



This project is co-funded by the European Union and the Republic of Türkiye

Technical Assistance for Assessment of Türkiye's Potential on Transition to Circular Economy

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GREEN TRANSFORMATION IN INDUSTRY

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Activity 3.2.4. Training on Integrated Waste Management in Circular Economy
October 10-11, 2024 Ankara



GREEN TRANSFORMATION IN INDUSTRY

Meryem ARSLAN

Chemical Engineer

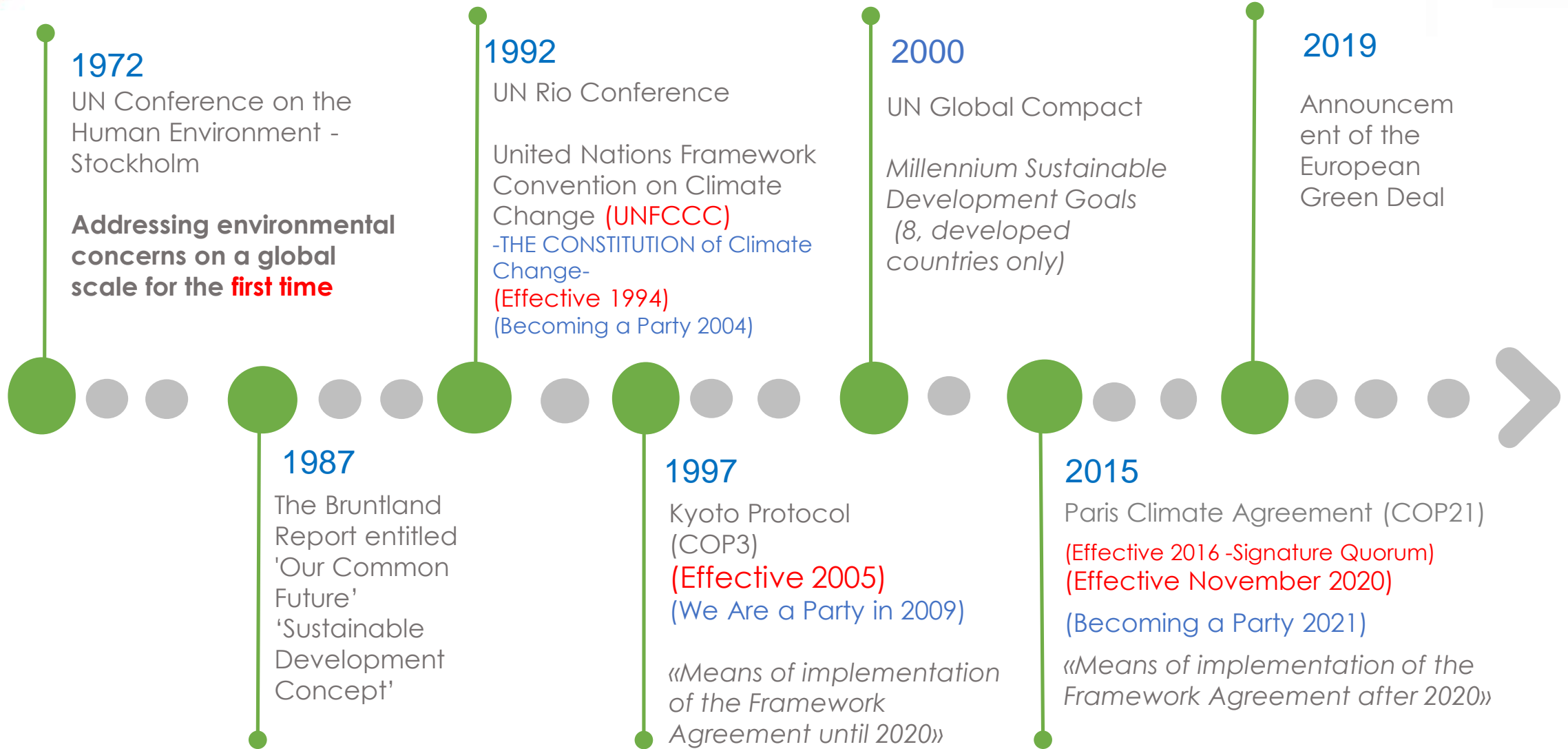
General Directorate of Environmental Management

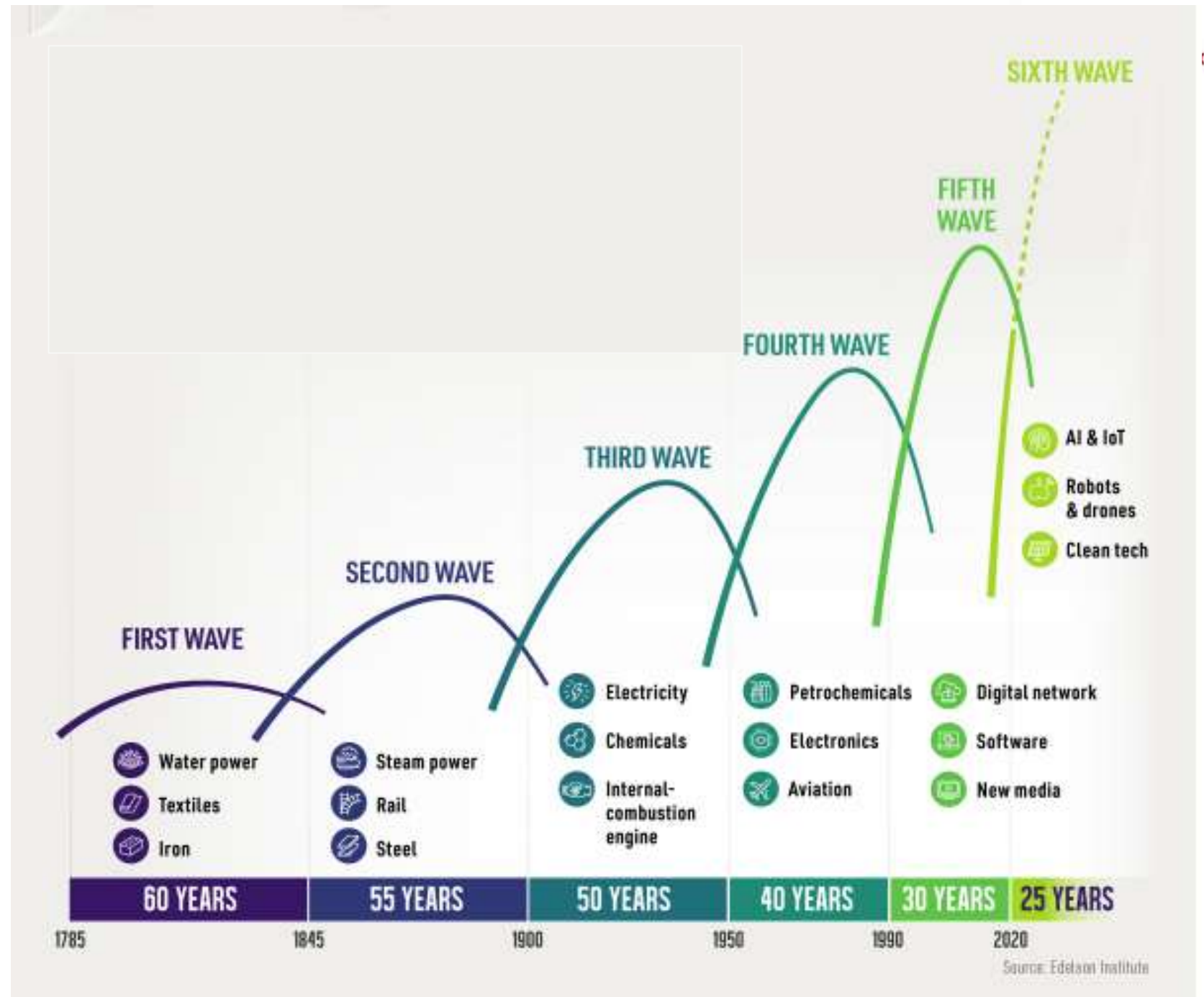
**Republic of Türkiye Ministry of Environment,
Urbanization and Climate Change**

FROM PAST

GREEN TRANSFORMATION

TO PRESENT



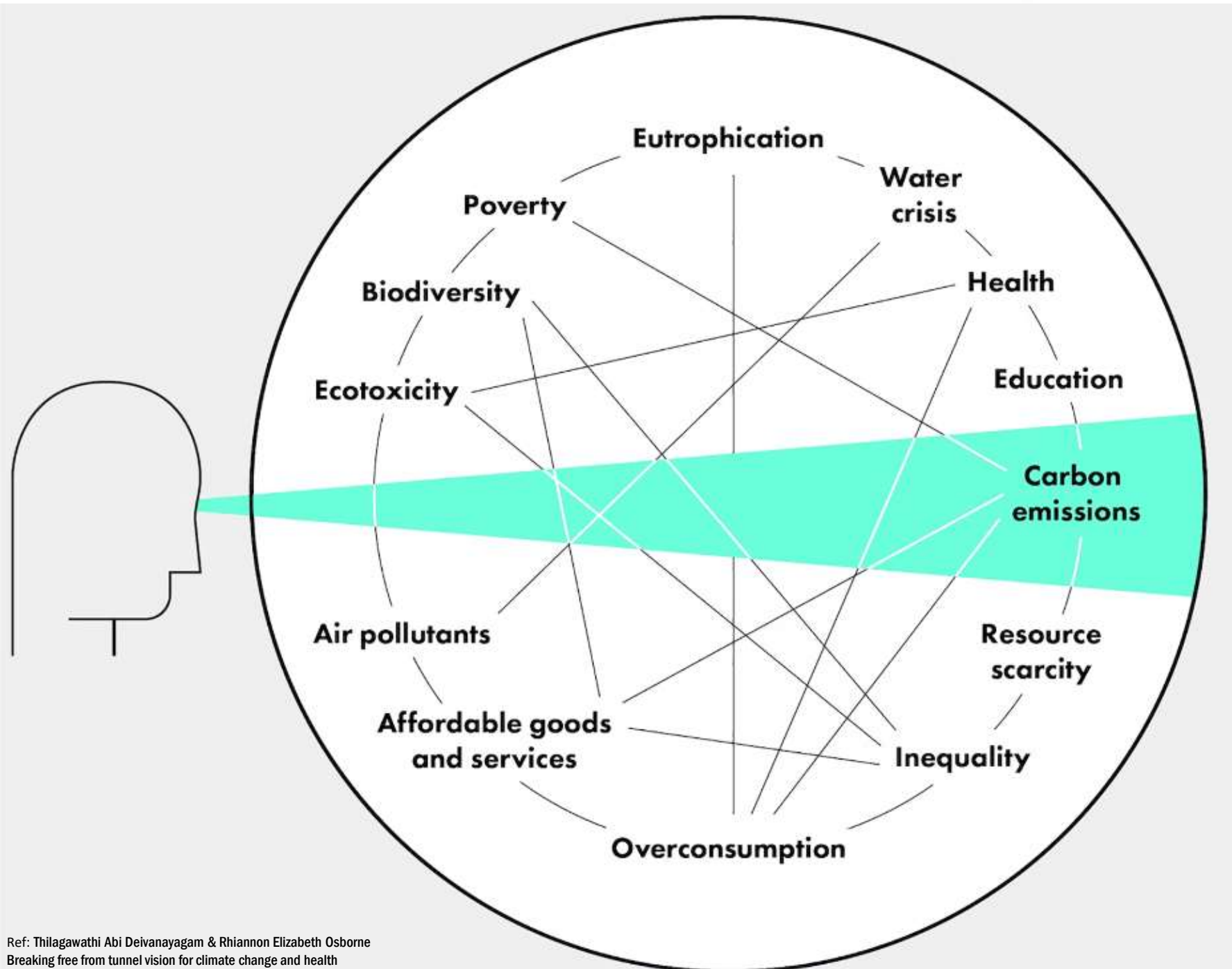


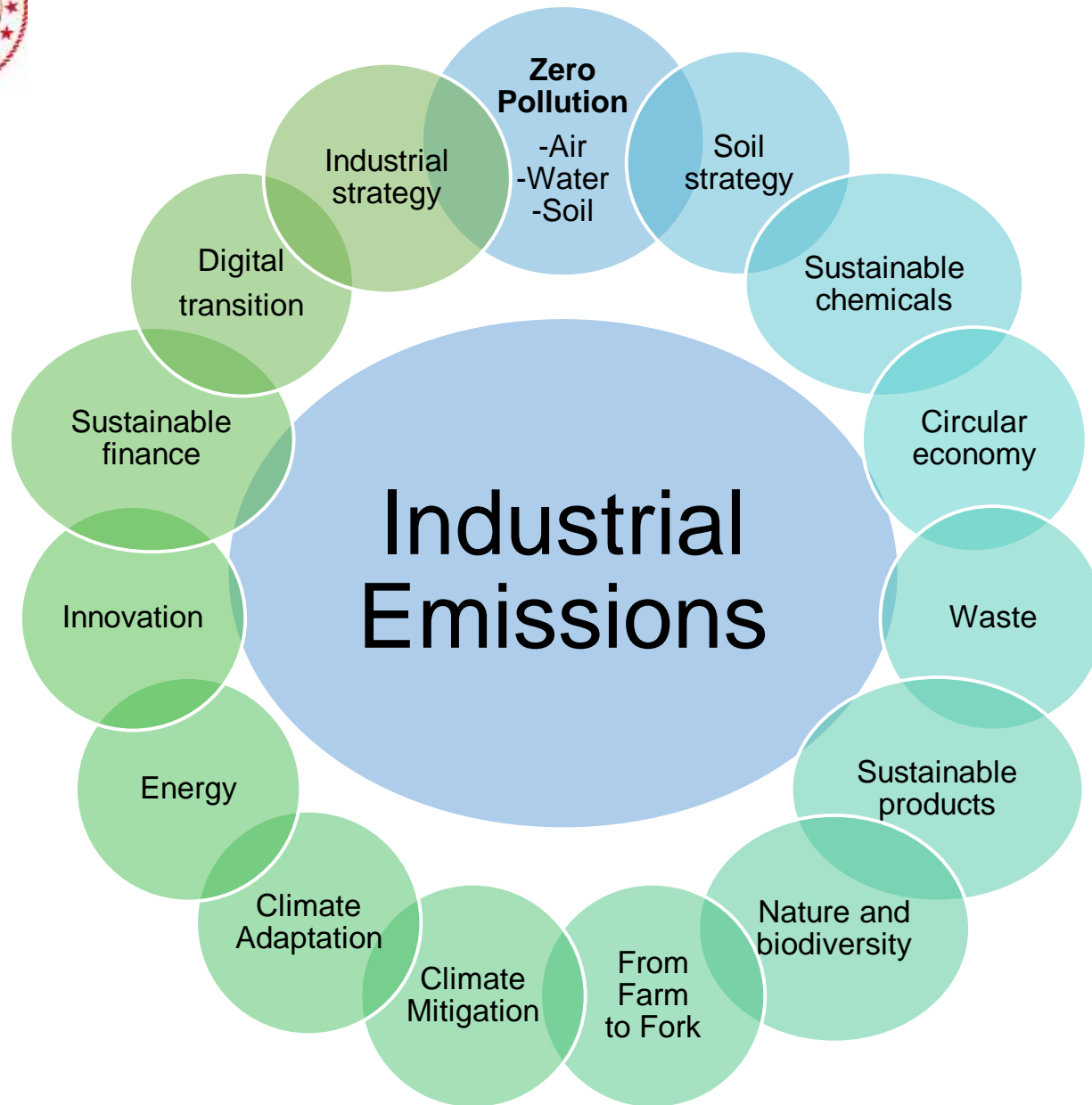
INDUSTRIAL EMISSIONS

GREEN TRANSFORMATION



TARGET;
**MULTI-FACETED
APPROACH**





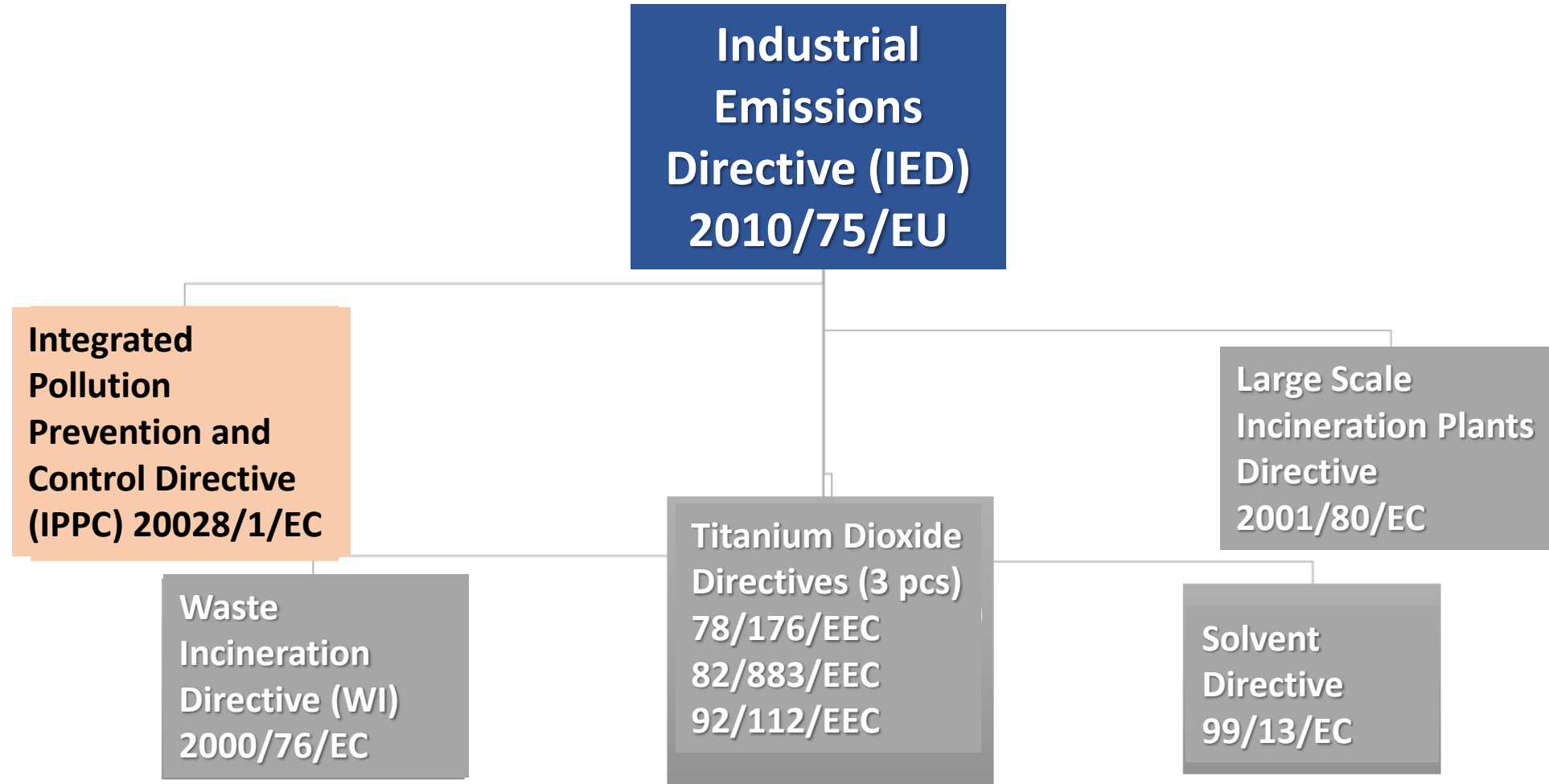
EED's integrated approach to pollution control and environmental management has **strong links with other European Green Deal policies.**

It has now become a principle for the upcoming industrial transformation





Industrial Emissions Directive 2010/75/EU





Industrial Emissions and Zero Pollution

European Green Deal

For a non-toxic environment Zero Pollution Target

"The EU will review its measures to address pollution from large industrial installations. The sectoral scope of the legislation and exactly how to make it consistent with climate, energy and circular economy policies will be looked at."

Industrial Emissions Directive

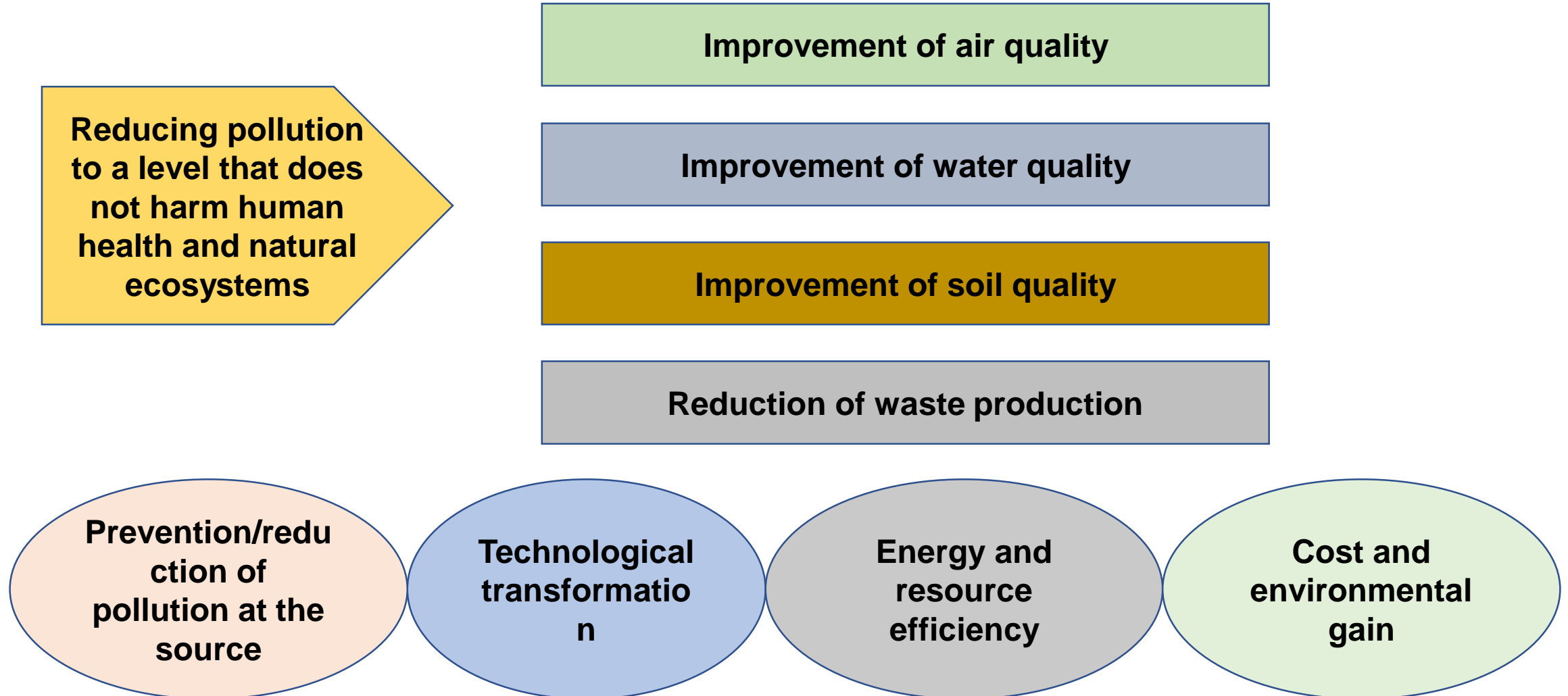




Industrial Emissions and Green Transformation



It is an important regulation for **progress towards the 'zero pollution' goal** for a **sustainable environment** and to support climate, energy and circular economy policies.





Scope of the Industrial Emissions Directive



<u>Energy</u> <ul style="list-style-type: none">• Large Scale Incineration Plants• Refineries• Coal coke production	<u>Mineral Industry</u> <ul style="list-style-type: none">• Cement, Lime, MgO production• Glass / Glass Fibre Production• Tile, brick, porcelain, ceramic production	<u>Metal Manufacturing and Processing</u> <ul style="list-style-type: none">• Mine firing / sintering• Pig iron and steel production• Iron and steel processing• Iron foundries• Non-ferrous raw metal production• Alloy and non-ferrous raw metal smelting• Metal/plastic surface treatment	<u>Production of Chemicals</u> <ul style="list-style-type: none">• Organic/inorganic chemicals production• Fertilizer Production• Plant protection product inspection• Production of pharmaceutical products• Explosive production
<u>Waste management</u> <ul style="list-style-type: none">• Waste disposal and recovery• Landfilling			
<u>Other activities</u> <ul style="list-style-type: none">• Pulp, Paper, cardboard production• Textile/leather• Agriculture based industry• Intensive cultivation• Surface processing with organic solvents			



GREEN TRANSFORMATION IN INDUSTRY- PROJECTS CARRIED OUT

2003-2005	"Capacity Building Project for the Adoption and Implementation of the Integrated Pollution Prevention and Control (IPPC) Directive" MATRA-PSO Project funded by the Dutch Government
2006-2007	"Implementation of IPPC in Türkiye" Project MATRA-PSO Project funded by the Dutch Government
2011-2014	"Supporting the Implementation of the Integrated Pollution Prevention and Control Directive in Türkiye Project" (Twinning + Technical Assistance) EU - IPA Project
2015-2021	Integrated Pollution Prevention and Control Large Scale Incineration Plants
	Integrated Pollution Prevention and Control METAL
	Integrated Pollution Prevention and Control CEMENT
	Integrated Pollution Prevention and Control AUTOMOTIVE
	BESTÜ (TEXTILE - LEATHER)
	Integrated Pollution Prevention and WASTE Control
2020-2024	'Determination of Türkiye's Industrial Emission Strategy within the scope of IPPC' (DIES Project) EU - IPA Project



The Current Compliance Status of the Activities within the Scope



Sectoral Projects (Large Scale Incineration Plants, Cement, Automotive, Metal, Leather, Textile, Waste, Chemical, Mineral, Paper, Livestock and Food, Wood Products)

- Sector inventory
- Conditions envisaged for the sector
- Current compliance status, needs and cost
- Transition process

<u>Sector</u>	<u>Ratio of Cleaner Production Practices</u>
Energy	% 62
Cement	% 59
Automotive	% 74
Metal	% 40
Textile	% 75
Leather	% 70



Facility Specific Evaluations



Best Available Techniques Reference Documents and Communiqués



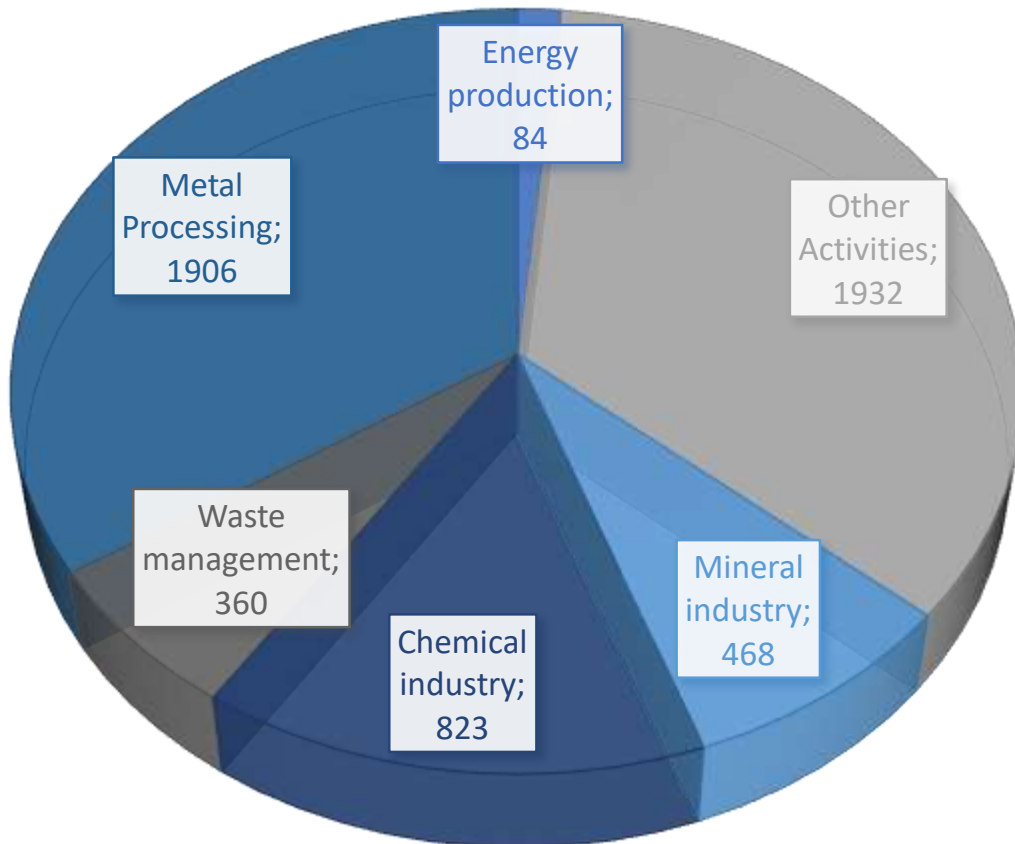
Trainings



Distribution of Sector Based Facilities in Türkiye

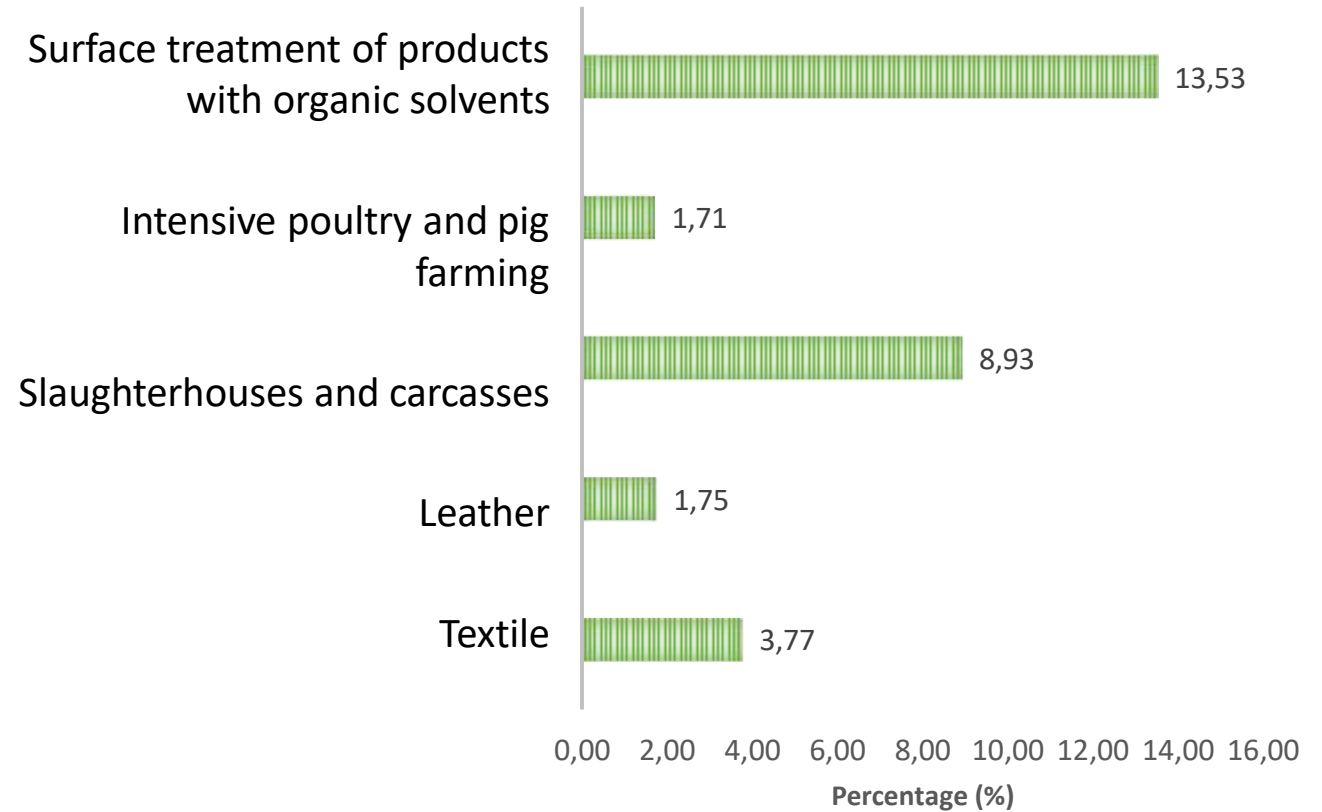


NUMBER OF IED FACILITIES IN TÜRKİYE



5,573 facilities in Türkiye

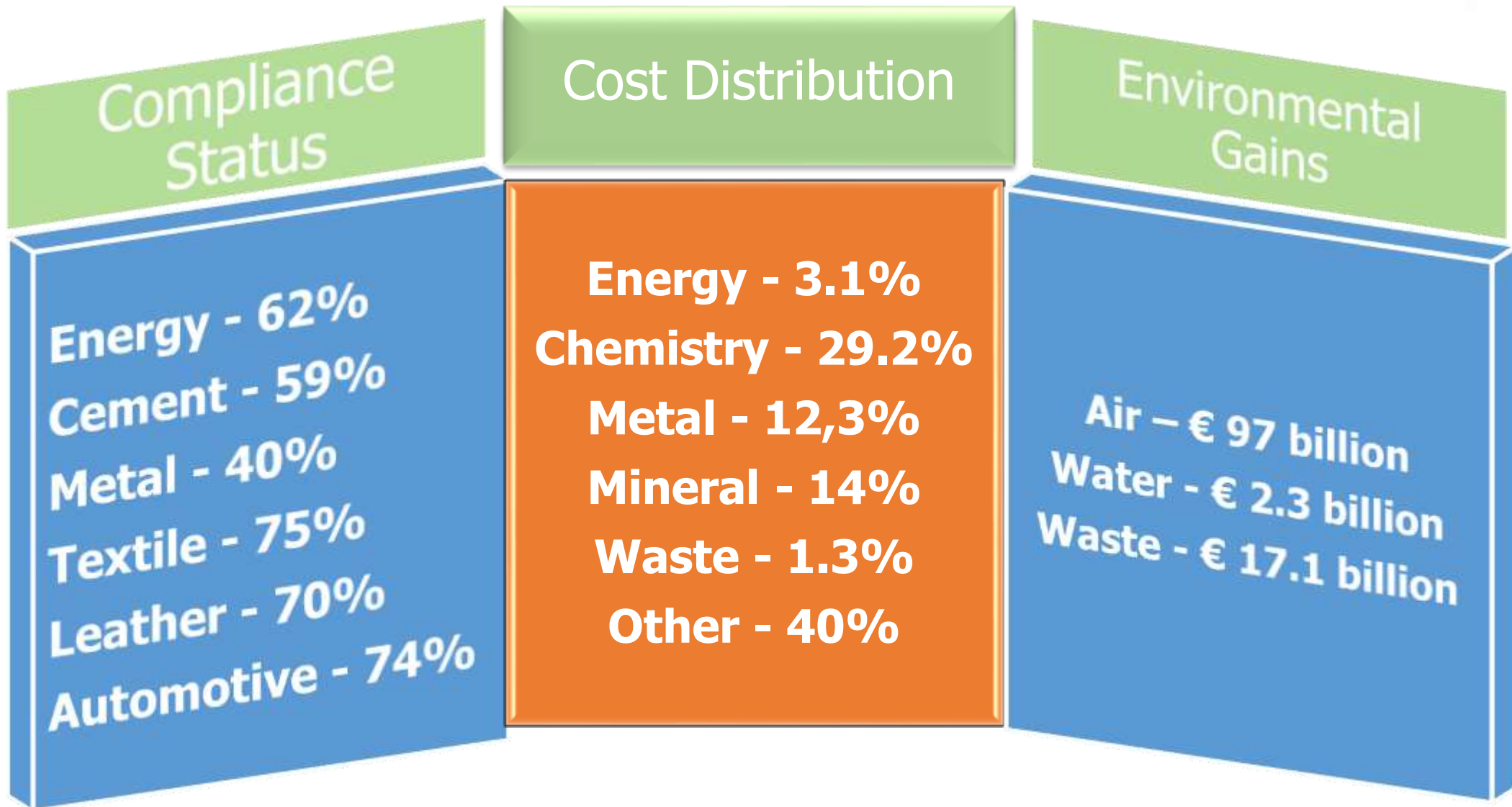
6. OTHER ACTIVITIES SUB-DIVISION



About 50,000 facilities in the EU



SECTOR ANALYSES INCLUDED IN THE SCOPE



TOTAL AVERAGE COST 38 BILLION EUROS



Türkiye's Century- Green Transformation in Industry Project



Under the title of "Century of Sustainability" in the vision of "Türkiye's Century" announced by our President Recep Tayyip ERDOĞAN, our Ministry carries out activities in line with the goal of reducing and preventing industrial pollution at the source with clean, environmentally friendly and innovative technologies, together with the green transformation process in industry on the basis of both 2053 zero emission and zero pollution policies.





Important Documents Including the Green Transformation Docu

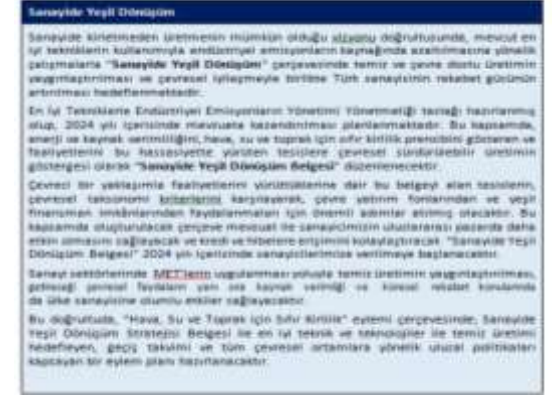


Green Deal Action Plan

Preparation of **general and sectoral national legislation** including green transformation in industry and EU legislation on Integrated Pollution Prevention and Control (IPPC) and Best Available Techniques Outcome Documents-**2024**

Q3

- Issuance of Green Transformation Certificate in Industry
- Establishment of Green Transformation Certification System in Industry
- Preparation of the Draft National Action Plan for the Determination of Türkiye's Emission Strategy



Coordination Council for the Improvement of Investment Environment in Türkiye (YOİKK)

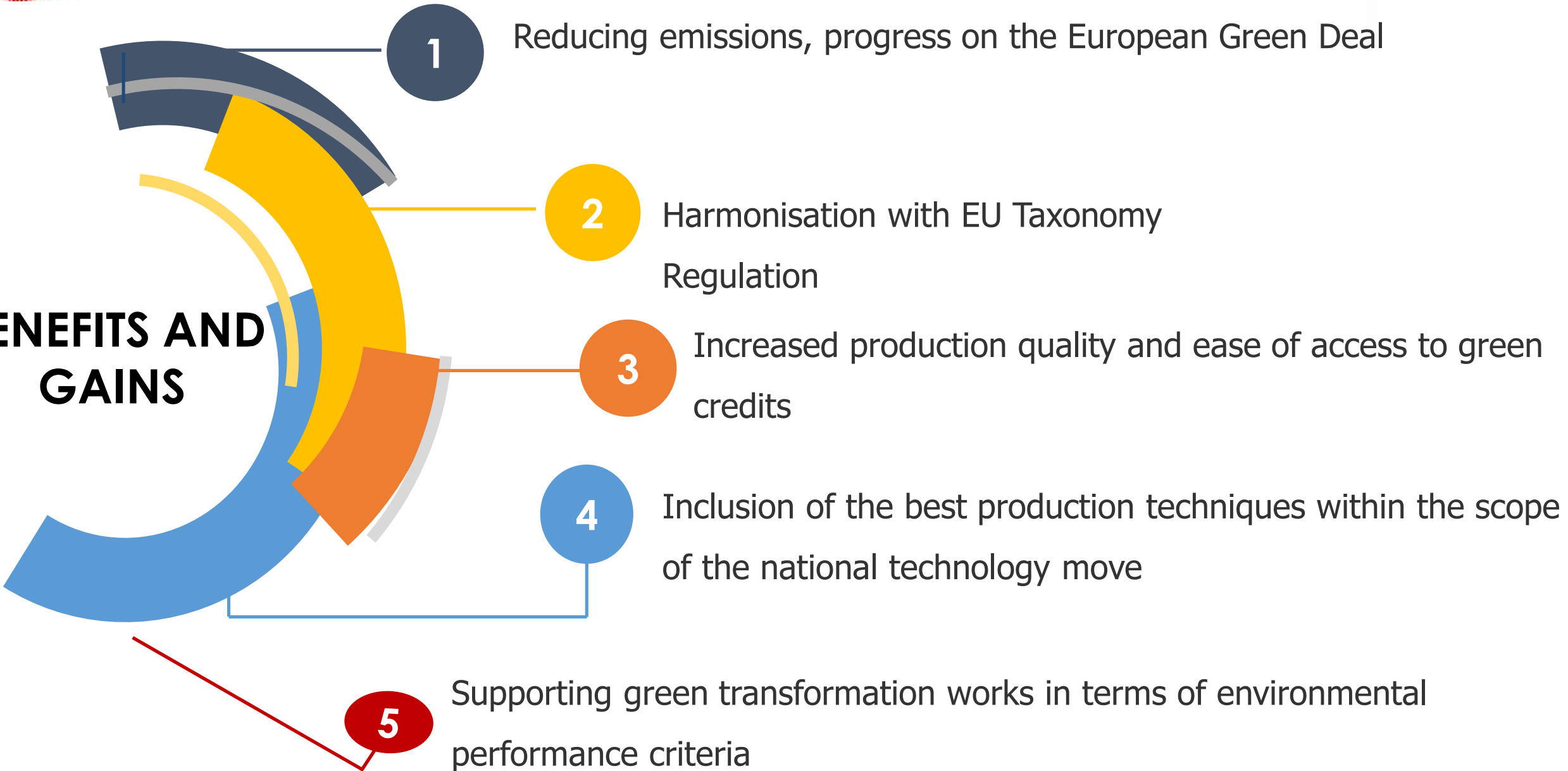


Establishment of **the Green Transformation Certification System in Industry in order to provide easy access to financial facilitating mechanisms for industrial facilities engaged in cleaner production *Medium Term (2024-2025)***

9	Yeşil Dönüşümün Hızlandırılması	Temiz üretim yapan sanayi tesislerinin finansal kolaylaştırıcı mekanizmalara kolay erişiminin sağlanması amacıyla Sanayide Yeşil Dönüşüm Belgelendirme Sisteminin kurulması	2010/75/AB Endüstriyel Emisyonlar Direktifi'nin uyumlaştırılması çalışmaları kapsamında AB Entegre Kirlilik Önleme ve Kontrol (EKÖK) Belgesi ile eş nitelikte olacak Sanayide Yeşil Dönüşüm Belgesi sisteminin kurulması	Teknik Çalışma ve İdari Düzenleme	Çevre, Şehircilik ve İklim Değişikliği Bakanlığı	Enerji ve Tabii Kaynaklar Bakanlığı, Hazine ve Maliye Bakanlığı, Sanayi ve Teknoloji Bakanlığı, Ticaret Bakanlığı, SBB, TOBB, TİM, TÜSİAD, YASED, MÜSİAD, DEİK, TİSK	Orta Vade (2024-2025)
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BENEFITS AND GAINS





Green Transformation and Taxonomy in Industry



- According to the taxonomy, in order for an activity to be considered green; it should contribute significantly to one of the 6 environmental objectives, but should not harm the other objectives.



**REGULATION ON THE
MANAGEMENT OF
INDUSTRIAL EMISSIONS
DRAFT**



Regulation on Management of Industrial Emissions

❖ Green Transformation Certificate in Industry;

For existing and new facilities; it is issued according to the implementation of BATs related to the activity, the document is graded according to the

implementation of BATs and given in categories A (100% compliance), B (90% and above compliance), C (80% and above compliance), D (70% and above compliance), E (60% and above compliance), F (50% and above compliance)

- New facilities are obliged to obtain at least D level industrial green transformation certificate as of the effective date of the Regulation.
- Existing facilities **will be given a compulsory** green transformation certificate at least at level F according to the provisions of this Regulation as of 31.12.2028 and at least at level D according to the provisions of this Regulation as of 31.12.2030.

Çevre, Şehircilik ve İklim Değişikliği Bakanlıđından;
ENDÜSTRİYEL EMİSYONLARIN YÖNETİMİ YÖNETMELİĐİ

BİRİNCİ BÖLÜM
Amaç, Kapsam, Dayanak, Tanımlar

Amaç
MADDE 1- (1) Bu YönetmeliĐin amacı, çevrenin bütüncül olarak korunması için sıfır kirlilik hedefleri doğrultusunda entegre kirlilik önleme ve kontrol yollarında hava, su ve toprak kirliliĐine neden olan sanayi kaynaklı emisyonları ve atık oluşumunu kaynağında önlemek ve önlemek için, kaynakları verimli kullanmak için sanayide yeĐil dönüşüme yönelik idari ve teknik usul ve esasları düzenlemektir.

Kapsam
MADDE 2- (1) Bu Yönetmelik, Ek-1 listesinde yer alan faaliyetlerin gerçekleştirildiĐi işletmeleri kapsar.
(2) Araştırma ve geliştirme faaliyetleri, yeni tesis ve süreçlerin test edilmesi için kullanılan işletmeler veya işletme bölümleri ile atıkların sanatsal bu YönetmeliĐin kapsamı dıŐarındadır.

Dayanak
MADDE 3- (1) Bu Yönetmelik; 9/8/1983 tarihli ve 2872 sayılı Çevre Kanunu'nun 3 üncü ve 8 inci maddeleri ve 10/07/2018 tarihli ve 30747 sayılı Resmî Gazete'de yayımlanan 1 sayılı CumhurbaşkanlıĐı TeĐikları Hakkında CumhurbaşkanlıĐı Kararnamesi'nin 103 üncü ve 104 üncü maddelerine dayandırarak hazırlanmıştır.

Tanımlar
MADDE 4- (1) Bu Yönetmelikte geçen;
a) Bakanlık: Çevre, Şehircilik ve İklim DeĐişikliği BakanlıĐı'nı,
b) Çevresel kalite standartları: Çevre mevzuatında belirlenen, belirli bir çevrede ya da alıcı ortamda sağlanması gereken değerler,
c) Çevresel sürdürülebilirlik: Doğal kaynakların kendini yenileme özelliĐinin zarar görmemesi ve devamlılıĐının sağlanması amacıyla faaliyetlerin yürütülmesini,
d) Çevresel sürdürülebilirlik bypassmanı: Sanayide YeĐil Dönüşüm belgesi başvuru dosyasındaki bilgilere inşinden mevcut durum raporu, deĐerlendirme, deĐişiklik ve gözden geçirme süreçlerinde ilgili raporları hazırlamak üzere süreçlerin koordinasyonunu sağlamak ve raporların tamamlanmasından sorumlu Bakanlıkça yetkilendirilmiş uzman,
e) Çevresel sürdürülebilirlik uzmanı: Sanayide YeĐil Dönüşüm belgesi başvuru dosyasındaki bilgilere inşinden mevcut durum raporu, deĐerlendirme, deĐişiklik ve gözden geçirme süreçlerinde proje raporunu hazırlamak üzere Bakanlıkça yetkilendirilmiş uzman,
e) DeĐerlendirme raporu: Sanayide YeĐil Dönüşüm başvuru dosyasındaki edilen işleme için, Sebetsel Mükvut En İyi Teknikler (MET) dokümanları doğrultusunda hazırlanan rapor,
f) DeĐişiklik raporu: Tesiste yapılacak planlanan deĐişiklikte yönelik olarak hazırlanan rapor,
g) Emisyon: Maddelerin, süreçlerin, su veya gücün işletme veya tesiste yer alan bir veya birden fazla kaynaktan havaya, suya veya topraĐa doğrudan veya dolaylı biçimde burakılması,
g) Emisyon sınır değeri (ESD): Bir emisyonun belirli parametrelerde ifade edilen kütlesinin, belirli zaman dilimi içinde aĐınmasını gereken konsantrasyonu ve/veya seviyesini,





General Principles



Document Rating in Green Transformation Process in Industry

- According to the Regulation, the green transformation certificate in industry **will be issued according to the implementation of activity-related BATs** for existing and new facilities. The document will be graded according to the application of BATs and BAT-IES (limit values).
- There are a total of **102 BAT Checklists** and **33 Draft Communiqués** prepared on BAT Reference Documents and BAT Outcome Documents.
- www.ippc.csb.gov.tr



Reduction of Industrial Emissions in Türkiye Project

It will be financed within the framework of the **Memorandum of Understanding** signed with the **World Bank** on 22 October 2021, which includes financing of **3 Billion 157 Million Dollars**.

With the **5-Year Project**, negotiations are ongoing to provide a total of **400 Million Dollars** of foreign loans to industrial facilities that make the best environmentally friendly production within the scope of **green transformation** in the industry.

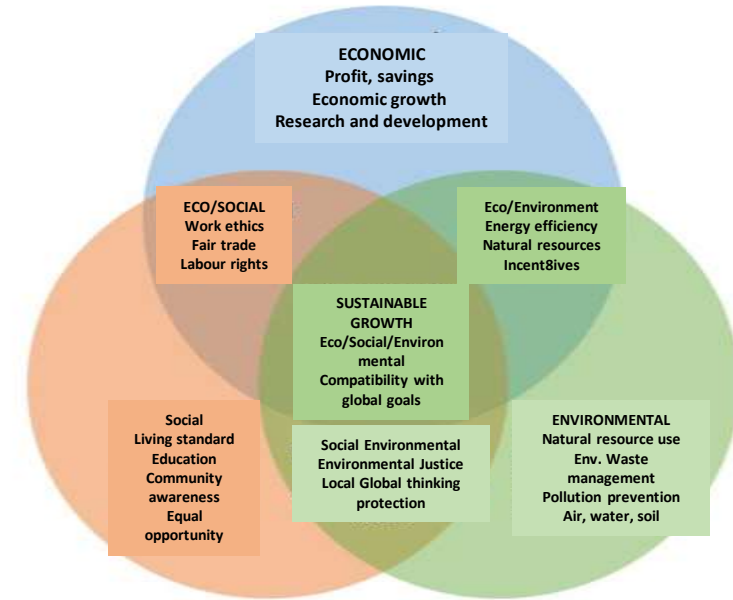
If the project is found eligible, it is envisaged that the financing implementer will be the **Development and Investment Bank of Türkiye** and the technical implementer of the project will be the **Ministry**.



**SUSTAINABILITY STRATEGY
STUDIES**



Sustainable Consumption & Production





PREPARATION OF SUSTAINABLE CONSUMPTION AND PRODUCTION NATIONAL ACTION PLAN (STÜ UEP) PROJECT

Sectors:



Food, Fishery and Agriculture



Manufacture of consumer products



Textile and ready-to-wear



Plastic



Automotive



Residence and construction



Tourism



“

THANK YOU

”

**MERYEM ARSLAN
CHEMICAL ENGINEER**

**ÇEVRE YÖNETİMİ GENEL MÜDÜRLÜĞÜ
T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ
BAKANLIĞI**



This project is co-funded by the European Union and the Republic of Türkiye



Thanks for your attention.



Türkiye Döngüsel Ekonomi

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Türkiye Döngüsel Ekonomi

IPA Çevre/Environment TÜRKİYE



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