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NEWSLETTER

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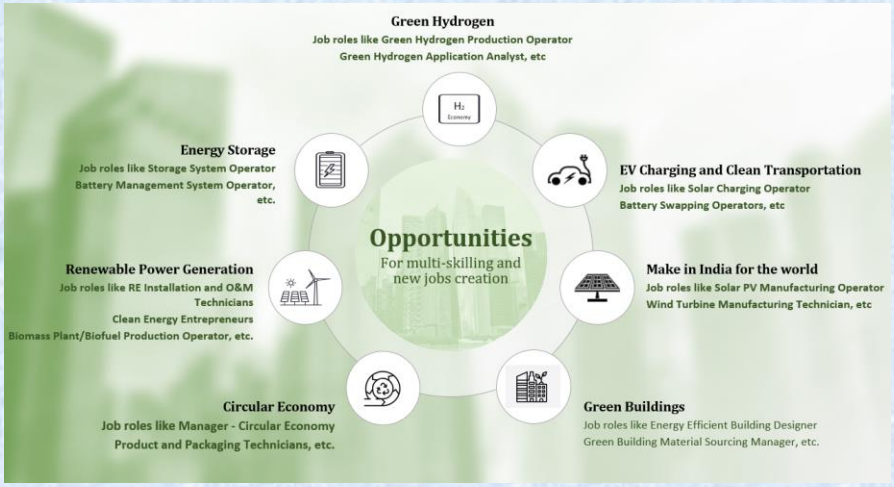

GREEN FINANCE PROJECTION 2024

INSIDE THE ISSUE

MESSAGE

From the CEO's Desk

An inter-ministerial delegation from India attended the COP 28 held in Dubai, United Arab Emirates from 30th November'2023 to 13th December'2023. The major outcome from COP 28 included the decision on Outcome of the First Global Stocktake, ratcheting up global climate ambition before the end of the decade. Another major outcome of COP 28 is the agreement on the operationalization of the Loss and Damage Fund and its funding arrangements.

The purpose of the Fund is to assist developing countries that are particularly vulnerable to the adverse effects of climate change in responding to economic and non-economic loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events. Another major outcome related to Loss and Damage is the decision on Santiago network for averting, minimizing and addressing loss and damage to catalyse the technical assistance of relevant organizations, bodies, networks and experts for the implementation of relevant approaches associated with climate change impacts.

Green finance refers to the financial support and investment in projects and initiatives that are environmentally sustainable and contribute to the transition to a low-carbon and climate-resilient economy. Green finance plays a crucial role in addressing climate change as it helps mobilize capital to fund renewable energy projects, resource-efficient initiatives, sustainable infrastructure, and other environmentally friendly initiatives. It encourages financial institutions and investors to consider the environmental impact of their investments and allocate funds in a way that supports sustainable development.

At COP28, countries discussed ways to enhance green finance, including creating incentives and frameworks that promote investments in green projects, developing sustainable finance regulations and standards, and encouraging collaboration between public and private sectors to drive more sustainable investments.

Given the government's push for sustainable development and the increasing need among businesses and investors to develop strong sustainability credentials, the Reserve Bank of India has introduced guidelines for banks and non-bank financial companies (NBFCs) to accept "green deposits".

The purpose is to ensure funds are utilized for energy efficiency, clean transportation, climate change adaptation, sustainable water and waste management, green buildings, and terrestrial and aquatic biodiversity conservation.

As the demand for green finance grows, India is expected to see more innovative financing solutions and investment opportunities in the green sector.

While anticipating government action on green financing, including tax breaks for low-carbon technologies, policy pushes for green financing instruments etc., it is equally important for private sector organizations to adopt internal carbon pricing and promote investment in green technologies and solutions.

These are early days and as processes mature, green finance and other modes of investments will gain standardized definitions and measurement frameworks. Visibility in performance and impact assessment will improve the comparison and selection of funds and companies. The intersection of the use of technology in tracking emissions, tighter reporting requirements, and better governance will help fine-tune as well as improve transparency in companies' green credentials, which will, in turn, strengthen investor confidence and quell fears of greenwashing.

While green finance may not be a silver bullet for addressing environmental and social challenges, it is critical to promote sustainable and responsible investment practices and encouraging companies to prioritize these issues. Government, academia, and industry collaborations, advocacy on new policies, and public-private partnerships is necessary to ensure the effective roll out of innovative green financing mechanisms to boost the transition to a net zero economy by 2070.

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Green Finance Skills

Green finance refers to any structured financial activity that has been created to ensure a better environmental outcome. It includes components of **loans, debt mechanisms and investments** that encourage development of green projects or minimize the impact on the climate of more regular projects.

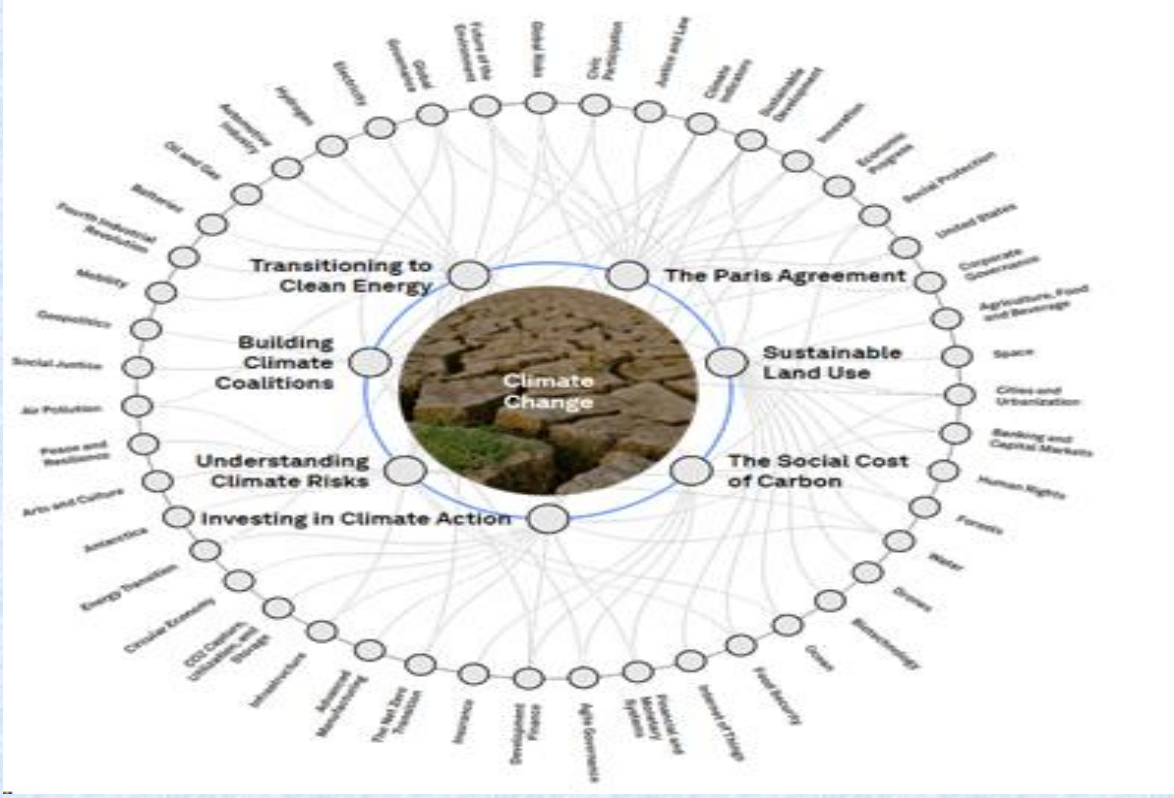
Typical projects that fall under the green finance umbrella include:

- Renewable energy and energy efficiency
- Pollution prevention and control
- Biodiversity conservation
- Circular economy initiatives
- Sustainable use of natural resources and land

Green finance plays an important role in delivering several of the United Nations Sustainable Development Goals. It is regarded as a way of meeting the needs of environmentalism and capitalism simultaneously.

One common green finance instrument is the green bond. There is a code of conduct that defines what constitutes a green bond. To qualify, a bond must adhere to criteria on the use of proceeds, have a process for project evaluation and selection, ensure proper management of any proceeds, and offer detailed reporting. Green Bond Issuance is about US$2.830tn as per Climate Bond Initiative(https://www.climatebonds.net/) .

Studies show that companies with strong ESG practices often outperform the market, making green investing a financially sound choice. As the world transitions to a low-carbon economy, green investments are well-positioned for long-term success.



Credit: World Economic Forum

In India, green finance is fast emerging as a priority for public policy. The Reserve Bank of India (RBI) is working towards aligning financial systems with sustainable development goals. The Reserve Bank of India has also been taking proactive policy measures to promote and support green finance initiatives. RBI mandated "Corporate Social Responsibility, Sustainable Development and Non-financial Reporting – Role of Banks" highlighting the importance of global warming and climate change in the context of sustainable development.

Loans for environmentally sustainable projects like renewable energy production, clean transportation, energy-efficient projects, and waste management were made part of directed priority sector lending by banks. Under this scheme, firms in renewable energy sector are eligible for loans upto 30 crore.

RBI also joined the Network for Greening the Financial System (NGFS) to benefit from and contribute to the best practices in climate risk management and green finance. They issued sovereign green bonds worth US$ 2.2 billion (INR 16,000 crore) in two tranches to mobilise resources for the Government for green infrastructural investments. Recently in April 2023, the RBI introduced a "Framework for Acceptance of Green Deposits". The sectors such as sustainable fashion & décor, handmade crafts, zero waste consumer products, biodegradable & nature fibre-based packaging & sustainable tourism represent major market for green finance. SBI raises $250 million through green bonds maturing in 2028. The bonds have been listed on the India International Exchange. IIFCL plans to garner INR 2,000 crore via maiden green bonds in 6 months. Renew Power signed Memorandums of Understanding (MoUs) worth INR 640 billion (~US $7.8 bn) with Power Finance Corporation (PFC) and Rural Electrification Corporation (REC) for its green energy projects.

One of the biggest obstacles to the green bond issue in India is that investors, issuers and regulators often misunderstand green bonds, their benefits, and principles. Due to the compliance concerns and lack of investor demand, potential issuers may be deterred. Specialized training programs, workshops and awareness campaigns are needed to educate stakeholders on green bonds' benefits and mechanics.

SCGJ can play a pivotal role to include the training modules at National Level on how to assess green bonds, evaluate risks associated with climate change, benefits, mechanism and compliance with new standards.

COP 28 Helping to strengthen countries

UN Climate Change conferences (or COPs) which take place every year, are the world's only multilateral decision-making forum on climate change with almost complete membership of every country in the world. To put it simply, the COP is where the world comes together to agree on ways to address the climate crisis, such as limiting global temperature rise to 1.5 degrees Celsius, helping vulnerable communities adapt to the effects of climate change, and achieving net-zero emissions by 2050. The 28th meeting of the Conference of the Parties (COP 28) COP 28 to the UNFCCC took place in Dubai, United Arab Emirates, from 30 November until 12 December.2023 Delegates from all over the world are expected to attend COP28, including the member states (or Parties) of the UN Framework Convention on Climate Change (UNFCCC). Business leaders, young people, climate scientists, Indigenous Peoples, journalists, and various other experts and stakeholders are also among the participants. The United Nations Climate Change Conference (COP28) closed on 3 December 2023 with an agreement that signals the "beginning of the end" of the fossil fuel era by laying the ground for a swift, just and equitable transition, underpinned by deep emissions cuts and scaled-up finance.

In a demonstration of global solidarity, negotiators from nearly 200 Parties came together in Dubai with a decision on the world's first 'global stocktake' to ratchet up climate action before the end of the decade – with the overarching aim to keep the global temperature limit of 1.5˚C within reach.

The global stocktake is considered the central outcome of COP28 – as it contains every element that was under negotiation and can now be used by countries to develop stronger climate action plans due by2025.The stocktake recognizes the science that indicates global greenhouse gas emissions need to be cut 43% by 2030, compared to 2019 levels, to limit global warming to 1.5˚C. But it notes Parties are off track when it comes to meeting their Paris Agreement goals.

The stocktake calls on Parties to take actions towards achieving, at a global scale, a tripling of renewable energy capacity and doubling energy efficiency improvements by 2030. The list also includes accelerating efforts towards the phase-down of unabated coal power, phasing out inefficient fossil fuel subsidies, and other measures that drive the transition away from fossil fuels in energy systems, in a just, orderly and equitable manner, with developed countries continuing to take the lead.

In the short-term, Parties are encouraged to come forward with ambitious, economy-wide emission reduction targets, covering all greenhouse gases, sectors and categories and aligned with the 1.5˚C limit in their next round of climate action plans (known as nationally determined contributions) by 2025.

Helping countries strengthen resilience to the effects of climate change.

The two-week-long conference got underway with the World Climate Action Summit, which brought together 154 Heads of States and Government. Parties reached a historic agreement on the operationalization of the loss and damage fund and funding arrangements – the first time a substantive decision was adopted on the first day of the conference. Commitments to the fund started coming in moments after the decision was gave led, totalling more than USD 700 million to date.
There was more progress on the loss and damage agenda with an agreement also reached that the UN Office for Disaster Risk Reduction and the UN Office for Project Services will host the secretariat of the Santiago Network for Loss and Damage. This platform will catalyze technical assistance to developing countries that are particularly vulnerable to the adverse effects of climate change.

Parties agreed on targets for the Global Goal on Adaptation (GGA) and its framework, which identify where the world needs to get to in order to be resilient to the impacts of a changing climate and to assess countries' efforts. The GGA framework reflects a global consensus on adaptation targets and the need for finance, technology and capacity-building support to achieve them.

Increasing climate finance:

Climate finance took center stage at the conference, with Stiell repeatedly calling it the "great enabler of climate action." The Green Climate Fund (GCF) received a boost to its second replenishment with six countries pledging new funding at COP28 with total pledges now standing at a record USD 12.8 billion from 31 countries, with further contributions expected.

Eight donor governments announced new commitments to the Least Developed Countries Fund and Special Climate Change Fund totalling more than USD 174 million to date, while new pledges, totalling nearly USD 188 million so far, were made to the Adaptation Fund at COP28.
However as highlighted in the global stocktake, these financial pledges are far short of the trillions eventually needed to support developing countries with clean energy transitions, implementing their national climate plans and adaptation efforts.
In order to deliver such funding, the global stocktake underscores the importance of reforming the multilateral financial architecture, and accelerating the ongoing establishment of new and innovative sources of finance.
At COP28, discussions continued on setting a 'new collective quantified goal on climate finance' in 2024, taking into account the needs and priorities of developing countries. The new goal, which will start from a baseline of USD 100 billion per year, will be a building block for the design and subsequent implementation of national climate plans that need to be delivered by 2025.
Looking ahead to the transitions to decarbonized economies and societies that lie ahead, there was agreement that the mitigation work programme, which was launched at COP27 last year, will continue until 2030, with at least two global dialogues held each year.

Event participation and inclusivity:

World leaders at COP28 were joined by civil society, business, Indigenous Peoples, youth, philanthropy, and international organizations in a spirit of shared determination to close the gaps to 2030. Some 85,000 participants attended COP28 to share ideas, solutions, and build partnerships and coalitions.

The decisions taken here today also reemphasize the critical importance of empowering all stakeholders to engage in climate action; in particular through the action plan on Action for Climate Empowerment and the Gender Action Plan.

Strengthening collaboration between governments and key stakeholders.

In parallel with the formal negotiations, the Global Climate Action space at COP28 provided a platform for governments, businesses and civil society to collaborate and showcase their real-world climate solutions.

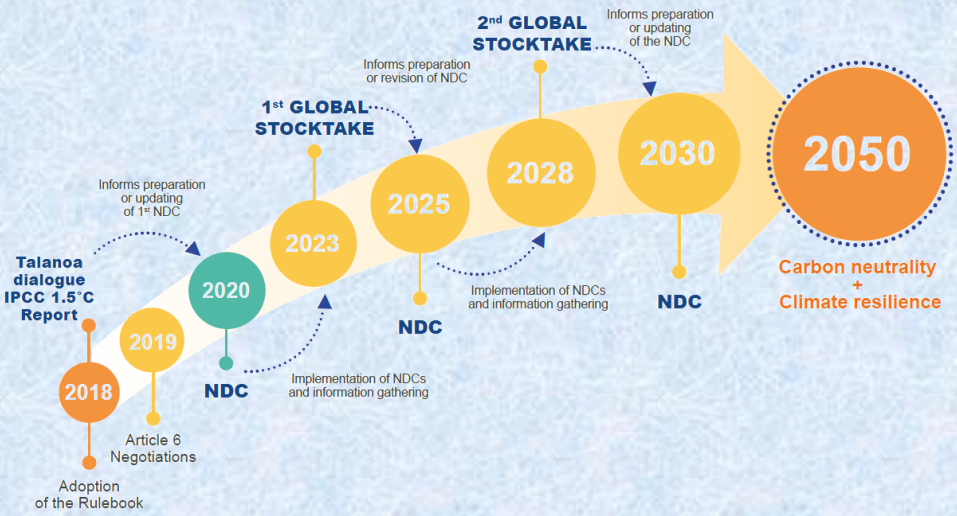
The High-Level Champions, under the Marrakech Partnership for Global Climate Action, launched their implementation roadmap of 2030 Climate Solutions. These are a set of solutions, with insights from a wide range of non-Party stakeholders on effective measures that need to be scaled up and replicated to halve global emissions, address adaptation gaps and increase resilience by 2030.

The conference also saw several announcements to boost the resilience of food and public health systems, and to reduce emissions related to agriculture and methane.

Key Outcomes of COP 28 (2023)

- **Global Stocktake Text:**
  - The Global Stocktake (GST) is a periodic review mechanism established under the Paris Agreement in 2015.
  - The text proposes eight steps to keep the global temperature rise within the ambit of 1.5 degrees Celsius.
  - It calls for tripling renewable energy capacity globally and doubling the global average annual rate of energy efficiency improvements by 2030.
  - It calls for substantially reducing non-CO2 emissions, including, in particular, methane emissions globally by 2030.
- **Transitioning Away from Fossil Fuels:**
  - COP28 calls for transitioning away from fossil fuels in energy systems, in a just, orderly, and equitable manner, accelerating action in this critical decade, to achieve net zero by 2050.
- **Global Goal on Adaptation (GGA):**
  - Global adaptation goal focuses on enhancing adaptive capabilities, and minimizing vulnerability for sustainable development.
  - At COP28, this text calls for a doubling in adaptation finance and plans for assessments and monitoring of adaptation needs in the coming years.
  - Positively, an explicit 2030 date has been integrated into the text for targets on water security, ecosystem restoration, and health.
- **Climate Finance:**
  - The United Nations Conference on Trade and Development (UNCTAD) estimates that wealthy nations owe developing countries USD 500 billion in 2025 under the New Collective Quantified Goal (NCQG) for climate finance.
  - The goal is to set a new collective quantified goal before 2025. The goal will start from a floor of USD 100 billion per year.
  - This includes USD 250 billion for mitigation, USD 100 billion for adaptation, and USD 150 billion for loss and damage.

- **Loss and Damage Fund:**
  - Member countries reached an agreement to operationalize the Loss and Damage (L&D) fund aimed at compensating countries grappling with climate change impacts.
  - A specific percentage is earmarked for Least Developed Countries and Small Island Developing States.
  - The World Bank will oversee the loss and damage fund in the beginning.
- **Global Renewables and Energy Efficiency Pledge:**
  - The Pledge stipulates that signatories commit to work together to triple the world's installed renewable energy generation capacity to at least 11,000 GW by 2030.
  - It also calls for collectively double the global average annual rate of energy efficiency improvements from around 2% to over 4% every year until 2030.
- **The Global Cooling Pledge for COP 28:**
  - It includes 66 national government signatories committed to working together to reduce cooling-related emissions across all sectors by at least 68% globally relative to 2022 levels by 2050.
- **Declaration to Triple Nuclear Energy:**
  - The declaration launched at COP28 aims to triple global nuclear energy capacity by 2050.



Major Engagements of India in COP 28

- **Green Credit Initiative:**
  - The **Green Credit Initiative** has been conceptualized as **a mechanism to incentivize voluntary pro-planet actions,** as an effective response to the challenge of climate change.
  - It envisions the issue of Green Credits for **plantations on waste/degraded lands and river catchment areas,** to rejuvenate and revive natural ecosystems

- **Phase II of the Leadership Group for Industry Transition (Lead IT 2.0):**
  - It will focus on **inclusive & just industry transition**, co-development and transfer of low-carbon technology, and financial support to emerging economies for industry transition.
- **Global River Cities Alliance (GRCA):**
  - It was launched at COP 28, led by the **National Mission for Clean Ganga (NMCG)** under the **Ministry of Jal Shakti,** Government of India.
  - GRCA highlights India's role in **sustainable river-centric development** and climate resilience.
  - This platform will facilitate knowledge exchange, **river-city twinning,** and dissemination of best practices.
- **Quad Climate Working Group (QCWG) on Localised Climate Action:**
  - The event focused on recognizing and amplifying the role of local communities, and regional governments in supporting sustainable lifestyles.

Key Concerns:

- **No Specific Timelines for Fossil Fuel Phase-out:**
  - The agreement lacked a **clear and urgent plan for fossil fuel phase-out,** using vague language such as "transitioning away" without specific timelines or targets.
- **No Specified Targets on Tripling of Global Renewable Energy:**
  - The COP28 agreement calls upon countries to contribute to tripling of global installed capacity of renewable energy and doubling of annual improvements in energy efficiency.
  - Tripling is a global target, and it is **not incumbent on every country to individually triple its current installed capacity.** It is thus not clear how this tripling would be ensured.
- **No Clear Mechanisms for Achieving Adaptation Goals:**
  - Developing countries made it clear that the adaptation draft fell well below their expectations there is **no mention of how these objectives are to be realized** or the mechanisms that will fund these efforts.
- **Lack of Accountability on Financial Commitments:**
  - There is currently **no established mechanism to hold governments and institutions accountable** for fulfilling their climate financing commitments.
- **Varying Interpretations on Climate Finance:**
  - Data on climate finance flows are compiled using various methodologies and have varying interpretations.
  - **Double counting of climate finance can occur** when the same funds are reported by multiple parties, leading to an overestimation of the actual financial flows.
- **Resistance over Phase-down of Coal:**
  - There was a move to stipulate that **no new coal-fired power plants could be opened** without an in-built carbon capture and storage facility, but this was **strongly resisted** by India, China, South Africa, and other countries.

- **Concerns over Methane Emission Cuts:**
  - The agreement talks about "accelerating and substantially reducing non-carbon-dioxide emissions globally, including in particular methane emissions by 2030.
  - Cutting methane emissions could **involve tweaking agricultural patterns which could be extremely sensitive** in a country like India.

A STATUS CHECK OF MAJOR PARAMETERS		
Criteria	**Requirement**	**Current State**
Emission	Immediate peak and rapid reduction, 2030 emissions must be 43% below 2019	Emissions still rising. As of now, 2030 emissions likely to be just 2% below 2019
Adaption	At least $ 215 billion/year needed to fund adaptation projects in developing countries	Barely $21 billion/year flowing now
Loss & Damage	An estimated $ 100 billion/year required to help countries hit by climate disasters	No money right now
Finance	An estimated tens of trillions of dollars per year needed to facilitate all climate actions	Even the modest promised flow of $100 bn per year has not materialized
Temperature	Hold rise within 1.5 degree Celsius from pre-industrial times	Breached for daily temp. Annual avgs likely to be breached in 4 years

- **Looking ahead**
  - The negotiations on the 'enhanced transparency framework' at COP28 laid the ground for a new era of implementing the Paris Agreement. UN Climate Change is developing the transparency reporting and review tools for use by Parties, which were showcased and tested at COP28. The final versions of the reporting tools should be made available to Parties by June 2024.
  - COP28 also saw Parties agree to Azerbaijan as host of COP29 from 11-22 November 2024, and Brazil as COP30 host from 10-21 November 2025.
  - The next two years will be critical. At COP29, governments must establish a new climate finance goal, reflecting the scale and urgency of the climate challenge. And at COP30, they must come prepared with new nationally determined contributions that are economy-wide, cover all greenhouse gases and are fully aligned with the 1.5°C temperature limit.

Local Job Creation through Modern Energy Cooking

Dr. (Mrs.) Parveen Dhamija
Advisor, SCGJ

Modern energy cooking solutions are the need of the hour to provide clean energy access to millions of people all over the globe. Even today, despite so much efforts to promote clean cooking energy, more than one third of the global population is cooking on open fires or traditional biomass stoves which cause high levels of Indoor air pollution due to incomplete combustion causing severe health impacts. It is well known that traditional cookstoves have adverse environmental impacts; they emit black carbon, a short-lived climate pollutant (SLCP) that has a global warming potential 4,000 times greater than that of carbon dioxide over a 20-year span. As per International Energy Agency (2016) globally about 3.5 million premature annual deaths occur from household air pollution (HAP), of which one million have been reported from India alone. Further, the use of traditional biomass for cooking also leads to the drudgery of collecting fuel, reducing the time which could be used for productive activities and leisure.

In India also, 840 million people rely fully or partially on traditional biomass for cooking exposing women and children to the hazards of inefficient combustion. Universal access to clean cooking through modern fuels would alleviate health problems reduce drudgery and create significant employment opportunities for local people in design, delivery, distribution, after sales and supporting clean cooking campaigns India is also promoting Modern Energy cooking to achieve Goal 7 of the Sustainable Development Goals, that is, to provide access to affordable, reliable, sustainable and modern energy services for all by 2030 which is also linked to Goal 3(Ensure health and well-being for all) and Goal 5 (achieve gender equality and empower all women and girls)This will also help to achieve the PANCHMITRA goal to reduce emissions and net zero by 2070.T To this end, the government has made significant efforts to enhance access to clean cooking energy in India. This is reflected in government policies and programmes for the promotion of biogas, improved cookstoves, and LPG. The government has also envisioned newer solutions, including electricity and piped natural gas (PNG), for meeting the energy demand for cooking in India.

Ministry of Petroleum & Natural Gas

Azadi Ka Amrit Mahotsav

PNG for Cooking in Metro Cities

Posted On: 21 DEC 2023 5:22PM by PIB Delhi

Providing Piped Natural Gas (PNG) connections are part of the development of City Gas Distribution (CGD) Network and the same is being carried out by the entities authorised by Petroleum and Natural Gas Regulatory Board (PNGRB). After completion of 11A CGD bidding round, 300 Geographical Areas (GAs) covering about 98% of the population and 88% of total geographical area of the country spread over around 630 districts in 28 states/UTs, including metropolitan cities and district headquarters situated within the GAs, have been covered under the CGD network. As per Minimum Work Plan (MWP) targetdetermined by PNGRB, authorized CGD entities have to provide approx.12.50 crore PNG (D) connections across the country by 2032.

In order to further expand the reach of natural gas in the country, PNGRB has launched 12th and 12A CGD Bidding Rounds, covering the states of Arunachal Pradesh, Meghalaya, Mizoram, Nagaland, Sikkim, Manipur and remaining parts of Union Territory (UT) of Jammu and Kashmir and the entire UT of Ladakh.

This information was given by the THE MINISTER OF STATE IN THE MINISTRY OF PETROLEUM AND NATURAL GAS SHRI RAMESWAR TELI, in a written reply in Lok Sabha today.

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Ministry	Relevant schemes
Ministry of New and Renewable Energy	• National Biogas and Manure Management Programme (NBMMP) • Unnat Chulha Abhiyan(UCA)
Ministry of Petroleum and Natural Gas	• Pradhan Mantri Ujjwala Yojana (PMUY) • Direct Benefit Transfer for LPG (DBTL) • Unified Guidelines for Selection of LPG Distributorships
Ministry of Rural Development	• Deendayal Antyodaya Yojana (DAY-NRLM) • Advancement of Rural Technologies (ARTS)
Ministry of Micro, Small and Medium Enterprises	• Prime Minister's Employment Generation Programme (PMEGP) • A Scheme for Promotion of Innovation, Rural Industry and Entrepreneurship (ASPIRE) • Market Promotion Development Assistance (MPDA) • Women Entrepreneurship (TREAD) • Quality Management Standards & Quality Technology Tools (QMS/ QTT)
Ministry of Skill Development and Entrepreneurship	• Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
Ministry of Panchayati Raj	• Gram Panchayat Development Plan • Gramoday se Bharat Uday Abhiyan

However, the implementation of these policies and programmes has suffered from various challenges, both at local and national levels. Further efforts are required to ensure the sustained use of cleaner fuels As per the 68th round of the NSSO (2011–12), over two-thirds of households in rural India still rely on firewood and chips for their cooking energy needs which has declined very slowly over the years, despite the increase in LPG use from less than 2 per cent of rural households 1993-94 to 15 per cent in 2011–12. The ACCESS4 study revealed that only 14 per cent of households in rural areas reported using Biogas, LPG, Electricity and Natural Gas (BLEN) as their primary source of energy for cooking (Jain, et al., 2015a). The lack of policies promoting the use of electric stoves has resulted in low awareness of electric and induction stoves. ACCESS revealed that although 1.37 per cent of rural households made use of an electric or induction stove, only 0.01 per cent of 12 households used it as primary cooking energy (Aklin et al., 2016). Hence, there is a need to understand access to clean cooking energy beyond the device or the connection, and instead to address the issue from a multidimensional perspective of health and safety, availability of fuel, affordability and convenience of the solution, and quality of the cooking.

Promotion of modern energy cooking solutions will create a lot of opportunity for employment. Manufacturing, distribution, and after-sales service of new clean cooking technologies require a large-pool of trained human resources and entrepreneurs. Skill development and training of human resources is a cross cutting need across all components. Comprehensive studies to assess the needs of modern energy cooking will have to be undertaken and used to develop qualification packs, training modules and assessment frameworks, which in turn will be used to provide training. A lot of job roles listed below have been identified along with the skills required for promoting this huge work force. In addition to the identification of job roles there is need to cover capacity building on the demand & supply side and also to create an enabling environment for cookstove dissemination. On the demand side there is a need to create local level awareness and gender sensitization through community engagement, behavior change and communication campaigns user trainings and product promotion and managing activities. NGOs, SHGs, last mile distributors and service providers need to be actively engaged and oriented. On the supply side there is need for modern clean cooking companies to be involved for assessing user needs, developing products based on local needs and providing regular managing and maintenance services.

Job Roles	Skills
Project Manager (Clean Cooking Programs)	Responsible for overseeing initiatives related to clean cooking programs, ensuring successful implementation, coordinating stakeholders, managing budgets, and evaluating project outcomes.
Clean Cooking Technology Engineer	Engineer specialized in designing, developing, and maintaining clean cooking technologies such as improved cookstoves, solar cookers, or biogas systems. They work on improving efficiency, affordability, and usability of these technologies.
Clean Cooking Technician/Installer	Responsible for installing, repairing, and providing technical support for clean cooking appliances in homes or communities.
Entrepreneur/Small Business Owner (Clean Energy Cooking Solutions)	Individuals or groups who establish small businesses focused on manufacturing, distributing, or servicing clean cooking technologies within local communities.
Sales and Marketing Specialist (Clean Cooking Solutions)	Focuses on promoting and selling clean cooking technologies, educating consumers about their benefits, and working with retailers or distributors to increase accessibility.
Monitoring and Evaluation Officer	Monitors the performance and impact of clean cooking programs, collects data, and evaluates the effectiveness of interventions to make informed decisions for future initiatives.
Policy Advocate/Analyst	Individuals who work on advocating for policies that support the adoption and promotion of clean cooking solutions. They analyze existing policies, propose improvements, and collaborate with policymakers and organizations to drive change.
Researcher (Energy and Environmental Science)	Conducts research to better understand the impact of traditional cooking methods on health, environment, and climate change. They also explore innovative solutions and technologies to address these challenges.
Quality Control/Assurance Specialist	Ensures the standards and quality of clean cooking technologies meet regulatory requirements and are safe, efficient, and reliable for users.

Training individuals in clean cooking methods will help in reducing indoor air pollution, a significant health hazard caused by traditional cooking methods that rely on solid fuels like wood, coal, or dung. This pollution leads to respiratory diseases and other health issues, particularly affecting women and children who spend a lot of time near the cooking area. Clean cooking methods, such as the use of efficient stoves or renewable energy sources like biogas or solar cookers, contribute to reducing deforestation, air pollution, and greenhouse gas emissions. Training people in these methods helps in mitigating environmental degradation and climate change. Providing skills and training in clean cooking technologies can create job opportunities in manufacturing, distribution, and maintenance of clean cooking solutions. This can particularly benefit local communities, including women, by providing opportunities for local entrepreneurship and income generation. Access to clean cooking aligns with several Sustainable Development Goals, including SDG 3 (Good Health and Well-being), SDG 7 (Affordable and Clean Energy), and SDG 5 (Gender Equality). Skilling and training programs play a crucial role in achieving these goals by ensuring access to clean and sustainable cooking solutions for all. Training programs not only introduce people to clean cooking technologies but also educate them about the associated benefits. This helps in fostering a shift in behavior towards adopting these cleaner alternatives and ensures their sustained use.

Governments, NGOs, and international organizations often conduct training programs that focus on educating communities about the advantages of clean cooking, teaching them how to use modern cookstoves or alternative fuels efficiently, and providing maintenance support. Such initiatives are integral in promoting the widespread adoption of clean cooking methods and technologies.

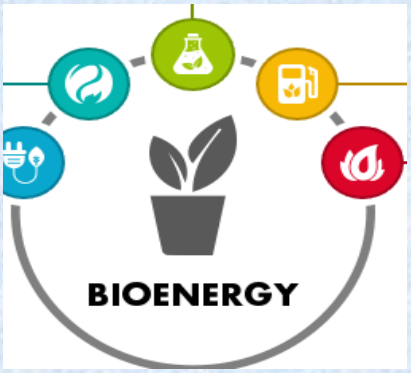
Skill Council for Green Jobs was set up in 2015 to develop competencies /skills in the domain of Renewable energy, Energy Storage, sustainable development and environmental issues.Key activities encompass all stages of training design and delivery including, performing skill gap analysis, occupational mapping, development of qualification based on industry requirements and implementing externally sponsored projects. Has a network of over 550 affiliated training institutions / centers across 24 States along with over 4000 Trainers and assessors across the country, to deliver trainings across green business domain.

Clean cooking has been identified as a focus area by SCGJ with the objective to reduce indoor air pollution as well as carbon emissions under INDC commitment This will lead to increase in use of clean cookstoves but also create millions of job. SCGJ has carried out sector analysis of the clean cooking sector and developed training modules for different job roles for which trainings have been carried out through competent and knowledgeable training partners., SCGJ has already implemented a project under the Smart gram initiative of Rastrapati Bhawan for providing green interventions for access to clean energy, waste management, clean water access, affordable green transport, health and wellness, governance, skill development & employment etc. Under the project supported by REC, 12000 induction clean cooktop were provided in about 12000 households in 50 villages in Haryana to transit from traditional to energy efficient and healthy way of cooking and reducing exposure to IAP and drudgery and fuel collection. Village level Women entrepreneurs were also created to facilitate propagations of the cooktops.

Smart Gram Initiative

(The information used from: https://www.ceew.in/sites/default/files/CEEW-Access-to-Clean-Cooking-Energy-in-India-12Oct17.pdf is acknowledged)

SCGJ New Qualifications



Green Hydrogen

Green Hydrogen Plant Entrepreneur
Green Hydrogen Plant Technician
Green Hydrogen Plant Junior Technician- Power Sources
Green Hydrogen Plant Junior Technician- Electrolyser
Green Hydrogen Plant Junior Technician- Desalination
Green Hydrogen Plant Junior Technician- Storage

Solar Energy

Solar Photovoltaic Technician
Solar PV Cell Manufacturing Technician
Solar Domestic Product Assembler
Solar PV Site Survey Assistant
Solar Manufacturing - Junior Technician
Solar Cold Storage Entrepreneur

Bio-Energy and allied

Bio-Energy Micro Entrepreneur
Biomass Pellet Manufacturing Junior Technician
Sewer Entry Professional
Junior Technician-Mechanized Sewer Cleaning
Material Recovery Facility (MRF) Micro-Entrepreneur
Plastic Recycling Micro-Entrepreneur

All QPs Available at: https://sscgj.in/wp-content/uploads/2024/01/Green-Jobs-Handbook-SCGJ.pdf

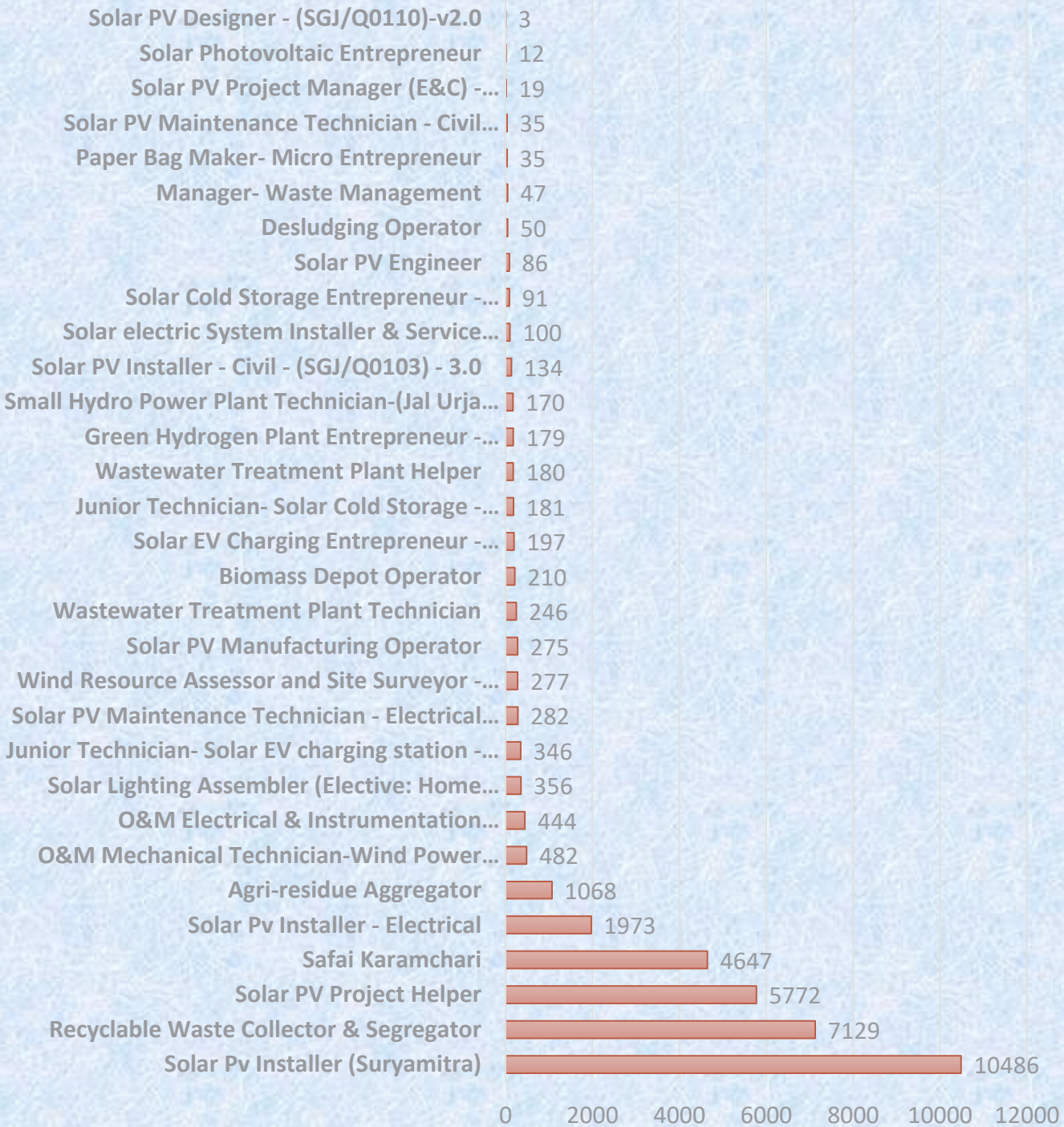
Q1-Q3 Trainings

SCGJ Statistics through 2023

Total Training = **35512**

Cumulative Training = **571909**

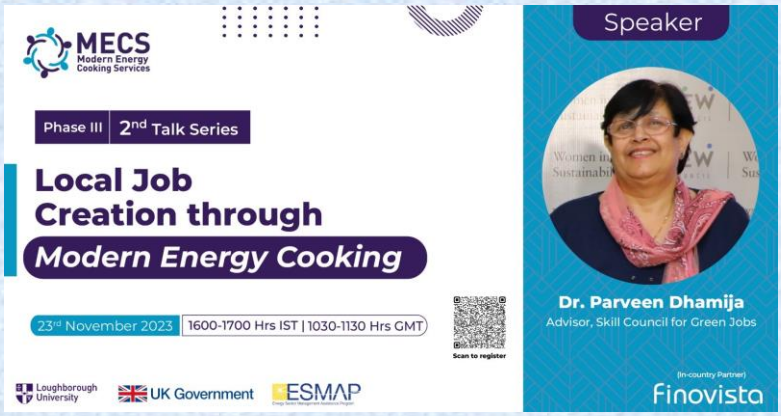
Job Role Wise



SCGJ Activities

Talk on Modern Energy Cookingg

Finovista, India under FCDO funded MECS Programme organized Talk Series 3.02 on Transitioning to Modern Energy for Cooking. Dr.(Mrs) Parveen Dhamija, Advisor, SCGJ presented talk on Local Job creation through Modern Energy Cooking. The session conducted virtually on 23rd November 2023 with an aim to identify, discuss and explore avenues to address the specific challenges in the global clean cooking sector.



Training on Solar PV Installation supported by GOODWE

Skill Council for Green Jobs, in association with GOODWE, organized a "Transformative Training and Competition on Solar Project Installation" on October 13, 2023, at the India Habitat Centre, New Delhi.

Workshops on Biomedical Waste Management supported by WHO

SCGJ conducted 20 Workshops for various level of staff at Hospitals in Jaipur, Alwar and Delhi NCR on Biomedical Waste Management

SCGJ Activities

Webinar Series Supported by Panasonic

Webinar conducted on Plastic under the Panasonic's 'Harit Umang' program on 27th December 2023, It was designed for students in classes 6 to 12.

SCGJ empaneled as Swachhta Knowledge Partner

Skill Council for Green Jobs has been empaneled as a Swachhta Knowledge Partner by the National Institute of Urban Affairs, Ministry of Housing and Urban Affairs.

Masterclass on Green Hydrogen Ecosystem

SCGJ organised a two-day training event titled 'Masterclass on Green Hydrogen Ecosystem'' during December 13–14, 2023, with the objective of providing about 30 suitable participants with the necessary knowledge, skills, and competencies to excel as entrepreneurs in the dynamic field of green hydrogen.

Sustainability Leadership Summit

The Centre for Sustainable Development (CSD) organized a Climate Parliament for the youth and Sustainability Leadership Summit on 3rd and 4th November 2023 in Bangalore. Ms. Sangeeta Patra, Vice President – Marketing & Partnerships, SCGJ presented talk on "Green Jobs for Sustainable Development". She discussed the crucial role of training, apprenticeship and entrepreneurships in the context of sustainability and distributed the rewards to the youth of the climate parliament.

Proceedings of Webinar Series

Azadi Ka Amrit Mahotsav

About Azadi Ka Amrit Mahotsav

Government of India is commemorated 75 years of progressive India and the glorious history of its people, culture and achievements by celebrating 'Azadi Ka Amrit Mahotsav'.

The 75th anniversary of India's independence is a testament to its march from a young nation to an economic superpower today. Much of this journey has been possible due to the rich heritage of skills and craftsmanship that has strengthened the country. It is indeed a step towards aligning all its efforts with the larger vision of building a New India.

Skill Council for Green Jobs celebrated Azadi Ka Amrit Mahotsav

As a part of the 'Azadi ka Amrit Mahotsav' 2021-23, Skill Council for Green Jobs (SCGJ) organized a series of Webinar on Sustainable Development, Renewable Energy and Waste Management by inviting eminent and learned Speakers to deepen the understanding of recent developments in these sectors.

The first in the series was launched on 24th September 2021 by Mr. Sameer Gupta - Chairman (SCGJ) and Dr. Praveen Saxena – CEO (SCGJ). SCGJ brought eminent Speakers in diverse field/sectors so to enhance knowledge and learning and bring forth various development and innovation in Renewable Energy(RE) and waste management as a part of the 'Azadi ka Amrit Mahotsav' 2021-22.

Key Highlights of the Webinar Series

100	110	6K+
Webinars	Speakers	Participants

[SCGJ | Azadi ka Amrit Mahotsav – SCGJ celebrates Azadi ka Amrit Mahotsav]

Scan to Watch the Session on SCGJ YouTube Channel or Click Here

Webinar Summary

Integrated Waste Management (IWM) is a holistic approach that seeks to optimize waste prevention, reduction, recycling, and disposal strategies to minimize environmental impact while promoting sustainable development goals for economic and social benefits. It aims to shift the focus from mere waste disposal to end-to-end resource management solutions, emphasizing the circular economy model.

In developing country like India where the total municipal solid waste (MSW) generation grows exponentially per year due to amplified urbanization and industrialization. According to the reports of the TERI, 2022 and Down to Earth, 2022, India generates MSW about 62 million tonnes in a year where only about 68-70% of the MSW gets collected and out of this only 22-28 % is processed and treated and remaining is disposed untapped at dump yards or landfills. Therefore, to extract the potential of these untapped wastes, the material recovery facility (MRF) is recommended under SWM rules, 2016 to facilitate segregation, sorting and recovery of recyclables before delivered or taken up for its processing or disposal. The effective segregation (may be source segregation) of the collected waste is the key approach in the IWM to convert it into a valuable product and for energy generation (SWM Rules, 2016). In the present Indian scenario, the possible major segregated fractions of MSW reported are: i) wet waste or organic waste ii) dry-recyclable waste iii) dry-non-recyclable waste iv) plastic waste v) domestic hazardous waste vi) Inert waste, etc. Correspondingly, there are few processing technologies such as Biomethanation technology, thermochemical process, thermo-catalytic depolymerization (TCD), Recycling, disposal to Sanitary Landfill (SLF), etc. which helps in converting different segregated fractions of the waste into valuable products or energy (e.g. Bio-CNG, RDF, Polyfuel, Power, Manure, etc.) . Hence, IWM includes the amalgamation of different processing technologies at one point which brings the End-to-End Solution for all types of diverse waste and beneficial in generating the circular economy. It can be concluded in the end about the IWM approach as a drive towards Environment, Social Responsibility and the Economics for Sustainability.

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Webinar Summary

Waste management is a critical issue that affects not only the environment but also human health and the economy. However, through entrepreneurship in waste management, we can turn this problem into an opportunity for innovation and job creation while also contributing to sustainable development.

We have seen successful examples of waste management entrepreneurship ventures that have made a significant impact on both the environment and society. While these ventures face challenges, such as lack of funding and regulatory barriers, there are solutions available to overcome them. By working together, we can create a more sustainable future through waste management entrepreneurship.

Firstly, the growing demand for e-waste recycling and proper disposal services presents a significant opportunity for entrepreneurs. The increasing volume of electronic devices being discarded globally creates a need for efficient and environmentally friendly recycling processes. Entrepreneurs can establish e-waste recycling centers equipped with advanced technologies to extract valuable materials and minimize the environmental impact. By adopting sustainable practices and adhering to regulatory requirements, these ventures can attract both individual consumers and corporate clients seeking responsible e-waste management solutions.

Secondly, the emerging market for refurbishing and reselling electronic devices offers another avenue for entrepreneurial ventures. Many discarded electronic devices still have significant value and can be refurbished and resold to individuals or businesses looking for affordable alternatives. Entrepreneurs can establish refurbishing facilities or online platforms that specialize in the restoration and sale of pre-owned electronics, thereby reducing waste and contributing to the circular economy.

Additionally, the presentation has shed light on how to start a recycling factory. The samples of all the processes were shared and how Aseries Envirotek India Pvt. Ltd. is working on it.

In conclusion, the field of waste management, particularly e-waste, presents immense opportunities for entrepreneurship. By addressing the pressing environmental challenges associated with e-waste disposal and harnessing innovative solutions, entrepreneurs can contribute to both the preservation of our planet and the growth of profitable businesses. With a focus on recycling, refurbishing, upcycling, and education, entrepreneurial ventures in e-waste management have the potential to create a positive impact, foster a circular economy, and pave the way for a sustainable future.

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Webinar Summary

At COP26 summit in Glasgow, India made the twin commitment of reaching net-zero emissions by 2070, and to procure 50% of its energy requirements from clean and renewable energy sources within this decade. Biomass as renewable resource for India can play important role to achieve a net-zero carbon emissions economy by 2070. In India's quest for sustainable and affordable energy sources to bridge its supply demand imbalance, bio-energy can plays an important role to meet this challenge. India has 140 million hectares of land under crop cultivation with a large variety of crops being grown. A substantial amount of crop residues is generated post-harvest. Agriculture residues has always played a major role in meeting the energy requirements for many centuries. By virtue of recent policy initiatives, technology advances, modern biomass conversion technologies/processes which can convert these biomass resources into various new energy forms and are playing an important role in bringing about a change in energy transition by providing sustainable fuels for meeting energy demand in industries, power generation and transportation applications. In due acknowledgement of the above and it is in this context, the lecture highlights to examine the existing technology, market, and related issues, to give an overview of the current landscape and the regime, The complexities involved in collecting, processing, storing and transporting agri-residues, which are dispersed and voluminous as a resource, make it difficult to evolve centralized measures for their management, understanding of which is key to promote penetration of these technologies/solutions into target markets.

The importance of decentralised model that involves farmer producer organizations (FPOs), farmer cooperatives, etc. in the production of crop residue pellets or torrefied pellets at the village/cluster level was proposed. This will augment farmer incomes, while also reducing air pollution. Such initiatives will also promote entrepreneurship in rural areas. These approaches can provide a long-term solution to the problem of stubble burning. Such policies can also help India achieve the status of becoming a net-zero carbon emissions economy by 2070, while also reducing GHG emissions and decarbonizing the power and industrial sector in India.

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Webinar Summary

Abroad view on National and International trends related to Climate Action and Just transitions was presented, which consisted of opening out key commitments from COP-26, India's action plan as a part of G-20 and even the steps taken by the government for the same. In order to bring spotlight on Just transitions, an emphasis was placed on the critical aspects defining Just transitions; i.e.

1. Making relevant amends to operations in order to make them equitable
2. Redressing past harms that have happened on vulnerable groups
3. Warranting social and economic agency to all

This was followed by talking about the pathways that India needs to actualize these principles which consisted of recommendations such as working on labor laws, creating spaces for conversations, constantly working upskilling the existing and new workforce, etc.

This was followed by highlighting the most important sub-sectors under Waste Management that have the potential to grow, to create jobs, to reduce GHG emissions and that need focus in the light of 'Just transitions'. Here, based on Sattva's experience of working across projects, E-Waste, Wastewater, Construction waste and Textile waste were discussed in detail. Indicators like the CARG, Employment potential, Extent of Environmental issues that would be tackled and population groups that would be impacted were used to show the significance of each of the sectors. This was followed by focusing on the most important value chain segments in each of the sectors and hence, the kind of skilling requirements therein. For example: Considering India being the third largest E-Waste generator, it was indicated that recycling and refurbishment are key segments as they would really impact the value of E-Waste generated each year and help navigate the informal workforce which stands at 90% of the total workforce. This segment was closed by calling out the key areas of investment for funders across the four sectors in terms of skilling. These areas were termed as big bets and belonged to one of the five categories of activities:

1. Reskilling and upskilling the existing workforce
2. Training the entry-level workforce
3. Supporting entrepreneur-led models
4. Fostering diversity and inclusion
5. Promoting formalization and decent jobs

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Webinar Summary

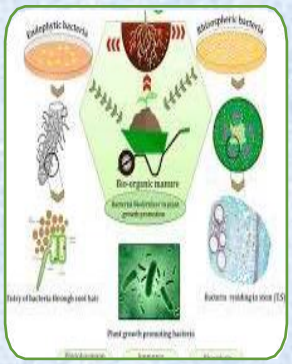
The potential for developing rural participation and strengthening the economy lies in the bioenergy sector, specifically in the utilization of biomass. In India, there is a significant amount of agricultural waste produced, with approximately 650 million MT generated annually. While some of this waste is used for applications like fodder, roof-thatching, and mulching, there is still a surplus of around 230 million MT.

The bio-energy sector currently utilizes only 25-30 million MT of Agri-waste. However, if the entire surplus waste is utilized, it could cover 17% of India's energy needs, contributing to energy security and reducing greenhouse gas emissions. Various opportunities exist for rural enterprises, especially farmers and farmer collectives (farmer producer organizations - FPOs), to participate in the biomass supply chain. The suggested enterprise models include biomass aggregation, small storages, briquette manufacturing plants, and establishing quality laboratories for testing and certifying biomass.

To develop these rural enterprises, BiofuelCircle proposes a digitally enabled rural franchisee model that provides farmer and market connections, standard operating procedures, and digital settlements. Through this model, farmers can earn additional income ranging from Rs. 8,000/- to 12,000/- per year by efficiently disposing of Agri-waste.

The implementation of these enterprise models can lead to economic growth and employment generation in rural areas. For example, a village with 1,500 acres of land under cultivation could generate an additional economic activity of Rs. 75 lakhs per year. BiofuelCircle aims to create a self-reliant local market with trade potential of 100,000 MT per year, benefiting 15,000 farmers in 50 interconnected local markets.

Furthermore, the integration of digital platforms and logistics services would connect diverse participants in the bioenergy marketplace.



Aggregation

- Tractor owners have an opportunity to join Biofuel Circle fleet operation
- Steady Income source

Storages

- FPOs could set up small storage units
- Can sell biomass to processing companies on Biofuel Circle platform

Rural Briquette Plants

- Small processing units within 25-50 Km distance from collection points

Quality Laboratory

- set up to test and certify biomass quality could be set up in villages by skilled technicians

Bio-fertilizer Distribution

- Existing businesses can take up distribution of bio fertilizers

In conclusion, by promoting the sustainable utilization of biomass and fostering rural participation through various enterprise opportunities, BiofuelCircle supports the green energy sector, rural economies, and energy security in India.

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