GREEN JOBS







EWSLETTER

ISSUE 17 | January 2022

PANCHAMITRA at COP 26



Net Zero by 2070



50% RE in Energy Mix by 2030



Reducing emissions intensity by 45% by 2030



Reduce 1 **Billion** tonne of Carbon Emissions 2021-2030



500 GW RE by 2030

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From CEO's Desk

Skill Council for Green Jobs (SCGJ) is continuing with its efforts in promoting skills for the Green business industries. At the COP 26 in Glassgow, Hon'ble PM had also focused on tremendous opportunities in skill development for taking forward the five fold strategy in reducing the impacts of climate change. India will thus take its non-fossil energy capacity to 500 GW by 2030 which translates into a huge opportunity for Additional Job Creation. It is estimated that about 2 crore additional jobs will be created by 2030 due to these interventions apart from waste (which is engaging about 3% of our population).

The workforce employed in the Indian RE sector grew nearly five-fold in the past five years, rising from nearly 19,800 workers in FY14 to nearly 99,900 workers in FY19. The largest renewable energy employment growth occurred in FY18 with over 30,000 new workers added in utility-scale ground mounted solar, rooftop solar, and wind energy. Rooftop solar and other decentralized renewable energy technologies continue to employ far more workers than utility-scale solar and wind energy.

Scaling mini-grid deployment can help improve rural livelihoods, create jobs, and reduce income and energy poverty. Solar mini-grids offer a tremendous opportunity for job creation, especially if paired with skill development, connection to markets, and affordable and longer tenure financing.

In the effort of promoting skill development in green businesses, SCGJ has developed 7 New National Qualification on Small Hydro Power plant operation and six on wind power operation, construction and resource assessment. I am happy to announce that the National programme will be launched soon on these new qualifications.

During the last quarter the SCGJ focus was to became an Awarding body of NCVET. It is proposed to add about 75 industries as members every year taking total number to 1250 by the year 2030. A placement target of 5 lakh candidates, conduct 10 additional skill gap studies, create repository of 100 qualifications, built capacity of training with 750 Training Partners and 50 Assessment agencies by 2030.

SCGJ would continue to leverage its linkages with various bilateral and multilateral institutions to design, implement and scale up multiple training /skilling interventions in market mode. Similarly CSR funding stream will also be leveraged to undertake a range of new activities including desktop studies, pilot projects and virtual and physical trainings across selected job roles.

My best wishes to all Stakeholders of SCGJ.

Dr. Praveen Saxena CEO, Skill Council for Green Jobs





India is a young nation with 64% of its population in the median age of 29 that would play a critical role in achieving the nation's ambitious target to become a US\$ 5 trillion economy. The large youth population offers both a workforce as well as a market. The 5 trillion economies by 2030 is pursuing an inclusive and sustainable growth trajectory by stimulating manufacturing, building infrastructure, spurring investments, fostering technological innovation, and boosting entrepreneurship.

At the Glasgow's Summit (COP 26), India proposed a five-fold strategy or 'Panchamrita' to become Net Zero by 2070, share of non-fossil fuel energy in India's total energy mix will be 50% by 2030, installed renewable energy capacity to be enhanced from 450 GW to 500 GW, emissions per unit GDP or emissions intensity, will be reduced by at least 45 per cent by the year 2030 from the 2005 levels and make a billion-tonne reduction in projected emissions from now until 2030. This energy transition will require huge workforce by decarbonizing our economy through changes in production processes and energy leading more extensive use of renewable energy and achieving higher energy efficiencies in different sectors.

As per the Renewable Energy and Jobs Annual Review 2021 by International Renewable Energy Agency (IRENA) there is an Increase in employment in renewable energy worldwide with women holding 32% of these jobs. The Solar PV industry is retaining the top spot, but off-grid decentralized renewables are also creating a growing number of jobs which are propelling employment in productive uses ranging from agro-processing and health care to communications and commerce in local communities. Employment has also increased in biofuels and there is significant workforce in wind and hydropower projects. In India also, significant numbers of direct and indirect jobs have been created in the renewable energy sector with women holding 21% of the wind workforce, 25% of the jobs in Decentralized Renewable Energy (DRE).

The need for strong policy frameworks for renewables has been reinforced by the COVID-19 pandemic with creation of a large skill base for more training and increased use of information and communications technology for remote learning.



	World	China	Brazil	Indla	United States	Europe Union (E
Solar PV	3 975°	2300	68	163.5 ^h	231.5 ¹	194
Liquid biofuels	2 411	51	871 ⁹	35	271	229
Hydropowera	2182	813.6	175.8	319.5	71 ^k	80
Wind power	1254	550	40	44	116.8	259
Solar heating and cooling	816	670	47.2	21	na	21
Solid biomass ^{b, c}	765	188		58	44.51	368
Biogas	339	145		85	na	76
Geothermal energy ^{b, d}	96	3			8 ^m	40 ^d
CSP	32	11			na	6
Total	12 018 ^f	4 732	1202	726	838.4 ⁿ	1300

Estimated direct and indirect jobs in Renewable Energy 2019-10

(Source: Renewable Energy and Jobs Annual Review 2021, IRENA)

Skill Council for Green Jobs is addressing the need for developing the skilled workforce required for various sectors in Green Business Industry. Its activities are linked to Skill India Mission, National Solar Mission, Swachh Bharat Mission and Green India mission of Government of India. SCGJ has established strategic alliances with about 400 Industries, organizations and State skill missions. SCGJ is also focusing on "Entrepreneurship development for Sustainable Development" and promoting support to women to learn marketable skills and connect with income opportunities.

As a part of its objectives, Skill Council for Green Jobs has carried out sector analysis, skill gap studies, occupational mapping and process flow along with identification of job roles in different sectors of renewable energy, waste management and sustainable development. SCGJ enables development of Skilled workforce aligned to National Skills Qualification Framework.

As per the sector analysis on wind and solar energy, India targeted to achieve 100 GW of installed solar energy and 60 GW of wind energy by 2022. Given the large employment generation potential of solar in India, a large workforce needs to be trained in skills for manufacturing, engineering, procurement, construction, installation and O&M to support the market. Thus, in line with India's National Mission on Solar Energy and in consultation with industries and National Institute of Solar Energy (NISE), Gurugram 14 NSQF aligned Qualification Packs (QPs) were developed on various occupations.

In the wind sector, 8 Qualifications Packs(QPs) were prepared in consultation with stakeholders and National Institute of Wind Energy (NIWE), Chennai for capacity building in resource assessment, development of infrastructure, installation, operation and maintenance of wind electric generators.



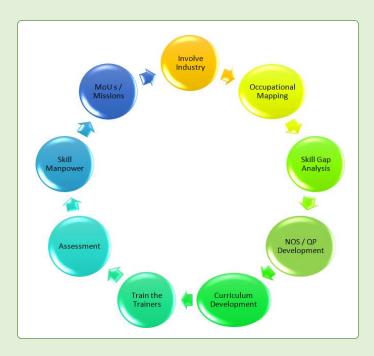
In the rural waste sector, there was an urgent need to create a cadre of skilled manpower and local entrepreneurs who not only manage the surplus agriculture residue of farm but also develop avenues for livelihood generation in villages. 4 Qualifications Packs were developed job roles in biomass supply chain for managing agriculture residue to reduce stubble burning and create opportunities in the existing and as well as upcoming Bio-CNG plants. Indoor air pollution from use of biomass is also a grave concern and needs to be addressed. In line with the Sustainable Development Goals (SDGs) for energy access for all training modules for job roles for installation, assembling, distribution and sales and maintenance for Improved Cookstove have been developed for the Clean Cooking Sector.

In the urban solid waste management sector, Solid Waste Management Rules, 2016, has given impetus to activities in waste processing and management leading to widespread creation of employment in waste collection, segregation, transport, processing and disposal through technologies such as waste-to-energy, bio methanation, pyrolysis and composting and other solid waste recycling techniques. In line with the Swachh Bharat Mission 5 QPs were developed for different jobs roles covering the skilling and training requirement of workers working in solid waste and faecal sludge & septage management. Waste water management sector analysis showed the need to skill and train the workforce deployed for the Wastewater Treatment Plants operation so as to improve the efficiency ensure environmental compliance and health and safety measures of the workers.

Based on sector analysis, SCGJ has developed 48 QPs which includes 39 registered Qualifications on National Qualification Register (NQR).

In a very short span, SCGJ has affiliated over 500 training institutions across 24 States, PAN India and delivered over 5,00,000+ candidate trainings on the QPs developed by SCGJ. SCGJ has trained over 2000 Trainers and certified more than 200 Assessors.

Skill Council for Green Jobs has trained around 106939 trainees in renewable energy which includes 84,540 of trainees on PV Installer(Suryamitra) through various renewable energy training institutions. As per the impact assessment study undertaken on solar trainings, the estimated placement/ improvement in job prospects is more than 80%.



In the waste management sector about 3 lakhs Safai Karamcharis and 2500 waste pickers of Municipal Corporations in 18 States were trained for mechanized cleaning, segregation, collection and composting of waste. Under a project for awareness cum sensitization training on hazardous cleaning of sewers and septic tanks, 3112 Desludging Workers across 10 States were trained as a part of SafaiMitra Suraksha Challenge' launched by Ministry of Housing and Urban Affairs (MoHUA). A total 817 candidates were trained as Wastewater Treatment Plant Technician including 118 numbers from 8 Common Effluent Treatment Plants (CETPs) in Delhi on operation and maintenance and issues related to environmental compliance.







Desludging Operator







Solar Power Plant Installation

Waste Water Plan Technician

International Training on Solar Power

As reported in published article 'Powering Jobs Growth with Green Energy, CEEW- NRDC-SCGJ;2019', the workforce employed in the Indian RE sector grew nearly five-fold in the past five years, rising from nearly 19,800 workers in FY14 to nearly 99,900 workers in FY19, the largest renewable energy employment growth occurred in FY18 with over 30,000 new workers added in utility-scale ground mounted solar, rooftop solar, and wind energy, rooftop solar and other decentralized renewable energy technologies continue to employ far more workers than utility-scale solar and wind energy. In order to cater to the industry 4.0 requirement in the post pandemic, an elearning Management System (SEMS) has been developed to facilitate online skill activity in the green jobs sector by aggregating all its partners on a single digital platform and making learning activities accessible to the candidates across India. A total of 55 Training Partners have registered with this portal. A Foundation Programme on Renewable Energy for India Skills 2021 has been launched to train and prepare interested registered candidates for India Skills 2021 and World Skills 2022 under the guidance of our World Skills experts and RE master trainers.

India's climate action strategies call for clean and efficient energy systems, disaster resilient infrastructure, and planned eco-restoration. The need of the hour is to facilitate the ongoing global energy transition to a decarbonized economy to halt the impact of climate change. This transition will also be a driver of growth by creating numerous green jobs in a great number of sectors. SCGJ will continue to promote skill development in green jobs in environmentally friendly green technologies with reduced consumption levels, minimization of all forms of waste and pollution prevent depletion of natural resources and generate growth in economic activities that will lead to a prosperous and sustainable environment essential for our growth and survival. Skill Council for Green Jobs is also working towards demand aggregation across all job roles and sectors so as to provide training in accordance with such demand so that jobs are immediately available after completion of the practice. Efforts are also being made to encourage universities and educational institutes to introduce professional skill training and vocational training to ensure holistic growth of these students by boosting their chances of getting employed.





The "Green Jobs" or "Green Skilling" catalyse ecosystem protection by reducing energy, materials, and water consumption through high efficiency strategies. Green jobs are central to sustainable development and imminent response to the global challenges of environmental protection, economic and sustainable development and more so, by social inclusion. A green job is which helps in bringing about a transition to environmentally sustainable forms of production and consumption. There are range of Green Jobs, such as "Green jobs" with low income which are clandestinely referred as "green but not decent" (e.g., municipal waste, plastic waste or e-waste) recycling without any adequate safety measures and there are of course "green and decent" jobs in the sectors such as wind and solar power, etc. As a long-term strategy, there are continuous efforts at the national and international level to have a balance between development and growth with an aim to protect environment and generate green jobs.

"Green jobs" can provide services that is beneficial to the environment. Therefore, green jobs can also be acknowledged by their contribution to more environmentally friendly processes. The scope of Green Jobs covers the entire array of "Green Businesses" through renewable energy, energy storage, green construction, green transportation, solid waste including plastic and e-waste management, waste water management. Some imminent examples of sectors generating Green Jobs include the following:

- I. Renewable sector: India and the world are looking forward to reduce greenhouse gas and adopting renewable energy resources. To make this transition achievable, more skilled people are needed in this sector for jobs such as rooftop solar power panel, manufacturing of solar panel modules, inverters and converters etc.
- II. Green transport sector: The transport sector is one of the areas for greenhouse gas emissions and adoption of electric vehicles and green mobility requires significant skilled manpower.
- III. Vertical garden/urban farming sector: Urban areas are fast losing its green lungs due to construction of buildings and the ambient temperature are in rise. In order to address this issue, there are efforts to make vertical garden and urban farming. Urban farming adds and preserves green space in cities. Urban forestry and roof-top gardening are rapidly becoming a trend. An increase in such urban farming practices can also generate skilled manpower and create jobs.

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IV. Waste management sector: Waste management is a pressing issue in the world and more specifically in developing and least developing countries especially with the unceasing growth of consumerism. In order to mitigate this issue "green but not decent" jobs can also be very useful in a way to address critical issues that most towns and cities in India are facing i.e., municipal solid waste management, plastic waste and e-waste management and wastewater management. Collection, segregation and scientific disposal of these waste so also building and management of wastewater treatment plants can help for cleaner environment while also generating jobs.

Plastic waste management, by recycling through skilled manpower, could create "Green Jobs" and address sustainable development as well. For example, as much as 3.3 million metric tonnes of plastic waste is generated in India This roughly translated to 9,200 tonnes a day (TPD). The total municipal solid waste generation is 55-65 million tonnes. India recycles over 60 per cent of its plastic, which was way higher than the recycling capacity of any developed country. Despite notification of the Plastic Waste Management Rules, 2016 and Waste Management Rules, 2016, followed by numerous amendments, most parts of the country lack skilled manpower and systematic efforts to mitigate the risks associated with waste.

Way forward: Skills and manpower, both are available in India. However, there need to be an intimate linkage between them. Skilled manpower need to be polished and upskilled and reskilled from time to time. Bridging the gap of skill deficiency in India is a huge challenge. Due to lack of skilled manpower, these environmentally sustainable practices are lagging behind. There is a need to create viable employment opportunities. Many policies acknowledge the need for sustainable practices so also the skilled manpower but the implementation has always been a big challenge. The other key factor is involving private sector for their expertise and funding. Therefore, an integrated approach which cuts across different sectors, government departments and private sectors is required for enhance skill manpower for employment opportunities through "Green Jobs".



COP 26 Summit in Glasgow

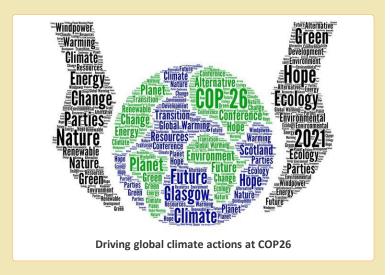
Mr. Deepak RaiAVP - Standard & Research, SCGJ



The 26th Conference of parties of the UN Framework Convention on Climate Change (UNFCCC), or COP 26 as it is popularly called was held from Oct 31- Nov 12, 2021 in Glasgow, Scotland. These meetings are held every year to design and implement a global response to climate change. Earlier, these meetings have also delivered two treaty-like international agreements, the "Kyoto Protocol" in 1997 and the "Paris Agreement" in 2015, which form the global architecture for actions to be taken to address climate change. While the Kyoto Protocol expired in 2020, the Paris Agreement is now the active instrument to fight the global climate change. At the Glasgow summit, Prime Minister Narendra Modi announced that India will attain net zero emissions by 2070, which is one of the most ambitious targets by a developing country to combat climate change. He also announced that India will raise its non-fossil energy capacity to 500 GW by 2030 while meeting 50% of its energy demand from renewable sources, and cut its carbon emissions by a billion tonnes by the same year.

In addition, India will achieve carbon intensity reduction of 45 per cent over 2005 levels by 2030. India's five-point climate action plan, which PM Narendra Modi described as "panchamrit" (five values)", is set to give a firm push to India's plans for an accelerated transition to a low carbon economy.

The main task for COP 26 was to finalise the rules and procedures for implementation of the Paris Agreement which was finalised in 2015 with an objective to keep the rise in the global average temperature to 'well below' 2 degrees above pre-industrial levels (ideally 1.5 degrees); strengthen the ability to adapt to climate change and build resilience; and align all finance flows with 'a pathway towards lower GHG emissions and accelerating climate-resilient development'. The effort at the Glasgow summit was to push for an agreement that could put the world on a 1.5-degree Celsius pathway, instead of the 2-degree Celsius trajectory which is the main objective of the Paris Agreement.





KEY ACHIEVEMENTS MADE AT COP 26

Mitigation: To achieve the 1.5-degree Celsius temperature goal, the Glasgow agreement, in particular

- 1. Has asked countries to strengthen their 2030 climate action plans, or NDCs (nationally determined contributions), by next year and established a work programme to urgently scale-up mitigation ambition and implementation.
- 2. Decided to convene an annual meeting of ministers to raise ambition of 2030 climate actions.
- 3. Requested the UN Secretary General to convene a meeting of world leaders in 2023 to scale-up climate ambitions and actions and called for an annual synthesis report on those.
- 4. Asked countries to make efforts to reduce usage of coal as a source of fuel, and has called for a phase-down of fossil fuels.

Adaptation: The Glasgow Climate Pact has:

- 1. Asked the developed countries to at least double the money being provided for adaptation by 2025 from the 2019 levels.
- 2. Created a two-year work programme to define a global goal on adaptation as the Paris Agreement has a global goal on mitigation.

Climate Finance: In 2009, developed countries had promised to mobilise at least \$100 billion every year from 2020. This promise was reaffirmed during the Paris Agreement, which also asked the developed countries to scale up this amount from 2025. The 2020 deadline has long passed but the \$100 billion promise has not been fulfilled however the developed nations have now said that they will arrange this amount by 2023.

Other achievements of COP 26: Besides the main deal, COP 26 also made a few other pledges, including the following:

- To reduce deforestation: In the 'first' major outcome of COP 26, 105 countries accounting for 85 per cent of the planet's forests signed the "Glasgow Leaders' Declaration on Forests and Land Use". The Declaration commits the countries to "halt and reverse deforestation and land degradation by 2030."
- To reduce methane emissions: Countries led by the United States and the European Union signed the voluntary and non-binding Global Methane Pledge to cut their methane emissions by at least 30 per cent by 2030.
- Climate-resilient health systems: A group of 47 countries committed to develop climate-resilient and low-carbon health systems.
- Over 30 countries signed on to a declaration promising to work towards a transition to 100 per cent zeroemission cars by the year 2040

COP26 also saw plenty of discussions about how to fund the transition away from fossil fuels dependency to clean energy and how to finance projects to make countries more resilient to disruptions due to climate change. Major financing institutions, investors and insurers also pledged trillions of dollars in green funding in a coordinated commitment to factor in emissions into their investment and lending decisions.



Skill Development paving way for a Greener Economy in India

The steadfast nature of India toward achieving its climate goals, while ensuring its rapid economic growth can be an ideal story for both developing and developed countries across the world. The availability of the right skills across the industry paves the way for a structural transformation towards a greener and resilient economy and thus it is key for a just and inclusive transition. In recent years, growth in skills development for green jobs has been consistently happening however there is a need to fast-track that with an integrated approach to make it just and inclusive. The focus on green jobs continues to be driven largely by policy and regulations to address climate change and environmental degradation, and deployment of clean energy technologies and solutions for fast growing market for green products and services. As the country embarks on meeting its climate targets, a clean energy transition in both near and mid- term future will also impact millions of people employed in fossil-fuel and fossil-fuel-dependent sectors. Such workforce will also have to be upskilled and reskilled in greener work processes, to meet the requirements of low carbon technology industries. As India outlines its roadmap towards meeting its ambitious climate commitments, there is also an urgent need for a more rigorous approach to the analysis and anticipation of demand for green job skills across the industry, with better data on skills and occupational needs to facilitate human centric approach for the green transition.



RPL 2 Training provides better Support to Swachh Bharat Mission

Mr. P B SinghDeputy Manager- Technical, SCGJ



Recognition of Prior Learning (RPL) is a skill certification component to enable a large number of Indian youth to take on industry-relevant skill certification which will help them to secure a better livelihood. Individuals with prior learning experience or skills can register themselves and get assessed and certified under the RPL component of the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) scheme. RPL focuses mainly on individuals engaged in unregulated sectors. So far, 47 lakh individuals have been RPL certified under the PMKVY Scheme.

Skill certifications on different job roles are aligned with different missions. Swachh Bharat Mission (SBM) is one of them. The objectives of Swachh Bharat Mission were to eliminate open defecation through the construction of household-owned and community-owned toilets and establishing an accountable mechanism of monitoring toilet use. Skill Council for Green Jobs (SCGJ) conducted trainings under Swachh Bharat Mission. SCGJ imparted trainings for Safai Karamchari on Mechanized Cleaning, Personal health & safety while cleaning and MS act. Similarly, Capacity building of Waste Pickers involve value addition of waste, personal health & safety and Waste water treatment plant technicians etc.

Under RPL 2 which was part of PMKVY 3.0, some of the benefits provided to participants are given below:

- No fee is charged from a candidate for participating in the RPL program.
- RPL recognizes the value of learning acquired outside a formal setting and provides a government certificate for skills acquired in informal settings or during work.
- Every certified candidate receives a reward money of INR 500.
- Candidates receive exposure to concepts such as digital literacy, financial literacy, entrepreneurship etc.
- Candidates receive free of cost accidental insurance coverage for three years.

During the training, Training Partner (TPs) were managed a 35 hours RPL training as per training delivery plan drawn by SCGJ. The TPs had arranged PMKVY branding of the training center, refreshment to the candidates under training cost. The Training Partners were fully responsible for uploading of data at least 3 days before commencement of batches and distribution of certificates as and when available from the SDMS/Skill India Portal. SCGJ arranged and provided SafaiKaramcharis kits & books before the schedule of training. Assessment carried out on the last day of the training at no cost to TP.

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According to term sheet of RPL 2 project, 80000 numbers of candidates for Safai Karmachari and 10000 numbers for Waste Pickers were allocated. The State wise approved target is given below in the table:

S. No.	States/Union Territory	
1	BMC Mumbai (Maharashtra)	
2	SDMC New Delhi (Delhi)	
3	Delhi, Bihar, Gujrat, Haryana, HP, J&K, MP, Odisha, TN, UP, & WB	

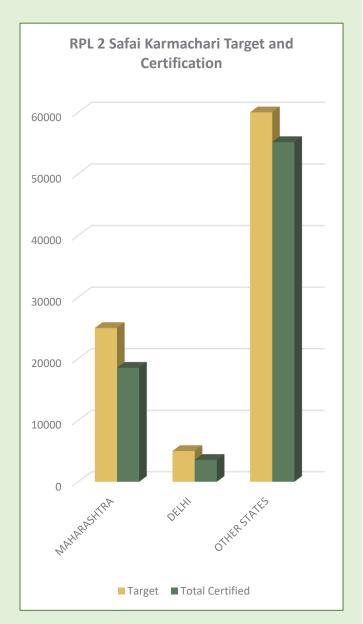
According to achievement, the majority States are covered as Maharashtra, Uttar Pradesh, Madhya Pradesh, Odisha, Gujrat and Punjab. The State wise achievement are given in the table below:

RPL 2 State	RPL 2 State wise certification Status					
Sr. No.	State	Total Certified				
1	MAHARASHTRA	18535				
2	DELHI	3556				
3	UTTAR PRADESH	13254				
4	MADHYA PRADESH	9267				
5	ODISHA	8398				
6	GUJARAT	5350				
7	PUNJAB	3823				
8	WEST BENGAL	3437				
9	HARYANA	3006				
10	ANDHRA PRADESH	2813				
11	UTTARAKHAND	2429				
12	TAMIL NADU	1236				
13	CHHATTISGARH	1235				
14	TELANGANA	325				
15	JHARKHAND	204				
16	JAMMU AND KASHMIR	139				
17	BIHAR	100				
18	KARNATAKA	100				
19	HIMACHAL PRADESH	60				
	Total	77267				

Out of total target SCGJ certified 77267 numbers of participants from different as given under the table:

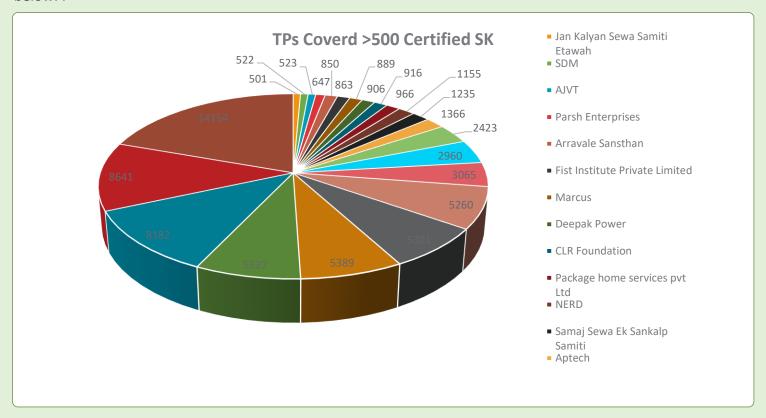
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RPL 2 State wise Certification Status						
State	Target	Total Certified				
MAHARASHTRA	25000	18535				
DELHI	5000	3556				
OTHER STATES	60000	55176				
Total	90000	77267				





SCGJ cover 19 States with the help of 51 Training Partners (TPs) to achieve around 86% of the above target. The rest of target was unable to complete due to start of Sampurna Lockdown of Covid 19. The Lockdown was effective in all states in single day. Due to this all ongoing trainings was stopped immediately. Out of the 51 TPs, the major achievement was completed by the following TPs are Advect, Innodust, SLMDS, Prerna Groups, Ayushman Educational & Welfare Society, Kam Avida, Panacea Education, Bitan, PSP Samiti and Shreeyam Softtech respectively. Out of total 51 TPs, 23 numbers of Training Partners (TPs) were covered between 500 to >14000 Certified SK and around 28 numbers of TPs are covered less than 500 Certified Safai Karmacharies, before start of Sampurna Lockdown of Covid-19 in the March 2020. The TPs wise achievements are given in the Chart below:



SCGJ also approached to some of CETP in New Delhi and included for the training. The CETP societies often lack skilled workforce which is involved in the operation and maintenance of these plants resulting in various hazards such as, Activity Hazards, Chemical Hazards, Accidental Hazards, Fire Hazards, Electrical Hazards & Biological Hazards. Acknowledging that demand for qualified skilled staff in the Water and Wastewater Industry is high while qualification pathways are diverse and complex, SCGJ addressed the above issue by Training 118 wastewater treatment plant technicians also. The Skill training was provide to the Safai Karmi staff to improve the cleaning skill, improve behavior, should be good relation with community people etc.

During the training we found that several women candidates are also participated as well as men. This will not going to increase the livelihood options but improve the Women empowerment in India. Women empowerment seeks to stimulate the confidence in women by providing to them everything in their capacity to help them see the skills that they contain and are dormant within them. Women empowerment also serves in contributing to the economic benefits of the household and the society as a whole. SCGJ is providing skilling and training in Green Jobs Sector to women so as to create gainful employment. The Skills training was imported in different municipal corporations / Nagar Nigam of selected States in India.







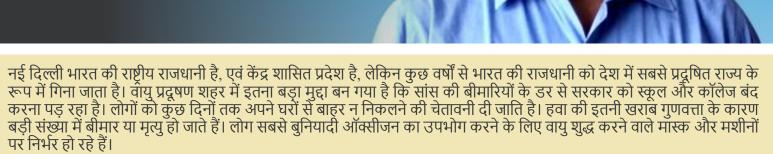




"कारगर नीतियों एवं गुणवत्तापूर्ण प्रशिक्षण और कौशल विकाश से पराली प्रदुषण का समाधान संभव"

पी बी सिंह्

उप प्रबंधक, स्किल कौंसिल फॉर ग्रीन जॉब्स



दिल्ली का वायु प्रदूषण हर सर्दियों में सुर्खियों में रहता है। यह मुख्य रूप से पंजाब और हरियाणा जैसे अन्य राज्यों से लाए गए वायु प्रदूषकों के कारण है, जहां फसलों को जलाया जाता है। जैसा की हम अवगत है कि पेट्रोल, डीजल, कोयला जलाना, औद्योगिक कचरा, पटाखे जलाना आदि प्रदूषण बढोतरी में अत्यधिक योगदान करते हैं।

दिल्ली में बढ़े वायु प्रदूषण का आरोप-प्रत्यारोप पराली जलाने और दीवाली के पटाखों पर होता है। वैज्ञानिक तथ्यों के आधार पर तो पराली और दीवाली दिल्ली के वायु प्रदूषण बढ़ाने में महत्वपूर्ण भूमिका मानि जाति है। पराली वाले PM2.5 में कार्बनिक अंश ज्यादा होता है और ये आंख नाक गले मे जलन पैदा करने वाले रेडिकल ज़्यादा पैदा करता है। साथ ही दीवाली वाला धुआँ भी किसी ज़हर से कम नहीं होता है।

वायु प्रदुषण मानक (AQI): 0-50 अच्छा, 51-100 संतोष जनक, 101-200 औसत, 201-300 ख़राब, 301-400 बहुत ख़राब और 400 से ज्यादा को खतरनाक या गंभीर माना जाता है। जिस हिसाब से दिल्ली में ट्रैफिक दिन प्रति दिन बढ़ा रहा है उस हिसाब से तो दिल्ली में वायु प्रदूषण तय सीमा से अधिक होना स्वाभाविक है, खासकर अक्टूबर, नवंबर, दिसंबर महीने में। अक्टूबर-नवंबर महीने में धान की फसल कटाई होती है, और दीवाली का त्योहार भी होता है। दिल्ली में पराली प्रदूषण का मामला ज़्यादा पुराना नहीं है। दिल्ली में वायु प्रदूषण की समस्या पिछले 10-11 वर्ष पहले संज्ञान में आई थी पर तब किसी का ध्यान पराली जलाने पर नहीं गया था।

हरित क्रांति की वजह से सरकारों द्वारा किसानों को सिंचाई के लिए बिजली और डीजल में जमके सब्सिडी दी गयी। पंजाब और हरियाणा जो कि मुख्यतः गेहूं उत्पादन के केंद्र थे, सिंचाई जल पाकर धान पैदा करने लगे। और तो और धान पर एमएसपी होने से किसानों को धान पैदा करना ज़्यादा लाभदायक लगा। वैसे एमएसपी गेंहूँ की खरीद पर भी है लेकिन गेंहू की बुवाई से फसल तैयार करने का समय सर्दियों का होता है और गेंहू धान की तरह बहुत अधिक पानी वाली फसल भी नहीं है।

धान की खेती में किसानों ने ज़मीनी जल को ट्यूबवेल से अंधाधुंध तरीके से दोहन किया। परिणाम ये हुआ कि ज़मीनी जल का स्तर बहुत कम हो गया। तब आमजन और सरकार का ध्यान इस समस्या पर गया। विशेषज्ञों ने सरकार को बताया कि अगर पंजाब - हरियाणा में धान की बुवाई जो कि अप्रैल में ही शुरू हो जाती थी, को शिफ्ट करके मई -जून कर दिया जाए तो धान की खेती में पानी की खपत को काफी हद तक कम किया जा सकता है।

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10 जून 2009 को पंजाब सबसॉइल वाटर संरक्षण अधिनियम (Punjab Preservation of Subsoil Water Act), लागू किया गया और अगले कुछ सालों में जमीनी जल के स्तर में अच्छी बढ़ोत्तरी पाई गई। पानी की समस्या तो कुछ हद तक ठीक हुई, लेकिन इस वजह से धान की फसल की कटाई अक्टूबर - नवंबर में शिफ़्ट हो गयी।

लेबर की कमी ने धान की कटाई को मशीन केंद्रित बना दिया। धान की कटाई में काम आने वाली हार्वेस्टर मशीन खेत से धान तो अच्छे से निकाल देती है लेकिन पराली खेत में ही छोड़ देती है। पराली हटाना किसान के लिए बहुत ज़रूरी होता है क्योंकि गेंहू की बुवाई का सबसे बढ़िया समय नवंबर का पहला दो हफ्ता होता हैं। इस दस-पंद्रह दिन के छोटे से वक्त में किसान के पास पराली जलाने से सस्ता और आसान तरीका और कोई नहीं हैं।

पराली जलाने से वायु प्रदूषण की समस्या में अक्टूबर-नवंबर का स्थायी वातावरण काफी हद तक ज़िम्मेदार है। अगर पराली को गर्मी में जलाना होता तो पराली जलने से निकलने वाले वायु प्रदूषक आसमान में उड़कर गायब हो जाते, जब की शीतकालीन मौसम में हवा में रहते हैं।

शीतकालीन मौसम में वातावरण स्थिर रहता है और जो कुछ भी हवा में छोड़ा जाता है वो सब कई घंटों तक हवा में तैरता रहता है। इसी हवा को दिल्ली और एनसीआर वासी सांस लेते हैं और हवा में मौजूद सब कुछ उनके फेफड़ो में पहुँच जाता है जिससे सांस, हृदय, मधुमेह की बीमारी का खतरा बहुत अधिक बढ़ जाता है।

केंद्र सरकार द्वारा की जा रही निगरानी रिपोर्ट में साफ तौर पर बताया जा रहा है कि 15 सितंबर से 16 नवंबर के बीच हरियाणा में 2020 की तुलना में पराली जलाने की घटनाओं में बढ़ोतरी हुई है. हरियाणा देश का इकलौता ऐसा राज्य है, जहां पराली जलाने के मामले घटने के बजाय बढ़ते ही जा रहे हैं. जब कि अन्य राज्यों में पिछले साल की तुलना में पराली जलाने के मामले कम हुए हैं

Source: 61.9% increase in cases of stubble burning in Haryana, the government engaged in shaving (newsncr.com)

हरियाणा सरकार द्वारा पराली को लेकर राज्य भर में चेतना-रैली आयोजित करने को कहा हैं। जिसमें स्कूली बच्चे, युवा, एनएसएस और युवा केंद्र शामिल होंगे। इन रैलियों के माध्यम से समाज को संदेश दिया जाएगा कि पराली को जलाना न केवल स्वास्थ्य के लिए हानिकारक है, बल्कि यह पृथ्वी की उर्वरता को भी नष्ट कर देता है। मोबाइल वैन के माध्यम से गांव-गांव प्रचार भी किया जाए और किसानों को संदेश दिया जाए कि वे पराली नहीं जलाएं।

पराली को खेत से धान निकालते वक्त न हटा पाना ही इसे किसानों को जलाने पर बाध्य करता है और पराली से जुड़े सभी व्यवसाय, चाहे चीनी मिल या कोयले के औद्योगिक संयत्रों में बिजली पैदा करना हो या बायोगैस संयत्र से बायोगैस, सब घाटे में चले जाते हैं।

स्किल कौंसिल फॉर ग्रीन जॉब्स का सहयोग:

कौशल विकास और उद्यमिता मंत्रालय (MSDE) द्वारा अक्टूबर 2015 में स्थापित स्किल कौंसिल फॉर ग्रीन जॉब्स (SCGJ), हरित व्यवसाय क्षेत्र के भीतर सेवा उपयोगकर्ताओं के साथ-साथ निर्माताओं / सेवा प्रदाताओं की कौशल आवश्यकताओं की पहचान करने और देश भर में लागू करने के लिए प्रतिबद्ध है। उद्योग नेतृत्व, सहयोगी कौशल विकास और उद्यमिता विकास पहल जो "हरित व्यवसायों" के लिए भारत की क्षमता को पूरा करने में सक्षम होगी।

एससीजीजे का मुख्य उद्देश्य देश में ग्रीन जॉब सेक्टर में गुणवत्तापूर्ण प्रशिक्षण और कौशल विकास के लिए एक मजबूत और जीवंत पारिस्थितिकी तंत्र बनाना है। साथ ही विभिन्न उप क्षेत्रों में स्किल गैप अध्ययन के बाद, 2016-2020 के दौरान एससीजीजे ने 50 से अधिक क्वालीफिकेशन विकसित किए हैं। जैसे कृषि फसल अवशेष एग्रीगेटर (एग्री रेसिडुए एग्रीगेटर - Agri-residue Aggregator –SGJ/Q6201, NSQF level 4), बायोमास डिपो ऑपरेटर (SGJ/ Q6207, NSQF level 4) और पशु अपशिष्ट खाद एग्रीगेटर (विकल्प: बायोगैस प्लांट ऑपरेटर / कम्पोस्ट प्लांट ऑपरेटर- SGJ/Q6302, NSQF level 4) इत्यादि अपने आप में महत्वपूर्ण है

।स्किल कौंसिल फॉर ग्रीन जॉब्स (SCGJ), उपरोक्त विषय को ध्यान में रखते हुए गुणवत्तापूर्ण प्रशिक्षण और कौशल विकाश के लिये हमेशा तत्पर रहती हैं।

एस सी जी जे (SCGJ) की कृषि फसल अवशेष एग्रीगेटर (एग्री रेसिडुए एग्रीगेटर - Agri-residue Aggregator) क़्वालीफिकेशन का सुचारु ढंग से उपयोग पराली जलाने से रोकने में कारगर साबित हो सकती है, साथ ही प्रदुषण को भी कम करने में सहायक होगी। उपयुक्त क़्वालीफिकेशन के द्वारा किसानो एवं उससे सम्बंधित लोगो में गुणवत्तापूर्ण प्रशिक्षण और कौशल विकाश से पराली प्रदुषण को कम किया जा सकता है।

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इस मुद्दे को हवा की खराब गुणवत्ता को वातावरण में प्रवेश करने से रोकने के लिए एक स्थायी समाधान की आवश्यकता है। हालांकि प्रदूषण की इस समस्या के समाधान के लिए कई कदम उठाए गए हैं। जो केवल कुछ ही गतिविधियों को प्रतिबंधित कर रहा है जो उस समय की परिस्थितियों के आधार पर वायु प्रदूषण की ओर ले जाती हैं। इसलिए यह एक अस्थायी समाधान दे रहा है।

जैसा की हरियाणा सरकार के द्वारा विभिन्न प्रकार की रैली / जागरूकता अभियान का सहारा लिया जा रहा है, उसी प्रकार हरियाणा के साथ साथ अन्य राज्यों को भी स्किल कौंसिल फॉर ग्रीन जॉब्स के साथ मिल कर जागरूकता अभियान के तहत गुणवत्तापूर्ण प्रशिक्षण और कौशल विकाश के माध्यम से पराली प्रदुषण को कम किया जा सकता है।

इसके लिए खतरनाक प्रदूषण स्तरों को कम करने के लिए निरंतर निगरानी और निवारक कदम उठाने की आवश्यकता है। ऐसे कई कारण हैं जो इतने बड़े पैमाने पर प्रदूषण में योगदान करते हैं जिसके परिणामस्वरूप गंभीर स्वास्थ्य संबंधित खतरे होते हैं और यहां तक कि मनुष्य की मृत्यु और अन्य प्राकृतिक जीवन पर प्रभाव डालती है।

निम्नलिखित उपाय पराली नियंत्रण में कारगर हो सकते हैं:

- SCGJ की कृषि फसल अवशेष एग्रीगेटर (एग्री रेसिडुए एग्रीगेटर Agri-residue Aggregator) क़्वालीफिकेशन का सुचारु ढंग से उपयोग।
- ऐसी कंबाइन हार्वेस्टर मशीनें विकसित की जाएं जो धान निकालते वक्त पराली भी खेत से हटा लें तो पराली किसानों के लिए अतिरिक्त आय का साधन हो सकता है।
- SCGJ के द्वारा किसानो एवं उससे सम्बंधित लोगो में गुणवत्तापूर्ण प्रशिक्षण और कौशल विकाश से पराली प्रदुषण को कम किया जा सकता है।
- चावल अनुसंधान संस्थान द्वारा हाल के वर्षों में बहुत सी सूखा-प्रतिरोधी धान की प्रजातियां (सहभागी धान, डीआरआर धान) विकसित की गई हैं। साथ ही ऐसी प्रजातियां कम वक्त (105 दिन) में ही तैयार हो जाती हैं। ऐसी धान की प्रजातियों को प्रोत्साहित किया जाना चाहिए।
- उपयुक्त कम पानी वाली फसलों को बढ़ावा देकर धान की अंधाधुंध खेती पर लगाम लगाई जा सकती है





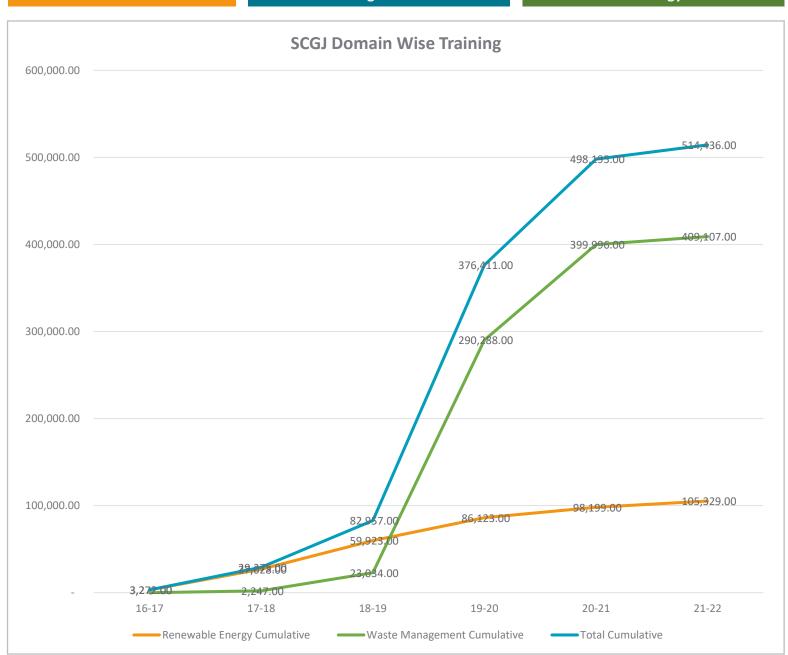
SCGJ Through Data

Cumulative Training

TOTAL TRAINING = 514436

Waste Management = 15461

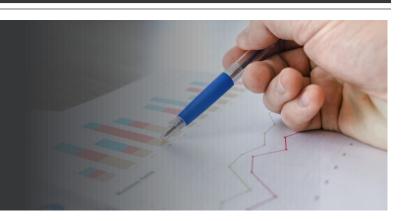
Renewable Energy = 105329





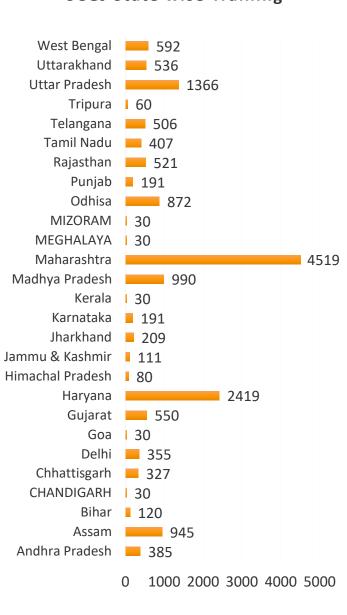
SCGJ Through Data

FY 2021 - 2022

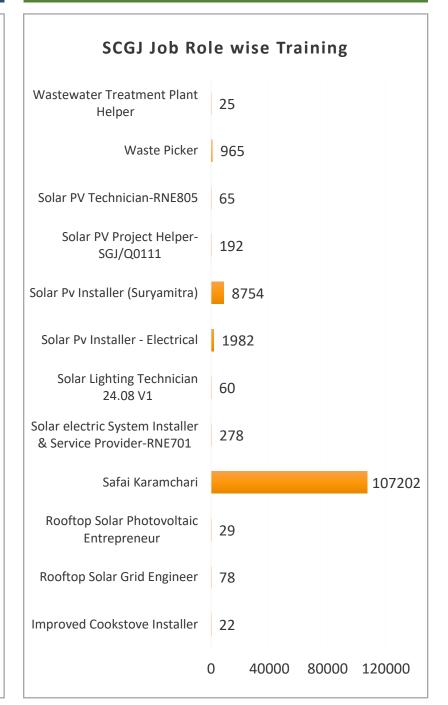


TOTAL TRAINING = 16402

SCGJ State wise Training



TOTAL CERTIFICATION = 15461





WorldSkill Competition

Skill Council for Green Jobs



World Skills International is the largest skill competition in the world, organized once every two years in one of the member countries. The competition is held over a span of four days. Being the global hub for skills excellence and development, World Skills brings youth, industries, and educators together to give youth the chance to compete, experience, and learn how to become the best in their skill of choice. From the traditional trades to multi-skilled technology careers in the industry and service sectors, supported by partners, industries, governments, volunteers, and educational Institutions, World Skills vision is to improve the world through the power of skills. World Skills International has announced Renewable Energy as a new skill to be introduced in World Skills 2022. Skill Council for Green Jobs (SCGJ) has been assigned the responsibilities of coordination and facilitation of selecting the final team for participation at World Skills 2022. In order to prepare the candidates, SCGJ organized foundation course on Renewable Energy with the enrollment of 160 candidates.

Candidates were selected for Regional level skill competition held in Chandigarh and Visakhapatnam. SCGJ selected 11 candidates in Renewable energy and 9 for Water technology at National Level Skill Competition to be held in Delhi in January 2022.

INAUGURAL EVENT IndiaSkills North and South Regional Competition 2021







Team SCGJ at IndiaSkills Regional Competitions 2021















Gold Medal & Silver medal on Water technologies at the Regional Competition South - Vishakhapatnam

Gold Medal & Silver medal on Renewable Energy at the Regional Competition - Chandigarh









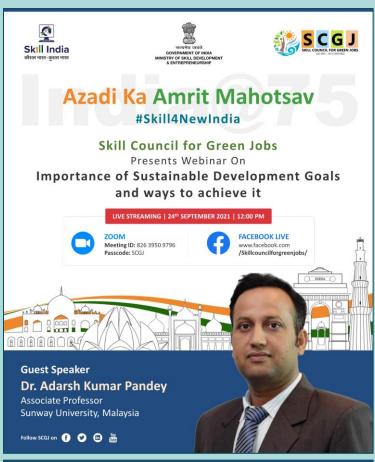
SCGJ is continuing to bring eminent Speaker in diverse field/sectors so to enhance knowledge and learning and bring forth various development and innovation in Renewable Energy(RE) and waste management as a part of the 'Azadi ka Amrit Mahotsav' 2021-22. So far a total of 8 lectures have been organized on different topics. The series were launched with the talk on Importance of Sustainable Development Goals and its role in reducing the impact of climate change. Next in the series was on Entrepreneurial opportunities in Solar focusing skills on different opportunities in starting a new venture on solar power plant. This was followed by a talk on Standard Operating Procedure for Solar PV Plant Installation. On 22nd October, the focus of the webinar was on waste to fuel conversion largely on Bio-CNG which has become very significant in view of the increasing demand for a decarbonized economy. SCGJ organized the next lecture on potential of Solar Energy for increasing Productivity and Profitability in Agriculture so as to focus on increasing agricultural demand for power utilities. Keeping in view the focus SCGJ on skill development and livelihood promotion for women entrepreneurs, the next lecture on 12th November was focused on upcycling Waste to Empowerment specially elevating livelihood opportunities for women lived in poverty conditions. World is committed on green economy and in view of COP 26, SCGJ organized recent webinar in the series on Getting to Net Zero Carbon Emissions provided a deep insight into the various concepts and provisions of GHG Standards and Protocol for accounting and mitigating GHG emissions by Corporates and on greening the Grid by NITI Aayog.









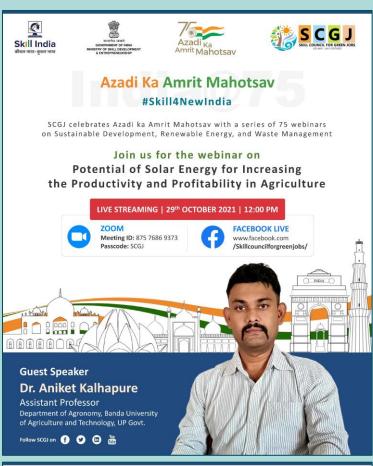




Note: Check your email after enrolling in training to get your enrollment approved by SCGJ





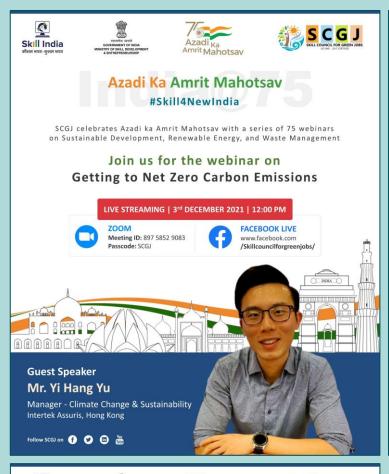


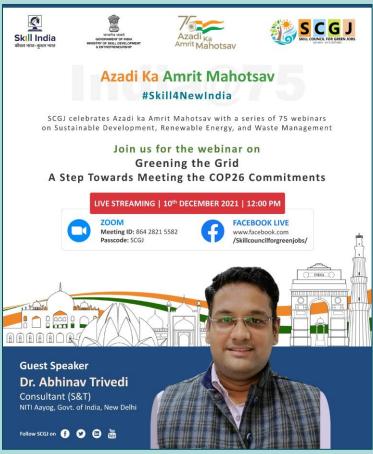


Join us for the webinar on Waste Management - Challenges & Strategies

















Upskilling trainings under the GIZ funded Indian Rooftop PV Installers Skilling and Employment (IRISE) Project



SCGJ has developed e-learning content for HCL Foundation on solid waste management



13th Governing Council Meeting 21st September 2021





WWTPcourse: WWTP Wastewater Treatment Plant Technician

ourses

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Wastewater Treatment Plant Technician Enroll

Vocational training for Wastewater Treatment Plant Technicians covering the following activities in detail: Operate the Wastewater Treatment Plant, Monitor and Maintain Wastewater Treatment Plant and Work Safety at Wastewater treatment plant. The course includes a mentored internship and an official certificate after a final written exam. The course includes a mentored internship and an official certificate after a final written exam. The course is delivered in a self-paced e-learning format and contains a wealth of digital learning material developed by international consultants.

Skill Council for Green Jobs(SCGJ) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) have developed a Training course on operations of Wastewater Treatment Plant for Online training on Open edX platform



SCGJ in collaboration with All India Management Association (AIMA) Launched Online Certificate Course On Sustainability Management

As Governing Council Member of Confederation of Biomass Energy Industry of India(CBEII), Dr.(Mrs.) Parveen Dhamija, Advisor, SCGJ participated in the 1st Governing Council meeting on 19th Oct, 2021 and a presentation on White Paper for Biomass Supply Chain in India supported by Foreign, Commonwealth and Development Office (FCDO)

SCGJ signed an MoU with M/s Kantar Public in Nov, 2021 for conducting a Skill gap assessment study amongst the workforce engaged in solid waste management in four metro cities of Mumbai, Chennai, Delhi and Kolkata.

SCGJ awarded a CSR project by SBI Card for "Design, supply, erection & commissioning of 300 kWp Grid tied Solar PV plant at 2 Government hospitals in Delhi".

SCGJ participated in CII International Conference and Exhibition on Waste to Worth between 16-17 November, 2021

SCGJ participated in Knowledge Session: Certification of Green Hydrogen on 24th of November 2021, organized by the Indo-German Chamber of Commerce in collaboration with the Indo-German Energy Forum (IGEF) Support Office.



SCGJ conducted different regional workshops on renewable energy for World I Skill Competition 2022 in Chandigarh and Vishakhapatnam





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