



## Workshop on Youth Vision for a Circular Economy

### Green jobs and Entrepreneurship



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# Recent policy discussion with respect to climate

## From COP21 to COP27



**2020 UN BIODIVERSITY CONFERENCE**  
**COP 15** - CP/MOP 10 - NP/MOP 4  
Ecological Civilization-Building a Shared Future for All Life on Earth  
KUNMING – MONTREAL



Cooperation in a  
fragmented world



- Increased emphasis on the phase-out of coal rather than phase-down
- Pressure of biodiversity conservation is mounting on the coal producers, particularly which are in their developing phase
- North has been successful in dividing the countries of coal producer and petroleum producers
- The Russia-Ukraine war has called for an immediate action on fossil fuel

# The premise: global context

NAME ↑↓	COUNTRY ↑↓ All ▼	SECTOR ↑↓ All ▼	ANNUAL REVENUE ↓	TARGET YEAR ↑↓ All ▼	TARGET TYPE ↑↓ All ▼	END TARGET STATUS ↑↓	INTERIM TARGET ↑↓ All ▼
<a href="#">Walmart</a>	USA	Retail	\$559bn	2040	Net zero	In corporate strategy	2025
<a href="#">Apple</a>	USA	Retail	\$379bn	2030	Carbon neutral(ity)	In corporate strategy	2030
<a href="#">UnitedHealth</a>	USA	Services	\$298bn	2035	Net zero	Declaration / pledge	2030
<a href="#">Amazon</a>	USA	Retail	\$296bn	2040	Net zero	In corporate strategy	2025
<a href="#">PetroChina Co</a>	CHN	Fossil Fuels	\$281bn	2050	Zero carbon	Proposed / in discussion	2025
<a href="#">Exxon Mobil</a>	USA	Fossil Fuels	\$281bn	2050	Net zero	In corporate strategy	2030
<a href="#">Toyota Motor</a>	JPN	Manufacturing	\$281bn	2050	Carbon neutral(ity)	In corporate strategy	2030
<a href="#">BP</a>	GBR	Fossil Fuels	\$272bn	2050	Net zero	In corporate strategy	2025
<a href="#">Sinopec</a>	CHN	Fossil Fuels	\$271bn	2050	Carbon neutral(ity)	Proposed / in discussion	2030

# The premise: Indian context

NAME ↑↓	COUNTRY ↑↓ IND ▼	SECTOR ↑↓ All ▼	ANNUAL REVENUE ↓	TARGET YEAR ↑↓ All ▼	TARGET TYPE ↑↓ All ▼	END TARGET STATUS ↑↓	INTERIM TARGET ↑↓ All ▼
<a href="#">Indian Oil</a>	IND	Fossil Fuels	\$72bn	2046	Net zero	Declaration / pledge	
<a href="#">Reliance Industries</a>	IND	Fossil Fuels	\$61bn	2035	Net zero	In corporate strategy	
<a href="#">State Bank of India</a>	IND	Services	\$51bn	2030	Carbon neutral(ity)	In corporate strategy	
<a href="#">Oil &amp; Natural Gas</a>	IND	Fossil Fuels	\$47bn	2070	Net zero	In corporate strategy	2021
<a href="#">Bharat Petroleum</a>	IND	Fossil Fuels	\$43bn	2040	Net zero	Declaration / pledge	
<a href="#">Tata Motors</a>	IND	Manufacturing	\$30bn	2045	Net zero	Declaration / pledge	2030
Rajesh Exports	IND	Retail	\$26bn		No target		
<a href="#">Tata Consultancy Services</a>	IND	Services	\$22bn	2030	Net zero	In corporate strategy	2025
Tata Steel	IND	Materials	\$21bn		No target		
ICICI Bank	IND	Services	\$21bn		No target		
<a href="#">HDFC Bank</a>	IND	Services	\$21bn	2031	Carbon neutral(ity)	In corporate	

# G20 Priorities

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- Priority 1: Mechanisms for mobilization of timely and adequate resources for climate finance (expected investment of at least USD 4–6 trillion<sup>4</sup> per year will be required for a global transformation to a low-carbon economy.)
- Priority 2: Enabling finance for the Sustainable Development Goals (USD 2.5 trillion to USD 4.2 trillion annually due to the reduction in SDG)
  - nature-related data and reporting
  - social impact investing
- Priority 3: Capacity building of the ecosystem for financing toward sustainable development

# Green and sustainable economy

Economy India

## India sees 8-fold rise, adds over 52k workers in solar & wind energy sectors in FY22, study shows

India's clean energy sectors employ 164,000 workers as of FY22 showing a 47% increase from FY21, finds the study jointly conducted by three organisations — CEEW, NRDC India, & SCGJ.



### Battery Energy Storage System

Job roles: Storage system operator, Battery management system operator



### Green Hydrogen

Job roles: Green hydrogen production operator, Green hydrogen application analytics



### EV Charging & clean Transport

Job roles: Solar charging operator, Battery swapping operators

## Opportunities

for multi - skilling and new jobs creation



### Renewable Power Generation

Job roles: RE installation & O&M technician, Clean energy entrepreneurs, Biomass plant/biofuel production operator



### Circular Economy

Job roles: Manager - circular economy product and packaging technicians



### Make in India for the world

Job roles: Solar PV manufacturing technician, Wind turbine manufacturing technician



### Green Buildings

Job roles: Energy efficient building designer, Green building material sourcing manager

# Tata Power: example

Tata Power Skill Development Institute (TPSDI) has so far trained 1.4 lakh people across its courses both conventional and renewable energy technology. They are training on an average 3000 trained professionals per year

- Solar photovoltaic for electric vehicle charging
- Installation and maintenance of rooftop solar photovoltaic
- Installation of smart meters, and home automation to promote smart and efficient energy

# Green entrepreneurship opportunities

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**Product manufacturing and services** (renewable energy, energy storage, charging stations, rooftop solar, green hydrogen, data and technology enabled products etc.)

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**Circular economy** (waste management, recycling and re-use industry, packaging, advisory and services of material reuse)

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**Transport and Construction-** green construction, e-mobility, hydrogen vehicles

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**Services-** consultancies, R&D, ESG advisory, Sustainable (design, engineering and construction) advisory, Energy management, power system tech and analytics, carbon tracking and measurements, climate finance etc.)

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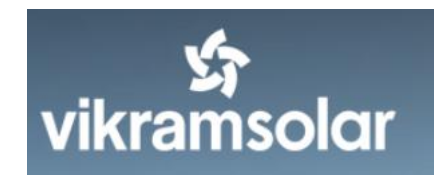
**Ecosystem services-** Land restoration, Nature-based solutions, precision agriculture

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**Climate technologies-** mitigation technologies such as geo-engineering, CCUS, climate adaptation (heat-action plan), climate prediction and warning, tailor-made insurance products



# Job Roles and start-ups in Green technologies



# Corporate in ESG domain



## Roles

- Consultant/ Senior consultant/Principal consultant
- ESG Rating Specialist
- Lead/Head/Director/ Advisor/Partner
- Associate (Analytics and benchmarking)
- Sustainability Manager/officer
- Risk analyst
- Risk Modeler
- Content reader/analyst
- Researcher (senior, associate)
- Client service specialist

# Type of skills required in ESG



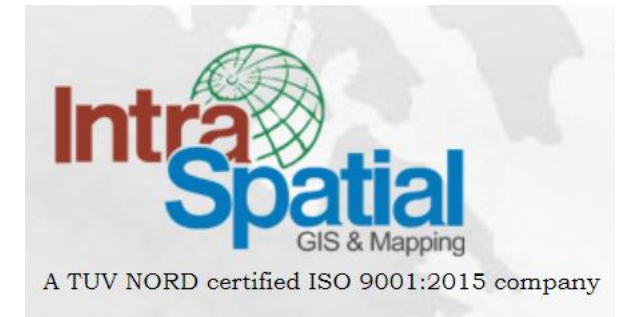
## You need to know

- Background of sustainability and climate change debate
- Sustainability reporting standards
- GRI- Global Reporting Initiatives
- NbS- Nature-based Solutions
- SASB- Sustainability Accounting Standard Boards
- TCFD- Task Force on Climate Related Financial Disclosure
- Water auditing standards
- Green building standards
- ISO standards
  - ISO 14001
  - ISO 14064
  - ISO 50001
  - ISO 4001

# Geospatial start-ups

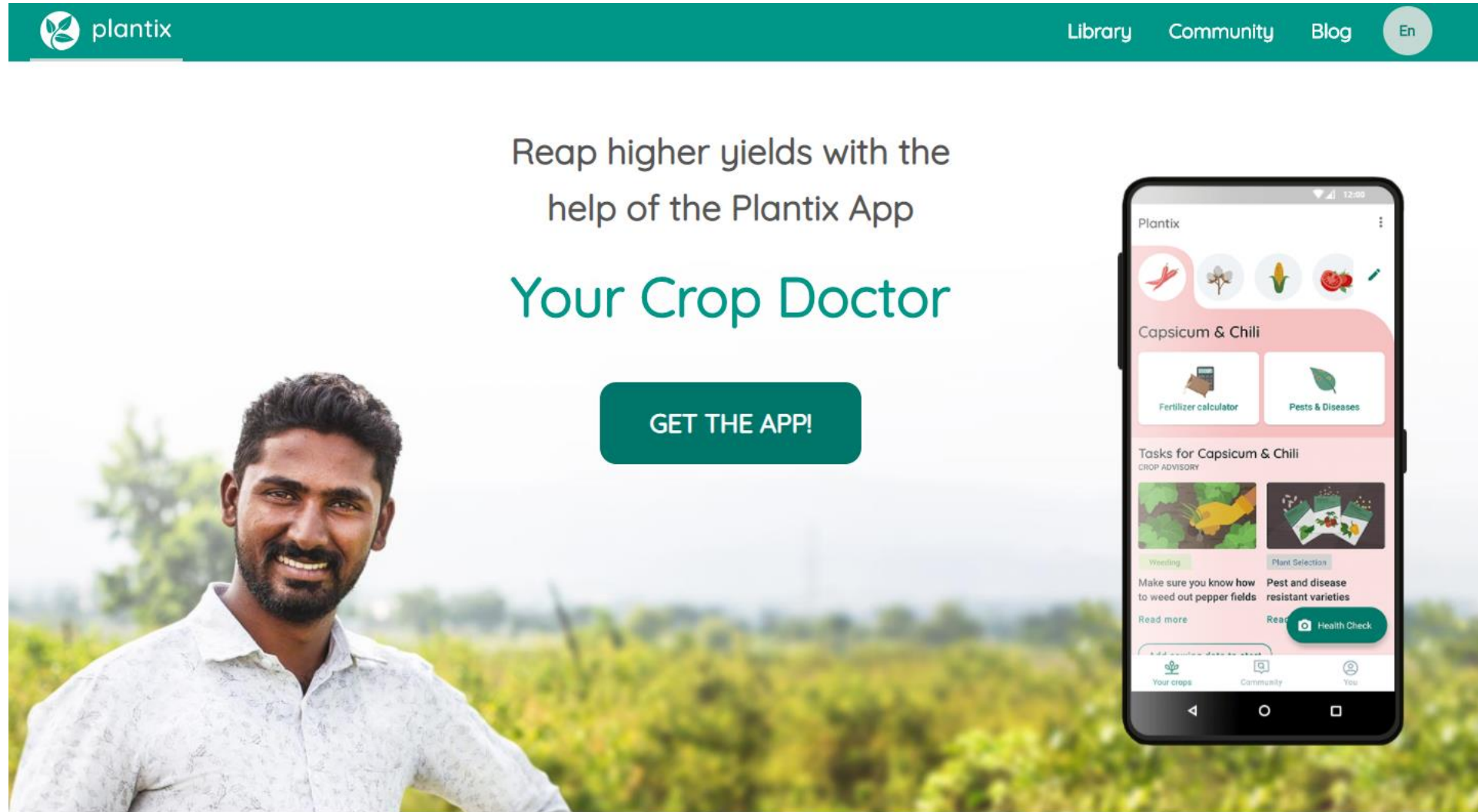


IGIS





# The story of Plantix...A German start-up



The advertisement features a smiling man in a white patterned shirt standing in a lush green field. To his right, a smartphone displays the Plantix app interface. The app's header includes the Plantix logo and navigation links: Library, Community, Blog, and a language selector (En). The main content area of the app is titled 'Capsicum & Chili' and includes sections for 'Fertilizer calculator', 'Pests & Diseases', and 'Tasks for Capsicum & Chili'. The 'Tasks' section lists 'Weeding' and 'Plant Selection' with corresponding icons and text. A 'Health Check' button is visible at the bottom of the app interface.

plantix

Library Community Blog En

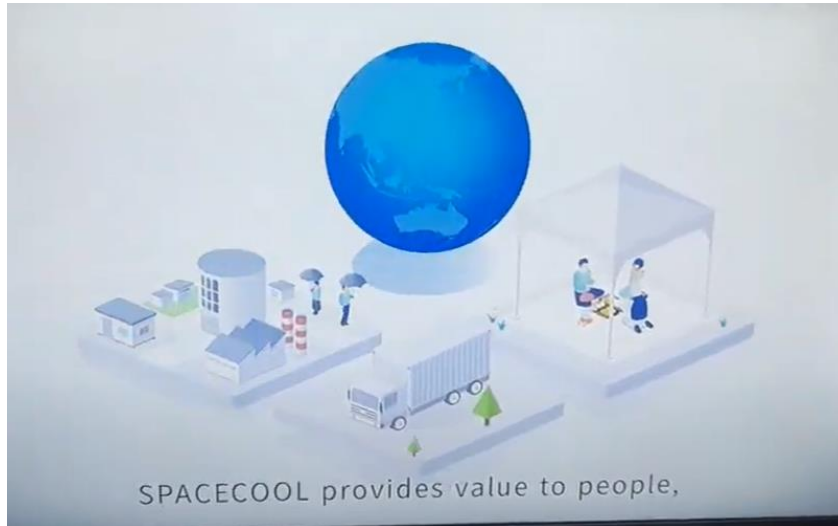
Reap higher yields with the  
help of the Plantix App

Your Crop Doctor

GET THE APP!

# Opportunities and innovation

## Use Case 2: Tanker based water distribution network in Bengaluru



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## Promises and challenges of perovskite solar cells

[JUAN-PABLO CORREA-BAENA](#) [id](#), [MICHAEL SALIBA](#) [id](#), [TONIO BUONASSISI](#), [MICHAEL GRÄTZEL](#) [id](#), [ANTONIO ABATE](#) [id](#), [WOLFGANG TRESS](#) [id](#), AND

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# Questions



Thanks



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