

## **New research could provide overdue solutions for saving China's imperiled Yellow River**

**Zhengzhou - 21st October 2003** A new report assessing the state of China's Yellow River could offer hope in providing much needed answers to the critical water management problems facing the country's 2<sup>nd</sup> longest river. The assessment which was carried out by researchers from the International Water Management Institute (IWMI) and the Yellow River Conservancy Commission (YRCC), was presented at the International Yellow River Forum taking place in Zhengzhou City from 21 -24 October. The Forum - attended by engineers, scientists and academics as well as government officials and policymakers, signals the start of a renewed international commitment to revive the Yellow River.

The report was carried out as part of the Comprehensive Assessment of Water Management in Agriculture, an international research program. The findings are stark. They highlight the four major challenges currently facing the river as being increased water scarcity, degraded environment, massive soil conservation needs and constant flood threats.

"Water scarcity is now the number one priority in the Yellow River. Given the growing supply and demand imbalance in the basin, it is difficult, if not impossible, to meet water demands from one sector without decreasing supplies to another. Hard choices must be made," said Dr. David Molden, Head of the Comprehensive Assessment.

Agriculture is by far the largest consumer of water, and reducing water to agriculture in the future will be unavoidable. In 2000, withdrawals for agriculture totaled 80%, and as demand for industrial and environmental water needs increase, predictions suggest that supplies will shortly reach their limit, with all sectors competing for access. YRCC has instituted a plan to reduce agricultural water consumption in the river basin by 10% by the year 2010. But given the importance of agriculture to the rural economy, and the long standing policy of self-sufficiency in food production, any reduction will be difficult to swallow. One acceptable option is to target real water savings where water from agriculture can be freed up for other uses, yet production levels in agriculture are maintained.

According to Dr. Molden, a key issue to ensuring a successful reallocation of water is minimal disruption to the livelihoods of farmers and agricultural output. He cites China's recent participation in the World Trade Organization, and the expected changes in the nation's agricultural product market as a timely opportunity to begin considering options.

The report is critical of ineffective pollution control and treatment measures in the basin. "Water pollution in the Yellow River is exceptionally high," said Dr. Zhongping Zhu, Principal Researcher with IWMI. "In 2000 less than 40% of the water was deemed drinkable after treatment, with 24% being classed as unfit for human consumption."

Findings indicate that the Yellow River has the highest silt concentration of any major river in the world. If made into a square belt with one meter-wide sides, the quantity of sediment moved annually by the river would be sufficient to loop around the earth at its equator 27 times. Of the total sediment, only about 25% is carried through to the sea with the remainder deposited in the riverbed, raising the riverbed at an average rate of 5-

10cm per year. Flood control embankments are in turn periodically raised in response- an ineffective and unsustainable long term solution. The YRCC calculate 1/3 of the river's flow will be needed for environmental purposes like sediment flushing if China is to successfully minimize floods and the cost to human life.

The report's research into flood and drought control is intended to stop the re-occurring devastation suffered by river basin communities throughout history. During the 90's drought years there was frequently no flow in the lower reaches for 4 months each year. This flow cutoff has had serious repercussions in terms of water accessibility to downstream users, sediment transportation to the sea, ecologic sustainability and costal fisheries. Today the assessment reveals that since 1999 effective management has put an end to absolute flow cutoff, although flow levels are sometimes so low they are largely symbolic.

Throughout China's history, 'harnessing the Yellow River' has been the number one civilian priority. In the past governments have spent vast sums of money and devoted massive amounts of human resources to flood control. An estimated 1.4 billion cubic meters of earth and rock works have been constructed - the equivalent to 13 'Great Walls'.

Flood prevention must continue to occupy a significant place in management of the Yellow River, but now there is the need for a new contemporary focus. The report proposes a transition of management in the Yellow River Basin, in which the agenda is shifted from prevention of the river doing harm to people, to a focus on preventing people doing harm to the river.

The report proposes significant institutional, policy and legal reforms to revive the river, based on the application of new knowledge and science. "There needs to be a more sustainable approach to managing the Yellow River. This requires a fundamental change in attitude from basin populations, water managers and the Chinese people as a whole", said Dr. Zhu. "The YRCC brings expertise of the Yellow River Basin's conditions, while IWMI brings international experience on water management. Together we're able to develop new ideas to address the critical water issues facing the basin while at the same time sharing the Chinese experience with the rest of the world." **Ends**

**For general media inquiries relating to IWMI and the Comprehensive Assessment please contact:**

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**Notes for Editors:**

1. For further information on the Yellow River Forum - <http://www.yrcc.gov.cn/2003iyrf.htm>

2. Working Paper 57 – ‘Yellow River Comprehensive Assessment, Basin Features and Issues’ - is available from [www.iwmi.org](http://www.iwmi.org)

3. The report is produced by the Comprehensive Assessment on Water management in Agriculture, an international research and capacity building program that takes stock of the costs, benefits, and impacts of the past 50 years of water development for agriculture, the water management challenges communities are facing today, and solutions people have developed. The results of the assessment will enable farming communities, governments, and donors to make better-quality investment and management decisions to meet food and environmental security objectives in the near future and over the next 25 years. The Comprehensive Assessment is carried out by a coalition of partners, including 11 CGIAR agricultural research centers, FAO and partners from some 40 research and development institutes globally.

4. For questions directly related to the Yellow River Comprehensive Assessment contact Dr. David Molden, 94-1 2787 404/ 2784 080, [d.molden@cgiar.org](mailto:d.molden@cgiar.org)