

# Down the Rabbit Hole

Christopher Butler



If a person happened to stumble into Nepal without knowledge of its energy woes and vast water resources and reviewed national newspapers for the past six months, he or she might be forgiven for thinking that a new “hydro rush” was underway.

“Bhote Khosi Resumes Power Generation” (Kathmandu Post, 1/22/15)

“Sino-Sagarmatha Agrees to Build 132kV Power Line” (Kathmandu Post, 12/22/14)

“Tamakoshi Shares Bring People Back to Villages” (Karobar, 1/20/14)

“CIAA Tones Down Orders on Hydro Projects” (Kathmandu Post, 12/16/14)

“PDA Talks on Tamakoshi-III Hydrel Project Resume” (Himalayan Times, 12/14/14)

“IBN, Satluj Sign Arun-III PDA” (Republica, 11/26/14)

Certainly since the August visit of Indian Prime Minister Narendra Modi, there has been an air of renewed hope and enthusiasm regarding Nepali hydro and the nation’s ability to address its energy crisis without surrendering its long-term interests. The billion US dollar credit that Modi offered to Nepal has excited developers and investors alike who believe this injection of capital will “prime the pump” for hydro projects big and small. Upper Karnali, Arun-III, and Budhi Gandaki all appear poised to come online in the next 10 years, while mid-size and smaller dams will arise even sooner, providing much-needed generation to urban areas that are frustrated with load shedding and to rural areas seeking stable energy.

But that’s not to say there aren’t doubters in the crowd. While momentum for hydropower has risen in Nepal, a spate of educated and vocal opposition continues to be voiced by civil society groups and selected politicians who feel current trends of hydro construction are moving forward in the face of more unknowns than certainties.

But other than the mechanics of generating electricity from hydropower, what else could be said to be certain about Nepali plans? For one, it seems obvious that increased hydroelectricity will stimulate consumption. The more reliable the power source, the more Nepalis will be encouraged to obtain products that rely on electricity which will create demand for more power - and so the circle goes round. In fact, many private producers have accused NEA for artificially suppressing demand on this point - by underestimating the rise in electricity use so as to avoid having to sign more power purchasing agreements. For another, it seems hydropower plants will accelerate infrastructure development (e.g., roads to transport heavy machinery and construction materials) and provide employment

in rural areas where more work is needed.

But beyond these two fairly predictable consequences, even to its advocates, the whole enterprise of hydropower development seems - in the infamous words of former U.S. Secretary of Defense Donald Rumsfeld - marked more clearly by “known unknowns.” Let’s take a look at a few.

## Political climate

While the donnybrooks rage on in the current Constitutional Assembly, much is yet to be known about how hydropower projects will be governed and processed in Singha Durbar. Which projects will be given priority status (see Pun this issue)? How will the eventual configuration of projects be decided?

## Environment

ICIMOD and other environmental groups argue that due to climate change, river flows will increase significantly in the next 30-40 years followed by a steep decline in those flows after glaciers have receded. This rise and fall of available water does not include concerns about glacial lake outburst floods. Will projects be constructed to absorb these augmented flows? And will the long-term doubt about water availability shorten the expected lifespan of hydropower?

## Distribution of benefits

Tapping Nepal’s many rivers for hydropower generation will increase capital either in the form of royalties from Indian-developed projects, or increased collection of tariffs from new users brought online. But what remains to be decided and implemented is how these additional moneys will be spent and distributed along the lines that connect the plant to Kathmandu. What will be the burden of proof to show residence in order to collect a “local share” in a project?

## NEA

Though nothing’s for certain on NEA, many hydro and policy experts predict the state authority will eventually come unbundled from its three-pronged attachment to generation, transmission, and distribution. But what role will NEA maintain after its unbundling? How will its 10,000 employees be absorbed or reassigned at that point? What will be the role for the private sector?

## Resettlement

Despite hundreds of examples around the world, the question of resettling affected persons from a hydropower site remains a Gordian knot of cultural, economic, and political complications. There is no set template on how to achieve a seamless and satisfactory end-for either the relocated or for the community into

which people are resettled. Larger hydro projects, especially, will need to clear this hurdle.

### Indian cooperation and market

Much confidence in Nepal's hydro future banks on Indian cooperation and purchase of Nepali hydroelectric power. Still many Nepalis - those with good knowledge of water history - are wary of India fulfilling its commitments and whether or not India intends to utilize Nepali water for its own productive needs, or just to maintain a controlling hand in Nepali water affairs. Beyond those political concerns, economists are split on just how remunerative sale of electricity to India can be. India continues to develop its own renewable energy sources and, during a recent visit from US President Barack Obama, repeated its desire to harvest nuclear power to meet its growing energy demands. All of these factors will compete with Nepali hydro.

So the unknowns outnumber the knowns. But perhaps that shouldn't be surprising. In many ways, all economic development in this global age of rapidly moving capital and liberal governance presents more

questions than answers. The cases of the booms (South Korea) in the 20th century were no more predictable than the busts (Argentina), except in retrospect. And so it will be for Nepal and hydro development... down the rabbit hole, we go.

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## CALENDER OF EVENTS - ENVIRONMENT

24-25 January 2015, 5th International Conference on Future Environment and Energy, Location: Taipei, Taiwan, URL: <http://www.icfee.org/>  
26 and 28 May 2015 Regional Conference 2015, Location: 183 Albion Street, Surry Hills NSW 2010, URL: [www.ial2015.com.au](http://www.ial2015.com.au)

9-10 July 2015 6th international Conference on Environmental Engineering and Applications, Location: Chengdu, China, URL: [www.iceea.org](http://www.iceea.org)  
3-5 September 2015, 14th International Conference on Environmental Science and Technology, Location: Rhodes, Greece, URL: [www.gnest.org/cest](http://www.gnest.org/cest)

## IRRIGATION

11-16 October 2015, 2nd world Irrigation Forum, Location: Chiang Mai Thailand, URL: [http://www.icid.org/conf\\_wif.html](http://www.icid.org/conf_wif.html)  
11-16 October 2015, 66th ICE Meeting 2015, Location: Montpellier, France E-mail: [icid2015@irstea.fr](mailto:icid2015@irstea.fr), URL: <http://icid2015.sciencesconf.org/?lang=en>

6-12 November 2016, Water Management in a changing world: Role of Irrigation for Sustainable food Production, Location: Chiang Mai Thailand, URL: [http://www.icid.org/conf\\_wif.html](http://www.icid.org/conf_wif.html)

## RAINWATER HARVESTING

19-20 January 2015 (AP) Rainwater Harvesting Workshop, Location: San Marcos, Texas, URL: [http://www.arcsa.org/events/event\\_list.asp](http://www.arcsa.org/events/event_list.asp)  
21-22 January 2015 (RWHDC) Rainwater Harvesting Design & Construction Workshop, Location: San Marcos, Texas, URL: [http://www.arcsa.org/events/event\\_list.asp](http://www.arcsa.org/events/event_list.asp)

23 January 2015 (IS) Inspection Specialist Workshop, Location: San Marcos Texas, URL: [http://www.arcsa.org/events/event\\_list.asp](http://www.arcsa.org/events/event_list.asp)  
24 February 2015 Urban Soil Water Summit, Location: Los Angeles, California, URL: [http://www.arcsa.org/events/event\\_list.asp](http://www.arcsa.org/events/event_list.asp)