



Contact: 097418 69722

03 October 2018**Daily News Pedia****India targeting 40% of power generation from non-fossil fuel by 2030: PM**

Indian PM has, in first assembly of International Solar Alliance (ISA), called for connecting solar energy supply across borders giving the mantra of 'One World One Sun One Grid'.

Solar energy increased by nine times in the last four years.

India's future Plan to generate power from renewable source of energy:

Add 50 GW of non-hydro renewable energy to existing 72 GW and will achieve the target of having 175 GW of clean energy by 2022. 28 lakh solar pumps would be installed which would help avoid 10 GW generation capacity.

To secure future, resources available above the ground like solar and wind energy need to be harnessed. Investment potential of thousands of crores in Solar Manufacturing. Low tariffs for solar and wind power in India will help in achieving the target.

Presently, Oil cartel OPEC led by Saudi Arabia meets close to half of the world's oil needs. According to Indian PM solar power will play the same role that oil wells have played over the past few decades

Indian PM has talked about expanding the scope of ISA beyond 125 tropical countries which fall between Tropic of Cancer and Capricorn.

Source: The Hindu.

**International Solar Alliance**

International Solar Alliance (ISA) was unveiled by Prime Minister Narendra Modi and then French President Francois Hollande at the U.N. Climate Change Conference in Paris on November 30, 2015.

It is the India's first international and intergovernmental organization of 121 Countries to have headquarters in India with United Nations as Strategic Partner.

The idea was to form a coalition of solar resource-rich countries to collaborate on addressing the identified gaps in their energy requirements through a common approach

ISA has set a target of 1 TW of solar energy by 2030. The ISA is open to 121 prospective member countries, most of them located between the Tropics of Cancer and Capricorn.

Source: The Hindu.

Concerns on Drone Regulations

Lack of clarity on the recently published drone regulations might affect competitiveness on this nascent field.

Concerns:

India's regulations separate drones into five categories — Nano, micro, small, medium and large.

There is very little regulation for flying a Nano up to 50 metres height, except for not flying near airports, military sites or in segregated airspace.

From the micro category, every drone must obtain a unique identification number (UIN) from the aviation regulator.

It will be followed by a long list of documentation including security clearances from the Ministry of Home Affairs (MHA) in several cases.

Once the UIN is obtained, drone operators have to apply for an Unmanned Aircraft Operator Permit (UAOP) which includes more forms, more annexures and more submissions.

Even for the micro drones that climb only up to a height of 200 feet, users have to intimate the local police station 24 hours prior to the flight.

Manufacturers of drones, technologists and researchers making applications using drones have to test fly drones frequently, often several times a day.

Source: The Hindu.

Soil Moisture Map

A joint exercise by IIT Gandhi nagar and the India Meteorological Department (IMD), for the first time, provides a country-wide soil moisture forecast at seven and 30-day lead times.

Significance of soil moisture

Soil moisture is crucial for agriculture since it directly affects crop growth and how much irrigation is required for the area.

It is because crucial information needed for agriculture is not revealed only through rainfall data.

Soil moisture gives us more information on what is needed for crop growth in different parts of the country. Besides, timely soil moisture forecasts will help target interventions, in terms of seed varieties for better planning in agriculture.

Source: The Hindu.

Global Skills Park

Asian Development Bank (ADB) and the Government of India signed a \$150 million Loan Agreement in New Delhi today to establish a Global Skills Park (GSP) in Madhya Pradesh, the

First Multi-Skills Park in India, to enhance the quality of Technical and Vocational Education and Training (TVET) System in the State and create a more skilled workforce.

Source: The Hindu.

IBSAMAR 4



The sixth edition of IBSAMAR, a joint Multi – National Maritime Exercise between the Indian, Brazilian and South African Navies, is being held at Simons Town, South Africa.

IBSAMAR are a series of naval exercises between the navies of India, Brazil, and South Africa.

The aim of the exercise is to undertake collective training for participating navies, building interoperability and mutual understanding as well as sharing of best practices. The first exercise took place in 2008.

Source: The Hindu.

Odisha Launches Own Food Security Scheme

Odisha government launched its own food security scheme on the occasion of Gandhi Jayanti.

The scheme is expected to benefit 25 lakh people who were left out of the National Food Security Act.

The State government had decided to launch its own food security scheme after the Centre did not respond to its request to add additional beneficiaries under the NFSA.

Source: The Hindu.

Editorial

To Read

Indian agriculture's problem of scale

Loan waivers and electricity subsidies are Band-Aids at best; a deeper transformation is needed

The past few days have neatly summed up the scale and nature of the challenges facing India's agriculture sector. First, the provisional agriculture census 2015-16 showed that landholdings have continued their decades-long trend of fragmentation, leading to a further rise in the proportion of small and marginal farmers. Then, 30,000 farmers, who had started their march from Uttarakhand last month, reached the national capital on Tuesday, demanding various relief measures. As a real world demonstration of the challenges posed by farm fragmentation, it could not have been better timed.

When the census, carried out every five years, started in 1970-71, it had reported that India had 71 million landholdings. These have more than doubled now to 146 million. Over 86% of cultivated farmland is held by small and marginal farmers who own less than two hectares, while only 0.57% farmers hold 10 hectares or more. Consequently, the average size of operational holdings has more than halved since the first census—from 2.28 hectares to 1.08 hectares.

Farmers consigned to subsistence farming by this fragmentation—that is, the vast majority of them—are unable to generate enough surplus for the investment needed to improve productivity. This is widely accepted. But the policy approach to the problem depends on how the specifics are diagnosed.

In his famous 1962 *The Economic Weekly* (later renamed to the *Economic and Political Weekly*) article, "An aspect of Indian agriculture", Amartya Sen had argued that small farms have higher per-acre output. A number of economists in the 1960s and 1970s drew similar conclusions. Ramesh Chand, P.A. Lakshmi Prasanna and Aruna Singh had presented an intriguing update of this argument in 2011 in *Farm size and productivity: Understanding the strengths of smallholders and improving their livelihoods*. Cobbling together data from the National Sample Survey Organisation, agriculture census and the Union ministry of agriculture's input survey, they found that the inverse relationship between farm size and per-hectare agricultural productivity still holds.

But this is misleading if taken at face value. The productivity argument is contingent on a number of factors--from soil quality to the level of farming technology adopted. And as Sen, with a sting in his article's tail, had pointed out, "the factor that makes the crucial difference is not size as such, which is incidental, but the system of farming, whether it is wage-based or family-based."

Andrew D. Foster and Mark R. Rosensweig backed this up last year, studying village-level survey data on farms to find that productivity actually follows a U-shaped distribution curve. While intermediate sized farms, which have to spend resources on wage labour are less productive than small farms, which get by on family labour, farms larger than a certain threshold are more productive than even the most productive small farms. The landowners have the necessary resources for economies of scale to kick in.

This has several policy implications. Promoting cooperative farming, for instance, will allow small and marginal farmers to take the advantage of their family labour. Corporate farming, meanwhile, could allow economies of scale to kick in at lower thresholds. The trickiest issue is improving land-man ratio. Urban growth with economic opportunities that will attract rural migrants is one way. But the evidence of the past few decades shows that India's urban areas are ill-equipped to deal with the inflow.

The rise of the proportion of non-farm income in small and marginal farmers' earnings points to the other possibility. Rural construction and industrialization are important supplementary sources of income. In a NITI Aayog paper last year, Ramesh Chand, S.K. Srivastava and Jaspal Singh pointed out that while these sectors have seen considerable growth, rural industrial employment hasn't budged in the past few decades. Solving this puzzle could help move rural workers to more productive sectors full time, while simultaneously boosting per-capita farm

productivity. This could have useful secondary effects as well. Rising wages due to more productive non-farm rural employment could make larger and more mechanized farms the increasingly more efficient option.

The exact policy mix will vary from state to state. Crop and landholding patterns vary widely, after all. Nagaland, with an average operational land holding size of 5.06 hectares, will need a very different approach from Kerala which averages 0.18 hectares. But they—and every other state—have one thing in common. Loan waivers and electricity subsidies are Band-Aids at best. A deeper transformation is needed.

Mains Question

Q: What is reservoir induced seismic activity? Explain with examples; also suggest some measures to mitigate the disasters.