

# THE SOLAR CHARKHA MISSION: NECESSITATED WAY FORWARD

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Over the past decades, the Government of India has launched various missions & programmes to promote sustainable economic activities and support rural communities. Amongst such programmes, special mention should be given to the Solar Mission Charkha launched by the Ministry of Micro, Small and Medium Enterprises (MSME). The mission primarily aims to restore the traditional handloom business by integrating units with solar power sources to boost output, reduce the carbon footprint and fostering cost effectiveness & improving profit margins. Through this, the emphasis would catalyse the comprehensive architecture through increasing employment, decreasing carbon emissions, while retaining Indian ethnic & traditional diversity. This shapes to be an interesting concept in climate change mitigation methodologies & techniques. This progressive concept simultaneously promotes art and entrepreneurship, it serves the addendum of the larger purpose of the country's sustainability and green energy policies. The mission stands as one of the most experimental and innovative concepts, to be put to the test on ground. In order to make one fully understand the intricacies & potential impact of this landmark national initiative, an overview from its nascent planning to development and implementation becomes very crucial.

## OBJECTIVES OF THE SOLAR CHARKHA MISSION:

The Solar Charkha Mission was launched on 27 June, 2018, by then President Ram Nath Kovind. The key emphasis & theme of the mission was to create & promote employment, alongside catalysing income generating prospects for the artisans of rural regions. It was first implemented in Nawada district's Khanwa village in the state of Bihar, which is the foundational village for the project to take off at. Post this pilot and upon assessing the impact & success of the project, the mission expanded to the villages in the vicinity within the radius of 8 to 10 kilometres. Specifically, through capture of solar energy, the mission aims at removing long tethered spinning techniques and at the same time enhancing efficiency in generating commodities. This paper primarily seeks to contribute to the existing literature in the development of this project which seeks to be modelled along the lines of a self-reliant India or Atmanirbhar Bharat and the steps taken within to achieve this.

Accordingly, the mission aims at empowering the rural fabric of employment seeking producers to develop textiles sustainably. The mission involves using imported solar charkhas for spinning wool and by doing so, it plans to cut the reliance on conventional energy sources (Fossil, hydro & others) to power its factory within the locality, therefore

decreasing the amount of pollution or carbon heavy sources released into the environment. It is through such planning that although while no other subsidy is provided to those partaking in the scheme - primarily the spinner and artisans, a subsidy amounting to INR 9.60 crore (US\$ 1.37 million) is provided to the agencies involved in the implementation and promotion of looms and charkhas procurement. The whole solar charkha cluster sees then an investment totalling INR 38.62 crores (US\$ 5.52 million).<sup>1</sup>

The scheme is aimed at clusters of the villages known as 'Solar Charkha Clusters' where artisans are grouped together. On average, each cluster encompasses 200 to 2042 beneficiaries, involving spinners & weavers and other skilled workers who may be associated to the sector. The proclaimed mission is to develop as many as 50 such clusters in India and this would generate employment to nearly one lakh people.<sup>2</sup>

### IMPLEMENTATION AND IMPACT:

The Government of India has endorsed the Solar Charkha Mission and the process of their implementation is being led by the Khadi and Village Industries Commission (KVIC).<sup>3</sup> The KVIC helps in providing training to the artisans along with ensuring availability of required material for manufacturing the products where, quite remarkably, telemarketing services are also being made available. The mission also entails providing funds for establishing the solar charkhas and other facilities associated with solar operations.

The impact of the Solar Charkha Mission has been significant in several ways:

1. Economic Empowerment: It has become one of the sources of income that has helped artisans in

the rural areas to improve their standard of living so that many of them have not been forced to move to urban areas, thus reducing the stress of cross migration. It also creates employment where the mission intends to ensure that rural artisans especially women are provided with sustainable sources of income through the formation of 50 Solar Charkha clusters across the country.<sup>4</sup> Every cluster is expected to accommodate up to 2000 artisans and this would lead to creation of approximately 1,00,000 direct employment openings and many more directly & indirectly in the allied sectors. The outcome of the scheme can be witnessed after the pilot project in the village at Khanwa did benefit about 1180 artisans, and upon deliberating on the progress of the same, the Government of India further made approvals of 50 more such clusters to be established. Furthermore, the success story was indeed translated into real tangible results when the 10 proposals approved under the scheme benefitted 13,784 workers and artisans in the states of Karnataka, Maharashtra, Gujarat and Chhattisgarh.

2. Environmental Benefits: In this regard, the mission has also aided in tackling climate change through the use of solar power in a bid to enhance the use of renewable energy sources. Through the use of solar powered charkhas, the mission helps to decrease the use of fossil fuels and increase the use of clean energy in textile production. The use of renewable energy sources is consistent with the Paris Agreement on Climate Change and India's efforts for emission reductions.

3. Preservation of Heritage: This has been made possible through the support of the Government of India and other organisations because handloom weaving is one of the oldest and thus traditional cultural practices that are pertinent to India. The mission acknowledges the importance of Indigenous hand-woven textiles and as an artistic voice of India, which thereby seeks to protect the practices by offering technological support.

Upon deliberating over the aforementioned aspects, and in a time of aggravated changes in the weather pattern and climate change, a project such as the Solar Charkha Mission will be among the first planned phases to transition to clean energy living. This is all the more exacerbated as 43% of the Indian population is still largely dependent on agriculture, and when extreme rise in temperature is projected to increase by 1.1- 4.1 degree Celsius over the 1986-2005 baseline.<sup>5</sup>



<sup>1</sup> PIB, "Subsidy to artisans under Solar Charkha Mission", March 2020.

<sup>2</sup> "Mission Solar Charkha."

<sup>3</sup> Vikaspedia, "Mission Solar Charkha" n.d.

<sup>4</sup> Ray, "Fifty Solar Charkha Projects in the Pipeline but Pilot Project Lies Defunct Since May 2019."

<sup>5</sup> World bank, "Climate risk profile India", 2021.

This is a worrying trend as it will disproportionately affect the rural and minority groups within the country due to compounding economic and social inequalities. The Solar Charkha Mission, thus not only provides livelihoods but is an alternative to the usage of fossil fuels, in a period characterized by India striving to be the manufacturing hub of the world.

### **SOLAR CHARKHA MISSION - A MODEL FOR SUSTAINABLE DEVELOPMENT:**

Amidst the escalating concerns of climate change, energy transformation, and increasing global income disparity, the Solar Charkha Mission exemplifies how other developing countries can also invest in themselves for future prosperity. Its approach of combining green technology with indigenous skills provides lessons on how countries that are looking for sustainable development models can transform rural communities by keeping this mission as a spearheading model of innovation, output, and minimal effort interdisciplinary participation. Thus, instead of just talking about climate change, job creation and preserving cultural history, the Solar Charkha Mission is setting an example for other countries to follow.

### **GLOBAL CLIMATE COMMITMENTS AND INDIA'S ROLE:**

According to the Paris Agreement, India has pledged to cut its carbon intensity by 33-35% by the year 2030 and achieve 50% of its total generation capacity through renewable sources by 2030.<sup>6</sup> Therefore, the Solar Charkha Mission that focuses on promoting solar-powered industries fits well into these targets. This mission also aims at providing employment in the MSME sector for the ambitious \$5 trillion Indian economy vision heralded by Prime Minister Modi by contributing nearly 30% to the country's GDP.<sup>7</sup>

### **CONCLUSION:**

The Solar Charkha Mission is not just an employment generation vehicle but a progressive model with regard to climate change, rural development, and innovation of traditional art & craft. Integrating the mission's overarching themes of renewable energy and rural entrepreneurship, therefore, presents the project and the nation with the realistic possibility of sustainable economic development without compromising on future generation's resources. The Solar Charkha Mission and such other government sponsored programmes offer the one of the most viable solution for ensuring that communities are fully empowered in the face of climate change. This mission goes on to extend a helping hand by providing a ray of light that climate friendly policies can and will

coexist with economic growth. In the same manner, the Solar Charkha Mission elevates the Indian rural economy and extends itself towards a noble cause of reducing global warming. The continued success of the Solar Chakra Mission depends on the commitment & determination of the implementing government agencies, supported by a dedicated team responsible for conducting timely reviews and making necessary changes in the accordance with regional, local variations and requirements.

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**Note:** All content reflects the individual views of the authors.

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<sup>6</sup> Deb and Roy, "COP28: Assessing India's progress against Climate Change".

<sup>7</sup> Protium, "How Do MSMEs Contribute to the Indian Economy?"