LET'S
TALK
ABOUT

Technology Sectors

that are working towards sustaining our future on this planet.

TECHNOLOGY FOR IMPACT

'Tech for Good' also referred to as 'Tech for Impact' is an umbrella term that refers to technological advancement and accelerating technologies being developed and used to resolve societal and environmental issues.

There are several existing and emerging sectors within tech for good/tech for impact segment of the accelerating tech industry. Since most of these are new or evolving concepts, there are certain overlapping aspects among them.

Let's take a look at the major tech innovation and impact sectors working for the planet.

CLIMATE-TECH

Technologies that are explicitly focused on addressing the impact of global warming and climate change.

It encompasses all the technologies aimed at making the key industries such as energy, finance, food & agriculture, urban planning, mobility, manufacturing among others more sustainable and regenerative.

Examples:

Zero-emission hydrogen powertrain for airplanes

Waste analysis technology to identify, sort, and recover waste

Rechargeable power stations and solar panels for outdoor and emergency use

WATER-TECH

Technologies aimed at making water consumption safe, sustainable, and regenerative.

These are focused on purification, reuse, and elimination of wastage of water across industrial, commercial, and personal usage scenarios.

Examples:

Chemical-free water purification systems

Solar Canals serving dual purpose of producing energy and reducing evaporation

Water Decarbonisation technology

FIRE-TECH

Technologies developed to handle megafires such as a wildfire burning through a forest, an occurrence that has increased as an impact of global warming.

These are focused on predicting, analyzing, reporting, curbing, and minimizing the impact of megafires.

Examples:

Pano AI
A deep learning AI and computer vision to automatically detect, verify and classify wildfire events in real time

Remotely controlled aerial firefighting aircrafts/water bombers

BurnBot - Scaling fuel treatment to wildfire mitigation

CARBON-TECH

Technologies aimed at reducing CO2 emissions in the planet's atmosphere.

Building on the principles of the circular economy for managing carbon emissions: to reduce the amount of carbon emissions entering the atmosphere, to reuse carbon emissions as a feedstock in different industries, to recycle carbon through the natural carbon cycle with bioenergy, and to remove carbon and store it.

Examples:

Carbon Capture Technology - capturing and storing carbon dioxide (CO2) before it is released into the atmosphere

Smart Grid Analytics to improve energy efficiency by directly reducing power losses, thus energy consumption

Planetary Hydrogen Ocean Air Capture (OAC) technology - using renewable electricity to produce hydrogen

OCEAN-TECH

Technologies aimed at safe use, protection of, and intervention in, the marine environment to decarbonize, preserve and protect ocean life.

More than 190 countries agreed on a pact to help safeguard the high seas and reverse biodiversity loss, at a United Nations conference on March 4, 2023.

Examples:

Electrolysis and membranes to remove CO2 from seawater

Alternative fuels for ships - Hydrogen based, biofuels, liquified natural gas

Marine robotics to generate and use solar energy for transportation

ARCTIC-TECH

Technologies aimed at slowing down/reversing the impact of global warming in the Arctic region.

Global warming is causing the Arctic to heat up dramatically, three times more than the rest of the world.

Examples:

Bear-dar - Using AI to reduce the risk of dangerous polar bear encounters in the Arctic

Sensor network tech to improve understanding and monitoring of sea ice breakup in the Arctic region

GEOENGINEERING-TECH

Technologies aimed at manipulating the atmosphere in order to affect the climate in a way that limits or reverses some of the effects of global warming.

Examples:

Ocean Fertilization - Adding nutrients to the upper (sunlit) layers of the ocean to stimulate phytoplankton activity (photosynthesis) in an attempt to draw down atmospheric CO2 levels

Stratospheric Aerosol Injection/ Solar Radiation Management uses tiny reflective particles or aerosols to reflect sunlight into space in order to cool the planet

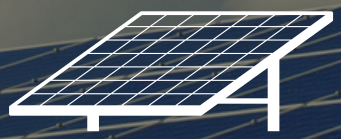
CLEAN-TECH

Also known as Greentech, these are technologies aimed at preserving the environment and facilitating sustainability across various industries.

This is a blanket term and may include many other sectors under climate tech.

Examples:

Electric Cars helping reduce pollution and individual carbon footprint



Solar Panels installed as an alternative energy source

Wind Energy - A leading renewable energy source

REGENERATIVE-TECH

Technologies aimed at the restoration and revival of natural habitats.

These include technologies that use concepts such as biomimicry and nature inspired regeneration to reverse the impact of climate change.

Examples:

Web3 enabled regenerative finance - a new iteration of the internet that harnesses blockchain to “decentralize” management

E-seed - A seed carrier has been designed to encourage the reforestation of natural areas that are difficult for humans to reach

TECHNOLOGY FOR IMPACT

Sources:
Quartz, The Washington Post, MIT, Mckinsey, WEF