



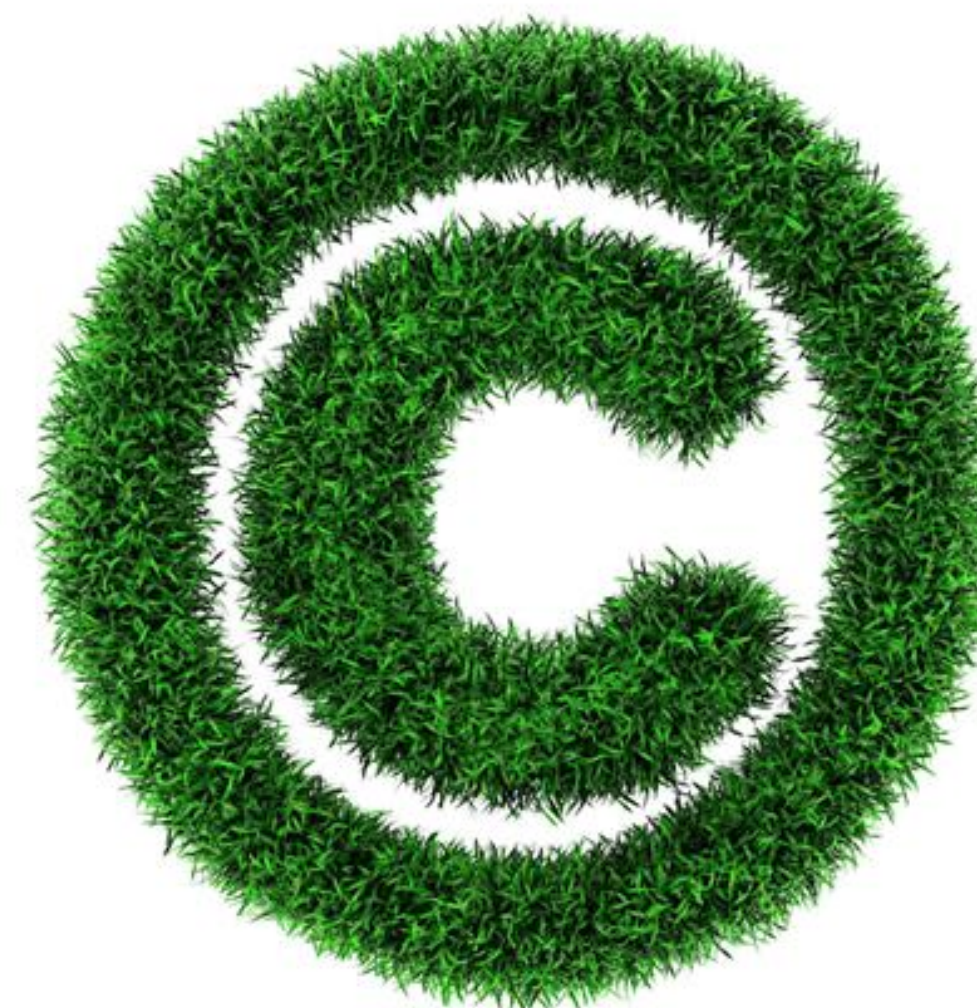
GREEN PATENTS

Faruk YAMANKARADENİZ

Chief Executive Officer, Board Member
Destek Patent

OUTLINE

- Can Patents help save the environment?
- What is a Green Patent?
- Why link Green Technologies and Patents?
- Green Patents and the Law
- Fast Tracking Green Technology Patents
- Green Patent Paradox
- The Classification for Green Patents
- Steps taken for the development of Green Technologies worldwide
- WIPO GREEN
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CAN PATENTS HELP SAVE THE ENVIRONMENT?



Encourages And Protects Innovations
In Sustainable Technologies And Practises

Supports Technological and Economical
Advancements Enables Problems to be
Solved Through Innovation

Plays a Crucial Role In Driving Innovation and
Sustainable Development



Helps Companies and Individuals to Invest
More in the Development Of New
Environmentally Friendly Technologies

36%

73%

38%

WHAT IS A GREEN PATENT?



Patents granted for environmentally friendly technologies including;



Renewable
Energy



Energy
Conservation



Sustainable
Agriculture



Waste
Reduction



Pollution
Control

WHY LINK GREEN TECHNOLOGIES AND PATENTS?



Promoting and protecting green technologies new and innovative processes materials and products

Patent data give an indication of the inventiveness of a country

Encourages innovation and investment Prevent the unauthorized use or infringement of green technologies

Stimulate the diffusion of technologies by providing secur channels to share know-how

GREEN PATENTS AND THE LAW

- Patent system – legally binding instruments (laws, treaties and regulations)
- The lack of hard international environmental law,
- Green Patents could fill the void of binding law
- Green Patent can help save the environment
- Low profitability margins
- Governments can incentivize to encourage Scientists and Engineers to innovate
- A system that allows its owners to financially benefit from their invention makes innovations accessible to everyone



'FAST-TRACKING' GREEN TECHNOLOGY PATENTS



The aim:

- to minimize delays in prosecution in patent offices,
- to allow patent applicants to license and use their technologies earlier,
- to increase diffusion of the green technology into society,
- to increase the dissemination of know-how by early publications,

The biggest advantage:

- to provide greater confidence in the technology,
- to help to attract investors and aid in overall growth,

Disadvantages:

- by delaying the prosecution, the final form of the claims is also delayed,
 - unpublished parts of the could limit the competitive advantage
- Countries initiated the program:
AU, JP, US, CA, UK, KO, IL, BR and CN

GREEN PATENT PARADOX

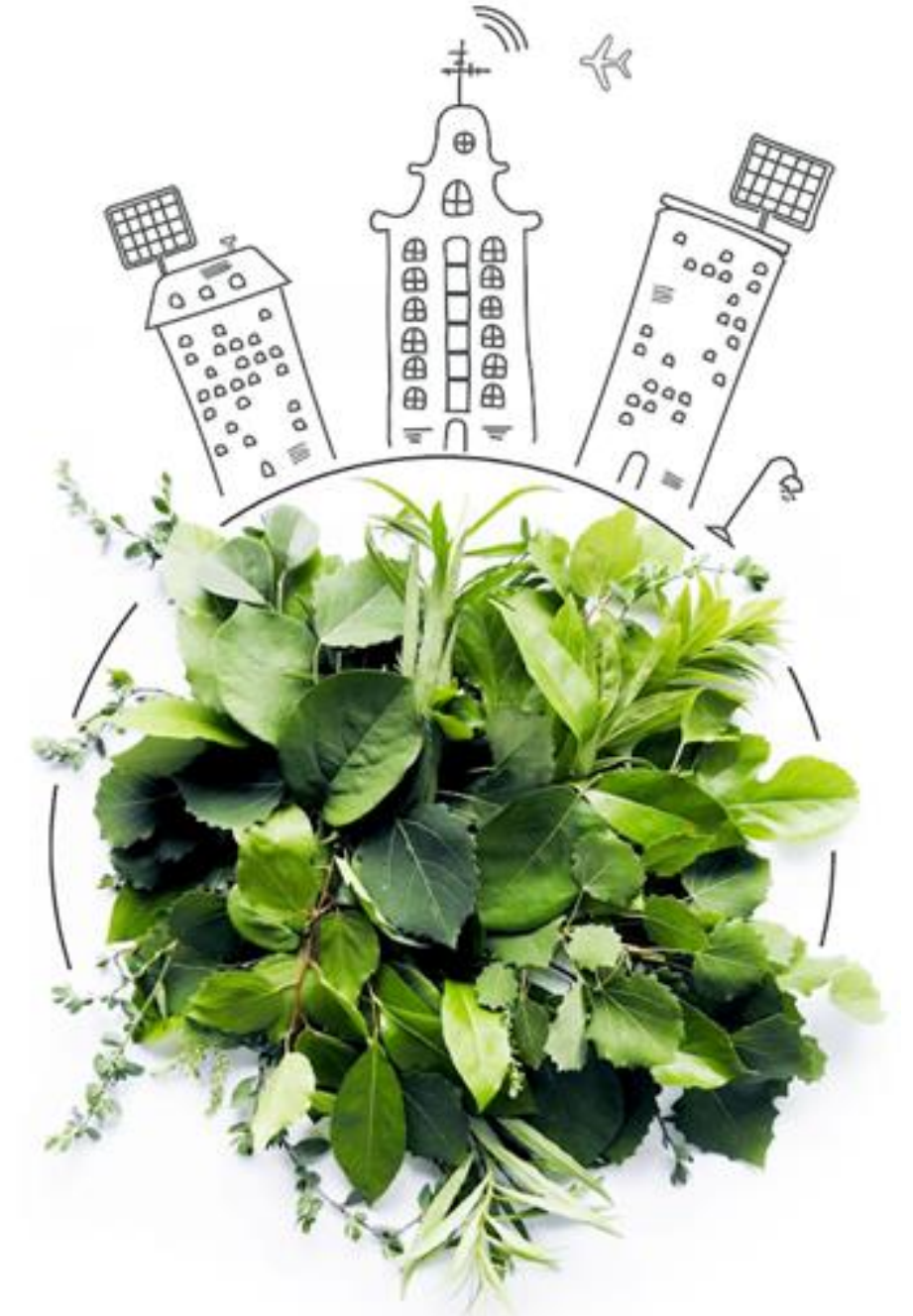
Patents can motivate inventors or companies that develop such technologies to invest in research and development by giving them exclusive rights

Or

Patents can also hinder the innovation and adoption of green technologies, particularly if patent holders try to exercise their exclusive rights in a way that limits access to or increases the cost of patented technology.

This is why

some argue that patent protection is necessary to foster green innovation and investment, while others believe open access to knowledge and technology is critical to achieving a more sustainable future.



THE CLASSIFICATION FOR GREEN PATENTS



Y classification makes it much easier to continue to be updated about recent efforts and approaches to improving sustainable energy

YO2 classification is for technologies or applications for mitigation or adaptation against climate change

Divided into 9 main sections

372 cross-sectional classes

More than 5 million documents

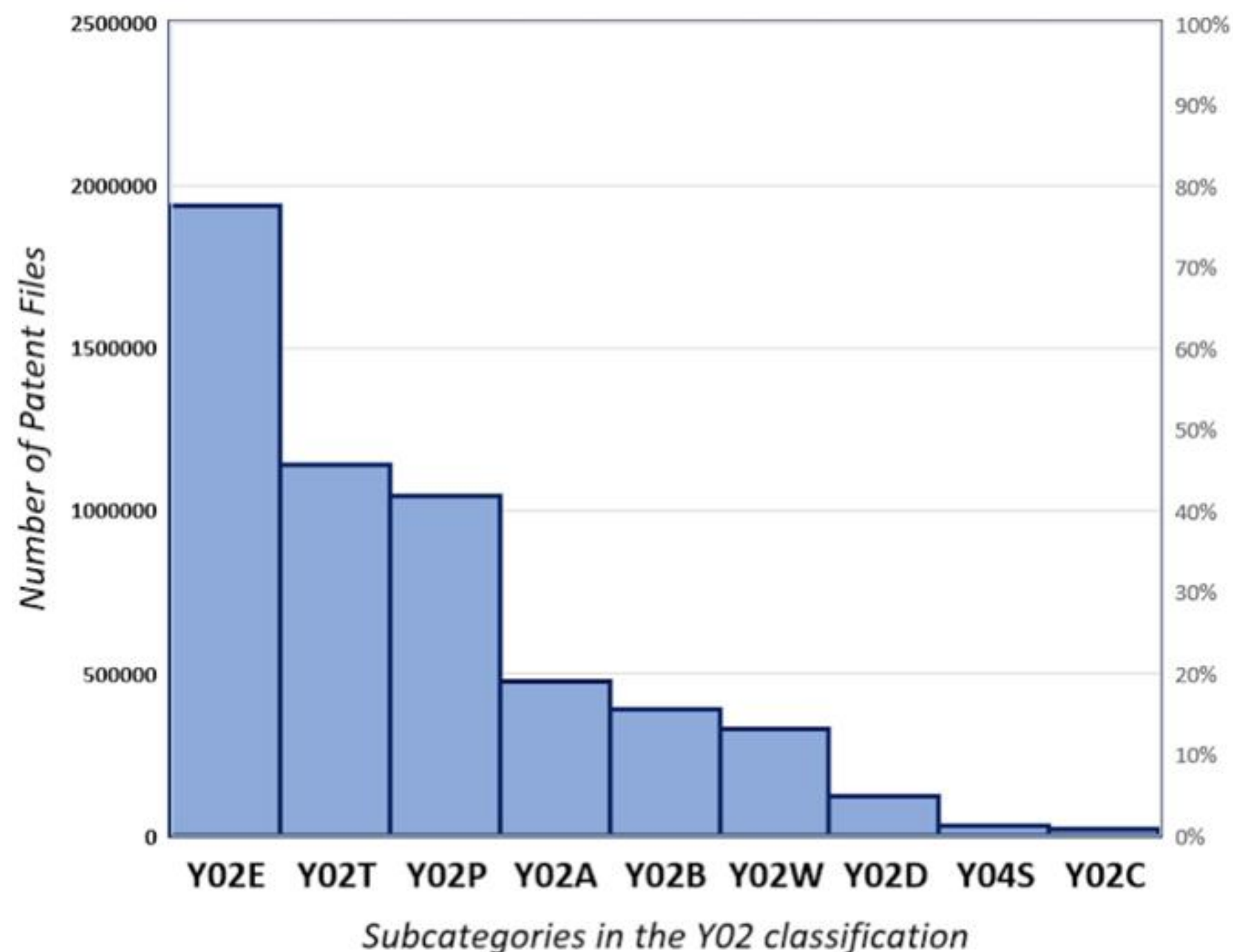
Y02 - TECHNOLOGIES OR APPLICATIONS FOR MITIGATION OR ADAPTATION AGAINST CLIMATE CHANGE



Symbol	Cooperative Patent Classification and Description
Y02A	Adaption to climate change
Y02B	Buildings
Y02C	Capture, storage or disposal of Greenhouse gases
Y02D	Reduction of energy use in information and communication technologies
Y02E	Energy generation, transmission or distrubution
Y02P	Industry and agriculture
Y02T	Reduction of energy use in information and communication technologies
Y02W	Wastewater treatment and wate management
Y04S	Smart grids



NUMBER OF PATENTS IN THE Y02 CLASSIFICATION



TOP 5

1 Y02E60/10:
Energy storage

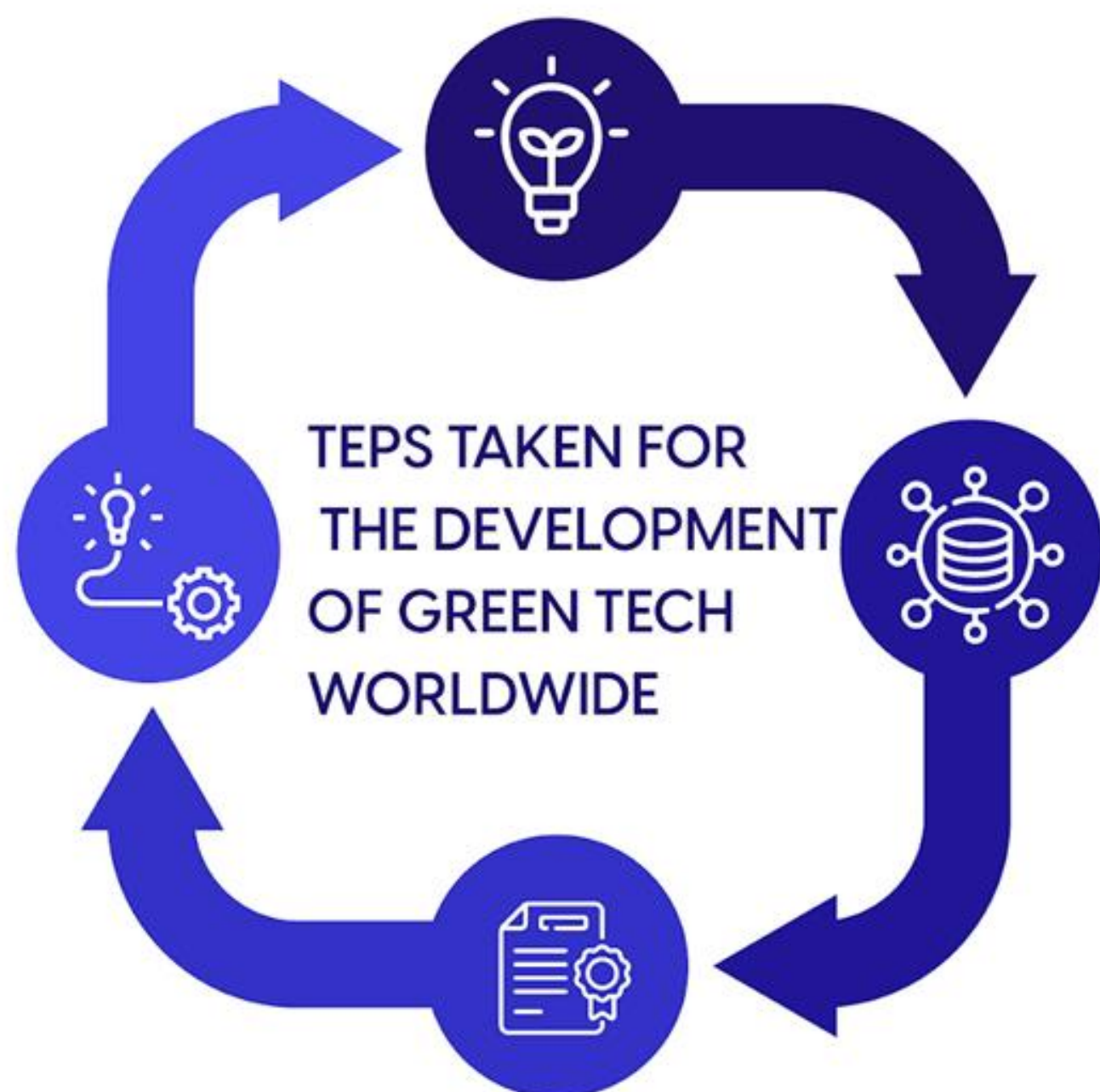
2 Y02T10/12:
Technologies for the improvement of indicated efficiency of a conventional Internal Combustion Engines

3 Y02P70/50:
Manufacturing or production processes characterised by the final manufactured product

4 Y02E60/50:
Fuel cells

5 Y02T10/70:
Energy storage for electromobility

STEPS TAKEN FOR THE DEVELOPMENT OF GREEN TECH WORLDWIDE



Promotion of green innovation: Tax credits, grants, and other benefits provided by Governments



Patent databases: Various databases have been developed to find green patents that are available for licensing or sale



Patent pools: Allowing companies to use each other's patents without fear of infringement



Patent reform: Shortening the length of time a patent is valid or allowing for easier licensing of patented technology

WIPO GREEN



- Online platform established in 2013 by World Intellectual Property (WIPO)
- Aim: Catalyzing green technology innovation and diffusion
- Connects technology and service providers seeking innovating solutions to environmental challenges
- Provides a database of green technologies and services
- Offers matchmaking services, connecting potential users with tech providers
- Women in Green interview series have been launched in 2020
- Provides free legal aid to organizations in developing countries
- 151 partners from around the globe



SOME NUMERICAL DATA



Over 20,000 green patent applications (mostly renewable energy tech - solar and wind power) filed worldwide in 2020

Over 15,000 patent applications (mostly energy storage) filed for climate change mitigation tech in 2020

The top countries for green patent filings in 2020 were China, the United States, and Japan

Over 14,000 green patent applications (mostly Energy conservation and environmental mitigation tech) filed in the United States in 2019

GREEN PATENTS

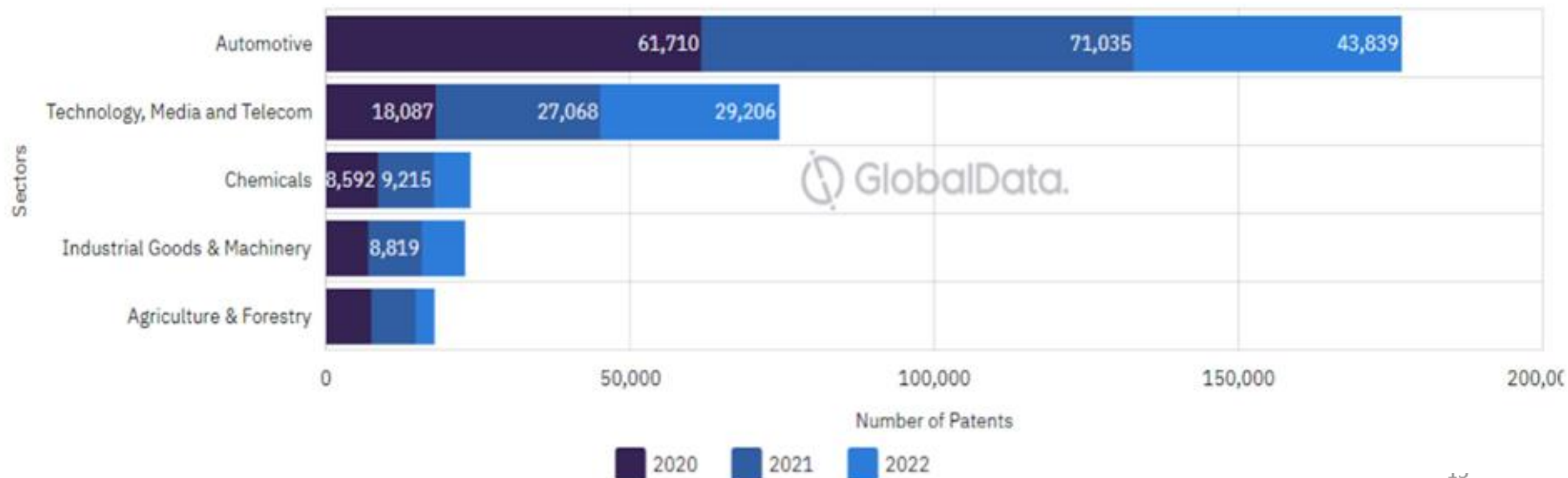


Patent data is sourced directly from offices of various patenting authorities and relevant patents to the environmental themes are identified and mapped.

Records	
3,417,091	
Inventions	Assignees
199,276	57,452
Grants	Filings
1,265,867	2,083,337

TOP 5 SECTORS WITH 'ENVIRONMENT' PATENTS ACROSS SUSTAINABLE DEVELOPMENT GOALS (SDGs) OVER THE LAST 3 YEARS

The Automotive industry is the key innovator with 179,531 patents

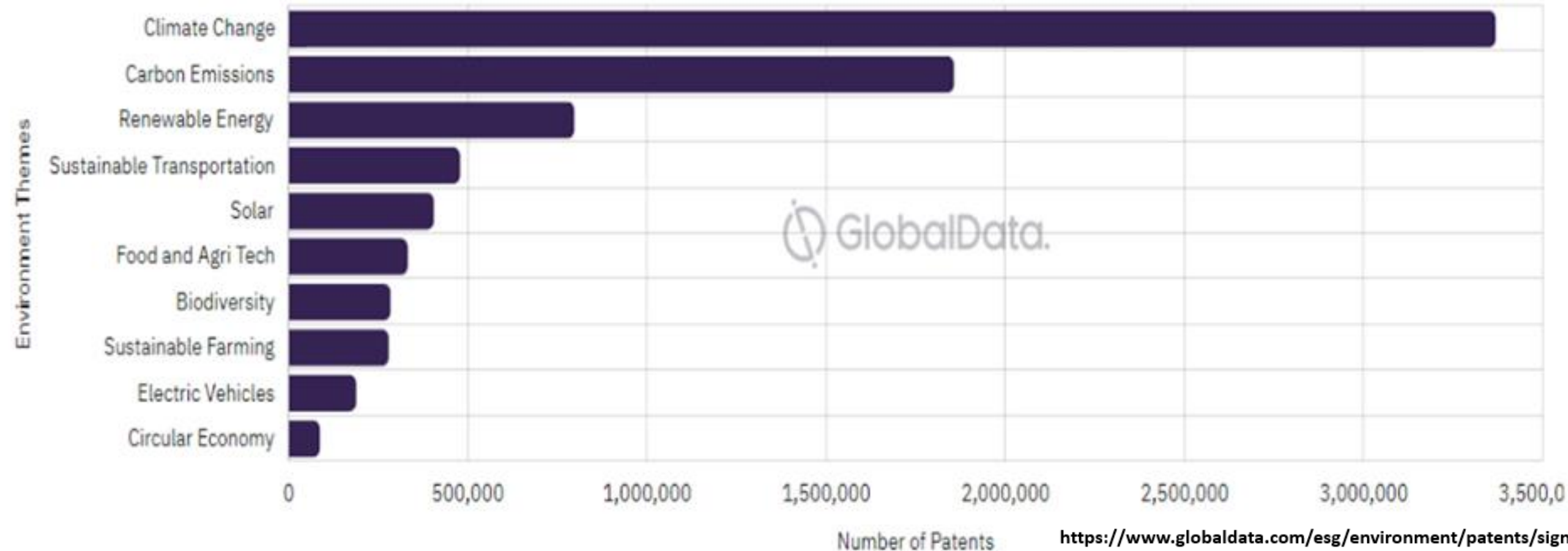


<https://www.globaldata.com/esg/environment/patents/signals>

PATENTS FILED ACROSS TOP 10 ENVIRONMENTAL THEMES OVER THE LAST 5 YEARS



Climate Change is one of the environmental-related themes with 3,366,795 patents



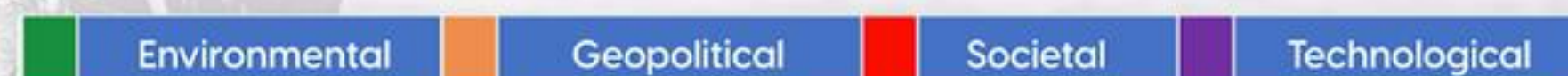
5 GREEN TECH TRENDS TO WATCH IN 2023

- Low-carbon construction
- Carbon capture and storage
- Renewable energy storage
- Hydrogen
- Upcycling (circular waste management)



GLOBAL RISKS RANKED BY SEVERITY OVER THE SHORT AND LONG TERM

	2 YEARS		10 YEARS
1	Cost-of-living Crisis	1	Failure to mitigate climate change
2	Natural disasters and extreme weather events	2	Failure of climate change adaptation
3	Geoeconomic confrontation	3	Natural disasters and extreme weather events
4	Failure to mitigate climate change	4	Biodiversity loss and ecosystem collapse
5	Erosion of social cohesion and societal polarization	5	Large-scale involuntary migration
6	Large-scale environmental damage incidents	6	Natural resource crisis
7	Failure of climate change adaptation	7	Erosion of social cohesion and societal polarization
8	Widespread cybercrime and cyber insecurity	8	Widespread cybercrime and cyber insecurity
9	Natural resource crisis	9	Geoeconomic confrontation
10	Large-scale involuntary migration	10	Large-scale environmental damage incidents





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