River Linking Project A Disquieting Judgment

RAMASWAMY R IYER

The recent Supreme Court decision on two writ petitions of 2002 on the inter-linking of rivers is a deeply disquieting judgment because it is not only a clear encroachment into the executive domain, but also shows an inadequate awareness of the extensive debate on the project. The ruling provides strong backing to a "project" that many hold to be fundamentally flawed and potentially disastrous. This article first deals with the question of judicial overreach and then considers the soundness of the project in terms of the various benefits that are claimed on its behalf. It concludes with a plea for an urgent reconsideration of the judgment.

Ramaswamy R Iyer (*ramaswamy.iyer@gmail. com*) is with the Centre for Policy Research and has written extensively on issues related to water.

1 Introduction

The judgment of the Supreme Court of 27 February 2012 finally disposes of two writ petitions of 2002 on the inter-linking of rivers (ILR). In this judgment the Supreme Court directs the executive government to implement the project and to set up a special committee to carry out that implementation; it lays down that the committee's decisions shall take precedence over all administrative bodies created under the orders of this court or otherwise: it asks the union cabinet to take all final and appropriate decisions, and lays down a time limit of 30 days ("preferably") for such decision-making; and it grants "liberty to the learned amicus curiae to file contempt petition in this court, in the event of default or noncompliance of the directions contained in this order". This is a deeply disquieting judgment because it (1) is a clear encroachment into the executive domain, (2) shows an inadequate awareness of the extensive debate on the project, and (3) provides a strong backing to a "project" that many hold to be fundamentally flawed and potentially disastrous. This article will first deal with the question of judicial overreach at some length, then proceed to consider the soundness of the "project", and conclude with a plea for an urgent reconsideration of the judgment.

2 Background

At the outset it may be useful to recall how this "project" came into being. After the K L Rao proposal of a Ganga-Cauvery link and the Dastur concept of a Garland Canal had been rejected on various grounds, the Ministry of Water Resources brought out a report ("National Perspectives for Water Resources Development") outlining a general idea of links and transfers and set up the National Water

Development Agency (NWDA) in 1982 to study basin water balances and possibilities of storages, links and transfers. The NWDA was carrying out these studies and preparing reports (and continues to do so), but none of these became a project, nor was there anything called the "Inter-Linking of Rivers Project". No such project figured in the Ninth or Tenth Five-Year Plans. In 2002, arising out of a speech by the then President of India, advocating the linking of rivers as the answer to India's water problem, the amicus curiae in a certain case (which related to other matters) submitted an application praying for a mandamus by the Supreme Court on the subject of riverlinking, and the Supreme Court converted the application into a writ petition for the purpose of delivering a judgment. After going through some processes (which we need not go into here), the Supreme Court then asked the Government of India to accelerate the implementation of the project. It was not entirely clear whether this was in the nature of a direction, but it was virtually so treated by the Government of India, and by the Court itself insofar as it called for regular status reports and began monitoring progress. (In any case, that ambiguity has now been removed, because the Supreme Court has, in the final disposal of that old writ petition, clearly issued firm directions to be complied with.)

The Supreme Court's direction (or suggestion) in 2002 presented a political opportunity which was seized by the ruling party; the then Prime Minister A B Vajpayee made a dramatic announcement of a major initiative on the ILR in Parliament and set up a task force. That initiative was welcomed by some and deplored by others. There was a fierce controversy about the project in the media. In 2004, there was a change of government, and the new United Progressive Alliance (UPA) government was clearly unenthusiastic about the project; its common minimum programme said that the project would be comprehensively reassessed in a fully consultative manner. Thereafter, apart from a memorandum of understanding (моu) between

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the governments of Uttar Pradesh and Madhya Pradesh on the preparation of a detailed project report (DPR) for the Ken-Betwa link, and perhaps another мои between Gujarat and Maharashtra, nothing much has happened. The general impression was that the grand "project" had been more or less put on hold, though no formal declaration to that effect was made. Those who were profoundly uneasy about the project felt relieved because it appeared to be a nonstarter. That position has dramatically changed with the Supreme Court's judgment of 27 February 2012 reviving and reactivating the dormant project with a set of directions.

3 Creation of a Project

The reason for outlining the background was that it seemed necessary to bring out the fact that in 2002 there was no sanctioned project that was in need of a push for acceleration. As referred to above, no such project was mentioned in the Ninth or Tenth Five-Year Plans; the Government of India did not go to the Court asking for a direction to facilitate its own task in the face of political and other difficulties; there were no public interest litigations (PILs) from civil society asking for the early implementation of the project; the writ petition was a creation of the Court itself; and the impetus for this came only from (a) an address by the then President of India expressing his personal views and not official policy and (b) the amicus curiae's personal (totally non-authoritative) view of what the country needed. It will, therefore, be fair to say that the "project" was virtually the creation of President Abdul Kalam, Ranjit Kumar (the amicus curiae) and Justice Kirpal (who gave his direction or suggestion on the eve of his retirement as the Chief Justice of India).

4 Beyond the Judicial Domain

A Clarification: What has come to be known as judicial activism in this country has undoubtedly done much good in certain cases, though it may be questionable in others. This article is not making a general point about judicial activism, but raising that issue with reference to this particular case. Judicial interpretation of the Constitution and the laws virtually becoming legislation, i e, judgemade law, is a phenomenon found in many countries, though in varying degrees. Judge-directed executive action is much less widespread, but it is certainly familiar in India. The present case is a striking example of this.

Possible Arguments for Judicial Inter-

vention: Let us start with a statement of the obvious. Assuming that there is a serious water-scarcity problem facing the country, it is not the business of the Supreme Court to deal with it; there is an executive government to deal with such matters, and it is accountable to Parliament.

True, the citizen's right to water is a fundamental right, and, therefore, the Supreme Court is concerned with it; but while it may direct the government to ensure that the right is not denied, it is not for it to lay down the manner in which or the source from which that right should be ensured. From the right to water there is no direct line of reasoning leading to the ILR project.

It is true, again, that there are intractable interstate river water disputes, and these are of great concern to the Supreme Court; but the Supreme Court can at best direct the executive government to find early answers to river water disputes, and not recommend a particular answer such as the ILR project. (It is not a very satisfactory answer, as we shall see later.)

Ignoring Their Own Caution: It must in fairness be noted that the learned judges were well aware of the danger of judicial overreach and the need to avoid it, as is evident from the following remarks in the judgment:

The Court can hardly take unto itself tasks of making of a policy decision or planning for the country or determining economic factors or other crucial aspects like need for acquisition and construction of river linking channels under that programme. The Court is not equipped to take such expert decisions and they essentially should be left for the Central Government and the concerned State. Such an attempt by the Court may amount to the Court sitting in judgment over the opinions of the experts in the respective fields, without any tools and expertise at its disposal. The requirements in the present case have different dimensions. The planning, acquisition, financing, pricing, civil construction, environmental issues involved are policy decisions affecting the legislative competence and would squarely fall in the domain of the Government of States and Centre.

Having made those unexceptionable observations, the learned judges proceeded to say:

We certainly should not be understood to even imply that the proposed projects of interlinking of rivers should not be completed. We would recommend, with all the judicial authority at our command, that these projects are in the national interest, as is the unanimous view of all experts, most State Governments and particularly, the Central Government.

That is a non sequitur. No one was asking the Supreme Court to say that the project should not be implemented. By the same token, no one (except the amicus curiae) was asking the Supreme Court to say that it should be implemented. Neither statement falls within the judiciary's domain.

The learned judges proceed further to say that "this Court may not be a very appropriate forum for planning and implementation of such a programme". (That again is an unexceptionable and perhaps obvious, and therefore, an unnecessary observation.) They go on to suggest that the government should set up an implementing agency.

In other words, the learned judges, ignoring their own earlier caution, clearly say that the project should be implemented and that the government should set up an agency for the purpose. Having told themselves not to go beyond the judicial domain, they have done precisely that.

Wrong Assumptions: Again, to be fair to them, they have done so because they believe that the project is in the national interest; that there is a general consensus on the project; that there is unanimity on it at the central and state levels, barring a few exceptions; that its implementation needs to be accelerated; and as that is not happening (which implies executive failure – though this not stated in so many words), it is necessary for the judiciary to intervene and issue directions. Unfortunately, that is an amalgam of factual, logical and domain errors.

First, the statement that the project is in the national interest is only the opinion of the three judges and not a judicial finding; and it carries no greater weight than the opinions – in favour of the project or against it – of engineers, economists, environmentalists, ecologists, sociologists, social activists, and others.

Second, it is wrong to assume that there is a national consensus on the project. When the project was announced in 2002, a controversy ensued. There were many who thought that it was a very good idea, but there were also many who thought that it was a thoroughly bad idea. Regardless of who was right in that controversy, it is at any rate clear that there were divergent views on the project. The learned judges have gone by the views of the amicus curiae and the National Council of Applied Economic Research. Were they aware that there was a strong expert opinion to the contrary? Should they not have asked some distinguished critics to state their objections to the project? Did the amicus curiae bring to their lordships' notice any part of the vast literature on the subject?1 If he did not, was it not a serious failure on his part?

Without an examination of the extensive literature on the subject how could the learned judges say "We would recommend, with all the judicial authority at our command, that these projects are in the national interest, as is the unanimous view of all experts"? That statement simply had no basis and no judicial authority (with the deepest respect to their lordships), and is factually incorrect.

Third, assuming that the learned judges had heard both the supporters and opponents of the project fully and patiently, would they then have been in a position to decide which view was right? Would that conclusion have had a judicial weight? The answer is, again, simply "No", because the question did not fall within their domain.

Fourth, it is simply not true that there was unanimity on the project at the central and state levels, barring a few exceptions. Broadly speaking, the states which want water from elsewhere support the idea, and the states which are expected to provide water to other states oppose it. Some states are, in fact, strongly opposed to the project.

Federalism Ignored: The judgment minimises the dissent on the part of the state governments and makes an unwarranted presumption of near-unanimity, and offers this gratuitous observation:

The state Governments are expected to view national problems with a greater objectivity, rationality and spirit of service to the nation and... ill-founded objections may result in greater harm, not only to the neighbouring states, but also to the nation at large.

That is a dismissive observation which fails to do justice to the serious concerns expressed by some state governments, ignores the resolution passed by the Kerala State Assembly, presumes that state-level objections to the ILR project are irresponsible and anti-national, and admonishes the states to show a national spirit. That rather patronising admonition has a strong centralising undertone and drives a coach and four through the spirit of federalism.

The Constitution recognises interstate rivers and provides for a central role in relation to them, but it makes no reference to inter-basin transfers and includes no enabling provision for central intervention to bring them about. Assuming that inter-basin transfers become necessary in some exceptional cases, they cannot be ordered by the central government or mandated by the Supreme Court; they can only be brought about by consent. That consent cannot be achieved by admonitions and dismissive remarks.

(Incidentally the judgment discusses Article 262 and the precise application of the barring of the jurisdiction of the courts at some length. The connection between that discussion and the case under consideration seems rather remote.)

Failure to Understand Central Ambivalence: As for the central government, the National Democratic Alliance (NDA) government announced the project, but the UPA government clearly indicated its lack of enthusiasm for the project in its common minimum programme. Both UPA-I and UPA-II have refrained from

formally abandoning the project, doubtless for political reasons, but have deliberately chosen to let it languish. This was not a case of executive inaction warranting judicial entry into the space so created, but one of a lack of interest in the project, not explicitly stated. It appears that the learned judges took the formal statements of the central government at face value, and failed to understand its ambivalence.

Pre-empting Procedures and Processes:

Consider the implications of a specific judicial direction to the executive to implement a particular project. In the normal course, a project goes through certain stages and procedures: formulation; examination/evaluation from various angles (techno-economic, environmental, ecological, financial, social, etc) by the appropriate agencies, committees and ministries; statutory clearances under the Environment Protection Act, the Forest Conservation Act, and other Acts, and the necessary state government approvals; compliance with the procedures prescribed in the National Rehabilitation Policy; acceptance of the project by the Planning Commission from the national planning point of view; concurrence by the finance ministry from the budgetary and financial clearance angles; and finally a decision by the cabinet. The Supreme Court rides roughshod over all this and orders not quick consideration and decision-making by the government, but implementation. This pre-empts all planning, budgetary, project-approval, and expenditure sanction processes and procedures.

Taking Away Executive Decisionmaking: Are the proposed special committee and the cabinet free to examine the project and come to the conclusion that it is unacceptable and must be rejected? No, they are under the Supreme Court's order to implement the project and may face contempt proceedings if they fail to do so. The project decision has been taken away from the hands of the government; it has been exercised by the Supreme Court; the government and the Planning Commission have been reduced to the position of subordinate offices or implementing agencies of the Supreme Court.

It could be argued that the above is a misrepresentation of what the Supreme Court has done, and that the learned judges are only concerned at the delay in the implementation of an approved project and asking for an early implementation. However, there is, in fact, no approved, sanctioned project called "the inter-linking of rivers project". In the controversy about this idea, an important defence by its supporters has been that it is not a project but a grand concept; but if it is a concept, how can it be "implemented"? It has first to be translated into projects, and each of those projects (a total of 30 links, each one a project, and involving in all more than 60 dams, perhaps closer to 80) has to be properly examined, evaluated and approved or rejected, as the case may be. It is only thereafter that the question of implementation would arise. It is

theoretically possible that the processes of examination and approval may result in all the projects being cleared, or all the projects being rejected, or some being cleared and some rejected. A blanket direction to implement the "project" as a whole (i e, 30 projects) is clearly inappropriate.

How many of those 30 projects have been actually approved? None. Three – Ken-Betwa, Damanganga-Pinjal, Par-Tapi-Narmada – have reached the stage of preparation of DPRs, and one (Polavaram), though included in the ILR project, was separately taken up by the Andhra Pradesh government on somewhat different lines, but is the subject of cases in the Supreme Court by Orissa and Chhattisgarh. There is not a single case of a project actually sanctioned and ready for implementation.

The learned judges may say that this is precisely what worries them; that by now the projects should have been well

under way; that a good project or concept or whatever it was, announced in 2002, is languishing; and that the judiciary has to step into the vacant space created by non-action by the executive and issue the necessary direction. This is the vacuum-occupying theory. However, there is a fallacy here. As already mentioned, the "delay" is not the result of executive failure or inefficiency, but a deliberate (though unstated) slowing down of action on the project. Unfortunately, the UPA government's attitude towards the project was never made unambiguously clear either to the general public or to the Supreme Court. It is that ambiguity that enabled the Supreme Court to issue its directions.²

Implications for Executive Accountability: Consider some further implications of a Supreme Court direction to the government to implement a particular project. The learned judges may say that



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they have not asked the government to ignore prescribed procedures and other formalities, but once there is a judicial direction reinforced by the threat of contempt proceedings, will any examining or evaluating agency or ministry dare to come to an adverse finding on the project? The whole process of examination and clearance thus stands vitiated, and becomes a formality. Further, the judicial direction undermines the accountability of the executive: in answer to any criticism the executive can say that it was only acting under the Supreme Court's direction. By the same token, the direction also restricts the scope of the comptroller and auditor general's (CAG) work: the CAG can do an ordinary expenditure audit, but will not be able to examine the soundness of the project decision because that would amount to questioning the Supreme Court. Paradoxically enough, a judicial direction to implement a particular project also exempts the project from judicial review. No citizen or institution can go to court against a project mandated by the Supreme Court. One wonders whether the learned judges considered these implications.

5 The Case against the Project

It has already been pointed out that there are widely divergent views on the project,³ and that it was not right for the Supreme Court to throw its weight behind one view. This is not merely a question of asking the Supreme Court to be neutral and impartial. It is this writer's view (shared by many) that the Supreme Court has lent its massive support with all the judicial authority that it can command (to use the judges' own words) to a project that must be considered a folly or a disaster or both. It is, therefore, necessary to state the case against the project.

(A digression: In the controversy over the announcement of the project in 2002, some of the government engineers used to make the point that ILR was a somewhat misleading title for what was really a plan for inter-basin transfers, and that such transfers were not a new idea. That was an attempt to bring what seemed a bizarre idea within the ambit of a familiar rubric. However, the pretentious name "inter-linking of rivers" has come to be firmly established and is truly indicative of the hubristic thinking behind the enterprise, and this is made even clearer by the name "Networking of Rivers" popularised by Kalam, and enshrined by the Supreme Court in the name of the writ petition that it created in 2002 ("In Re-Networking of Rivers"). From the point of view of the critics of the project, that grotesque name serves very well to highlight the kind of thinking that the project exemplifies.)

Let us forthwith take note of but put aside two very important points that can be forcefully argued against the project. (i) The first is that the projected water crisis is to a large extent the result of competitive unsustainable demand for water, and can be significantly moderated by major economies in water use for all kinds of purposes, i e, agricultural, industrial, municipal and domestic; that the possibility of arresting the growth of demand for water is dramatically illustrated by the achievement of China in this direction; and that a similar effort by India will minimise the need for augmenting the availability of water for use. This writer holds that view strongly, but will assume for the purpose of the present argument that some additions to water availability for use will continue to be necessary despite substantial restraints on the growth of demand.

(ii) The second point is that given the need for some additions to supplies, it is possible to argue that there are many ways of doing this and that river linking is by no means the obvious or best choice. There are striking examples of what can be achieved through alternative routes (e g, Anna Hazare's transformation of Ralegan Siddhi, Rajendra Singh's achievements in Alwar district in Rajasthan). This important point will also not be gone into here. Instead, taking the river-linking project as given, we shall examine it on its own terms.

The Concept: Let us look first at the "concept" of ILR. It is a rather odd concept, though we may have failed to notice this. One would expect the water planners to start from the identification of the needs of water-scarce areas in Rajasthan, Madhya Pradesh, Maharashtra,

Karnataka, Andhra Pradesh and Tamil Nadu, and work out area-specific answers to their problems. In each case, if we wish to proceed scientifically, the following questions will have to be asked: What is the extent of the problem? To what extent can local and intra-basin answers be found? Is there an inescapable need for bringing in water from outside? If that is so in a given case, and if that necessitates the linking of two rivers as the best answer, one can take a careful look at such a proposal. However, the project inverts that logical sequence: it looks at a map of India, decides a priori that the rivers of India can and should be linked, and then proceeds to consider the modalities of doing so.

References are made to a "national water grid" on the analogy of a power grid or the linking of highways. The analogy is inapt and misleading. In a power grid or a highway link, the movement can be in both directions, but that is not the case with a river link; water will flow only in one direction. Apart from that, highways and power lines are human creations and can be manipulated by humans. Rivers are not human artefacts; they are natural phenomena, integral components of ecological systems, and inextricable parts of the cultural, social, economic and spiritual lives of the communities concerned. They are not pipelines to be cut, turned around, welded and rejoined. The term "national water grid", like the term "networking of rivers", is an evidence of profoundly wrong thinking about rivers. Rivers are far more than mere conduits for water. Further, the project is in essence an attempt to redesign the geography of the country; underlying it is the old hubristic idea of "conquest of nature" or "subduing nature" which stands discredited today. However, that point cannot be elaborated here.

Rationale of the Project: Two main justifications are offered for the "interlinking of rivers". The first is that it is an answer to the occurrence of floods in some parts of the country and drought in other parts; that the project will transfer water from the former areas to the latter, providing some relief from floods to the former areas and making more

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water available to the latter. The second is that some river basins are "surplus" in water while others are "deficit", and that the project will transfer water from the former to the latter. It must be noted that these are two distinct propositions, but they are often mixed up.

Flood Moderation: The very idea of flood control has been questioned by some, but leaving that aside, it is not quite clear how the linking of rivers will contribute to the objective of flood control. A significant moderation of floods will call for a massive diversion of flood waters which may not be feasible at all. or if technically feasible, it may have serious impacts on the river regime downstream of the diversion point, on the diversion route and in the recipient areas. On the other hand, if only small fractions of the flood flows are to be diverted (as seems to be the intention). there will be hardly any flood moderation. For instance, the flow in the Ganga during a high flood can exceed two million cusecs, whereas the link canals envisaged will divert only 1,500 cusecs. What flood moderation will this achieve? Even if all the river-linking proposals are implemented, the contribution that this will make to the mitigation of the flood problem will not be substantial. There is no need to discuss this point further. Bharat Singh, professor emeritus, Water Resources Training Centre, Indian Institute of Technology, Roorkee, and member, National Commission for Integrated Water Resources Development Plan (1996-99), has observed categorically that "any water resources engineer will immediately discard the idea of the ILR as a flood control measure".4 (On the other hand, if flood moderation is sought to be achieved by building dams and reservoirs - in itself a questionable proposition - that is something that does not necessitate the concept of river linking.)

However, if we wish to put aside those doubts and undertake a more detailed examination of this matter, the questions to be considered will be the following: (a) How much of the flood is proposed to be transferred? (b) What degree of flood moderation will this provide to the area in question? (c) What has been the past experience with flood moderation through big projects? (d) What will be the impact of the diversion on the downstream river regime, aquatic life, livelihoods of riparian communities, water quality and selfpurifying capacity, groundwater recharge, estuarine conditions, etc? (e) What will be the impacts (good and bad) of the water en route as it travels to the destination? (f) What will be the impacts (good and bad) of the transfer of water on the recipient river/area? (g) Are the floods in the "donor" area and the droughts in the recipient area synchronous, and if not, where will the waters be stored temporarily, and what will be the impacts of those storage projects?

'Surplus' and 'Deficit': Turning to the question of transfers from surplus to deficit basins, there is the crucial question of how "surpluses" and "deficits" are determined. The assumptions behind the calculation of a surplus will have to be gone into thoroughly, and even small changes in those assumptions and other parameters may affect the calculation substantially.⁵

Other scholars have also pointed out the highly problematic nature of the notions of surplus and "deficit" rivers.⁶ We cannot determine the surplus in a basin by comparing the flow in the river with the aggregate of requirements for domestic, municipal, industrial and agricultural uses. The river also serves many other purposes as it flows: for instance, it supports aquatic life and vegetation; provides drinking water to human beings, their livestock and wildlife; influences the micro-climate; recharges groundwater; dilutes pollutants and purifies itself; sustains a wide range of livelihoods; transports silt and enriches the soil; maintains the estuary in a good state; provides the necessary freshwater to the sea to keep its salinity at the right level; prevents the incursion of salinity from the sea; provides nutrients to marine life, and so on. It is also an integral part of human settlements, their lives, landscape, society, culture, history and religion.

A large dam involves a violent disruption of that complex system and relationships. To put it dramatically, every dam kills a river: it plays havoc with the river regime; traps silt and stops the flow of nutrients: diverts water from downstream to upstream; reduces flows downstream; causes distress to aquatic life, wildlife in general, and populations dependent for life-support and livelihoods on the river; devastates fish populations; has an adverse impact on vegetation; submerges large areas of land (agricultural, forested and other); causes violent disruption in the lives of settled communities, particularly aboriginal and tribal communities in pristine areas, and in their access to water, forests and other natural resources; changes river morphology and water quality; reduces the river's capacity to clean and regenerate itself downstream of the dam; diminishes groundwater recharge; has an adverse impact on the health of estuaries;7 causes the ingress

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of salinity from the sea; and so on. Moreover, the reservoir behind the dam which changes moving water into still water has its own consequences: eutrophication, temperature stratification, emission of greenhouse gases from submerged and decaying organic matter, changes in the micro-climate, increased incidence of diseases such as malaria, and so on. Some of these impacts and consequences can be foreseen and mitigated to a limited extent; some others can be foreseen but cannot be mitigated; and some cannot be foreseen at all: there are unforeseen consequences in most cases.

It follows that any diversion of waters from a river, however small, is bound to have some consequences, major or minor. This makes it very difficult to estimate the surplus, if any, in the river. In fact, the term surplus is meaningless in the hydrological/ecological context (surplus over what?) and must be abandoned. Diversions may indeed be found necessary, but they will have to be decided upon in the full knowledge that there will be some adverse consequences; the planners will then have to consider the acceptability of those consequences.

The term "deficit" is equally inappropriate. The flow in the river is what it is, neither surplus nor deficit; we, with our "demand", call it "deficit". Leaving that aside, and accepting common usage, it will be necessary to examine whether a projected deficit is, in fact, the result of bad water management and unsustainable demands. If it is, the deficit will disappear with better water management.

A careful, economical and sustainable intra-basin management should come first, and bringing water from elsewhere should be the last recourse. Moreover, even in the states that are presumed to be water-rich (e g, Bihar, Orissa, Andhra Pradesh), there are problem areas, and their needs should be met before sending the water to distant places.

Power Generation: A further justification offered for the project is that there will be a net generation of electric power (of upwards of 30,000 MW). This seems very questionable and in need of careful examination, but it is a secondary aspect that will not be gone into here. **Answer to Drought?:** It is primarily in the context of drought that the project might appear to be needed. However, two points must be noted.

First, the proposed river links (reportedly mainly by gravity, with a few modest lifts) are no answer to drought-prone areas. Linking a river to another will merely provide additional water to areas already served by rivers. Most of the uplands and dry lands of this country are distant from rivers, and at elevations of 300 m to 1,000 m above mean sea level. The ILR will serve very few such areas.

The second and complementary point is that fortunately no such long-distance transfer is necessary. There are several well-known examples of the transformation that can be brought about through local rainwater-harvesting and watershed development even in low rainfall areas. In brief, the primary answer to drought has to be local; it is only thereafter, and in some very unpromising places where rainwater-harvesting may not be feasible or may yield meagre results, that the bringing in of some external water may need to be considered.

Water for Irrigation?: Turning to water transfers for irrigation, these may be proposed either for providing additional water to areas already under irrigation or for extending irrigation to arid or "rainfed" areas. In both cases, difficult questions arise.

(a) In irrigated areas, the question is whether large demands for additional irrigation water should be unquestioningly accepted and met through supply-side solutions such as large dams or inter-basin transfers. Should not serious attempts be made to improve water-use efficiency in irrigated agriculture, get more value out of a given quantum of water, reduce the water demand, and minimise the need for supply-side projects? In the context of the prevailing low efficiency of water conveyance in canal systems and water use in irrigated agriculture, bringing in more water from another basin would really amount to the provision of more water for being wasted. It would also mean that there would be no motivation at all for economising on the use of water; on the contrary, the tendency to grow water-consuming crops and to be profligate with water would receive strong encouragement.

(b) In arid or drought-prone areas, the introduction of irrigated agriculture of a kind appropriate to wet areas may be unwise. "Development" in arid areas should perhaps take other, less water-intensive forms.

In both irrigated and rain-fed areas, the importation of external water may also have other secondary consequences: the increased incidence of conditions of water-logging and salinity (a concomitant of irrigated agriculture in many places); the possibility of the repetition of the green revolution patterns of agricultural development and the related problems (which need not be spelt out here), and so on. These are not unavoidable consequences of additional water, but they are dangers that have to be kept in mind: given more water, there would be a natural tendency to slip into familiar agricultural practices.

Minimal Lifts?: It has been claimed that the flows will be largely by gravity with lifts (not exceeding 120 m) at a few selected points, and that the need for a transfer of water through natural barriers between basins will be obviated. Two questions arise. First, such an approach may be possible in some cases, but its feasibility in some 30 projects seems prima facie doubtful. This, like the claim referred to earlier that the project will be a net generator of large quantities of electricity, needs to be looked at very carefully, case by case. Second, if indeed the links are to be largely by gravity with a few modest lifts, will not such an approach limit the extent of water transfers and the scope of the project? Can large claims still be made for the project? There seems to be a dilemma here: if we want an ambitious project we must go in for massive lifts and incur the related costs and risks of gigantism; alternatively we must content ourselves with a modest project, in which case, the tall claims made for it will have to be moderated.

Impacts and Consequences: The project (i e, the grand design consisting of 30 projects) will be a major intervention

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in nature and is potentially fraught with serious consequences. It will necessarily involve a large number of dams (around 80), reservoirs, diversion of waters, canal systems, and so on. What a dam does to a river has already been stated, and it is not necessary to repeat that here. However, one point must be mentioned, namely, that before diverting waters and reducing downstream flows we must make sure that disaster will not follow. It is well known that river diversions by the former Soviet Union led to the virtual death of the Aral Sea. That cautionary example should not be forgotten. It is surely not necessary for India to relearn that lesson by actual experience.

Generating New Conflicts?: We have not so far been notably successful in persuading states within a basin to share river waters without disputes. Instead of resolving such intra-basin disputes through the better, more economical and more cooperative management of the resources of the basin, should we try to bring water from another and more distant basin? Further, even if we assume that the conflict within a "water-short" river basin will be eased by the importation of external water, such an effort may initiate new conflicts between basins.

For instance, assuming that the Cauvery dispute between Tamil Nadu and Karnataka arises from a real shortage of water in the Cauvery for sharing and can be resolved by bringing water from the Ganga via Subarnarekha, Mahanadi, Godavari, Krishna and Pennar, this may lead to new conflicts involving the donor states of West Bengal, Orissa and Andhra Pradesh. Is it a good idea to resolve an intra-basin interstate dispute by creating an inter-basin dispute?

Incidentally, there is already much concern in the north-east about the large number of hydroelectric projects that are proposed to be undertaken on the rivers in that area. The ILR project will accentuate the anxiety of the people there. This will not be discussed further here except to say that the sensitivities of the north-eastern states must be kept in mind. It seems hardly necessary to add one more element of discord in an already difficult situation. International Aspects: When the project was initially announced, there were serious apprehensions in Nepal and Bangladesh about its implications for them. Those anxieties were muted by the Government of India's assurance that for the time being only the peninsular rivers would be considered, and that before taking up the Himalayan component, there will be consultations with Nepal and Bangladesh. In any case, the project seemed to be in the doldrums, and Nepal and Bangladesh ceased to worry too much about it. However, the Supreme Court's judgment has revived their anxieties, and a movement against the project might start again. Opinion in Bangladesh is sore about the fact that the Supreme Court of India completely ignored that country in its judgment. As for Nepal, the judgment has the following strange sentence (evidently based on the NCAER report): "the project will also help the countries like Nepal, etc, thus uplifting India's international role". That is not going to be well received in Nepal. This judgment is a negative contribution to India's relations with those two countries.

6 Conclusion: A Request

It is hoped that enough has been said both on the propriety of the judicial direction in this case, and on the nature of the project to which the Supreme Court has lent its strong support, to plant some doubts in the minds of the learned judges about the rightness of their decision, if not to persuade them that an error has been made. It is the earnest request of this writer that they should put the judgment on hold and undertake a re-examination of the matter with extensive study and wide-ranging consultations.

NOTES

- 1 The following are a few illustrative instances:
 - (i) The observations on the subject of interlinking of rivers in the report of the National Commission on Integrated Water Resources Development Plan, 1999. (It found no "imperative necessity for massive water transfers".)
 - (ii) The extensive debate on the project, ranging over several issues of *Economic & Political Weekly* in 2002-03, between this writer and Radha Singh, the then additional secretary, Ministry of Water Resources.
 - (iii) A similar debate among this writer, B G Verghese ("Exaggerated Fears on

'Linking Rivers'", *Himal South Asian*, September 2003) and Himanshu Thakkar ("Manufacturing Consensus for Collective Suicide", 17 August), *Himal South Asian* (and the next issue), Kathmandu.

- (iv) Bharat Singh's article "A Big Dream of Little Logic", *Hindustan Times*, 9 March 2003.
- (v) A Vaidyanathan's article "Interlinking of Peninsular Rivers: A Critique" in Economic & Political Weekly (5 July 2003).
- (vi) T Prasad's article "Interlinking of Rivers for Inter-basin Rivers" in *Economic & Political Weekly* (20 March 2004).
- (vii) "Interlinking Rivers: Is It the Solution?" by V Rajamani in *The Hindu*, 29 August 2005.
- (viii) Y K Alagh, Ganesh Pangare and Biksham Gujja (ed.), Interlinking of Rivers in India: Overview and Ken-Betwa Link (New Delhi: Academic Foundation, 2006).
- (ix) Paper by Jayanta Bandyopadhyay and Shama Perveen in Alagh et al (ed.), Interlinking of Rivers in India: Overview and Ken-Betwa Link (New Delhi: Academic Foundation, 2006).
- (x) Chapter 21 on Water Resources in the Mid-Term Appraisal of the Eleventh Plan.
- 2 In a sense it could be said that the central government brought the present judgment upon itself by the lip service that it has been paying to the project. In fact, there are divergent views within the government, and those in favour of the project may welcome the judgment.
- 3 The following quotation from Chapter 21 of the mid-term appraisal of the Eleventh Plan may serve to reinforce the argument of this article that there are serious doubts about the project: "Interlinking of Rivers 21.56. Several technical problems have to be addressed in order to interlink and become economical. In a country like India which gets seasonal rainfall from monsoons, the periods when rivers have "surplus" water are generally synchronous across the subcontinent. Another key issue is how the reasonable needs of the basin states, which will grow over time, will be taken into account while planning inter-basin transfers. Further, given the topography of India and the way links are envisaged, it might totally bypass the core dry land areas of central and western India, which are located on elevations of 300+ metres above MSL. It is also feared that linking rivers could affect the natural supply of nutrients through curtailing flooding of the downstream areas. Along the east coast of India, all major peninsular rivers have extensive deltas. Damming the rivers for linking will cut down the sediment supply and cause coastal and delta erosion, destroying the fragile coastal ecosystems. It is also pointed out that the scheme could affect the monsoon system significantly. The presence of a low salinity layer of water with low density is a reason for maintenance of high sea-surface temperatures (greater than 28 degrees C) in the Bay of Bengal, creating low pressure areas and intensification of monsoon activity. Rainfall over much of the subcontinent is controlled by this layer of low saline water. A disruption in this layer could have serious long-term consequences for climate and rainfall in the subcontinent, endangering the livelihoods of a vast population.
- "A Big Dream of Little Logic", *Hindustan Times*, 9 March 2003.
- 5 See A Vaidyanathan (2003).
- 6 Bandyopadhyay and Perveen (2006).
- 7 On the possible impact of diversions of rivers under the ILR project on the Bay of Bengal see V Rajamani, "Interlinking Rivers: Is It the Solution?", *The Hindu*, 29 August 2005.