food production is a good starting point: "Agriculture is harmed directly during drought because plant productivity is affected during all phases of growth. If this impact is sufficiently extensive in the world's 'breadbaskets', drought can, and has, led to food prices rising globally and a range of significant cascading indirect impacts. Such indirect impacts are the result of complex impact pathways. They cascade quickly through the economic system, affecting regions far from where the drought originated, and can linger long after the drought has ended. Thus, drought may result in temporary or permanent unemployment, business interruption, disrupted international trade, loss



→→ of income, disease due to poor water and air quality, food insecurity, malnutrition, starvation and widespread famine. In turn, this can trigger internal and cross-border migration, social unrest and even conflict in extreme cases.”

Indirect Costs

“Most drought impacts are indirect. They cascade through economies and communities and continue over time, dwarfing direct losses. They are not well documented or assessed. Global estimates of costs offer only partial accounts and are deep underestimates; case studies suggest multiplicative impacts many times these costs.”

Drought obviously affects the food supply, but it doesn't end there: “Examples of direct impacts include limited public water supplies, crop loss, reduced forest production, limited commercial shipping capacities, drying up of wetlands, damage to buildings due to terrain subsidence and reduced energy production. However, drought impacts are often indirect because of the dependence of livelihoods and economic sectors on water. These indirect effects can cascade quickly through the economic system, affecting regions far from where the drought originated and lingering long after the drought ended.”

“Indirect impacts relate to secondary consequences on natural and economic resources that might also be directly affected. They affect ecosystems and biodiversity, human health, food prices and poverty. In extreme cases, drought may result in temporary or permanent unemployment, business interruption, loss of income, rising school dropout rates, and transmission of diseases due to poor water and air quality. Droughts can lead to food insecurity, malnutrition and, in extreme cases, starvation and widespread famine, resulting in internal and cross-border migration. The latter can increase the risk of social conflict in the host region or country.”

“Reducing the impacts of drought will contribute to the achievement of Sustainable Development Goals, in particular poverty reduction, zero hunger, good health and well-being, gender equality, clean water and sanitation, and sustainable cities and communities.”

Hard to Measure

“Estimates of economic damage should be interpreted

with care – there is a significant gap between reported and real, direct and indirect impacts, and systematic quantification is extremely challenging.”

“Vulnerability to droughts is difficult to quantitatively measure due to its multidimensional nature [and] vulnerability cannot be fully assessed by quantifiable variables only. There are other root causes of vulnerability that cannot be ‘quantified’ with a simple indicator, such as beliefs, awareness, social capital or accepted risk thresholds.”

“Recently, the concept of flash droughts has emerged, describing quick-onset, severe events of water stress due to high temperatures and a high evaporative demand.”

“The risks resulting from droughts can be severely aggravated by compound events (e.g. droughts and heatwaves).”

“Human activities resulting in water scarcity and feedback loops in the climate system play a key role in drought intensification and propagation.”

“Typical mitigation responses are building more infrastructure or reducing exposure and vulnerability. However, more infrastructure can increase vulnerability by increasing demand or dependence on reservoir storage.”

“Meteorological droughts are projected to increase globally, mainly driven by higher temperatures due to climate change. Soil moisture droughts and hydrological droughts, which may occur following meteorological droughts, are influenced by increasingly direct human interferences.”

“The cost of drought to society and ecosystems is often substantially underestimated. It is borne disproportionately by the poor. As cultural historians warn, drought has been the single longest-term physical trigger of political change in 5,000 years of recorded human history. With its severe, wide-ranging and cascading impacts, the causal drivers of drought are rooted in the complex interactions of socioecological and technological systems. It is therefore imperative that addressing drought is included in national and international dialogues around poverty alleviation and sustainable development, including discussions on political insecurity and instability, which drought provokes and exacerbates.”

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“As with Covid-19, droughts affect all societies and economies – urban and rural – regardless of stages of development. Drought negatively affects the achievement of significant global agreements, underlining the imperative that risk reduction should be at the heart of accelerating action towards the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction 2015–2030, the Paris Agreement, the Convention on Biological Diversity, the Convention to Combat Desertification, the New Urban Agenda and others.”

If you want to read all 200 pages of The Special Report on Drought 2021,” it’s easy to find online.
<https://www.undrr.org/publication/gar-special-report-drought-2021> ◆

I think most Nygaard Notes readers have an idea of what is meant by “the Paris Agreement.” But the rest of that list... maybe not so much. So, in the next issue of the Notes, I will briefly explain the ones that are most interesting to me: The Agenda for Sustainable Development, The Sendai Framework, and The New Urban Agenda.

“Quote” of the Week: “*No Such Thing as a Natural Disaster*”

It is time to recognize that there is no such thing as a natural disaster. The world – low income and middle-income countries in particular – is being devastated by a mistaken notion of human progress. The global use of fossil fuels, the lack of international cooperation in support of developing countries and their health systems, the destruction of the environment, unplanned urbanization and unchecked poverty are all driving up the frequency and intensity of disaster events.

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