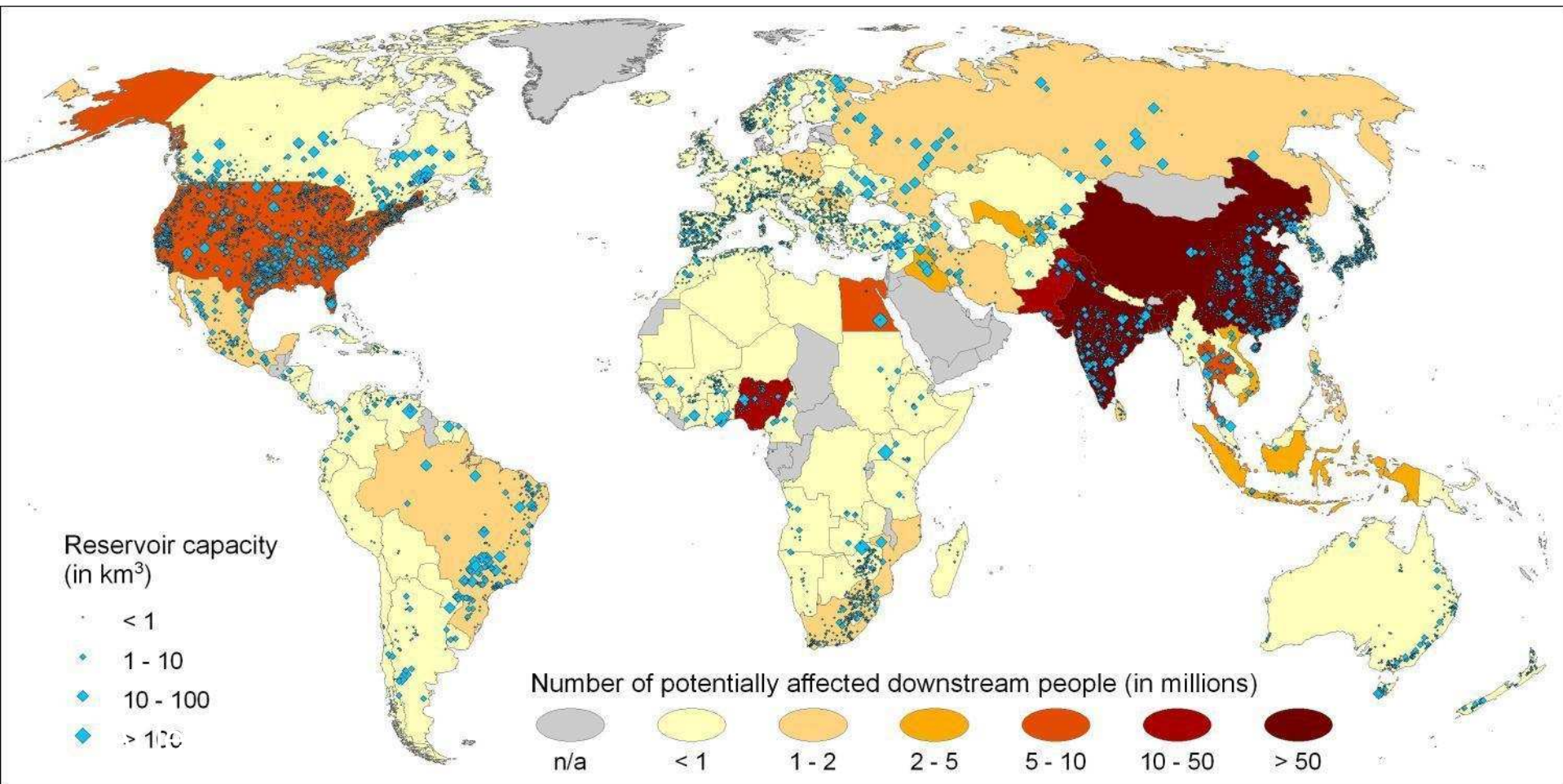




Are River flows to the sea 'a waste'?



Missing Heartbeats – Dying Rivers

We cannot afford to ignore downstream impacts

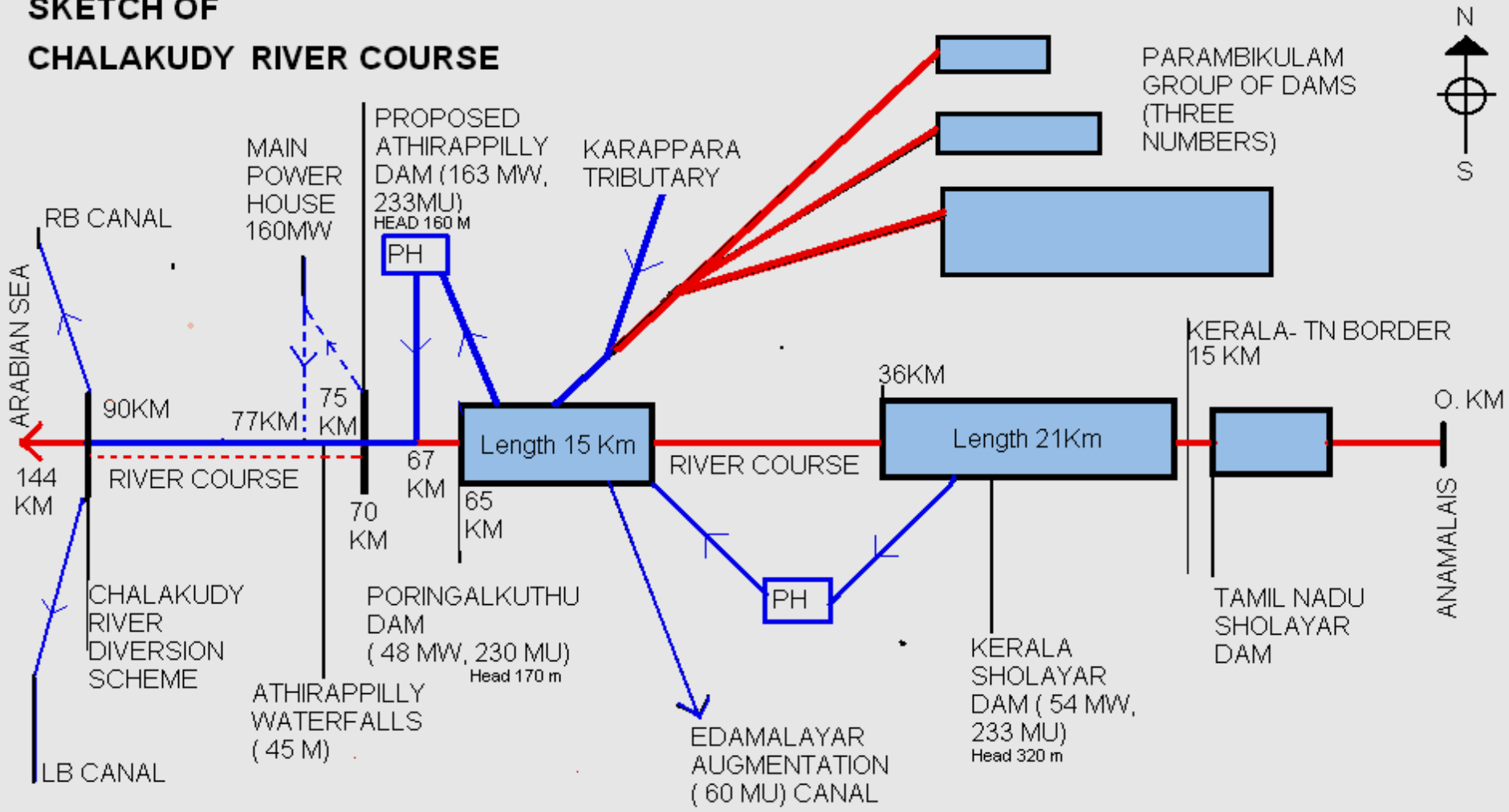
- *Rivers not reaching seas in summer*
- Aquatic biodiversity and fish life – *at risk*
- Flood plains and deltas - *disappearing*
- Wetland and river dependent livelihoods
- *displaced*
- Water tables - *plunging*
- Water quality - *deteriorating*
- Saline ingress - *increasing*

Dams are the



- Daily and Seasonal changes in flows – time, duration, frequency - *Western ghats rivers*
- Modify river channel and flood plain habitats
- Disconnect rivers from flood plains
- Sediment flow changes impact downstream aquatic life
- Life cycles and flow

SKETCH OF
CHALAKUDY RIVER COURSE



(not to scale)

Existing Flow
Fluctuations

With 6 dams upstream

1: 4

Proposal for seventh
dam

Future flow fluctuation

1 : 17



Downstream impacts of a Top Down Approach I



Downstream Impacts – Unaccounted !



- EIA assessments – At ‘Project level’ not at river basin level in proper framework
- On ecology , social and economic impacts do not enter EIAssessments and build into cost – benefit analysis
- Even recent attempts – Alaknanda – Bhagirathi CIA – no proper assessment of environmental flows requirements when dams convert rivers to tunnels !
(Even EAC’s 50th meeting pointed out this aspect !)

Other interventions within river basin

- Mining in catchments – Kudremukh affected Bhadra river and reservoir downstream
- Destructive land uses
- Sand Mining
- Pollution upstream - Plantations
- Never ending expansion of cities and water needs – Dams in Maharashtra Western Ghats

Water for ecosystems or E flows

?



Flow regime to be provided in the river for ecosystem functions and livelihood and social benefits ?

Water provided to us by nature ! Who are we to provide water to nature ?

Water for terrestrial ecosystem - forests, wetlands + Aquatic ecosystem needs –

tributaries and main river ?

Challenges and risks are there !

- Potential for new conflicts to arise
- Do we know the limits to abstraction or diversions ?
- For whom and in whose interest ?
- Do we have reliable data base and resources ?
- Can we relate data base to ecological impacts
- Allow e flows on paper – allow more dams

Time for *Ecosystem Approach* to river basin planning

- Right of the river to flow freely
- Ecological value of rivers and water use
- Local wisdom on flows and ecosystems
- Priority on par with drinking water needs
- Use best scientific information available
- Place data and updates before river basin communities and involve them

Strategies

- Clarity in the society on the value of rivers and need water for ecosystem needs
- Policy Changes prioritising ecosystem needs
- Gather support on the positive incentives
- Movements and legal interventions can be entry points
- Plan and implement from lowest level
- Most appropriate methodology –

Smallest actions can contribute to flows



Hard nuts to crack !

- EC to new projects to be bound by all season flows and minimum deviation from natural flows , allow enough 'room to the river to flow'
- Dam – reoperations to improve flows
- De- commissioning of dams that have crossed viable life span
- Implement Catchment Area Treatment Plans
- Negotiated approach to implementation

Allow Our rivers to flow



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