Importance of Technology for Environmental Protection

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Our work on technology

Supporting Global Initiatives
- Sustainable Development Goals (SDGs)
- Climate change negotiations (UNFCCC)
- Sustainable Energy for All initiative
- Kigali Agreement

Hosting Secretariats
- Climate Technology Centre and Network (CTCN)
- Climate and Clean Air Coalition (CCAC)
- Renewable Energy Network for 21st Century (Ren21)

Providing Assistance to Countries and Cities
- Programmes and Projects

Multistakeholder approaches for concerted action
- Multiple angles (low-carbon, sustainable energy, resource efficient cities)
- Sustainable Consumption and Production, Sustainable Lifestyles.
- Green Economy

Technology for Sustainable Development

- 17 Goals
- 169 Targets
- 232 Indicators

as means for achieving the SDGs

UNFCCC Technology Institutions
Promoting technologies, building local knowledge and capacity

- **Technology Mechanism**

    Climate Technology Centre and Network (CTCN)

    Technology Executive Committee (TEC)

- **Technologies for adaptation**

    Adaptation Committee

- **Financing for technology**

    Green Climate Fund (GCF)

    Global Environmental Facility (GEF)

    World Bank

Science, Technology and Innovation Forum
June 2016 and May 2017

Objectives

- **Monitoring and sharing trends**

- **Showcasing solutions and achievements**

- **Collecting and disseminating information**

- **Identifying emerging priorities and knowledge and innovation gaps**

- **Building STI-for-SDGs community of collaborators**

2018 STI Forum

Date tbc

Theme - *Focus on SDGs 6, 7, 11, 12, 15 and 17*

Aligned with **High Level Political Forum** theme:
"*Transformation towards sustainable and resilient societies*"
Date tbc

Online Platform

➢ **Mapping** of existing science, technology and innovation initiatives, mechanisms and programmes (UN and non-UN)

➢ **Facilitate access** to information, knowledge, experience, best practices and lessons learned on facilitation initiatives and policies

➢ **Disseminate** relevant open access scientific publications generated worldwide

➢ **Independent technical assessment** completed – analysed 35 existing platforms. Explored **value-added** partnerships with existing initiatives.
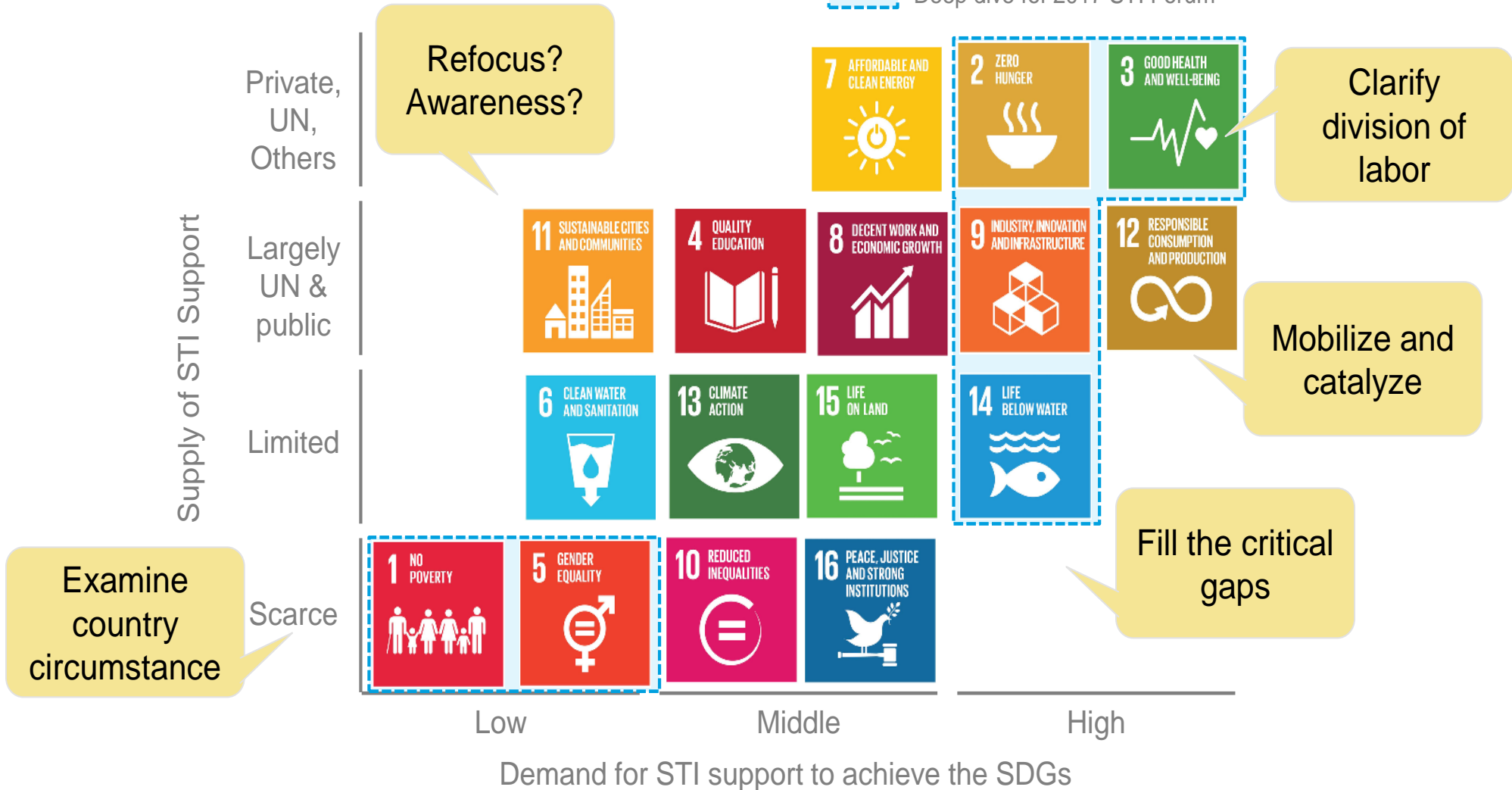
UN Environment Initiatives on Air Pollution

UN
environment
United Nations
Environment Programme

Climate and Clean Air Coalition (CCAC)

Action to accelerate efforts to reduce short-lived climate pollutants.

Partnership for Clean Fuels and Vehicles (PCFV)

Supporting countries to introduce cleaner fuels and vehicles.

Global Fuel Economy Initiative (GFEI)

Helping promote cleaner and more efficient vehicles.

Global Alliance for Clean Cookstoves (GACC)

Creating global market for clean and efficient household cooking solutions.

United for Efficiency (U4E)

Energy efficiency "accelerator" for lighting, appliances and equipment

Electric Vehicles (EVs)

- Becoming prevalent in **China, Japan, US, European markets**.

- Many **new models** including Tesla Motors, Ford, Mercedes..

- Have reached **1 million** in 2015 and **2 million** in 2016.

- **Policy support** remains critical.

Cleaner 'Soot-Free' Buses for Megacities

- **<20%** of all **buses sold globally** meet the definition of soot-free, with the vast majority being diesel powered.

- BYD, Cummins, Scania and Volvo Buses will ensure **'soot-free' engine technology** is available for purchase in megacities beginning in **2018**.

Source: CCAC, 2017

Drones

Environmental applications include:

- Species and habitat **monitoring**;
- **Mapping** coastline or soil erosion;
- **Precision** agriculture.

Using Satellites to Monitor Open Burning

- **Open burning** is the single largest source of black carbon (BC) emissions globally.

- **~36% of BC emissions** (agricultural fires being 10-20% of all fires).

- **International Cryosphere Climate Initiative**

Use satellite data to monitor BC emissions from open burning.

Source: CCAC, 2017

Technology for Smart Agriculture

~70% of world's freshwater
is used by agricultural industry.

- **Drip Irrigation**
- **Precision Fertilizers**
- **Aerial imagery analysis**
- **Fertigation** (nitrogen + irrigation)
- **Field print calculator** (state conditions)

Mobile Phone Technology
Respond more quickly to natural disasters, conflicts and disease outbreaks.

Savings from efficient air conditioners

ANNUAL SAVINGS IN 150 DEVELOPING COUNTRIES AND EMERGING ECONOMIES WILL REACH IN 2030

620 Twh OF ENERGY, EQUIVALENT TO 390 COAL-FIRED SMALL OR LARGE POWER PLANTS

OVER **310 MILLION** NEW HOUSEHOLDS CONNECTED TO GRID
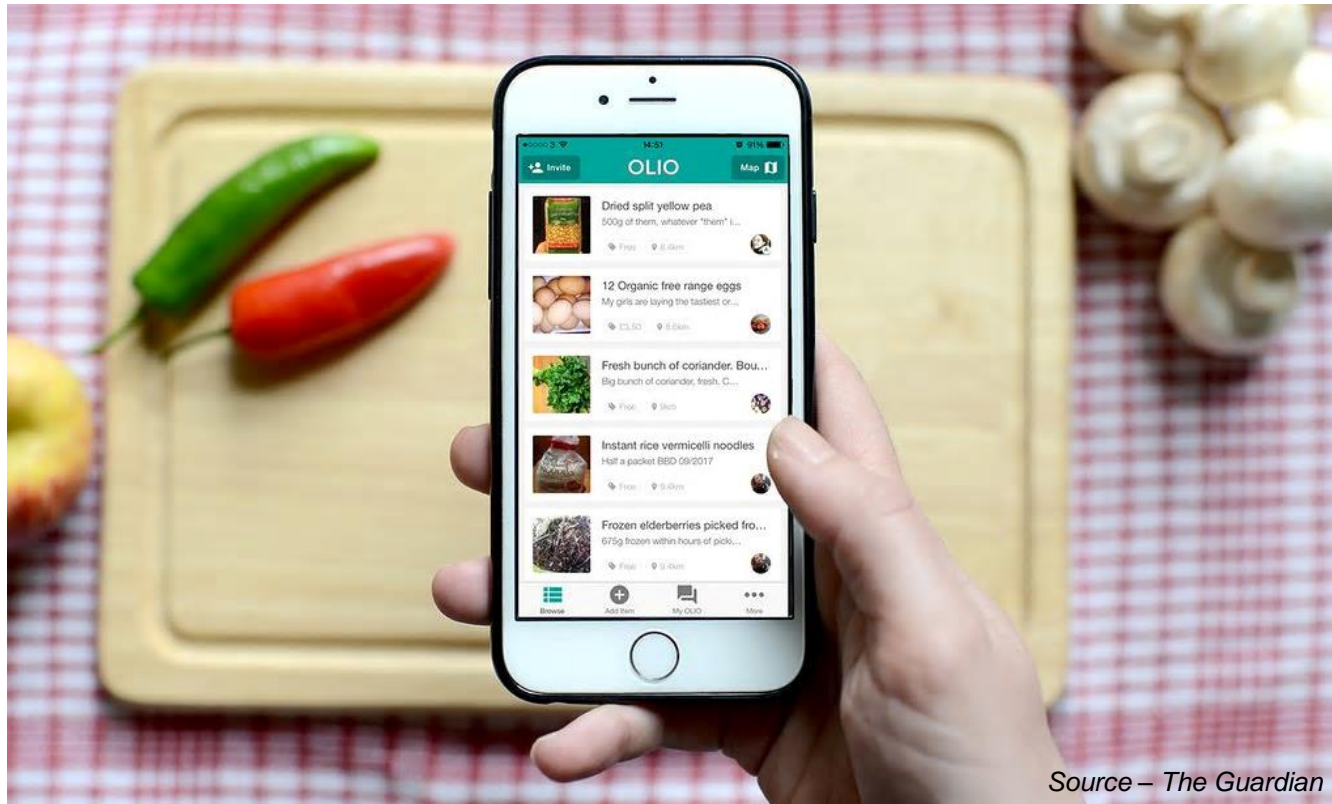
480 MEGATONNES OF CO_2 EMISSIONS

$56 BILLION IN CONSUMER SAVINGS ON THEIR ELECTRICITY BILLS

THESE SAVINGS ARE EQUIVALENT TO THE CURRENT CONSUMPTION **OF GERMANY**

Technological innovations to tackle waste

UN environment
United Nations Environment Programme

**Food sharing apps
intelligent food labelling
smart fridges**

1/3 of produced food is lost or wasted

815 million people go hungry

Source – The Guardian