



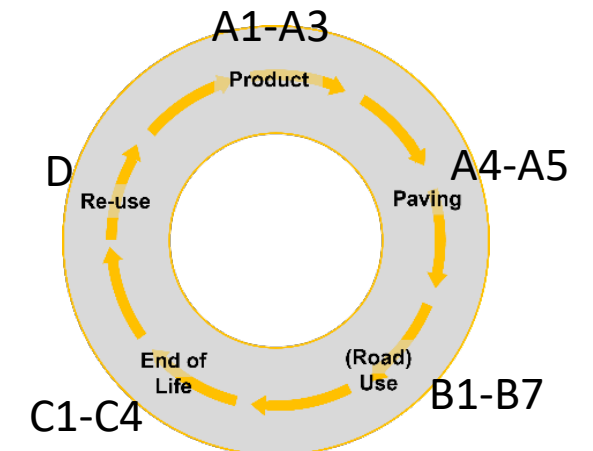
Current and future EU issues in the Asphalt Industry

Dr. Carsten Karcher, Secretary General
European Asphalt Pavement Association

15. November 2024, Infra, Finland

Content

- The European Asphalt Pavement Association (EAPA)
- The hot topics and new challenges for the asphalt industry in Europe
- The answers of a sustainable and responsible industry



The European Asphalt Pavement Association (EAPA)



The European Asphalt Pavement Association (EAPA)

- EAPA is a non-profit association, founded in 1973 and nowadays based in Brussels, Belgium EAPA represents the majority of the European asphalt paving industry



Ralf Pomp



Slovenko Heningman

EAPA's mission

- EAPA is the voice of the Asphalt Paving Industry in Europe and works to ensure that the use of asphalt, as the optimum choice for the construction and maintenance of the vital European road infrastructure, is fully appreciated, promoted and implemented.



Dr. Carsten
Karcher

Secretary General



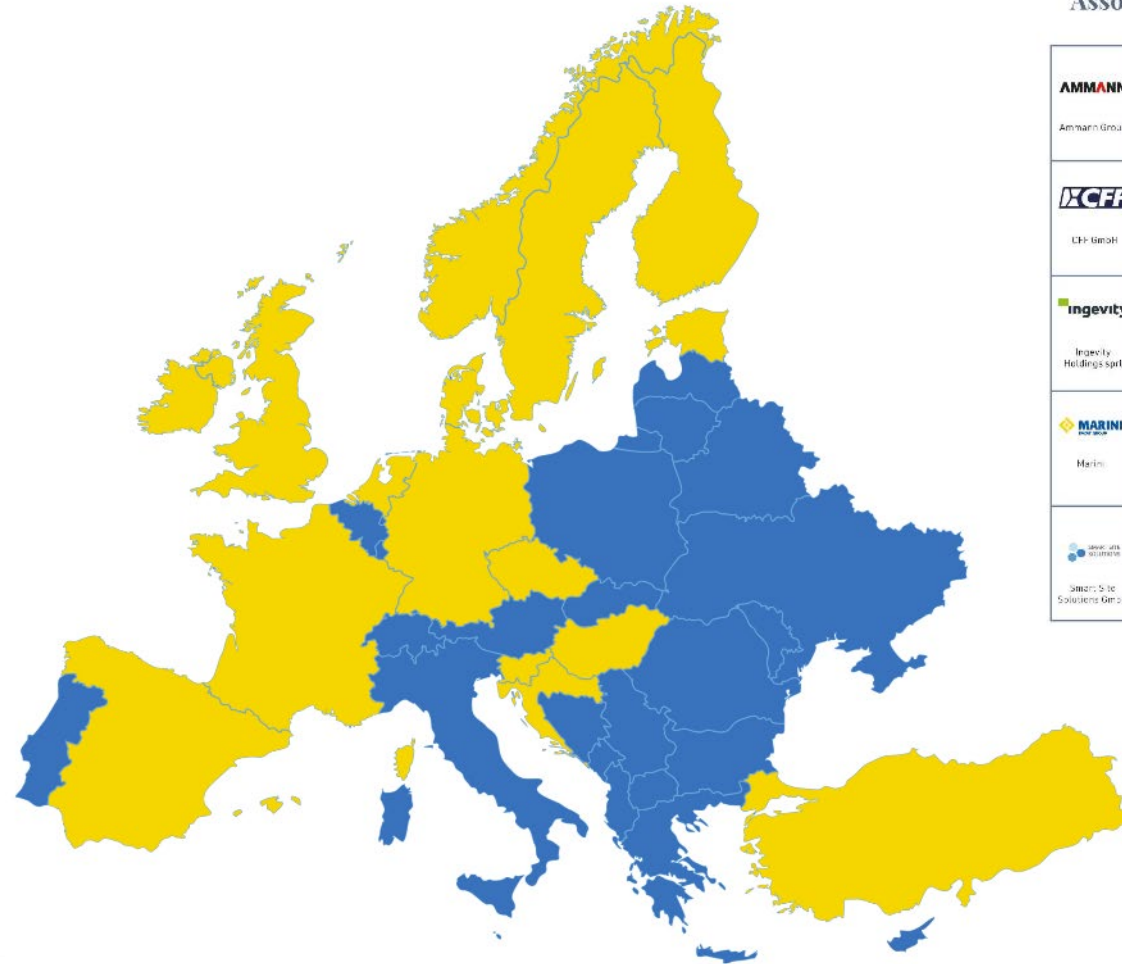
Dr. Breixo
Gómez-Meijide

Technical Director

The European Asphalt Pavement Association (EAPA)

- 16 National Members

 Asefma - Spanish Association of Asphalt Producers	 Asfaltindustrien - Danish Asphalt Pavement Association	 ASMUD - Turkish Asphalt Contractors Association	 Dutch Construction and Infrastructure Contractor's Association
 HAD - Croatian Asphalt Association	 German Asphalt Pavement Association	 EBA - Norwegian Contractors Association	 ESTICA - Estonian Infra Construction Association
 HAPA - Hungarian Asphalt Pavement Association	 IAPA - Irish Asphalt Pavement Association	 INFRA - Infra Contractors Association, Finland	 MPA - Mineral Products Association, UK
 NCC AB, Sweden	 Peab, Asphalt AB, Sweden	 Czech Road Contractors Association	 Routes de France - French Contractors Association
 ZAS - Slovenian Asphalt Pavement Association			



Associate Member Companies

 Ammann Group	 Arkena	 Brenninghoven	 BASF	 Cargill	 Caterpillar Paving Products Inc.
 KCF GmbH	 GRH plc	 Dow	 Evonik Resource Efficiency GmbH	 GIB Aluminium	 InfraTest
 Ingevity Holdings spA	 Methuen	 Fliegl Bau- und Kommunikation GmbH	 HyWax	 JRS Polymer & Sphero GmbH + Co. KG	 Kraton Polymers Nederland B.V.
 Marini	 &nbs;	 Q Point	 Ruthmann GmbH	 Ravago Chemicals	 Sasol Germany GmbH
 Sripath Technologies LLC	 Vialit Asphalt GmbH	 Joseph Vögele AG	 Volvo Construction Equipment	 Zydex Industries	

The European Asphalt Pavement Association (EAPA)

European Contacts in Brussels:

- Aggregates Europe (UEPG)
- Eurobitume
- European Union Road Federation (ERF)
- European Construction Association (FIEC)
- Conference of European Road Directors (CEDR)
- Construction Alliance 2050
- High Level Construction Forum (HLCF)
- Industry for Europe etc.



The European Asphalt Pavement Association (EAPA)

European Floor Exchange

- Regular exchange with representatives of European Parliament and Commission



The European Asphalt Pavement Association (EAPA)

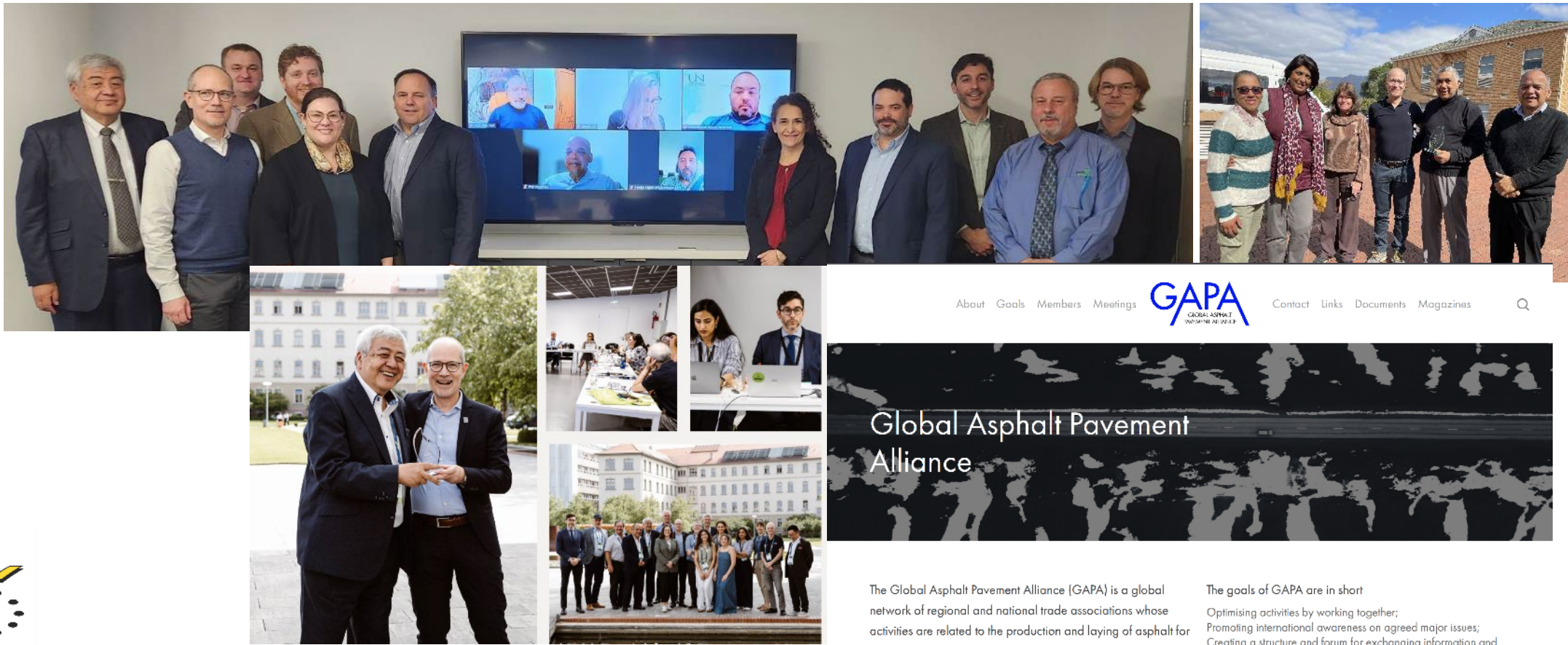
EAPA Committees

- General Council Assembly
- Directors' Group
- Executive Committee
- Technical Committee
- Health, Safety and Environment Committee
- Communication Committee
- Asphalt 4.0 Committee
- Various Task Forces: Warm Mix Asphalt, Reuse of asphalt, Decarbonisation, Odour



The European Asphalt Pavement Association (EAPA)

Global contacts and Chairmanship of Global Asphalt Pavement Alliance



The European Asphalt Pavement Association (EAPA)

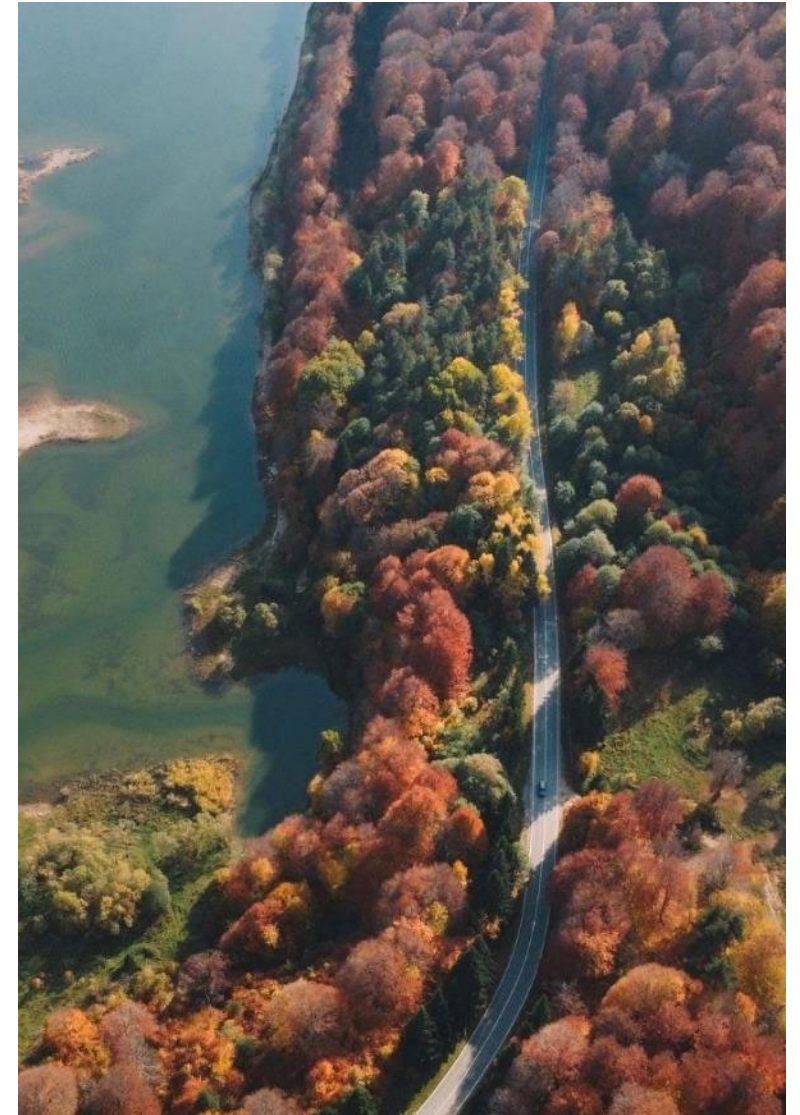


The hot topics and new challenges for the asphalt industry in Europe



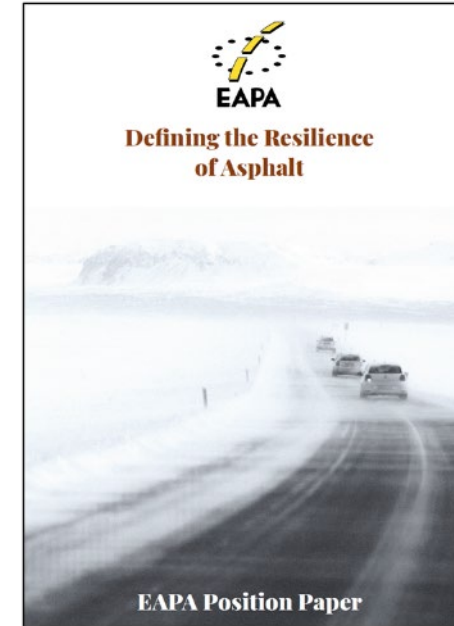
Many hot topics for the asphalt industry (1)

- Sustainability
 - Decarbonisation of asphalt and road sector
 - Environmental Product Declaration (EPD)
 - Circular Economy - Re-use of asphalt
 - Taxonomy
 - Tyre and road wear particles
 - Alternative binders
 - European End-of-Waste criteria for asphalt
- Health issues
 - Reduction of emissions in work environment
 - Temperature reduced asphalts/Warm Mix Asphalt (WMA)
 - Odour - Emissions of asphalt plants
 - Emissions of existing asphalt pavements



Many hot topics for the asphalt industry (2)

- Technical Aspects
 - Megatrends towards increased productivity
 - Durability of asphalt pavements
 - Hydrogen use for drying systems of asphalt plants
 - Asphalt for bike lanes
- Digitalisation and Innovation / Asphalt 4.0
- Attracting new talents and skilled workforce
- Resilience
- Future Road Transport
- Communication -Webinars, Social Media, Magazine, YouTube, Podcasts, etc.



Always hot topics for the asphalt industry

Standardisation

- Revision of the Construction Products Regulation (CPR)
- Updates and inputs for CEN Standardisation Committees
 - Bituminous mixtures (CEN TC227, CEN TC227 WG1)
 - Bituminous binders (CEN TC336, CEN TC336 WG1)
 - Sustainability, PCR and EPDs (CEN TC227 WG6)
 - Aggregates (CEN TC154)
- Exchange with Academia
 - Rilem TC on Alternative Paving Materials and Fumes Emission Evaluation
 - ERTRAC, ECCREDI
 - Universities over Europe



Decarbonisation of the Asphalt Sector

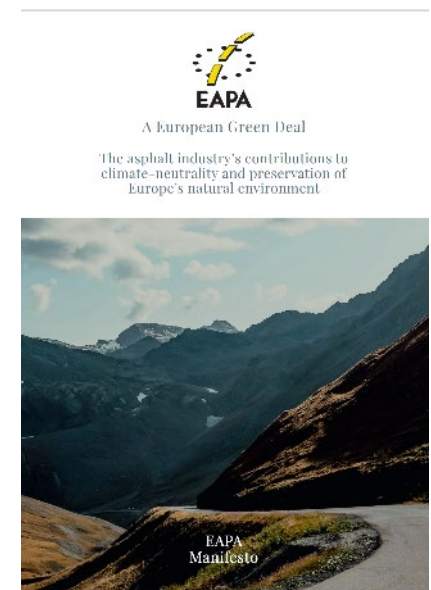


Decarbonisation and Circular Economy – The European Green Deal

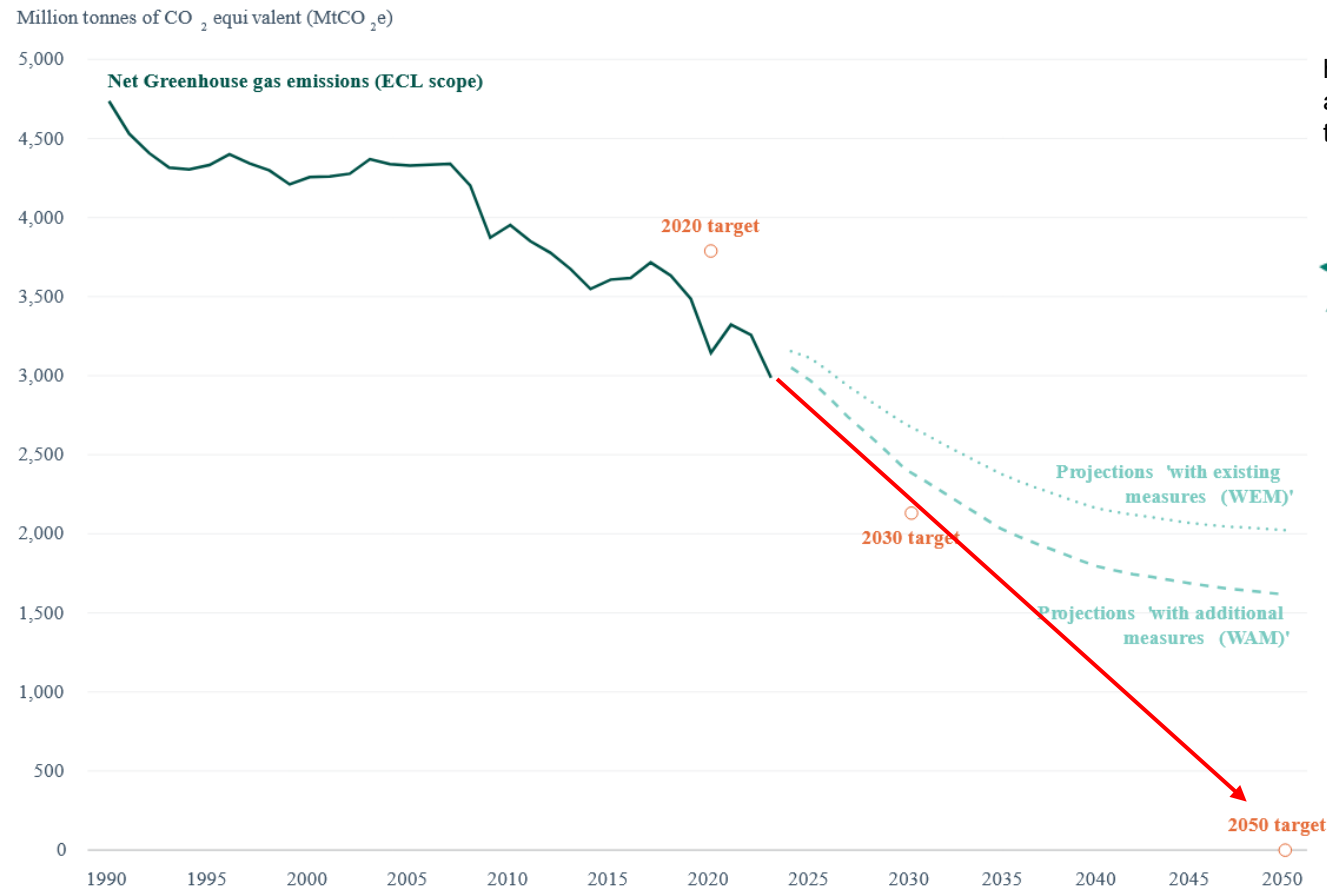
- “A European Green Deal” by EC in October 2019
 - **Carbon Net Zero** by 2050
 - A **circular economy** action plan and a ‘sustainable products’ policy to support the circular design and prioritising reducing and reusing materials before recycling them. Encourage businesses to offer reusable, durable and repairable products. Reduce waste significantly.
 - **Emissions** reduction
- “Fit for 55” package in July 2021
 - revision of climate, energy and transport-related legislation in order to align laws with the 2030 and 2050 ambitions.



Fit for
55



GHG emissions in the EU



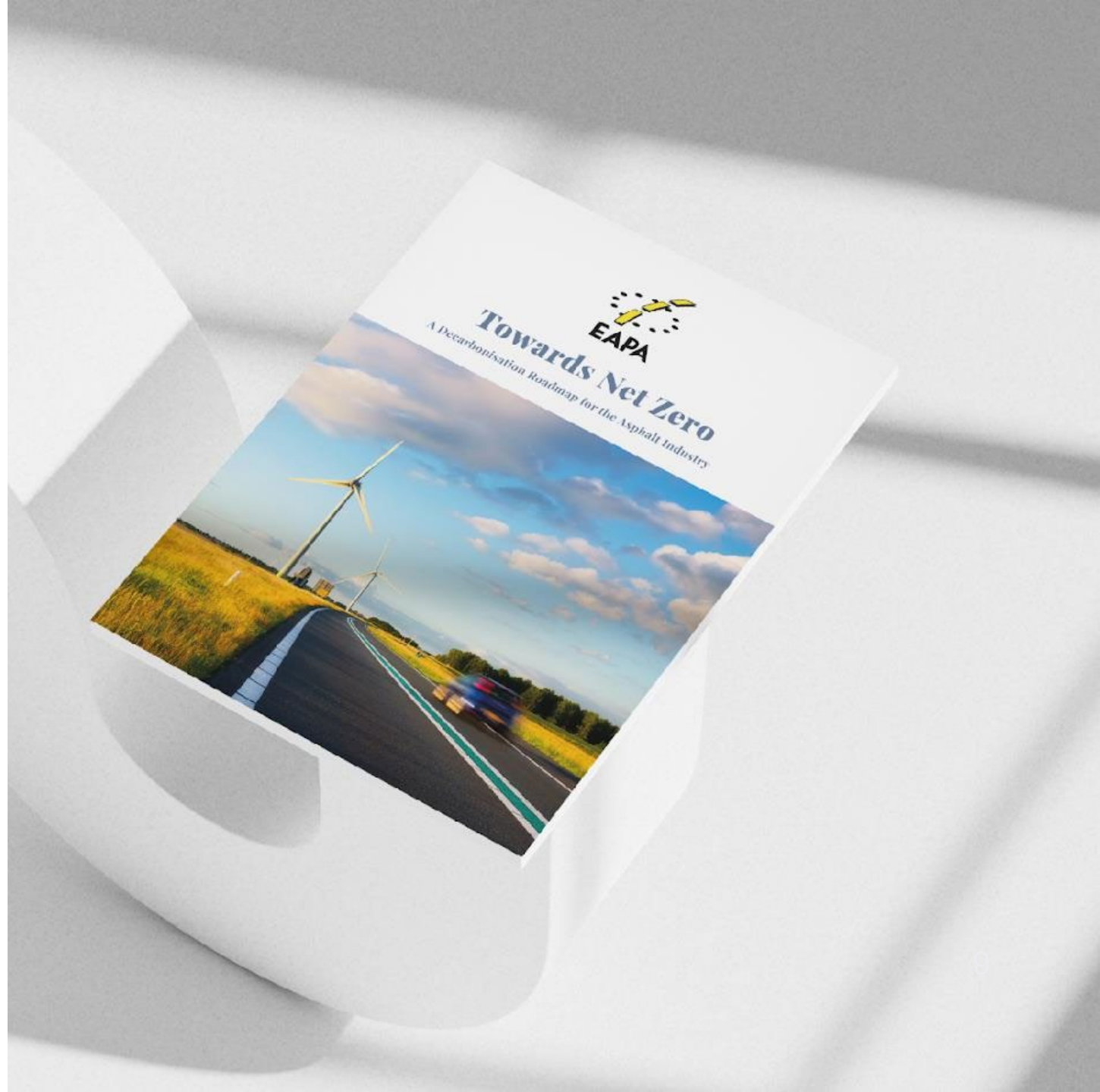
<https://www.eea.europa.eu/en/analysis/indicators/total-greenhouse-gas-emission-trends/progress-towards-achieving-climate>



**European
Environment
Agency**

JUST RELEASED!!!

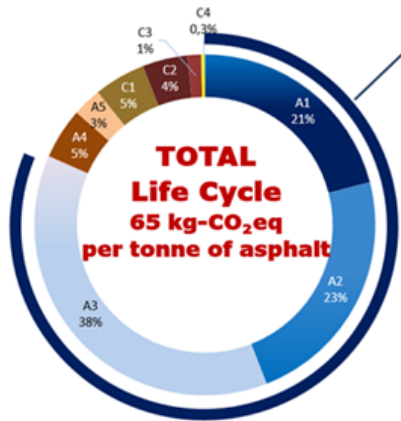
**Scan & access
digitally**



Roadmap to Net Zero – Release June 2024



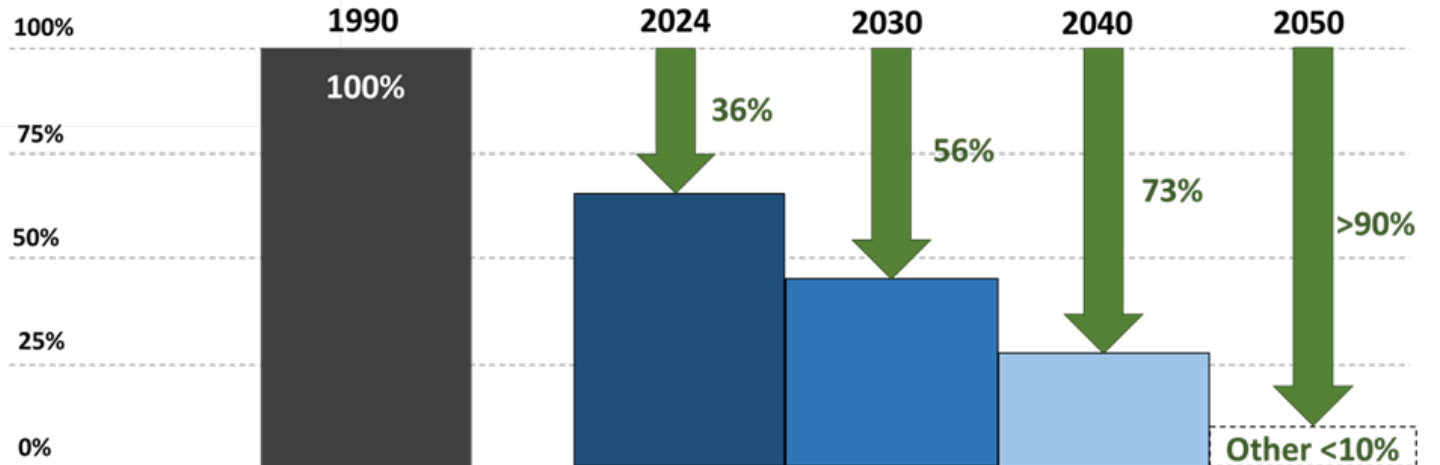
Roadmap to Net Zero



**Modules A1-A3
(Cradle to Gate)**
53kg-CO₂eq/t
>80% of Total CO₂ Emissions

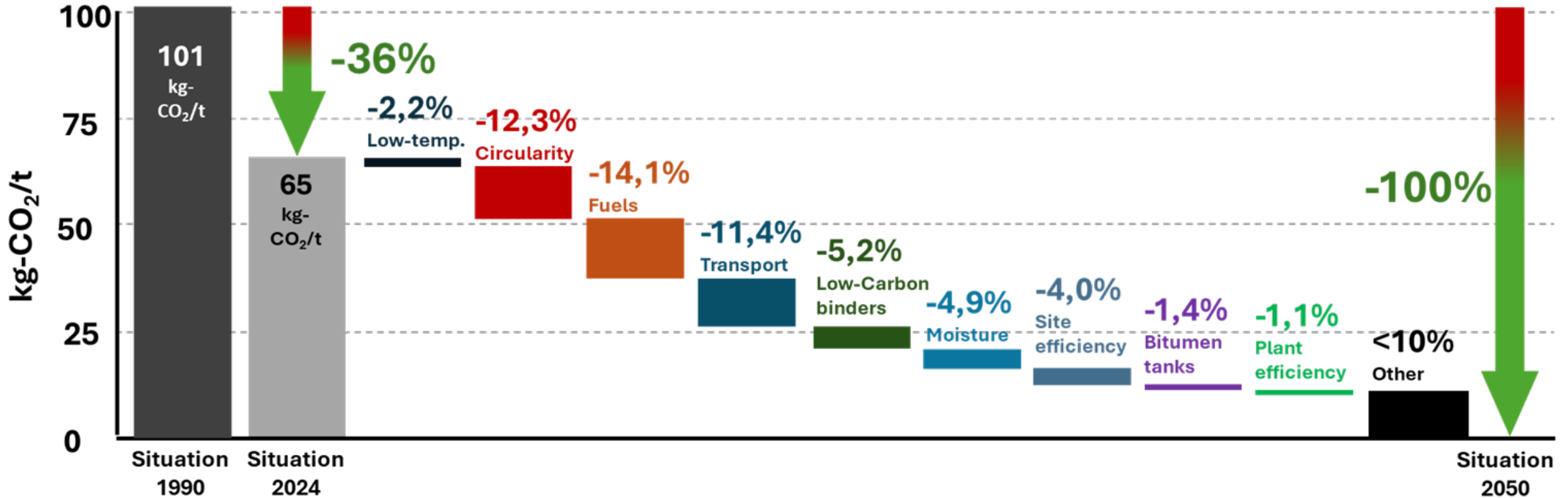


**Currently best available
information and prediction**

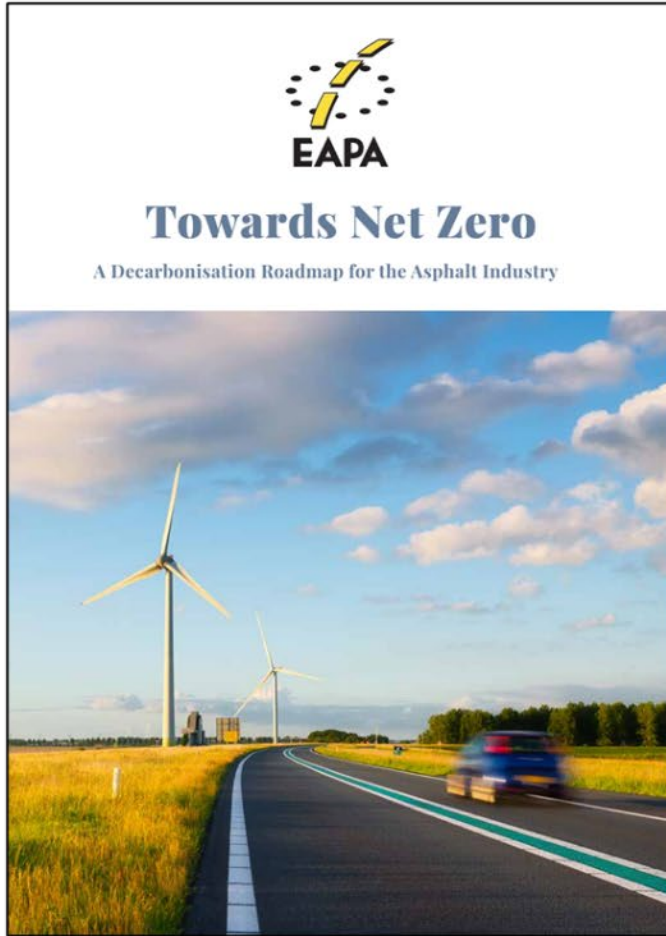


	1990	2024	2030	2040	2050
Binder substitution	0%	0%	~0%	5%	10%
% WMA production	0%	4,8%	50%	75%	100%
Average RA content	~0%	13,2%	30%	45%	50%
Fuels	Coal, heavy fuel-oil	Mix (all)	Gas, bio, hydrogen	Gas, bio, hydrogen	Bio, hydrogen
Moisture reduction	0%	~0%	2%	2%	2%
Binder heating	Heavy fuel-oil	Fuel-oil, gas, electric	Gas, electric	Electric	Electric
Transport emissions	152%	100% (reference)	~100%	60%	20%
Plant consumption	~100%	100% (reference)	~100%	75%	50%
Job-site emissions	~100%	100% (reference)	~100%	60%	20%

Roadmap to Net Zero



Roadmap to Net Zero



Towards Net Zero

A Decarbonisation Roadmap for the Asphalt Industry



Corporate responsibility

Infrastructure is one of the most important assets, consisting of 5.5 million km of roads and over 8,000 billion km of free movement across the continent. The majority of goods are transported across the continent. Carbon-neutral, innovative, efficient and safe construction of these valuable assets to be stimulated and ensure that their past value and future worth are maximised.

Reaching each of the milestones on this path, while maintaining the competitiveness of the asphalt sector will require significant long-term strategies and synergies. These are not only between industry and direct stakeholders of the paving sector (such as material suppliers, Road Administrations, Governments and Academia), but between the asphalt sector and others, such as the automotive and energy sectors.

The asphalt industry has experience with some technologies that will need to be boosted beyond current limits (e.g. higher re-use of reclaimed asphalt or the implementation of WMA techniques). Other technologies, such as the use of carbon-neutral energy sources at the asphalt plant or the replacement of conventional

bitumens by alternative binders are still at a very early stage. In addition, some necessary external enablers, such as the decarbonisation of the transport sector and of electricity production, are beyond the efforts of the asphalt industry itself.

For all these reasons, underpinning such a long-term strategy relies on supporting strong developments and adaptations by the industry, aligned investments (private and public), innovative research programmes, enabling and flexible specifications and standards, and the commitment of Administrations to use the available technologies with shared risks. In other words, a holistic approach based on cumulative intersectoral synergies and which goes beyond the efforts of the asphalt industry alone must be embraced.

Enables Governments and Road Authorities to:

Permit and incentivise solutions. To stimulate the use of low-carbon road construction and which optimise the sustainability, circular design and quality. Effective and timely strategies and

into asphalt mixtures or, at least, recycled for other applications.

Enable the use of new technologies. To exploit innovations to enhance road asset management and operation.

Adopt Green Public Procurement: Establishment of Green Public Procurement initiatives, based on Environmental Product Declarations (EPD), which allow fair comparisons among products and suppliers and favour proposals with lower whole life environmental impact, rather than forcing prescribed solutions. This in conjunction with Most Economically Advantageous Contracts which enables innovative, rather than

the lowest initial cost, solutions in tenders, with reasonable shared risk.

Boost Research & Development: To set up balanced R&D Programmes developed and steered collaboratively by industry and road owners/operators with a focus on real needs, with reduced duplication of effort across the EU and to deliver real-life solutions in real projects. Research on topics, such as increasing RA content in asphalt mixes, low-temperature production, large-scale bio-binders production, zero-emissions transport or zero-emissions energy sources for asphalt plants (e.g. hydrogen), may help to more rapidly achieve decarbonisation objectives.



EAPA urges the Asphalt Paving Industry to:

Continue product development: To optimise asphalt mixture designs for performance, maximum service life with minimum maintenance and minimum environmental impact.

Optimise circular production: To optimise the processing and handling of the RA to maximise its re-use. Also to develop asphalt plants and mix designs to maximise RA content in new mixes while ensuring that the mixes will be also re-usable and recyclable in the future, when they reach the end of their service life.

Undertake process development: To adapt production plants, as well as transport and construction equipment to undertake advanced manufacturing processes with optimised energy efficiency. The high-quality execution of mix manufacturing, transport and on-site construction operations can also create benefits for pavement performance and durability. Hence, special care must be put on these operations over the whole process, including RA milling and processing, storage, mixture production, paving and compaction.

Adopt Asphalt 4.0: To embrace the digital transformation of the asphalt paving industry. Digitally enabled technologies can help push forward the efficiency, productivity and sustainability of the industrial processes along the whole value chain.

Drive standardisation: To engage with stakeholders of the paving sector to dynamically develop or adapt standards to enable the use of low-carbon materials and technologies.

EAPA urges other sectors external to the Asphalt Paving Industry to:

Supply carbon-neutral raw materials: To develop alternative raw materials for asphalt production, which are produced in a carbon-neutral way, but do not compromise workers health and safety, asphalt performance, as well as circularity at the end of service life [10].

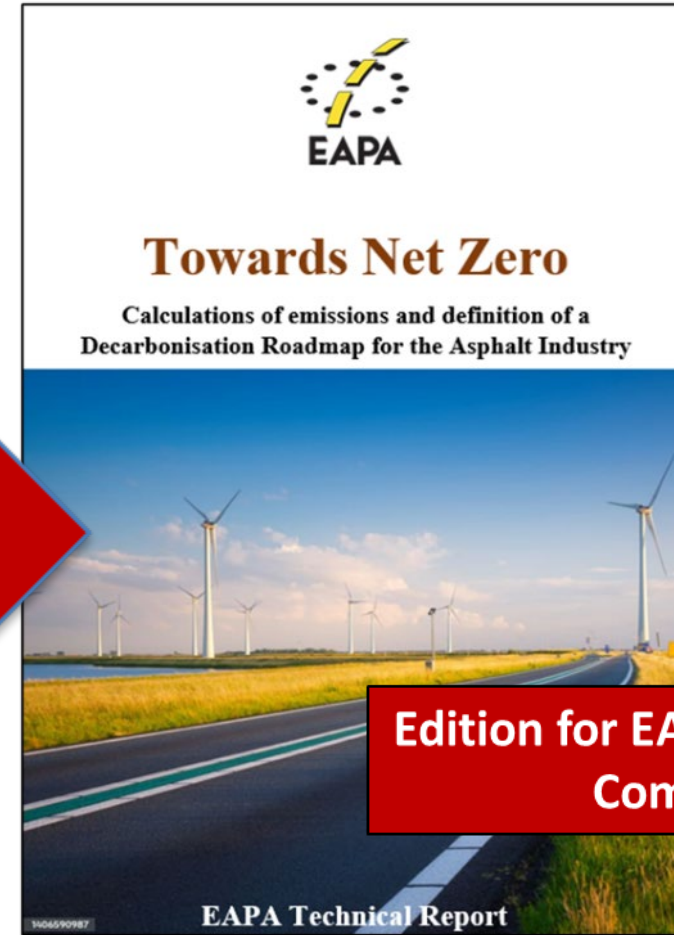
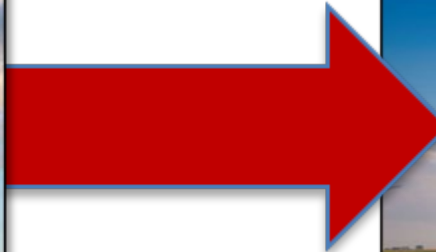
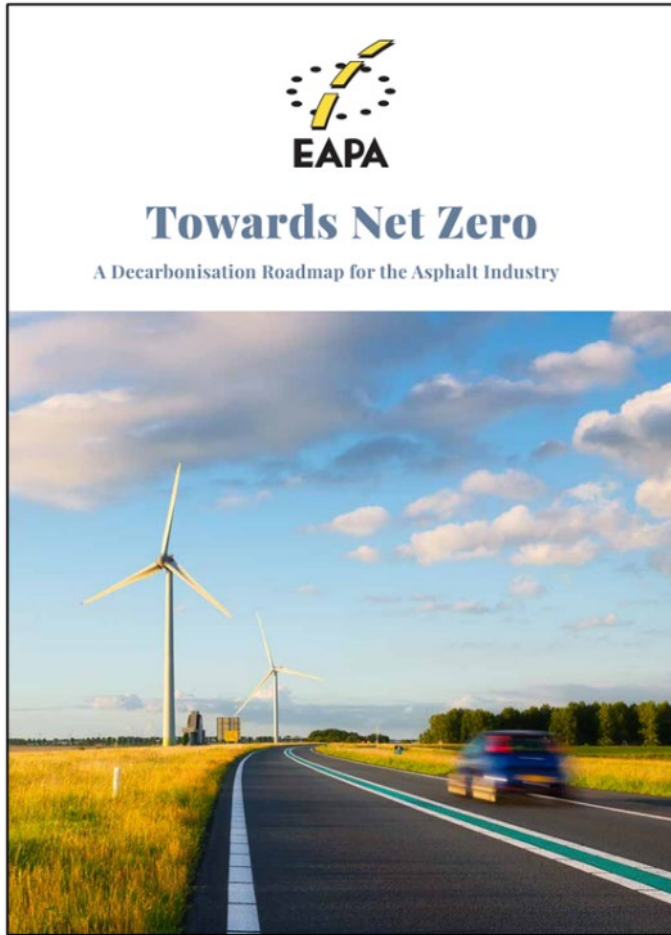
Enable green energy sources: To develop and maximise the capacity and availability of carbon-neutral and renewable energy sources, to be used by all industries.

Develop a decarbonised automotive industry: To develop carbon-neutral solutions for mobile plant and heavy-duty vehicles, used in the transport and processing of raw materials, reclaimed asphalt and the final asphalt mix.



And all to collaborate to develop the cumulative solutions to achieve Net Zero.

Roadmap to Net Zero



**Edition for EAPA Members Only
Coming soon**

Reduce Road Transport Emissions with proper Road Maintenance

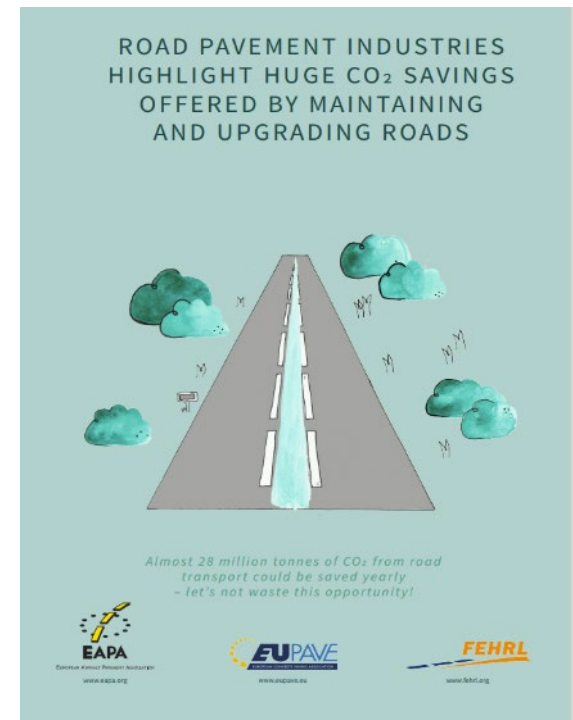
- Transport is responsible for nearly 25% of the EU's total CO_{2eq} emissions 3,000 Mt (2023), of which 70% comes from road transport.

Road Transport

- Appr. 525 Mt of CO_{2eq} are related to road transport
- 3-5% can be saved with smooth and even roads* (and more with tailor made asphalt surfaces)
→ **>25 Mt of CO_{2eq} per year → Road maintenance is important**

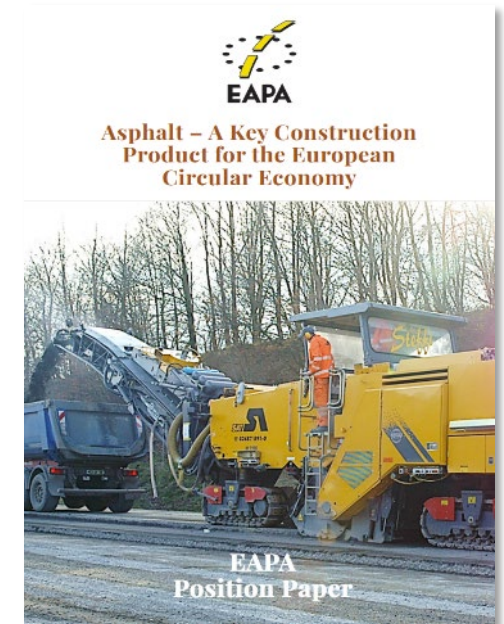
Production of Asphalt

- 40-60kg of CO_{2eq}/t of Asphalt with 215 Mt of Asphalt being produced (2019/EU-27)
→ **appr. 10 Mt of CO_{2eq} per year**



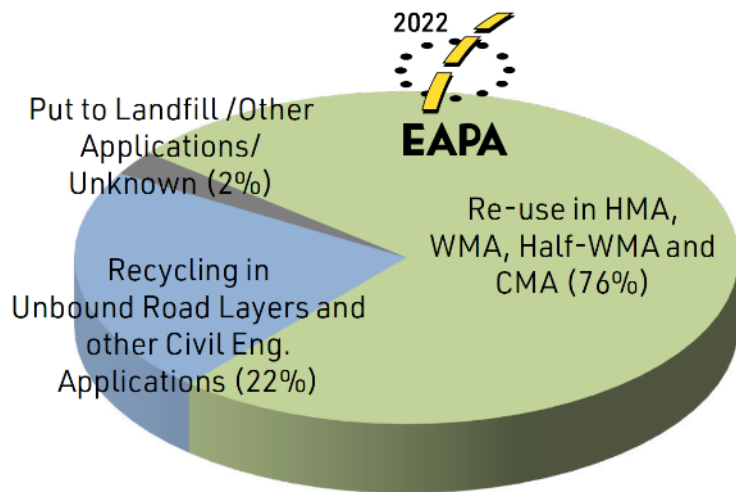
* See [Road Pavement industries highlight huge CO₂ savings offered by maintaining and upgrading road - view - EAPA](#)

Circular Economy – Asphalt is Circular



Circular Economy – Asphalt in Figures by EAPA

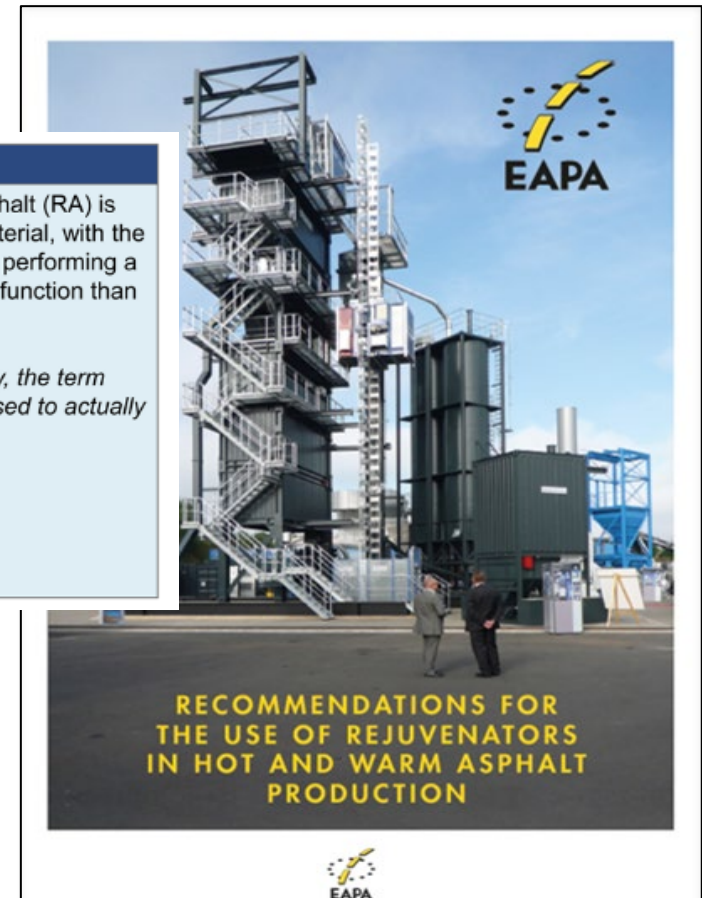
- Asphalt Industry is fully committed to the Circular Economy




Data from Austria, Belgium, Croatia, Czech Republic, Denmark, France, Germany, Great Britain, Hungary, Ireland, Norway, Romania, Slovenia, Spain and Turkey. In these countries, a total of 36,1 Mt of reclaimed asphalt were available, out of which, 76% were re-used, 22% were recycled and only 2% were used on unknown applications or put to landfill.

Asphalt re-use	Asphalt recycling
Operation by which reclaimed asphalt (RA) is added to new asphalt mixes, with the aggregates and the aged bituminous binder performing the same function as in their original application.	Operation by which reclaimed asphalt (RA) is used as foundation, fill or road material, with the recovered aggregate and bitumen performing a lesser (or alternative engineering) function than in the original application.
<i>Note: This is independent of manufacturing temperature, road layer, etc. Hence, it would include, for example, the manufacturing of cold mix asphalt from former warm or hot mix asphalt, as long as aggregates and aged bitumen keep respectively working as aggregates and binder.</i>	<i>Note: This means that, traditionally, the term "recycling" has been mistakenly used to actually refer to "re-use" operations.</i>



Important: End of Waste Activities!




Re-use




Recommendations for Road Authorities to achieve circular economy goals through the maintenance, re-use and recycling of asphalt




The Circular Economy of Asphalt




EAPA Technical Review




Asphalt – A Key Construction Product for the European Circular Economy



EAPA Position Paper



Re-Use of Reclaimed Asphalt
EAPA Task Force Report



Internal Report

Digitalisation & Innovation – Asphalt 4.0



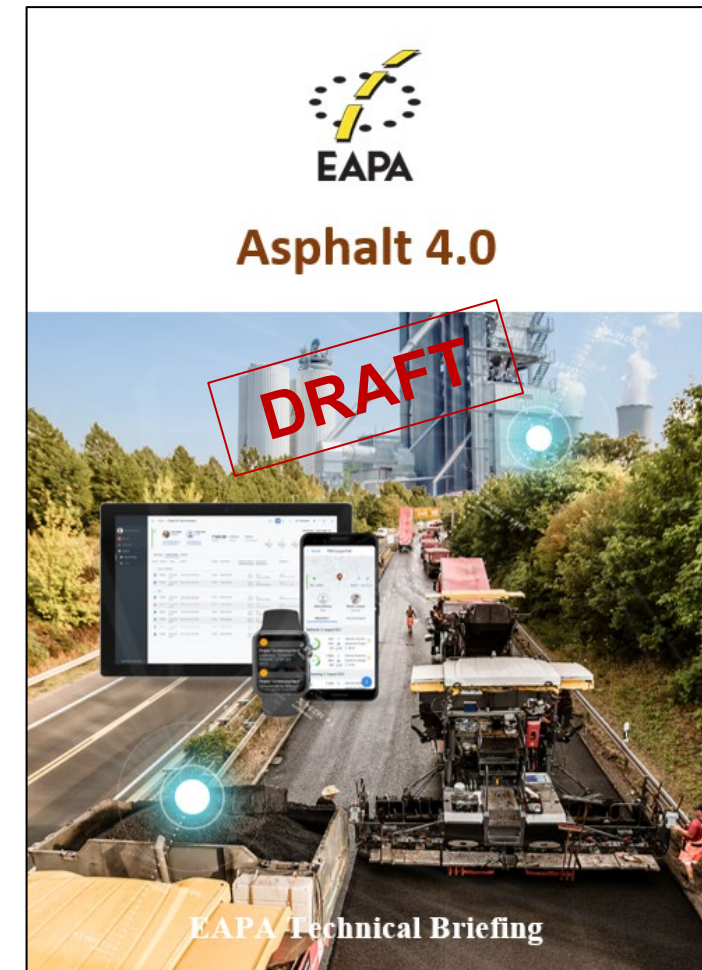
Asphalt 4.0 Committee



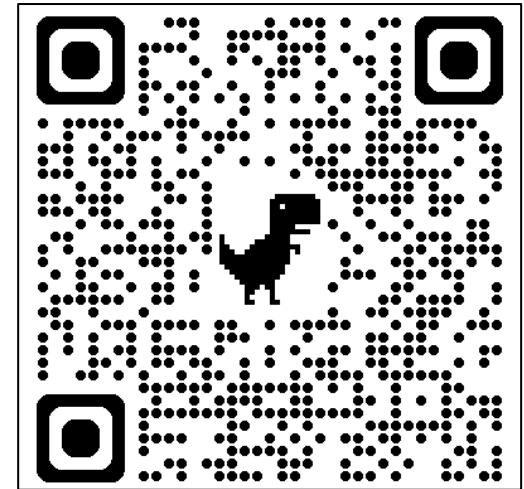
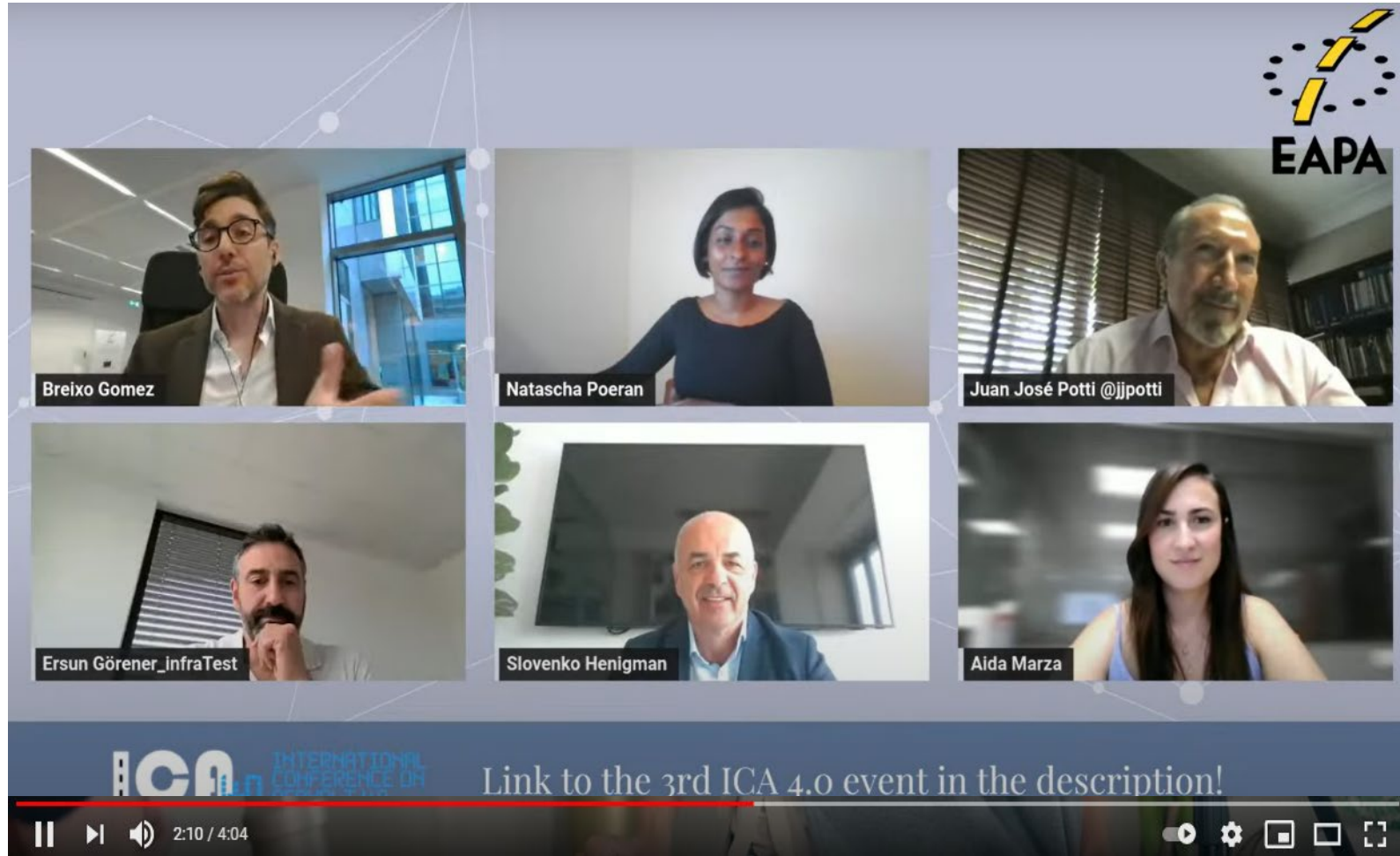
- In the past, digital technologies and innovations used to be discussed within the agenda of our Technical Committee
- This content was increasing a lot → 2020 launch of Committee for Asphalt 4.0

Asphalt 4.0 Priorities

- Identification of relevant technologies, initiatives, projects in the world related to the concept of Asphalt 4.0
- Share knowledge among EAPA Members
- Create external awareness among related stakeholders, Public Administrations and general society about the benefits, challenges, barriers for implementation, EAPA position, roadmap, etc. of Asphalt 4.0 technologies.
- Main Outcomes:
 - EAPA Technical Briefing: Asphalt 4.0 (in progress)
 - Support International Conference on Asphalt 4.0
 - Communication and campaigning activities



EAPA Webinar on Asphalt 4.0

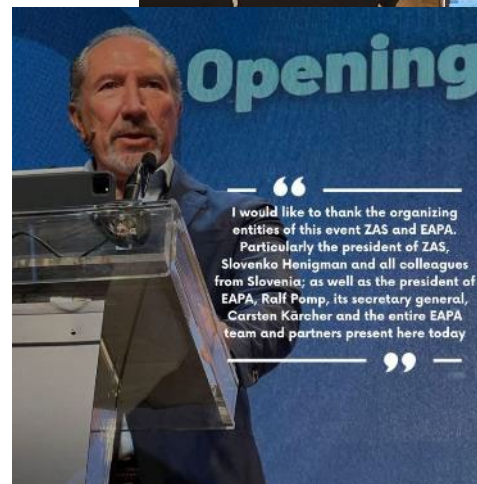


More than 4.000 views!

<https://www.youtube.com/watch?v=PsdNPCqTxAg>



International Conference on Asphalt 4.0



Communication



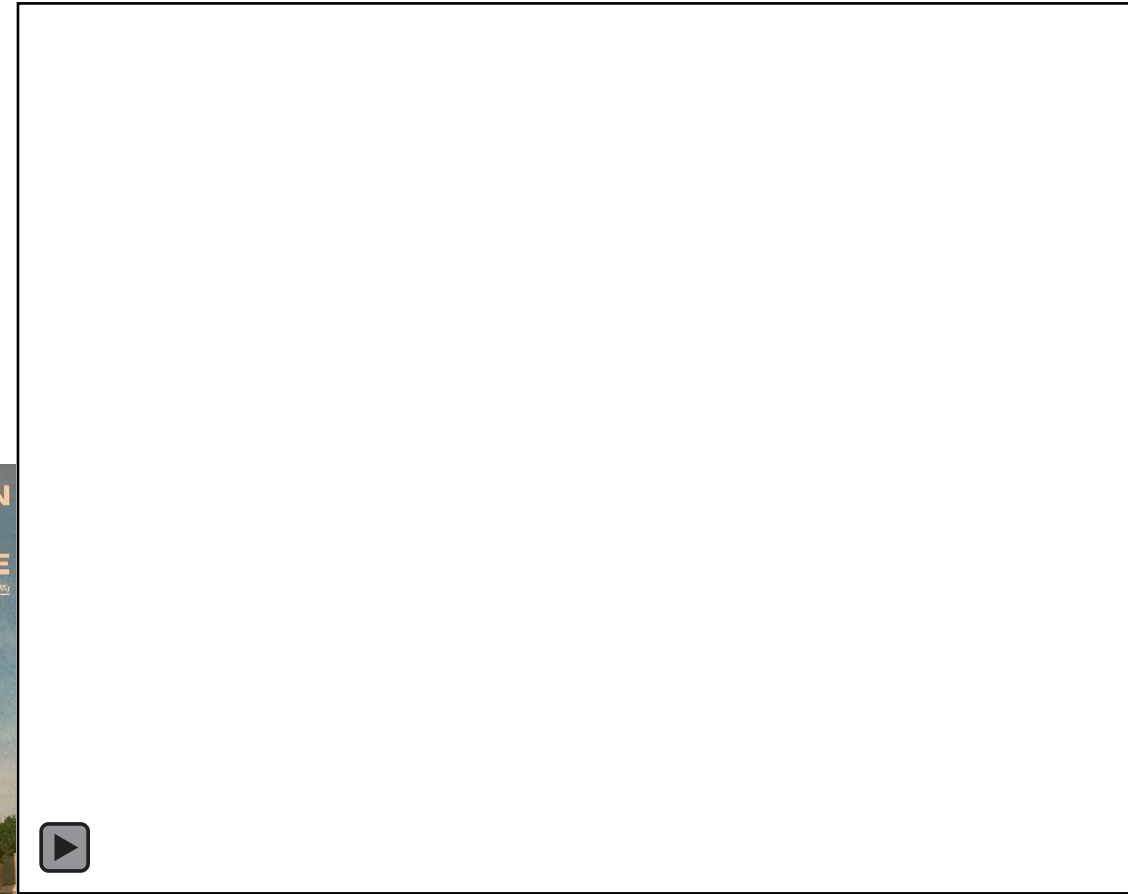
International Road Maintenance Day

- Gathered on 4 April 2024, bringing together experts to discuss CO₂ emissions reduction and sustainable road maintenance. Hosted by EAPA and Asefma (Spanish Asphalt Pavement Association) with 150+ participants from 45 countries. Live streamed by EAPA for global audience.



Magazine, Newsletter and Website

- Communication via website, magazine, newsletter as well as public relations



Social Media – LinkedIn, Instagram, X

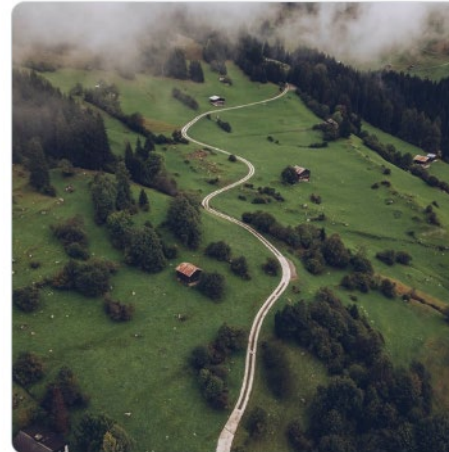
EAPA @eapa_org · Apr 4, 2019
 International Road Maintenance Day 2019 #IRMD2019
 Almost 28 million tonnes of CO2 from road transport could be saved yearly – let's not waste this opportunity!
eapa.org/wp-content/upl... @IRMD2019
 @jjpotti @CarstenKarcher @asphalteu



Karcher @CarstenKarcher · Mar 12, 2021
 the International Road Maintenance Day on 8 A
nanceday.org #IRMD #IRMD2021 #asphalt #r
 #asphaltadvantages #eapa #asefma @eapa_org @asefma
 @EEcongress2021 #eecongress2021



EAPA @eapa_org · Apr 7, 2021
 #IRMD2021
 Asphalt a precious construction material that can be used for recycling. Asphalt can be re-used in new asphalt mixes at the highest level. In some European Union Member States, the re-use rate for asphalt is up to 95%!
roadmaintenanceday.org

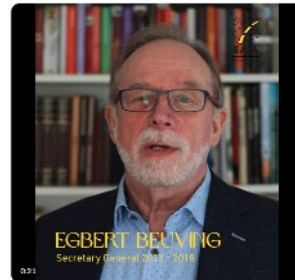


EAPA @eapa_org · Apr 4, 2019
 #IRMD2019 ROAD PAVEMENT INDUSTRIES HIGHLIGHT HUGE CO2 SAVINGS OFFERED BY MAINTAINING ROADS
 They call on Member States and local and regional road authorities to consider the CO2 effect in their road maintenance plans.
eapa.org/wp-content/upl...
 @CarstenKarcher @IRMD2019



EUPAVE, the European Concrete Paving Association and 8 others

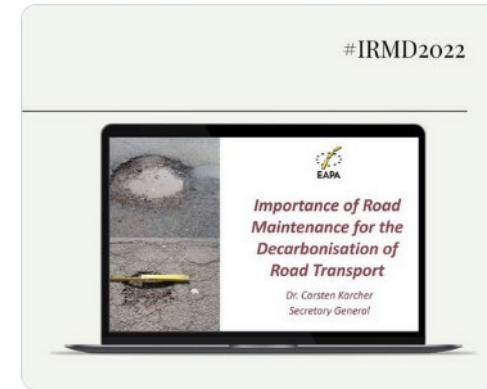
EAPA @eapa_org · Apr 13
 #EAPAS50Years We asked some former EAPA representatives to answer some questions about their experience throughout these 50 years. 🇪🇺
 The first was Egbert Beuning, EAPA Secretary General between 2003 and 2018.



EAPA @eapa_org · Apr 25
 #EAPAS50Years On a series of interviews with some former EAPA representatives, we will disclose their experience and how they see EAPA. 🇪🇺
 This time we talked with François Chaignon, EAPA President in 2019 and 2020.



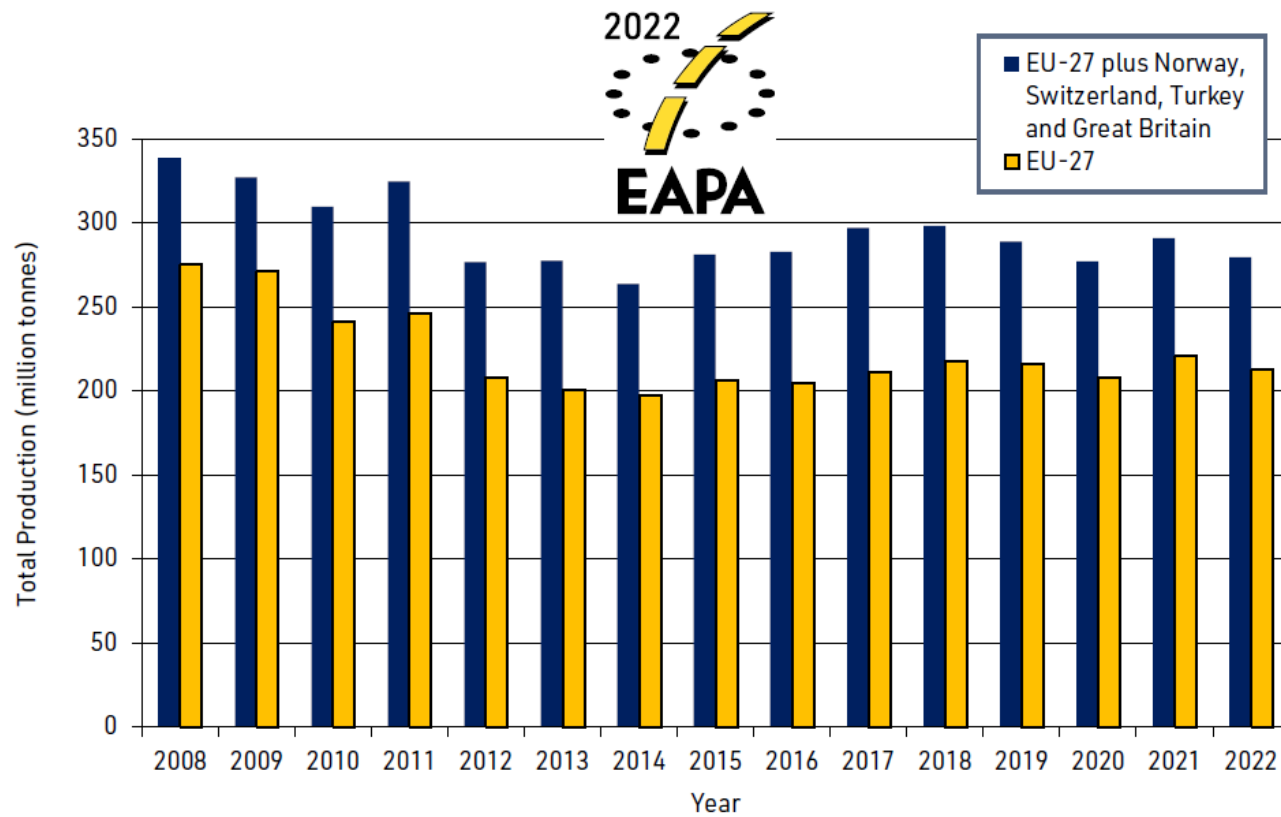
EAPA @eapa_org · Apr 7, 2022
 #IRMD2022
 Do you know that good #Road #Maintenance is important for the #decarbonisation of road #transport? Learn more in this short video!
roadmaintenanceday.org
youtu.be/QSQDeARSFE



eapa_org · Oct 2
 50Years We asked former EAPA representatives to answer some ns about their experience throughout these 50 years. 🇪🇺
 ie we talked with Ayberk Özcan, EAPA Vice-President from 2011 to



Asphalt in Figures



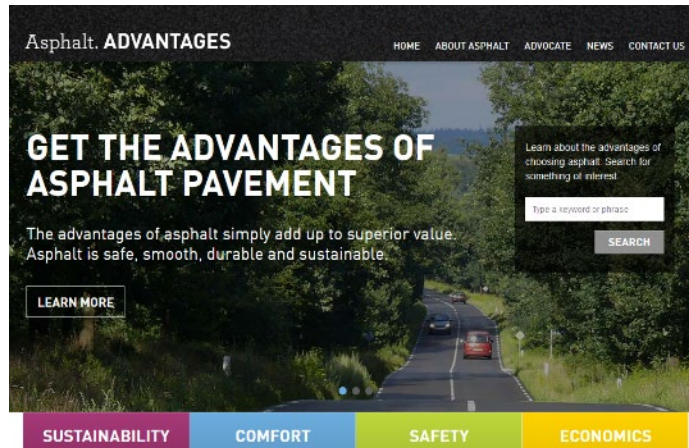
Podcast and Blog

Inspiring and empowering the next Generation of Engineers



Videos, Advantages, Awards





- EAPA YouTube Channel
- Asphalt Advantages
- Asphalt Advocate of the year



Manifestos and Position Papers

- Preparing EU Items and Manifestos (e.g. Green Deal, Reducing CO2 in the transport sector, Circular economy)

Position Papers

 <p>Asphalt – A Key Construction Product for the European Circular Economy (June 2022)</p> <p>Free Download View online</p>	 <p>Road Pavement industries highlight huge CO2 savings offered by maintaining and upgrading road (2016)</p> <p>Free Download View online</p>
 <p>EAPA Positions Paper on Secondary Materials (September 2020)</p> <p>Free Download View online</p>	 <p>Secondary Materials Ukrainian Version (May 2023)</p> <p>Free Download View online</p>

Guidance Documents

 <p>Recommendations for Road Authorities to achieve circular economy goals through the maintenance, re-use and recycling of asphalt (June 2022)</p> <p>Free Download View online</p>	 <p>The Ideal Project (June 2017)</p> <p>Free Download View online</p>
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EAPA
A European Green Deal

The asphalt industry's contributions to climate-neutrality and preservation of Europe's natural environment



EAPA Manifesto

Manifesto of the European Asphalt Pavement Association on the occasion of its 50th Anniversary 1973-2023





CONTRIBUTING TO AN ATTRACTIVE FUTURE FOR THE ASPHALT AND BITUMEN INDUSTRIES

Manifesto of Future Leaders of the Asphalt and Bitumen Industries
Presented at C&E Event 2012




Campaigns

- Enhancing the public perception of asphalt as a versatile and beneficial material
- Associate asphalt with sustainable road users and connect with runners & cyclists' community to foster a new audience base and promote the sustainability and usability of asphalt
- Address misconceptions about Asphalt roads
- Attract young talents and professionals to the industry
 - #AsphaltHeroes
 - #CyclistsLoveAsphalt
 - #RunnersLoveAsphalt



Women in Asphalt

Meghaa Vandana working with Siobhan McKelvey from Eurobitume
Women in Asphalt Focus Group – insights

MISSION STATEMENT

Empowering women in asphalt industry careers.

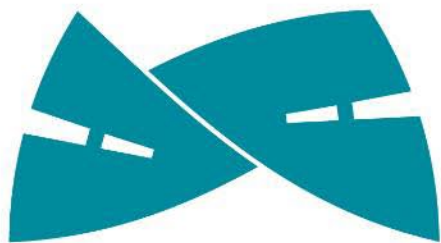
GOALS

- AWARENESS - Increasing awareness of opportunities in the industry.
- KNOWLEDGE - Elevating knowledge through education and resources.
- COMMUNITY - Providing platforms to create supportive relationships and growth.



Congresses, Symposia, and Events





3RD E&E EVENT
EURASPHALT & EUROBITUME
11-12 JUNE 2026
VIENNA
AUSTRIA

AUSTRIA TREND HOTEL
SAVOYEN VIENNA



WWW.EEEVENT2026.ORG

Thanks for listening!



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[@eapa_org](https://twitter.com/eapa_org)

karcher@eapa.org
[@CarstenKarcher](https://twitter.com/CarstenKarcher)

