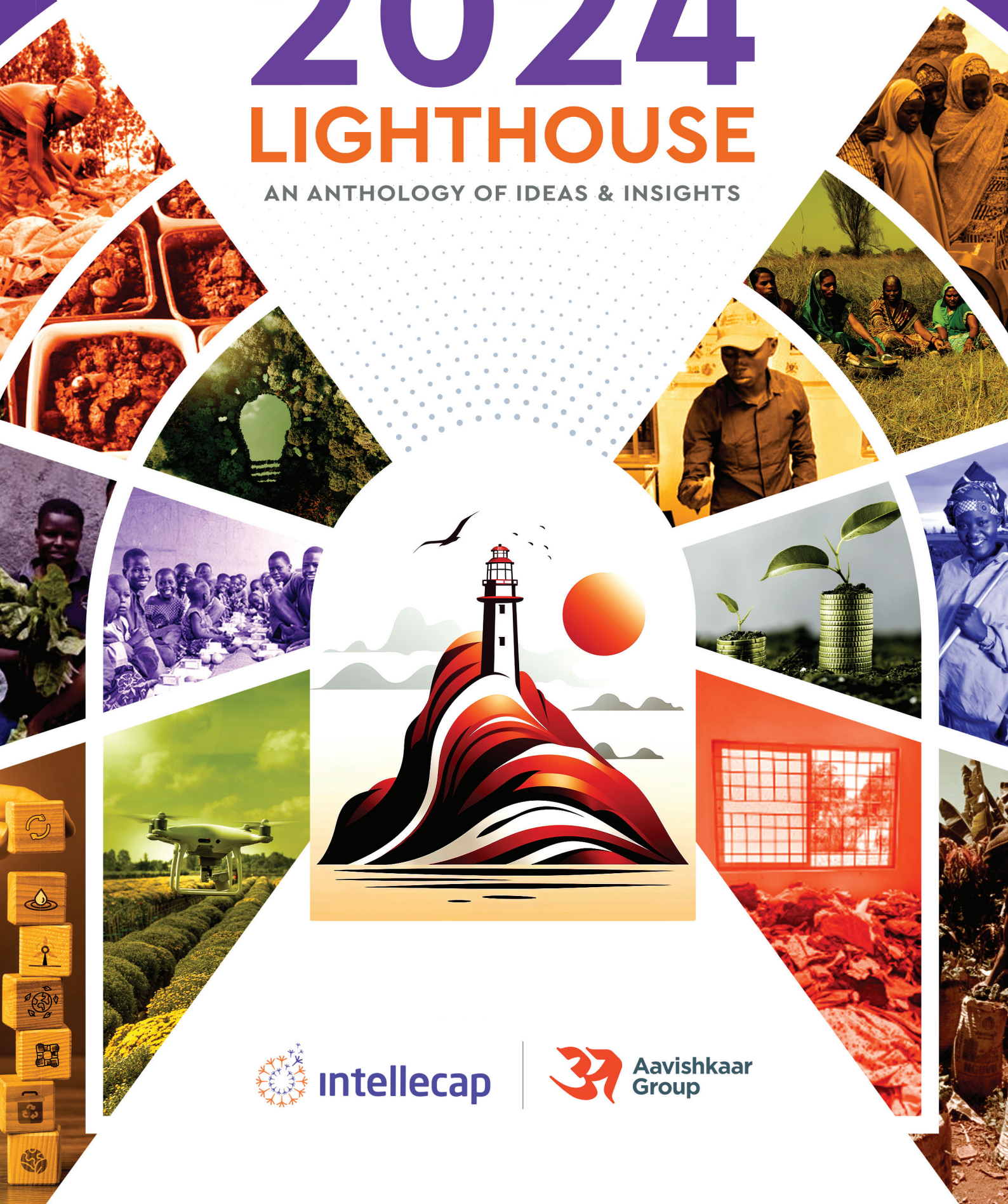
THE INTELLECAP 2024 LIGHTHOUSE

AN ANTHOLOGY OF IDEAS & INSIGHTS



intellecap | Aavishkaar Group

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OVERVIEW

Since 2002, Intellecap has constantly strived to shape outcomes in emerging and underserved markets by developing key insights and new ideas. As a result, the organization has undertaken bold initiatives across its various practices to push the envelope, seeking to build collaboration and thought leadership as part of the social impact discourse.

This year marks the **6th edition of the Lighthouse**, and there's been a concerted effort to bring more diverse, yet unique perspectives to the sectors Intellecap covers, and unearth fresh ideas that complement our work in nurturing ecosystems to deliver change.

The goal of this endeavour has always been to highlight and share the most relevant thought pieces with our external stakeholders, in order to bring forth sustainable solutions towards achieving the SDGs, as set forth by the United Nations. We continue to spotlight diverse perspectives through stories on regenerative farming in Africa, agri-waste innovations, climate finance, and electric mobility in Kenya. From carbon credits aiding farmers to circular textile models improving livelihoods, this year's pieces highlight the intersection of agtech, climate action, and inclusive sustainability.

It is our sincere hope that the Lighthouse offers you more than a glimpse into some of the most compelling geographies and sectors Intellecap serves as part of its key constituents, and aspires to continue serving in the years to come.

To connect with us about our work, and to know more about our various initiatives, please write to us at marketing@intellecap.net or visit our website www.intellecap.com.

All articles published in the lighthouse are from April 2024 to March 2025

AGRICULTURE

AGRICULTURE

1. Building Impact Ecosystems: Interview of Vineet Rai, Founder & Chairman, Aavishkaar Group at 'Startup Mahakumbh'

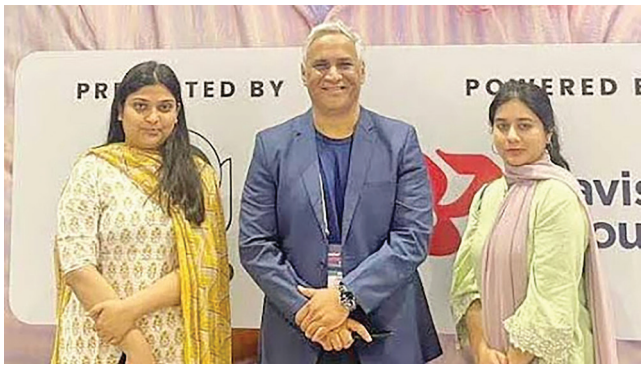
Published in Agriculture Today, May Edition 2024

Vineet rai is the Founder of Aavishkaar group, an Impact Investment Platform touching millions of people in Asia and Africa, using an entrepreneurship based development approach. In an interaction with Agriculture Today, Vineet talked about building impact ecosystems to deliver real Impact as enshrined in the vision of Aavishkaar Group. "We exist to bridge the Opportunity gap for the Emerging 3 Billion". Vineet believes that Impact Investing has the potential to change the world of finance irreversibly. Excerpts from the interview.

May 07, 2024, Mumbai: Vineet Rai, Founder and Chairman, Aavishkaar Group and Managing Partner, Aavishkaar Capital, was the Agritech Pavilion lead at the recently concluded Startup Mahakumbh, the largest showcase of startups and enterprises from India, attended by Industry stalwarts and noted Govt. dignitaries including the Hon'ble PM of India.

In partnership with NABARD, Aavishkaar Group powered the Agritech Pavilion which showcased the ingenuity of agritech startups, presented cutting edge disruptive agri technologies, featured insightful discussions by reputed Industry leaders, masterclasses for aspiring startups and presented investment opportunities to promising enterprises.

Agriculture Today, one of the largest print magazines focussed on the agri sector, interviewed Vineet Rai at the 'Startup Mahakumbh' on building impact ecosystems and how it will reshape the future of agriculture in India for their May Edition.



The idea behind the startup mahakumbh is to bring all the Indians and all the sectors together to be a part of celebration

You have played pivotal role in bringing all the stakeholders on a single platform. How is this platform going to change the landscape of agritech?

I think all the platforms must have some relevance or the other. It would be nar- cisstic to claim that you will change the way startup ecosystem or agriculture or agritech startup will change. But this is a platform that

will allow the democra- tization of the startup and agritech. The idea behind the startup mahakumbh is to bring all the Indians and all the sectors together to be a part of celebration. Agri- tech pavilion aims at bringing diverse set of ideas to be showcased to everybody else. Secondly, it aims at celebrating the spirit of entrepreneurship. The tagline of Agritech Pavilion is Udhami Kisan, that makes farmers as entrepreneurs. We are trying to symbolize the pavilion as the transitioning phase of agricul- ture. Seeing a kisan coming from sub- sidy background to support credit back- ground and moving onto entrepreneurial thought process is forward-looking.

Although we talk about robotics and AI integration into agriculture, we haven't seen the application at ground level. So how soon can we see them apply at field level? We have to first ask this question as to how relevant precision farming to a small farmer is. And that's where lies the answer to your question. It's very dif- ficult to adopt. So, let's say that the ro- botics product costs Rs.5 Lakh. How many farmers would actually be able to adopt it? So therefore, SAS (Software as a service) should have farm products, mechanization as a service. In fact, it is an experiment that has been going on since 2007 but did not work very well. Many companies came and went.

But those are the kinds of experi- mentation that will need to be done for robotics to play an engaging and effec- tive role. We still have arbitrage issues, even though labor has become very dif- ficult to find in the farms. So as the labou r

cost goes up, we will be left with limited choice. And I think we will find ways and mechanisms to integrate it. It's a process and will take time in order to happen. But drone participation in agriculture has become very significant in a very short period of time.

In which segment in agriculture do you find more startups coming up?

In agriculture, there is input side, pro- ductivity side, post harvest infrastructure side and finance side. And then comes the direct to consumer (d2C) branding, positioning and processing. In the in- put side, AgroStar is a startup in which Aavishkaar was among the first ones to invest. They work on productivity and farm productivity and innovation. Then you have Ergos, which is actually on post harvest infrastructure side. Then you have Samunnati as a post financing company and then you move to Soulful, which is actually millet processed foods for rich couples and their children who want to be on millet diet, or are con- scious of their health and also of their children.

So, you can actually see agriculture in different segments and then of course, there is agro chemicals, bio chemicals etc.

How do you see the policy environment for startups?

Policy environment is positive and at the political level I think we have got a very strong positive impact. Now, from political state, there is transitions to bu- reaucracy. From there to financial institu- tion, then to R&D institutions (which is agriculture industry in exchange etc.) to education. And between these percola- tions you find resistance. So, I think po- litical transformation is complete. There is absolutely no step back. Bureaucracy I think, is in early to mid stage of transi- tion. The financial institutions are at ear- ly stage of transition because now you heard NABARD talking about equity and the Chairman actually said that "credit penetration has gone up.

How do we get investment credit penetration?

That's a big statement coming from NABARD, which only talked about refi- nancing. At agri research level, we are still struggling. For agricultural industry, we are still probably 30 years behind of what is happening in the political sector. So, it has to be streamlined and hopeful- ly in the next five years, more regression, more success, more scale is expected. I mean, it's quite funny to say that when I first made investment in 2007, the term agritech was not known and the term agri tech started being used as late as 2014.

So what are the new technologies that you see coming into agriculture in next five years?

That will be a billion dollar question and will be very difficult for me to answer but I do see massive application of artificial intelligence, generative AI and all kinds of technological innovation that are tak- ing place across the world. It could ac- tually be the utilization of infrared rays and actually understanding what is the quality so it will be on quality, precision, traceability, something as rudimentary as drip irrigation to satellites. But I think the biggest transition will be from crop to horticulture and fruits and vegetables. Generally you will move from very basic cereals and that transition is very clear. I think the bigger challenge will be to see how will technology play a role in water conservation, which I think will be our biggest challenge as a country.

At agri research level, we are still struggling. For agricultural industry, we are still probably 30 years behind.

What are the future plans of Aavishkaar in agri-tech?

Yeah, that's interesting question. So we are right now thinking of actually looking at deep tech on one side, agriculture on the other side and financial services.

And then climate as an overarching theme. Within climate, we are actually looking at climate tech on one side, and we are looking at carbon bio sequestration.

We believe agritech is still going to be the leading segment coming in in terms of innovation. It will take a more gradual path. So patience and long term thinking will be the way we look at it.

We are not going to get excited just because great new ideas come in. We have been around too long to actually get excited

And education-wise, do you see a transition?

I see lots of engineers coming and showing interest in agriculture these days. And most of the founders are IITians and do not have background from agriculture universities, I actually am a great believer that lateral thinking does help. I don't get so excited by just hearing about IIT. I think people coming from tier three institutions have better context to bring about a change, than the person with no context. Now if you have a person from IIT, IIM and other reputed institutes, coming from the tier three towns and has actually context of agriculture and access to best of education, then we will definitely make a differ- ence. But I think the education curve is also smoothening. While IIT has a brand name, the knowledge level is not so far away. The brand gap is very large but I don't believe that the knowledge gap is that wide. So my belief is that there will be a democratization on the education side also. So while linguistically we use IIT as a brand and assign a certain value to it, we see a fairly high level of variation between the systems. My general belief is that engineers or people with techni- cal background will play a very big role in transitioning to the agricultural sector, not necessarily IIT.

AGRICULTURE

2. Regenerative Agriculture in Africa

Published in Intellecap Blog

Regenerative Agriculture in Africa: A Transformative Approach for Food Security, Ecosystem Restoration, and Smallholder Empowerment

Sub-Saharan Africa is facing unprecedented population growth, with projections indicating that agricultural output must more than double by 2050 to meet burgeoning food demand. Current trajectories suggest that without significant intervention, 65% of the population could face food insecurity by mid-century.

While stakeholders have proposed various solutions, including intensified industrial agriculture, biodiverse food systems, and supply chain optimization, these approaches often fall short of addressing the complex, interconnected challenges facing African agriculture. Many proposals require substantial capital investment and technological infrastructure, which are often scarce in developing economies. Moreover, these solutions frequently fail to account for the socioeconomic realities of smallholder farmers, who comprise over 60% of the agricultural workforce in sub-Saharan Africa.

The confluence of population growth, climate change, and environmental degradation necessitates a transformative approach that can simultaneously address food insecurity, restore ecosystems, and build resilience across multiple levels of the agricultural value chain. This includes enhancing the adaptive capacity of smallholder farmers, securing food access for vulnerable communities, and preserving critical ecosystem services.

Regenerative agriculture emerges as a promising paradigm in this context. This holistic approach to farming aims to rebuild soil health, restore degraded ecosystems, and promote biodiversity while maintaining or increasing agricultural productivity. By aligning with natural processes, regenerative agriculture offers the potential to concurrently address food security, environmental conservation, and climate change mitigation.

Africa's agricultural landscape, dominated by smallholder farmers, is uniquely positioned to benefit from regenerative practices. Many of these farmers already employ traditional methods that align with regenerative principles, leveraging their deep understanding of local agroecosystems. However, the widespread adoption of regenerative agriculture faces significant barriers, primarily due to limited access to resources, including credit, appropriate technology, and market linkages.

The Good Food Innovation Fund (GFIF), supported by The Rockefeller Foundation and implemented by Intellecap, exemplifies an innovative approach to overcoming these barriers. The fund aims to increase access to good food for underserved populations,

these are foods that are nourishing, regenerative, and equitably produced and distributed. By focusing on agro-processors as key leverage points in the value chain, GFIF catalyzes the adoption of regenerative practices at scale. The fund supports SMEs that work directly with smallholder farmers, providing essential resources and market access.

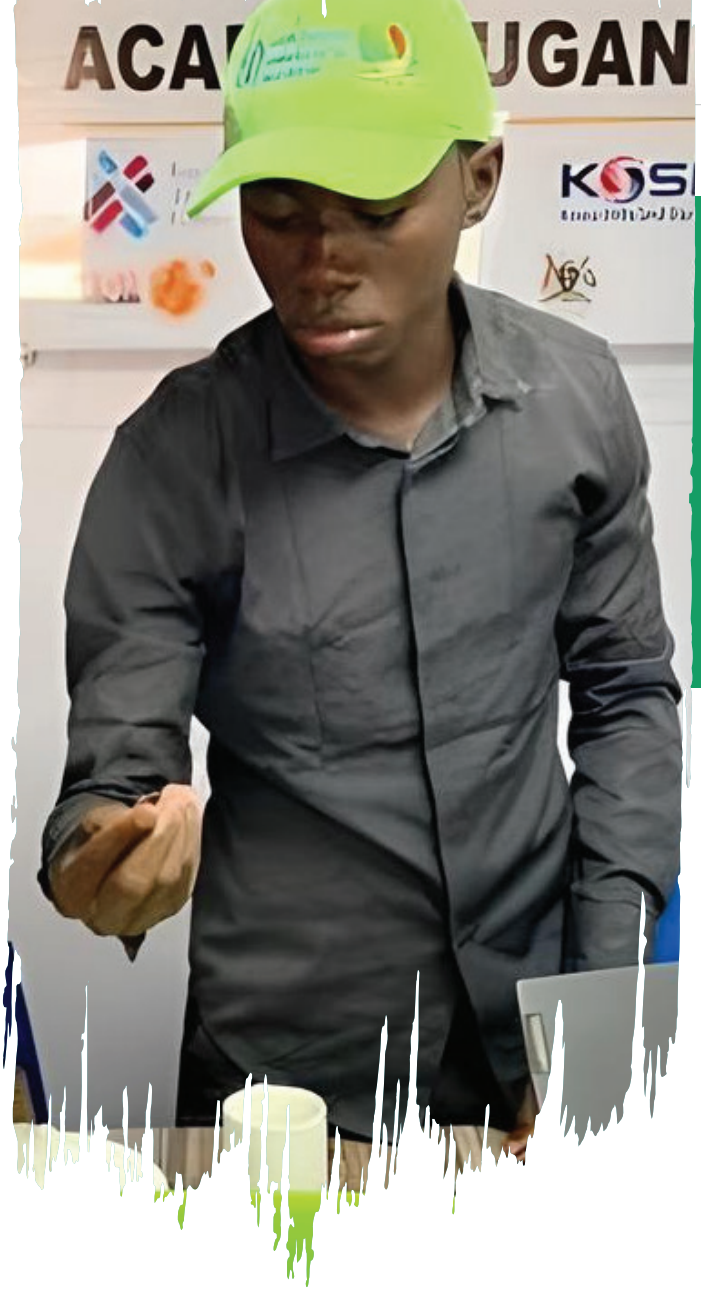
For instance, GFIF-supported companies like Delish and Nutri in Kenya, which process biofortified beans, supply critical post-harvest equipment to farming communities, significantly reducing losses and optimizing resource utilization. The fund also facilitates structured contracts between SMEs and farmers, ensuring price stability and income security across crop cycles. This approach not only mitigates market volatility for smallholders but also incentivizes the adoption of sustainable agricultural practices.

Furthermore, GFIF addresses market access challenges through a multifaceted strategy. By mandating SMEs to directly procure from farmers or cooperatives, the fund eliminates unscrupulous intermediaries, enhancing transparency and ensuring fair prices for producers. ESOP Kandi, a rice milling company in Benin, provides regenerative agricultural extension services to rice farmers, thereby sustainably improving crop yields.

All seventeen GFIF-supported SMEs are mandated to supply nutritious, processed products to institutional buyers like schools, enhancing food security and nutrition for vulnerable populations. These initiatives not only establish stable market connections but also encourage diverse and nutritious crop cultivation, particularly benefiting marginalized farmers.

By tailoring solutions to the African context and engaging with existing local institutions and networks, we can create an enabling environment for smallholder farmers to fully adopt regenerative agriculture practices. This context-specific approach is essential for achieving the goals of ecosystem restoration, climate change mitigation, and sustainable food production in Africa.

Regenerative agriculture offers a path forward for healing the land, revitalizing biodiversity, and empowering smallholder farmers in Africa. By working together – governments, development partners, farmers, and local communities – we can unlock the potential of regenerative agriculture to create a more resilient, sustainable, and equitable future for all.



AGRICULTURE

3. Black soldier fly could offer a revolution for farming and waste management

Published in Intellecap Blog

Africa, with its diverse ecosystems and rich agricultural potential, faces a paradox. On the one hand, there is a tremendous amount of biowaste generated from agriculture. Approximately, one third of food produced globally is lost or wasted resulting in economic losses estimated at US$1 trillion annually. In Sub-Saharan Africa, 37% of 120-170kg per capita per year of all food produced is lost or wasted at various points along the value chain. At the same time, there is a constant search for sustainable solutions to mitigate climate change, rejuvenate soils, bolster food production, and provide people with healthy, nutritious diets.

Rapid urbanisation, industrialisation, and population growth have led to an exponential increase in waste generation, including food waste and organic matter. In 2016, Sub-Saharan Africa generated an estimated 174 million tonnes of waste at a rate of 0.46 kg per capita per day, and is projected to triple by the year 2050, making the continent the world's fastest-growing waste-generating region by 2050.

Organic waste currently constitutes up to 57% of total waste produced in Sub-Saharan Africa, with agriculture being one of the main sectors generating the largest quantities. If left unmanaged, this waste strains already-limited resources and contributes significantly to greenhouse gas emissions.

The opportunity for reusing, recycling and recovering waste for the African continent could inject—UNEP estimates—USD$8 billion annually into the economy. The diversion of waste is expected to improve the socio-economic status of the continent, i.e. by creating jobs in the waste-to-value sector. Moreover, the diversion would minimise the environmental and health impacts associated with the current poor solid waste management practices. The need for sustainable solutions that address both biowaste management and climate change has never been more urgent.

As Africa grapples with the challenges of sustainable agriculture, food security, and climate resilience, the black soldier fly offers a compelling solution. In this article, we delve into the potential of this unassuming insect and explore how Ugavoil, an agricultural enterprise in Uganda, is harnessing the black soldier fly to revolutionise the African agriculture landscape.

Black soldier flies: nature's clean-up crew

Native to many regions of Africa, the black soldier fly *(Hermetia illucens)* is a non-pest insect known for its remarkable waste-conversion abilities. With its voracious appetite for organic waste, rapid growth rate, and nutrient-rich larvae, this insect offers a multi-faceted solution to the twin challenge of biowaste management and climate change.

The black soldier fly (BSF) lays its eggs in decaying matter where the larvae, the true stars of the show,

develop. As they feed, the larvae break down a wide range of organic materials, from food scraps to animal manure, agricultural residues, and even sewage sludge. These larvae convert the waste materials into two highly valuable resources for the agriculture sector: protein-rich larvae biomass and nutrient-rich residue or 'frass'. The nutrient-dense biomass can be harvested and used as livestock or fish feed or converted into biofuels. Furthermore, the larvae themselves are a protein-rich food source, offering a sustainable alternative to traditional livestock feed. The second product, the nutrient-rich frass, can be utilised as a potent fertiliser, thereby replacing synthetic fertilisers that contribute to climate change through high energy consumption at manufacture, nitrogen oxide (N2O) emissions during usage, and soil health degradation and water pollution post-usage.

How is Ugavoil harnessing the black soldier fly?

Intellecap, through its project, 'Reorienting the Private Sector to Enable Climate-Smart Agricultural Solutions to Address Gender Inequalities', is working with ten private sector enterprises that have innovative climate-smart business models to use gender-transformative approaches to scale their businesses. One of the enterprises the project supports is Ugavoil Organic Products Limited. Ugavoil has two main business lines. It manufactures and sells edible oils made from oil seeds, including avocado, soybean, sunflower, chia seed, and sesame. Ugavoil has also partnered with the Kasese Municipal Council in Uganda to collect organic waste from the district, reducing landfills and greenhouse gas emissions by converting the waste into organic farm input and animal feed using black soldier flies. Ugavoil is using black soldier flies to revolutionise the circular economy in the Kasese part of Uganda:

a. Gender inclusion and employment creation: Using black soldier flies presents an opportunity to empower women across the agricultural value chain, from waste management to larvae harvesting, processing and distribution. Working mostly with women, Ugavoil trains women on how to sort and compost organic waste and use black soldier flies to generate organic products that can be used on farms and in animal feed. This empowers the local communities, supports women's economic empowerment, fosters economic growth, and contributes to achieving Sustainable Development Goals (SDG) 12 – Sustainable Consumption and Production; SDG 8 – Decent Work and Economic Growth; SDG 5 – Gender Equality; and SDG 13 – Climate Action. That said, it is critical to provide resources such as land, finance, training, and awareness campaigns to ensure women can capitalise on the opportunity to use black soldier flies in agriculture.

b. Biowaste to feed: The organic waste collected is channeled into a black soldier fly larvae production unit, where the black soldier flies mate to produce the larvae which in turn feed on the waste. Within weeks, these ravenous larvae reduce the waste by over 50%, and, in the process, they convert it to high-protein biomass. Once fully developed, these nutrient-packed larvae are also harvested themselves. The biomass and larvae become key ingredients in livestock and fish feed. These are sold to farmers in Kasese District, where Ugavoil's production is currently located, reducing their reliance on traditional, resource-intensive proteins like soy and fishmeal. As a result, local farmers can access affordable and sustainable feed options, enhancing the productivity of their livestock and boosting rural economies. Rearing soldier flies is an efficient way to dispose of organic waste by converting it into livestock feed and other products: the freshly harvested larvae are processed into black soldier fly meal, which contains essential amino acids and fatty acids. Black soldier fly meal can potentially replace soybean meal as a poultry feed and can provide better amino acids. (Poultry feed based on soybean meal currently represents 60–70% of farmers' production costs while the black soldier fly alternative is cheaper). Furthermore, a scientific study revealed that replacing soyabean meal with black soldier fly meal did not affect poultry's feed intake, daily body weight gain, feed conversion ratio or the aroma or taste of the cooked meat.

c. Soil enrichment: Post-feeding, the frass left behind by the larvae acts as an organic fertiliser, which Ugavoil sells to the local farmers. Rich in nutrients, these nutrient-rich organic fertilisers provide a sustainable alternative to chemical fertilisers.

d. Carbon sequestration: By diverting biowaste from landfills, where it would decay and release

methane – a greenhouse gas over 80 times more harmful than carbon dioxide – Ugavoil leverages the black soldier fly larvae to combat climate change significantly. Furthermore, reducing the demand for traditional animal feed can alleviate pressure on our fragile ecosystems and reduce the carbon footprint associated with livestock feed production.

Embracing change for a sustainable future

As we stand at the crossroads of waste management, sustainable agriculture, and climate change, the black soldier fly is a beacon of hope. Its ability to convert biowaste into valuable agricultural inputs, creates immense potential to transform economies, improve food security, and combat climate change. The case of Ugavoil and other research examples showcased in this article serve as a blueprint for integrating this innovative solution into the African agricultural landscape.

As stakeholders in the planet's future, we are responsible for championing sustainable practices. Ecosystem actors, such as investors and incubator programmes, have a significant contributions to make. Most waste-to-agriculture enterprises in East Africa, like Ugavoil are at their proof-of-concept stage or minimum viable product stage. Therefore, investors in business incubators and accelerator programmes could increase their funding into the sector. This would, in turn, enable these enterprises to scale their solutions through increased adoption of waste-to-agriculture solutions such as black soldier fly-based solutions.

More broadly, African governments, NGOs, research Institutes and the private sector – including entrepreneurs, farmers, and consumers – could collaborate to create an enabling environment for the adoption of black soldier fly-based solutions. This could include:

- Disseminating credible information on results of existing efforts
- Supporting research and training centres for waste-to-agriculture entrepreneurs and research and development more generally
- Creating tax holidays or tax breaks for enterprises in the waste-to-agriculture sector and investment in waste-to-agriculture infrastructure to encourage adoption
- Formulating and endorsing public policies and regulatory frameworks that incentivise and support sustainable agriculture and waste reduction.

Finally, the role of women in the adoption of waste-to-agriculture practices cannot be overstated. It is important to integrate gender perspectives into research, policies, programmes, and projects to address the specific needs, roles, and contributions of both women and men. This is why Intellecap is supporting Ugavoil and other similar private sector enterprises with relevant technical assistance to improve their business model to engage and reach more women actors in the food system while identifying new growth opportunities. This support has empowered Ugavoil with the requisite skills to attract gender-lens investors, tailor their marketing approach, and improve their field engagement practices. The waste-to-agriculture sector needs more initiatives to follow Ugavoil's lead and accelerate their impact through gender mainstreaming.

AGRICULTURE

4. Firm tackles food insecurity with Striga weed bioherbicide- Coverage of Toothpick Company, an Agri enterprise from Kenya, and winner of the 11th Sankalp Africa Awards 2024

Published In Business Daily, Kenya

What you need to know:

- The Toothpick Company supplies farmers with Kichawi Kill, a host-specific active agent that kills Striga.

Claire Sands Baker's path wasn't always destined for bioherbicides and battling the tenacious Striga weed. Her career traversed the social enterprise and environmental landscapes, driven by a desire to foster collaboration and positive change. But to her, The Toothpick Company resonated differently; It is deeply personal.

Claire's father, Professor Emeritus David Sands, a dedicated plant pathologist, microbiologist, and agronomist, developed a bioherbicide technology for decades. He learned of the devastation Striga wreaked on Kenyan farms through his brother.

"My uncle was volunteering in a hospital in Western Kenya where he learned about the Striga problem and thought my dad's technology could be utilised," Claire told the Business Daily.

Sh5 billion crop loss

Striga (Striga hermonthica), an invasive parasitic weed that attacks the roots of staple crops like maize, sorghum, and millets, causes yield losses of 20-100 percent for affected farms. It thrives in poor soils and erratic weather patterns, plaguing over 40 million farms across sub-Saharan Africa and causing an estimated $9 billion in crop loss annually.

The parasitic plants produce thousands of tiny seeds that can remain dormant in the soil for up to 20 years, making them extremely difficult to eradicate.

In Kenya, the weed infests approximately 340,000 hectares of land. In the Western region where the weed is common, maize yield losses have totaled over Sh5 billion annually ($38 million), Kenya Agricultural and Livestock Research Organisation (Kalro) Director-General Eliud Kireger once reported. A public-private collaborative effort with Kalro made Kenya the ideal spot for the Toothpick Company to launch its pilot programme.

A scientific twist

With the research starting in 2007, and the enterprise officially established in 2018, the Toothpick Company takes a unique approach to weed control. It utilises strains of endemic Kenyan fungus selected explicitly for their overproduction of specific amino acids. This builds

on two vital scientific concepts: amino acids can inhibit plant growth, and a host-specific plant pathogen can target particular weeds.

The company's innovation lies in selecting these fungal strains to manufacture the inhibitory amino acids. Claire, now director and co-founder, says this research combination has never happened before.

The herbicide development

The journey began with collaborative research between Montana State University and Kalro.

Henry Sila Nzioki, a research scientist from Kalro-Katumani, played a pivotal role in running lab and field trials. After over a decade of work, Nzioki submitted the regulatory dossier for Kichawi Kill to the Kenya Pest Control Products Board as a joint registration between The Toothpick Company and Kalro.

Claire saw a chance to carry out her father's legacy work in this collaborative effort. She explains that the team was ready to launch an enterprise after solid proof of concept trials in 2014–2015.

"My experience with strategic and stakeholder development gave me a great fit for the team," she says.

The Toothpick Company now supplies farmers with an environment-safe biocide, Kichawi Kill, a host-specific active agent that kills Striga but leaves other plants unharmed.

The invasive striga weed.

The invasive striga weed.

Kichawi Kill helps restore farmers' crop yields, with an average increase of 42-56 percent in maize production. Claire explains that the company's name, 'Toothpick,' commemorates the company's humble beginnings.

"We initially used toothpicks to deliver our primary inoculum to the villages."

Building a sustainable future

The path to commercialisation, completed in June 2023, was challenging. The first significant milestone – regulatory approval for their live inoculum product – took six years to achieve.

"We had a range of challenges with our trials, including drought, fall armyworm, negligent third-party implementers, and Covid," Claire continues, "It is exciting to see that our mission has remained consistent for 15 years."

With the first product approved, the team focused on the next iteration: a seed coating. This new formulation, developed by Dr Peter Lüth, Loise Kioko, and Dorcas Kemboi, offered a 60 percent price reduction and a three-month shelf life. This innovation improved accessibility and addressed the challenges of earlier methods.

Most expensive cost item

The Toothpick Company's most expensive part of operations is achieving its mission of education, which the field team carries out through field days and farmer meetings. The bioherbicide technology requires a simple seed-coating process. Users must therefore learn to distinguish the benefits of this technology compared to synthetic chemical herbicides.

"Even though our product is easy to use, education is always important as we introduce a new innovation, and encourage both soil and human health," Claire advises.

Claire, however, emphasises the need for patient funders who understand the importance of navigating the regulatory landscape. "Every African country has biocontrol regulations, presenting a time-consuming and expensive hurdle."

The team of scientists

With a dedicated team of scientists from 14 African countries, the start-up envisions a future where Kichawi Kill empowers farmers across sub-Saharan Africa to manage Striga for food security.

They aspire to see a shift from synthetic chemicals to biocontrol solutions around the world, placing African scientific expertise at the forefront of this agricultural revolution.

"There is a lot of pressure on us to get it right, for both the farmers and the future of bioherbicide development globally," she says.

Getting the right collaborations will boost the company. "We have ambitious goals, and having the right team members and partners in place will get us there," Claire concludes.

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ENERGY AND CLIMATE

Insights from the Climate Team

ENERGY AND CLIMATE

1. Climate team Insight on Global Energy Independence Day

Published in Intellecap Blog

"True progress lies in harnessing the power of innovation to illuminate our lives while preserving the resources of our planet."

On Global Energy Independence Day, we at Intellecap, reflect on the pivotal strides made towards achieving energy self-sufficiency worldwide. This day underscores the importance of developing and adopting diverse energy sources, ensuring nations can meet their energy needs without over-reliance on foreign resources. The journey towards energy independence has been driven by innovation in renewable energy technologies, energy-efficient practices, and sustainable resource management. By harnessing solar, wind, hydro, and geothermal power, countries are not only reducing their carbon footprint but also securing a more stable and resilient energy future. We also took the occasion to ask a few leaders from the climate team across Asia and Africa on their insights as we commemorate this day.

Managing Director-Climate, Santosh Kumar Singh highlighted, "As we commemorate this day, we at Intellecap take note of the significant impact we have enabled through our market-led solutions around clean energy transition in the Global South. We are working with Global Institutions and making this transition possible by building solutions with cleantech innovators, channeling capital to the ecosystem and accelerating a shift towards a greener and cleaner planet."

Energy independence is more than just a strategic goal; it is a critical component of economic stability and national security. As nations invest in local energy production and infrastructure, they reduce vulnerabilities associated with geopolitical tensions and supply chain disruptions. This shift promotes economic growth, creating jobs in emerging sectors and fostering technological advancements. Moreover, energy independence enables countries to set their energy prices, offering protection against volatile global markets. This autonomy helps stabilize domestic economies and provides consumers with reliable and affordable energy solutions.

As Principal, Ashay Abbhi explains, "Intellecap's work in the energy sector embodies the Sanskrit shloka 'Tamaso ma jyotir gamaya' – 'from darkness, lead me to light'. We strongly pursue the purpose of energy independence and help solution providers that empower everyone across the varied economic and energy strata, from those struggling with energy poverty to delivering giga-scale solutions. By embedding sustainability into core strategies, we work to seed, scale, and solve the energy problems for a brighter global future."

As we celebrate Global Energy Independence Day, we at Intellecap reaffirm our commitment to supporting this vital movement. Our expertise in

energy management, policy development, and technological innovation empowers our clients to navigate the complexities of the energy landscape. We believe that through collaboration and continued investment in clean energy, we can achieve a future where every nation enjoys the benefits of energy independence.

Principal, Sarah Njoroge, puts it succinctly, "Energy independence refers to a nation's ability to produce sufficient energy resources to satisfy its domestic demand, reducing or eliminating the need to import energy. At Intellecap, we remain focused on identifying enterprises offering energy access solutions and support them to navigate the complex regulatory landscapes, secure funding and provide implementation support. Our collective efforts light the way to a more independent energy future for our communities"

As the world unites to celebrate this significant occasion, it highlights the critical importance of energy independence and underscores the need for diversified and sustainable energy sources. This day serves as a reminder of the urgency to transition away from fossil fuel and embrace cleaner alternatives while emphasizing on the importance of enhancing energy security through sustainable energy practices.

Talking about Africa, Principal, William Mulehi, opines, "Transition to clean energy is one of Africa's paramount targets and is in line with SDG 7. A number of Governments across the continent are pushing for clean and sustainable energy, and part of our work at Intellecap is to support Government efforts to achieve this. Leveraging on our key levers that support Impact @ Scale (Knowledge, Capital, Networks and Technology), and coupled with the passion that stems from seeing clean energy having a positive impact on the people and planet, Intellecap is at the forefront in enforcing collaborative efforts between the private sector, development partners and other ecosystem players to support achievement of clean and sustainable energy for the African continent."

At Intellecap we celebrate and commit to a clean energy transition through our solutions -first approach and through clean energy interventions across Asia and Africa.

Manager, Utsav Mulay, sums up the occasion perfectly, "Energy independence is energy freedom. Since the advent of fire, people have striven to use energy to serve households, industry and society. Energy independence is the freedom to use different sources of energy to serve humanity, without harming the planet. At Intellecap, we are enabling communities and businesses to invest, develop and deploy clean energy solutions that lead to happier, healthier lives. We are building the ecosystems that enable the flow of finance by mission oriented investors to create energy independence at the grassroots level in the Global South. We are driving the conversation for accelerating energy independent low carbon economies."

Together, we are building a world that is not only energy-secure but also environmentally sustainable and economically prosperous.

If you would like to know more about Intellecap's climate team's work across Asia and Africa and our specific energy interventions, write to us at marketing@intellecap.com

ENERGY AND CLIMATE

2. Carbon credits to boost incomes of Jharkhand village farmers

Published In Mint India

The Birsa Harit Gram project serves as a potential model for agro-forestry, which is gaining ground because the buyers of carbon credits prefer — pay a premium — for credits based on Nature Based Solution, as opposed to offsetting projects like renewable energy or projects like carbon capture.

With financial help from Jharkhand government's Birsa Harit Gram Yojana, a scheme launched in 2018, farmers in Birsa village planted trees, mostly mango, over 1,00,000 acres. When they did it, they had no idea that they could be earning by generating and selling carbon credits; now they do.

Over 13,000 farmers have joined a Carbon Credit Finance Project on Rabobank's ACORN platform, with more expected to join. These farmers are expected to take care of the trees to ensure their growth, for which they will get money. Trees grow by absorbing carbon dioxide from the atmosphere —it is the carbon in CO2 that becomes the wood. The carbon sequestered annually earns them Carbon Removal Units (CRUs), which are carbon credits issued by ACORN. These credits are issued for actual carbon removed from the atmosphere, rather than avoided emissions or presumed removals. One CRU denotes one ton of sequestered carbon.

Intellecap Advisory Services, a climate and carbon consultancy of the Avishkaar group, worked with ACORN to onboard the farmers and establish a satellite-based carbon sequestration assessment system.

The Birsa Harit Gram project serves as a potential model for agro-forestry, which is gaining ground because the buyers of carbon credits prefer — pay a premium — for credits based on Nature Based Solution, as opposed to offsetting projects like renewable energy or projects like carbon capture.

In the Jharkhand project, the ultimate buyers of the CRUs have put three conditions — the farmers must be 'small' in terms of land holdings, at least 80 per cent of the proceeds of CRU sales must go to the farmers (meaning all the expenses should be contained within the other 20 per cent), and carbon sequestration should be measured rather than calculated with a formula to ensure the integrity of the carbon credits. Santosh Singh, Managing Director, Intellecap, told businessline that roughly CRUs generated by Birsa farmers could earn even $20 a CRU.

The first-time verification of carbon sequestered would be done physically, by inspectors — this is expected to happen in a couple of months. Subsequent measurements could be satellite-based, Singh said. The first disbursement of CRU money to farmers could happen in a year.

Roughly, the project is expected to earn ₹500-600 crore over the next 20 years.

NEW CASH COW

Carbon windfall for Jharkhand farmers

M Ramesh

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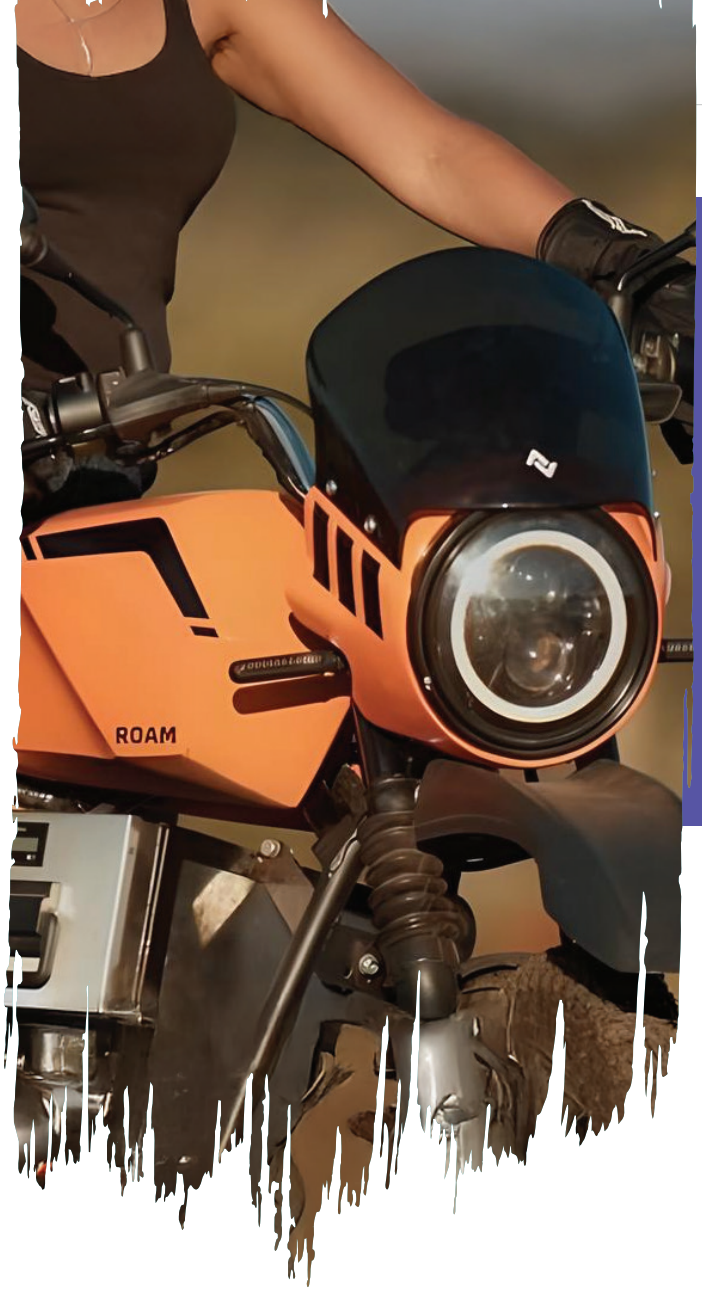


ENERGY AND CLIMATE

3. Dynamics of Electric Mobility Transition in Kenya

By Ashay Abbhi, Principal, Intellecap

Published in Business Today Africa

The e-bike saves time otherwise wasted in queues at petrol stations since the 'e-juice' is now available at home.

George, a delivery executive, lives in a modest home on the outskirts of Nairobi. He unplugs the wire that charges his shiny new electric bike, presses a tiny switch bringing the quiet engine to life, and rides off to deliver happiness in the form of food. George is part of a large cohort of gig-economy workers who swears by this innovation. They feel that while it has a relatively high upfront cost, various leasing and pay-as-you-go models make ownership easier.

Moreover, the e-bike saves time otherwise wasted in queues at petrol stations since the 'e-juice' is now available at home, which means an increased take-home pay. A few also take pride in the fact that it is good for the environment. While there are multiple transitional challenges, most giggers seem happy with Kenya's mobility transition.

Kenya is rapidly emerging as the East African e-mobility leader amid the bourgeoning electric vehicle (EV) market in the continent. With President Ruto's endorsement during the last Africa Climate Summit, where he drove an EV to the venue, the Kenyan EV ecosystem has made rapid strides. The government has been making the right moves to increase EV adoption in Kenya, especially in the gig-economy and commercial fleet segment.

The government has taken a multitude of initiatives over time to encourage EV adoption and to bring private sector companies to Kenya. The country has set a target for 2025, aiming for 5% of all new vehicle sales to be EVs. Further, as Kenya is currently dependent on imports for EVs, the government has reduced the excise duty rate from 20% to 10% for fully electric vehicles.

Electric Bus Firm BasiGo Secures Ksh390 Million to Speed Growth

A preferential retail electricity tariff of 17 KShs/kWh for charging EVs has been proposed while plans have been put in place for commercial buildings to allocate at least 5% of parking space to EVs. In August 2023, the Kenyan government also set up a 15-member team to develop a dedicated e-mobility policy, the draft of which has now been opened to the public for opinions. A key highlight of the policy is to transform Kenya into an e-mobility manufacturing hub.

The Kenyan EV market, however, has multiple challenges. The opening of the market has led to

heavy competition. According to latest estimates, upwards of 40 2W EV companies are operating in Kenya, leaving little breathing space. This also ties in to the less than ambitious target for EVs, which does not provide enough 'skin in the game' for EV companies.

The government support, therefore, must be greater than only reduction in import duties to make the EV economics viable for customers. A more ambitious target will provide enough scale for private companies to achieve better profit margins, ensuring their longevity in the market.

Currently, the market is in strong overdrive, typical of the growth stage. The government has also responded positively with the introduction of the policy framework, thereby exhibiting a constructive intent. As the market will inevitably begin to plateau in the next five years, especially in the 2W EV segment, we will see the market evolve within multiple tangents and consequences.

As the EV market grows, it will move from being a supplier's dream to a heavy demand orientation.

We can expect an interesting supply-side consolidation as the current targets, the given scale, and number of market participants do not align. The market will correct the number of players, bringing it down significantly from the present 40 plus companies, until those with deeper pockets and sheer resilience survive.

Further, there will be a strict EV economics correction. At present, the product prices are arbitrary with a perception of being higher for the customers and haphazard consequent margins for companies. Moving forward, the market forces will find a way to stabilise the economics, in favour of the demand-side.

As the EV market grows, it will move from being a supplier's dream (small market with fewer options) to a heavy demand orientation. With all the different supply options available, ultimately the consumers will decide which of these will stay and which will perish. The demand will mostly focus on customer needs and value-added services, determining the supply-side survivors.

The Kenyan EV space has become extremely dynamic. Moving forward, policies, capital, and demand will act as the engine, battery, and accelerator, respectively, of the vehicle of mobility transformation. George and his cohort are already happy. And incoming policies, market evolutions and market-led economic corrections, will eventually put more money into their pockets and bigger smiles on their faces.

ENERGY AND CLIMATE

4. COP29 Climate Christmas in Annual Summit at Azerbaijan

By Ashay Abbhi, Principal, Intellecap

Published in Business Daily Africa

African countries and small island developing states, some of the most vulnerable, continue to be treated like the underprivileged brethren at Christmas – they may have a seat at the table, but not in conversations.

The festival season is here with us again. Shimmering lights, exotic foods, heartfelt greetings, people flying over from all around the world to be with family and friends, gifts and rewards, gala times, great conversations, and promises to do better this year.

Like all its previous editions, COP29 guarantees all of this and much more under the presidency of Mukhtar Babayev, COP29 President-Designate.

The annual climate Christmas taking place in Baku, Azerbaijan, also aspires to be what every COP before it did – different. But will Climate Christmas really be different this year? In this article, let's explore the possibility and what it means for Kenya and Africa.

Kenya's contribution in Baku will be more pronounced this year as it takes on the role of the Chair of the African Group of Negotiators. Its focus is expected to be on securing climate finance for the African brethren, advancing action for loss and damage, and determining carbon market regulations.

Kenya estimates about three to five percent of the GDP per year to be lost to climate disasters. Recovering the damage thus caused will require strong negotiations in Baku. COP29 seems to be distinct from the usual COP noise – it promises action. And not only action, but also enhanced ambition. Kenya's potential claim to climate fame rests upon leveraging these two pillars in Baku.

Enhance ambition

It should come as no surprise that the world is on the verge of overshooting the 1.5 deg Celsius target. But can it be avoided? Enhanced climate ambitions of countries may be a good start.

The New Collective Quantified Goal (NCQG) for climate finance has been heavily contested and is expected to be finalised in 2025. It hopes to be the definitive statement on the ambitious financial resources required by the developing countries, to fulfil their climate change commitments, keeping in mind their developing needs.

This also affirms what Kenya has been advocating – enhanced ambitions from the developed countries.

Enable action

Enabling climate action to meet enhanced ambition is now more important than ever. Climate action, however, does not come cheap.

What exactly will it cost?

According to the Independent High-Level Expert Group on Climate Finance, about $2,400 billion will be needed by 2030 to meet the climate targets. While the 'what' of climate finance may have been answered, it immediately begs the question of 'who' will fund it.

Leaders at COP29, hailed as the 'Finance COP', must find a way to rethink the current commitment of the wealthy of $100 billion each year, a target that has not been met. To achieve this, the global leaders will have to put aside their differences, especially the glaring north-south divide on climate finance.

According to the NCQG, Africa needs about $1.3 trillion annually to address the climate crisis by 2030. A significant quantum of this is required for Kenya for tackling its exacerbating climate-related disasters. As Kenya leads the financing negotiations in Baku, it must come back with commitments to fulfil the need.

African countries and small island developing states, some of the most vulnerable, continue to be treated like the underprivileged brethren at Christmas – they may have a seat at the table, but not in conversations.

For these countries, the climate risk is significantly more real, resources dismally few, and support woefully inadequate. The Loss and Damage fund, still under construction, may just be too tiny to meet the needs of the world.

The private sector, therefore, must be mobilised to look at these countries as key emerging markets and design climate products that suit their needs. In recent years, Kenya has been particularly vulnerable to recurring droughts.

It has begun deploying innovative policies and interventions to improve the country's resilience to climate disasters. However, financing continues to be a challenge in recovering these losses.

What the world really needs is a climate miracle in Baku. Skepticism aside, COP29 must be different than the others and there are indications that it might just be. The parties must understand that this may just be the last year that the world can afford without much action.

The Kenyan delegation led by President William Ruto must ensure a few things – a clear realistic ambition from all parties irrespective of their economic and geographic status and aligned financial commitments (preferably cheques), especially from the wealthy nations.

These may not be significantly distinct from the previous COPs and their commitments.

However, the following addendum to the commitments may prove to be critical for Kenya and Africa – strict penalties for developed countries upon missing the climate and financial targets thereby making them accountable, responsibility in action, and transparency to ensure the funds reach where they are most needed. Maybe they could call this the 'Santa Claus'.

ENERGY AND CLIMATE

5. Revitalizing India's CBG mission

By Ankur Kathuria, Partner, Intellecap

Published in ET Insights

In recent years, green growth has become one of India's greatest priorities fueled by ambitious Net Zero targets. Compressed Biogas (CBG), also called the fuel of the future, is seen as a key tool for achieving the decarbonization goals globally. Amongst others, the India Govt. launched the SATAT scheme, driven by lofty targets of 15 MMT CBG production from 5000 plants across the country. More recently, the Govt. has also mandated 5% CBG blending in CNG and PNG by 2030. With 750 MMT of agri-feedstock generated every year (highest in the world), India is well-placed to harness this technology, leading to potential savings of over $29Bn in LNG imports between FY 2025-30.

The Govt, recognizing this potential, has been proactive in providing tailwinds to the sector. The launch of various schemes such as the SATAT scheme, GOBARdhan scheme, National Policy on Biofuels etc. has provided impetus through ambitious targets (of over 5000 CBG plants), financial incentives and enabling policy measures.

However, these schemes have shown remarkably low uptake – with only 68 plants commissioned yet. CBG suffers from problems all across its value chain – starting from quality of feedstock to aggregation.

Agri-feedstock in India suffers from poor quality due to varied reasons such as moisture etc. Moreover, consistent supply of feedstock at a predictable price is a concern as farmers, not informed about its benefits, are vary to provide feedstock for CBG. The converse is also true for some farmers realising the monetary value which can be extracted ask for high prices for feedstock thus disturbing the plant viability.

This is further compounded by poor private sector visibility on availability of land for stocking the agri-residues – raising uncertainties associated with operating a CBG plant. To alleviate these concerns, Private players can start by entering long-term agreements with farmers to ensure the availability of feedstock at an assured price on a long-term basis. Start-Up ecosystem should be promoted through challenge funds, innovation funds etc to solve the problems of the sector. Start Ups can consider the use of AI for feedstock mapping, test innovative technologies that can process lower quality of feedstock etc.

State Governments should provide subsidies on biomass aggregation equipment, engage FPOs/ custom hiring centres etc. for aggregation and storage of biomass in catchment areas of CBG plants and provide incentives on operating expenses of biomass equipment. The allocation of plants should be done basis the availability of the feedstock in the catchment. The states can also work with Panchayats to identify land which can be provided for aggregation and the information should be made publicly available. The Donor agencies can step in to enable states to launch comprehensive reforms.

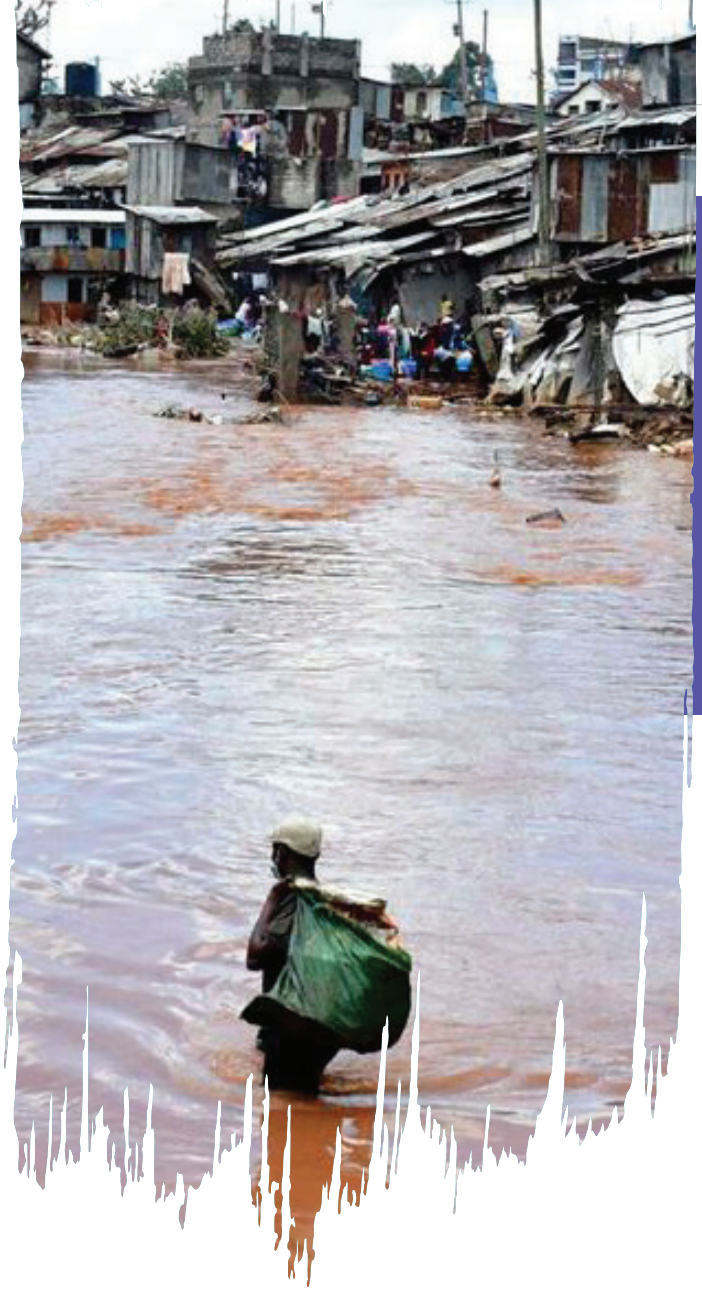
On the processing side, Fermented Organic Manure which is a byproduct of CBG production holds the key to CBG plant viability. It has the potential to clock nearly 15% of the overall project revenues in a sector which is already struggling to make plant economics work. Fermented Organic Manure (FOM) has witnessed poor uptake within farmers who prefer to use cheaper subsidy-driven fertilizers. The Govt. has taken positive steps to fix this by introducing Market Development Assistance at INR 1500/MT FOM but some developers are facing payments being delayed to upto more than 6 months. Hope the recent budget announcement to provide a push to natural farming contributes to the increased offtake of FOM. To make CBG a viable initiative, accelerator programs can enable increase in marketability of FOM by educating farmers on the benefits of FOM and providing them with technical expertise.

On the offtake side, CBG is plagued by a variety of issues. Oil Marketing Companies have historically procured CBG on a 'best effort' basis which puts plant owners at a disadvantage. Moreover, with CBG procurement price by OMCs is fixed at 0.8x of the price of CNG, plants are further put at a disadvantage. Double taxation as both GST on CBG and VAT on CNG has only added to the problem of poor offtake.

Steps have been taken in the right direction to alleviate the problem of offtake. On the back of blending norms, targets have been assigned to OMCs. Such targets will create an ecosystem for OMCs to sign long term offtake agreements with the CBG producers. These long-term offtake agreements should be long enough to cover the duration of the loan. The change in the tariff structure will also provide impetus to the sector – a price break up in terms of fixed and variable component should become the basis for payment. In case of no off-take or lower off-take of CBG due to reasons solely attributed to buyers (OMCs etc), the fixed component of the CBG should be paid for.

CBG projects are capex heavy, and despite being a priority lending sector, have struggled for financing. The plants are developed on varied technical specifications due to which bankers find it difficult to evaluate loan applications. As a result bankers price this risk in the form of higher collateral requirements. Most of the time collateral requirements being 50% of the plant cost. Hence, the technical specifications should be codified which will enable creation of a standardised checklist for bankers to evaluate projects against. This will channelise debt capital in the CBG sector which has largely seen balance sheet funding till date. To ringfence the risk for the lenders, there are guarantee products such as First Loss Default Guarantee (FLDG). Positive steps have been taken in this direction as GEF has already structured risk-sharing facility which will be implemented by SIDBI, mobilizing funding for ~70 projects over the next 5 years. With a target of 5000 plants much more emphasis on catalytic financing is still needed and there is no dearth of guarantee products. First step can be to connect Financial Institutions and Project Sponsors with guarantors who can provide first loss guarantees or risk sharing facilities. These Guarantors in most cases are also looking for pipeline of projects, so it is win-win for both the Guarantors and the Financial Institutions.

India has set ambitious targets for the future of CBG and is betting big on the same. However, recognizing the roadblocks that have plagued this journey, there is need for concerted action amongst all stakeholders – both public and private, to help India achieve its lofty goals and set itself as an example for green development to all developing countries in the world.



ENERGY AND CLIMATE

6. Navigating flood risks with effective adaptation and mitigation strategies

Published in Business Daily, Kenya

A flooded Mathare River as it passes through Mathare Slums Gitathuru area on April 27, 2024.

In recent times, the frequency and intensity of extreme weather events have escalated, posing significant challenges across the globe.

In many regions, relentless rains have led to catastrophic flooding, disrupting lives and livelihoods. This indiscriminate nature's fury always hit vulnerable communities hardest—particularly the urban poor and low-income groups who lack the resources to withstand or recover from these disasters.

Women, children, the elderly, and the disabled are disproportionately affected, facing greater difficulties in responding to and recovering from such calamities.

After the floodwaters recede, these communities face yet another challenge: the onset of the dry season. Areas now submerged under floods soon become dry, parched lands under the harsh sun.

A vicious cycle that not only signifies a shift in climate but also lays bare the damage left behind by the floods—ruined crops, lost livestock, and damaged agricultural infrastructure. However, it's possible to mitigate these impacts through effective adaptation strategies and proper allocation of climate finance.

A crucial step in this process is the enhancement of early warning systems. Strengthening these systems can drastically reduce the impact of extreme weather by allowing timely preparations and evacuations, thereby safeguarding lives and property. The menace that the Maai Mahiu community is struggling to come to terms with is a sad reality, yet a sharp pointer to how early warning systems could save the day.

Additionally, investing in water management infrastructure, such as dams and reservoirs, is essential.

These facilities not only help control floods during rainy seasons but also maintain water supplies during droughts. The High Grand Falls Dam project, for example, is an excellent idea that has stalled for over a decade. Had it progressed, it might have alleviated the recurring floods affecting the Tana River communities.

Infrastructure resilience is another critical area requiring attention.

The recent flooding on the Nairobi Expressway, a structure less than two years old, collapsing of newly constructed apartment buildings among others underscores the need to ensure that new infrastructures can withstand such events. Overwhelmed drainage systems during these times

reveal the urgent need for robust, climate-resilient building practices.

The cornerstone of all these efforts is funding. The Global Landscape of Climate Finance 2023 report by the Climate Policy Initiative reveals that a substantial portion of tracked climate finance—84 percent—is raised and spent domestically in most regions.

However, for sub-Saharan Africa, a significant amount—92 percent—of climate finance flows from international sources. Notably, this only represents a fraction of the global climate finance that cross borders, emphasising the need for increased financial inflows to the region.

Through these measures, Kenya can better navigate the complexities of climate-induced disasters and secure a more sustainable and resilient future for all its citizens.

Most of the global climate finance in 2021/2022 was through market-rate debt at 61 percent, which, while helpful, can exacerbate the already substantial debt burdens of developing countries like Kenya. It is imperative, therefore, that the government and other stakeholders explore alternative financing mechanisms that do not increase debt.

These could include leveraging public funds and concessional finance from multilateral development finance institutions (DFIs) and bilateral climate finance sources.

Creating blended finance facilities could also play a vital role in de-risking investments for private actors, encouraging them to invest in climate-related projects. This approach is essential for mobilizing the much-needed domestic funding necessary for substantial climate action.

Lastly, Kenya's potential as a carbon sink should be strategically utilised. The country's diverse ecosystems, such as forests, grasslands, and wetlands, offer significant opportunities for carbon sequestration.

With the carbon markets policy developed late last year and the regulations now nearing completion, tapping into carbon finance could provide critical support for building resilience for the country and local communities.

ENERGY AND CLIMATE

7. SMEs under pressure to measure, reduce harmful gases

Published in Nation, Africa

Greenhouse gas emissions are of great concern as they contribute to changes in climatic conditions

What you need to know:

- The trees they are planting today are part of MGI Worldwide's carbon credit project.
- According to the World Bank, a carbon credit is a tradable certificate that represents GHG emission avoidance or removal of one tonne of carbon dioxide equivalent from the atmosphere.

"There seems to be a symbiotic relationship between the planes buzzing above Bomas of Kenya in Nairobi and the trees we are growing," Felix Kimoli, the managing partner of MGI Alekim LLP Certified Public Accountants, tells me.

MGI is a mid-sized accounting firm affiliated with MGI Worldwide, an international network of accounting, legal, and consulting entities with members spread over 101 countries. That affiliation has come at a premium: They must be carbon neutral. This explains why they are braving the chilly Saturday morning soiling their hands as they exuberantly plant seedlings at a half-acre land at Bomas.

"Do you know that Bomas is a flight path for Wilson and Jomo Kenyatta International Airport?" Mr Kimoli asks me. I frankly admit I am hearing it for the first time.

But I know that the big birds are propelled into the skies by burning fossil fuel, specifically jet fuel. When these fossil fuels are burnt, they produce greenhouse gases (GHG) such as carbon dioxide. Scientists say GHGs, or carbon gases, are responsible for heating up the world and causing all kinds of natural disasters, from droughts to floods.

But for the last three years, Kimoli and his staff have endeavoured not to be caught on the polluters' side by planting trees once a year during Earth Day. Trees and forests, scientists say, are good at capturing and storing carbon.

Every year, whenever Kimoli joined other MGI affiliates for their annual conferences, he was bombarded with tough questions, most of which he didn't have answers for.

"I would complete a questionnaire detailing how I got to the airport and from the airport to the conference venue," says Kimoli.

The GHG emissions might be direct from the operations of MGI Alekim such as heating using diesel generators, or indirectly when its management flies in planes powered by burning fossil fuels.

So, tree planting is not only aimed at protecting the environment, but the accounting firm is also trying to offset the carbon gases that they emit, either directly or indirectly.

MGI Alekim is just one of the many small and mid-sized firms, including those in the service sector that do not have a massive carbon footprint, that have been forced by their global body to account for the greenhouse gas emissions they produce, including those from the taxis and aeroplanes they use while travelling.

The trees they are planting today are part of MGI Worldwide's carbon credit project. According to the World Bank, a carbon credit is a tradable certificate that represents GHG emission avoidance or removal of one tonne of carbon dioxide equivalent from the atmosphere.

Last week, the World Bank published a carbon market guidebook for Kenyan enterprises, including medium enterprises such as MGI Alekim. For the last eight months, Sarah Njoroge, a principal at Intellecap Advisory Services, has been helping entities, including medium enterprises, to measure their carbon footprint.

After entities have quantified their emissions, they are expected to set their decarbonisation targets, which they can reduce through operational efficiency such as increasing energy efficiency in their processes. However, most organisations cannot attain their decarbonisation or net zero targets by optimising their operations.

"They then have the opportunity to explore the carbon markets regarding offsets. They could do it by setting up their own projects, and the carbon credits that are generated could go towards offsetting their own footprints," said Ms Njoroge.

"But they could also produce more than they need, which could then be traded in carbon markets," she added. A carbon market means that MGI can sell carbon credits to other companies that need to offset their emissions.

According to the World Bank, carbon markets are not only crucial for enterprises' climate action, but are also a source of non-debt, results-based financing that does not require collateral. It has since developed a guidebook to help organisations conceptualise, finance, develop, verify and sell carbon credits.

The carbon credit trading, whose legal framework was only created last year, has not picked up. Nonetheless, a World Bank report shows that in 2022, Kenya was the second largest issuer of the voluntary carbon market (VCM).

Since 2011, over 59 metric tonnes of carbon credits have been issued, a large chunk of them through VCM. Most are nature-based projects like MGI's- forestry and land use projects.

The goal is to have a net zero effect where as much GHG gases being emitted are also being removed from the atmosphere. This means that the project has to actually be working- the trees removing GHG from the atmosphere.

This means that Kimoli and his team have to be vigilant.

"At first, we were not very serious. So when the people from the MGI came and told me they wanted to see the project, we found a few trees. I was really embarrassed," says Kimoli. These carbon credit projects have to be verified to pass the test.

But now, Kimoli believes he has the momentum towards a net zero target. Later this year, he will travel to South Africa and Italy for two MGI conferences. But this time, he will not be under immense pressure as he was three years ago.

ENERGY AND CLIMATE

8. Investing for Change: Measuring the Impact of Climate Finance

Published in AVPN, Asia

Climate change is an urgent global issue demanding immediate action. Businesses are grappling with its wide-ranging consequences from a risk perspective and also analysing opportunities that climate change will bring in the coming years. Simultaneously the conversation on transitioning to net-zero has intensified, requiring businesses to openly disclose their climate-related impacts with prescribed metrics.

Measuring climate impact is crucial for evaluating the effectiveness and success of capital deployed in addressing climate change. It involves gauging the outputs and outcomes of investments, promoting accountability and transparency, optimising resource distribution, iterating based on learning and feedback, demonstrating value to stakeholders, and ensuring the long-term sustainability of interventions and investments. By meticulously tracking and reporting on the achieved outcomes, stakeholders can make informed decisions, attract additional funding, and refine course of action to maximise positive outcomes.

Despite significant advances, the undeniable reality of climate injustice spurred discussion on shifting the focus of climate efforts towards its inherent uncertainty. While a general agreement exists, a universally accepted framework for quantifying climate-related financial impact along with key assumptions and uncertainties remains elusive.

As part of an ongoing dialogue at different global impact events, a workshop on impact measurement and management of climate finance was held during the AVPN Global Conference 2024 – kicking off with FLII in Merida, Mexico, and Sankalp in Nairobi, Kenya followed by AVPN in Abu Dhabi, and will wrap up at SOCAP in San Francisco. The workshop commenced with sharing from DFC and Intellecap as well as our sister network, Latimpacto and delved into the heart of climate finance by exploring four key questions centred on measuring its impact: evaluating current metrics and addressing their limitations, engaging stakeholder to ensure inclusiveness, strengthening multi-stakeholder collaboration, and considering impact of external drivers such as regulatory changes and market trends. Below are the key outputs of the workshop discussions.

Evaluating current metrics and address their limitations

Whilst conceptually the measurement of the impact of climate finance seems straightforward, the lack of standardised common frameworks poses significant challenges. The discussion highlighted that standardised frameworks like IRIS+ or the Impact Management Project (IMP) might be insufficient

for capturing the impact of climate initiatives, particularly regarding scope 2 and 3 emissions. These frameworks need to be reviewed and updated to integrate the dynamics of climate action and finance, or require the adoption of a completely new common framework.

Participants at the workshop emphasised the critical role of metrics in ensuring relevance and advocated for context-specific measurement methods using a theory of change lens. A systems thinking approach is crucial, which requires a shift in how the entire ecosystem measures success. Narrative-driven metrics were highlighted, cautioning against oversimplifying causality through standardisation. Other factors such as conservation, biodiversity, and nature based solutions were also considered, which are more challenging to quantify and require further research for their impact measurement.

Engaging stakeholder to ensure inclusiveness

Considering social outcomes of climate adaptation, mitigation, and resilience efforts is crucial. While it's important to track progress of climate actions, we must also ensure that these efforts do not come at the expense of equity, justice, and progress. Neglecting social outcomes can exacerbate inequalities and undermine climate action.

Participants recognised the gap between how funding is currently allocated (often in a coordinated, top-down manner) and how it translates into real-world impact. There is often a mismatch between investor or donor expectations and the reality on the ground, requiring engagement with stakeholders, including local communities and environmental groups, to gather feedback on the impact of our climate investments. The voice of the communities most impacted by the vagaries of climate change should be incorporated.

Solutions are needed to ensure that resources reach the community level and empower local populations including vulnerable communities to promote sustainable and inclusive social development. Future impact measurements should delve into the concept of community power and assets, considering both measurable (quantitative) and less easily quantifiable (qualitative) factors, and should focus on adoption of community-driven change models by NGOs and funders worldwide.

Strengthening multi-stakeholder collaboration

Multi-stakeholder collaboration is vital. The participants stressed the necessity of breaking down silos to replicate and scale successful initiatives. Eliminating duplicate work and streamlining our efforts to make meaningful contributions will save time and resources. We need safe spaces for honest dialogue to facilitate knowledge sharing, including lessons from failures, for improving practices and avoiding pitfalls. Diverse narratives showcasing the impact of climate finance initiatives are also important, as highlighting these stories can encourage wider adoption of climate-conscious practices.

Discussions also explored collaboration among funding bodies to share data and best practices, as well as broadening the understanding of impact measurement. The system change of climate finance impact measurement needs dedicated leadership and joint efforts of multiple stakeholders. We need to jointly build the capacity of all stakeholders including the providers of climate finance, sustainability professionals, industry representatives, policymakers, impact measurement professionals, and academic researchers.

Considering external drivers

There is a need for adaptation strategies to include external factors like regulatory changes and market trends for more effective impact assessment. Mandatory reporting requirements from governments or stock exchanges can drive broader adoption but must be built with stakeholder consultation. Outcome-based financial solutions can also incentivize reporting and lower capital costs for climate initiatives. Emerging trends and innovations in impact measurement methodologies throughout Asia encompass various technological applications as well.

Investor engagement is critical. Investors have the power to drive change by directing their investments towards sustainable and climate-resilient projects and businesses. Their engagement can influence the direction of capital flows and incentivize more sustainable practices across industries including focusing on biodiversity and nature-based solutions. Existing networks and technology should be utilised to foster these conversations.

The way forward

In conclusion, the workshop highlighted the critical need for context-specific metrics, better data sharing, multi-stakeholder collaboration, and the inclusion of broader climate impacts beyond just carbon emissions. The above challenges can be addressed through standardised reporting, regulatory support, and innovative financial solutions. By quantifying and communicating the tangible impacts of investments, impact measurement can catalyse further investment, innovation, and collaboration, driving collective efforts towards achieving the climate goals.

Sharing notes from each convening and documenting ongoing discussions in this workshop series will foster a continuous dialogue, allowing insights from both local and global participants to accumulate and evolve. By making smart investments, sharing knowledge and collaborating to enhance the effectiveness and impact of climate finance investments, Asia can pave the way towards a future that is both sustainable and prosperous.

ENERGY AND CLIMATE

9. Investing in Nature is Key

Published in Intellecap Blog

Intellecap Leaders share their insights on World Nature Conservation Day 2024

World Nature Conservation Day is a vital reminder of our collective responsibility to safeguard the planet's natural resources. We are deeply committed to promoting sustainable forest management practices that balance ecological, economic, and social needs. Forests are not only critical for biodiversity but also play a crucial role in mitigating climate change.

Managing Director- Jayesh Bhatia, Partner & Director, Rahul Agrawal and Partner, Shailesh Nagar share their commitment and highlights how we are building inclusive, equitable and sustainable solutions that champion our critical work around Agro Forestry, Land Resources and Sustainable Livelihoods, facilitating conservation, preservation and enabling community management of natural resources.

Jayesh Bhatia puts it straight saying, "It is imperative to safeguard natural capital which has a significant impact for our communities. At Intellecap, we're dedicated to designing and delivering nature focussed solutions across the Global South. By bringing innovation, insights, intent and investments, we are simply 'paying it forward' through our conservation efforts."

At Intellecap our focus continues to be ecological restoration, improving livelihoods, enhancing income opportunities and overall community development. By promoting livelihood linked natural resource management in remote areas, enabling nature based solutions, enhancing climate resilience and working closely with rural and vulnerable communities with market based solutions, we continue to conserve, preserve and work towards restoring our rich biodiversity.

Shailesh Nagar opines, "Life on Earth, for humans and all other beings, fundamentally depends on air, water, and soil provided by nature. Viewing ourselves as separate from nature has led to a flawed relationship that continues to harm our environment and other living beings. Nature is the stage on which all aspects of economy and society play out. We are an integral part of nature, and understanding this connection is crucial. Without it, our interactions with other living and non-living beings will remain destructive, ultimately threatening our very existence.

At Intellecap, we recognize that the transition towards sustainable human engagement with nature has begun. We are committed to catalyzing this shift by providing innovative solutions and fostering knowledge, capital, networks, and technologies. Our efforts in agriculture and forestry exemplify our dedication to facilitate this vital transition.

Collaboration is key to this endeavour, and we invite both individuals and organizations to join us in this mission to prevent human extinction and build a sustainable future for all."

By collaborating with communities and working with Global Institutions, we are crafting the roadmap for better land resource management, implementing climate resilience, and delivering transformative forestry solutions that impact, across the Global South.

"We believe that constant innovation drives significant impact. By working at the intersection of climate change, biodiversity preservation, and waste reduction, we demonstrate how new approaches can preserve our environment while fostering inclusive growth. Through our focus on conservation and sustainability, we are working to ensure a healthier planet for future generations." highlighted Rahul Agrawal.

On this day, we reaffirm our dedication to preserving these invaluable ecosystems through innovative solutions and community engagement.

ENERGY AND CLIMATE

10. Carbon Markets it Works

By Santosh Kumar Singh, MD, Intellecap

Carbon markets, often used to describe the trade of carbon credits (mostly trade of voluntary carbon credits), is one of the least understood mechanisms and a polarising topic among climate activists. But Carbon markets are much more than just trade of carbon credit that you might have heard from someone talking about making money by planting trees or selling credits from a biogas plants or from an 'improved cookstove' projects. Carbon market is one of the most effective way of implementing result based financing or pricing the carbon (in other words: making polluters pay).

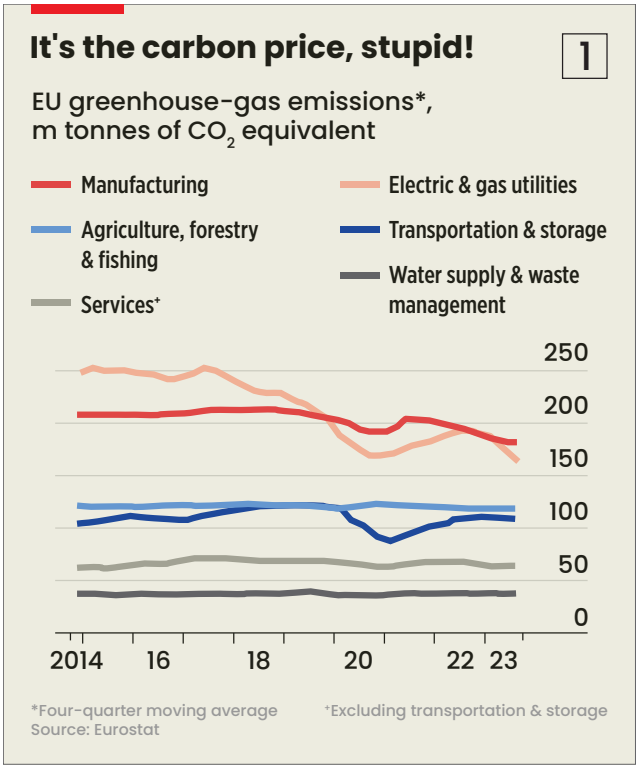


Chart: The Economist

While the debate on carbon market and its different implementation frameworks is still on, the European carbon market and carbon pricing mechanism does provide evidence that mechanism works if implemented properly.

Read more

ENERGY AND CLIMATE

11. Climate Action — Slow and Inadequate

By Santosh Kumar Singh, MD, Intellecap

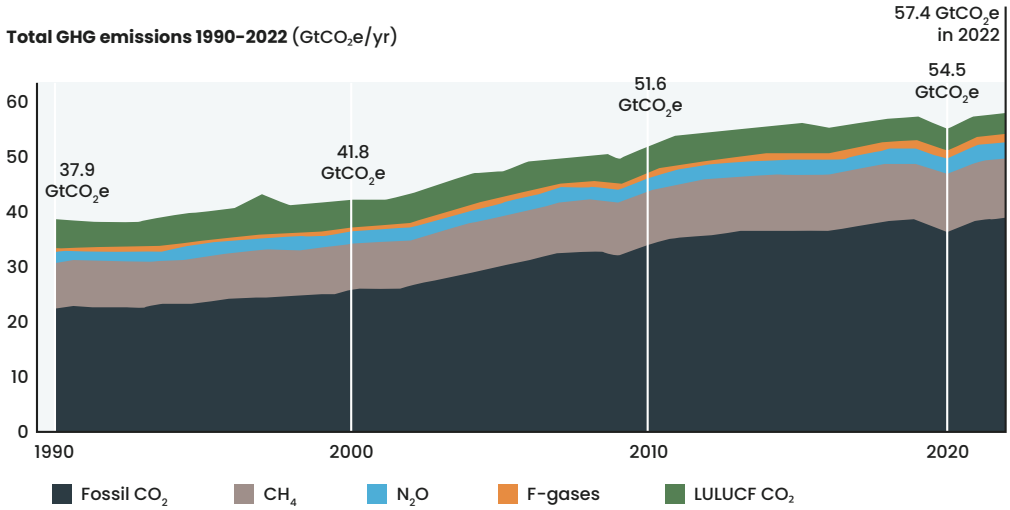
As I interact with people who are not immersed in the climate discourse, it is surprising that they believe that there is 'too' much focus on climate action. They believe that with this kind of 'intense focus' on climate action, we are already doing a lot and will be able to manage this.

Unfortunately, we are nowhere on the path to achieve our climate goals. The emissions increased post the dip in the pandemic years. We were at 57.4 GtCO2e in 2022. (See the graph below from UNEP Emission Gap Report 2023).

And even if we meet all our existing climate goals (Nationally Determined Contributions — NDCs set up countries) we will fall short of the 2030 target by 11 GtCO2e (if we want to keep the global warming below 2 degree).

Many of us are familiar with the data, but there is a limited understanding of climate change and climate action among the general public. Mainstream climate discourse is urgently needed.

Figure ES.1 **Total net anthropogenic GHG emissions, 1990-2022**



Source: UNEP Emission Gap Report 2023

ENERGY AND CLIMATE

12. How can safe and accessible public transport help in inclusivity?

An average disabled person in India goes through many things in their everyday life. But the two common things that grate on them are the pitying and/or coddling noises ("Oh, I'm so sorry for your family! They must be going through a lot!" "It's so unfortunate that you are disabled!" "You don't deserve to be disabled." "Who will marry you and take care of you when your parents are not around? It's a pity.") and the fact that they must seek help to even feel somewhat independent.

Sweden has accessible transport and enough data on Stockholm's Accessibility database, which is more than enough for a wheelchair user to navigate the city on their own, making sure to pick destinations that they can easily access. Canada's tourism includes attraction for disabled people, including adaptable skiing for people with visual impairment. While these examples are not all encompassing, nor perfect, they are inclusive and have made their disabled citizens more empowered and confident enough to lead normal lives.

This can be the beginning of a better, more inclusive world.

Mobility, or freedom of movement, is a human right. The idea that a person or a certain set of people are unable to access their rights because the world they live in has always disregarded them. This sets us back on our journey of building an inclusive world.

Transportation plays a vital role in being able to access basic amenities, like education (schools and colleges), hospitals, and employment. Limited access to transportation directly affects access to these amenities, which only hinders the growth of an equitable world.

Persons with disabilities in India—people with blindless and locomotor disability being some commonly observed ones—are often seen navigating busy roads of metropolitan cities, usually begging, or in a more dignified way, asking for donation to fund their education or organizations. There is only a smidgen of sympathy that is offered to them on the busy roads of Bangalore. It remains even as signals change to green, and with it, a new set of people. This sympathy or pity is often seen in how people on bikes and scooters and autos ignore them but expertly swerve around them or move a fraction in reverse, making sure not to harm them.

This seems to be the most that can be expected out of a city that does not cater to them.

According to WHO, nearly 1.3 billion people, or 16 percent of the global population suffer from some sort of disability. In India, the 2011 Census showed that 2.21 percent of the population is disabled (according to the eight categories that was updated in that year), which is 26.8 million; however, more recently, other sources like the NFHS-5 survey resulted in much

higher numbers, nearly 63.2 million, or 4.5 percent of the population.

About 30 percent of the disabled people live in cities, and 69 percent of them live in poverty. This could be because they were unable to secure a job, or even if they were, they might not be able to commute frequently. There are no other surveys that are done specifically for disabled people, hence data is available is limited.

Even with such a significant population requiring different kinds of needs, they are very rarely met. Post the implementation of the Rights of Persons with Disabilities Act, 2016, the GoI has come up with guidelines on making Government offices more accessible for PWDs, with some mandatory specifications being having audio announcement in elevators and marking of evacuation routes keeping PWDs in mind. However, this does not extend to private buildings, nor to public transport. Does constructing a ramp in the corner of a building for one person to get to their office count for inclusivity? How does that help for a person with visual impairment if there are no tactile floors? How can a person with hearing disabilities use trains if all announcements are made through speakers, with very few monitors listing trains? In addition to this, there is severe stigma around PWDs, often being termed as a "burden" to their families, which is not always the case, especially if the family of the concerned has no such view. PWDs live in a world that does not include or cater to them; how fair is it to call them a burden?

With more than 63 million PWDs in the country, how much of the infrastructure are they able to access? It is not fair that a government building that calls itself "disabled friendly" has a ramp on the side of the building, or there's an entire coach on the Mumbai local train specifically for "divyangjan" that has no space for actual PWDs. PWDs also deserve to live with dignity and take the front doors, whether they are on motorized wheelchairs, or walking with a cane in front of them.

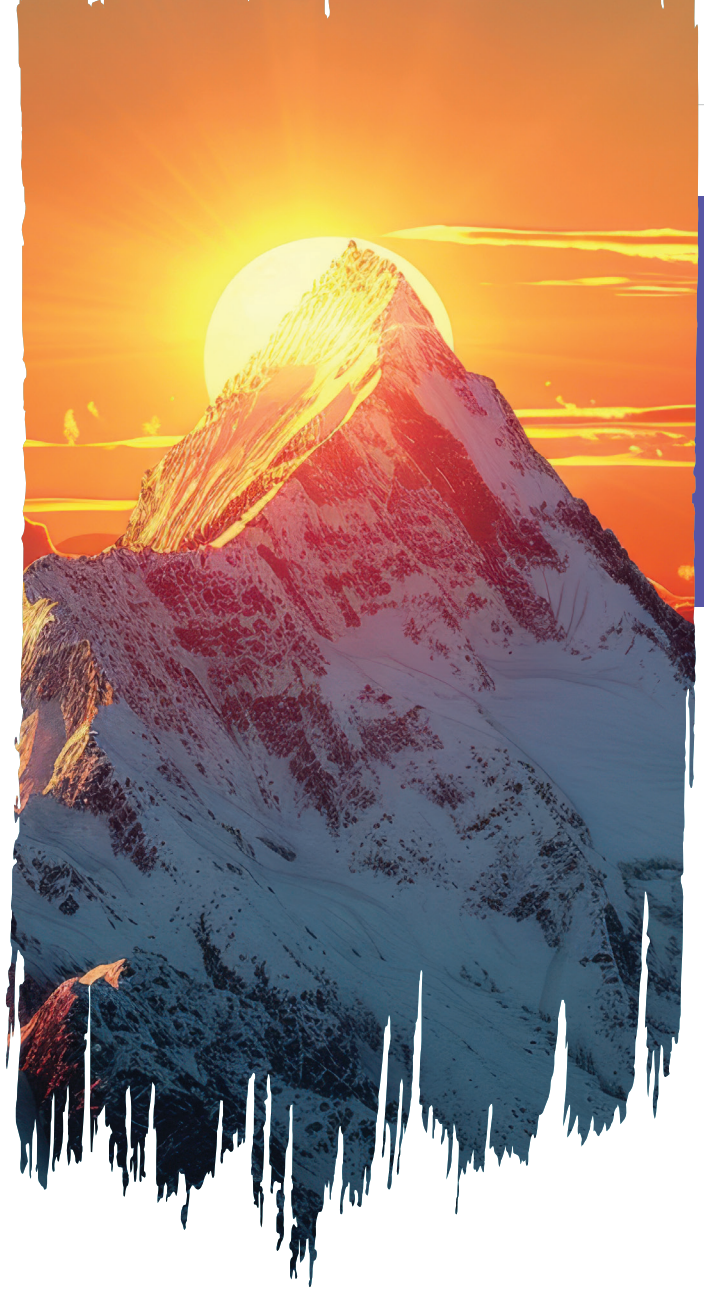
Apart from physical and digital infrastructure, there is a general lack of awareness among the public. New parents, especially those who are more economically disadvantaged, are at a complete loss if their child is born disabled. There is lack of dissemination of information, sensitivity, and the idea that disabled people have the right to opportunities and can lead their own lives. There is severe dearth of data regarding disabled people in the country, which makes is even more difficult to bring about policies and implement them.

These challenges were highlighted in the recent consultation workshop conducted by GIZ, titled "Inclusive Mobility for PWDs" as part of the Indo-German Development Cooperation project Sustainable Urban Mobility-Air quality, Climate Action, and Accessibility (SUM-ACA). The workshop was joined by experts from the sector, Disabled People organizations, policy makers, and international development agencies. It aimed to delve into policy frameworks, legal frameworks, universal accessibility codes, and the lived experiences of persons with disabilities. The workshop ensured representation of various disabilities.

Some more challenges that were highlighted included gaps in frameworks, policies, their implementation, and first and last mile connectivity. Lived examples were shared by disabled people from across the country, which highlighted the idea of movement as an inherent right. Advocate Tapas Bhardawaj stressed upon Free Movement, and Right to Equality as promised by the constitution. "It should be ensured by the country so that these rights are being fulfilled for every individual in the country."

For all individuals of the country to access their rights, the country must take large steps towards inclusivity. This can begin with understanding the impact that lack of access to mobility has on PWDs, and how to bridge these gaps. Through having PWD representatives at all levels of the government, robust data collection, effective policy implementation, stringent action taken against Urban Local Bodies for not following mandates, sensitization and awareness among public transport crew and infrastructure developers, adaptable guidelines for accessibility, and more budget allocated for accessible digital infrastructure, the country can be a step closer in creating an accessible and inclusive space for its citizens.

This is an intersectional issue. With more independence to PWDs, the idea that they are a "burden" can be removed, and for that to materialize, the right kind of infrastructure and policies need to be implemented. PWDs need to have more representation where their voices can be heard. And with the world moving towards transitioning to more carbon-neutral or carbon-friendly alternatives, it can be the perfect opportunity to uphold the idea of Just Transition and create more equitable infrastructure.



ENERGY AND CLIMATE

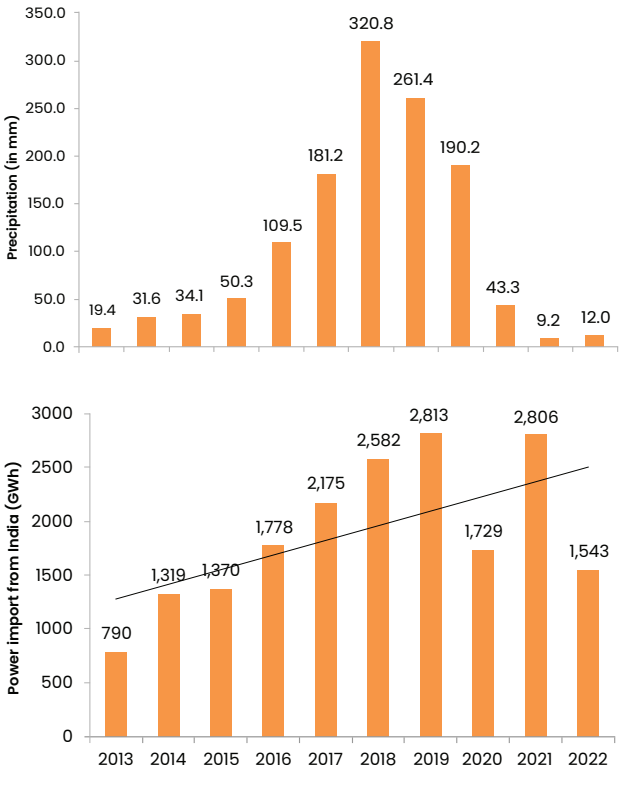
13. The Rising Himalayan Sun

By Ashay Abbhi, Principal and Poulomi Mazumdar, Manager, Intellecap

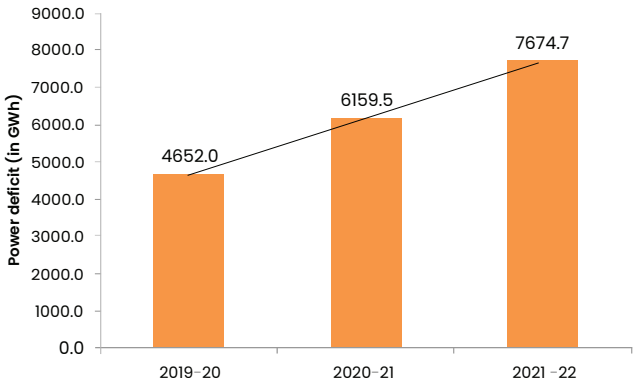
Situated grandly at the foothills of the mighty Himalayas, Nepal has the distinction of being a hydropower-driven economy. Its gushing rivers have traditionally been the source of power to the country. However, climate change has not spared the pristine country and threatens to dilute the green quotient of its power sector. With a compounded annual growth rate of 8% in imported coal-based power from India over the decade, Nepal's contribution to the emissions has elevated. Meanwhile, decreasing domestic power generation has begun to impact its economic progress. The answer lies in energy transition – from being entirely hydro-dependent to a smart diversification of its electricity mix. Solar energy has the potential to address Nepal's power woes with a promise to protect the country's green quotient. This would require two primary ingredients – government focus and private sector participation. This article explores why hydropower is unable to fulfill Nepal's increasing power demand, how solar can complement its electricity sector, and what needs to be done to create a solar ecosystem for enhanced private sector participation.

What is the challenge?

Hydropower is the backbone of Nepal's electricity generation, with an installed capacity of 2,081.7 MW[1]. and around 94% share in the electricity mix. However, it is a resource most susceptible to climate variations due to changes in temperature and precipitation levels. Since most of the hydropower plants in Nepal are run-of-river (ROR) type, climate variations affect the stream flows and water discharge rates. This causes significant generation variations in the power generation pattern. During the summer (or wet) season, higher precipitation rates result in adequate generation. However, during the long and dry winters,



1 *Annual Report (2021-22), Nepal Electricity Authority (NEA)*



low precipitation leads to reduced generation causing power deficits. This deficit in winter months is met by importing electricity from its neighbour, India. The electricity thus purchased by Nepal for meeting its energy requirements is expensive - over 5 times[2] the cost at which it produces electricity – and primarily coal-based. The increasing dependence on imported coal-based power and the associated import bill have compelled Nepal to think about diversifying its power generation through alternative sources.

Why solar?

Solar energy has emerged as the most viable solution to complement existing hydropower resources. With a potential of 50,000 tera-watts (TW), solar energy potential in Nepal is 100 times larger than its hydropower resources. Global Horizontal Irradiation (GHI) levels, used for comparing geographical conditions for solar related electricity systems, ranges from 4.4kWh/m2 in the southern parts to 5.5kWh/m2 in the north-western parts, making it a favourable location for harnessing solar energy[3] Although solar energy currently accounts for only 4% of the total installed capacity in Nepal at present, it has huge potential to scale-up.

To develop the solar energy sector in Nepal, it is imperative for the country to develop a comprehensive market ecosystem especially to foster participation of the private sector to deliver solar solutions at scale. This ecosystem is expected to provide Nepal with capabilities to move beyond the sub-1 MW off-grid solar systems towards larger grid-connected systems. While hydropower will continue to act as the base load, large-scale solar deployment for grid-injection will reduce the country's dependence on a single source.

Why has the solar sector not scaled up?

In the recent past, discussions around solar in Nepal have increased. However, there exist critical challenges in scaling it up. The Government of Nepal laid out a plan to diversify the energy mix by including 5-10%[4] of renewable energy in the total electricity mix. While this provides a considerable target, solar power deployment in Nepal has largely been grant-based, with participation from only a handful of private sector investors and players. The absence of a market ecosystem attracting the private sector can be detrimental to the achievement of this target. This is primarily due to the priority accorded to hydropower resources for electricity generation by the Government of Nepal. Further, policy uncertainties and delays in commissioning of solar projects, dissuades large-scale solar deployments. According to industry experts, even solar projects that are ready are awaiting commissioning due to delays in signing power purchase agreements by the Nepal Electricity Authority, the sole off taker for power in the country.

The challenges are further exacerbated by lack of public private coordination. For instance, during the recent competitive bidding round for solar projects, the ceiling tariff was restricted to NRs 5.94 per kWh (USD 0.045). The developers bid aggressively at NRs 5.8 per kWh (USD 0.044). However, private solar developers were not consulted before deciding the ceiling tariff. Therefore, it has proven to be extremely difficult to justify the economics of the project at such low rates with commercial sources of capital. This may result in the capacity not being developed or the developers and financiers not being able to make any returns on the project, deterring them from further bidding for projects.

Meanwhile, the rooftop solar power category is also facing policy challenges. The directives restrict the capacity to 500 kW of rooftop solar for the commercial and industrial (C&I) segment. For large C&I operations, this capacity restriction does not allow consumers to optimally utilize their rooftop space. Therefore, the segment continues its dependence on the grid.

Limited technical know-how of government officials regarding the potential of solar energy, existing technologies, and the benefits of solar has been an impediment in mainstreaming solar energy in Nepal. Furthermore, there are significant variations in interest, capacity and infrastructure at provincial

2 *High Prices of Imported Electricity could affect Power Utility's Finances, The Kathmandu Post, June 15, 2023*
3 *Solar Resource And Photovoltaic Potential of Nepal, The World Bank, March, 2017*
4 *Tariff Based Competitive Procurement of Solar Power In Nepal, USAID, June, 2022*

level leading to limited development of the solar sector.

Access to affordable financing for solar projects is a critical challenge to scaling-up solar in Nepal. The solar sector in the country has primarily been driven on grants. At present, only a few domestic commercial financing institutions have been lending to the solar sector. Lack of knowledge and experience of financing solar projects along with limited capacity to conduct due diligence deters financial institutions from lending to the sector. Additionally, financiers have a high-risk perception of the solar projects since large-scale solar deployment is at a nascent stage in Nepal. Foreign investment in the sector is limited as well due to the lack of adequate risk management products to hedge the interest rate and foreign currency risks. Further, there is lack of scale in private sector financing due to absence of bankable business models and high dependence on government subsidies.

What needs to be done?

The primary need for scaling up solar energy in Nepal is to create a sustainable market ecosystem with enhanced cooperation between the government and the private sector. This would require interventions at several levels.

Providing policy and regulatory support to the Government of Nepal for increasing solar capacity deployment is imperative. It is important for the Government to consider the private sector as an active participant and an ally while creating policies and regulatory frameworks that can provide a profitable market for the participants.

Developing a strategy for creating a private sector driven self-sustainable market ecosystem for solar in Nepal will need a visible pipeline of capacity for the developers and financiers. This would involve the introduction of novel financial and business models and consistent association with bankers, commercial lenders, and development institutions to a private sector-oriented financial ecosystem.

Strategic technical assessment of Nepal's solar segments and transferring of policy, regulatory, and market success stories from India and other countries will help the ecosystem contextualize best practices. Meanwhile, providing technical assistance to the government agencies, enterprises, financiers, and other stakeholders to increase awareness of large-scale grid-connected solar projects is required.

There is a strong need for the transformation of the mind-set in which the Government views the solar energy sector. For Nepal, solar can no longer be a charity case restricted to off-grid solar systems for energy access. It has to be included into the country's grid-based energy system and accorded the same priority as hydropower to enable sustainable mainstreaming of solar into the electricity mix. This will not only reduce Nepal's dependence on hydropower but also reflect positively in the country's forex bill as the import of power from India will reduce. Through increased inclusion of solar energy, Nepal's power sector has the potential of becoming carbon negative. Creation of the market ecosystem is expected to enable solar energy deployment to match Nepal's increasing electricity demand in the long-term and aid its economic growth while preserving its environment.

CIRCULAR ECONOMY

CIRCULAR ECONOMY

1. Celebrating Circularity at the Sankalp Bharat Summit 2024

Published in Intellecap Blog

Aavishkaar Foundation, part of the Aavishkaar Group was proud to present the Sankalp Bharat Summit 2024, at the Rudraksh International Convention Centre in Sigra, Varanasi on the 26th & 27th of Nov.

Themed around 'From India to the World: Impact Unicorns Shaping the Future', this was the 16th edition of the Sankalp convening in India and was the largest celebration of home grown innovators. The Summit laid emphasis on local and regional innovators shaping the future of Indian entrepreneurship and will feature ground breaking enterprises making waves on the global stage.

The Summit positively engaged 700+ delegates including 150+ Global Leaders, 300+ Entrepreneurs, 100+ Investors, Private Sector, Multilaterals, Bilaterals and Govt. Agencies to discuss, define, and drive forward the critical levers of entrepreneurial success.

Tags : Circular Economy

At the Summit, Circular Apparel Innovation Factory (CAIF) an Intellecap initiative hosted the 5th CAIF Conclave intended to

throw a spotlight on a wide host of pertinent topics. We conducted several sessions on the Textile and Apparel ecosystem and the work of CAIF and its partners. Attending delegates appreciated CAIF's work in helping build a planet and people positive Textiles and Apparel Fashion Industry.

Be it our extensive work around valorizing textile waste including showcasing our CTWM model, highlighting why we need to make a sustainable shift for a greener supply chain, the aspect of recycle, rewind, reinvent to give fabrics a second life in style, creating circular approaches for the textile and apparel industry and around how to transform the future of flexible plastics, the summit hosted the most pertinent topics, with the intent to meet at the intersection of ideas, insights and innovation.

Circularity on Main Stage:

On Main stage we hosted a **Keynote Address from Venkat Kotamaraju, Partner and Director, CAIF,** who showcased CAIF's our work in building the circularity ecosystem and laid emphasis on building sustainable and circular businesses.

This was followed by a main stage panel on the topic, "Sustainable Shift 360: Embracing Circular Strategies for a Greener Supply Chain" which featured V Keshavdev, Deputy Editor, Fortune India in conversation with Dr. RK Singh, CGM, SIDBI; Ankit Todi, Chief Sustainability Officer, Mahindra Group; Ravi Gupta, Executive Director, Renuka Sugars; Neha Mudaliar, Head of Climate & Renewable financing, Northern Arc Capital and Anjalli Kumar, Chief Sustainability Officer, Zomato.

The context to this session was that India's Textiles & Apparel (T&A) sector aims to boost garment exports to $100B in five years, driven by initiatives like MITRA parks, including a major hub in Lucknow. Employing 40M people, the sector faces growing pressure to adopt sustainable practices, as it contributes 10% of global carbon emissions. This session explored circular solutions like recycling and sustainable sourcing, featuring case studies and strategies to reduce waste, cut costs, and enhance brand loyalty, positioning India as a global leader in responsible textiles.

The Key Takeaways from the session on "Sustainable Shift 360: Embracing Circular Strategies for a Greener Supply Chain" was:

3-step solution to advance circularity: – Problem-solving around core issues: Businesses must address the root causes of waste and inefficiency. – Impact-driven intent: Sustainable solutions must be designed with commercial viability in mind, ensuring scalability – Scaling solutions beyond single organizations: Collaboration across industries is essential for systemic change.

Government Mandates and Incentives: Strong policies are needed to encourage industries to adopt sustainable practices and provide the necessary infrastructure for circularity. Anjalli Ravi Kumar shared Zomato's ambitious goal for 100% EV-based deliveries by 2030, emphasizing the need for government incentives and infrastructure support to achieve the target.

Consumer Awareness and Consciousness: Educating consumers about sustainability and fostering demand for eco-friendly products is crucial for driving change.

Collaboration and Reverse Logistics: Building partnerships and efficient reverse logistics systems can help scale circularity across supply chains.

Commercial Viability and Scalability: Solutions must not only be sustainable but also economically feasible to encourage widespread adoption.

CAIF Breakout Sessions

We also had several breakout sessions around-

'Recycle, Rewind, Reinvent: Giving Fabrics a Second Life in Style' led by Somatish Bannerji, Partner, CAIF in conversation with the panelists, Nalini Shekar from Hasiru Dala, Dr. Gayathri Vasudevan from Sambhav Foundation, Dr. Naresh Tygai, Chief Sustainability Officer, Aditya Birla Fashion & Retail, Harshit Kakkar from HSN Ecotex (H.R Overseas & Kakkar Spinning Mills) and Shruti Singh from Canopy.

This roundtable explored how to give old clothes a new life by integrating post-consumer textiles into the textile and apparel (T&A) supply chain. Key players—global brands, manufacturers, recyclers, and waste managers— discussed scaling circular materials to reduce reliance on virgin resources. In partnership with Circular Apparel Innovation Factory (CAIF) and Closing The Loop, the roundtable aimed to drive industry-wide adoption of circular fashion solutions.

Key Takeaways from the session, 'Recycle, Rewind, Reinvent: Giving Fabrics a Second Life in Style' was:

Five Pathways for Sustainable Textile Waste Management: Closing the Loop focuses on five key pathways to manage textile waste—Thrift, Resale, Upcycle, Recycle, and Downcycle. These approaches aim to reduce waste generation, promote circular economy principles, and encourage sustainable consumer behavior.

Addressing India's Textile Waste Challenge: With 43% of India's domestic textile waste being incinerated or landfilled, there is a pressing need for action. The "Closing the Loop" model targets waste reduction at both community and ecosystem levels, supporting 40 waste entrepreneurs in over 20 cities and impacting 10,000 livelihoods.

Corporate Leadership in Sustainability: Aditya Birla Group, a leader in sustainability, introduced initiatives like 'Re Earth', adopting sustainable sourcing and production practices to ramp up circularity and enhance the product lifecycle from the design stage to consumer use. Similarly, Hasiru Dala Innovations works on the principle of 'Inclusive Circularity', which is the deliberate and planned inclusion of waste pickers and informal waste workers in the evolving circular economy value chain.

Not just Saving but 'Saving Responsibly': While youth are major consumers of recycled clothing, they also contribute significantly to fast fashion, highlighting a paradox. The panel emphasized the need for "responsible saving" — urging consumers to make mindful choices in their consumption habits.

And Bridging the Gap Between Supply and Demand: Global brands and suppliers were urged to align production with available supply rather than fluctuating demand. This shift can reduce overproduction and support sustainable practices in the textile industry.

We also hosted a session on, **'A Vision for Circularity in India's Textile and Apparel Industry'** in collab with GIZ, Aditya Birla Fashion and Retail Limited (ABFRL) and Centre for Environment Education (CEE). This panel featured Dr. Naresh Tyagi, Chief Sustainability Officer, Aditya Birla Fashion & Retail, Tushar Jani , Senior Program Director from Center for Environment Education (CEE), Kavya Arora, Technical Advisor, Climate Change & Circular Economy, GIZ India, Meghana Kshirsagar, Senior Advisor, Climate Change & Circular Economy, GIZ India, Padmakar Pandey, AVP, Sustainability, Aditya Birla Fashion and Retail Limited, Rahul Mehta, Chief Mentor, Clothing Manufacturers Association of India, Rachna Arora, Director, Climate Change & Circular Economy, GIZ India and Kashyap Arya, Project Coordinator, Centre for Environment Education

This session focused on the need for sustainability and circularity in India's textile and apparel industry, a significant contributor to the economy. Experts discussed the shift towards a circular economy, highlighting initiatives like Mission LiFE, aimed at promoting resource efficiency and recycling. The session also showcased innovative projects and local impact stories, emphasizing the importance of awareness programs and supporting local artisans.

Key Takeaways from the Session, , 'A Vision for Circularity in India's Textile and Apparel Industry' was-

India's Textile Sector and Sustainability: India is one of the largest global producers of textiles and apparel, contributing significantly to the economy. However, there is a growing focus on making the sector more sustainable and circular, which involves using resources efficiently and promoting recycling.

Circular Economy adoption- need of the hour: A shift towards a circular economy (CE) in the textile industry is crucial for preserving natural resources. This involves designing durable, reusable products and ensuring that materials can be recovered and recycled at the end of their life.

Key approaches for circular textile and apparel industry: The various approaches adopted for circular textile and apparel industry are Research, mapping good practices; Stakeholder Partnership and networks, Capacity building , Demonstration Pilots, Circularity Manifesto and guidelines compliance, Policy advocacy and Knowledge dissemination.

Government and Industry Initiatives: Various initiatives such as Mission LiFE, Project Su.Re, and the Textile Mission are focused on promoting sustainability, resilience, and circularity within India's textile sector, aiming to enhance the industry's global competitiveness.

Challenges to Circularity: Key challenges include a lack of sustainable consumer behavior, cost concerns for recycling and upcycling, and insufficient government support for recycling infrastructure. Overcoming these challenges requires widespread awareness and education programs.

Innovation and Local Impact: Innovation projects like Punarbhavaa and Schutzen chemical products are helping improve sustainability in the textile sector. Additionally, artisans like Maqbool Hasan from Varanasi highlight the importance of supporting local handloom businesses, which face challenges such as a lack of local raw materials.

and **"Revalue- Transforming the Future of Flexible Plastics"** which featured Devanshu Ralhan, Principal, CAIF with Ankit Gupta, GM-Sustainability from ITC, Alankrita Khera from ACT for Environment, Janvi Papriwal, Associate Partner from Circulate Capital and Aditya Shukla, CEO from Saltech

This session focused on addressing India's plastic waste challenge, particularly with low-value flexible plastics, which face low recovery rates due to supply-demand imbalances. Key discussions covered creating demand for products made from low-value plastics, scaling solutions for flexible plastics, shifting perceptions on recycled products, brand commitments to recyclable packaging, and understanding the capital needs of innovators. The session sought to discover innovative approaches to drive a circular economy for plastics.

Key Takeaways from the session, Revalue- Transforming the Future of Flexible Plastics' was :

Innovative Recycling Solutions: Companies like ITC and Saltech are leading the way with innovative recycling technologies, such as turning flexible plastic waste into high-value materials like plastic boards, bricks, and tiles, demonstrating the potential for upcycling.

Investment in Innovation: Investment firms like Circulate Capital are prioritizing funding for ventures that develop cutting-edge recycling technologies, supporting the transition to a circular economy by driving scalable and profitable solutions for flexible plastics.

Policy Support and Incentives: Strong public-private partnerships (PPPs) and policies like Extended Producer Responsibility (EPR) frameworks are crucial for scaling recycling efforts and incentivizing sustainable practices across industries.

Consumer Awareness and Engagement: Educating consumers on proper waste segregation and disposal plays a critical role in improving the efficiency of recycling systems, ensuring that waste is processed correctly and effectively.

Collaboration is Key: A collaborative approach across the value chain—from manufacturers to recyclers—is essential to creating an effective system for managing flexible plastics, ensuring their integration into the circular economy.

CAIF Installation:

At the Summit we at CAIF also showcased an installation that captured three interesting aspects of their ecosystem building work namely, Closing the Materials Loop across the value chain, Enabling a just transition for workers and Accelerated Decarbonization of Supply Chains.

Circular Innovation Award:

A striking feature at the #SankalpBharat2024 was the Circular Innovation Awards 2024 led by Circular Apparel Innovation Factory (CAIF) Intellecap, which rewarded and recognized outstanding enterprises in the Circular space.

The Winner of the Circular Innovation Award 2024 went to Canvaloop led by Shreyans Kokra, CEO, Canvaloop, a startup which has been showcased on Shark Tank and has a proprietary technology that enables them to process the agricultural waste to superior textile fibres thereby bringing significant changes in the textile chain by creating socially inclusive, progressively viable, and adequately available materials and to promote sustainability in the textile industry. Team Canvaloop received the recognition from Venkat Kotamaraju, Partner & Director, CAIF-Intellecap with Anjalli Ravi Kumar, Chief Sustainability Officer, Zomato

Each of these CAIF sessions was designed to stimulate circular entrepreneurs and empower circular innovators to redefine growth and create positive impact.

With over 35 Sessions and 60+ exhibition showcases, across the two days, the Sankalp Bharat Summit was an unparalleled gathering of visionaries, industry experts, and decision-makers, to exchange high-value insights, explore forward-thinking strategies, and foster partnerships that will shape the future of entrepreneurship. At the summit, transformative ideas met actionable solutions, and ambitions turned into measurable outcomes, shaping the future of businesses and the economy.

CIRCULAR ECONOMY

2. People and planet positive: How an inclusive circular textile waste management model is improving livelihoods of waste pickers in Bengaluru and saving the environment

By Somatish Banerji, Partner and Rahul Chatterjee, Manager from Intellecap's CAIF

Published in Saamuhika Shakti Blog

An award winning and recognised social entrepreneur in her own right, Indumathi is an expert in waste management and all its processes. She has not only successfully demonstrated to the city of Bengaluru that waste pickers can become waste entrepreneurs but also advocated for recognising the role of the community in mitigating the effects of climate change and saving the environment from the unending waste supply through circularity.

But the textile waste brought in as part of the dry waste collection drives sat in a corner. A significant amount of textile waste passed through her centres with no sustainable solution, often ending up in landfills. This troubled her, as sending materials to the landfill neither made a good decision business or environment wise.

India, one of the world's largest exporters of textiles and apparel products, faces a significant challenge in managing textile waste. Despite the country's manufacturing base and famous recycling prowess vis a vis textile waste, it lacks a formal infrastructure to properly address the issue. And therefore, textile waste is the third largest source of municipal solid waste in India, the potential to provide income and stable livelihoods for workers lying untapped.

Indumathi's story highlights the pressing need for innovative solutions in the textile waste sector, one that could potentially replicate the recycling success story of the PET single use bottles in the country (India recycles more than 80% of PET bottles) while opening up avenues for green jobs in the sector.

'Closing the Loop on Textile Waste'

The opportunity to address the mounds of textile waste came Indumathi's way in early 2023 when she joined Circular Apparel Innovation Factory's (CAIF) 'Closing the Loop on Textile Waste' program under the Saamuhika Shakti initiative in Bengaluru.

Through the program, Indumathi and her team learnt how to process textile waste and create an additional business line out of it from her Dry Waste Collection Center (DWCC), and join the cohort of the many DWCC operators in Bengaluru who have embarked on a similar journey as textile waste entrepreneurs of Saamuhika Shakti.

Indumathi and other waste workers sorting textile waste at DWCC. | PC: Circular Apparel Innovation Factory (CAIF)

Circular Apparel Innovation Factory (CAIF), an Intellecap initiative dedicated to helping build a planet positive (resource efficiency through decarbonization and zero waste to environment) and people positive (creating sustainable green livelihoods) textile industry through adoption of circular economy, became a partner of the Saamuhika Shakti initiative in early 2023 with the objective to:

- **Establish an integrated Circular Textile Waste Management (CTWM) model in Bengaluru to recover and reclaim value from textile waste;**
- **While creating green and sustained livelihoods for the underserved waste picker community.**

This CTWM model is part of CAIF's larger 'Closing the Loop on Textile Waste' program, being implemented in 10 other cities across India. The Bengaluru implementation is supported by H&M Foundation and Saamuhika Shakti.-

In 2023, eight DWCC operators (of which three are women) in Bengaluru successfully adopted and integrated the CTWM model into their existing dry waste businesses. CAIF along with on-ground implementation partner Hasiru Dala, built the capacities and capabilities of the eight DWCC operators and waste pickers on:

- **How to collect post-consumer textile waste from communities**
- **Conduct market focused sorting and establish a textile waste business.**

The CAIF team also supported the DWCCs establish market linkages with buyers of textile waste such as resellers, up-cyclers, key textile recyclers in Panipat (which is one of the two major textile recycling hubs in India), and downcyclers resulting in regular transactions between CTWM waste entrepreneurs and such buyers.

This was critical for closing-the-loop on textile waste by reintroducing recycled materials back into the textiles and apparel and other supply chains.

Kumuda is the manager of a DWCC where textile waste is processed. | PC: Vinod Sebastian/Saamuhika Shakti

By the end of Saamuhika Shakti's Phase 1 in December 2023, in just 11 months, CAIF's intervention helped divert 131,436 kg of post-consumer textile waste from going to landfill and impacted the lives and livelihoods of 225 waste pickers through capacity building support. Of these, 33 waste pickers were directly engaged in handling textile waste (green jobs) at the DWCCs and experienced an increase in incomes ranging between 18% to 25%.

Training on market focused sorting of textile waste at Dry Waste Collection Center (DWCC). | PC: Circular Apparel Innovation Factory (CAIF)

Setting up the first of its kind Textile Recovery Facility (TRF)

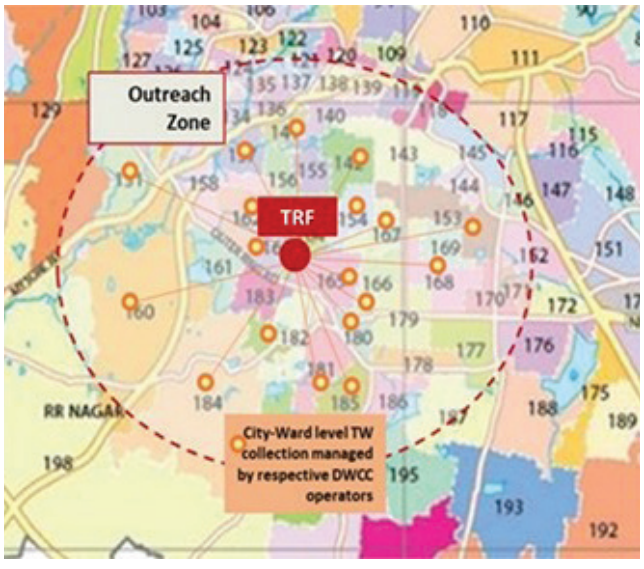
As the 'Closing the Loop on Textile Waste' program matured, it became evident that for scaling the

model, aggregation and recovery of textile waste in the city will be critical to guarantee volumes and to meet market requirements. The focus therefore needed to shift to enabling waste entrepreneurs to access textile waste at an aggregation centre that would not only efficiently cater to the diverse buyer requirements but also unlock more green jobs and elevated job roles for the waste picker communities in Bengaluru. In fact, the CAIF team had factored in this critical learning from Bengaluru while designing the replication of the CTWM model across other cities in India.

The design of CAIF's intervention for Saamuhika Shakti's Phase 2, launched in January 2024, envisioned a hub and spoke model wherein a total of 16 DWCCs will operate as spokes for collection and primary sorting of textile waste and a Textile Recovery Facility (TRF) established and operated by one or more waste entrepreneurs will function as the city-level hub for secondary sorting and value addition of textile waste.

The TRF is conceptualised as one of the biggest buyers of textile waste for the DWCCs solving the dual challenge of lack of space at the DWCC level and barriers to regular cash flows for DWCCs.

The hub and spoke model involves 16 Dry Waste Collection Centers (DWCCs) acting as spokes for the collection and primary sorting of textile waste. These spokes feed into a central Textile Recovery Facility



(TRF), which serves as the city-level hub. | Illustration: Circular Apparel Innovation Factory (CAIF)

In Phase 2, CAIF has set an ambitious target of diverting 800,000 kg of textile waste over three years (2024-2026) and positively impacting the lives and livelihoods of 500 waste pickers in Bengaluru.

Today, the vision of the hub and spoke model is a reality with the inauguration of the first Textile Recovery Facility (TRF) in August 2024. Indumathi, whom we introduced earlier, has taken on the responsibility of setting up and managing the TRF, in addition to running her existing DWCCs.

The Textile Recovery Facility (TRF), | PC: Circular Apparel Innovation Factory (CAIF)

Market focused sorting being done at TRF; and colour sorted textile waste kept separately at TRF. | PC:

Circular Apparel Innovation Factory (CAIF)

The TRF has the capacity to process 50 MT of textile waste per month.

The CTWM model being piloted in Bengaluru demonstrates that through the circularity journey we can sustainably address the many challenges of climate and the environment and it need not be at the cost of overlooking the marginalised communities who form the bedrock of the efforts. We can be both planet and people positive.

CIRCULAR ECONOMY

3. Introducing Circularity in used-textile waste management, with inclusivity at its centre

Article about Intellecap's CAIF

Published in The Hindu, Bengaluru (Print)

Textile Recovery Facility is part of a larger attempt to create a value chain for post-consumer textile waste while weaving into it alternate livelihood possibilities for waste pickers

Thursday, November 28, 2024
BENGALURU

THE HINDU
Bengaluru

Introducing circularity in used-textile waste management, with inclusivity at its centre

Textile Recovery Facility is part of a larger attempt to create a value chain for post-consumer textile waste while weaving into it alternative livelihood possibilities for waste pickers

Shilpa Elizabeth
BENGALURU

At her Textile Recovery Facility (TRF) in Hirandahalli where used textiles from around 10 wards of Bengaluru arrive, Indumathi, a waste picker-turned-entrepreneur seems quite exuberant and optimistic. She remembers how during Deepavali the metal roof facility "almost turned into a shopping mall."

"I was stunned that there is so much demand even for second-hand clothes! During Dasara and Deepavali, locals as well as migrant labourers came here to buy these clothes. The business was fast-moving during the festive month."

TRF, run by Indumathi and employing four people, is part of a larger attempt to create a value chain for post-consumer textile waste while weaving into it alternative livelihood possibilities for waste pickers.

NGOs Hasiru Dala and Circular Apparel Innovation Factory (CAIF), in partnership with Saamuhika Shakti - a not-for-profit organisation that brings together multiple organisations to empower the informal waste picker community - have been working to see if they could introduce systems and processes for the same.

Under the initiative, used clothes are collected from individual houses, sorted, segregated and, depending on their quality, recycled, upcycled, downcycled or resold. According to the NGOs, this successfully diverted 1,35,000 kgs of cloth from reaching landfills last year between March and December and resulted in an 18-25% increase in the income of the waste pickers directly engaged with the programme.

After a successful pilot last year with eight wards in the city, the programme has been scaled up to cover 10 wards this year. Five more DWCCs (Dry Waste Collection Centres) are getting operationalised and the aim is to save 800 metric tonnes of clothes from reaching landfills in the next three years.

Used clothes are collected from individual houses, sorted, segregated and, depending on their quality, recycled, upcycled, downcycled or resold. RAVICHANDRAN N

Employees sorting textile waste at TRF. RAVICHANDRAN N

Members of TRF, Saamuhika Shakti, Hasiru Dala and CAIF at TRF. RAVICHANDRAN N

Products like bags and artefacts are made from upcycled clothes. RAVICHANDRAN N

The process

In India, more than 80% of PET bottles are recycled, thanks to the value chain established around it. Collecting them makes it a valuable proposition for waste pickers too. The same has not been the case with used textiles. With no formal system in place to create value out of textile waste, most of it ended up in landfills making it among the top three items in landfills.

"Earlier, it was not known what you could do with post-consumer textile waste. However, through the experiments and pilots done in 2023 and 2024, we have been able to showcase that there is value to post-consumer textile waste, and through methods and processes, we can create a system similar to what we have for plastics in India," says Zibi Jamal from Saamuhika Shakti.

The first step is to collect the textile waste from individual houses. Waste pickers at the DWCCs in select wards were trained in collecting textile waste and awareness was created among residents. After collection, the first level of sorting happens at DWCCs.

Once a month, when the quantity of clothes becomes a ton or more, they are sent to TRF. A secondary level of sorting happens at TRF.

"A lot can be thrifted. Some can go into recycling, be made into yarn. A small quantity can be upcycled. Some can be downcycled and used for stuffing. There is a small percentage - about 10 to 15% - which can't be used for anything. They are sent to the waste-to-energy plant in Bidadi," Jamal explains. It all started when CAIF launched its Closing the Loop on Textile Waste programme in 2021. The idea was to design and implement a circular textile waste management model.

"This programme, as of today, is scaled up in 10 different cities across India, but it all started in Bengaluru with two entrepreneurs," says Rahul Chatterjee of CAIF.

Hasiru Dala came on board as an on-ground implementation partner and the implementation of the programme in Bengaluru was supported by H&M Foundation and Saamuhika Shakti.

"Together we onboarded eight DWCC operators as part of the programme and showed them the value that they can reclaim out of the textile waste," notes Chatterjee who points out that apart from preventing large quantities of clothes from reaching the landfill, the programme impacted the lives and livelihoods of 225 waste workers.

"Out of them, 33 were directly getting employment out of this and they saw an increase in their income ranging from 18 to 25 percent."

Improving results

Kumuda, who runs a DWCC in J.P. Nagar, was one of the first to sign up for the programme. She notes that every day about 10-15 kg of used clothes come into her centre and income from it has been increasing over the period. "We get about ₹15,000 for a ton of used clothes," she says.

Ravi, a division manager with Hasiru Dala, notes that the awareness-building exercises have helped. He is one of the team members who do door-to-door visits twice a week to raise awareness and inform people about BBMP guidelines.

"As fast fashion started, we saw a lot of textile waste coming into the centres. Earlier, it would go to cement kilns. But right now, there is so much waste that even the cement factory is not taking them in," says Bianca Fernandes who works with Hasiru Dala.

"That is when Hasiru Dala identified different kinds of streams where waste pickers can get a livelihood out of. As part of it we collaborated with CAIF for this initiative."

Building TRF

As the programme progressed, certain challenges cropped up eventually. The DWCCs experienced space crunch to store the textiles. Additionally, there were legal restrictions that allowed them to collect only from households and not from other sources. Some of the commercial buyers preferred to buy the textiles in bulk from a single entity instead of multiple DWCCs.

"Factoring in all these learnings, in phase two, we pivoted to a hub and spoke model. We established TRF as the hub and the DWCCs would be the spokes. DWCCs will do the collection, a primary sorting and then sell it to the TRF. TRF will work as the central hub for aggregation, do a secondary sorting based on material and colour and then sell it to different buyers such as the recyclers, upcyclers, downcyclers and resellers. The TRF can also collect from other sources because they do not have such restrictions. They can collect from commercial entities, schools, hostels, and so on," explains Chatterjee.

The second phase of the project aims to impact the livelihoods of 500 waste pickers between 2024 to 2026.

Skill as a service model

The team also works on a skills-as-a-service model in partnership with Sambhav Foundation, yet another NGO which is a Saamuhika Shakti partner. Under the model, women from the waste picker families are trained to make upcycled products using textile waste.

"We work with informal waste picker women and upskill them so that they don't remain at the lower end of the waste picking spectrum, but move on to production and higher value chains," says Padmini Ram from Sambhav Foundation.

"We get upcycled cloth from Hasiru Dala. We work on creating products such as bags, artefacts and so on from them and the products are sold to a buyer. The women get trained here to make the products and they get a share of the profits that's earned from selling them," she explains.

Currently 12 women are being trained under the programme.

Future of hope

Sagaya Mary, at her DWCC near R.V. Road, has finished the sorting for the day.

All the clothes have been packed and neatly stacked away. The vehicle from TRF is expected to arrive the next day to collect them.

"We have delivered clothes five times to the TRF. We are making profits," Mary says.

Three months since becoming operational, TRF has processed 42 tons of textile waste. It is yet to turn profitable though. But Indumathi is optimistic.

Drawing hope from the sales during the Deepavali season, she believes the facility would see financial success in about two years.

She says, "So far, we have recovered only 10% of our initial investment. It may take a while. But I feel good that we are not sending clothes to landfills, we are saving the earth, we are able to generate employment for people, and it's helping me build a career.

CIRCULAR ECONOMY

4. Textiles go circular -Coverage of Circular Apparel Innovation Factory (CAIF)

Published in Business India, July 2024 issue (Print)

New Delhi, 18th July, 2024– Venkat Kotamaraju, Partner and Director, Circular Apparel Innovation Factory (CAIF), Intellecap and CAIF's overall effort to take the Industry to go circular was featured in Business India's, July 2024 Issue.

In a freewheeling conversation with Arbind Gupta, Assistant Editor, Business India, Venkat highlights how, "CAIF has set itself an ambitious mission to build the ecosystem and capabilities to accelerate the transition to circularity – from the margins to the mainstream".

Notably this is the third detailed story on CAIF by Business India who have been keenly following our transformative work across the years. The first story titled, 'The Textile & Apparel sector looks to build capabilities to drive the transition to a circular economy' was featured in Business India's Nov 2021 Issue and the second one titled, "Textile Industry gets ready to go circular" was featured in the Business India's Special Climate Edition, Nov 2022 Issue.

Getting Future Ready

Since India is one of the largest manufacturers of T&A (textiles and apparel) in the globe, it has now become paramount for it to have a right kind of textile recycling ecosystem in place to meet its SDG goals.

With sustainability and circularity becoming crucial aspects of responsible manufacturing of textiles and apparel, brands and manufacturers are now engaged in lot of conversion on how they can help their supply chain partners get decarbonised through energy efficiency, transition to renewable energy, water efficiency to save water, replacing chemical dyes and chemicals with more sustainable alternatives.

"The other side is where brands have specific commitments made publicly to become more circular, more engagement on how we can ensure more recycled material coming from the waste that can come to the manufacturing ecosystem," says Venkat Kotamaraju, director, CAIF, Intellecap. "This means that, with more and more supply of recycled material starting to replace some component of virgin material, there is less demand and less extraction of virgin material going down and getting replaced with the recycled material. So, there is less getting extracted from the planet."

"Apart from recycling materials and resources coming in to start replacing virgin material, there is also a greater amount of intent and conversations around how we create a value chain and the supply chain for alternative materials," adds Kotamaraju. "Industry recognises that, if we need to move towards

a more sustainable future, apart from bringing the recycled material, there needs to be clear action towards creating a demand and supply for alternative materials (for example, banana or pineapple waste fibre, etc), as they are less resource- and carbon-intensive".

Circular Apparel Innovation Factory (CAIF) is an industry-led platform, the mission of which is to build the ecosystem and strengthen capabilities to drive the transition to a circular economy in the apparel and textile industry. The platform is building the textile industry's innovation infrastructure by bringing together key stakeholders to collaborate and work together on achieving the five key circular goals. CAIF is a global initiative of Intellecap, an impact advisory arm of the Mumbai-headquartered Aavishkaar group, a leading impact investing organisation, which works to build businesses that can benefit the underserved segments across Asia and Africa.

CAIF initiatives

Founded in 2018, CAIF is supported by the DOEN Foundation (a Dutch organisation encouraging initiatives in the field of culture and cohesion, as also green and inclusive economy) and Aditya Birla Fashion & Retail Ltd (ABFRL), as its founding anchor partners. To accelerate the shift of the industry from its current 'take-make-dispose' approach to one that is more circular across the lifecycle, CAIF works with a diverse group of stakeholders from across the value chain.

Over the last six years, CAIF has been actively working with many Indian and global brands (H&M, Target Corp, SHAHI Exports, House of Anita Dongre, Trident, CL Gupta, Raj Group, Jay Jay Mills and CTA Apparels), through different pilots and initiatives. It has identified and mapped multiple innovators across different dimensions of circular economy relevant to the textile and fashion industry.

"CAIF is an industry-led and industry-facing platform born with a singular purpose of helping build a planet and people positive textiles and apparel industry. In line with this purpose, CAIF has set for itself an ambitious mission to build the ecosystem and capabilities to accelerate the transition towards circularity – from the margins to the mainstream," explains Kotamaraju.

"We have a long way to go, but we are beginning to see light at the end of the tunnel" – Venkat Kotamaraju, Director, CAIF, Intellecap

"Much of its thinking and work focusses on building ecosystems and capabilities that help decarbonise the industry, get to zero-leakage of textiles waste into the environment, stop leakage of single-use plastics into the environment and securing a thriving future for the millions of workers employed across the textiles and apparel value chain through creation of green and circular jobs at scale," he adds. "CAIF is designing and shaping work in the key global south economies incl. South Asia, SE Asia and East Africa, which play a critical role in the complex global value chain".

ACRE and more

Back in 2020, CAIF conceptualised and designed the ACRE Program (Accelerating Circular and Regenerative Economy), with specific sub-programs, each with the intent to develop proven and viable pathways to circulate, regenerate and eliminate waste/harmful materials from the fashion/textiles and apparel value chains.

Since late 2021, it has operationalised the Closing The Loop (CTL) program as part of the circulate pillar. CTL envisions an integrated circular textiles waste model (CTWM) with a pan-India network of hyper-local material recovery facilities which are powered by waste pickers. It is not just recovering and recovering value from textiles/apparel waste at scale, but also unlocking green and circular jobs and improving the livelihoods of the informal, marginalised and underserved individuals and communities across the waste ecosystem.

Starting with two micro-entrepreneurs across two pilot cities in late 2021, the CTWM model now spans nine cities, has already diverted half a million kg (~500,000 kg) of textiles (collected and sorted) waste and in the process engages 350 waste workers,

trained almost 700 waste workers (of which 90 per cent are women) in market-informed skills of sorting and segregating.

In partnership with seven grassroots organisations (so far), CAIF has enabled 18 micro-entrepreneurs across nine cities and the waste workers are seeing an average increase of 15-20 per cent in their incomes. More so, with the micro-entrepreneurs now engaged in commercial contracts with some leading recyclers, it is working closely with select brands and their manufacturers on their material transition journeys. Pace and scale is a key driver for it and for that, in the current phase it is mobilising capital, knowledge, networks and technologies (solutions) to create value for all stakeholders involved.

Building on this early success, CAIF is now being engaged by brands in establishing reverse logistics for materials which is key to achieving their circularity and net-zero ambitions.

"For us intent is prime," affirms Kotamaraju. "We conceptualised the ACRE program and Closing the Loop program (within the broader ACRE) through a bottom-up approach and built it around the waste pickers and their communities, who, despite their contributions to waste management, have been caught in intergenerational poverty. A key design principle (emerging out of a study we had commissioned back in 2019-20) was that the solution to the scale and complexity of the waste problem needed a rather hyper-local solution and the best way to enable that was through the existing waste workers and the civil society organisations. Kudos to every member of the CAIF team, who remains committed and passionate to find a resolution to this existential challenge. We have a long way to go, but we are beginning to see light at the end of the tunnel"

Handling & recycling of pre-consumer and post-consumer textiles wastes is critical

ACEing the agenda

In 2021, CAIF launched Project ACE with the singular aim of a business case for low carbon/circular solutions in India. During the first phase of ACE (2021-23), ACE was designed to address two clear ecosystem gaps which are key to accelerate the decarbonisation of textiles and apparel supply chain in India: lack of awareness on the business opportunity from adopting circular economy/low-carbon solutions and a limited awareness about and access to circular/low-carbon solutions that can address emissions across the supply chain.

To create a robust business case, CAIF designed demonstration pilots with multiple stakeholders (brands and their manufacturing partners) to test, validate and commercially deploy high potential low-carbon solutions in areas including energy efficiency, water efficiency, alternative dyes and chemicals, digital solutions in textiles waste traceability, etc. H&M, Target Corp, SHAHI Exports, House of Anita Dongre, Trident, CL Gupta, Raj Group, Jay Jay Mills, CTA Apparels and their manufacturing partners are some of the brands that participated.

Some of the key outcomes it was able to engineer during the Phase 1 (2021-23) included 15 per cent improvement in energy efficiency, 25 per cent reduction in process heat, 35-40 per cent reduction in waste-water generation and an overall cost savings of about 20 per cent for the participating manufacturers.

According to brands and textile manufacturers, three key components of ACE were critical in design/execution of the pilots along with expediting the buy-in from leadership/board teams for eventual long-term commercial contracts: the ability of CAIF to source and evaluate high-potential innovative solutions; technical assistance provided by CAIF to innovators (from problem-solution through product-market fit) and the capacity building support provided to manufacturers and supply chain partners; and designing a financial assistance through a pool of capital available for both innovators and manufacturers to execute the demonstration pilots and develop a proof of concept.

India and abroad

Earlier, CAIF was focussed on India, as the country offered a significant opportunity to be a large manufacturing hub for the global textile value chain and has a large consumption base. India was the largest importer of second waste. In the last

few years, CAIF has increased its focus from India to other markets, including Bangladesh, where it launched a programme, where they are checking the quality while mapping the environmental and social sustainability hotspots across the readymade garment manufacturing value chain in Bangladesh.

Through this initiative, Oporajita (in collaboration with H&M Foundation), in Bangladesh, multiple partners are joining hands to equip women garment workers for a future defined by automation and digitalisation. As one of the partners in this collective impact initiative, CAIF is creating sustainable livelihood opportunities for out-of-work RMG workers through identifying and developing capacity on circular jobs and circular micro-entrepreneurship models. It is building capacities of both the out-of-work women garment workers and SMEs in the garment manufacturing and allied sectors. Over the past two years, it has engaged with over 50 SMEs in Bangladesh, trained around 1,250 out-of-work women garment workers, of which 650 have been employed back in the sector and seen their incomes improve by 8 -15 per cent as a result of the capacity building efforts.

Meanwhile, the handling and recycling of pre-consumer and post-consumer textiles wastes is turning out to be a critical component of the entire process of circularity. More so, since India is one of the largest manufacturers of T&A (textiles and apparel) in the globe, it has now become paramount for it to have a right kind of textile recycling ecosystem in place to meet its SDG goals.

Textile Powerhouse

India is poised to become one of the most important textile recycling hubs of the world. While India has been a powerhouse in textile manufacturing, only recently, textile recycling has gained prominence. In recent years, large scale infrastructure set-up for sorting, processing and recycling has received attention in the call for scaling textile recycling worldwide. Towards building up capacity and putting up a much-needed ecosystem for recycling, India today hosts large sorting and grading facilities at the SEZ of Kandla in Gujarat, employing over 3,000 workers.

Besides, in Panipat, Haryana, India also houses one of the largest industrial clusters for mechanical recycling in the world. There are estimated between 900 and 2,500 sorting, recycling and spinning units. The Panipat cluster employs about 4 million informal workers, who are engaged in processing textile wastes.

In Tirupur in south India, a knitwear hub has also been growing into an efficient cluster for recycling, with focus on pre-consumer waste. Amroha, in Uttar Pradesh, is largely working with the cycling of textiles, where discarded inputs are recycled and repurposed into something of lower value. Pre-consumer textile waste consists mostly of post-industrial waste from textile factories, while post-consumer comes from used garments and household textiles.

Experts view that recycling solutions and innovations have to be hyper local in order to be sustainable in a true sense. Earlier, while most of the wastes were produced within the country, the recycling solutions were primarily available outside India. Towards this end, clusters like Kandla, Panipat and others can play a big role.

Out of the over 7,800 tonnes of textile waste handled annually in India, an estimated 51 per cent is post-consumer waste, originating from local consumers. Another 42 per cent is pre-consumer wastes. Seven per cent is imported waste.

“India is becoming a major recycling hub with multi-stakeholder investment projects, run by Fashion for Good and Reverse Resources with giant textile players like Arvind, Wellspun India and Birla Cellulose taking the lead and supported by international players like PVH, Adidas, Tesco, Target, Levi’s. This opens up opportunities for developing novel value chains and business models for valorising textile waste inter-continentally. Additionally, with growing purchasing power India is also a major producer of post-consumer textile waste domestically,” states a white paper jointly prepared by The Swedish School of Textiles, IIT Delhi and Wazir Advisors.

CIRCULAR ECONOMY

5. Plastic Free July Annual reminder to transition to sustainable plastic consumption in India

By Devanshu Ralhan, Principal, Circular Apparel Innovation Factory, Intellecap

Published In Renewable India

Plastic Free July is a global movement that inspires millions of people to reduce their reliance on single-use plastics. Plastic Free July has gained traction worldwide, including in India, offering encouragement to individuals, communities, and businesses to rethink their plastic use and adopt more sustainable practices.

Plastic waste generation in India has crossed 5 million tonnes, nearly triple the volume in last 5 years, with the primary sources being packaging, automotive, agriculture, and textiles. This is despite the low per capita plastic waste production, which stands at 8 kg per person per year. However, India is witnessing rapid urbanization and shifts in consumption patterns, resulting in greater plastic consumption.

India's urban waste management system is struggling with the increasing volume of plastic waste, achieving a collection efficiency of only around 85–86 percent for Municipal Solid Waste (MSW). 60 percent recycling rate for post-consumer plastic waste is primarily for select valuable plastics – PET and HDPE. For majority of Low Value Plastics (LVP), collection and recycling through Government funded schemes have been found inadequate to deal with the costs and complexities, and these end up in the landfill or are incinerated.

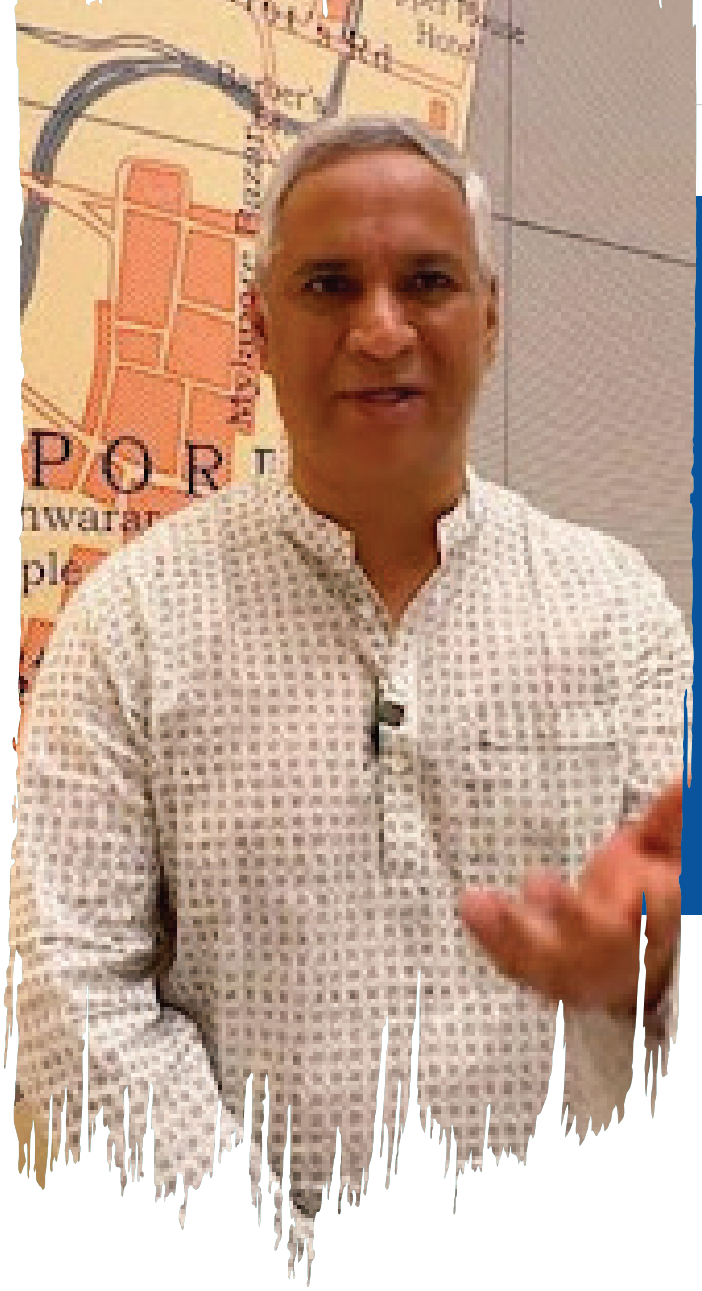
To set the context, LVP refers to any plastic flexible plastics consisting of one or more of the seven plastic material types where the costs of collecting and processing the waste exceed the revenue generated from selling the recovered plastic. This includes single-use plastics such as noodle packets, non-woven fabric/bags (Polypropylene), poly bags, thermocol, and composite packaging material made from layers of two or three different materials used for sachets, biscuit and chips wrappers and more.

Most of India's recyclable plastic waste is consumed by households and MSMEs. The belief that expanding recycling and waste management capacity alone

will solve the plastic crisis in the country is misguided. Without aggressive reduction at the source, our battle against plastic pollution will, at best, remain stagnant. Plastic Free July is a timely reminder to transition to sustainable consumption and refuse the single-use low value plastics in daily lives as far as possible. Households and MSMEs can:

- Ensure that segregation at the source enables the maximum value extraction from all recyclables
- Consider purchasing products made from recyclable materials and packaging, and enhancing efficiencies to reduce waste in their daily operations.
- Enhance working conditions when collaborating with informal sectors involved in sorting and collecting recyclable plastics
- Engage in plastic circularity initiatives led by ULB, local communities and brands
- To achieve the vision of Plastics Circularity in India, responsible consumption, reimagined production and effective recycling need to be developed all at once. Collaboration is needed from all stakeholders, including national, state, and city governments, brands, MSMEs across the value chain, academia, and the informal sector.

IMPACT INVESTING



IMPACT INVESTING

1. The Origins of Impact Investing- Interview of Vineet Rai, Founder, Aavishkaar Group at the AVPN South Asia Summit 2024

Published In Storm Asia

"IMPACT investing was not created to be mainstreamed. Mainstream has to become impact investing."

Vineet Chandra Rai, one of the pioneers of impact investing is referring to the global mindset shift required to kick this $1.57 trillion industry into a much high gear.

The Founder of Aavishkaar Group, an organisation that aims to lift the low–middle income group, has been on the impact investing trail since he started as a 29-year-old forester in India, tasked with bringing money to rural India.

"I didn't call myself an impact investor. That term didn't exist," he recounts his early days, at the recently concluded AVPN South Asia Summit 2024, in Chennai.

Vineet feels strongly that $400 trillion of mainstream capital should be shifted towards impact investing, for it to live up to its name.

Helping Up Those At The BOP

Aavishkaar addresses the needs of the 'emerging 3 billion' who are moving from subsistence-level existence to become active participants in the global economy. By lending a hand, the aim is to raise them via a smoother transition of entrepreneurial activity and jobs into a new strata of opportunities.

Vineet's early years as a forester planted the seeds of what was to eventually become Aavishkaar, which, based on its 2024 impact report, has $1.45 billion assets under management and has — among a number of accomplishments — provided financial services to 81 million people, and helped raise farmers' income by 20-30% via investments in the agricultural sector. It employs around 10,000 people, of which more than 20% are women in senior management positions.

Clearing waste is one of the first jobs that beggars moving to a city will wind up doing.

Technology As A Driver

Vineet is banking on the rise of artificial intelligence and technology to facilitate the continued rise of those at the bottom of the pyramid (BOP)

"Having supported more than 144 million underserved customers through our investments and engagements, we have repeatedly stated that the BOP is no longer a one-dimensional concept, and technology can flatten these pyramids and assist us in delivering a world free from hunger, poverty and inequity."

Idealistic, perhaps, but that's been the main driver from the outset.

Raising living standards will be key to breaking the poverty cycle.

Impact Investing As A Call To Action

In 2008, Vineet was with an international group of like-minded people working towards mobilising capital for the benefit of the underserved in community.

Antony Bugg-Levine, who had just taken over as Managing Director of The Rockefeller Foundation facilitated a group of disparate change makers with similar ideals to convene at the Bellagio Center.

Vineet was part of the convening group that resulted in the coining of 'impact investing', and was handed US$1 million to market the name.

In the video interview above, Vineet talks about the past but also looks to the future of impact investing and what's needed to help raise the lives of those struggling to get out of the quicksand pull of poverty.

Watch the Video

IMPACT INVESTING

2. More Funding Needed for Startups, AI to be Significant in the Future- Interview of Vineet Rai, Founder, Aavishkaar Group at Sankalp Bharat Summit 2024

Published in Entrepreneur, India

Significant resources and funding is needed to create a strong impact in the startup ecosystem artificial intelligence (AI) starts to play a more significant role, Vineet Rai, Founder and Chairman of Aavishkar said on the sidelines of the recently-concluded Sankalp Bharat Summit in Varanasi.

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The Global Impact Investing Network defines impact investing as investments "made into companies, organizations, and funds with the intention to generate a measurable, beneficial social or environmental impact alongside a financial return." At the core of it, impact investing is largely about aligning the investors' beliefs and values with the subsequent allocation of funds and solving social and environmental issues.

According to the Impact Investors Council (IIC) research, India saw USD 2.9 billion worth of equity investments made toward 275 impact companies, a significant decrease from 2022 with USD 6 billion. However, the slowdown witnessed in the global venture capital climate does not indicate the proposition that India, as an attractive investment destination continues to offer.

Climate startups have played a big part in the world of impact funding, with the onset of climate change being one of the biggest results of global warming. Kushal Agrawal, Partner at Lightrock said that climate is not the only part of impact but rather a subsection. "While we do have specific products focused on climate, Lightrock as a whole focuses on all aspects of impact. We have typically defined ourselves as people, planet, and productivity."

Lightrocket's portfolio features companies like Porter, a company which has had significant impact on the truck owner or the small-cargo fleet economy. Since its introduction, small-medium truck owners have benefited from access to clients and gigs through its app which has changed the way these fleets operate.

"Companies like Porter are commercially successful companies and have been market leaders. And that's what our dream is, to create market leaders in spaces that make a difference," said Agrawal.

Lightrock has a total investment portfolio of over USD 1 billion across sectors like healthcare, education, and financial inclusion. The firm's portfolio spans Europe, India, Africa, and Latin America with impact outcomes in areas such as sustainable agriculture and clean energy.

Despite the slowdown last year, 2024 has shown that business models that address critical problems attract interest from investors. With a population exceeding 1.4 billion, out of which 60 per cent are rural, the scope remains immense for companies to innovate and create impact within the country.

Vineet Rai, Founder and Chairman of Aavishkar Group said that as an investor, it is more of a responsibility without choice to see if the community can play a role in actually addressing the needs of the climate or climate issues.

"Otherwise, not only would we face issues, but humanity will face issues with survival. So I don't think there is a choice anymore, especially for people who manage capital. We have to find opportunities and options that would address the climate issues and address them effectively, emphatically, and hopefully quickly as well," said Rai.

While metro cities in India are bustling with global capability centers (GCCs) and international enterprises, startups in tier-2 and lower areas are significantly gaining traction by solving hyper-local challenges mainly because the founders understand the problems that exist in their location in a more personal way.

"When we go into tier-2, tier-3, and tier-4 towns, you are looking at entrepreneurs who have an intimate understanding of local challenges. And some of those local challenges have country-wide ramifications and potentially, global ramifications. So as investors, what we are looking for is an entrepreneur who can identify a challenge, understand the solution, and come up with a solution that is not only relevant locally but is relevant in the global context," said Rai.

Speaking on the current impact investing environment and the future, Rai said that there is no dearth of data or startups and that more capital needs to go into the startup ecosystem so that they can scale and meet the real challenges.

"A software will not solve every problem. Maybe somewhere down the line AI or GenAI will play a more significant role. But for that to happen, a significant exchange of data has to take place, or data warehouses need to be built that would allow generative AI to come up with solutions using the data as a background. There is a large amount of high-quality management that is thinking about new solutions for the problems that we see in agriculture. Most of these solutions are still very small but in a short period of time we will see them scale," said Rai.

IMPACT INVESTING

3. Aavishkaar eyes permanent vehicle in farm carbon

Published in Mint News

Out on Mint's investment page 'Deals, Tech & Startups' , Vineet talks about Aavishkaar's investment plan for the farm carbon, interest from global companies to invest in this space, how this will encourage more farmers to participate and help in making our environment more greener and cleaner.

During the interview, Vineet said, "Investing in nature with bio-sequestration is effectively helping poor people create assets without having an obligation to return money and try to create returns through voluntary carbon trade". He further added, " As the trees start growing and sequestering carbon, the plan is to bring in an international agency which can evaluate the systems and processes put in place and certify that the carbon being produced is of high integrity".

livemint

Aavishkaar eyes permanent vehicle to capture farm carbon

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MUMBAI

Impact investor Aavishkaar Capital is planning a permanent capital vehicle to invest in growing trees on Indian farms to promote carbon sequestration, and monetize it through the carbon trade market, the firm's founder Vineet Rai said in an interview.

The firm has received $150 million worth of soft commitments from global companies—such as oil firms or tech majors—wanting to buy these carbon credits resulting from the carbon sequestration, to offset their carbon emissions.

Sequestration is the process of capturing and storing carbon, while a permanent vehicle has unlimited tenure.

"Investing in nature with bio sequestration is effectively helping poor people create assets without having an obligation to return the money and try to create returns through voluntary carbon trade," Rai said. Bio sequestration, or carbon sequestration, uses trees—through the conversion of carbon dioxide to oxygen—to remove carbon dioxide from the environment.

"We have received interest from all the large global companies, who need these offsets," Rai said.

Aavishkaar plans to identify and mobilize small landowners, helping them grow more trees and adding density to existing forest lands.

The firm will invest in farmers and create groups that will plant local tree varieties such as sal or teak over 5,000 to 10,000 acres of farmland.

"As the trees start growing and sequestering carbon, the plan is to bring in an international agency which can evaluate the systems and processes that are put in place and certify that the carbon being produced is of high integrity."

The vehicle will also invest in "agriculture and land use systems, afforestation/reforestation, mangroves and wetlands regeneration, other community-based carbon projects such as efficient cookstoves, biogas, biochar," according to a note on the firm's investment thesis.

Vineet Rai, founder, Aavishkaar Capital, said the firm has received $150 million worth of soft commitments from global firms.

For this, the firm will "build and invest in technologies which enhance efficiency and effectiveness of carbon project execution, monitoring and verification, and engage in market making and trading of carbon".

Carbon credits trade at $5-50 apiece in global markets where "high integrity carbon" commands a premium.

Aavishkaar plans to mobilize small landowners, and help them grow more trees and to add density to existing forests

Aavishkaar first considered launching a $330 million-$500 million fund for carbon sequestering in June 2022, *Mint* reported at the time. Although it found interest from investors, including development finance institutions, it has since changed its thinking. Funds usually have a 10-year tenure, which means that in such a structure, the firm will be obliged to exit just when the trees start sequestering most carbon dioxide.

"A lot of investors are interested, but we have been asking ourselves if we should we raise this capital through a permanent vehicle as no limited partner (an investor in a fund) will stay invested for 30 years. A fund structure (in carbon sequestering) will require us to sell just when the tree is giving us the maximum return," Rai said.

Aavishkaar's permanent capital vehicle, to be led by Sanchayan Chakraborty, is likely be incorporated overseas by the end of March.

ENTREPRENEURSHIP

ENTREPRENEURSHIP

1. The Defining Moment: Pivoting to Create Lasting Healthcare Impact in Africa

Published In Intellecap Blog

Every entrepreneur experiences a defining moment that reshapes the direction of their business. For me, as co-founder of MedTrack Technologies, that moment was the realization of how crucial it is to balance business sustainability with social impact. This shift didn't just alter MedTrack's business model—it ignited a mission to address pressing healthcare challenges across Africa.

Balancing Business Sustainability with Societal Impact

When MedTrack was founded, our goal was clear: to deliver innovative digital healthcare solutions. However, as the business evolved, I came to understand that true entrepreneurship, especially in healthcare, goes far beyond financial success. The core of social entrepreneurship is about giving back and tackling the deep-rooted challenges in society.

This new perspective, inspired by my own experiences, led to a major pivot in MedTrack's approach. We refocused our efforts on improving healthcare for vulnerable communities in Africa. Our work in the Gomoa East District of Ghana, where we are enhancing both general and maternal health outcomes, exemplifies this shift. By aligning our business objectives with the real needs of communities, MedTrack has built a model that innovates sustainably while directly serving those who need it most.

Redefining Success

Success is no longer measured by traditional business milestones, but by consistency. I've learned that success is not a destination, but a journey that demands persistent effort. Whether it's opening a clinic on time every day or providing high-quality healthcare services, maintaining a reliable presence is now my key measure of success.

The power of small, consistent steps toward progress far outweighs flashy, one-off achievements. It's this dedication to consistency that drives MedTrack's commitment to improving healthcare across Africa.

Advice for Aspiring Entrepreneurs

For anyone just starting their entrepreneurial journey, my advice is simple: build strong systems from the start and seek mentorship. Entrepreneurship can be demanding, but having a structured approach won't limit your creativity—in fact, it will help it thrive.

Stay disciplined, never stop seeking guidance, and always keep your mission at the forefront of your

efforts. That's how MedTrack has continued to grow, and it's the path I'd encourage others to follow.

Building Resilience Through Setbacks

Like many entrepreneurs, I find inspiration in Thomas Edison's view of failure—as a stepping stone to success. Each setback offers a lesson, an opportunity to refine my strategy, and a reason to keep pushing forward. The tangible impact of MedTrack's work serves as a constant reminder to stay resilient, even in the face of uncertainties.

For me, resilience means approaching every challenge with the mindset of growth. This outlook has been pivotal in MedTrack's journey and success.

Conclusion

MedTrack's journey has taught me that the heart of entrepreneurship is not just about profitability—it's about making a lasting impact. Striking the balance between sustainability and social responsibility, consistently redefining what success means, and embracing resilience in the face of challenges have been fundamental to our story.

As we continue to push forward, MedTrack remains committed to improving healthcare in Africa, and I hope our journey inspires fellow entrepreneurs to keep making a difference.

MedTrack Technologies and the Sankalp Africa Awards

Victoria and MedTrack Technologies became part of the Intellecap ecosystem after being recognized as the 2nd runner-up at the Sankalp Africa Summit 2024. Known for their innovative work in health technology, MedTrack embodies the kind of impactful entrepreneurship that the Sankalp Awards celebrate. Through initiatives like the Sankalp Awards, Intellecap connects entrepreneurs with the resources, networks, and visibility they need to scale their solutions and drive meaningful change across Africa.

ENTREPRENEURSHIP

2. Mastering the Pitch: Lessons from a Pitching Event in Côte d'Ivoire

Published in Intellecap Blog

Scaling a business is no walk in the park. In fact, it's more like walking uphill while juggling a dozen flaming torches. And the pitch? That's what determines whether you light the way or get burned. Recently, the International Solar Alliance and Intellecap co-hosted the Pitching Session for the winners of the ISA SolarX Startup Challenge: Africa in Abidjan, Côte d'Ivoire, where solar startups faced off with some of the sharpest minds in the investment world. These weren't just any investors – they were seasoned veterans ready to back the next wave of clean energy pioneers in Africa.

As the pitches unfolded, so did the lessons. These are things every entrepreneur should know – but many learn the hard way, long after missing out on critical investment opportunities. So, let's dive into the key takeaways that stood out in that electric room of opportunity.

Your Pitch Is the Key to Entrepreneurial Heaven – Treat It That Way

Your pitch isn't just a sales deck; it's the doorway to your company's future. Nail it, and you unlock access to capital, mentorship, and networks that can take your business to new heights. Fumble it, and you might find that door closing faster than you can say, "But wait, there's more." Consistency is everything – get it right every single time.

The Problem Is as Important as the Solution

No matter how game-changing your product or service is, if investors aren't convinced the problem you're solving is worth addressing, you've already lost half the battle. Define the problem with precision, and make sure the stakes are clear. Investors need to feel the urgency – show them why this challenge matters and why you are the one to tackle it.

Context Is Everything

Not all investors are created equal. What piques the interest of one might leave another stone-faced. Do your homework. Understand who's in the room and why they should care about your solution. Tailor your pitch accordingly – a one-size-fits-all approach rarely fits anyone.

Investors Invest in People, Not Just Companies

You might have the most groundbreaking idea, but if your team doesn't inspire confidence, you're in trouble. Often, investors are backing the people behind the idea as much as the business itself. Bring out your best – the sharpest minds, the most

passionate advocates. If the investors believe in you, they'll believe in your company.

The Clock Is Ticking – Make Every Second Count

You could have all the time in the world to make your pitch, but here's the truth: most investors form their opinions in the first 60 seconds. Don't waste time on fluff. Get straight to the heart of your pitch – the problem, the solution, the market opportunity, and why you're the one to solve it.

Make Your Ask Crystal Clear

Ambiguity is the enemy of investment. Be specific about what you need, how much you need, and for how long. Don't just mention capital – explain the instruments (equity, debt, etc.) and exactly how it will be used. If your ask isn't crystal clear, don't expect a crystal clear "yes."

Show Them the Money, Honey

Yes, you need their capital, but they need to know how they're getting it back. Your financial models need to be airtight. Investors want to see revenue streams that are not only viable but scalable. Be transparent and make sure your projections make sense for the market you're targeting.

Scaling Is the Goal – The Perfect Pitch Is the First Step

No matter how brilliant your idea is, scaling it requires fuel. And in the entrepreneurial world, fuel almost always means capital. But capital doesn't just come from having the best idea; it comes from the perfect pitch. The startups we saw pitching in Abidjan understood that a well-executed pitch isn't just about presenting an idea – it's about securing the future of their business.

So, for all the entrepreneurs out there – here's the golden rule to keep in mind: pitch, please!

ENTREPRENEURSHIP

3. Need for Meaningful work

By Elsie Wanjiku, Associate, Intellecap

Published in Intellecap Blog

We talk about "Money Matters"more often than not, but in today's fast-paced work environment, " pay" has been taking a step back over the years with most employees looking for meaning and passion in what they put their efforts to.

Let's dive deeper- It is increasingly evident that aligning personal and professional goals is crucial for both individual and organizational success. Research consistently shows that employees who connect their personal aspirations with their professional objectives experience greater job satisfaction, productivity, and loyalty. In retrospect, could this alignment be a definition of what is often referred to as an existential crisis? Moreover, can organizations effectively foster this alignment?

The Importance of Goal Alignment

From research, the significance of purpose and value in work cannot be overstated. A study done by the Harvard Business Review found that "meaningful work is the most important aspect of a job for employees, even more than pay or promotion opportunities". Similarly, research from the journal Frontiers in Psychology by Frank Martela highlights that "meaningful work involves a broader purpose and self-realization, contributing to intrinsic value and work significance".

The idea is simple: while money may initially bait employees to a job, it is the presence of purpose and meaningful work that keeps them engaged and committed. More often than not, when employees find meaning in their work and understand what they want to gain from it—whether at a call center, a food store, or a corporate firm—they tend to contribute more efficiently and exhibit increased dedication to their organization. This alignment has consistently shown how personal and professional goals create a positive feedback loop where individual fulfillment enhances organizational success.

Quick tips for Organizations and Managers

This is a **wake-up** call for managers and leaders at all levels about the profound impact of aligning individual purpose with work responsibilities.After lots of conversations throughout my life about what participative leadership looks like, I've come to the conclusion that...(Eureka punchline) it actually looks like different things to different people.For me, the unique spaces, i have been part of over the years have continuously shown employees' productivity, presence, and intentionality are closely tied to their sense of comfort and fit within their roles. While there are numerous strategies that can be implemented, might i add, here are some key ways i have seen that

individuals could also use to meet employee needs and align them with organizational goal:

1. **Alignment of Vision and Goals:** Organizations that articulate a compelling purpose and values inherently attract individuals who resonate with those principles. This alignment of values creates a cohesive and motivated workforce, resulting in higher levels of employee satisfaction and commitment. Will HR managers need to make this a checkbox?

2. **Check-ins and Feedback:** Quarterly if possible,having one-on-one meetings between managers and employees help ensure that individual goals are on track and aligned with broader organizational objectives. During these meetings, managers should ask open-ended questions like, "How do you see your current projects contributing to your personal growth?" or "What skills are you looking to develop further?"

3. **Flexible Work Arrangements:** Offering flexible work arrangements can help employees balance their personal and professional lives more effectively. Remote work options, flexible hours, or job-sharing opportunities can cater to diverse personal needs and enhance job satisfaction.

4. **Recognition and Rewards Programs:** Acknowledge both professional achievements and personal milestones can motivate employees. Celebrating an employee's work anniversary or personal achievements, like completing a marathon, can make them feel valued and supported.

Is Empathy still needed from Managers?

It is true that common knowledge might make leadership seem simple, but not everyone is a natural-born leader. Above and beyond the tools and strategies to make life and work easier for employees,a notable aspect is managers' empathy as a crucial key guide. Their unique perspectives on leadership for instance —Do they view mistakes as opportunities for growth rather than failures? Are employees' ideas and opinions only to be heard but not actively listened to? Are they consistently demonstrating genuine interest in employees' well-being? Are they mindful of their own biases and how these might affect their interactions with employees? How responsive are they to the feedback they receive from their team?

Arguably,we should teach individuals in ALL leadership spaces (this is depending on your company structure) how to lead with grace and a high EQ. This type of mindset, fostered by a sense of purpose, sets the stage for resilience and a swift rebound from setbacks, contributing to increased fulfillment in finding solutions.Employees under search leadership also report enhanced self-worth, improved teamwork, and overall better health and well-being.

Additionally, the philosophy of "fail early and often" would take on a new dimension in organizations prioritizing meaningful work. We all know companies are not similar in size ,revenue or brands but if we could imagine an environment where Employees are encouraged to view failures not as dead ends but as stepping stones to growth and improvement. This mindset shift would be instrumental in cultivating a culture of continuous learning and innovation, propelling both individual and organizational development.

What change can be done?

The previous generations in the workforce, such as Millennials and Gen X, were often driven by traditional industries. They believed that hard work would guarantee adequate income, which in turn would support their families, dreams, and all the good things that come with life. However, this often comes at the expense of health, passion, and excitement for new things.

We see a paradigm shift with the newer folks.The newer generations, Gen Z have a profound need for meaningful work alongside adequate finances. With a non-traditional approach, they seek to balance purpose in life while still enjoying the little things. This shift reflects a changing mindset, where work is not just a means to an end but an integral part of a fulfilling life.

In essence, the intertwining of purpose and work transforms the workplace into a dynamic ecosystem. Individuals find fulfillment, organizations achieve success, and the collective journey becomes more than the sum of its parts.

Let's all recognize the value of meaningful work ,as **not only** just a "strategic move" for organizational leaders; but also a **fundamental shift** toward a culture , people that foster growth, resilience, and lasting success.

GENDER AND WOMEN EMPOWERMENT

GENDER AND WOMEN EMPOWERMENT

1. Bridging the gap: Gender equity in the green transition

Published in Intellecap Blog

The transition away from high-emission technologies will impact all sectors and significantly transform the availability and potential quality of jobs. Globally, experts emphasize that the "green transition" depends on social equalization and gender equality. As the transition progresses, and given the important role that women could play in driving transformation, they will need to be supported to act as entrepreneurs, decision-makers, and consumers.

A multi-crop thresher that removes the grain or beans from up to eight crops has increased youth employment and reduced women's drudgery in Tanzania. Developed by Imara Tech to be a gender-responsive solution, the machine can thresh eight bags of soybeans in one hour compared to a whole day beating the beans with clubs.

Women who used to clean and sort the beans now have more time to tend to other business, including taking on more entrepreneurial roles.

It is this sort of investment in gender-responsive solutions that was highlighted in the recent Sankalp Africa Summit, alongside other equally inspiring and relatable use cases that provide practical approaches and models.

Each year the Summit focuses on sustainably solving global challenges within the entrepreneurial ecosystem using collaborations. This year, it was held in Nairobi (28–29 February) and a session titled 'Bridging the Gap: Gender Equity in the Green Transition' built on examples and case studies from the IDRC-funded 'Business Acceleration through Gender Mainstreaming Accelerator' program, as well as research and development organizations like the CGIAR and others.

The transition away from high-emission technologies will impact all sectors and significantly transform the availability and potential quality of jobs. The session, with a diverse panel of researchers, entrepreneurs and development partners examined ways to incentivize the private sector, investors and development partners to prioritize economic and social outcomes for women as part of transition strategies to a green economy.

Making a business case for gender mainstreaming

Natasha Ezekiel from Rise Sustainability Consulting spoke about male-dominated companies missing out on profits. She pointed to the fact that the top companies with the most diverse executive leadership teams, which include women, are more profitable than the bottom companies without such diversity.

"Excluding women from the workforce can lead to missed opportunities for development," she said. "A McKinsey study estimated that achieving parity in the workforce could add as much as $12 trillion to the global economy."

However, Ezekiel also said that to support the business case for gender mainstreaming, it is important to establish institutional structures with gender leaders who can ensure training is appropriate to gender needs and that gender programs are implemented.

Winnie Osulah, a Gender Integration Lead at the Alliance for a Green Revolution in Africa (AGRA), agreed that institutional strengthening and development and making a business case for gender strengthening in the private sector is important. However, she pointed to the need to embed policy or employment regulation initiatives as a next vital step.

This means focusing on how to turn evidence about women's needs into action. "We then need to look at how that translates into the [institutional] systems themselves; that's where the policy comes in," she added.

Osulah also stressed the importance of giving women a voice in the process of institutional strengthening and policy development: "If you are doing something for me, but without me, then it means it is not for me in the first place. The point of inclusion is to ensure that women have a voice in the processes that are impacting their lives."

Speakers at the Sankalp Africa Summit session on 'Bridging the Gap: Gender Equity in the Green Transition'. L-R: Rob Madziva, Natasha Ezekiel, Eileen Nchanji, Stella Kimani, Winnie Osulah and Thomas Jaeschke. Photo: V. Atakos (CGIAR)

Research with people to increase understanding

Dr. Eileen Nchanji, a gender specialist, showcased how the work of the CGIAR through its GENDER Impact Platform is helping close gender gaps for more inclusive and diverse green workforces.

Nchanji works with the Alliance of Bioversity International and International Center for Tropical Agriculture in the Pan Africa Bean Research Alliance program.

"The place for research," Nchanji observed, "is to first understand the different roles of women and men, the gender differences, the norms that control them, and the constraints."

The next steps, Nchanji said, are far from 'academic': "Then, it's not about sitting in an office and saying you understand a community. It has to be participative—getting people to state their problems and their ideas for solutions."

"For sustainability, researchers need to co-design and co-create with people, so the people themselves own it—something they've put on the table and said, 'This can change our livelihoods.'"

Involving women makes business sense

Rob Madziva from Agri fintech start up Digital Mobile Africa (DMA) agrees on the imperative of involving people, especially women, throughout. "We are intentional about involving women because about 65% of our customer base is women."

Many of DMA's services are applied through farm field schools and community demonstration plots where the community can come to learn how to grow certain types of crops.

"At the demonstration plots, we ask women to lead sessions. For example, women could be showing men how to use a mechanical planter," he explained. "Because of this exposure to the women's skills and experience, we have seen an uptake in women being involved in the leadership of farmer producer organisations due to their technical knowledge."

Madziva also noted the importance of male engagement in gender integrating and gender mainstreaming. "Men are often the 'gate keepers' in communities. It is important to empower men to understand that when women are in traditionally male spaces such as farmer organisations, it is not

about the women taking the place of men. It is about working collaboratively."

Equalling the opportunities

Thomas Jaeschke is a Project Team Leader at GIZ and part of the Employment for Woman for the Green Transformation in Africa. He works in green sectors: regenerative or sustainable farming, renewable energies, waste management, the circular economy, ecotourism and green construction and transport.

Providing opportunities to integrate women into these sectors can be difficult. "Some sectors such as ecotourism or agriculture are already well represented by women", Jaeschke said. "But it can be challenging in sectors such as renewable energy or construction. There, our aim is not to achieve high numbers, but to be as transformative as possible, for example by increasing the number of women in solar generation from 20% to 30%, which we would consider a success."

Jaeschke said his program's main goal is to not only create more jobs in the green economy, but to make existing jobs better in terms of wages and conditions. This also means making sure that successful models can be replicated or made bigger to reach more women. To do this, the program takes an integrated approach: considering labour markets on the supply side; and promoting skills and capacities on the demand side.

Women as drivers of change

Speakers at this year's Sankalp Africa Summit agreed on the importance of including women as drivers of change.

Women's empowerment, voice, and agency in environmental management and sustainable development initiatives only happens when they take a lead in decision-making processes. This means they need to be given critical roles in governance structures so they can drive the right gender-responsive strategies for change.

As the transition to the green economy progresses, women need to be supported and promoted to act as change agents while being entrepreneurs, decision-makers, and consumers. Photo by C. de Bode/CGIAR

GENDER AND WOMEN EMPOWERMENT

2. Urban farming as a key driver of sustainable food systems and women's economic empowerment in Kenya

Published in Intellecap Blog

Africa's population will double by 2050, and more than 80% of that increase will occur in urban cities, thereby creating a higher demand for food in urban areas. Urbanisation has led to the transformation of food systems by influencing trends in food demand and redefining consumer preferences, impacting how, where, and what food is produced, supplied, and consumed. Furthermore, Africa's urban and peri-urban areas are likely to suffer disproportionately from climate change, as the region as a whole is warming up 1.5 times faster than the global average. The strain on basic services such as clean water, housing, health services, and nutritious diet is worrying.

To curb the challenge of food insecurity in urban dwellings in Africa, the adoption of urban farming is inevitable. The lethal combination of rapid population growth, urbanisation, and climate change poses an ever-growing threat to food security. With the recent growth of urban population, food demand is also on the rise. Food demand is projected to rise 2.5-fold in sub-Saharan Africa by 2050 compared to 2010. According to IFPRI, the projected demand for meat, cereals, and fruits and vegetables on the continent is expected to more than triple by 2050. This increase is related to the expected increase in wealth and concentration of welfare, mostly in urban areas. Similarly, urban food environments provide more options for food products which typically include unhealthy and processed foods containing unhealthy amounts of sugar, salt, and fat available at cheaper prices. Although diverse nutritious foods options are also available for middle and upper class urban households, poorer urban households tend to prioritize sustenance over nutrition, and thus opt for affordable foodstuff and not necessarily nutrient-dense. This increased food demand and changing consumption habits are leading to a concomitant rise in net food imports in Africa, expected to grow from $35 billion in 2015 to more than $110 billion by 2025. Such high import costs can effectively be countervailed by increased food production within the continent.

Urban farming has the potential to diversify economies, increase food security and improve nutrition. It also provides an opportunity for climate adaptability options by reducing reliance on long distance transportation of agricultural produce, employing resource-efficient growing techniques such as vertical farming and hydroponics, composting of organic urban waste, among others. These practices result in reducing carbon emissions, optimizing use of space and water, and increasing resilience in the face of limited resources and changing climatic conditions. Since organic inputs are derived from recycled organic waste, and natural sources such as plants, microbes, or insects like the

black soldier fly, they help farmers reduce reliance on synthetic pesticides, which are produced through energy-intensive processes that generate significant greenhouse gas emissions. The overall outcome is a sustainable and nutritious food production chain for urban dwellers, with fruits and vegetables like cabbage, lettuce, tomatoes, chillis, and onions coming increasingly under production.

African women play a pivotal role in driving food security in both rural and urban households. In urban areas especially, women are increasingly concerned about promoting good nutrition and dietary diversity for themselves and within their families. They are often involved in urban farming and community gardening initiatives, optimizing small home spaces to grow vegetables and herbs. In Kenya, a powerful movement is steadily taking root, transforming the agriculture landscape, and fostering women's economic empowerment. Urban farming has emerged as a key driver of sustainable food systems, not only nourishing cities with fresh, nutritious produce but also offering a compelling solution to the challenges of food security, climate change, and gender inequality. Intellecap through its project, Reorienting the Private Sector to Enable Climate-Smart Agricultural Solutions to Address Gender Inequalities supported by IDRC, is working with 10 private sector enterprises (PSEs) (who have innovative business models that address climate change impact in the agriculture sector) to use gender-transformative approaches to scale their businesses. One of the PSEs that the project is currently supporting is Griincom Innovate Limited in Kenya. Griincom Innovate Limited is located in Nakuru County. Its business model entails recycling organic waste into organic farm inputs such as organic fertilizer, organic pesticide, and organic foliar as well as training smallholder farmers on efficient methods of farming. Foliar fertilizers are applied on the leaves or used in drip systems to boost plant performance. For the pesticides, they combine plant extracts (from select crops and indigenous plants) and rabbit urine through a fermentation process to produce the organic pesticides. The pesticides are used to control cutworms, aphids, cabbage looper, fall army worm, stalk borer, etc.)

Griincom's business model contributes immensely to the uptake of urban farming in Nakuru County (a region in Kenya that has both urban, peri-urban, and rural dwellers). Firstly, Griincom collaborates with urban dwellers and the county government to off-take kitchen organic waste and market organic waste respectively. In the case of the urban dwellers, Griincom encourages them to sort their household

source : Griincom

wastes into organic and non-organic waste, and thus prompts their interest in the use of organic waste through composting for direct usage in their gardens or earning from sales of the wastes to Griincom. The county government on the other hand act as a collaborator, providing an enabling environment through policy framework and allowing access to organic wastes produced by traders in markets within their jurisdiction, which Griincom then offtake for commercial composting.

Secondly, Griincom trains the urban dwellers on how to set up kitchen gardens. For instance, through demonstrations they have educated women on how to use various materials such as tire, flower vases, jerry cans and shed nets to design urban farms in their kitchens, verandas, and backyards. Thirdly, through trainings, Griincom demonstrate to urban farmers on how they can utilise their kitchen waste as organic input for their small gardens. Finally, Griincom's products are available in both small and large quantities in the county, allowing urban farmers with small gardens to afford their inputs.

Griincom as a champion for inclusive value chains

Griincom's production has contributed immensely to women's economic empowerment in Nakuru County, thus improving their livelihoods. Firstly, Griincom encourages women, who are the primary workers at home, to sort their kitchen waste into organic and inorganic waste and then collect the organic waste from them at a small fee. When food ends up in landfills, ethane, it generates methane, an even more potent greenhouse gas than CO2. As such, by sorting organic waste at the source, the overall amount of

waste sent to landfills reduces, thereby mitigating greenhouse gas emissions.

Secondly, Griincom trains women on composting kitchen waste into organic fertiliser that can be applied in their backyard gardens, thus increasing food production. Engaging women in the process of value addition of household waste to make organic fertilisers empowers them to contribute financially to their households and communities and to a circular economy. Thirdly, Griincom works with women farmers who rear animals such as rabbits and chicken for subsistence production as well as organised farmer groups. Griincom train the women on how to aggregate their animal waste which are then purchased as a raw material for the manufacture of Griincom's organic products.

Over the past three years, Griincom has trained over 200 women farmers in Nakuru County on household and livestock waste management, composting, and sustainable farming practices. These trainings have equipped women farmers with new skills and knowledge, empowering them to become more effective and efficient farmers, reduced their dependency on expensive synthetic fertilisers and pesticides, helped diversify their income streams, and enabled a majority of the women to engage in commercial production.

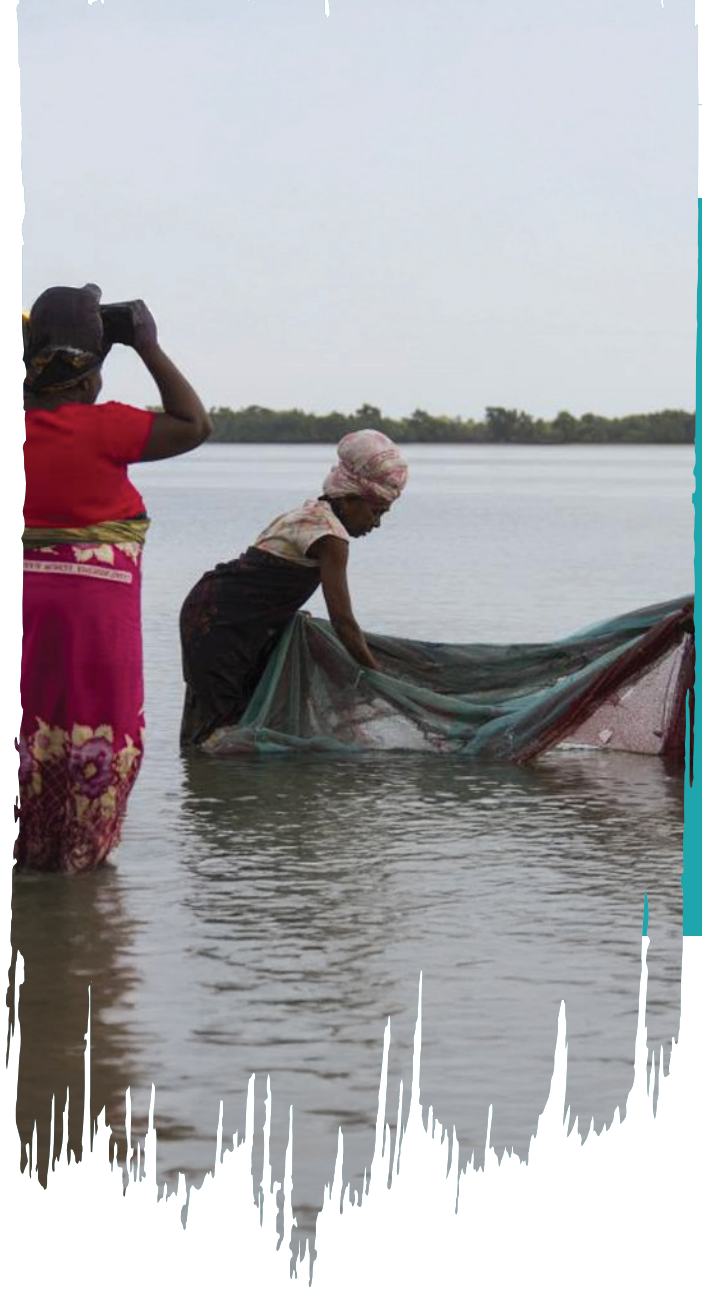
source : Griincom urban farming

Griincom as a changemaker in driving a sustainable economy

Recently, Griincom participated in the 2023 Nakuru National Agricultural Show, themed, "Promoting Climate Smart Agriculture and Trade Initiatives for Sustainable Economic Growth." At the event, the Griincom team leveraged demo plots on the show ground to demonstrate how a small plot of land can be optimised for food production and show the significant difference in yield of crops grown using organic inputs versus synthetic inputs. Based on field data provided by Griincom's CEO, Mildred Gachoka Day, Griincom's clients have recorded 40% to 50% increase in production after the 2nd and 3rd application of organic fertiliser respectively, compared to those who use non-organic inputs. Use of organic inputs has also reduced the cost of crop management and replanting by >50% for Griincom's clients. These results show the tremendous potential for scaling up sustainable food production on the continent. By participating in events such as the Nakuru Agricultural Show, Griincom is able to reach both rural smallholder farmers and urban food producers, including private, public, and development sectors alike to support climate-smart innovations in the landscape.

In conclusion, urban farming presents a huge opportunity to achieve the much-needed balance between environmental stewardship, meeting the rising demand for food, and empowering women in sustainable food production. It is vital that players in the food system lead the adoption of urban farming through innovation, awareness creation, and capacity building.

It is in this vein that Intellecap is supporting Griincom and other similar private sector enterprises with relevant technical assistance to improve their business model to reach more women actors in the food system, implement tailored marketing approaches, and identify new opportunities for growth, critical to creating more resilient and thriving communities. Other stakeholders, African governments, policy makers, and donors must also join the race to accelerate the adoption of urban farming through shaping policies, generating awareness by leveraging platforms such as the Nakuru National Agricultural Show, and channeling investments for the uptake of sustainable farming practices.



GENDER AND WOMEN EMPOWERMENT

3. The role of climate smart agriculture enterprises in women's empowerment

Published in Intellecap Blog

Climate change continues to be a significant concern globally. The effects of climate change are being experienced in East Africa in the form of increasing temperatures, weather variability, shifting agroecosystem boundaries, invasive crops and pests, and more frequent extreme weather events. On farms, climate change is reducing crop yields, the nutritional quality of major cereals, and livestock To combat the menace, an integrated approach to managing landscapes — cropland, livestock, forests and fisheries — has been championed in a bid to enhance food security. East Africa is the one of the most vulnerable regions to climate change as a result of its considerable development constraints Resilience and coping mechanisms across East Africa remain limited, reflecting structural factors restricting region's abilities to respond to and recover from shocks. In particular, heavy reliance on rain-fed agriculture increases humanitarian, social, and macroeconomic vulnerabilities to rising temperatures and extreme weather shocks, which most heavily affect the poorest segments of the region's rapidly growing population.

The scaling of climate-smart enterprises with a gender lens would contribute to the transition of East Africa countries to a low-carbon economy through women's economic empowerment. Innovations and enterprises using climate-smart agriculture practices can play a critical role in improving the region's food security. For this reason, it is imperative to support them in their efforts to scale up. In addition, given women's critical role in the region's food systems ecosystem – as producers, farm laborers, processors, and traders – it also becomes essential for these enterprises to embed a gender lens within their business design and advance gender mainstreaming. This is especially important since women in agriculture are often disproportionately affected by climate change.

It is estimated that 50% of the agricultural labour force in East Africa comprises women. Gender imbalances exist in the agriculture value chain and are further exacerbated by climate change. Women smallholder farmers are more vulnerable than men to climatic shocks and stressors as they tend to be more dependent on agriculture and natural resources and have less diversified livelihoods.

Structural gender inequalities impede women's ability to respond to, adapt to or mitigate climate change impacts. Women tend to have fewer and lower-value assets as well as less access to land, capital, labor, agricultural inputs, and social and institutional networks. Coupled with social norms and gender roles that limit their agency, both at the household and community levels, women's access to and use of climate-smart technologies is constrained. Subsequently, they have less time to pursue other sources of income as they are stuck in undertaking drudgery-prone activities as unpaid workers on the farm and in their homes. As a result, they face challenges such as limited decision-making power, negligible ownership of and control over land and other productive resources, time poverty and mobility.

It is in the business interest of enterprises to adopt a gender lens in their operations. Gender-inclusive approaches to business hold the potential for not only positively impacting women engaged in the sector, but also for providing a significant potential for the business growth of climate-smart agricultural enterprises. Evidence suggests that businesses incorporating women in their operations have better profitability and higher returns, more innovation, better decision-making, improved customer responsiveness and retention, and are also able to attract gender lens.

Intellecap has launched an accelerator program, 'Business Acceleration through gender mainstreaming' which aims to support climate smart agricultural enterprises in Kenya, Rwanda, Tanzania and Uganda to scale-up and simultaneously mainstream gender in their operations. This programme is part of the wider 'Reorienting the private sector to enable climate-smart agricultural solutions to address gender inequalities' programme, being supported by the International Development Research Centre (IDRC). The accelerator programme has so far selected two enterprises in Kenya and Tanzania operating at the nexus of sustainable agriculture and climate change. The accelerator programme runs for a period of 12 months, for each of the enterprises, divided into 2 phases: the first six months are spent on providing customised technical assistance support and capacity strengthening through training and coaching on business and gender mainstreaming; and the second phase includes impact assessment and monitoring and evaluation to support the businesses in further institutionalizing gender mainstreaming and keep track of it as the businesses scale.

source : Intellecap

The first cohort

Agriculture is one of the most important sectors of economic activity in East Africa, accounting for more than 68% in Tanzania and more than 40% in Kenya. Good agricultural practices such as using quality, improved, and resilient seeds and planting material, soil testing, and health conservation, land preparation techniques, safe and efficient use of crop protection products, efficient water use and post-harvest loss management, are fundamental in mitigating and adapting to the impacts of climate change. Inadequate implementation of these measures leads to increasing inefficiencies in the use of inputs. This, in turn, leads to increased cost of production, reduced yields, and an overall reduction in incomes due to the reduced yields and increased cost of production.

Alaska Tanzania and Aquarech Ltd in Kenya, two enterprises supported by the programme, are helping farming communities adapt to climate change.

Alaska Tanzania is working to support women farmers improve their productivity. Tanzania is the leading producer of rice in East Africa and the fourth largest in hectare. Evidence shows that negative impacts associated with climate change, inadequate use of regenerative agricultural practices, low yielding rice varieties, pests and diseases, and gender dynamics all contribute to the yields. While more than 68% of women in Tanzania are employed in agriculture, they have limited access to and control over productive resources like land and capital. Approximately, 8% of women in Tanzania own land independently, and furthermore, only men traditionally inherit land. This implies that most women can only farm their spouse's land or rent land. Subsequently, women have limited access to financing, leading to inadequate access to modern farming tools and other GAP resources such as seeds and fertiliser.

Alaska Tanzania sources rice from a pool of 65 small-scale farmers, of whom 65% are women

farmers. The rice is cleaned, sorted and packaged, and sold to customers through various distribution channels. Customers include; retail stores, hotels and restaurants, women-street vendors and institutions such as hospitals and schools. Alaska Tanzania trains farmers on good agricultural practices, climate change effects and coping mechanisms, including water conservation and effective use of inputs, thereby reducing the cost of inputs. So far, Alaska Tanzania has supported 8,000 paddy farmers through trainings on good agricultural practices, post-harvest losses and climate-smart measures. Additionally, it assists farmers in accessing high-quality inputs, and finance. On the customer side, Alaska Tanzania trains micro businesses, who form part of their customer base, on business management, to improve and scale their businesses. The business owners are empowered and equipped with knowledge on better business management, which enhances their income management and equips them to

source : Malingering, flickr.com

cope with climate change. In addition to the above interventions, Alaska Tanzania, through its Mama Lishe programme is championing gender inclusivity in agriculture by providing access to grants to women in the programme. Through this programme, Alaska Tanzania empowers street food vendors by training them on effective ways of managing their businesses.

Aquarech in Kenya is striving to reduce the vulnerabilities of women fish traders and enhance economic empowerment for women fish farmers. The fishing industry in Kenya is already under pressure from overfishing, habitat destruction, and weak governance due to inadequate policies and increased food demand from a rapidly growing population. These local stressors, along with the direct and indirect impacts of climate change, are resulting in an estimated 40% of the potential growth of the aquaculture sector being lost.

The sector is grappling with increasing sea temperatures and rising sea levels that affect fish breeding patterns and lower fish food supply, disrupting the regional fishing industry. Changes in the marine ecosystems have resulted in fish moving from the shore into deeper waters, which makes it riskier for small fishermen to accumulate enough catch to sustain their livelihoods. Although fishing is customarily considered a male activity, in Kenya, women play a substantial role in the fisheries sector, making up nearly half of the overall workforce in the fisheries value-chain. Despite their participation in the value chain, persistent gender inequalities exist due to inadequate education and training, cultural and societal norms and lack of financing, which prevent women from fully participating in economic opportunities and decision-making in the sector. This is where Aquarech is playing its part in helping small-scale fish farmers to adapt to climate change while actively championing gender mainstreaming in the sector.

Aquarech sells high-quality floating fish feed to fish farmers, and sources, aggregates fish from small-scale farmers and sells to fish traders and eateries. It also trains farmers on good aquaculture practices, climate change effects and coping mechanisms, including using improved and more efficient feeds. On the customer side, by linking farmers with quality fish feed, it is improving efficiency in the fish feed and reducing the overall production costs. By aggregating and selling fish to traders and eateries, it creates a reliable market for the farmers hence managing their revenues and providing income stability. It also has fish distribution outlets that directly serve the low-income communities, hence increasing access to nutritious food i.e., fish. Aquarech has an online platform, Aquarech farmer app, which allows fish farmers to directly trade with buyers on the platform, enhancing transparency in pricing. It also allows farmers to buy fish feed by placing orders through the platform. Furthermore, the platform offers a precise feeding regime that helps farmers adapt to climate change by monitoring and controlling water temperature. This feature eliminates underfeeding or overfeeding, thereby boosting fish production.

In addition to the above interventions for farmers, Aquarech is building sustainability for fish farmers by offering credit financing. Access to finance enables the fish farmers to increase their production whilst adapting to climate change and thus enables them to build sustainable businesses.

source : Intellecap

Challenges and opportunities in gender mainstreaming for the enterprises

While several enterprises offer climate-smart agriculture products and services in East Africa, multiple challenges limit their effective adoption and use: access to relevant and timely information, and inadequate capital are the most critical ones. The gender-impact potential of such products and services often remains unrealised due to the insufficient focus of the business on gender mainstreaming. Stakeholders such as investors lack the evidence to validate such enterprises' investment case and impact on women's economic empowerment and low carbon development.

Alaska Tanzania faces challenges in sourcing from more women farmers since women have limited access to finance and training on good agricultural practice. Aquarech faces challenges in linking women farmers to inputs and knowledge on good agricultural practice, as most of their suppliers and customers are men. Women traders also face challenges accessing fish due to underlying social issues, like fish for sex required to access fish, and in effect, affecting their equal opportunity to earn a living from fish trading.

Intellecap conducted a needs assessment of these two enterprises which surfaced the opportunities for gender mainstreaming across their operations. Over and above the impact on improving livelihoods of the people in the community, Alaska Tanzania can increase sourcing from women farmers through contract farming, supported by linking the women to capital, markets and agronomy training. For Alaska Tanzania's women customers, who are micro traders/ street food vendors (known as Mama Lishe), there is an opportunity to scale their businesses by linking them to financing partners and providing capacity-building support on business management.

On the other hand, opportunities for Aquarech can increase access to fish feed for its women fish farmers and improve access to markets for the women fish traders and thus potentially reducing their exposure to fish for sex. In addition, increased use of the digital platform has the potential to better link fish farmers to inputs and advisory services while transparently linking traders to markets.

The enterprises will spend the first six months of the program going through targeted gender-lens business development support. Support includes developing core value propositions through a business model canvas, market analysis and marketing opportunities, scaling strategies (including business planning, growth and operational efficiency), team and partnership management, financial management, capital raising and investor readiness. Intellecap will work with each of the enterprises to develop a Gender Action Plan which will guide them in their gender mainstreaming efforts across their operations.

By gender mainstreaming and including more women as customers and suppliers, the enterprises will increasingly impact women by helping them to cope with climate change. Adoption of a Gender Action Plan by these enterprises will not only lead to women's economic empowerment but also contribute to transition to a low carbon economy through the climate smart agriculture techniques they adopt.

GENDER AND WOMEN EMPOWERMENT

4. Inclusive value chains: experiences of gender mainstreaming

Published in Intellecap Blog

Women's Economic Empowerment through the reduction of gender inequalities in global value chains is a crucial path to achieving the 2030 Agenda for Sustainable Development Goals, especially SDG 5-Gender Equality. It is estimated that if women are allowed to participate equally and fully in the global value chains, they could contribute up to USD 28 trillion to global GDP annually by 2025.

Despite the commitment and funds channeled into numerous initiatives to get more Women-owned and led Small and Medium Enterprises (WSMEs) into global value chains, the results have been underwhelming. Procurement from WSMEs by businesses across sectors vastly lags that of male-owned and led SMEs. For instance, although one-third of registered SMEs globally are estimated to have been created by women, large corporations and governments spend less than 1% of their procurement budgets on WSMEs, leaving key business and development benefits untapped. A structural transformation in commercial ecosystems is required in order to incorporate WSMEs and other disadvantaged groups in supply chains equitably.

It is in this context that Intellecap and the International Development Research Centre (IDRC) hosted an event, moderated by Amar Gokhale of Intellecap, at the 10th Sankalp Africa Summit. The aim of the session was to share experiences and ways in which different organisations, small and large businesses, public and private, across multiple sectors, can enhance gender considerations in their value chains, with the intent of increasing women's participation throughout.

Paul Okwi, Senior Programme Specialist, IDRC introduced the session and explained that IDRC focuses on fostering partnerships and generating quality knowledge to create social impact. IDRC funds the GLOW programme, which investigates pathways to achieving SDG 5 by creating gender equality in low carbon economic transitions. Via GLOW, IDRC supports the Intellecap-led project 'Reorienting the Private Sector to Enable Climate-Smart Agricultural Solutions to Address Gender Inequalities'.

In this project, Intellecap is working with 10 SMEs operating at the intersection of sustainable agriculture/food systems and climate change, to help them mainstream gender considerations in their operations, including in their value chains.

source : Intellecap

Inclusive value chains through inclusive procurement policies

One of the most effective ways firms can champion diversity, equity and inclusion is to increase their spending with diverse suppliers and vendors in their value chains. For example, Safaricom, a listed Kenyan mobile network that is well known for its invention of the global mobile payment service Mpesa, has incorporated a policy that requires 10% of the organisation's procurement to be sourced from WSMEs, through its Women in Business initiative.

Agnes Wanjiru, Sustainability Manager, Safaricom explained that the number of women-owned businesses pre-qualified in Safaricom's procurement has increased from 20 to 245, via this initiative.

Despite the increase, Safaricom's experience is that WSMEs are concentrated in less profitable sectors that are associated with low spending. This is a consequence of the additional barriers that women face while trying to build and grow a business, such as time constraints: women have competing demands on their time, such as family responsibilities. They also face gender biases arising from cultural constraints, and they lack access to business networks – due to limited access to capital and information.

It is evident that having policies that promote inclusive procurement is a step in the right direction. However, more needs to be done by organisations and actors in commercial ecosystems to address systemic inequalities in value chains. While noting the challenge, Ms Wanjiru mentioned that Safaricom's initiative has provided useful insights and learnings for the organisation, as well as fostering forums within Safaricom that promote awareness about inclusion. Furthermore, through its sustainability reporting, Safaricom has striven to report on progress in women's inclusion, irrespective of the small strides achieved thus far.

source : EUCP

Inclusive value chains through capacity building

To ensure that WSMEs are able to participate in global supply chains, it is critical to strengthen their capacities on procurement readiness. Sourcing2Equal Kenya is an initiative by IFC that brings together 11 corporate buyers, including Safaricom, to increase access to corporate procurement opportunities for WSMEs. Angela Kariuki, Project Coordinator – Gender and Economic Inclusion Group, IFC noted that the programme is addressing barriers faced by both buyers and WSMEs through two activity streams: a) corporate peer learning on ways to increase sourcing from WSMEs; and b) capacity building of WSMEs on corporate procurement requirements.

WSMEs are provided with technical assistance on formalising their businesses, procurement policies and regulations, contract management, procurement technology, market research and analysis and negotiation skills. With the technical assistance and skills garnered through procurement capacity building programmes, more women entrepreneurs are able to engage more competitively in 'high spend' (more lucrative) business categories.

Inclusive value chains through tech-enabled platforms

Technological platforms can play a significant role in encouraging more women entrepreneurs to participate. Platforms provide remote access to procurement opportunities, encouraging women to be economically engaged while working from home. The majority of women work from home as they are the primary caregivers at home.

Online platforms also provide greater transparency in the procurement process, making it easier for women-owned businesses to understand what they need to do in order to succeed. It helps to level the playing field and make it easier for women to

compete with larger, more established businesses. By providing a centralised platform where buyers and sellers can connect, procurement platforms create more opportunities for women entrepreneurs and help close the gender gap in procurement. In addition, the platforms help women-owned businesses, which may have previously struggled to gain visibility or access to funding, to connect and showcase their businesses to potential investors.

Data collected through procurement platforms can be useful in tracking progress and identifying areas where further action is needed to address gender inequalities. For instance, Aquarech, a fish farming platform, enables fish farmers, fish feed manufacturers, and fish traders to trade and build trusting long-lasting partnerships. Ithas made significant strides in developing activities along the value chain in Kenya's aquaculture sector.

Dave Okech, Founder and CEO, Aquarech, noted that through the platform more women fish farmers are able to participate along the value chain. They are able to procure and sell fish products conveniently and access aquaculture knowledge and skills, such as precision fish farming techniques.

Moreover, the platform enables women to participate equally and fairly in the value chain by eliminating fish for sex (FFS) and other forms of discrimination in the aquaculture sector.

Finally, Aquarech uses the information from the platform to better understand and serve the women fish farmers and traders by providing solutions to their challenges.

source : Green Harvest and Intellecap

Inclusive value chains through financial inclusion

A majority of women entrepreneurs disproportionately face barriers to accessing finance, primarily due to lack of collaterals, as a consequence of lack of ownership of land and other fixed assets. Globally, less than 15% of all landholders are women. Additionally, limited financial literacy and limited access to financial education due to societal and cultural norms makes it harder for women to navigate financial systems and secure financing. Furthermore, family responsibilities such as caring for children and elderly family members, prevent them from fully participating in the economy and thus improving their livelihoods.

One of the ways to address financial access barriers faced by women entrepreneurs is by developing financial products tailored specifically for women. In this regard, Jackie Githiga, Business Development Manager, KWFT noted that KWFT, a women-only microfinance bank in Kenya, has been on the forefront of addressing this challenge through providing specialised financial products such as affordable loan financing to women entrepreneurs with limited access to financing.

Through access to affordable financing, women entrepreneurs can participate more fully in the value chain by expanding their product and service offerings and creating more job opportunities. Moreover, through their products and services, women entrepreneurs can bid for procurement opportunities in higher-spending categories.

Finally, the specialised products and services for women enable more women to be included in the financial sector thus enabling researchers to deepen their study, develop a framework for inclusion, innovate new products and services and highlight their successes and challenges, thereby increasing insight on how to address financial access barriers.

In summary

Inclusive value chains are critical in addressing systemic inequalities and leveling the playing field for disadvantaged groups. Both the private and public sectors can adopt policies to ensure diversified and inclusive sourcing. Secondly, governmental support through grants and interventions that support equality, education and awareness for disadvantaged groups such as WSMEs can be ramped up. Finally, increased access to financing by the financial service sector can be promoted. Research institutes can also play an important role by highlighting successes and challenges in the world of business and suggesting possible solutions.

GENDER AND WOMEN EMPOWERMENT

5. Levelling the AI playing field for women in agriculture

By Niharika Agarwal, Manager & Wambui Kuria, Manager, Intellecap

Published in Intellecap Blog

Training women alongside men builds value for diverse perspectives, boosting women's participation in technology and enhancing the overall efficiency and productivity of agricultural systems.

By NIHARIKA AGARWAL & WAMBUI KURIA

Artificial intelligence (AI) is touted as a game-changer. Companies like Neurafarm in Indonesia have developed AI-powered solutions to detect plant diseases and recommend treatment solutions for farmers, while Ignitia in Ghana has developed climate intelligence and forecasting solutions for agribusinesses, providing much-needed support for smallholder farmers.

However, these advancements risk perpetuating gender biases if women farmers are not included in the data used to develop and test such technologies. Most leading AI companies are led by men and 70 percent of the sector's workforce is male.

Additionally, AI models for agriculture often rely on training data that's been collected primarily from male farmers.

This means the algorithms are designed to solve problems from a male perspective, leaving out the farmers such as access to land or the double burden of unpaid domestic labor unique challenges faced by women.

Without targeted interventions, the gender digital divide will continue to grow, leaving women farmers at a disadvantage in adopting new technologies like AI. So how can we ensure AI benefits women as much as it does men?

Design inclusive AI

First, we need gender-balanced data to train AI models to eliminate any misrepresentation. Developers must make sure that the training data includes inputs from both male and female farmers to reflect the diverse challenges they face. Involving women in the design, testing, and development of AI tools will help create solutions that are not only technologically sound but also socially inclusive and acceptable.

Open data

Second, making agricultural data freely available can encourage the development of more inclusive AI technologies. Stakeholders need to make data freely available for all people and entities to use.

Governments, tech firms, and women's organisations should collaborate to ensure that both men and women benefit equally from these innovations. Open data initiatives can also help track gender disparities

in agriculture, providing actionable insights for policymakers.

AI governance structures

Research conducted by the Stanford Social Innovation Review indicates that 44 percent of existing AI systems globally exhibit gender bias.

There is a need for well-developed and validated AI governance models that have the potential to prevent and address any racial or gender bias exhibited by AI solutions and be able to reinforce safety and privacy standards.

Targeted education and training

Access to AI is not enough if women do not have the skills to use it. Equipping women with essential skills and knowledge to adopt AI solutions and participate fully in the field is key.

Women, especially in rural areas, need targeted digital and AI literacy training alongside skills in data management, using AI technologies in agriculture, empowering them to fully participate in the digital revolution, levelling the playing field.

This is where government programs and private sector outreach to farming communities become crucial.

Training women alongside men builds value for diverse perspectives, boosting women's participation in technology and enhancing the overall efficiency and productivity of agricultural systems.

Increase women's participation

Finally, it is essential that women are represented in leadership roles within the AI and agricultural sectors. Only about 18% of leadership positions in AI are held by women, a glaring gap that needs addressing.

By increasing women's participation at the decision-making level and building diverse teams, we can ensure that AI solutions are more gender-responsive and better equipped to tackle the complex challenges in agriculture.

Further, women's inherent skills in communication, empathy, etc. may be used in generative AI for agribusinesses to include women in market or customer outreach functions and design more gender-responsive solutions.

GENDER AND WOMEN EMPOWERMENT

6. Channel Female Leadership for Sustainable Land Management

Published Business Daily Africa

Historically, women in Kenyan communities have been the stewards of the land.

In a nation where land is not only a precious resource but also a cultural heritage, sustainable land management and conservation are pivotal for preserving Kenya's natural wealth for generations to come.

At the forefront of these efforts are women, whose contributions and leadership are instrumental in safeguarding the country's ecosystems and ensuring a sustainable future.

Historically, women in Kenyan communities have been the stewards of the land, drawing upon indigenous knowledge and sustainable practices to maintain the delicate balance between human needs and environmental preservation. As the custodians of their households, women ensure food security for their families.

However, women face significant challenges in land ownership. Land is mostly owned by men, limiting women's access to financial resources and decision-making power.

Despite these hurdles, women across Kenya are rising to the challenge and leading grassroots conservation initiatives that are making a tangible difference in their communities. Women are at the core of helping their communities to mitigate the impacts of climate change and ensure food security in the face of changing weather patterns and environmental challenges.

To fully harness the potential of women's leadership in sustainable land management, it is essential to create an enabling environment through gender-responsive policies. These policies should ensure women's equal rights to own, inherit, and control land, as well as facilitate their access to financial resources for sustainable land management projects.

It is critical that policies facilitate women's access to credit, loans, and grants for sustainable land management projects. Policies targeting funding for women-led initiatives and organisations would be game-changing.

Moreover, policies should mandate women's equal representation in decision-making bodies, such as land management committees and conservation boards, to ensure their perspectives and priorities are considered. By implementing these gender-responsive policies, governments can unlock the potential of women to drive positive change for both communities and ecosystems.

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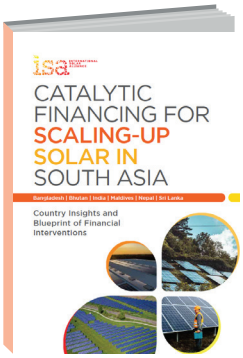

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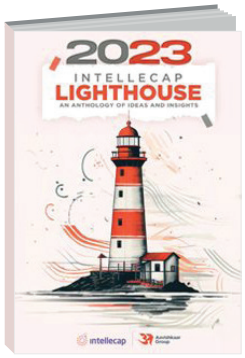

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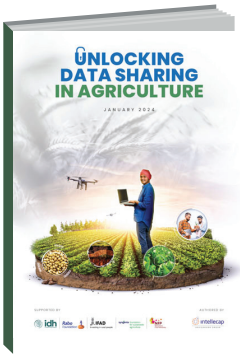

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