

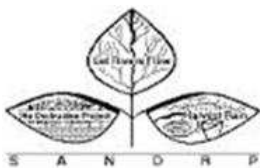
# DELHI DECLARATION

## Let Our Rivers Live

### INDIA RIVERS WEEK

(24 - 27 November 2014)

New Delhi



# **LET OUR RIVERS LIVE - DELHI DECLARATION**

## **I. Preamble**

- (1.1) Most of India's rivers are in varying degrees of decline and distress. It is a deep concern at the plight of our rivers that lay behind the India Rivers Week 2014, the overall theme of which was 'Rivers in Crisis'.
- (1.2) Arising from those deliberations, we, the organizers, delegates, and other participants of the India Rivers Week (New Delhi, 24 – 27 November 2014), have adopted and issued this Declaration.

## **II. Causes of Decline (Threats to Rivers)**

- (2.1) Many factors cause the decline of rivers:
- obstruction of flows by structures such as dams and barrages, based on an engineering approach of controlling and manipulating nature, in particular, rivers;
  - excessive abstraction or diversion of waters (largely for irrigated agriculture - water-intensive crops, extension of irrigation to water-short areas, etc - but also increasingly for industrial use);
  - excessive extraction of groundwater affecting the base flow in rivers;
  - disruption of continuity in flows and large diurnal variations caused by run-of-the-river hydroelectric projects;
  - drastic reduction of aquatic and riparian bio-diversity (primarily the result of deteriorating river-health, but also a contributory factor);
  - dumping of construction debris on or near river beds;
  - restriction of channels by embankments;

- occupation of floodplains;
- deterioration of catchments through human activity such as deforestation, destruction of water sources (springs, lakes, wetlands), etc;
- reckless and unregulated mining of sand from the river-bed;
- enormous generation of waste by urbanisation, and its disposal, untreated or partially treated, into rivers;
- dumping/discharge of sewage, industrial effluents, chemical residues from agriculture, and other pollutants and contaminants;
- disposal of religious offerings and idols, which has multiplied over time beyond the river's capacity to absorb; and so on.

(2.2) All these constitute threats to the well-being of rivers, aggravated by an instrumentalist/utilitarian engineering-cum-economic view of rivers, a limited perception of rivers as merely a source of water, with little concern for their multiple aspects, dimensions and values, and the absence in India of any statutory protection for rivers from abuse and misuse.

(2.3) Rivers and other natural resources are also threatened by improper nexuses, motivations and corruption, as well as by a flawed conception of development that exalts consumption as the ultimate value, but those are larger subjects not specific to rivers, and therefore not gone into in this Declaration. However, any effort to restore our rivers to health will eventually and inevitably lead us to those larger issues.

### **III. The Task**

(3.1) The task is twofold:

(3.1.1) The immediate stoppage of all harmful factors and interventions, so that rivers that are now in reasonable health may remain so, and those already affected to some extent are not further harmed; and

(3.1.2) The restoration of sick and dying rivers to reasonable health within a certain period of time.

### **IV. What is a River?**

(4.1) A poor understanding of rivers lies at the heart of the widespread abuse of rivers. The first step in any effort for the revival of rivers must be a proper understanding of what a river is.

(4.2) A river is more than a channel carrying water; it is also a transporter of sediment; it is also the catchment, the river-bed, the banks, the vegetation on both sides, and the floodplain. The totality of these constitutes a river. A river harbours and interacts with innumerable organisms (plant, animal and microbes). It is a natural, living, organic whole, a hydrological and ecological system, and part of a larger ecological system. A river is also a network of tributaries and distributaries spread over its basin and the estuary.

(4.3) As rivers flow, they perform many functions. Rivers are the major geomorphic agents which sculpt the earth's surface by incising deep valleys, carrying rocks and boulders and turning them to

gravel, sand and clay. They support aquatic and riparian biodiversity (flora and fauna); provide drinking water to human beings, their livestock and wildlife; influence the micro-climate; recharge groundwater; dilute pollutants and purify themselves; sustain a wide range of livelihoods; transport silt and enrich the soil; carry essential sediment to the estuary and to the sea; close the hydrological cycle by flowing to the sea, and maintain the temperature and salinity gradient in the sea, which are among the key drivers of the monsoon; prevent the incursion of salinity inland from the sea; provide nutrients to marine life; and so on. Rivers are also integral parts of human settlements, their lives, landscape, society, culture, history and religion.

- (4.4) The notion that river water is used only when it is abstracted, and that in-stream water flow, particularly to the sea, is 'wasted', is a fallacy that shows a poor understanding of a river.
- (4.5) A river as a system is connected *longitudinally* from the source to the delta, *laterally* with its flood plain and *vertically* with the bed and the associated aquifers.
- (4.6) No two rivers are alike. Each river has a characteristic identity based on the totality of its physical, chemical, biological and functional attributes. Different sections within the same river also may vary in their characteristics.
- (4.7) Indian rivers are monsoonal: their flow volumes vary greatly between the monsoon (high flows) and the non-monsoon months (lean season 'base' flows). The Himalayan rivers also receive water from snow-melt and glaciers.

## **V. What is a Dying River?**

- (5.1) Deteriorating flow regimes and the discharge of organic and toxic effluents combine to affect a river's health adversely. Further deterioration occurs when its 'organs' – the tributaries, the riparian vegetation, the floodplain, the bed, the biota – are damaged and mutilated. At some stage, the resilience and homeostatic ability of the river are lost, and the river ecosystem reaches a threshold from which recovery becomes very difficult, and the river may then be said to be dying.
- (5.2) As the main river and the tributaries and distributaries together constitute a system, the decline of a tributary will lead to the decline of the river as a whole.
- (5.3) The survival of the river cannot be ensured by the mitigation of only a few causative factors. For example, ensuring some flows and/or a reduction in waste discharges cannot revive a river in the absence of its floodplain or riparian vegetation or the biodiversity within the river or even the regular renewal of its bed sediments. Action may be needed on multiple fronts.

## **VI. Imperative of a Flowing River**

- (6.1) Natural flow by gravity is the defining characteristic of a river. What flows is not only water but also biota, sediment and nutrients, all of which serve vital purposes.
- (6.2) Interference with natural flows must be exceptional. With every proposal for such interference, the question must be asked: is this

- interference absolutely necessary? Are there options that can obviate it?
- (6.3) Large dams and barrages obstruct rivers, and smaller dams and diversion structures do so to a lesser extent. It follows that in every such case, large or medium or small, the effect of the intervention on the river and on the ecological system needs to be considered.
  - (6.4) Where structures across rivers are considered absolutely necessary, every effort must be made to maintain reasonable downstream flows, simulating the pattern of natural flows as far as possible.
  - (6.5) In that context, the concept of 'minimum flow' (cosmetically renamed as 'environmental or ecological flow') is misconceived. Every drop serves a useful purpose and therefore all flows are 'ecological'. What is needed is not 'minimum flow' but minimum interference with natural flows.
  - (6.6) In particular, there should be no diversion of waters from a river during the lean season.
  - (6.7) A cascade of dams or barrages across a river constitutes maximal interference with natural flows, and must be avoided.
  - (6.8) A run-of-the-river hydroelectric project for peaking purposes is a particularly destructive intervention in a river because it means both interrupted flows (with a series of interruptions in the case of a cascade of projects) and enormous diurnal variations in flows arising from the intermittent operation of the power plant. Such a

project effectively kills a river and its biota. Other answers must be found to energy needs.

(6.9) In view of the vital relationship between groundwater and surface water, the impact of the extraction of groundwater on the base flows of rivers needs to be considered.

(6.10) In particular, the extraction of water through borewells on the river-bed will affect the base flow seriously and should not be approved without a careful examination.

(6.11) The above principles must govern future cases. Interferences with natural flows that have already taken place must be reviewed to consider the restoration of the original state of the river to the extent feasible.

## **VII. Floods and Floodplains**

(7.1) Periodical floods are part of the river and are natural phenomena, not necessarily natural disasters. They could occasionally be fierce but are often benign and beneficial.

(7.2) The attempts to 'control' floods often increase the danger and damage. Large dams are not often planned with flood moderation as a primary aim, and even where they are, the competing claims of irrigation and power-generation often override the flood-moderation function. If the flood cushion is overlooked and the reservoirs are kept full at the beginning of the flood-season (for irrigation or power-generation), there will be no space to accommodate the floods when they come; and the flood waters,



when released, will cause more and sudden flooding downstream than might have occurred in the absence of the dam.

(7.3) Not 'flood control' but 'learning to live with floods' is the right answer to this phenomenon.

(7.4) As for embankments, they have to be repeatedly rebuilt at great cost; they may fail in the event of a major flood and cause greater difficulties; by jacketing the river and preventing it from spreading they may create new problems further down; by blocking drainage from the adjoining areas into the river they often lead to water-logging and 'man-made floods' in the 'protected' villages; and they deprive the farmers of the benefit of the deposit of silt by the receding floods. Thus they have often proved a remedy worse than the disease.

(7.5) The river needs space to accommodate floods. That space must be determined with reference to the hundred-year return flood, and left free to the river. Without this, the floods may become destructive. The floodplain is therefore an essential and integral part of the river and must be respected. It is not vacant space available for building on or for 'development'.

### **VIII. Protection from Pollution**

(8.1) The best protection of a river from pollution is the complete prevention of pollutants and contaminants (even after treatment) from entering the river. This applies to industrial effluents, commercial waste, agricultural runoff, municipal and domestic sewage, etc.

- (8.2) For domestic and municipal sewage, alternatives such local, decentralised, ecologically appropriate and less-energy-intensive sewage treatment methods, with local use of treated material, must be considered. Treated material, after recycle and re-use, eventually reaching a river, must be at tertiary level.
- (8.3) Alternatives to flushing toilets must be worked out and adopted.
- (8.4) For Industry, the medium term goal must be full treatment of waste, i.e., zero effluents. In particular, certain severely polluting industries require special and urgent attention; these include slaughterhouses, tanneries, pharmaceuticals, chemicals, mining, textiles, cement, sugar, paper and pulp, and power of all kinds. In all cases, there must be full recourse to recycling and multiple use, with water-use as a closed cycle.
- (8.5) As for agriculture, the pollution and contamination of irrigation runoff by chemical fertilisers and pesticides can only be stopped by a transformation from the Green Revolution-type of high-chemical-input, high-energy, high-capital, centralised agriculture to low-external input sustainable agriculture (LEISA). Such a transformation is doubtless difficult and will require much time and effort, but is inescapable.
- (8.6) Once the inflow of pollutants and contaminants into a river has been stopped, the river will purify itself in time provided the necessary flows are maintained.

## **IX. What Needs to be Done?**

### (9.1) **Flows:**

(9.1.1) River flows shall be *aviral* (uninterrupted, continuous) and unpolluted (*nirmal*). This over-riding principle shall govern all uses of and interventions in rivers, and shall be given statutory backing. In particular, certain rivers, because of their biodiversity and social/cultural significance, should be left untouched.

(9.1.2) Abstraction of waters from rivers needs to be minimised in every possible way, and avoided altogether in the lean season. Reducing our freshwater footprint is an essential part of rescuing rivers from decline.

(9.1.3) As part of this discipline, there shall be no external water for a city until it exhausts all local options including rainwater-harvesting, groundwater recharge, protection of local water systems including floodplains and forests, and so on.

### (9.2) **Projects: Dams, Barrages:**

(9.2.1) There shall be a thorough, rigorous and comprehensive review of the impacts, positive and negative, of all existing dams, barrages and other structures on rivers. The original cost-benefit calculation on which the investment decision was taken in each case shall be rigorously re-examined *ex post facto*.

(9.2.2) The decommissioning of those dams, barrages or other structures that were *ab initio* misconceived and serve no useful purpose, or

have done great harm to environment and ecology, or have become old and can be presumed to be nearing the end of their useful life, must be initiated immediately.

(9.2.3) There shall be no further construction of dams, barrages or other structures that interfere with river flows until the comprehensive review proposed above has been carried out.

(9.2.4) Where, in an exceptional case, such a project is proposed as necessary, it shall be subjected to a stringent scrutiny and shall be considered only if, in an options assessment with reference to felt and identified needs, it represents the unique option or the best available option in the given case.

(9.2.5) Any such project shall be planned and appraised within a river-basin-level hydrological and ecological framework, governed by a perspective of social justice and equity.

(9.2.6) In any such project, the principle of minimum interference with natural flows shall be observed, and downstream flows shall be maintained, not at a minimum level, but at a level appropriate for the wide range of functions that a river performs.

(9.2.7) Run-of-the-river hydroelectric projects do great violence to rivers and shall be avoided as far as possible. The place accorded to them in energy policy shall be re-examined, and other answers found for energy needs estimated with due regard to efficient and economical use.

(9.2.8) Not only big dams and barrages but even check dams, bridges, culverts, and anicuts may have an impact on river flows. This shall be carefully assessed before the construction is undertaken.

(9.2.9) The Inter-Linking of Rivers project, a wholly misconceived project based on completely fallacious ideas, will not merely fail to produce the expected benefits but will also cause immense harm to rivers, ecological systems, and people. It shall be carefully re-examined with reference to all the criticisms that have been made. The reasons why it cannot and should not be undertaken shall be explained to the Supreme Court.

(9.2.10) The proposal to build barrages and related structures on the Ganga and the Yamuna for navigational purposes is fraught with danger to the rivers and shall be abandoned. Navigation on these and other rivers shall be confined to what is feasible with the natural flows of the rivers. No river shall be re-engineered for navigational purposes.

(9.2.11) Similarly, there shall be no dredging of a river for navigational purposes. Dredging the river-bed for navigation is open to the same objections as sand-mining. It will do physical violence to an organic component of the river, and amounts to the disembowelling of the river.

(9.3) **EIA/SIA:**

(9.3.1) The entire process of environmental, ecological, social and related assessments of projects by Committees of the Ministry of Environment and Forests shall be overhauled to ensure

professionalism and objectivity and ensure insulation from improper political influence. The track record of persons to be appointed to the appraisal Committees shall be carefully examined to determine their suitability for inclusion, and avoid conflicts of interest.

- (9.3.2) In each case, there shall be a truly independent, objective, transparent, professional Environmental Impact Assessment (EIA), as also a Social/human Impact Assessment (SIA), and a Disaster Potential Assessment (DPA), by an agency or agencies far removed from the ambit of influence by the project proposers or approvers. The agencies for this purpose shall be chosen by the Ministry of Environment and Forests (or by a statutory body for administering the Environment Protection Act if one is established) out of a panel maintained by it.
- (9.3.3) In addition to the project-level assessments, there shall be a cumulative impact assessment (CIA) of all projects in a river basin, including carrying capacity studies.
- (9.3.4) In any EIA/SIA/CIA, the inter-relationship between the river and the associated aquifers shall be kept in view.
- (9.3.5) In the appraisal process, the preservation of bio-diversity (flora and fauna) shall be a very important consideration.
- (9.3.6) In all decision-making on such projects, the approach and criteria recommended by the World Commission on Dams (2000), shall be followed.

- (9.3.7) In particular, the question “Who will benefit from the project and who will bear the risks and costs of the project” must be gone into. See also the reference to the principle of Free, Informed Prior Consent in section 9.7.1 below.
- (9.3.8) In the EIA/SIA/CIA, all costs and benefits, direct and indirect, upstream and downstream, proximate and ultimate, quantifiable and non-quantifiable, shall be gone into.
- (9.3.9) Adequate time – no more, no less - must be allowed for a proper EIA/SIA/CIA. The spirit and integrity of the process shall not be compromised by an undue concern for speed of clearance, which is important but shall not be an over-riding consideration. Besides, “clearance” must be understood to include “non-clearance”, i.e., rejection, in certain cases.
- (9.3.10) It shall be understood that the timely and positive outcome of the whole process will depend on the prompt submission of full and reliable information and documentation by the project proponents.
- (9.3.11) There shall be regular periodical post-clearance monitoring of compliance with clearance conditions, and there shall be penalties, including cancellation of clearance, for non-compliance and/or misrepresentations at any stage.

#### **9.4 Public Consultation**

- (9.4.1) The consent of the local people shall be an essential requirement for all projects, and a Public Hearing (PH) is an

instrument for securing that consent. It shall be held in all affected blocks, including not only submergence areas but also downstream areas.

- (9.4.2) PH shall be real and effective and not nominal and ritualistic. It must be kept in mind that PH is more than just 'hearing' and must be true *consultation*.
- (9.4.3) The EIA/SIA/CIA and other relevant documentation shall be made available in English, Hindi, and the local language at least a month in advance of the PH.
- (9.4.4) PH shall be conducted by an independent panel to ensure relevant knowledge and experience, true professionalism and immunity to improper influence.

### **9.5 Environmental Management Committee**

- (9.5.1) There shall be an Environmental Management Committee (EMC) for each project, and it shall include, to the extent of 50%, members from local groups, NGOs, and independent persons.
- (9.5.2) There shall be an EMC for each Sewage Treatment Plant, each urban area, each 5-km stretch of rivers, each Pollution Control Board from the Block upwards

### **9.6 Climate Change:**

- (9.6.1) The phenomenon of climate change is leading to changes in the rainfall pattern and glacier-melt and in the river-flow patterns, rendering all past project planning obsolete. Fresh studies of the



impact of climate change on precipitation, quantum and variability of river flows, snowfall, snowmelt, glacier melt, etc, need to be undertaken and completed urgently.

**9.7 Displacement, Rehabilitation:**

- (9.7.1) There shall be no involuntary displacement of people for 'developmental' projects. The principle of Free, Informed, Prior Consent (of people concerned with a project in any manner) shall be observed.
- (9.7.2) The people likely to be affected shall be fully kept informed and consulted at all stages from the first inception of a project to the final implementation and commissioning, and thereafter, reviewing and monitoring. The planning, implementation and operation of the project shall be truly participatory.
- (9.7.3) The resettlement and rehabilitation of project-affected people shall be such as to make them better off than before.
- (9.7.4) The people likely to be affected by a project shall be statutorily given the first claim on the benefits expected from the project.

**9.8 Natural Drainage Channels:**

- (9.8.1) In the processes of urbanization and economic development, care shall be taken not to interfere with natural drainage channels. Where interference has already taken place, efforts shall be made to restore the original conditions to the extent possible.

**9.9 River Water Disputes:**

- (9.9.1) Inter-State and inter-country disputes over rivers arise from competitive unsustainable demands for their waters adding up

in the aggregate to more water than there is in a river. This is the surest way of killing a river. While laws and treaties might exist for dealing with such disputes, community action for resolving them through people-to-people initiatives should be encouraged.

**9.10 Integrity of river system:**

(9.10.1) The ecological and hydrological integrity of the river system shall not be compromised. The river-bed shall be inviolate, the banks and floodplains shall not be encroached upon, and the water sources in the catchment shall be protected.

**9.11 Bio-diversity:**

(9.11.1) There shall be a thorough documentation (through participatory and multidisciplinary methods) of the riverine biodiversity, its uses, and the threats to it. River bank vegetation shall be restored. Efforts shall be made to maintain or restore riverine connectivities for species restoration.

**9.12 Data Relating to Rivers:**

(9.12.1) All data relating to rivers shall be in the public domain, and accessible to all citizens. The practice of treating such data as confidential or as available only for official use shall be forthwith abandoned.

(9.12.2) Wherever possible data on virgin flows at different points of a river should be collected.

**9.13 Annual reports on Rivers:**

(9.13.1) The Ministry of Water Resources and the National River Conservation Directorate of the Ministry of Environment and Forests shall separately or together bring out annual reports on the state of all rivers (Red Lists of Rivers).

**9.14 No commercialisation:**

(9.14.1) River space shall not be commercialised under schemes such as ‘riverfront development’.

(9.14.2) No river, or any stretch of it, shall be privatised.

**9.15 A River Protection Law:**

(9.15.1) Having regard to several of the points made above, a comprehensive law is needed for the protection of rivers from human abuse and misuse, *inter alia* recognizing a river as a legal person and conferring on it a legal right to its waters, natural variations in flows, physical components such as its bed, banks, vegetation, floodplains, biota, etc.

(9.15.2) Such a law shall specifically restate the constitutional obligation to protect the environment (including rivers and riverine biota) that already exists under Articles 48A and 51A (g).

(9.15.3) By judicial pronouncements, it is already part of Indian law that water as a natural resource (including rivers) is held by the state

in public trust for the community. This could be specifically restated in the proposed law on rivers.

(9.15.4) In addition, River Zone Regulation measures shall be introduced to provide statutory protection to rivers and their essential connectivities. Community Conserved Areas (CCA) around rivers shall be encouraged and provided with legal protection. Institutional linkages across river stretches shall be promoted for collective community action for river protection and revitalisation.

(9.15.5) Critical biodiversity stretches in our rivers should be identified and kept pristine by law.

#### **9.16 Livelihoods:**

(9.16.1) Local and traditional livelihoods based on rivers shall be restored and promoted.

#### **9.17 Responsibilities for All:**

(9.17.1) All of us (the state, the engineers, bureaucrats, farmers, industrialists, institutions of all kinds, ordinary citizens) have contributed in varying degrees to the present state of our rivers. All of us must alter our ways and our relationship with rivers. Let the rivers live. Let us learn to live with and celebrate rivers.

(9.17.2) Based on this declaration, a national campaign shall be launched for the restoration of India's rivers.

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