

**Huge Weirs** 



**Uncertain Future** 



**Stagnant Pools** 

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**Two-day Training Workshop** 

on

"Stream Ecology and Environmental Flow"

Venue: Kotmale International Training Center

(KITI)

Mid February, 2016 Target Group

Environmental Officers of Kandy, Matale, Nuwara Eliya, Badulla, Ratnapura & Kegalle Districts

## For further information

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# SMALL HYDROPOWER



SMALL HYDROPOWER POTENTIAL IN SAARC COUNTRIES				
Country	Potential (MW)	Tapped (MW)	%	
Bangladesh	0.15	0.01		
Nepal	1430	70	5	
	400	302	75.5	
India	15000	3198	21	
Bhutan	8	8.0	100	
Afghanistan	1200	75	6	
Pakistan	2265	281	12	





#### **Small Hydropower Operation**

Clean power generation	No!
No greenhouse gas emission	No!
Dependable operation	No!
Advance technology	Yes!
Competitive investment	Yes!
Huge benefits for developers	Yes!



#### **Massive Constructions**

#### **Small Hydropower Plants**

- Alter stream flow
- Expose stream bed
- Stop fish movements
- Affect waterfalls
- Change stream habitats
- Erode river banks
- Gradually kill streams

More than 200 km stream stretches in the mountain landscape in Sri Lanka are almost dead by now.

#### Mini Hydropower Plants in Sri Lanka

Mahaweli River	60
Kelani Ganga	31
Kalu Ganga	28
Walawe River	13
Others	11
Total	143
Number under construction	37



**Dead River Beds** 

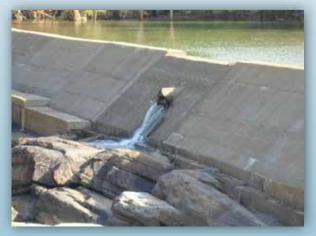
#### **Lost Stream Stretches May**

- Create habitats for mosquitoes
- Vanish bathing pools
- Alter water quality
- Emit greenhouse gasses
- Promote toxigenic algae
- Promote pathogenic protozoa
- Affect livelihood of humans

Monitoring programmes of small hydropower schemes in Sri Lanka are inadequate.

#### Freshwater Fishes in Sri Lanka

About 53 native fish species inhabit hill streams, of which 41 are endemic to Sri Lanka and 34 of them are found only in hill streams. Twelve endemic species inhabing hill streams are critically endangered and fourteen are endangered while others are either threatened or vulnerable according to IUCN Red Data Book.



No Environmental Flow

### **Small Hydropower Operations**

- Trigger land slides
- Disrupt material transport
- Remove stream bank vegetation
- Alter groundwater balance
- Disrupt river continuum
- Eliminate stream fishes
- Fade away beauty of nature

Some endemic fishes evolved for millions of years in hill streams of Sri Lanka likely to be extinct in near future.