

Hindustan Times- 29- May-2023

IN A FIRST, HALF OF CULTIVATED LAND HAS IRRIGATION

Zia Haq

zia.haq@htlive.com

NEW DELHI: For the first time, over half of India's cultivated land has access to assured irrigation led by an expansion in micro projects, which have higher water-use efficiency, official data shows. Of the 141 million hectares of gross sown area in the country, nearly 73 million hectares, or 52%, had irrigation access in this period, up from 41% in 2016.

→P9

Over half of all cultivated land now has irrigation access for first time

Zia Haq

Zia.haq@htlive.com

NEW DELHI: For the first time, more than half of India's cultivated land now has access to assured irrigation led by an expansion in micro projects, which have higher water-use efficiency, official data for 2022-23 show.

In 2022-23, of the 141 million hectares of gross sown area in the country, nearly 73 million hectares, or 52%, had irrigation access, up from 41% in 2016, according to updated data from Niti Aayog, the state-run think-tank. The increase in irrigation cover, especially in dryland agricultural zones of states, such as Telangana and Andhra Pradesh, will help mitigate the increasing impacts of drier summers and patchy monsoons that are partly linked to the climate crisis, analysts say.

Agriculture accounts for nearly 80% of the country's annual available water use, or 700 billion cubic metres. The June-September monsoon, vital for the world's fifth largest economy, still waters much of the kharif or summer-sown crops. When the monsoon is poor, farm



Roxy Mathew Koll, a scientist with the Indian Institute of Tropical Meteorology.

A micro-irrigation fund (MIF) with corpus of ₹5,000 crore was created with the National Bank for Agriculture and Rural Development (NABARD) during 2018-19 to help states mobilise resources.

Under the fund, central assistance worth ₹12,696 crore has been released to states, of which ₹11,845 crore was utilized till the last financial year.

The increase in irrigation cover since 2017-18 was driven by six programmes and projects, according to data seen by HT. These are the Pradhan Mantri Krishi Sinchai Yojana (PMKSY) and the Accelerated Irrigation Benefit Programme (AIBP), under which ₹11,505 crore was released between 2017-18 and 2021-23; Har Khet Ko Paani-Surface Minor Irrigation (₹4,000 crore); PMKSY-groundwater projects (₹787 crore); special package for Maharashtra (₹1,988 crore); Rajasthan and Sindh feeder (₹300 crore) and Shahpur-Kandi project (₹298 crore). In Madhya Pradesh, 21 prioritised irrigation projects have been identified

under PMKSY-AIBP. Out these, 17 projects have been completed, increasing the state's irrigation cover by 16%.

Of the total irrigation-infrastructure expansion, micro irrigation facilities through sprinklers and drip systems were installed in 8 million hectares. Out of the total irrigated area in the country, 40% is currently watered through canal networks, while 60% through groundwater, which in several states has plunged to severely depleted levels, the data show.

"There's much more to do. The total potential for micro-irrigation in the country is estimated to be 60 million hectares. Conventional surface irrigation provides only 60% efficiency but drip irrigation has nearly 90% efficiency," said SK Jayashankar, an expert with the Watershed India Trust.

The country can create irrigation potential in about 60% of its arable land and 40% of the cultivable area will remain dependent on rains because it is not possible to create irrigation networks in certain regions due to hydrological and geographical reasons, according to a document of the Jal Shakti ministry.

incomes take a hit. Its effects ripple into the broader economy because rural demand is key to the country's economic growth. While the increase in irrigation cover is a welcome development for the agriculture sector, its impact on the already depleting groundwater

levels cannot be ignored. There is a need to balance cultivators' interests and policies' potential impact on the environment.

Global warming has made the rain-bearing system more erratic, with too much rain in a short period or too little, according to

Hindustan Times- 29- May-2023

{ INTERVIEW } AROMAR REVI, DIRECTOR OF INDIAN INSTITUTE FOR HUMAN SETTLEMENTS

'Climate crisis not only urban but also rural, developmental'

As India's already warm cities get warmer, the real danger of the climate crisis lurks in the form of water and food crises for the country's large urban population, and experts warn that only a systemic transformation can reverse the grim trajectory that we find ourselves on. Aromar Revi, director of the Bengaluru-based Indian Institute for Human Settlements and a coordinating lead author of the Intergovernmental Panel on Climate Change, told Shivani Singh about the challenges that Indian cities face. Edited excerpts:

How serious is the climate crisis in Indian cities?

The climate crisis will quickly become an existential crisis for Indian cities. But it's not just an urban crisis. It is also a rural and agrarian crisis and fundamentally a development crisis.

A significant driver of this crisis will be water – flooding and drought, which could lead to a food security crisis in the future. If we go back in time to cities like Fatehpur Sikri and Tughlaqabad, we realise what happens when cities are faced with systemic water crises. This climate-induced food crisis cannot be addressed in cities because most cities don't produce much food. Unless we address the balance of development between rural and urban India, we will not be able to address the climate crisis.

India has a huge opportunity because, unlike China, we are not barreling down a highway to hyper-urbanisation. We can keep the balance between urban and rural areas. This is not just about cities getting hotter and more difficult to live in, it is about understanding the relationships between cities and agriculture, cities and water, and cities and biodiversity.

Where do Indian cities stand in this discourse?

Most cities across the world,

including in India, are well beyond the 1.5°C guardrail for climate change because of the urban heat island effect.

In the face of extreme heat, many Indian cities have started developing heat action plans, which is a good thing. But this is trying to address the symptom (unbearable temperatures), not the cause of the disease (greenhouse gas emissions). We need to coordinate both climate adaptation and mitigation in cities.

You mentioned an impending water crisis. How will that affect our cities?

The most proximate risk to cities, especially in the peninsular and parts of northern India, is that we don't have enough water for residents. So, we're forced to take a pipeline several hundred kilometres to carry water from far away, like in Delhi, or dramatically over-extract groundwater, like in Gurugram. That's not a sustainable solution. We have to reorganise and reform our urban water systems.

Lack of water for drinking and sanitation translates into diseases like diarrhoea and hepatitis. We're still using colonial-era systems for sanitation, which use so much water. Faecal sludge treatment systems that serve 15 million people in Tamil Nadu use a lot less water and have been deployed much faster than sewerage systems at a fraction of their cost. They are a climate-relevant innovation that Swachh Bharat should pick up and scale.

So, we need to recalibrate basic civic upkeep and governance in climate terms?

The climate will not only kill people because it becomes too hot. We also pay high costs via a vis health or the economy, like the impact of



flooding that we have seen repeatedly in our cities. We can reduce climate risks by raising the floor of urban service delivery. Everybody has to have access to clean water, sanitation, and clean energy, delivered by resilient infrastructure that doesn't collapse when there is heavy rain, or a cyclone or flooding.

But most of these systems are currently based on fossil fuels. You can get an electric vehicle (EV) and reduce your personal carbon footprint. But, if that EV is powered by a grid that is based on 80% coal-fired power plants, you're not doing much.

Do you think efficient governance of cities can help in climate mitigation and adaptation?

It has been 30 years since the 74th Constitutional Amendment Act, which was meant to devolve core governance functions to municipalities. But this hasn't happened in most states. In addition, in most Indian cities, the governance framework is fragmented. Climate action is almost impossible to implement in this context.

Bangalore, for instance, has a very

well-run water utility, and people pay their bills. But the bulk of the city gets its water from tankers because of issues with distribution. The city's residents have invested hundreds of crores in pumps to draw water from the ground. If that investment went to the water utility, it's possible it could supply water 24x7, like in Cuttack.

Is there a case for separate climate financing or can it be addressed with state or municipal budgets?

First, the national and state budgets and the finance commission need to make sure that we are not investing in assets that create emissions. We need to undo climate-insensitive subsidies and incentives. There is almost no scrutiny of this in our Budgets. Without that climate financing, it is like pouring money into a leaking bucket. We have to end energy poverty in villages and in cities, but do that using renewable power. This needs dedicated climate-sensitive development and infrastructure finance.

How do we bring accountability to climate action?

To bring accountability, the governance, economic development, infrastructure, and planning systems of the city have to work together for the common good and not at cross-purposes in favour of special interests.

Citizens and firms pay much of India's direct taxes and GST. But our city systems are chronically underinvested. Most municipalities are unable to even operate and maintain their services.

Successful climate action is not charismatic piecemeal solutions like painting roofs green or white, or harvesting rainwater from all roofs – even though these are useful things to do. Climate change is a systemic crisis.

Part of the solution is the devolution of power and finances to urban local bodies, and the build-

ing of a civic polity, where you can demand accountability from somebody who lives and works in your neighbourhood, rather than distant state capital or Delhi.

What about reducing consumption and demand-side management through lifestyle changes?

The challenge of limiting unsustainable consumption in urban India is a very real one. If the Indian middle class continues its current path of conspicuous consumption, it will make life miserable for itself and everybody else. India has to deliver everybody the basics – access to jobs, safe and affordable housing, water, energy, transport and at the same time we need to talk about lifestyle change, with the better off. That is part of what the government's LIFE programme is about.

But isn't higher consumption also aspirational?

In India, we privilege conservation as a cultural practice. The challenge is the late 20th-century idea that consumption is a driver of growth. This is in deep contradiction with most of our shared values and the lived reality of poverty and inequality that surrounds us.

It is through solidarity that we can address the climate question, not just through the blind application of technology. If you don't share the benefits with me, how can you ask me to share the risks? This is a question of climate justice, not only between India and other countries but also within our cities and between our cities and villages.

We are also too invested in what we're comfortable doing. We are now addicted to fossil fuels, that have created an addiction to fossil groundwater. We are addicted to a form of development that doesn't work for most. And when it doesn't work for all of us, it will not work to accelerate and deepen climate action.

