



Cost of Clean Energy: Damming Consequences

Episode References

Intro Music

The Future Ancient Now, Nathan Moore

<https://www.youtube.com/watch?v=Utyopp5mDgs>

Soundbites

00:30 And it brought catastrophic consequence. Nearly 1.5 million people displaced

France 24, China's Three Gorges Dam: the disaster project | Revisited • FRANCE 24 English,
Oct 3, 2020

<https://www.youtube.com/watch?v=VEqZu3Nr3Q8>

Entire valleys were flooded during construction. In total 1.4 million people had to leave their lands and property to make way for the edifice.

France 24, China's Three Gorges Dam: the disaster project | Revisited • FRANCE 24 English,
Oct 3, 2020

<https://www.youtube.com/watch?v=VEqZu3Nr3Q8>

2:00 it is known as the mother of all rivers helping riverine communities survive across boundaries... cascading through Myanmar, Thailand, Laos, Cambodia and Vietnam before emptying into the South China Sea

CNA Insider, Is Cambodia's Thirst For Energy Destroying The Mekong River? | Once Upon A River | CNA Documentary, Feb 20, 2021

<https://www.youtube.com/watch?v=LVwfef5iVB0>

4:15 A river that sustains some 60 million people is dying... Dams are slowly choking the river

DW News, Are dams killing the Mekong river?, Jan 18, 2020

<https://www.youtube.com/watch?v=dOg6s2YB0Fg>



4:20 New hydropower dams on the Mekong river are causing problems... leaving fishing communities high and dry.

CNA Insider, Is Cambodia's Thirst For Energy Destroying The Mekong River? | Once Upon A River | CNA Documentary, Feb 20, 2021

<https://www.youtube.com/watch?v=LVwfef5iVB0>

4:35 Upstream dams, many built by China, have upended the natural cycles of the river, a waterway that feeds 60 million...

Voice of America, Mekong Dams Bring Hardship to Thai villages, April 12, 2021

<https://www.youtube.com/watch?v=Zen3o24aalk>

5:53 Some 80 new dams are planned in addition to the ones already existing

DW News, Are dams killing the Mekong river?, Jan 18, 2020

<https://www.youtube.com/watch?v=dOg6s2YB0Fg>

7:50 the largest inland fisheries in the world, worth about two and a half billion dollars a year... would block fish migration, threatening already endangered species... could doom the nearly extinct Irrawaddy dolphin

Voice of America, Mekong Dams Threaten Aquatic Life, Jan 12, 2010

https://www.youtube.com/watch?v=3O6wb_Z5QM0

8:12 disrupting the water flow and its sediments downstream. But 60 million people depend... in Thailand “The water level is too low and the climate is also changing... I only catch 60% of what I used to catch”.

DW News, Are dams killing the Mekong river?, Jan 18, 2020

<https://www.youtube.com/watch?v=dOg6s2YB0Fg>

8:53 The riverbank used to provide farmland to the poorest Mekong villagers. Now water levels rise and fall without warning when the dams are closed to make electricity and the land yields little. Campaigners say fish stocks have been decimated when the downstream is starved of vital sediment, sending a shock through the entire ecosystem.



Locals fear another two billion dollar China-backed dam in Laos will be the end of the living river

Voice of America, Mekong Dams Bring Hardship to Thai villages, April 12, 2021

<https://www.youtube.com/watch?v=Zen3o24aalk>

16:20 *Mekong protestors background*

VOA Lao, Mekong Dam Protestors Movie, April 26, 2016

https://www.youtube.com/watch?v=BfuXF9XAn_4

16:27 balancing the pros and cons of hydropower dams, is the biggest challenge facing the Mekong Basin.

Voice of America, Mekong Dams Threaten Aquatic Life, Jan 12, 2010

https://www.youtube.com/watch?v=3O6wb_Z5QM0

19:55 Have you ever heard of floating solar farms? In recent years such structures have become more and more popular, and some experts even say that in the future they will completely replace traditional solar panels

Innovative Techs, Can floating solar farms solve the energy crisis?, Nov 2, 2021

<https://www.youtube.com/watch?v=D6VvZCEGJ9w>

20:11 capable of providing 50% of the world's ongoing energy needs, floating solar is being touted as a meaningful solution to...

Tech Vision, The World's Largest Floating Solar Farm, July 14, 2021.

<https://www.youtube.com/watch?v=DAEGNL56sEM>

20:19 and they're being installed on a reservoir on northeast Thailand. It's being called one of the biggest floating solar hybrid projects. It's under construction at a dam where workers are completing the last of seven solar farms covering over 100ha of water...

Global News, Thailand close to completing world's biggest hydro-floating solar farm, April 12, 2021

<https://www.youtube.com/watch?v=KzalvAyCMIk>



21:36 but one fundamental piece is missing from the argument. It might sound counter-intuitive, but hydropower is not emissions free. Around 10% of the world's hydropower facilities emit as many greenhouse gases as conventional fossil fuel power plants. Some existing dams in the lowland Amazon have even been shown to be 10x more carbon intensive than coal fired power plants.

Terra Mater, What are the True Costs of Damming a River? Dec 1, 2020

<https://www.youtube.com/watch?v=XfjdTCmkoaA>

28:07 The solution: a solar-powered mini-grid. An affordable, renewable alternative that can connect the homes and businesses

World Bank, Solar-Powered Mini-Grids Bring Security and New Economic Opportunities in Ghana, Feb 7, 2019

<https://www.youtube.com/watch?v=wdyvLdm26Bs>

28:24: 6 hydrokinetic generators installed in Nepal by a...

Prime Minister's Office of Japan, Small is beautiful: How a Japanese micro-turbine is transforming a Nepalese village. Nov 2, 2018.

https://www.youtube.com/watch?v=Wp_xASUzjz8

29:30 That provide solar energy to remote areas in Thailand, we don't have access to grid power. The main benefit of renewable energy is that you don't have to have emission lines because you can create the energy where you are. Most of the time in rainy season you will be cut off where you are....

Sci Dev Net, Solar revolution for off-grid Thailand, March 13, 2014.

<https://www.youtube.com/watch?v=6IlebXhdbou>

30:15 to really get a sense of how far solar has come you need to look at it over the last ten years. In the early 2010s or so... today you can get that electricity for around \$30MWh... Manufacturing efficiency has steadily improved.

Bloomberg, Community Solar Is Bringing Renewable Energy to Everyone, May 23, 2021

<https://www.youtube.com/watch?v=8AXyIlJA28U>



33:34 what you're experiencing today is really the future of sustainability for remote river communities and it is happening right here in Alaska...

ORPC, Sustainable, Off Grid Energy for Communities from Free Flowing Rivers, Jan 29, 2020

<https://www.youtube.com/watch?v=GxjELfnX5xc>

Community energy is where a group of people of community interest group come together... They want to do that by sharing the benefits with the community... could be a group developing a wind turbine

Boeronbond innoveert, The power of community energy, June 22, 2021

<https://www.youtube.com/watch?v=BiAiYsOgBok>

Community Power is Ireland's first community owned electricity supplier

Community Power, Ireland, Community Power - Ireland's First Community Owned Electricity Supplier, June 7, 2020

<https://www.youtube.com/watch?v=0XVONFxHNnc>

Ten years ago we created renewable energy cooperatives...to help citizens create energy from the wind and sun

Boeronbond innoveert, The power of community energy, June 22, 2021

<https://www.youtube.com/watch?v=BiAiYsOgBok>

34:35 Community solar is a model by which anyone who might consider putting solar on their roof... signs up to receive a share of electricity from a larger projects

Bloomberg Quicktake, Community Solar Is Bringing Renewable Energy to Everyone, May 23, 2021

<https://www.youtube.com/watch?v=8AXyIIJA28U>

Operated for a year, through the summer and the winter, validating that we could generate a meaningful amount of electricity and integrate it into the grid. "Its 24/7, 365 and it doesn't fluctuate.



Business & Human Rights Resource Centre

ORPC, Sustainable, Off Grid Energy for Communities from Free Flowing Rivers, Jan 29, 2020

<https://www.youtube.com/watch?v=GxjELfnX5xc>

35:04 Community energy is about participation, is about local engagement in our energy supply. For me, fundamentally its more about doing, and people and activism.

Boeronbond innoveert, The power of community energy, June 22, 2021

<https://www.youtube.com/watch?v=BiAiYsOgBok>