

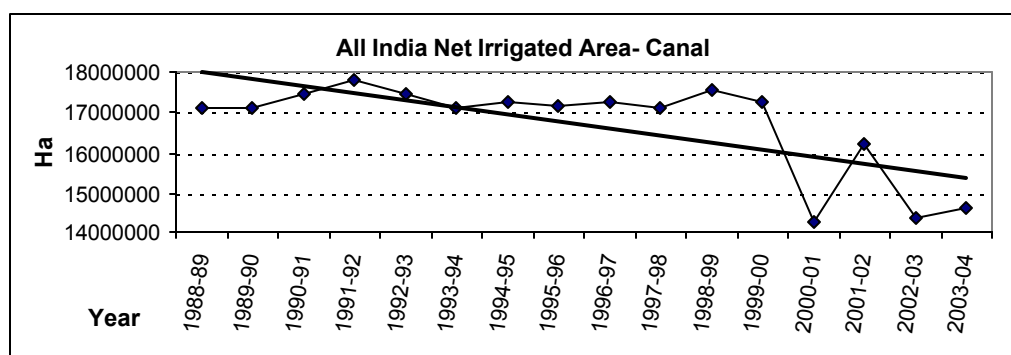
## Rs 100 000 crores spent, but no additional benefits

### There has been no addition to Canal Irrigated areas for 12 years

In twelve years from 1991-92 to 2003-04 (the latest year for which figures are available), there is been absolutely no addition to net irrigated areas by canals as reported by Union Ministry of Agriculture, based on actual field data from states. In the period from April 1991 to March 2004, the country has spent Rs 99610 crores on Major and Medium Irrigation Projects with the objective of increasing canal irrigated areas. What the official data shows is that this whole expenditure has not lead to addition of a single ha in the net irrigated area by canals in the country for the whole of this twelve year period. This should be cause of some very serious concerns and the Ministry of Water Resources (MWR), the states and the Planning Commission will have to answer some difficult questions.

The then Prime Minister Rajiv Gandhi speaking on big irrigation projects to State Irrigation Ministers in August 1986 had said, "Perhaps, we can safely say that almost no benefit has come to the people from these projects. For 16 years, we have poured out money. The people have got nothing back, no irrigation, no water, no increase in production, no help in their daily life." Only change that quote would require today is removal of the word *Perhaps*.

The net irrigated area by canals all over the country was 17.79 million ha in 1991-92. In all the years thereafter, till 2003-04, the latest year for which the data is available, the net irrigated area by canals has not only been lower than 17.79 m ha, but has been consistently falling, as can be seen from the graph below.



In this period, the MWR has been claiming (e.g. in the working group report on water resources for the 11<sup>th</sup> Plan) that they have created additional irrigation potential of 8.454 million ha and utilisation of irrigation potential of additional 6.297 million ha, but the data from the ground raise questions about these claims. The MWR has been using such claims to push more allocations for investment in major and medium irrigation projects. The MWR has proposed, for example, that in the 11<sup>th</sup> plan, an allocation of Rs 165900 crores should be done for the Major and Medium Irrigation Projects. The available facts show that this will be a total waste of public money.

The detailed figures of net irrigated area by source for the period 1990-91 to 2003-04 is given in the table below.

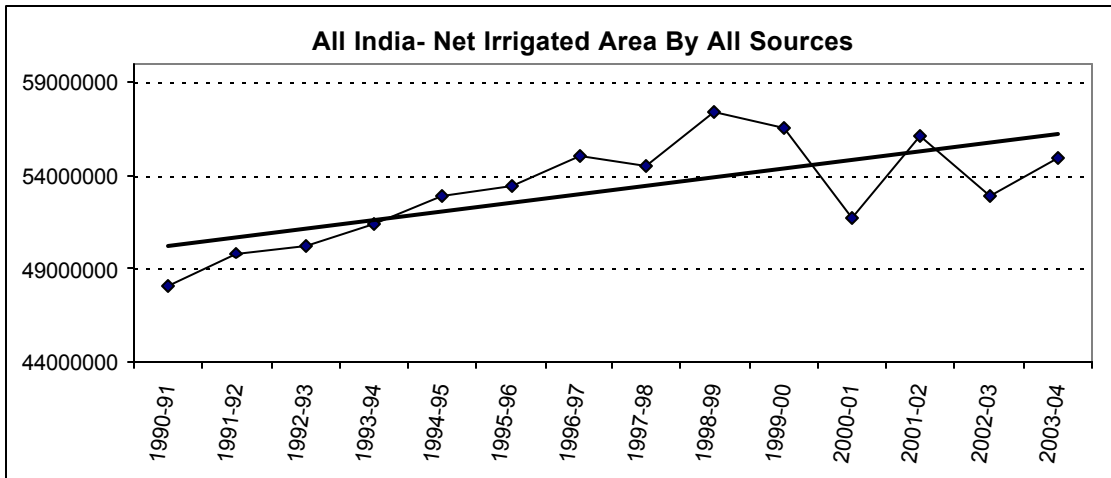
#### Net Irrigated Area (Ha)

	Canals	Tube Wells	Other Wells	Total GW	Tanks	Other Sources	Total
1990-91	17453000	14257000	10437000	24694000	2944000	2932000	<b>48023000</b>
1991-92	17791000	15168000	10869000	26037000	2991000	3048000	<b>49867000</b>
1992-93	17457000	15814000	10569000	26380300	2854000	3599000	<b>50293000</b>
1993-94	17111000	16376000	11386000	27762000	3152000	3427000	<b>51452000</b>
1994-95	17280000	17190000	11722000	28912000	3276000	3533000	<b>53001000</b>
1995-96	17142000	17937000	11860000	29797000	3111000	3460000	<b>53510000</b>
1996-97	17262000	18410000	12408000	30818000	3343000	3626000	<b>55049000</b>
1997-98	17092000	18432000	12448000	30880000	3100000	3491000	<b>54563000</b>
1998-99	17554697	20627894	13050073	33677967	2944266	3266846	<b>57443776</b>
1999-00	17278592	20842969	13036710	33879679	2686183	2857897	<b>56564414</b>
2000-01	14229380	21394279	10855953	32250232	2490856	2769566	<b>51740034</b>
2001-02	16240609	25161523	9818183	34979706	2349073	2594310	<b>56163698</b>
2002-03	14347064	18035551	8729653	33765204	2340000*	2532891	<b>52985159</b>
2003-04	14605419	25676525	9513092	35189617	2440000*	2707024	<b>54942060</b>

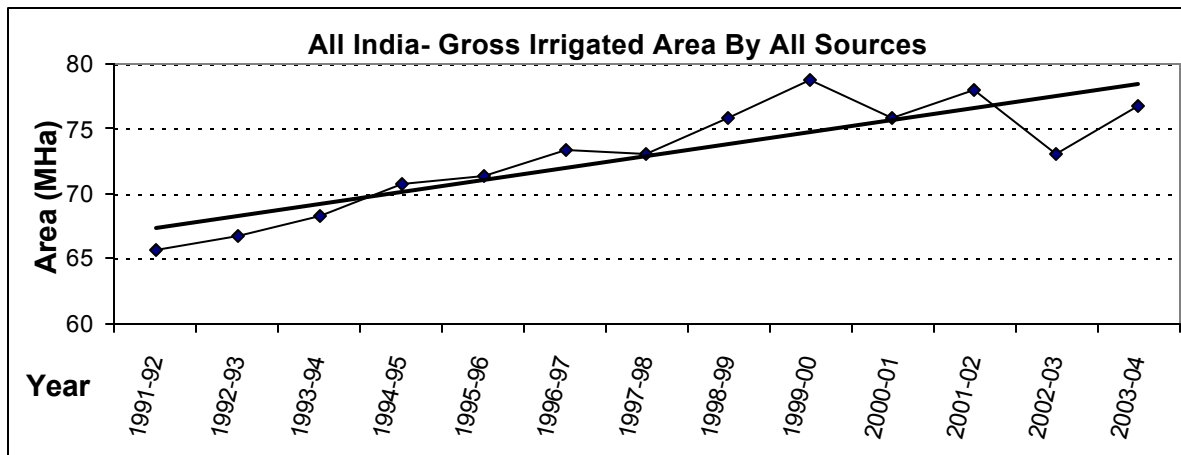
\*: Assumptions based on trends.

Source: 1. CWC annual year books, various years. 2. Ministry of Agriculture, Agricultural statistics, various years. 3. Website of Ministry of Agriculture, Government of India, <http://agricoop.nic.in/Agristatistics.htm>

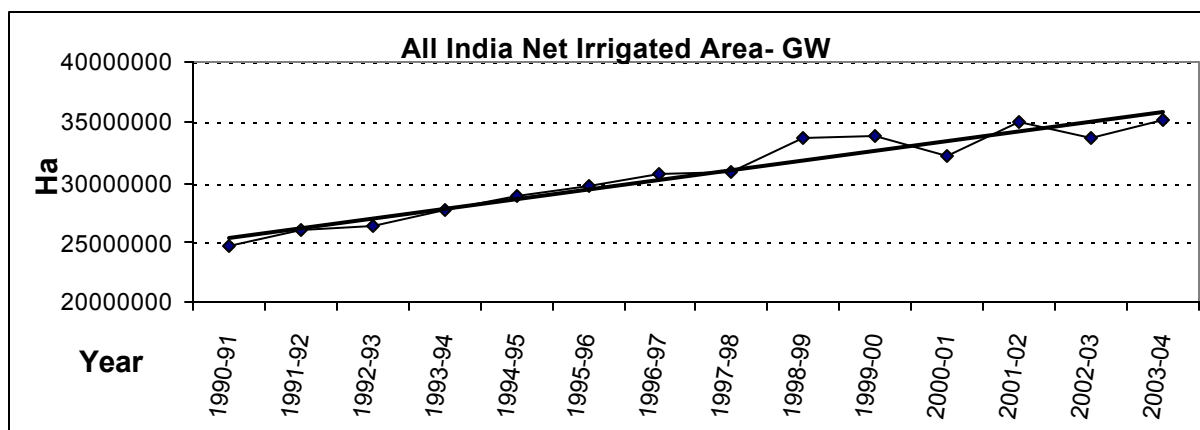
It is clear from the above table that the Net Irrigated Area by all sources increased from 48.02 m ha in 1990-91 to 57.44 m ha by 1998-99 and remained below 57 m ha thereafter, see the graph below.



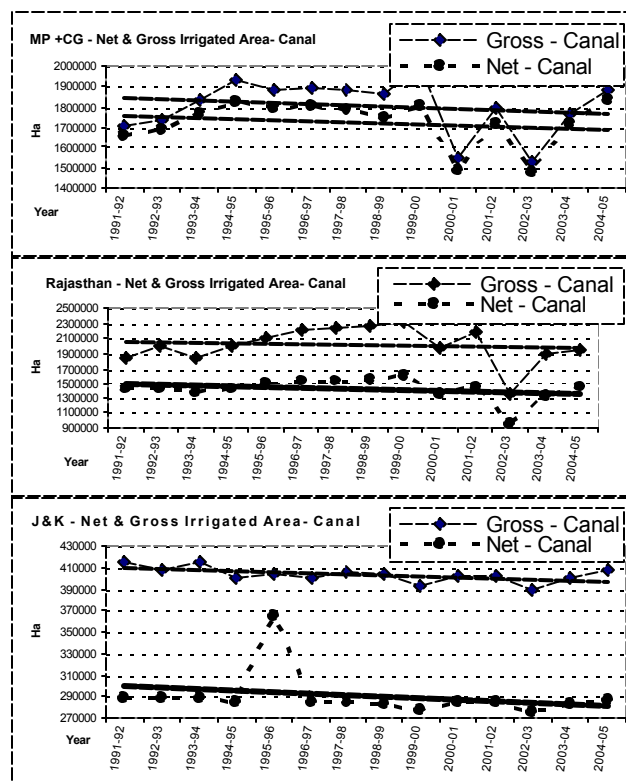
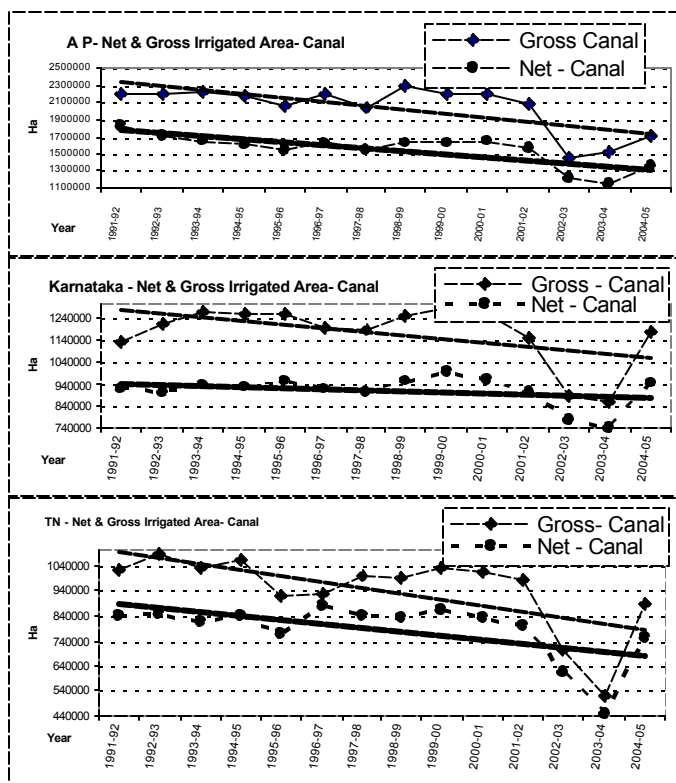
Similarly Gross Irrigated area (if two irrigated crops are taken in year that area counted twice in estimation of gross irrigated area, but once in estimation of net irrigated area) across all sources has been increasing during the period as seen in the graph below.



This increase in all India net and gross irrigated areas have been possible due to the increase in groundwater irrigated area from 24.69 m ha in 1990-91 to 35.19 m ha in 2003-04, see the graph below. In fact the increase in groundwater irrigated area has helped the MWR suppress the reality of non performance of the big dams.



Figures of gross (& net) irrigated areas from canals for some selected major states for the period under discussion for which necessary data is available also indicate this trend as can be seen from the graphs on next page. These graphs show that even gross irrigated area by canals has shown a consistent decreasing trend, even though we do not have nation wide figures for gross irrigated areas by canals for these years.



**The Reasons** Some of the reasons for this situation include: Siltation of reservoirs and canals, lack of maintenance of the irrigation infrastructure, water intensive crops in the head reaches and non building of the canals and over development (beyond the carrying capacity) of projects in a basin, water logging & salinisation are some of the other reasons. In some cases, the additional area added by new projects is not reflected in the figures as the area irrigated by older projects (due to above reasons) is reducing. Indeed the World Bank's 2005 report *India's Water Economy: Bracing for a Turbulent Future* showed that annual financial requirement for maintenance of India's irrigation infrastructure (which is largest in the world) is Rs 17000 crores, but less than 10% of that amount is available and most of it does not result in physical maintenance of the infrastructure.

**The Implications** These findings have grave implications. Firstly, they very clearly imply that the thousands of crores the country is spending each year on big irrigation projects is not leading to any additional net irrigated area. Secondly, the real increase in irrigated area is all coming from groundwater irrigation and groundwater is the lifeline of irrigated agriculture. Thirdly, in fact these futile investments of Rs 99610 crores not adding any irrigation may be the reason behind the slackening of the agriculture growth rate India has experienced over the last decade. Fourthly, Rs 14669 crores spent on the Accelerated Irrigation Benefits Programme (AIBP) between April 1996 (when the programme started) to March 2004 (the period we are discussing) has not helped add any additional irrigation area, the claims of MWR that AIBP has added 2.66 m ha of additional irrigation potential notwithstanding. Lastly, this raises many accountability issues & those responsible in MWR, Planning Commission & states will have to answer for a lot.

This trend indicates that in stead of spending money on new major and medium (M&M) irrigation projects, the country would benefit more (at lesser costs and impacts) if we spend money on proper repair and maintenance of the existing infrastructure, taking measures to reduce siltation of reservoirs and at the same time concentrating on rainfed areas. On groundwater front, we need to make preservation of existing groundwater recharge systems and augmentation of the same our top priority. Weeding out the unviable investments from the ongoing M&M irrigation systems needs to be done so that good money (not yet spent) is not thrown after bad money (spent on unviable projects). In case of some of the ongoing projects, it may be more profitable to review the projects to reduce further investments and impacts. Even as the Planning Commission finalises the 11<sup>th</sup> Five year plan, this is a golden opportunity to make radical changes in our water resources development. If we miss this opportunity, the combined impacts of the wrong priorities we have pursued so far and the global warming will result in we having neither the water required for the people or the economy, nor the cash to maintain the and sustain the existing benefits, as the 2005 World Bank report concluded.