MEASURING PROGRESS TOWARDS CLIMATE NEUTRALITY

HOW NET ZERO INDICATORS CAN INFORM POLICY-MAKING AND WHY THE EU NEEDS TO DEVELOP AN INTEGRATED SET

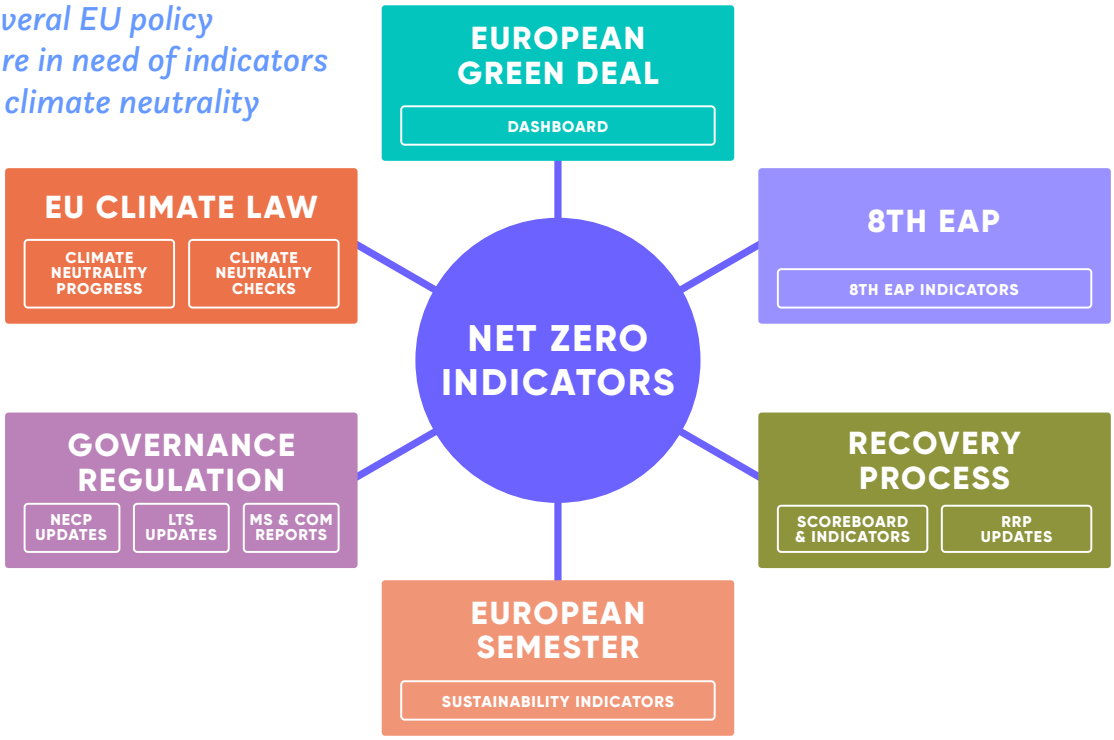
A FRAMEWORK FOR MEASURING STRUCTURAL CHANGE

Reaching climate neutrality requires changes in the way we organise our economies and conduct our daily lives. Net zero emission solutions often require integrated approaches across traditional sectors. **Measuring progress towards climate neutrality needs to capture the complexity of the underlying transformation**, to inform policy-making in a timely and sufficiently detailed fashion. This report presents a framework that can do this job. It is built on a set of indicators that can provide a systematic overview on the change happening (or not) in essential underlying processes. It could be applied for both reporting and planning purposes, at EU and national level alike – and the report identifies where and how this should be done.

KEY MESSAGES

- **Achieving climate neutrality will require the tracking of structural change throughout the economy:** Climate neutrality implies changes to our economic system, with solutions that work across sectors. To measure progress and plan and design policy towards this goal we will need a framework that captures the complexity of these shifts and reveals sufficiently in-depth information. Measuring greenhouse gas emissions or energy consumption alone is not a sufficient metric.
- **Net zero indicators can inform policy-making:** The proposed monitoring methodology defines a set of "net zero elements" that all form part of climate neutral vision of the future (see Figure 2). It identifies underlying "enablers" for the change that needs to happen in each of these elements – underpinned by indicators. This creates a detailed assessment matrix that can be used for both monitoring and planning purposes.
- **An integrated EU set of indicators to inform many processes**: The European Commission should lead the development of a methodology to measure progress towards climate neutrality by mid-2022 – which could then be applied in a range of relevant processes currently underway in EU policy (EU Climate Law and Energy Union governance, 8th Environment Action Programme, European Semester and Recovery process, European Green Deal Dashboard) (see Figure below). Decisions will be taken in these processes by the end of 2021 – so the window of opportunity for an integrated approach is open, but could be closing soon.

Figure 1: Several EU policy processes are in need of indicators to measure climate neutrality



A WINDOW OF OPPORTUNITY FOR INTEGRATION ACROSS PROCESSES

Several relevant EU policy processes are currently underway which seek to define new progress monitoring systems (see Figure 1), all connecting to the climate neutrality objective. This congregation represents a unique opportunity to integrate and harmonise across parallel processes. By connecting the many parallel processes explicitly, duplication of efforts and potential inconsistencies can be avoided, resulting in a more effective and efficient system and a better understanding of the impacts on climate neutrality. A common indicator set, including net zero indicators measuring structural change, could be applied (in sub-sets) in each, streamlining the effort required and enhancing comparability and accountability.

Specific policy recommendations

The **European Commission should lead the development of a methodology** to measure progress towards climate neutrality with a dedicated monitoring of structural change indicators – which could then be applied in all relevant processes. This exercise should start in 2021 and **conclude by mid-2022**.

This **monitoring methodology for climate neutrality** would enable the following uses:

- Help realise the missing **European Green Deal dashboard**
- Support the assessment of recovery process contributions to climate neutrality (in recovery plans and the **Recovery and Resilience Facility (RRF)** scoreboard - delegated acts to be adopted in 2021)
- Integration into broader sustainability measurements for the **European Semester** and the **8th Environment Action Programme** (indicators to be decided in 2021)
- Implementation of the progress measurement under the **EU Climate Law** (2023) and support to the "consistency checks" under the EU Climate Law (2023)
- Inclusion in future templates for **updated NECPs and LTSs** and in biennial reporting by Member States – and in Commission assessments of these national documents
- Inclusion in every **annual State of the Energy Union** report

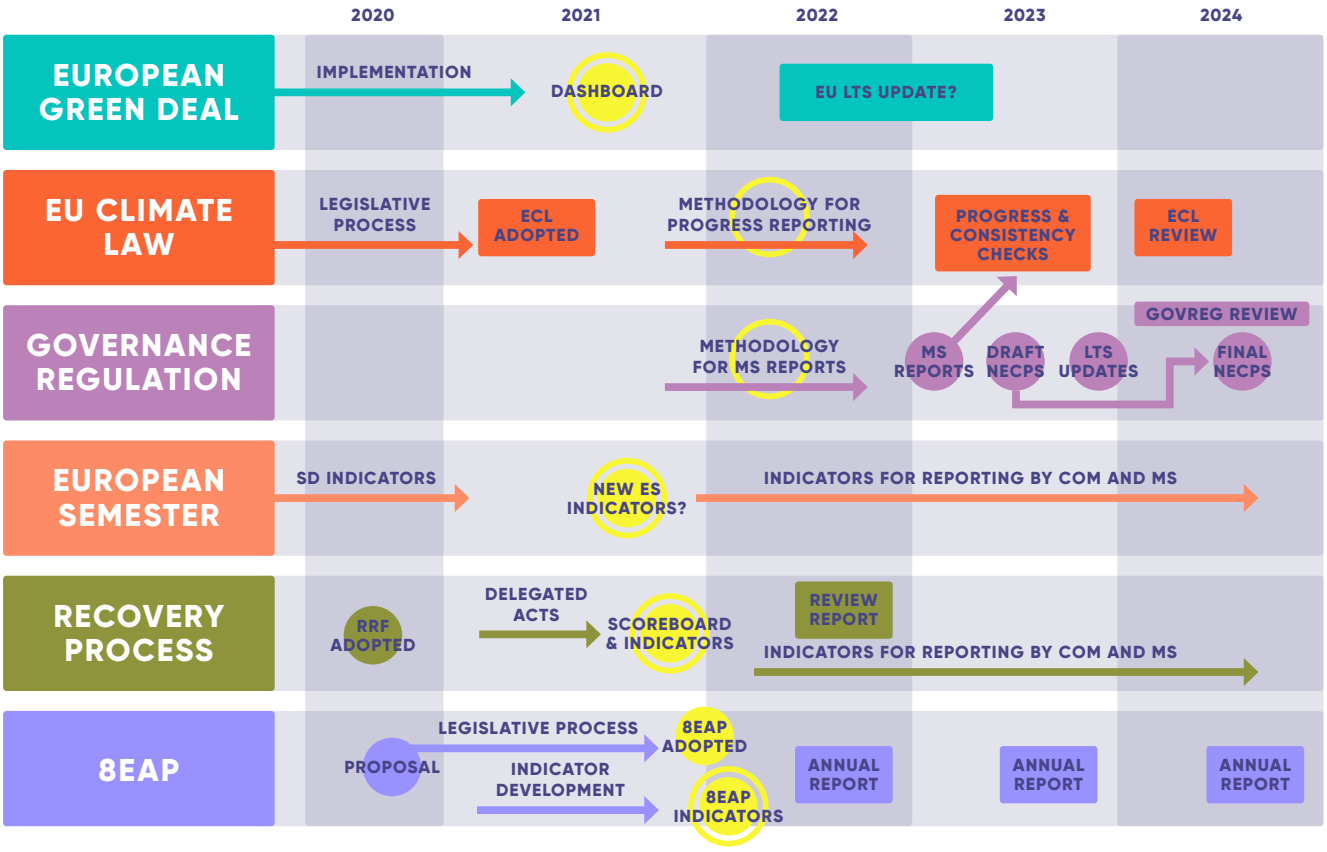
Full use of net zero indicators would require additional actions by the Commission:

- An **update to the EU Long-Term Strategy** as input to setting target values for indicators
- A **revision of the Governance Regulation** as part of the overall package for 2030

Furthermore, the **European Scientific Advisory Board on Climate Change** – to be formed after adoption of the EU Climate Law – could engage itself proactively in the task of developing such a monitoring methodology for climate neutrality, in support of the Commission's efforts.

A coherent and harmonised approach for measuring climate neutrality progress can and should be connected to and integrated in a broader assessment of progress under the European Green Deal and overall sustainable development goals.

Figure 2: Timeline of European policy processes using indicators



TRACKING PROGRESS THROUGH ENABLERS FOR DIFFERENT ELEMENTS OF A NET ZERO FUTURE

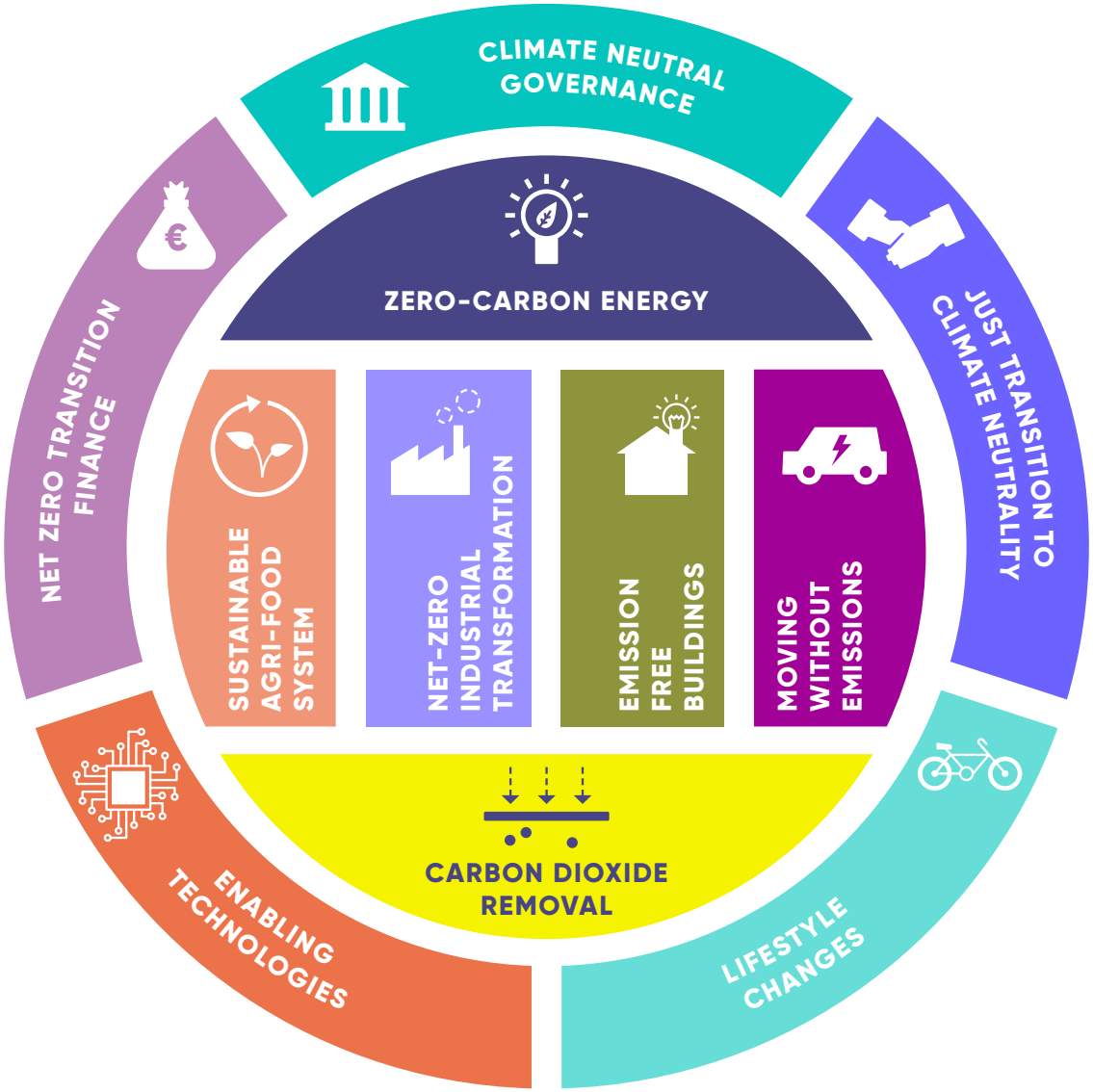
The proposed monitoring methodology is an attempt to develop a comprehensive tool for tracking progress towards the net zero emissions objective (see Part I for details). **Eleven "net zero elements"** form the basis of this framework; they are pieces of a vision for the future, covering the greenhouse gas (GHG) emitting sectors as well as the cultural, governmental and economic structures that connect them (see Figure 2).

For each net zero element, we identified respective **targets** (where they currently exist), but also their essential **drivers** ("enablers") and corresponding **indicators**, which are able to describe the change towards both targets and drivers.

For example, in the element "Moving without emissions", one of four enablers is to shift to "zero carbon fuels". One of four related indicators for the enabler is ""number of vehicles" with sub-indicators for vehicle types and fuel types. It provides information on the change in the vehicle fleet towards electric and hydrogen powered vehicles.

Standard progress measurement often relies on sectoral greenhouse gas emissions and energy consumption, which has its use at an abstract level **but cannot provide real insight into underlying developments**. Tracking enablers of change is essential to develop an understanding on the state of progress and to avoid blind spots. Without this level of detail, policy-making cannot be adjusted and improved to get on track – should a course correction be required. If we realise too late that one of the key shifts that will be required in the coming decades is not happening or taking too long, catching up will be harder and more costly, putting our goals at risk.

Figure 3: Elements for a net zero future



EARLY INDICATIONS OF STUMBLING BLOCKS – AND DATA GAPS

A **preliminary analysis** of selected indicators shows that progress is largely insufficient in most of the elements. While these example indicators only provide a glimpse of what the full set would reveal, the results provide a first hint at necessary policy adjustments addressing many sectors and policy fields to put the EU on track towards climate neutrality.

The research has identified important gaps in data availability and a lack of harmonisation and centralisation in some areas. Moreover, for several indicators, there simply is no data available at present (e.g. for the elements sustainable finance and governance) suggesting the need for enhanced data collection in these areas. In addition, most cross-sectoral elements (especially lifestyle changes and just transition) lack clear targets and these need to be defined for better progress measurement. This is particularly important as **some elements are presently not properly addressed in existing policy processes** (lifestyle changes, just transition) or at an early stage (finance). This is a cause for concern as it could perpetuate blind spots and thus ignore important elements of the transformation.

NET ZERO INDICATORS CAN IMPROVE BOTH PLANNING AND REPORTING

The progress monitoring methodology we propose has a broad applicability and could be used to structure future Long-Term Strategies and sector specific roadmaps and it could be integrated into relevant planning and monitoring procedures (e.g. National Energy and Climate Plans). The concrete integration and use in relevant EU policy processes is detailed in Part II of this report.

We hope that this proposed methodology will serve as **a welcome stimulus for debate about how all stakeholders in the EU can better judge whether we are on track** towards climate neutrality and where and how adjustments are needed. It is also the authors' view that a common approach to planning for and tracking progress towards climate neutrality, integrated across all relevant policy processes, could enhance administrative efficiency and real world impact.

PREVIOUS REPORTS IN THE NET ZERO 2050 SERIES INCLUDE:

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"Climate Laws in Europe: Good Practices in Net Zero Management" (February 2020)

"Zero Carbon Buildings 2050: Summary Report" (July 2020)

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