Methodology and process for the EEA's input to the 'Early warning' reports

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1. Background

The revised Waste Framework Directive, Packaging and Packaging Waste Directive and Landfill Directive require the European Commission, supported by the EEA, to publish Early warning reports three years ahead of the recycling and landfilling target years. The first early warning report is due in 2022 for the targets on recycling of municipal waste and packaging waste with a 2025 deadline.

The goal and purpose of the Early warning reports is to identify the prospects for each Member of meeting the recycling target(s) and to ensure **better, more timely and more uniform policy implementation, anticipate implementation weaknesses and allow taking action ahead of the target deadlines to ensure compliance with the targets**.

The three elements of the Early warning reports, as stated in the three Directives are:

a. An **estimate of the attainment of the targets** by each Member State;
b. A **list of the Member States at risk** of not attaining the target(s) within the respective deadlines accompanied by appropriate recommendations for remediating measures for the Member States concerned;
c. Examples of **best practices** that could provide guidance for progressing towards attaining the targets.

The EEA, supported by its ETC/WMGE, will develop preliminary Early warning assessments for all Member States in 2021, to feed into the first Early warning reports related to the 2025 recycling targets for municipal waste and packaging waste. Recommendations and best practices will be developed by the European Commission. A lighter assessment will be done for the target for the landfilling of municipal waste set in the EU Landfill Directive in the first Early warning report, as the target deadline is only 2035.

2. Assessment methodology

The EEA and ETC/WMGE have developed a methodology that is based on a set of 'success/risk factors'. A success/risk factor is assumed to influence the probability of meeting the target. Both data-based and qualitative success/risk factors are used for the assessment. These success and risk factors are defined in such a way that they can be analyzed as much as possible in a **transparent and objective way** across all Member States. The success/risk factors are assessed separately and then combined in a success/risk matrix, so in combination they give a **picture of the overall situation**. The full methodology is described in three **methodology documents** (one per target).

The assessment of each success/risk factor is done through threshold values or qualitative assessment categories that categorize each factor into green, amber or red:

on track target reached favorable	additional effort needed medium uncertain	unfavorable highly uncertain no information

The threshold values currently set and based on expert judgement might need to be further refined during the process. Table 1 gives an overview of the success/risk factors identified per target.

Table 1 Overview of success/risk factors per target

Recycling target for municipal waste	Recycling targets for packaging waste	Landfill target for municipal waste
Current situation and past trends		
Distance to target	Distance to target	Distance to target
Past trend in municipal waste recycling rate	Past trend in packaging waste recycling rate, total and by material	Past trend in municipal waste landfill rate
		Diversion of biodegradable municipal waste from landfill
Legal instruments		
Proper and timely transposition of the revised Waste Framework Directive into national law	Proper and timely transposition of the revised Packaging and Packaging Waste Directive into national law	
Clearly defined responsibilities for meeting the targets, and enforcement mechanisms, e.g. fines etc.	Clearly defined responsibilities for meeting the targets, and enforcement mechanisms, e.g. fines etc.	
Economic instruments		
Taxes and/or ban for landfilling residual- or biodegradable waste	Taxes and/or ban for landfilling residual- or biodegradable waste	
Taxes on municipal waste incineration or other residual waste treatment	Taxes on municipal waste incineration or other residual waste treatment	
Pay-as-you-throw systems	Pay-as-you-throw systems	
	Packaging taxes	
	Deposit-return systems	
Separate collection systems		
Convenience and coverage of separate collection systems for different household waste fractions	Convenience and coverage of separate collection for different packaging waste fractions	
Firm plans to improve the type and coverage of separate collection for different household waste fractions	Firm plans to improve the type and coverage of separate collection for different packaging waste fractions	
EPR and similar schemes		
	Coverage of Extended Producer Responsibility (EPR) schemes for packaging	
Fee modulation in EPR schemes for packaging	Fee modulation in EPR schemes for packaging	
Data quality		
Data and quality check	Data and quality check	
Verification process used to verify data	Verification process used to verify data	
Treatment capacity		
Capacity for the treatment of bio-waste		
Legally binding national standards and Quality Management System for compost/digestate		

In addition, a number of contextual parameters will be analysed without color-coding, including the evolution of waste generation, the implementation of the recommendations of the previous early warning reports published in 2018 where available, alignment of the waste management plans with Article 28 of the Waste Framework Directive, and the (non-binding) target of the 2020 Circular economy action plan to halve residual municipal waste by 2030. Although these contextual parameters are not 'scored', they are needed to get a deeper insight into the waste management in the MS. As in some cases SRFs could be too rigid and therefore require expert judgement to properly assess them, the insights from the contextual parameters complemented with the information provided by the MS, help to substantiate this expert judgement.

Weighting of the success/risk factors to determine 'total risk'

The risk assessment should indicate whether a country is at low, medium or high risk of not meeting the target. The 'total risk' categorization is the result of the sum of the individual scores of each SRF, where the assessment of each SRF results in a score of 2 points (green), 1 point (amber) or 0 points (red), depending on the assessment of the SRF. As some SRFs are considered to have a higher impact on meeting the target, the score of the SRF is multiplied by the defined weight of the SRF. This weighting factor is included in the description of the SRF. All SRFs are weighted evenly, with two exceptions:

- 'Distance to target' – weight 5
- 'Separate collection' – weight 2
- All others – weight 1

The final assessment will be done by summing up the individual assessments for each SRF (green = 2 points, amber = 1 point, red = 0 points) and weighting the points by the weighting factors assigned to each SRF as included in the description. As some SRFs might not be applicable to all MS, only the SRFs relevant to the MS are taken into account to define the maximum score. A MS is considered to be 'not at risk' if its score is more than 66% of this maximum score. A MS is considered to be 'at risk' if its score is less than 33% of this maximum score.

3. Process

The EEA and ETC/WMGE have developed and tested the methodology throughout 2020 with support from an advisory group of experts from five voluntary Member States and the European Commission. The process foresees several steps of interaction with the Member States as illustrated below.
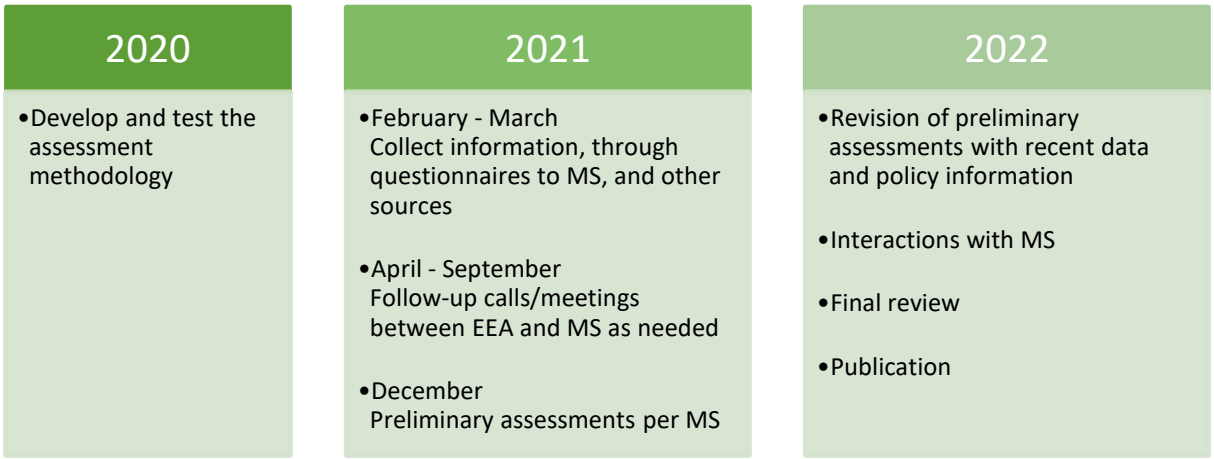
Figure 1 Process and timeline for the EEA's contribution to the early warning report