

Policy instrument evaluation

A tool for increasing
efficiency in
environmental policy

Policy instrument evaluation

A tool for increasing efficiency in environmental policy

*Emelie Von Bahr, Geir Vasseljen Mørkrid, Kristian Sipiläinen,
Peter G. Madsen and Sandra Friis-Jensen*

Policy instrument evaluation

A tool for increasing efficiency in environmental policy

Emelie Von Bahr, Geir Vasseljen Mørkrid, Kristian Sipiläinen, Peter G. Madsen and Sandra Friis-Jensen

ISBN 978-92-893-5934-4 (PRINT)

ISBN 978-92-893-5935-1 (PDF)

ISBN 978-92-893-5936-8 (EPUB)

<http://dx.doi.org/10.6027/TN2019-531>

TemaNord 2019:531

ISSN 0908-6692

Standard: PDF/UA-1

ISO 14289-1

© Nordic Council of Ministers 2019

Disclaimer

This publication was funded by the Nordic Council of Ministers. However, the content does not necessarily reflect the Nordic Council of Ministers' views, opinions, attitudes or recommendations.

Rights and permissions



This work is made available under the Creative Commons Attribution 4.0 International license (CC BY 4.0)
<https://creativecommons.org/licenses/by/4.0>

Translations: If you translate this work, please include the following disclaimer: *This translation was not produced by the Nordic Council of Ministers and should not be construed as official. The Nordic Council of Ministers cannot be held responsible for the translation or any errors in it.*

Adaptations: If you adapt this work, please include the following disclaimer along with the attribution: *This is an adaptation of an original work by the Nordic Council of Ministers. Responsibility for the views and opinions expressed in the adaptation rests solely with its author(s). The views and opinions in this adaptation have not been approved by the Nordic Council of Ministers.*

Third-party content: The Nordic Council of Ministers does not necessarily own every single part of this work. The Nordic Council of Ministers cannot, therefore, guarantee that the reuse of third-party content does not infringe the copyright of the third party. If you wish to reuse any third-party content, you bear the risks associated with any such rights violations. You are responsible for determining whether there is a need to obtain permission for the use of third-party content, and if so, for obtaining the relevant permission from the copyright holder. Examples of third-party content may include, but are not limited to, tables, figures or images.

Photo rights (further permission required for reuse):

Any queries regarding rights and licences should be addressed to:

Nordic Council of Ministers/Publication Unit
Ved Stranden 18
DK-1061 Copenhagen K
Denmark
Phone +45 3396 0200
pub@norden.org

Nordic co-operation

Nordic co-operation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and the Faroe Islands, Greenland and Åland.

Nordic co-operation has firm traditions in politics, economics and culture and plays an important role in European and international forums. The Nordic community strives for a strong Nordic Region in a strong Europe.

Nordic co-operation promotes regional interests and values in a global world. The values shared by the Nordic countries help make the region one of the most innovative and competitive in the world.

The Nordic Council of Ministers

Nordens Hus
Ved Stranden 18
DK-1061 Copenhagen K, Denmark
Tel.: +45 3396 0200
www.norden.org

Download Nordic publications at www.norden.org/nordpub

Content

Preface	7
Summary	9
1. Introduction	13
2. Methodology	15
2.1 Definition of policy instrument evaluation	15
2.2 Study questions	17
2.3 Scoring system	18
2.4 Information gathering	21
2.5 Analysis	22
3. Policy evaluation in the Nordic countries	23
3.1 Organisation	23
3.2 Guidelines	27
3.3 Evaluations	32
4. Evaluation of a policy instrument	39
5. Lessons learnt and recommendations	43
Sammendrag	47
Appendix A: Mapping of evaluations	51
Appendix B: Assessment of 32 evaluations	55
Denmark	55
Norway	63
Sweden	71
Finland	79
Appendix C: Stakeholders consulted	87
Appendix D: Literature	89

Preface

The Nordic countries are frontrunners in using economic instruments within the environmental policy field. In theory, well designed economic instruments have the potential to create cost-effective solutions to environmental problems. However, when implementing new policy instruments there are many factors – foreseen or un-foreseen – that may affect the efficiency of the policy.

In order to sustain cost-efficient policy instruments over time, policy evaluation is an important tool. The focus of the report is therefore on the role of evaluations of environmental policies in the Nordic countries and how evaluations could be better implemented in order to create and uphold effective and efficient environmental policies. The report shows, that the Nordic countries have a good and clear setup for conducting ex-ante evaluations, while there is still room for improvement for evaluating the environmental policies ex-post.

The report was funded by the Environment and Economy Group (MEG) of the Nordic Council of Ministers and prepared by COWI.

September 2018

Signe Krarup
Chairman of the Working Group
on Environment and Economy
under the Nordic Council of Ministers

Summary

This study analyses the role of evaluations for environmental policies in the Nordic countries (Denmark, Finland, Norway and Sweden) and discusses how environmental policy instrument evaluations could be better implemented in order to create and uphold effective and efficient environmental policies. A policy is effective if it is successful in achieving or progressing towards its objectives, while it is efficient if the policy interventions has been cost effective and so the costs can be justified by the changes it has achieved.

The focus of the study is on evaluations of environmental policy measures in the Nordic countries that contain economic instruments as well as policy instruments.

The study has been conducted by COWI A/S under supervision of the Environment and Economy Group of the Nordic Council of Ministers. The Environment and Economy Group is a multi-sectoral group with a mandate approved by both the environment sector and the finance sector of the Nordic Council of Ministers.

The study investigates the role of both ex-ante and ex-post evaluations for environmental policies, i.e. assessments of policies before and after they are implemented (cf. table 1 for a more detailed definition of ex-ante and ex-post evaluations).

Table 1: Ex-post and ex-ante evaluations, Definitions

Type	Definition
Ex-ante evaluation	<p>Ex-ante evaluations (1) must set out the logical reasoning that links the problem, its underlying causes, the objectives and a range of policy instruments to tackle the problem. They must present the likely impacts of the policy instruments, who will be affected by them and how.</p> <p>Ex-ante evaluations must compare the policy instruments on the basis of their assessed economic, social and environmental impacts.</p>
Ex-post evaluation	<p>Ex-post evaluations (2) aim to inform policy makers about existing policy instruments regularly (3), and to ensure that relevant evidence is available to support the preparation of new initiatives ("evaluate first" principle).</p> <p>As a minimum, ex-post evaluations must assess effectiveness, efficiency, relevance and coherence. Assessments of efficiency should always aim to quantify regulatory costs and benefits and identify burdensome or complex aspects of legislation and its implementation.</p> <p>All ex-post evaluations must assess all significant economic, social and environmental impacts.</p>

Notes: (1) Ex-ante evaluations are called impact assessments (IA) in the BRG.

(2) Ex-post evaluations are frequently referred to as evaluations.

(3) Ideally carried out on a regularly basis, but in practice often an ad-hoc basis.

Source: COWI – inspired by the so-called Better Regulation Guidelines (BRG) developed and issued by the European Commission (for information about the BRG, see: https://ec.europa.eu/info/better-regulation-toolbox_en).

The study focuses on three main areas in regard to ex-ante and ex-post evaluations:

- Organisation: How environmental policy evaluations are organised in the different Nordic countries – i.e. who are the typical clients and evaluators and what are the requirements in regard to conducting evaluations?
- Guidelines: Which types of guidelines exist for conducting ex-ante and ex-post evaluations?
- Specific evaluations: We look into 32 already conducted evaluations of environmental policies – i.e. 8 (4 ex-post and 4 ex-ante) in each of the four Nordic countries. We do this to look for good, but possibly also less good elements of the evaluations to learn from.

To investigate these three areas, we have set up a number of study questions for each area, developed a scoring system and conducted a number of interviews.

As a result of the analysis, we have found a number of lesson learnt shown in Table 2 for the three investigated areas. Based on the lesson learnt we have then developed a number of recommendations on how to improve the evaluation of environmental policies.

Overall, the results of the study show that the Nordic countries have a good and clear organisational setup for conducting ex-ante evaluations while there is room for improvement for evaluating the environmental policies ex-post. Only Finland has a requirement and a process for conducting ex-post evaluations of environmental policies. In regard to the organisational setup, we therefore recommend that:

- Evaluators in Denmark, Norway and Sweden look to Finland for inspiration to establish ex-post evaluation requirements that mirror ex-ante evaluation requirements, thereby encouraging a consistent policy cycle evaluation process.

In all the Nordic countries, it is a requirement that ex-ante evaluations are carried out for environmental policies, where the impact is expected to be large and there are guidelines describing how these evaluations should be conducted. However, there is some variation in how the evaluation guidelines in the different Nordic countries cover the environmental policy domain.

In regard to the guidelines for evaluations we have the following recommendations:

- There seems to be room for exchange of good practices. For example, others may be inspired by the use of Danish catalogue of environmental indicator values in evaluations, and the Swedish evaluation guidelines for environmental policies may inspire others to be more specific;

- Ex-ante guidelines should ensure a solid foundation for the ex-post evaluation. To carry out a good ex-post evaluation, it is important that good indicators are identified and introduced at an early stage, i.e. in the ex-ante evaluation when defining the baseline. Most important in this regard is that collection of data to be used in ex-post evaluations may be carried out on a regular basis;
- There is a need to develop specific guidelines for conducting ex-post evaluations. These guidelines may be inspired by the BRG developed and issued by the European Commission and its accompanying toolbox.¹

Even though there are no requirements or guidelines for conducting ex-post evaluations, we have in the study of the already conducted evaluations not found a strong tendency that the ex-ante evaluations are better than the ex-post evaluations when it comes to the definition and coverage of impacts and to the use of analytical tools. However, the study of the specific evaluations shows that it is not always clear which effects are included in the evaluation as well as the limitations related to estimating the effects. Furthermore, the study of the already conducted evaluations also indicate that the use of stakeholders is limited. Based on the analysis of the already conducted evaluations, we therefore have the following recommendations:

- The used, not officially documented, good methodologies should be made public – not least to encourage that evaluations results from different evaluations become more comparable;
- Recommendations and best practices for involving stakeholders should be included in the guidelines for evaluations.

¹ For information about the BRG, see: https://ec.europa.eu/info/better-regulation-toolbox_en

Table 2: Lessons learnt

Overview

Organisation

1. There are many different clients as well as evaluators, in all four Nordic countries. In itself, this points to a benefit from having common, widely-used evaluation methodologies encouraging that evaluations of different environmental policies are comparable – and so helping choosing the right ones in the future.
2. In contrast to Denmark, Norway and Sweden Finland has established ex-post evaluation requirements that mirror ex-ante evaluation requirements, thereby encouraging a consistent policy cycle evaluation process.
3. The Finnish Council of Regulatory Impact Analysis – that seems to be inspired by the European Commission's Regulatory Scrutiny Board – facilitates a formal way of monitoring that evaluations follow a consistent approach and are of good quality.

Evaluation guidelines

4. Most of the evaluation guidelines in all the Nordic countries are mainly applicable to ex-ante evaluations, and thus do not play much of a role in encouraging comparability between ex-ante and ex-post evaluations – and, in turn, in encouraging consistent policy cycles.
5. All the Nordic countries have more than one (ex-ante) evaluation guideline. The different guidelines shall, however, always be in compliance with the guidelines from the Ministry of Finance. Some of the guidelines focus on the evaluation process, while others focus on the use of analytical methods. Both types of guidance are overall of good quality.
6. Only few evaluation guidelines explain the use of and the benefit from stakeholder consultation – i.e. how it can contribute to the impact evidence base and how it can help to ensure wide acceptance and, thereby, usability of the evaluation results.
7. There is some variation in how the evaluation guidelines in the different Nordic countries specifically cover the environmental policy domain.
8. In general, the evaluation guidelines pay limited attention to cross-border impacts, although such impacts often can be significant. Furthermore, there is a discrepancy in some of the Nordic countries (e.g., Denmark) between guidelines of ministries of environment and ministries of finance with regard to cross-border impacts. As a rule, guidelines of ministries of finance exclude cross-border impacts.

Already conducted evaluations

9. Some evaluations have both ex-ante and ex-post elements. This can be problematic for the use of the evaluation results if it is not clear which of the results concern ex-post findings for the relevance, efficiency and effectiveness of policies, and which concern the assessment of the likely impacts of future environmental policies.
10. Apart from Denmark, there is not a strong tendency that ex-ante evaluations define, cover and analyse impacts better than ex-post evaluations although evaluation guidelines almost only are available for ex-ante evaluations.
11. The coverage of impacts in the evaluations, hereunder whether they only cover narrow (e.g. environmental) or also wider impacts on the society, is not always clear – limiting comparisons of the policy instruments being evaluated.
12. Stakeholder consultation is more frequently used within ex-post evaluations than within ex-ante evaluations. For the latter, there seems thus to be missed opportunities regarding obtaining evidence for and regarding securing wide acceptance of the evaluation results.

1. Introduction

This study analyses the role of evaluations for environmental policies in the Nordic countries (Denmark, Finland, Norway and Sweden), foremost the extent to which they are conducted and how, and discusses how environmental policy instrument evaluations could be better implemented in order to create and uphold effective and efficient environmental policies. A policy is effective if it is successful in achieving or progressing towards its objectives, while it is efficient if the policy interventions has been cost effective and so the costs can be justified by the changes it has achieved.

The Nordic countries are by many seen as frontrunners in developing and, not least, implementing environmental policies. To maintain this situation, there may be a need to improve the way in which the evaluation tool is used within the policy-making cycle. Hence, there may be a need to better evaluate and document the effects of already implemented environmental policies – via ex-post evaluations² – as well as a need for better analyses of the likely effects of possible future policies – via ex-ante evaluations.³

The study has been conducted by COWI A/S (henceforth: COWI) under supervision of the Environment and Economy Group of the Nordic Council of Ministers. The Environment and Economy Group is a multi-sectoral group with a mandate approved by both the environment sector and the finance sector of the Nordic Council of Ministers.

We aim with this study to contribute to the use of the evaluation tool in the Nordic countries. However, other countries may also benefit from our findings. We do this by adding to the policy evaluation capabilities in the Nordic countries by documenting a number of lessons learnt from how environmental policy evaluations are carried out at present, and by providing recommendations for how civil servants and/or external evaluators can make better use of the evaluation tool – in particular by learning from practices in other Nordic countries. This also means that the purpose is not to develop a new evaluation guideline to be used in all the Nordic countries. From the start of the study, we acknowledged that such an approach would not be feasible because it would disregard the fact that the Nordic countries have different policy cultures, such as requirements or ways of carrying out evaluations of environmental policies.

Our findings are reached via applying a methodology that defines what an evaluation is, and that defines a scoring system to help answer a number of study questions. The methodology is presented in Chapter 2.

² Frequently referred to as evaluations.

³ Frequently referred to as impact assessments.

In Chapter 3, we then assess the strengths and weaknesses of the existing evaluation guidelines and the methodologies applied when conducting environmental policy instrument evaluations in the different Nordic countries.

This assessment is in Chapter 4 accompanied by a “cold case” evaluation of the “Effect assessment of chemical initiatives 2014–2017”, conducted for the Danish Ministry of Environment and Food by COWI. Here we explain how this already conducted evaluation could have provided better evidence if the identified weaknesses had been overcome.

Finally, we present in Chapter 5 the main lessons learnt and provide recommendations for how these lessons may lead to improvements in the use of the evaluation tool within the environmental policy field in the Nordic countries. Focus is here on providing a robust basis for allowing each country to develop its own priorities for improving environmental policy evaluation practices. However, through increased sharing of good practices among the Nordic countries, a more “harmonised Nordic approach” will form, and consequently more comparable evidence of the effectiveness and efficiency of policy instruments within the environmental field will be available.

Four appendices are attached. Appendix A provides a non-exhaustive mapping of environmental policy evaluations conducted in Denmark, Norway, Sweden and Finland in the period 2011–2017. Appendix B provides for each of the 32 selected already conducted evaluations details of their assessed strengths and weaknesses. Appendix C informs on the stakeholders consulted. Finally, Appendix D lists the literature made use of – in addition to that presented in Appendix A.

2. Methodology

The methodology applied is presented in five sections. First, we provide a definition of policy instrument evaluation that has guided what we have been looking for in existing evaluation guidelines and in the methodologies applied when conducting evaluations in the different Nordic countries. Second, we present the specific study questions that we provide answers to in the report. Third, we present the scoring system that has helped us to provide the answers. Fourth, we describe the gathering of information needed to answer the study questions. Finally, we explain how we have used the information in the analysis.

2.1 Definition of policy instrument evaluation

To define policy instrument evaluation, we first define what we mean by environment policy instruments. Here, as shown in Table 3, we make use of the typology suggested by Norden (2014), which is based on the analysis presented in Konjunkturinstitutet (2012). We study economic instruments as well as other types of policy instruments used within the environmental policies of the Nordic countries. In other words, we do not only analyse evaluation practices for policy instruments that aim at adjusting prices of goods and services to reflect environmental externalities, or that provide carrots in the form of tax credits, grants and support.

Table 3: Types of policy instruments

Economic	Administrative	Informational	Research
Taxes	Legislation	Creating awareness	Research
Tax credits	Norms	Eco-labelling	Development
Fees	Limits	Counselling	Demonstration
Grants	Long-term contracts	Education	Technology and system evaluation
Subsidies	Environmental classification	Shaping public opinion	
Deposit-refund systems	Regulation		
Emissions trading	Technical requirements		
Certificates trading	Testing		
Environmental compensation	Supervision		
	Target management		

Source: Norden (2012) and Konjunkturinstitutet (2012).

Policy instrument evaluations have in recent years gained momentum – not least at EU level with the adoption of the Better Regulation agenda in 2015 and the Better Regulation Guidelines (BRG).⁴ Actually, the BRG have been revised as recently as in July 2017 (European Commission, 2017). The BRG covers the entire policy-making cycle and intends to boost openness, effectiveness and efficiency of the EU policy-making process and thus improve the quality of new proposals through better ex-ante evaluations, and to promote constant and consistent review of existing EU laws and policies through ex-post evaluations.

We have, as shown in Table 4, been inspired by the definitions provided by the BRG. Hence, we have addressed the issues covered by these definitions when assessing the identified guidelines and ex-ante and ex-post evaluations. When doing this, we acknowledge that evaluations are of different scope/ambition, most often depending on the scope/comprehensiveness of the evaluated policy instrument. For example, the application of a full cost-benefit analysis (CBA) or the use of the impact evaluation (IE) approach is complex and mostly only used for comprehensive policies. Furthermore, by defining a scoring system (see Section 2.3) we explain what we consider characterises a good evaluation.

Table 4: Ex-ante and ex-post evaluations, Definitions

Type	Definition
Ex-ante evaluation	<p>Ex-ante evaluations (1) must set out the logical reasoning that links the problem, its underlying causes, the objectives and a range of policy instruments to tackle the problem. They must present the likely impacts of the policy instruments, who will be affected by them and how.</p> <p>The ex-ante evaluations must compare the policy instruments on the basis of their economic, social and environmental impacts.</p>
Ex-post evaluation	<p>Ex-post evaluations (2) aim to inform policy makers about existing policy instruments regularly, and to ensure that relevant evidence is available to support the preparation of new initiatives ("evaluate first" principle).</p> <p>As a minimum, ex-post evaluations must assess effectiveness, efficiency, relevance and coherence. Assessments of efficiency should always aim to quantify regulatory costs and benefits and identify burdensome or complex aspects of legislation and its implementation.</p> <p>All ex-post evaluations must assess all significant economic, social and environmental impacts.</p>

Notes: (1) Ex-ante evaluations are called impact assessments (IA) in the BRG.

(2) Ex-post evaluations are frequently referred to as evaluations.

Source: COWI – inspired by the so-called Better Regulation Guidelines (BRG) developed and issued by the European Commission (for information about the BRG, see: https://ec.europa.eu/info/better-regulation-toolbox_en).

⁴ Cf. https://ec.europa.eu/info/law/law-making-process/better-regulation-why-and-how_en and also https://ec.europa.eu/info/better-regulation-toolbox_en

The definitions in the table mention neither environmental policies nor economic instruments explicitly. Hence, they are not exclusive to these, but applicable to policy instruments in general. Furthermore, it may be worth mentioning that there are other types of evaluations than policy instrument evaluations. There are, for example, organisational or process evaluations assessing the workings and performance of organisations; project evaluations assessing the impact of e.g. specific infrastructure projects and programme evaluations where the activities undertaken by ministries and agencies are assessed against a set of objectives or criteria.

2.2 Study questions

The study's starting point was a number of study questions. Table 5 lists these and introduces our overall approach to providing answers to these. Hence, as described further in the following sections, we have made use of desk study information to map and assess existing ex-post and ex-ante evaluation guidelines and already conducted evaluations of environmental policies. We have then consulted stakeholders in Denmark, Norway, Sweden and Finland to obtain comments on our preliminary findings, thereby contributing to the final answering of the study questions, see Appendix C.

Table 5: Study questions and approach to provide answers

Study question	Approach to provide answer
To what extent are ex-ante evaluations conducted?	Mapping of ex-ante evaluations conducted in Denmark, Norway, Sweden and Finland since 2011 – i.e. counting the number of evaluations, hereunder the number that addresses economic instruments, and comparing the numbers among the Nordic countries. Gathering stakeholder assessments of the share of environmental policies – hereunder of economic instruments – that have been subject to ex-ante evaluations.
To what extent are ex-post evaluations conducted?	Mapping of ex-post evaluations conducted in Denmark, Norway, Sweden and Finland since 2011 – i.e. counting the number of evaluations, hereunder the number that addresses economic instruments, and comparing the numbers in between the Nordic countries. Gathering stakeholder assessments of the share of environmental policies – hereunder of economic instruments – that have been subject to ex-post evaluations.
Are there national guidelines about when and how evaluations are to be conducted?	Mapping of national ex-ante and ex-post evaluation guidelines, focus being on requirements to the timing of evaluations, to the types of policies to be evaluated, and to the evaluation methodologies to be applied.
How do ex-ante and ex-post evaluations compare in terms of methods, data availability etc.?	Assessing comparability/consistency between national ex-ante and ex-post guidelines and between already conducted evaluations – e.g., with respect to definitions and coverage of environmental and other impacts, to use of data, and to methods for assessing effects of environmental policy instruments. Hence, overall assessing consistency within the policy-making cycle.
Are evaluations conducted systematically or ad-hoc, and are they performed internally or by external consultants?	Based on the above mappings of evaluations and evaluation guidelines, characterising the extent of systematics vs. ad-hoc approach, and the extent of using external consultants.
How is the independence and integrity of evaluations guaranteed?	Looking into the extent to which evaluations are carried out internally or by external evaluators.
To what extent do evaluations inform policy development?	Assessing how evidence from ex-post evaluations is used within ex-ante evaluations – and the other way around. Gathering stakeholder assessments of the extent to which evaluations inform policy development. Assessing strengths and weaknesses of the evaluation methods applied – and thus assessing the quality of the evidence provided by the evaluations.

Source: MEG invitation to tender and COWI.

2.3 Scoring system

As input to answering the above study questions, we have made use of a scoring system developed for the present study. Table 6 shows that the scoring system covers three central areas, i.e. what we mean by the extent, the quality, and the consistency of the evaluation approaches. We make use of the semi-quantitative scores, *high (H)*, *medium (M)*, or *low (L)*, for a number of indicators that are connected to the study questions. The specific scores have been determined in an iterative process between COWI and the interviewed stakeholders.

It must be underlined that many of the definitions of the indicators as well as of the criteria for assigning the scores are not entirely precise. This can of course be seen as a weakness of the approach. However, we believe that it is not feasible – and therefore

not usable – to define more precise indicators and criteria. Actually, we also consider it as a strength because it allows for some flexibility and does not prevent scoring. In other words, the aim of the scoring system has rather been to encourage that the right characteristics of the evaluation guidelines and already conducted guidelines are assessed, rather than calculating and comparing overall scores. In this context, we acknowledge that a ranking of the guidelines and evaluations using such scores may depend on their number. For instance, if only few evaluations have been made, it may not provide a robust representation of these.

Regarding the extent of evaluations (1), we have been looking for information to overall being able to assess and compare which of the Nordic countries evaluate most of their environmental policies – ex-ante as well as ex-post. A well-defined indicator here is the share of environmental policies evaluated (1.1). This is, however, not straightforward to measure as this would require a counting of both evaluations and policies. Furthermore, such account would comprise both comprehensive and less comprehensive evaluations, and the same goes for policies. Hence, the assignment of the scores is mainly done via stakeholder views.

The study provides a non-exhaustive list of environmental policy evaluations conducted in Denmark, Norway, Sweden and Finland in the period 2011–2017 (see Appendix A). In this context it is worth mentioning we do not have an estimate for the number of environmental policy evaluations that have been carried out (1.2).

The issue of whether the comprehensiveness of the evaluations reflects the comprehensiveness of the policy and thus the policy impact is assessed further in (1.3). For the evaluation guidelines, we have assessed whether the evaluation requirements depend on the expected policy impact. A high score is here given if the guideline clearly specifies why an evaluation shall take place, and how the evaluator shall focus on significant impacts.

Finally, within this first area, we have assessed the requirements to regularity (1.4), i.e. the extent to which the guideline specifies when an evaluation shall take place. A high score is here given if the requirements to timing include a specification of how the evaluation will contribute to the policy-making process.

Table 6: Scoring system

No.	Indicator	High (H)	Medium (M)	Low (L)
1	Extent of evaluations/guidelines			
1.1	Share of environmental policies evaluated	> 75%	25–75%	< 25%
1.2	Number of environmental policy evaluations	Above average of Nordic countries	Around average of Nordic countries	Below average of Nordic countries
1.3	Proportionality of evaluation to policy impact	Evaluation requirements depend on policy impact	Evaluation requirements depend somewhat on policy impact	Evaluation requirements do not depend on policy impact
1.4	Requirements to regularity	All (comprehensive) environmental policies are timely evaluated in the policy-making process	Few/some requirements to the timing of evaluations in the policy-making process	No requirements to the timing of evaluations in the policy-making process
2	Quality of evaluations/guidelines			
2.1	Definitions and coverage of impacts	Well-defined and comprehensive coverage of impacts	Acceptable definitions but not complete coverage of impacts	Unspecific definitions and only partial coverage of impacts
2.2	Comparability between ex-ante and ex-post evaluation guidelines regarding impacts	Full comparability	Some comparability	No comparability
2.3	Use of analytical methods for measuring impacts	Much use of analytical methods	Some use of analytical methods	No or little use of analytical methods
2.4	Comparability between ex-ante and ex-post guidelines regarding use of analytical methods	Full comparability	Some comparability	No comparability
2.5	Stakeholder consultation	Much use as evidence base and for acceptance of evaluation results	Some use as evidence base and for acceptance of evaluation results	No or little use as evidence base and for acceptance of evaluation results
2.6	Independency	High independency and integrity of evaluators	Medium independency and integrity of evaluators	Low independency and integrity of evaluators
3	Consistency of evaluations/guidelines			
3.1	Role of evaluation in policy cycle	Explicit role	Some role	No explicit role
3.2	Comparability of economic instruments with other policy instruments	Full comparability	Some comparability	No comparability

Source: COWI.

Regarding the quality of the evaluations and of the evaluation guidelines (2), we have looked at whether the expected impacts of the environmental policy instruments are well-defined (2.1), and whether the coverage of impacts is comprehensive and goes beyond environmental impacts to also cover economic impacts – e.g. administrative costs – and social costs. Hence, we have assessed whether the impacts covered are sufficient ex-post to assess the relevance, effectiveness, efficiency, and coherence of existing policies, and ex-ante to assess the likely impact of future policies. Furthermore, in the context of assessing coverage and consistency of the policy-making cycle, we compare the definitions and coverage of impacts between the ex-ante and the ex-post evaluation guidelines.

We have also looked at the use of analytical methods (2.3) to measure the defined impacts. Hence, we have looked for the use of approaches such as cost-benefit analyses and cost-effectiveness analyses, as well as for the use of analytical models, e.g. CGE, or econometric models. Furthermore, we have compared the use of analytical methods between ex-ante and ex-post evaluations and evaluation guidelines (2.4).

Furthermore, we have looked into the requirements in the evaluations guidelines to the use of stakeholder consultation (2.5) as well as the actual use in already conducted evaluations. In this respect, we have assessed how stakeholders are used as evidence base for measuring impacts and how stakeholders are consulted in the process of getting acceptance of the evaluation results.

Finally, within this second area, we have assessed any requirements to the independency (2.6) or integrity of the evaluators – internal or external – who have been involved in the analysed evaluations.

The third area regarding the consistency of the evaluations and of the evaluation guidelines (3) is to some extent summing up on the other two areas. First, we conclude on the roles of the ex-ante and ex-post evaluations in the policy cycle (3.1), i.e. whether such roles are explicitly specified in the evaluation guidelines. Second, we conclude on the comparability of how economic instruments are evaluated vis-à-vis other policy instruments (3.2).

2.4 Information gathering

As introduced above, the study questions have been answered using different information sources. We have, as listed in Appendices A and D, analysed written material, and we have, as listed in Appendix C, consulted a number of stakeholders in Denmark, Norway, Sweden and Finland.

The stakeholders have been identified by applying the so-called “snowball” methodology, where we have used an interview with one key stakeholder to identify other key stakeholders who they find have the best insight into existing evaluation guidelines and into policy instrument evaluations that have been conducted in recent years within the field of environmental policy. The key stakeholders are government officers, researchers, private companies or non-governmental organisations.

In practice, first, most of the written material has been gathered and analysed to get preliminary answers to the study questions. The stakeholders have then partly been asked to comment on these preliminary answers and on the coverage/suitability of the identified evaluation guidelines and already conducted evaluations. Furthermore, they have partly been asked to provide additional information and views, hereunder to provide their recommendations for improvements in the use of the evaluation tool within the environmental policy field in the Nordic countries.

2.5 Analysis

As presented in Chapter 3, we have first, on the basis of the gathered written material and the information provided by the stakeholders, described how evaluation activities for environmental policies are organised in the different Nordic countries.

From this starting point, we have assessed all the relevant national evaluation guidelines identified in Denmark, Norway, Sweden and Finland. Furthermore, we have searched for inspiration from guidelines elsewhere. Hence, we answered the respective study questions, hereunder provided values to the relevant scoring indicators.

Regarding the analysis of already conducted evaluations, we selected, as shown in Section 3.3, 32 evaluations, i.e. 8 (4 ex-post and 4 ex-ante) in each of the four countries: Denmark, Norway, Sweden and Finland. In the selection process, we have made use of the scoring system in order to cover high, medium and low scoring evaluations. In this context, we asked the consulted national stakeholders to point to evaluations that we can learn from particularly.

3. Policy evaluation in the Nordic countries

In this chapter, we provide both an assessment of the evaluation guidelines used in the Nordic countries and an assessment of the methodologies applied in already conducted evaluations of environmental policies.

3.1 Organisation

To set the stage for this analysis, we start with a brief description of how environmental policy evaluations are organised in the different Nordic countries – i.e. who are the typical evaluators.

As a rule, there are often more formal requirements to ex-ante evaluations than to ex-post evaluations. This has consequences for the way the evaluations are organised and anchored (e.g. role of ministries in evaluations). Furthermore, both ex-ante and ex-post evaluations of large environmental policy initiatives are typically carried out by external evaluators (consultancy firms or research institutes), while minor ones are typically carried out internally in ministries/agencies. Hence, in these cases – although different staff may be involved – the client and the evaluator coincide.

Table 7 reveals that there are several different clients and types of evaluators, in particular in Denmark and Sweden – in Sweden, many different government agencies. However, in Norway, also smaller evaluations are carried out within a ministry or agency. Such internal ex-ante evaluations are guided by an instruction⁵ where six questions have to be answered. All the Nordic countries also have a National Audit Office, which audits public spending and seeks to strengthen the accountability of public administration. The National Audit Office can choose to evaluate different policies ex-post, including environmental policies. The National Audit Office typically focuses on large policy initiatives.

The evaluation experience is thus scattered over many actors. This might, on the one hand, imply that there is a large resource base for carrying out evaluations and the possibility of establishing a forum for sharing evaluation practices. On the other hand, it may imply that different evaluation methodologies are applied – not least for ex-post evaluations where common guidelines very rarely exist (see Section 3.2). A first lesson learnt from the mapping exercise is therefore:

⁵ Instruks om utredning av statlige tiltak, fastsatt ved kongelige resolusjon 2016.

1. There are many different clients as well as evaluators, in all four Nordic countries. In itself, this points to a benefit from having common, widely-used evaluation methodologies encouraging that evaluations of different environmental policies are comparable – and so helping choosing the right ones in the future.

Table 7: Organisation of environmental policy instrument evaluations in the Nordic countries

Country	Ex-ante/ ex-post	Clients (1)	Types of evaluators
Denmark			
	Ex-ante	Ministry of Environment and Food of Denmark, Danish Environmental Protection Agency Ministry of Taxation Danish Ministry of Energy, Utilities and Climate Ministry of Transport, Building, and Housing Municipalities	Consultancy firms Research institutes Research institutes, e.g. Danish Centre for Environment and Energy Ministries; Ministry of Taxation, Ministry of Environment and Food of Denmark, Danish Environmental Protection Agency (minor evaluations), Danish Ministry of Energy, Utilities and Climate, Danish Energy Agency, Ministry of Transport, Building, and Housing Municipalities
	Ex-post	Ministry of Environment and Food of Denmark, Danish Environmental Protection Agency Ministry of Taxation Danish Ministry of Energy, Utilities and Climate Rigsrevisionen (The National Audit Office)	Consultancy firms Research institutes Danish Council on Climate Change Ministry of Environment and Food of Denmark, Danish Environmental Protection Agency (minor evaluations) Ministry of Taxation Danish Ministry of Energy, Utilities and Climate, Danish Energy Agency Rigsrevisionen (The National Audit Office)
Norway			
	Ex-ante	Norwegian Parliament Ministry of Climate and Environment Norwegian Environment Agency Ministry of Finance	Research institutes Consultancy firms Norwegian Environment Agency
	Ex-post	Norwegian Parliament Ministry of Climate and Environment Norwegian Environment Agency Ministry of Finance	Research institutes Consultancy firms Public evaluator: Riksrevisjonen
Sweden			
	Ex-ante	Ministry of environment and energy Ministry of Finance Government agencies: Swedish Environmental Protection Agency, Swedish Agency for Marine and Water Management, Swedish Forests Agency, Swedish Chemicals Agency, Swedish Board of Agriculture, Swedish Transport Agency	Consultancy firms Research institutes Government agencies: Swedish Environmental Protection Agency, Swedish Agency for Marine and Water Management, Swedish Chemicals Agency, Swedish Energy Agency, Swedish Board of Agriculture, National Board of Housing, Building and Planning, The National Institute of Economic Research, Swedish Transport Agency Public committee or special evaluator
	Ex-post	Ministry of Environment and Energy Government agencies: Swedish Environmental Protection Agency, Swedish Energy Agency, Swedish Board of Agriculture,	Government agencies: Swedish Environmental Protection Agency, Swedish Energy Agency, Swedish Agency for Growth Policy Analysis, The National Institute of Economic Research, Swedish National Audit Office Consultancy firms Research institutes Public committee or special evaluator Swedish Climate Policy Council

Country	Ex-ante/ ex-post	Clients (1)	Types of evaluators
Finland			
	Ex-ante	Ministry of Environment Ministry of Employment and the Economy Prime Minister's Office Ministry of Transport Ministry of Finance	Ministries/civil servants (incl. inter-ministerial working group) External experts (consultancy firms, research Institutes)
	Ex-post	Prime Minister's Office Ministry of Environment Ministry of Employment and the Economy	Ministries/civil servants (incl. inter-ministerial working group) External experts (consultancy firms, research Institutes)

Note: (1) Who is the specific client of the evaluation? Even though it is a ministry that is the client the evaluation can be a requirement from the parliament.

Source: COWI based on written material and stakeholder views.

In *Denmark*, it is mandatory that legislative proposals and environmental policies, where the impact is expected to be large include an ex-ante evaluation of the consequences for the state, the industry as well as for households, according to "Statsministeriets (1998) cirkulære" (Prime Minister's circular). The level of detail of an ex-ante evaluation depends on the extensiveness of the proposal compared to existing legislation. The ministry formulating the proposal is also responsible for conducting/commissioning the evaluation, hereunder by including other relevant ministries. A number of ministries (Finansministeriet et. al., 2005) have jointly developed a guideline that specifies when, who and what the evaluation must cover (see Section 3.2).

In contrast, while some legislative acts may include a requirement for an ex-post evaluation, there are no general requirements in the Danish legislation to conduct ex-post evaluations.

In *Norway*, it is considered important that all governmental initiatives are well founded, and so there must be an ex-ante evaluation as basis for (major) decisions made. The Ministry of Finance has provided instructions for all ministries, where an important principle is that the requirements to the comprehensiveness and thoroughness increase with the scope of the initiative. There are no particular instructions for environmental policies. However, the Ministry of Climate and Environment is responsible for ex-ante evaluations regarding environmental legislation, while including other relevant ministries. The ministry will usually ask the Norwegian Environment Agency for academic advice on specific environmental issues.

Although there are no general requirements or specifications for how to conduct ex-post evaluations, all public authorities must ensure that analyses are conducted to provide information about the efficiency and effectiveness of the initiatives. The extent of a given analysis/evaluation is determined by the initiative's characteristics such as risks and scope.

In *Sweden*, all legislative proposals must similarly be preceded by an ex-ante evaluation where expected societal consequences are analysed. A ministry can appoint one individual evaluator or a team of evaluators in a so-called "Kommitté"

(Kommittédirektivet 1998:1475), or ask a public authority to carry out the work (please note that this not imply that the “Kommitte” or public authority in question does evaluations only). There are regulations concerning the general content of the analyses but more detailed requirements, e.g. methodological concerns, are typically addressed in the specific instructions to the authority carrying out the evaluation. For example, the Swedish Environmental Protection Agency may specify the objective of an ex-ante evaluation, but not necessarily the method (The Regulatory Impact Assessment Ordinance – SFS 2007:1244).

Since early 2018, it has been a formal requirement to perform ex-post evaluations for policies in the climate area. This is specified in the Climate Act (Klimatlag 2017:720). While there are no explicit formal requirements to perform ex-post evaluations of policy instruments for other environmentally related policy areas, there is legislation that encourages such exercise. For example, it can be argued that evaluations are needed to be able to comply with the requirements of economising with public funds (Myndighetsförordningen 2007:515 and Budgetlag 2011:203). Also, the Government’s instructions to public agencies sometimes include policy evaluation requirements – e.g. the Swedish Environmental Protection Agency (Förordning 2012:989 med instruktion för Naturvårdsverket) and the Swedish Energy Agency (Förordning 2014:520 med instruktion för Statens energimyndighet).

In *Finland*, both ex-ante and ex-post evaluations are recognised as key tools for ensuring the quality and continuous improvement of legislation and policy-making. Ex-ante evaluations constitute an integral part of new legislative proposals prepared by each ministry, and are regulated by guidelines issued by the Ministry of Justice.⁶ However, ex-ante evaluations of wider policy instruments such as strategies are conducted at inter-ministerial level.

Ex-post evaluations are conducted either based on provisions foreseen in the legislation or on a more ad hoc basis. There is a coordination mechanism in place at centralised level within the Prime Minister’s Office. The ultimate responsibility for ensuring the appropriate ex-post evaluation of adopted legislation, however, lies at the level of the individual ministries responsible for the sector concerned.⁷

A number of initiatives to strengthen evaluation practices have been implemented in recent years. Most recently, in December 2015,⁸ the Finnish Government established an independent Council of Regulatory Impact Analysis. The Council is responsible for issuing opinions on government proposals and on regulatory impact assessments produced by the competent ministries. It aims at improving the quality of legislative drafting and, in particular, the impact assessment of government proposals.

⁶ SÄÄDÖSEHDOTUSTEN VAIKUTUSTEN ARVIOINTI, Ohjeet, Oikeusministeriö, Julkaisu 2007:6.

⁷ Oikeusministeriö, Lainsäädännön prosessiopas (<http://lainvalmistelu.finlex.fi/taytantaonpano/#esittely>)

⁸ <http://vnk.fi/arviointineuvosto>

Overall, the above findings point to fairly similar organisational and legislative setups for carrying out environmental policy evaluations in the Nordic countries. Apart from Finland, there are almost only legal requirements to carrying out ex-ante evaluations. The main lessons learnt are:

2. In contrast to Denmark, Norway and Sweden Finland has established ex-post evaluation requirements that mirror ex-ante evaluation requirements, thereby encouraging a consistent policy cycle evaluation process.
3. The Finnish Council of Regulatory Impact Analysis – that seems to be inspired by the European Commission’s Regulatory Scrutiny Board – facilitates a formal way of monitoring that evaluations follow a consistent approach and are of good quality.

3.2 Guidelines

Table 8 shows, in line with the findings presented in the previous section, that we mostly have identified ex-ante evaluation guidelines in all four Nordic countries.

Table 8: Guidelines for evaluation of environmental policy instruments in the Nordic countries^a

Guideline	Ex-ante/ ex-post	Scoring system indicators						
		Extent		Quality			Consistency	
		1.3 Proportional- ity of evalua- tion	1.4 Requi- rements to regula- rity	2.1 Defini- tion and covera- ge of impacts	2.3 Use of analytic meth- ods	2.5 Stake- holder consul- tation	3.1 Role in policy cycle	3.2 Compa- rability of policy instru- ments
Denmark								
Finansministeriet et.al. (2005), “Vejledning om konsekvensanalyser” (Ministry of Finance, “Guidance on impact assessments”)	Ex-ante	H	H	M	L	L	M	H
Finansministeriet (2017): “Vejledning i samfundsøkonomiske konsekvensvurderinger” (Ministry of Finance, “Guideline for socioeconomic assessments”)	Ex-ante	L	L	H	H	L	L	H
Erhvervsministeriet (2015), “Vejledning om Erhvervsøkonomiske konsekvensvurderinger”, (Ministry of Industry, Business and Financial Affairs, “Guideline for business economic impact assessment”)	Ex-ante	M	H	H	M	H	H	H
Miljøministeriet (2010), “Samfundsøkonomisk vurdering af miljøprojekter” (Ministry of Environment, “Socioeconomic assessment of environment projects”)	Ex-ante	L	L	H	H	L	L	H
Transportministeriet (2015), “Manual for samfundsøkonomisk analyse på transportområdet” (Ministry of Transport, Building and Housing, “Manual for socioeconomic analysis in the field of transport”)	Ex-ante	L	L	H	H	L	L	H
Energistyrelsen (2007), “Vejledning I samfundsøkonomiske analyser på energiområdet”, (The Danish Energy Agency, “Guideline for socioeconomic assessment in the field of energy”)	Ex-ante	L	L	M	H	L	L	M

Guideline	Ex-ante/ ex-post	Scoring system indicators						
		Extent		Quality			Consistency	
		1.3 Proportionality of evaluation	1.4 Requirements to regularity	2.1 Definition and coverage of impacts	2.3 Use of analytic methods	2.5 Stakeholder consultation	3.1 Role in policy cycle	3.2 Comparability of policy instruments
Norway								
Direktoratet for økonomistyring (DFØ) (2016) "Veileder til utredningsinstruksen" (Norwegian Government Agency for Financial Management (2014) "Guidelines for instructions on ex-ante studies")	Ex-ante	H	H	M	L	H	M	L
Direktoratet for økonomistyring (DFØ) (2014) "Veileder i samfunnsøkonomiske analyser" (Norwegian Government Agency for Financial Management (2014) "Guidelines for economic analysis")	Ex-ante	M	M	H	H	M	M	L
Direktoratet for økonomistyring (DFØ) (2011) "Strategisk og systematisk bruk av evaluering i styringen" (Norwegian Government Agency for Financial Management [2011] "Strategic and systematic use of evaluation in management")	Ex-post	L	L	L	M	M	L	L
Statens Vegvesen 2014 "Håndbok V712 Konsekvensanalyser" (The Norwegian Public Roads Administration 2014 "Handbook V712 Impact assessment on investments")	Ex-ante	L	L	M	H	L	L	M
Sweden								
Naturvårdsverket (2014), "Samhällsekonomiska analyser av miljöprojekt – en vägledning" (Swedish Environmental Protection Agency: "Socioeconomic analyses of environmental projects - a guide")	Ex-ante	L	M	H	M	L	L	L
Naturvårdsverket (2003): "Konsekvensanalys steg för steg" (Swedish Environmental Protection Agency, "Socioeconomic impact assessment step by step")	Ex-ante	H	M	H	M	L	L	M
Riksantikvarieämbetet (2008): "Metodhandledning i samhällsekonomisk konsekvensanalys" (Swedish National Heritage Board, "Methodology in socioeconomic impact assessment")	Ex-ante	L	M	H	M	L	L	L
Trafikverket (2018): "Analysmetod och samhällsekonomiska kalkylvärden för transportsektorn: ASEK 6.1" (Swedish Transport Administration, "Method, principles and values for cost-benefit analysis in the transport sector")	Ex-ante	H	M	M	M	L	L	L
Konjunkturinstitutet (2011): "Making Climate Policy efficient. Implementing a model for Environmental Policy Efficiency, Environmental economics, Working Paper no 125" (The National Institute of Economic Research)	Ex-ante/ Ex-post	L	H	M	L	L	M	M
Energimyndigheten (2015): "Metoder för utvärdering av styrmedel – En metautvärdering grundad på litteratur och två fall" (Swedish Energy Agency, "Methods for evaluating policy instruments")	Ex-post	L	H	L	M	L	M	L

Guideline	Ex-ante/ ex-post	Scoring system indicators							
		Extent		Quality			Consistency		
		1.3 Proportionality of evaluation	1.4 Requirements to regularity	2.1 Definition and coverage of impacts	2.3 Use of analytic methods	2.5 Stakeholder consultation	3.1 Role in policy cycle	3.2 Comparability of policy instruments	
Finland									
Oikeusministeriö (2007), "Säädösehdotusten vaikutusten arviointi" (Finnish Ministry of Justice, Impact assessment of proposed legislative measures")	Ex-ante	H	L	M/H	M	L/M	L	L/M	
Ympäristöministeriö (2013), "Menetelmiä ja tietolähteitä politiikkatoimien vaikutusten arviointiin" (Finnish Ministry of the Environment, "Methods and sources for impact assessment of policies")	Ex-ante	M	L	M	H	H	L	M	
Ympäristöministeriö (2011), "Kestävään kehitykseen liittyvien vaikutusten ennakkoarviointi politiikansuunnittelussa ja päätöksenteossa: Suositus arvioinnin työkaluksi" (Finnish Ministry of the Environment, "Ex-ante assessment of sustainable development impacts in policy planning and decision-making: Recommendation for an assessment tool")	Ex-ante	M	L	M/H	H	L	M	M	
Suomen Ympäristökeskus (2006), "Ympäristöpolitiikan taloudellisten vaikutusten arviointi" (Finnish Environmental Agency, "Assessing the economic impacts of environmental policy")	Ex-ante	M	L	M	H	L	M	H	

Note: (1) H = High, M = Medium, L = Low.

Source: COWI.

In Denmark, a number of ministries (Finansministeriet et. al., 2005) have developed a joint, general guideline to carrying out ex-ante evaluations. The guideline underlines that only significant impacts should be covered, and so it scores high with respect to pursuing proportionality of the evaluation. It describes the coverage of impact types for different stakeholder types, but without providing detailed definitions of the impacts. Regarding the use of analytical methods to measure the likely impacts, it mainly relies on other guidelines. The guideline does not explicitly suggest stakeholder consultation as contributor to the evidence base or for the acceptance of the evaluation results. Furthermore, the guideline does not explicitly refer to links to ex-post evaluations of the given policies, and so it does not encourage their consistency within the policy cycle.

In turn, the Ministry of Finance (2017) guideline for ex-ante evaluations goes into much detail when explaining how to use analytical methods – in particular those of a cost-benefit analysis and of a cost-effectiveness analysis. Furthermore, it provides details of the definition and coverage of impacts needed to apply these methods – although without explicitly addressing environmental policies and environmental impacts.

The Environmental Protection Agency (2010) provides – while complying with the principles of the Ministry of Finance’s guideline – guidance on ex-ante evaluations of environmental projects. The quantification of impacts is here supported by the use of the Danish catalogue of environmental indicator values in evaluations, provided by the

Ministry of Environment and Food (2015). In addition, the Ministry of Environment and Food (2016) has recently launched an Internal ministerial concept for effect assessments that provides guidance on the use of the effect chain methodology. Currently, this concept is used in connection with ex-ante evaluations. One of the reasons for launching the concept is to ensure that good indicators are identified and introduced at an early stage, including the measurement of baselines, thereby enabling government bodies and others to conduct ex-post evaluations. Most important in this regard is that collection of data to be used in ex-post evaluations may be carried out on a regular basis. The Danish Energy Agency and the Ministry of Transport, Housing and Building have also developed guidelines for ex-ante evaluations that cover impacts related to the climate and environment. Finally, since 2015 it has been mandatory to assess all legislative proposals' impacts on the industry. The Ministry of Industry, Business and Financial Affairs has developed a guideline for this (Erhvervsministeriet, 2015).

In *Norway*, there is one ex-ante evaluation guideline provided by the Government Agency for Financial Management for the Ministry of Finance, which covers all government authorities from ministries to small agencies. It is complemented by a guideline on how to follow the instructions for different topics. The instructions focus on why and when an evaluation should take place, and on who should be involved. We have therefore given high scores regarding proportionality, regularity, and stakeholder consultation.

The Government Agency also provides a guideline for economic analysis that handles issues such as measuring economic, environmental and healthcare impacts. It is a standard that makes all parameters alike independent of political instrument and topic. Hence, it scores high regarding the definition and coverage of impacts and regarding the use of analytical methods.

For ex-post evaluations, the Government Agency has a small checklist on, as it says, the *strategic and systematic use of evaluation in management*. Being a short note, it does not go into detail when explaining how to address the central areas, i.e. the extent, the quality, and the consistency of the evaluation. Hence, it generally scores low within our scoring system.

No Norwegian guidelines focus explicitly on environmental policies. However, the Håndbok V712 Konsekvensanalyser by the Norwegian Public Roads Administration provides detailed guidance on how to scope environmental impacts. Although the main focus is on public investments, having so comprehensive details, it is also often used for political instrument analysis.

In *Sweden*, we have identified one ex-post evaluation guideline while the guidance for ex-ante evaluations is more comprehensive. The ex-post evaluation guideline identified, Swedish Energy Agency (Energimyndigheten 2015), is, compared to the other guidelines, fairly specific to the targeted policy area, i.e. energy policy. It scores highest when it comes to specifying regularity requirements, and it provides also good guidance on analytical methods for assessing whether and how a given policy target has been achieved.

Two Swedish ex-ante evaluation guidelines, Naturvårdsverket (2003) and Naturvårdsverket (2014), have a good coverage of environmental impacts.

Furthermore, both focus on measuring the impacts of policy instruments by applying the cost-benefit analysis method. The first one does this on a more general level while the latter provides a more thorough guideline with many evaluation process details. Swedish Transport Administration (2018) provides a detailed and technical guideline for performing cost-benefit analysis in the transport sector, also including specific values to use for calculations. The guideline does, however, not address the issue of applying the analysis to several different regulations as part of a selection process. In addition, Konjunkturinstitutet (2011) provides evaluation guidelines – ex-ante as well as ex-post – for analysing climate policies.

Finally, there seems to be a tendency that the Swedish ex-ante evaluation guidelines are based on an economic theoretical framework, whereas the sole ex-post evaluation guideline makes use of a theory of change framework from political science.

In Finland, there is a general ex-ante evaluation guidance applicable to all legislative proposals issued by the Government. This guideline has been issued by the Ministry of Justice and has been in force since 2007. It scores high when it comes to guidance regarding the proportionality of the evaluation and has a good account of the impacts to be assessed, covering economic impacts, impacts on the activities of public authorities, environmental impacts and other societal impacts.⁹ However, it is less clear what the requirements are to regularity and what the role of an evaluation is in the policy cycle. Furthermore, it covers legislative measures only, i.e. other policy instruments are not addressed.

While there are some requirements to carrying out ex-post evaluations in Finland, it is somewhat surprising that we have not identified any ex-post evaluation guidelines. However, as shown in Table 8, there are other Finnish guidance documents focusing on the environmental policy domain. While these from the outset look at policies from the ex-ante angle, some of the suggested analytical methods are also considered to be applicable for ex-post evaluations of environmental policies.

We see the main lessons learnt from the above review of the evaluation guidelines as being:

4. Most of the evaluation guidelines in all the Nordic countries are mainly applicable to ex-ante evaluations, and thus do not play much of a role in encouraging comparability between ex-ante and ex-post evaluations – and, in turn, in encouraging consistent policy cycles.
5. All the Nordic countries have more than one (ex-ante) evaluation guideline. The different guidelines shall, however, always be in compliance with the guidelines from the Ministry of Finance. Some of the guidelines focus on the evaluation process, while others focus on the use of analytical methods. Both types of guidance are overall of good quality.

⁹ SÄÄDÖSEHDOTUSTEN VAIKUTUSTEN ARVIOINTI, Ohjeet, Oikeusministeriö, Julkaisu 2007:6.

6. Only few evaluation guidelines explain the use of and the benefit from stakeholder consultation – i.e. how it can contribute to the impact evidence base and how it can help to ensure wide acceptance and, thereby, usability of the evaluation results.
7. There is some variation in how the evaluation guidelines in the different Nordic countries specifically cover the environmental policy domain.
8. In general, the evaluation guidelines pay limited attention to cross-border impacts, although such impacts often can be significant. Furthermore, there is a discrepancy in some of the Nordic countries (e.g., Denmark) between guidelines of ministries of environment and ministries of finance with regard to cross-border impacts. As a rule, guidelines of ministries of finance exclude cross-border impacts.

3.3 Evaluations

In this section, we look into 32 already conducted evaluations of environmental policies – i.e. 8 (4 ex-post and 4 ex-ante) in each of the four Nordic countries. We do this to look for good, but possibly also less good elements of the evaluations to learn from.

While mapping the environmental policy evaluations carried out in recent years (see Appendix A), we have tried to assess the extent to which evaluations are carried out in the Nordic countries. We do, however, not pretend to have a good estimate of the actual number of evaluations carried out – not least because we do not have much information about the number of evaluations carried out internally in ministries/agencies. Hence, we have not tried to give scores for indicator 1.2 in our scoring system.

We have, however, when consulting stakeholders, inquired about the share of environmental policies being evaluated (indicator 1.1). In general, stakeholders assess that almost 100% of environmental policies are subject to ex-ante evaluations, not least because it is mandatory to do so. Similarly, most stakeholders assess that only a small share of the environmental policies are subject to ex-post evaluations – our best estimate is 5–10%. However, it has also been noted in the interviews that many evaluations are, in fact, a combination of an ex-ante and ex-post evaluation.

Table 9 contains a summary of our assessments of the quality of 32 already conducted evaluations. For more details, we refer to Appendix B. From the outset, we have assumed that an evaluation is of good quality if it has been conducted according to official evaluation guidelines. We recall here that such guidelines mainly exist for conducting ex-ante evaluations. Hence, particular attention is paid to assessing the quality of the methodologies applied in the ex-post evaluations. We have done this on the basis of our own experience with analysing environmental economic instruments, and of how the methodologies compare with the guidance provided by the BRG, where the toolbox contains a number of evaluations tools, in particular:

- #18: The choice of policy instruments – that guides ex-ante evaluations (and policy-makers) when considering alternatives or combinations of legal instruments, voluntary agreements, education and information, and economic instruments to solve a given (environmental) problem;
- #43: What is an evaluation and when is it required? – that informs the policy-makers on the requirements to evaluate in a proportionate way all EU spending and non-spending activities intended to have an impact on society or the economy;
- #52: Back-to-back evaluations and impact assessments – that guides the policy-making process, both with respect to the coordination of ex-ante and ex-post evaluations, and with respect to the consultation of stakeholders.

Table 9: Quality of already conducted evaluations of environmental policy instruments (2014-2017)¹

Evaluation	Ex-ante/ ex-post	Scoring system indicator			
		2.1 Definition and coverage of impacts	2.3 Use of analytical methods	2.5 Stakeholder consultation	2.6 Independency
Denmark					
Danish Council on Climate Change /Klimarådet (2016): "Afgifter der forandrer - Forslag til klimavenlige afgiftsomlægninger" ("Charges that give change – Proposals for climate-friendly tax changes")	Ex-ante/ ex-post	H	M	L	H
Ministry of Environment and Food of Denmark/Miljø og Fødevarerministeriet (2017): "Samfundsøkonomisk vurdering af behandling af imprægneret træaffald" (Socioeconomic assessment of the treatment of impregnated wood waste)	Ex-ante	H	H	L	H
Ministry of Taxation/Skatteministeriet (2017): "Sanering af punktafgifter" (Remediation of excise duties)	Ex-ante/ ex-post	M	M	M	M
Ministry of Environment/Miljøministeriet (2013): "Evaluering af vandsektorloven" (Evaluation of the water sector law)	Ex-post	L	M	H	H
Danish Council on Climate Change/Klimarådet (2016): "Midt i en energiomstilling – udfordringer og løsninger for den danske PSO-ordning" (In the midst of an energy conversion - challenges and solutions for the Danish PSO scheme)	Ex-ante/ ex-post	M	M	L	H
Ministry of Environment/Miljøministeriet (2014), Danish Environmental Protection Agency: "Evaluering af grønne regnskaber" (Evaluation of green accounts)	Ex-post	L	L	H	H
Ministry of Environment and Food/ Miljø og Fødevarerministeriet (2017): "Effektvurdering af kemikalieindsatsen 2014–2017" (Effect assessment of chemical initiatives 2014–2017)	Ex-post	H	H	M	H
Niras, DTU Miljø and DAMVAD Analytics (2017): "Evaluering af Miljøteknologisk Uviklings- og Demonstrationsprogram" (Assessment of Environmental Technology Development and Demonstration Program)	Ex-post	M	M	H	H

Evaluation	Ex-ante/ ex-post	Scoring system indicator			
		2.1 Definition and coverage of impacts	2.3 Use of analytical methods	2.5 Stakeholder consultation	2.6 Independency
Norway					
Østfoldforskning (2016): "Vurdering av virkemidler for økt utsortering av våtorganisk avfall og plastemballasje" (Assessment of policy instruments for increased sorting of organic waste and plastic packaging)	Ex-ante	H	M	M	H
Norwegian Environment Agency/Miljødirektoratet (2015): "M-386 Klimatiltak og utslippsbaner mot 2030; Kunnskapsgrunnlag for lavutslippsutvikling" ("M386 Climate and emissions paths towards 2030; Knowledge base for low-emission development")	Ex-ante	M	L	L	M
Norwegian Environment Agency/Miljødirektoratet (2014): "M-133 Faglig grunnlag for videreutvikling av den nasjonale og internasjonale klimapolitikken Klimatiltak mot 2020 og plan for videre arbeid" ("M-133 Academic basis for further development of the national and international climate policy; Actions against climate change towards 2020 and plan for further work")	Ex-ante	H	H	L	M
Ministry of Climate and Environment (2015): "NOU 2015:15 Sett pris på miljøet — Rapport fra grønn skattekommissjon" [Put a price on the environment - Report from the Green Tax Commission]	Ex-ante	M	M	M	M
DNV GL AS Maritime (2014) "Miljøvennlige ferjer: Realisering av null- og lavutslippsløsninger i anbudsprosesser for ferjesamband" (Eco-friendly ferries: Realization of zero and low-emission solutions in ferry connection through tender processes)	Ex-ante/ Ex-post	M	L	H	H
Carbon Limits AS, Norsk Energi (2016): "Konsekvenser av lave kvotepriser i EU ETS" (Consequences of CO ₂ emission prices in the EU ETS)	Ex-post	M	M	H	H
Riksrevisjonen (2015) "Undersøkelse av myndighetenes arbeid for å sikre god luftkvalitet i byområder" (Investigation of government work to ensure good air quality in urban areas)	Ex-Post	H	H	M	M
Statistics Norway (2015) "Byer og miljø. Indikatorer for miljøutviklingen i «Framtidens byer»" ("Cities and environment. Indicators for the environmental development in the future cities")	Ex-post	M	M	H	H
Sweden					
Swedish Environmental Protection Agency /Naturvårdsverket (2016)*: "Minskad förbrukning av plastbärkassar" ("Reduced consumption of plastic carriers")	Ex-ante	M	L	L	M
National Board of Housing, Building and Planning /Boverket (2015): "Förslag till utvecklad nationell strategi för energieffektiviserande renovering" ("Proposals for developed national strategy for energy-efficient renovation")	Ex-ante	L	L	M	M

Evaluation	Ex-ante/ ex-post	Scoring system indicator			
		2.1 Definition and coverage of impacts	2.3 Use of analytical methods	2.5 Stakeholder consultation	2.6 Independency
Public committee /Kemikalieskatteutredningen (2015): "Kemikalieskatt, Skatt på vissa konsumentvaror som innehåller kemikalier" ("Chemical tax on certain consumer goods containing chemicals")	Ex-ante	H	H	M	M
Swedish Agency for Marine and Water Management /Havs- och vattenmyndigheten (2013): "Styrmedel för en hållbar åtgärdstakt av små avloppsanläggningar" ("Policy instruments for a sustainable pace of action for small sewage plants")	Ex-ante	H	H	H	M
Swedish Forests Agency /Skogsstyrelsen (2015): "Ekonomiska stöd i skogsbruket" ("Economic subsidies in the forestry")	Ex-post	M	L	L	M
Swedish Board of Agriculture /Jordbruksverket (2016): "Förgröningen i praktiken – kostnader kontra miljönyttor" ("Greening in practice – costs and environmental benefits")	Ex-post	M	M	L	M
Sweco energuide AB (2013) "Styrmedels förutsättningar att styra mot ökad energieffektivisering – en utvärdering av 24 styrmedel" ("Possibilities for steering towards increased energy efficiency – an evaluation of 24 policy instruments")	Ex-post	M	L	L	M
Public committee Burning taxes /Förbränningsutredningen (2017) "Brännheta skatter! Bör avfallsförbränning och utsläpp av kväveoxider från energiproduktion beskattas?" ("Should waste incineration and emissions of nitrogen oxides from energy production be taxed?")	Ex-post	H	M	M	H
Finland					
Prime Minister's Office /Valtioneuvoston kanslia (2017): Energia ja ilmastostrategian vaikutusarviot: Yhteenvetoraportti (Impact assessments of the Energy and Climate strategy: The summary Report)	Ex ante	H	H	M	H
Prime Minister's Office /Valtioneuvoston kanslia (2016): Kohdennetut keinot kierrätyksen kasvuun. (Policy instruments for increasing waste recycling)	Ex ante	H	L/M	H	H
Prime Minister's Office /Valtioneuvoston kanslia (2017): Päästökauppadirektiivin uudistamisen vaikutukset Suomen teollisuuteen, energiantuotantoon ja kansantalouteen. (Impact of the Emissions Trading Directive on Finnish industry, energy production and the national economy)	Ex ante	H	H	L	H
Prime Minister's Office /Valtioneuvoston kanslia (2016): Yhden luukun periaatteen toteuttaminen ympäristöasioissa (The implementation of the one-stop shop principle in environmental matters)	Ex ante	H	L	M/H	H
Prime Minister's Office /Valtioneuvoston kanslia (2016): Biotalous ja cleantech Suomessa – strategioiden arviointi ja toimenpidesuosituksset. (Bioeconomy and cleantech in Finland – Assessment of Strategies and development suggestions.)	Ex post	L	M	H	H

Evaluation	Ex-ante/ ex-post	Scoring system indicator			
		2.1 Definition and coverage of impacts	2.3 Use of analytical methods	2.5 Stakeholder consultation	2.6 Independency
Prime Minister's Office /Valtioneuvoston kanslia (2016): Vuoden 2011 energiaverouudistuksen arviointia (Evaluation of 2011 energy tax reform)	Ex post	M	H	L	H
Prime Minister's Office /Valtioneuvoston kanslia (2017): Kansallisen materiaalitehokkuusohjelman arviointi (Evaluation of Sustainable growth through material efficiency programme)	Ex post	H	H	M	H
Ministry of the Environment /Ympäristöministeriö (2017): Väliarvio Suomen luonnon monimuotoisuuden suojelun ja kestävän käytön strategiasta ja toimintaohjelmasta vuonna 2016 (A mid-term review of the Finnish strategy and action plan for the conservation and sustainable use of biodiversity in 2016)	Ex post	M	L	M	H

Note: (1) H = High, M = Medium, L = Low.

* Utvärderingen omfattades av ekonomiskt styrmedel bland flera men ledde till rekommendation om implementering av annat än ekonomiskt styrmedel.

Source: Appendix B.

For *Denmark*, an initial observation is that several of the selected evaluations have both ex-ante and ex-post elements. This is as such not a problem if it is clear what is what – i.e. that the ex-post part concerns the relevance, efficiency and effectiveness of already implemented policies, while the ex-ante part looks into a concrete policy initiative or ways of improving the policy domain in the future and the likely impacts of these. This seems to be the case for most of the included examples, but as discussed further in Chapter 4, the “Effect assessment of chemical initiatives 2014–2017” conducted for the Danish Ministry of Environment and Food by COWI looks at initiatives that have been implemented (i.e. ex-post), but where most of the effects assessed are still to materialise. Hence, somehow an ex-ante evaluation methodology is applied to measure ex-post effects.

The ex-ante evaluations overall score higher than the ex-post evaluations with respect to definitions and coverage of impacts and to the use of analytical methods. We assess this to be a result of the use of the existing evaluation guidelines – that, as shown in the previous section, do not exist for ex-post evaluations. For the two low-scoring ex-post evaluations, focus is solely on the achievement of specific outputs, while there is only little or no coverage of wider environmental impacts, or socio-economic impacts for that sake. Furthermore, the quantification of impacts stem from theory-based assessments or stakeholder assessments, rather than from the application of genuine quantitative models.

In turn, the ex-post evaluations score overall higher when it comes to stakeholder consultation. Hence, interviews and/or questionnaire surveys are used to obtain stakeholder assessments of the impacts of the given environmental policies. Such

opportunity to make use of stakeholder assessments as evidence base for estimating likely impacts of future environmental policies has only to a limited degree been exploited by the included ex-ante evaluations. However, we acknowledge that all major policy proposals – that have been subject to ex-ante evaluations – in the further decision-making process will be sent to stakeholders for consultation. In *Norway*, at least for the included evaluations, there is not the strong tendency found in Denmark that ex-ante evaluations score higher than ex-post evaluations when it comes to the definition and coverage of impacts and to the use of analytical tools. Hence, while the ex-ante evaluations make good use of the available ex-ante evaluations guidelines, the ex-post evaluations also seem to apply recognised analytical methods.

Similar to Denmark, stakeholder consultation is more common within the ex-post evaluations than within the ex-ante evaluations. Hence, interviews with the relevant business sectors have only been carried out as part of assessing the impacts that they already have experienced. And, also similar to Denmark, the evaluations have been carried out by experienced and independent evaluators.

For *Sweden*, overall, we do not detect differences between the analysed ex-ante and ex-post evaluations when it comes to the definition and coverage of impacts and to the use of analytical methods. Actually, while two of the four ex-ante evaluations, Kemikalieinspektionen (2015) and Havs- och vattenmyndigheten (2013), make good use of the cost-benefit analysis method (although without directly referring to any specific guideline) and have an extensive coverage of impacts, the other two provide only qualitative assessments and cost-efficiency estimates, respectively – also without referring to any evaluation guideline. For example, Boverket (2015) does not even include environmental impacts.

Also for the ex-post evaluations, we see a variety of methods and evaluation designs used. In some cases, focus is on the effectiveness and efficiency of one policy instrument only, while in other cases a methodology is applied that enables the comparison of joint impacts on the targeted area from several policy instruments. There are, however, also examples of ex-post evaluations targeting only a part of the consequences of the policy instrument.

Stakeholder consultation is only made use of to a limited degree – both for the ex-ante and the ex-post evaluations. Only Havs- och vattenmyndigheten (2013) scores high as it made use of a reference group with representatives from relevant industry, research institutes, municipalities and state agencies. The other evaluation reports do not mention any stakeholder consultation.

For *Finland*, we assess that most of the selected evaluations score high when it comes to one or both of the indicators: definition and coverage of impacts and use of analytical methods. While there is not always a reference to the available ex-ante evaluation guidelines, they seem to have used methods consistent with these. Hence, many of the evaluation results are underpinned by a wide range of analytical methods and tools, including modelling techniques concerning economic and environmental impacts.

Although there are no official ex-post evaluation guidelines, most of the included Finnish ex-post evaluations also make good use of both quantitative and qualitative methods, hereunder statistical analysis and stakeholder consultation.

Stakeholder consultation is therefore overall used as a way of getting evidence for the evaluations in Finland. For example, two of the ex-ante evaluations have involved the arrangement of workshops with participants from research and industry. One also made use of the open consultation approach via a questionnaire published on the website of the Ministry of Environment.

In Table 9, we did not report on the scores given to the two consistency indicators: role in policy cycle (3.1) and comparability of policy instruments (3.2). The reason is that it has not been easy to assign such scores in a consistent manner (see Appendix B). Hence, overall we do not have a good overview of where, whether or how we can learn from good practices of pursuing policy cycle roles.

Furthermore, it is noted that the scores given to the already-conducted evaluations do not indicate that evaluations of economic instruments overall differ in quality from those of other environmental policy instruments. It follows from Appendix B.

Finally, the main lessons learnt from the analysis of the 32 already conducted evaluations are:

9. Some evaluations have both ex-ante and ex-post elements. This can be problematic for the use of the evaluation results if it is not clear which of the results concern ex-post findings for the relevance, efficiency and effectiveness of policies, and which concern the assessment of the likely impacts of future environmental policies;
10. Apart from Denmark, there is not a strong tendency that ex-ante evaluations define, cover and analyse impacts better than ex-post evaluations although evaluation guidelines almost only are available for ex-ante evaluations;
11. The coverage of impacts in the evaluations, hereunder whether they only cover narrow (e.g. environmental) or also wider impacts on the society, is not always clear – limiting comparisons of the policy instruments being evaluated;
12. Stakeholder consultation is more frequently used within ex-post evaluations than within ex-ante evaluations. For the latter, there seems thus to be missed opportunities regarding obtaining evidence for and regarding securing wide acceptance of the evaluation results.

4. Evaluation of a policy instrument

We have from the 32 already conducted evaluations analysed in the previous chapter selected one for scrutiny. This means that the aim is to assess whether this evaluation could have overcome some of its weaknesses if the evaluator had access to the lessons learnt – presented in the previous chapter.

We have chosen one where COWI was the evaluator – namely, the “Effect assessment of chemical initiatives 2014–2017” conducted for the Danish Ministry of Environment and Food by COWI in 2016. Hence, we allow ourselves to look inwards, while we at the same time have had the opportunity to interview the evaluation team members about their main challenges when conducting the evaluation. From the outset, it should, however, be underlined that we believe that our colleagues have carried out a good evaluation and made skilful use of analytical methods. This said, elements of the evaluation might have been stronger if they had taken into account some of our lessons learnt.

The chemical initiative focuses on three main areas: international influence, toxic products and resources in circuits. In total, a grant of DKK 185 million was allocated to this initiative. Based on extensive data collection through available reports and interviews with the Danish companies, COWI estimated the effect of the effort. The main conclusion from the evaluation was that the environmental and health gains that could be quantified by far outweigh the cost associated with the chemical initiative in the period 2014–2017. This conclusion was reached even though the evaluation only includes a quantitative assessment for a limited part of the effort. The rest of the effects could only be assessed qualitatively.

The evaluation was conducted in close cooperation with the Danish Environmental Protection Agency and the method for estimating the effects is based on the Ministry of Environment and Food’s effect chain methodology.

We have, as shown in Table 10, chosen to assess whether or how the evaluation might have benefitted from the 12 lessons learnt – presented in the previous chapter. In the table we have for each lesson learnt assessed its relevance for this specific evaluation (column 2) and described observations (pros and cons) for how the learning point relates to this specific evaluations (column 3).

Regarding the organisational (and other) lessons learnt, the main challenge for the evaluation of the chemical initiative was the fact that it had to do an ex-post evaluation before most impacts had materialized. The method used to conduct the evaluation primarily targets ex-ante evaluations and therefore only provides little guidance for how the ex-post evaluation should be conducted. Hence, the evaluation could have benefitted from a more direct discussion of the relevance, efficiency and effectiveness characteristics of the chemical initiative.

The effects estimated in the evaluation were primarily based on effects estimated in other ex-ante studies and not ex-post studies, since there were none. This does, however, render the final results uncertain. Nevertheless, the results from the analysis provide a good basis for another, future ex-post evaluation, and may inspire similar, future initiatives.

Finally, we envisage that the findings of the evaluation might have had larger impact if more stakeholders had been involved in the evaluation.

Table 10: Lessons learnt for the evaluation “Effect assessment of chemical initiatives 2014–2017”¹

No.	Lessons learnt	Relevance for the specific evaluation (low, medium, high)	Observations
Organisation			
1	There are many different clients as well as evaluators, in all four Nordic countries. In itself, this points to a benefit from having common, widely-used evaluation methodologies encouraging that evaluations of different environmental policies are comparable – and so helping choosing the right ones in the future.	High As there is no common requirements for conducting ex-post evaluations the method used in the evaluation was one developed by the ministry.	The developed method seems to be a good method, however the challenge with using this method is that it is difficult to compare the effects found with other evaluations that use a different method.
2	In contrast to Denmark, Norway and Sweden, Finland has established ex-post evaluation requirements that mirror ex-ante evaluation requirements, thereby encouraging a consistent policy cycle evaluation process.	High The methodology applied is mainly suitable for an ex-ante evaluation	Denmark doesn't have an official guideline for how to conduct ex-post evaluations. Hence, the evaluation was based on a method that is mainly suitable for ex-ante evaluations and does not describe important factors to evaluate when conducting ex-post evaluations.
3	The Finnish Council of Regulatory Impact Analysis – that seems to be inspired by the European Commission's Regulatory Scrutiny Board – facilitates a formal way of monitoring that evaluations follow a consistent approach and are of good quality.	High Denmark does not have a formal organisation for monitoring evaluations	If Denmark has had formal board that monitor evaluations similar to the one in Finland, this board may have provided the evaluation team with some best practices for conducting ex- post evaluations that could have benefitted the evaluation. The evaluation was only reviewed by the Ministry of Environment and Food. A formal setup may also have ensured that more stakeholders would have been included in the review of the evaluation's results.
Guidelines			
4	Most of the evaluation guidelines in all the Nordic countries are mainly applicable to ex-ante evaluations, and thus do not play much of a role in encouraging comparability between ex-ante and ex-post evaluations – and, in turn, in encouraging consistent policy cycles.	Medium There was not any ex-ante evaluation the ex-post evaluation could use	If an ex-ante evaluation had been conducted of the initiative indicators could have been identified and introduced, when defining the baseline and collection of data could then have been conducted on a regularly basis. This would most likely have made it easier to estimate some of the effects in the ex-post evaluation.
5	All the Nordic countries have more than one (ex-ante) evaluation guideline. The different guidelines shall, however, always be in compliance with the guidelines from the Ministry of Finance. Some of the guidelines focus on the evaluation process, while others focus on the use of analytical methods. Both types of guidance are overall of good quality.	Low The used guideline for the effect chain methodology focuses both on process and on method	Even though the developed method focuses both on process and method the focus is on ex-ante evaluation and not on ex-post evaluations.

No.	Lessons learnt	Relevance for the specific evaluation (low, medium, high)	Observations
6	Only few evaluation guidelines explain the use of and the benefit from stakeholder consultation – i.e. how it can contribute to the impact evidence base and how it can help to ensure wide acceptance and, thereby, usability of the evaluation results.	Medium The study did not use an official guideline for how to include stakeholders' views	The views of stakeholders are included in the analysis. However, the developed interview guide was based on the consultant team's own experience. An official approach for how to include stakeholders might have provided some input for how to include stakeholders also in the review process of the results.
7	There is some variation in how the evaluation guidelines in the different Nordic countries specifically cover the environmental policy domain.	Medium Uses former studies to estimate effects	The study uses former ex-ante studies conducted in European countries to evaluate the effect of the different initiatives in the initiative.
8	In general, the evaluation guidelines pay limited attention to cross-border impacts, although such impacts often can be significant. Furthermore, there is a discrepancy in some of the Nordic countries (e.g., Denmark) between guidelines of ministries of environment and ministries of finance with regard to cross-border impacts. As a rule, guidelines of ministries of finance exclude cross-border impacts.	Medium The study doesn't include cross-border effects	According to the Danish Ministry of Finance's guideline for evaluations cross-border effects should not be included in evaluations and the study therefore only includes effects in Denmark even though the area is to a large extent regulated through the EU.
Already conducted evaluations			
9	Some evaluations have both ex-ante and ex-post elements. This can be problematic for the use of the evaluation results if it is not clear which of the results concern ex-post findings for the relevance, efficiency and effectiveness of policies, and which concern the assessment of the likely impacts of future environmental policies.	High Had to do an ex-post evaluation before most impacts had materialized	The main challenge for the evaluation was that it had to be done before most effects had materialize. However, the results may guide another, future ex-post evaluation, and may inspire similar, future initiatives.
10	Apart from Denmark, there is not a strong tendency that ex-ante evaluations define, cover and analyse impacts better than ex-post evaluations although evaluation guidelines almost only are available for ex-ante evaluations.	Medium The evaluation is of high standard	The evaluation define, cover and analyse impacts thoroughly based on the developed method, hence it confirm the learning point.
11	The coverage of impacts in the evaluations, hereunder whether they only cover nar-row (e.g. environmental) or also wider impacts on the society, is not always clear – limiting comparisons of the policy instruments being evaluated.	Low Effects are clearly defined, and the most important impacts are covered.	The study define effects clearly, but it also concludes that it has been difficult to quantify the environmental effects whereas the health effects have been easier to quantify.
12	Stakeholder consultation is more frequently used within ex-post evaluations than within ex-ante evaluations. For the latter, there seems thus to be missed opportunities regarding obtaining evidence for and regarding securing wide acceptance of the evaluation results.	Low Stakeholders' views were included in the analysis	Similarly to other ex-post evaluations, stakeholders' views were included in the analysis when estimating the effects. However, it was only the ministry that commented on the results of the evaluations.

Note: (1) H = High, M = Medium, L = Low.

Source: COWI.

5. Lessons learnt and recommendations

We have in the previous chapters already presented a number of lessons learnt from the different parts of the analysis. In this final chapter, we recap on these and provide recommendations for how to make use of the learnings in the future.

Table 11 repeats the three lessons learnt from our analysis of how environmental policy evaluations are organised in the different Nordic countries. They suggest that the current situation – with many different clients as well as evaluators, and it only being mandatory to carry out ex-ante evaluations – gives rise to the risk of evaluation results not being comparable. This is a weakness with respect to having a coherent evidence base of evaluation results that may contribute to effective environmental policies within the countries and across borders. Hence, the weakness is about not having comparable ex-ante and ex-post evaluations and thus not having a consistent policy cycle analysis.

However, there are also benefits from having many evaluators, e.g. a large resource base and the possibility of sharing good evaluation practices. Hence, we do not necessarily recommend changes to this situation. We do see a benefit from more requirements to carrying out (comparable) ex-post evaluations, though. Furthermore, we recommend everyone to keep an eye on the achievements of the new Finnish Council of Regulatory Impact Analysis in getting comparable, high-quality evaluations – and thereby whether the benefits from its activities prove to be higher than the administrative burden from such extra organisational layer.

Table 11: Lessons learnt from organisational setups for evaluations

1	There are many different clients as well as evaluators, in all four Nordic countries. In itself, this points to a benefit from having common, widely-used evaluation methodologies encouraging that evaluations of different environmental policies are comparable – and so helping choosing the right ones in the future.
2	In contrast to Denmark, Norway and Sweden Finland has established ex-post evaluation requirements that mirror ex-ante evaluation requirements, thereby encouraging a consistent policy cycle evaluation process.
3	The Finnish Council of Regulatory Impact Analysis – that seems to be inspired by the European Commission’s Regulatory Scrutiny Board – facilitates a formal way of monitoring that evaluations follow a consistent approach and are of good quality.

Table 12 shows that the lessons learnt from reviewing the evaluation guidelines made use of in the four Nordic countries follow from the above organisational lessons. Hence, the situation that it is often not mandatory to carry out ex-post evaluations is a reason for low availability of ex-post evaluation guidelines. This underlines the risk of not

having a coherent evidence base and, in turn, a consistent policy cycle analysis. In order to carry out an ex-post evaluation successfully, it is key that ex-ante guidelines exist and provide a solid foundation, hence it is important that good indicators are identified and introduced at an early stage, i.e. in the ex-ante evaluation when defining the baseline. Most important in this regard is that collection of data to be used in ex-post evaluations may be carried out on a regular basis.

However, we assess that the guidance given to ex-ante evaluations in all four Nordic countries is of good quality. We have learnt that there is a benefit from respecting the different policy cultures, hereunder requirements and ways of carrying out evaluations. Hence, it can be argued that there is little scope for a formal harmonised Nordic approach. This said, we see room for exchange of good practices when it comes to covering the environmental policy domain.

Furthermore, we recommend that the evaluators look for inspiration in the developments made by the European Commission regarding its Better Regulation Guidelines. First, we recommend that the evaluators consider ways – without introducing a new guideline – to provide guidance on how to use the available guidelines in combination, i.e. the guidance on the evaluation process and the guidance on use of analytical evaluation methods. Second, the European Commission has in recent years explored the benefits from consulting stakeholders in the policy cycle. Hence, the current lack of guidance on this in the current Nordic evaluation guidelines could be remedied using this source.

Table 12: Lessons learnt from evaluation guidelines

4	Most of the evaluation guidelines in all the Nordic countries are mainly applicable to ex-ante evaluations, and thus do not play much of a role in encouraging comparability between ex-ante and ex-post evaluations – and, in turn, in encouraging consistent policy cycles.
5	All the Nordic countries have more than one (ex-ante) evaluation guideline. The different guidelines shall, however, always be in compliance with the guidelines from the Ministry of Finance. Some of the guidelines focus on the evaluation process, while others focus on the use of analytical methods. Both types of guidance are overall of good quality.
6	Only few evaluation guidelines explain the use of and the benefit from stakeholder consultation – i.e. how it can contribute to the impact evidence base and how it can help to ensure wide acceptance and, thereby, usability of the evaluation results.
7	There is some variation in how the evaluation guidelines in the different Nordic countries specifically cover the environmental policy domain.
8	In general, the evaluation guidelines pay limited attention to cross-border impacts, although such impacts often can be significant. Furthermore, there is a discrepancy in some of the Nordic countries (e.g., Denmark) between guidelines of ministries of environment and ministries of finance with regard to cross-border impacts. As a rule, guidelines of ministries of finance exclude cross-border impacts.

A lesson learnt from the analysis of already conducted evaluations is, as shown in Table 13, that some evaluations contain both ex-post and ex-ante elements. This is as such not a problem if it is clear what is what – i.e. that the ex-post part concerns the relevance, efficiency and effectiveness of already implemented policies, while the ex-

ante part looks into ways of improving the policy domain in the future and the likely impacts of these. Actually, it is our experience that some ex-post evaluations have sufficient evidence to also underpin recommendations for future policy changes. In other words, an ex-ante evaluation can be spared without breaking the policy cycle. However, this requires of course the existence of an ex-post evaluation guideline to explain how to do this.

Maybe surprisingly, we have not found a strong tendency that the ex-ante evaluations score higher than the ex-post evaluations when it comes to the definition and coverage of impacts and to the use of analytical tools. While this may speak against a strong need for ex-post evaluation guidelines, we do recommend that some of the used, not officially documented, good methodologies are made public – not least to encourage that evaluations results from different evaluations become more comparable.

Furthermore, similar to the analysis of the evaluation guidelines, we find, overall, that there is a lack of consistent coverage of environmental impacts, and a lack of utilising stakeholder consultation as evidence base and for securing wide acceptance of the evaluation results. Hence, we would like to reiterate that the evaluation guidelines could be strengthened in this respect.

Table 13: Lessons learnt from already conducted evaluation

9	Some evaluations have both ex-ante and ex-post elements. This can be problematic for the use of the evaluation results if it is not clear which of the results concern ex-post findings for the relevance, efficiency and effectiveness of policies, and which concern the assessment of the likely impacts of future environmental policies.
10	Apart from Denmark, there is not a strong tendency that ex-ante evaluations define, cover and analyse impacts better than ex-post evaluations although evaluation guidelines almost only are available for ex-ante evaluations.
11	The coverage of impacts in the evaluations, hereunder whether they only cover narrow (e.g. environmental) or also wider impacts on the society, is not always clear – limiting comparisons of the policy instruments being evaluated.
12	Stakeholder consultation is more frequently used within ex-post evaluations than within ex-ante evaluations. For the latter, there seems thus to be missed opportunities regarding obtaining evidence for and regarding securing wide acceptance of the evaluation results.

Finally, the lessons from the previous chapter from looking into whether a given already-conducted evaluation could have been done better confirm the relevance of the above learning points and recommendations.

Sammendrag

Denne rapport præsenterer en analyse af den betydning, evalueringer har for udformningen af miljøpolitikken i fire nordiske lande (Danmark, Finland, Norge og Sverige), og diskuterer, hvorledes evalueringerne af tiltag og instrumenter inden for miljøpolitikken kan blive (endnu) bedre tilrettelagt og gennemført, så de bidrager til udformningen af på én gang efficiente (omkostningseffektive) og effektive miljøpolitiske tiltag og instrumenter. Fokus i analysen er på evalueringer af miljøpolitiske tiltag, der indeholder økonomiske instrumenter såvel som politiske instrumenter.

Rapporten er udarbejdet af COWI A/S på vegne af Miljø- og Økonomigruppen i Nordisk Ministerråd. Miljø- og Økonomigruppen er en tværsektoriel gruppe med et mandat, som godkendes af både miljøsektoren og finanssektoren ved Nordisk Ministerråd.

Analysen ser på både ex-ante- og ex post-evalueringer, dvs. vurderinger af miljøpolitiske tiltag og instrumenter før henholdsvis efter deres gennemførelse (jf. Tabel 1 for en mere detaljeret definition af ex-ante- og ex-post-evalueringer).

Tabel 1: Ex-ante- og ex-post-evalueringer, Definitioner

Type	Definition
Ex-ante-evaluering	Ex-ante-evalueringer (1) forklarer den logiske sammenhæng mellem problemet, dets underliggende årsager, målene, og mulige politiske tiltag til løsning af problemet. De beskriver de sandsynlige effekter af tiltagene, dvs. hvem der bliver påvirket af dem og hvordan. Ex-ante-evalueringer sammenligner de politiske tiltag med hensyn til deres vurderede økonomiske, sociale, og miljømæssige effekter.
Ex-post-evaluering	Ex-post-evalueringer (2) informerer regelmæssigt (3) politikere om eksisterende politiske tiltag og sikrer, at der findes relevant evidens til brug ved forberedelse af nye tiltag ("evaluér først"-princippet). Ex-post-evalueringer skal som et minimum vurdere effektivitet, omkostningseffektivitet, relevans og sammenhæng med andre politiske tiltag. Vurderingerne skal altid forsøge at indeholde kvantificeringer af lovgivningsmæssige omkostninger og gevinster og skal beskrive administrativt tunge eller komplekse aspekter af lovgivningen og dens implementering. Ex-post-evalueringer skal vurdere alle væsentlige økonomiske, sociale, og miljømæssige effekter.

Noter: (1) Ex-ante-evalueringer kaldes også effektvurderinger (på engelsk "impact assessments") i BRG.
(2) Ex-post-evalueringer omtales ofte evalueringer, slet og ret.
(3) Ideelt bør ex-post evalueringer udføres regelmæssigt, men i praksis udføres de ofte mere ad-hoc.

Source: COWI – inspireret af EU Kommissionens såkaldte "Better Regulation Guidelines" (BRG; for information vedrørende disse, se: https://ec.europa.eu/info/better-regulation-toolbox_en).

I analysen ser vi på tre aspekter af ex-ante- og ex-post-evalueringer:

- Organisering: Hvordan er evalueringerne af miljøpolitiske tiltag og instrumenter organiseret i de nordiske lande, dvs. hvem er aktørerne, og hvilke krav stilles der til evalueringerne (hvornår og hvordan skal de gennemføres)?
- Vejledninger: Hvilke typer af vejledninger for gennemførelsen af ex-ante- og ex-post-evalueringer findes der?
- Specifikke evalueringer: Vi ser på 32 allerede gennemførte evalueringer miljøpolitiske tiltag og instrumenter (fire ex-ante- og fire ex-post-evalueringer i hvert af de fire lande omfattet af analysen). Det gør vi for at indfange gode og også mindre gode eksempler, som der på forskellig vis kan tages ved lære af.

For at undersøge disse tre aspekter har vi udarbejdet en række undersøgelsesspørgsmål, udviklet et scoringssystem og gennemført en række interviews

På baggrund af den foretagne analyse har vi identificeret en række læringspunkter for de tre undersøgte aspekter, jf. Tabel 2. Baseret på læringspunkterne har vi opstillet en række anbefalinger for, hvordan evalueringer af miljøpolitiske tiltag kan forbedres.

Overordnet viser analysen, at de nordiske lande alle som én har et velforankret og klart organisatorisk setup for gennemførelsen af ex-ante-evalueringer af miljøpolitiske tiltag og instrumenter, mens der er plads til forbedring, når det handler om ex-post-evalueringer. Kun Finland har et krav og en proces for gennemførelsen af ex-post-evalueringer af miljøpolitiske tiltag og instrumenter. Med hensyn til organisering anbefaler vi derfor, at:

- Evaluatorene i Danmark, Norge og Sverige henter værdifuld inspiration i Finland, når det handler om at opstille krav til ex-post-evalueringer, der afspejler kravene til ex-ante-evalueringer, og som på den måde sikrer en konsistent evalueringsproces fra start til slut.

I alle nordiske lande er det et krav, at der gennemføres ex-ante-evalueringer for miljøpolitiske tiltag, som forventes at have en stor effekt og der eksisterer vejledninger herfor; vejledningerne fortæller, hvordan ex-ante-evalueringerne skal gennemføres. Der er dog nogle forskelle mellem landene imellem med hensyn til hvordan og i hvilket omfang disse vejledninger undersøger de miljøpolitiske tiltag. Med hensyn til vejledninger for udarbejdelse af evalueringer har vi følgende anbefalinger:

- Der synes at være grobund for en øget udveksling af gode eksempler. For eksempel kan brugen af det danske katalog over miljøøkonomiske nøgletal i evalueringer og den svenske vejledning vedrørende evaluering af miljøpolitiske tiltag tjene som inspiration for andre lande.

- Vejledninger for ex-ante evalueringer skal sikre et solidt fundament for ex-post evalueringer. For at udarbejde en god ex-post evaluering er det vigtigt, at gode indikatorer identificeres på et tidligt stadie, dvs. i forbindelse med ex-ante-evalueringen. Kun på denne måde kan det sikres, at data, som skal anvendes i ex-post-evalueringen, indsamles regelmæssigt.
- Der er et behov for at udarbejde særlige vejledninger for gennemførelsen af ex-post-evalueringer. Disse vejledninger kan med fordel trække på EU Kommissionens såkaldte "Better Regulation Guidelines" (BRG) og dets tilhørende værktøjskasse.³⁰

Selv om der ikke er krav eller vejledninger for, hvordan ex-post evalueringer skal gennemføres, har vi i analysen ikke fundet nogen stærk tendens for at ex-ante evalueringer er bedre end ex-post evalueringer med hensyn til definition og estimering af effekter samt brugen af analytiske metoder. Analysen af de allerede gennemførte evalueringer viser dog, at det ikke altid er klart, hvilke effekter som er inkluderet i evalueringen samt hvilke begrænsninger der er i forhold til estimering af effekterne. Herudover viser studiet af de specifikke evalueringer, at interessenter kun inddrages i begrænset omfang. Baseret på studiet af de gennemførte evalueringer har vi følgende anbefalinger:

- De brugte, ikke officielt dokumenterede og gode metoder bør offentliggøres – ikke mindst for at sikre at resultater fra forskellige evalueringer bliver sammenlignelige.
- Anbefalinger og best practices for at involvere interessenter skal inkluderes i evaluerings-vejledninger.

³⁰ For information about the BRG, see: https://ec.europa.eu/info/better-regulation-toolbox_en

Tabel 2: Læringspunkter

Overblik

Organisering

1. I de fire nordiske lande er der mange forskellige aktører, heriblandt kunder og evaluatore. Det peger i sig selv på, at det er en fordel i hvert land at have fælles, let tilgængelige evalueringsmetodikker, så evalueringer af forskellige miljøpolitikker er sammenlignelige. Herved vil man bedre kunne udforme fremtidige miljøpolitiske tiltag og instrumenter.
2. I modsætning til Danmark, Norge og Sverige har Finland opstillet krav til ex-post evalueringer. Kravene afspejler kravene til ex-ante evalueringer, så der sikres konsistens mellem ex-ante- og ex-post-evalueringer.
3. Det finske "Council of Regulatory Impact Analysis", der synes inspireret af EU Kommissionens "Regulatory Scrutiny Board", facilitere en mere formel proces til sikring af, at evalueringerne følger en konsistent metode og er af en høj kvalitet.

Vejledninger

4. Hovedparten af evaluerings-vejledningerne i de nordiske lande vedrører ex-ante evalueringer og spiller således ikke en stor rolle med hensyn til at fremme sammenligneligheden mellem ex-ante og ex-post evalueringer og dermed fremme en konsistent proces for gennemførelsen af evalueringer.
5. Alle de nordiske lande har mere end en vejledning vedrørende ex-ante-evalueringer. De forskellige vejledninger skal dog være i overensstemmelse med finansministeriernes vejledning for evalueringer. Nogle af vejledningerne fokuserer på evalueringsprocessen, mens andre fokuserer på de analytiske metoder. Begge typer af vejledninger er af høj kvalitet.
6. Kun få evalueringer beskriver, hvordan interessenter kan inddrages, samt fordelene herved – med andre ord, hvordan interessenter kan bidrage til effektvurderinger samt hjælpe med at sikre en bred accept af evalueringen og dermed brugen af evalueringsresultaterne.
7. Der er en vis variation i, hvordan evaluerings-vejledningerne i det nordiske lande undersøger de miljøpolitiske tiltag.
8. Generelt lægger evaluerings-vejledningerne begrænset vægt på de grænseoverskridende effekter, selv om disse effekter ofte er betydelige. Desuden er der i nogle af de nordiske lande (f.eks. Danmark) en uoverensstemmelse mellem vejledningerne fra henholdsvis miljøministerierne og finansministerierne med hensyn til, hvordan grænseoverskridende effekter skal medtages. Finansministerierne ekskluderer som hovedregel grænseoverskridende effekter.

Gennemførte evalueringer

9. Nogen evalueringer har både ex-ante- og ex-post-elementer. Dette kan være problematisk i forhold til anvendelse af resultaterne, såfremt det ikke er klart, hvilke resultater der vedrører en vurdering af de mulige fremtidige virkninger af de miljøpolitiske tiltag og instrumenter (ex-ante), og hvilke resultater der vedrører efficiens og effektivitet af samme.
10. Med undtagelse af Danmark synes det ikke at være sådan, at ex-ante-evalueringer omhandler effekter og bruger analytiske metoder bedre end ex-post evalueringer, selv om der næsten kun er evaluerings-vejledninger for ex-ante evalueringer.
11. Nogle evalueringer omhandler kun miljøeffekter, mens andre også omhandler effekter på samfundet. Dette begrænser muligheden for at sammenligne evalueringer af politiske instrumenter.
12. Interessentinddragelse anvendes oftere i ex-post-evalueringer end i ex-ante-evalueringer. Sidstnævnte type af evalueringer forpasser dermed muligheden for at styrke indsamlingen af robuste data samt sikre accept af resultaterne.

Appendix A: Mapping of evaluations

Table A-1: Environmental policy evaluation in Denmark, Norway, Sweden, and Finland, 2011–2017 – Non-exhaustive list

Year	Client	Title and link
Denmark		
Ongoing	DCE - Nationalt Center for Miljø og Energi [Danish Centre for Environment and Energy]	Evaluering af effekterne af den omlagte pesticidafgift [Evaluation of the effects of the restructured pesticide tax] http://pure.au.dk/portal/da/projects/evaluating-af-effekterne-af-den-omlagte-pesticidafgift(292a1638-d6da-49eb-a5fc-d4ede6179c5d).html
2017	Miljø- og Fødevarerministeriet, Miljøstyrelsen [Ministry of Environment and Food of Denmark, Danish Environmental Protection Agency]	Samfundsøkonomisk vurdering af behandling af imprægneret træaffald [Socioeconomic assessment of the treatment of impregnated wood waste] http://www2.mst.dk/Udgiv/publikationer/2017/05/978-87-93529-95-3.pdf
2017	Miljø- og Fødevarerministeriet [Ministry of Environment and Food]	Effektvurdering af kemikalieindsatsen 2014–2017 [Effect assessment of chemical initiatives 2014-2017] http://www2.mst.dk/Udgiv/publikationer/2017/06/978-87-93614-02-4.pdf
2016	Klimarådet [Danish Council on Climate Change]	Effektive veje til drivhusgasreduktion i landbruget [Effective ways to reduce greenhouse gas emissions in agriculture] http://www.klimaradet.dk/da/nyheder/landbrugets-groenne-omstilling-kraver-bedre-regulering
2016	Klimarådet [Danish Council on Climate Change]	Afgifter der forandrer - Forslag til klimavenlige afgiftsomlægninger [Charges that give change - Proposals for climate-friendly tax changes] http://www.klimaradet.dk/da/rapporter/afgifter-der-forandrer
2016	Klimarådet [Danish Council on Climate Change]	Midt i en energiomstilling – udfordringer og løsninger for den danske PSO-ordning [In the midst of an energy conversion - challenges and solutions for the Danish PSO scheme] http://www.klimaradet.dk/da/analyser/midt-i-en-energiomstilling-udfordringer-og-loesninger-den-danske-psy-ordning
2015	Miljøstyrelsen [Danish Environmental Protection Agency]	Resultat af den internationale evaluering af grundvandsbeskyttelsen ift. sprøjtemidler [Review of the Danish risk assessment methodology regarding leaching to groundwater] http://mst.dk/service/nyheder/nyhedsarkiv/2015/maj/internationale-evaluering-af-grundvandsbeskyttelsen/
2015	Klimarådet [Danish Council on Climate Change]	Omstilling med omtanke - Status og udfordringer for dansk klimapolitik [Change with care - Status and challenges for Danish climate policy] http://www.klimaradet.dk/da/rapporter/omstilling-med-omtanke
2014	Miljøministeriet, Miljøstyrelsen [Ministry of Environment, Danish Environmental Protection Agency]	Evaluering af grønne regnskaber [Evaluation of green accounts] http://www.ft.dk/samling/20141/almdele/miu/bilag/27/1412964.pdf
2013	Miljøministeriet [Ministry of Environment]	Evaluering af vandsektorloven [Evaluation of the water sector law] http://eng.svana.dk/media/203683/evalueringafvandsektorlovenendeligrapport.pdf
2012	DCE - Nationalt Center for Miljø og Energi [Danish Centre for Environment and Energy]	Optimising the effect of policy instruments: A study of farmers' decision rationales and how they match the incentives in Danish pesticide policy https://www.researchgate.net/publication/254303975_Optimising_the_effect_of_policy_instruments_A_study_of_farmers'_decision_rationales_and_how_they_match_the_incentives_in_Danish_pesticide_policy
Norway		
2016	Statistics Norway	"Evaluering av virkemidler for å fremme energieffektivisering" https://www.ssb.no/energi-og-industri/artikler-og-publikasjoner/evaluering-av-virkemidler-for-a-fremme-energieffektivisering
2015	Statistics Norway	"Byer og miljø Indikatorer for miljøutviklingen i "Framtidens byer" https://www.ssb.no/natur-og-miljo/artikler-og-publikasjoner/_attachment/225738?_ts=14d1deb5aa8
2016	Norwegian Environment Agency	"Vurdering av virkemidler for økt utsortering av våtorganisk avfall og plastemballasje" http://www.miljodirektoratet.no/no/Publikasjoner/2016/Mars-2016/Vurdering-av-virkemidler-for-okt-utsortering-av-vatorganisk-avfall-og-plastemballasje/

Year	Client	Title and link
2014	Nordic Council of Ministers	"Economic Policy Instruments for Plastic Waste – A review with Nordic perspectives" http://www.norden-ilibrary.org/environment/economic-policy-instruments-for-plastic-waste_tn2014-569
2013	Electronics industry	"Innsamling av småelektronikk og elektronikkavfall. Virkemidler og miljøeffekter" https://vista-analyse.no/site/assets/files/5828/va-rapport_34-2012_ee-avfall_milj_og_virkemidler.pdf
2011	CICERO	"Vurderinger av norsk klimapolitikk - En syntese av fire internasjonale rapporter" http://www.cicero.uio.no/no/publications/internal/128
2011	Nordic Council of Ministers	"Voluntary Agreements and Environmental Labelling in the Nordic Countries" http://www.norden-ilibrary.org/environment/voluntary-agreements-and-environmental-labelling-in-the-nordic-countries_tn2011-538
2011	OECD	"OECD Environmental Performance Reviews: Norway 2011" http://www.oecd-ilibrary.org/environment/oecd-environmental-performance-reviews-norway-2011_9789264098473-en
Sweden		
2017	Swedish Government	"Brännheta skatter! Bör avfallsförbränning och utsläpp av kväveoxider från energiproduktion beskattas?" http://www.regeringen.se/rattsdokument/statens-offentliga-utredningar/2017/11/sou-201783/
2016	Swedish Government	"Minskad förbrukning av plastbärkassar" http://www.naturvardsverket.se/upload/miljoarbete-i-samhallet/miljoarbete-i-sverige/regeringsuppdrag/2016/rapport-plastbarkassar-v16.pdf
2016	Swedish Board of Agriculture	Förgröningen i praktiken - kostnader kontra miljönyttor ["Greening in practice - costs and environmental benefits"] http://www2.jordbruksverket.se/download/18.36b894651576a404e02f139/1474966108018/ra16_18.pdf
2015	National Board of Housing, Building and Planning	Förslag till utvecklad nationell strategi för energieffektiviserande renovering [Proposals for developed national strategy for energy-efficient renovation] https://www.boverket.se/sv/om-boverket/publicerat-av-boverket/publikationer/2015/utvecklad-nationell-strategi-for-energieffektiviserande-renovering/
2015	Swedish Chemicals Agency	Kemikalieskatt, Skatt på vissa konsumentvaror som innehåller kemikalier ["Chemical tax, Tax on certain consumer goods containing chemicals"] http://www.google.se/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=oahUKEWjq4nS4v3YAhWNYIAKHZM_AJYQFggzMAI&url=http%3A%2F%2Fwww.regeringen.se%2F49bb0f%2Fcontentassets%2F4a79d2c36415435fb2c202dbf54bobda%2Fkemikalieskatt--skatt-pa-vissa-konsumentvaror-som-innehaller-kemikalier&usq=AOvVaw1UilgNaXGwJ_4Mg-6c5hr1
2015	Swedish Forests Agency	Ekonomiska stöd i skogsbruket [Economic subsidies in the forestry] https://www.ivl.se/download/18.4b1c947d15125e72dda144d/1449742309518/C132.pdf
2013	Swedish Agency for Marine and Water Management	Styrmedel för en hållbar åtgärdstakt av små avloppsanläggningar ["Policy instruments for a sustainable pace of action for small sewage plants"] https://www.havochvatten.se/download/18.16a42a771405a5e96072fe6/1379305996556/reguppdrag-slutrapport-styrmedel-hallbar-atgardstakt-enskilda-avlopp.pdf
2013	Sweco energuide AB	Styrmedels förutsättningar att styra mot ökad energieffektiviserande ring - en utvärdering av 24 styrmedel [Possibilities for steering towards increased energy efficiency – an evaluation of 24 policy instruments] http://extra.lansstyrelsen.se/energi/SiteCollectionDocuments/Uppföljning/En%20utvärdering%20av%2024%20styrmedel_Sweco_%2020140218.pdf
Finland		
2017 (ongoing)	Ministry of the Environment	Jäteveden sisältämän fosforin talteenotto ja kierrättäminen. [Recovery and recycling of phosphorus from wastewater] http://tietokayttoon.fi/hankeet/hanke-esittely/-/asset_publisher/jateveden-sisaltaman-fosforin-talteenotto-ja-kierrattaminen
2017	Prime Minister's Office	Kansallisen materiaalitehokkuusohjelman arviointi [Evaluation of National Material Efficiency Programme] http://tietokayttoon.fi/documents/10616/3866814/64_Kansallisen+materiaalitehokkuusohjelman+arviointi.pdf/9416e1e8-3afa-417c-ba47-468fb55a0707?version=1.0
2017	Prime Minister's Office	Päästökauppadirektiivin uudistamisen vaikutukset Suomen teollisuuteen, energiantuotantoon ja kansantalouteen. [Impact of the Emissions Trading Directive on Finnish industry, energy production and the national economy] http://tietokayttoon.fi/hankeet/hanke-esittely/-/asset_publisher/paastokauppadirektiivin-uudistamisen-vaikutukset-suomen-teollisuuteen-energiantuotantoon-ja-kansantalouteen

Year	Client	Title and link
2017	Ministry of the Environment	Väliarvio Suomen luonnon monimuotoisuuden suojelun ja kestävä käytön strategiasta ja toimintaohjelmasta vuonna 2016 [A mid-term review of the Finnish strategy and action plan for the conservation and sustainable use of biodiversity in 2016] https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/79871/YMra_14_2017.pdf?sequence=1
2017	Prime Minister's Office	Energia ja ilmastostrategian vaikutusarviot: Yhteenvetoraportti [Impact assessments of the Energy and Climate strategy: The summary Report] http://tietokayttoon.fi/documents/10616/3866814/21_Energia-+ja+ilmastostrategian+vaikutusarviot+Yhteenvetoraportti/40df1f5f-c99c-47d1-a929-a4c825f71547?version=1.0
2017	Prime Minister's Office	Hajautetun uusiutuvan energian mahdollisuudet ja rajoitteet. [Opportunities and limitations of distributed (production of renewable) energy.] http://vnk.fi/documents/10616/3866814/35_hajautetun-uusiutuvan-energian-mahdollisuudet-ja-rajoitteet.pdf/331354b7-1b09-4fc9-b01a-89ff08b87241?version=1.0
2016	Prime Minister's Office	Vuoden 2011 energiaverouudistuksen arviointia [Evaluation of 2011 energy tax reform] http://tietokayttoon.fi/documents/10616/2009122/61_Vuoden+2011+energiaverouudistuksen+arviointia/73a9c40-c490-4b83-bb9a-eb4d3a9f193b?version=1.0
2016	Prime Minister's Office	Biotalous ja cleantech Suomessa – strategioiden arviointi ja toimenpidesuosituksset. [Bioeconomy and cleantech in Finland – Assessment of Strategies and development suggestions.] http://vnk.fi/documents/10616/2009122/51_Biotalous+ja+cleantech+Suomessa+%E2%80%93+strategioiden+arviointi+ja+toimenpidesuosituksset/5b3f622c-d593-4a84-a380-ad55089fb75f?version=1.1
2016	Prime Minister's Office	Kohdennetut keinot kierrätyksen kasvuun. [Policy instruments for increasing waste recycling] http://tietokayttoon.fi/documents/10616/2009122/53_2016+Kohdennetut+keinot+kierr%C3%A4tyksen+kasvuun.pdf/e883402b-13dc-4d69-8126-953c80cc1b8f?version=1.0
2016	Ministry of Employment and the Economy	Uusiutuvan energian tukijärjestelmien kehittämistyöryhmän loppuraportti. [Final Report of the Working Group for Developing Support Schemes for Renewable Energy.] http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/74933/TEMjul_16_2016.pdf
2016	Prime Minister's Office	Yhden luukun periaatteen toteuttaminen ympäristöasioissa [The implementation of the one-stop shop principle in environmental matters] http://tietokayttoon.fi/documents/10616/2009122/29_Yhden+luukun+periaatteen+toteuttaminen+ymp%C3%A4rist%C3%B6asioissa.pdf/a2c01baa-48f9-4719-88b7-e74ff7837eb7?version=1.0
2015	Ministry of Employment and the Economy	Selvitys energiapolitiikan vaihtoehtoista. [Report on Energy Policy Options.] http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/74969/TEMjul_25_2015-web_01042015.pdf
2013	Ministry of the Environment	Ympäristön kannalta haitalliset tuet. [Environmentally harmful subsidies]. http://www.ym.fi/download/noname/%7BB3E047CC-DD7A-4897-BA56-513FBD50C5F97D/40297
2012	Finnish Environment Institute SYKE	Kiviaineshankkeiden ympäristövaikutusten arviointi. [Environmental impact assessment of aggregate projects] https://helda.helsinki.fi/bitstream/handle/10138/38737/SY_27_2012-Kiviaineshankkeiden_ymparistovaikutusten_arviointi.pdf?sequence=1

Appendix B: Assessment of 32 evaluations

Denmark

Ex-ante evaluations

Table B-1: Denmark, No. 1

Title	Afgifter der forandrer - Forslag til klimavenlige afgiftsomlægninger [Charges that give change - Proposals for climate-friendly tax changes]	
Date	June 2016	
Source	http://klimaradet.dk/da/rapporter/afgifter-der-forandrer	
Client	Klimarådet (although targeted at the Parliament's implementation of its climate law) [Danish Council on Climate Change]	
Evaluator	Klimarådet [Danish Council on Climate Change]	
Ex-ante/ex-post evaluation	Ex-post evaluation (assessing recent policy developments) Ex-ante evaluation (assessing future challenges and needs for policy developments)	
Type of policy instrument	Economic: taxes	
Use of evaluation guideline	Has been carried out in accordance with prevailing guidelines available on websites of Ministry of Finance and Ministry of taxes.	
Brief description of purpose, results, and main learnings from the evaluation	Assessment of inefficiencies in the Danish climate/environmental tax system, and recommendations for climate-friendly adjustments – with a focus on recommendations for the transport and central heating sectors. Expert assessments based on a solid theoretical foundation, but without consistent quantifications of impacts.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	H	Wide coverage of well-defined climate-related environmental impacts
2.3 Use of analytical methods for measuring impacts	M	Solid theory-based assessment of deficiencies of current environmental tax system, and so of potential benefits from removing/reducing deficiencies – but without consistent quantifications.
2.5 Stakeholder consultation	L	No use of stakeholder views (apart from the Council itself) as evidence base, and no stakeholder consultation in the process of pursuing acceptance of policy recommendations.
2.6 Independency	H	Well-known, credible Council experts.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	L	Council's own choice to assess environmental/climate taxes (although acknowledging that they are on the political agenda).
3.2 Comparability of economic instruments with other policy instruments	L	Focus on economic instruments only.

Table B-2: Denmark, No. 2

Title	Samfundsøkonomisk vurdering af behandling af imprægneret træaffald [Socioeconomic assessment of the treatment of impregnated wood waste]	
Date	May 2017	
Source	http://www2.mst.dk/Udgiv/publikationer/2017/05/978-87-93529-95-3.pdf	
Client	Miljø- og Fødevareministeriet, Miljøstyrelsen [Ministry of Environment and Food of Denmark, Danish Environmental Protection Agency]	
Evaluator	Deloitte Consulting	
Ex-ante/ex-post evaluation	Ex-ante evaluation	
Type of policy instrument	Administrative: target management, technical requirements, legislation	
Use of evaluation guideline	Miljøministeriet (2010)	
Brief description of purpose, results, and main learnings from the evaluation	Socio-economic analysis of different scenarios for the end-disposal of CCA-impregnated woods. Competent use of the evaluation guideline, but only limited description of the policy process and the administrative costs of revising 'Restproduktbekendtgørelsen' [residual product order].	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	H	Clear definitions and coverage of costs and benefits in the different treatment scenarios.
2.3 Use of analytical methods for measuring impacts	H	Coverage of both budget and socioeconomic calculations. Use of sensitivity analysis to address uncertainty of calculations. Use of widely-accepted/standard unit prices for environmental impacts.
2.5 Stakeholder consultation	L	Use of stakeholder consultation for gathering data/facts, but little use for assessing expected behavioural changes within the different – although fixed – scenarios. No evidence of assessment/acceptance of stakeholders of the scenarios – hereunder the recommended scenario.
2.6 Independency	H	Well-known consultancy firm, and external quality assurance by another well-known consultancy firm.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	L	Limited description of the policy process.
3.2 Comparability of economic instruments with other policy instruments	L	No coverage of economic instruments – although scenarios may imply exemptions from energy taxes.

Table B-3: Denmark, No. 3

Title	Sanering af punktafgifter [Remediation of excise duties]	
Date	October 2017	
Source	http://www.skm.dk/media/1530964/hovedrapport-sanering-af-punktafgifter.pdf	
Client	Ministry of Taxation	
Evaluator	Inter-ministerial working group with the Ministry of Taxation as chairman and secretary.	
Ex-ante/ex-post evaluation	Ex-ante/ex-post	
Type of policy instrument	Tariffs	
Use of evaluation guideline	Has established four criteria the suggested changes to tariffs are evaluated on. The tariffs' impact on the industry is estimated based on the "AMVAB" method described in the following guideline Erhvervsministeriet (2012).	
Brief description of purpose, results, and main learnings from the evaluation	A committee has suggested a number of proposals for tariffs that can be abolished or revised. The Ministry of Taxes has in this report analysed whether there are tax-based reasons for the suggested initiatives. The report finds that the main part of the suggestions can be met.	
Quality score		
2.1 Definitions and coverage of impacts	M	Focus mainly on socioeconomic effects and effects for the industry. Only little coverage of environmental impacts.
2.3 Use of analytical methods for measuring impacts	M	Use a clear method to assess socioeconomic effects as well as effects for the industry. However, limited coverage of environmental impacts.
2.5 Stakeholder consultation	M	Stakeholders have been able to suggest tariff changes.
2.6 Independency	M	The analysis has been conducted by an inter-ministerial working group, which is not independent. However, an external committee consisting of business and industry organizations has assisted the working group in conducting the analysis.
Consistency score		
3.1 Role of evaluation in policy cycle	H	
3.2 Comparability of economic instruments with other policy instruments	L	Do not assess whether other economic instrument could be more effective.

Ex-post evaluations

Table B-4: Denmark, No. 4

Title	Evaluering af vandsektorloven [Evaluation of the water sector law]	
Date	2013	
Source	http://eng.svana.dk/media/203683/evalueringafvandsektorlovenendeligrapport.pdf	
Client	Although not explicitly stated, it appears that the Ministry of Environment (hereunder the Nature Agency) led a steering committee that also included the Ministry of Industry, Business and Financial Affairs (hereunder the Secretariat for Water Supply), the Ministry of Finance, the Ministry for Economic Affairs and the Interior, and the Ministry of Taxation.	
Evaluator	Deloitte Consulting, LETT, and DHI	
Ex-ante/ex-post evaluation	Ex-post evaluation	
Type of policy instrument	Administrative: legislation	
Use of evaluation guideline	No – but using the benchmarking model of the Secretariat for Water Supply for estimating effectiveness potentials.	
Brief description of purpose, results, and main learnings from the evaluation	Assessment of the effectiveness of the existing legal provisions in meeting the aims of the water sector reform: higher effectiveness, lower prices, more transparency, and clearer distribution of tasks, while fulfilling the requirements of the environment, health conditions, and security of supply. Assessing many different aims has limited the focus on environmental impacts and has so limited its role as an environmental policy instrument evaluation.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	L	While covering many impacts linked to the many targets of the water sector law – only little coverage of not well-defined environmental impacts.
2.3 Use of analytical methods for measuring impacts	M	Use of theory-based assessments and benchmarking model. However, limited coverage environmental impacts.
2.5 Stakeholder consultation	H	Comprehensive use of interviews and questionnaire survey for data collection and for obtaining stakeholder views.
2.6 Independency	H	Well-known consultancy firms – together covering evaluation and water sector expertise.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	H	Requirement to an evaluation three years after the signatory of parties to the agreement – enables them consider revisions to the agreement.
3.2 Comparability of economic instruments with other policy instruments	M	Comprehensive coverage of economic instruments and other policy instruments. However, only limited assessment of economic incentives for environmental improvements.

Table B-5: Denmark, No. 5

Title	Midt i en energiomstilling – udfordringer og løsninger for den danske PSO-ordning [In the midst of an energy conversion - challenges and solutions for the Danish PSO scheme]	
Date	April 2016	
Source	http://www.klimaradet.dk/da/analyser/midt-i-en-energiomstilling-udfordringer-og-loesninger-den-danske-pso-ordning	
Client	Klimarådet (although targeted at the Parliament's implementation of its climate law) [Danish Council on Climate Change]	
Evaluator	Klimarådet [Danish Council on Climate Change]	
Ex-ante/ex-post evaluation	Ex-post evaluation (assessing recent policy developments) Ex-ante evaluation (assessing future challenges and needs for policy developments)	
Type of policy instrument	Economic: subsidies and taxes	
Use of evaluation guideline	No	
Brief description of purpose, results, and main learnings from the evaluation	Assessment of current PSO-subsidy (Public Service Obligation) to renewable energy financed via PSO-taxes on electricity use. Expert assessments of causes for recent developments in PSO costs and their distributional impacts, and assessments of future developments and of alternative financing options.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	Focus on impacts on electricity prices and use. Hence, no assessment of climate-related environmental impacts.
2.3 Use of analytical methods for measuring impacts	M	Solid theory-based assessment of links between electricity prices and electricity use.
2.5 Stakeholder consultation	L	No use of stakeholder views (apart from the Council itself) as evidence base, and no stakeholder consultation in the process of pursuing acceptance of policy recommendations.
2.6 Independency	H	Well-known and credible Council experts.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	M	Council's own choice to assess the PSO system, but done at a time where it was under scrutiny being conflict with EU's state aid rules.
3.2 Comparability of economic instruments with other policy instruments	L	Focus on economic instruments only.

Table B-6: Denmark, No. 6

Title	Evaluering af grønne regnskaber [Evaluation of green accounts]	
Date	2014	
Source	https://www2.mst.dk/Udgiv/publikationer/2014/06/978-87-93178-65-6.pdf	
Client	Ministry of Environment and Food, The Danish Environmental Agency	
Evaluator	COWI	
Ex-ante/ex-post evaluation	Ex-post	
Type of policy instrument	Green accounts	
Use of evaluation guideline	No	
Brief description of purpose, results, and main learnings from the evaluation	The evaluation has had two focus areas. One focus area is to clarify whether green accounts are current and useful in relation to their two purposes hence provide the public with environmental information and encourage enterprises to work actively with environmental aspects of their activities. The second focus area is to investigate the effects of green accounts, including the effects of removing the duty to prepare accounts for Annex 2 enterprises. The report finds that green accounts have had a positive environmental effect the 1990s and 2000s. Though, the evaluation also shows that the enterprises are subject to other environmental regulation which overlaps green accounts and therefor green accounts doesn't add an added value in relation to the environment.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	L	There is no clear definition of impacts.
2.3 Use of analytical methods for measuring impacts	L	Results are only based on answers from stakeholders
2.5 Stakeholder consultation	H	Questionnaire and interviews with stakeholders
ers2.6 Independency	H	Well-known consultancy firm.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	H	The ministry of Environment promised the Danish Parliament an evaluation of the effects of green accounts.
3.2 Comparability of economic instruments with other policy instruments	M	Compare the effect from green accounts with the effect from other environmental requirements for the industry

Table B-7: Denmark, No. 7

Title	Effektvurdering af kemikalieindsatsen 2014-2017 [Effect assessment of chemical initiatives 2014-2017]	
Date	Juni 2017	
Source	http://www2.mst.dk/Udgiv/publikationer/2017/06/978-87-93614-02-4.pdf	
Client	Miljø- og Fødevareministeriet [Ministry of Environment and Food]	
Evaluator	COWI	
Ex-ante/ex-post evaluation	Ex-post evaluation – as the initiatives have been implemented	
Type of policy instrument	Economic: grants to administrative, informational, and research initiatives.	
Use of evaluation guideline	Effect chain methodology complies with Miljø- og Fødevareministeriet (2016), while the socio-economic calculations follow Finansministeriet (2017 – or rather the 1999 version).	
Brief description of purpose, results, and main learnings from the evaluation	<p>The purpose of the effect assessment was to establish a foundation for further chemical initiatives.</p> <p>It is, however, unlikely that similar funding of a similar set of initiatives will take place in the future. Hence, the overall analysis of the links between the initiatives and the overall benefit/cost ratio assessment may not be that valuable for the planning of future initiatives.</p> <p>This said, the analysis of the links between the initiatives contributes to establishing the intervention logic for the single initiative. Furthermore, the specific analyses of the initiatives make skilful use of analytical methods.</p>	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	H	Outputs and effects are clearly defined, and the most important impacts are covered.
2.3 Use of analytical methods for measuring impacts	H	Stringent use of effect chain and socio-economic methods – although the baseline for the evaluation is not entirely clear.
2.5 Stakeholder consultation	M	Use of stakeholder views as evidence base for assessing behavioural changes from the initiatives, but not for pursuing acceptance of the evaluation results.
2.6 Independency	H	The evaluation team is independent and comprises expertise with chemicals as well as with effect chains and socio-economic analysis.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	L	<p>The evaluation was conducted as a as part of the preparation of negotiations for a new Chemical Action Plan (replacing the 2014 plan - 17)</p> <p>The main challenge for the evaluation of the chemical effort initiative was the fact that it had to do an ex-post evaluation before most impacts had materialized</p> <p>However, the results may guide another, future ex-post evaluation, and may inspire similar, future initiatives.</p>
3.2 Comparability of economic instruments with other policy instruments	M	The evaluation covers grants (economic instrument) to other types of policy instruments. However, the baseline for the evaluation is not entirely clear, e.g. effects of other initiatives – some of which may be replaced by the chemical initiatives.

Table B-8: Denmark, No. 8

Title	Evaluering af Miljøteknologisk Uviklings- og Demonstrationsprogram [Assessment of Environmental Technology Development and Demonstration Program]	
Date	2017	
Source	http://ecoinnovation.dk/media/187290/evaluering-2017-rapport-final-31-oktober-2017.pdf	
Client	Bestyrelsen for det Miljøteknologiske Udviklings- og Demonstrationsprogram	
Evaluator	Niras, DTU Miljø and DAMVAD Analytics	
Ex-ante/ex-post evaluation	Ex- post	
Type of policy instrument	Program focusing on supporting and promoting the development, testing and demonstration of new environmental technologies and solutions within water and climate adaption, waste and resource efficiency, air, noise, chemicals as well as sustainable development.	
Use of evaluation guideline	No	
Brief description of purpose, results, and main learnings from the evaluation	The purpose of the study was to evaluate the Miljøteknologiske Udviklings- og Demonstrationsprogram (MUDP) and its initiatives in the period from 2007-2016. The program has supported projects focusing on new environmental technologies and solutions economically. The evaluation shows that the program has had a positive effect on the participating companies' turnover and employment. However, the companies undertake a considerable risk, as it takes time before the solutions are ready for the market.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	Focus both on economic (growth, employment and export) and environmental effects.
2.3 Use of analytical methods for measuring impacts	M	The conclusions are based on administrative information about the projects, results from a questionnaire and interviews with the participants as well as data from Statistics Denmark and SCOPUS.
2.5 Stakeholder consultation	H	Views and opinions from participants in the MUDP program have been included based on the answers from a questionnaire and interviews.
2.6 Independency	H	Experienced and independent evaluation team.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	M	.
3.2 Comparability of economic instruments with other policy instruments	L	Not included.

Norway

Ex-ante evaluations

Table B-g: Norway, No. 1

Title	Vurdering av virkemidler for økt utsortering av våtorganisk avfall og plastemballasje	
Date	15.01.2016	
Source	http://www.miljodirektoratet.no/Documents/publikasjoner/M522/M522.pdf	
Client	Norwegian Environment Agency	
Evaluator	Østfoldforskning	
Ex-ante/ex-post evaluation	Ex-ante	
Type of policy instrument	Economic, administrative and legal instruments	
Use of evaluation guideline	Guidelines for instruction on ex-ante studies and guidelines for economic analysis	
Brief description of purpose, results, and main learnings from the evaluation	The purpose of this study is to make recommendations to the authorities on which measures are most effective with a view to enhanced sorting of organic waste and plastic packaging from households and businesses. The overall objective of increased sorting is to improve utilisation of wastes and to reduce greenhouse gas emissions.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	H	Evaluating several instruments and clear on the goals.
2.3 Use of analytical methods for measuring impacts	M	Several methods are used, but the methods are not highlighted.
2.5 Stakeholder consultation	M	Has been in contact with several business related to the issue
2.6 Independency	H	Experienced and independent evaluation team.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	M	The report is meant as a recommendation for the Ministry of Climate and Environment.
3.2 Comparability of economic instruments with other policy instruments	H	Both legal, economic and administrative instruments are considered.

Table B-10: Norway, No. 2

Title	Klimatiltak og utslippsbaner mot 2030; Kunnskapsgrunnlag for lavutslippsutvikling	
Date	2015	
Source	http://www.miljodirektoratet.no/Documents/publikasjoner/M386/M386.pdf	
Client	Ministry of Climate and Environment	
Evaluator	Norwegian Environment Agency	
Ex-ante/ex-post evaluation	Ex-ante	
Type of policy instrument	Mapping of possibilities and various action packages	
Use of evaluation guideline	Guidelines for instruction on ex-ante studies and guidelines for economic analysis	
Brief description of purpose, results, and main learnings from the evaluation	The report is a response to assignments from the Ministry of Climate and Environment on the knowledge base for low-emission development. The report provides new figures for historical emissions and projections based on new GWP values and new emissions forecasts. The projections are divided into quotas and non-quota sectors. Furthermore, the report provides a review of possible measures that can be realized by 2030 and the impact of various action packages by quota and non-quota sector. The report contains 84 job description. These describe what the measures are, emission reduction potential and gross cost estimates. As far as possible, additional effects are also described. Possible energy impacts of the measures are also considered.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	Evaluating several action packages, but no clear aim.
2.3 Use of analytical methods for measuring impacts	H	Several methods are used, but the methods are not highlighted.
2.5 Stakeholder consultation	L	No use of stakeholder views.
2.6 Independency	M	Experienced evaluation team, but financed by the government
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	H	Mapping on emissions compared to targets, and instrument evaluation to achieve further goals on emission reduction
3.2 Comparability of economic instruments with other policy instruments	M	Several different action packages are considered, whereas economic instruments are not explicitly evaluated, but are an underlying factor.

Table B-11: Norway, No. 3

Title	Faglig grunnlag for videreutvikling av den nasjonale og internasjonale klimapolitikken Klimatiltak mot 2020 og plan for videre arbeid	
Date	2014	
Source	http://www.miljodirektoratet.no/Documents/publikasjoner/M133/M133.pdf	
Client	Ministry of Climate and Environment	
Evaluator	Norwegian Environment Agency	
Ex-ante/ex-post evaluation	Ex-ante	
Type of policy instrument	Mapping of possibilities, development and further goals to achieve the climate goals.	
Use of evaluation guideline	Guidelines for instruction on ex-ante studies and guidelines for economic analysis.	
Brief description of purpose, results, and main learnings from the evaluation	In "Klimakur" 2020, it was assumed that emissions by 2020 will reach 42-44 million tons of CO ₂ equivalents, when forestry measures are included, in order to reach the Climate Change Objective 1. It was further assumed that Norway will receive credited 3 million tons of CO ₂ Equivalents as a result of carbon capture in forests and that Norwegian emissions must be reduced to between 45-47 million tons of CO ₂ equivalents by 2020, when forest measures are not included. Rule- and methodological changes mean that we currently do not know what Norway will be credited under the Kyoto agreement in 2020. We therefore assume that the ambition level outside of forests is kept unchanged and that Norwegian emissions must be reduced to between 45-47 million tons of CO ₂ equivalents by 2020.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	H	Evaluating possibilities for several different sectors, but no clear aim of one instrument in particular.
2.3 Use of analytical methods for measuring impacts	H	Several methods are used, but each method are not specified.
2.5 Stakeholder consultation	L	No use of stakeholder views.
2.6 Independency	M	Experienced evaluation team, but financed by the government
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	M	The report is academic advices to further work
3.2 Comparability of economic instruments with other policy instruments	H	Several different instruments are considered, where different economic instruments are evaluated among other instruments.

Table B-12: Norway, No. 4

Title	NOU (Norway's public investigations) 2015:15 Sett pris på miljøet — Rapport fra grønn skattekomisjon	
Date	9.12.2015	
Source	https://www.regjeringen.no/contentassets/38978c0304534ce6bd703c7c4cf32fc1/no/pdfs/nou201520150015000dddpdfs.pdf	
Client	Ministry of Finance	
Evaluator	A committee of experts	
Ex-ante/ex-post evaluation	Ex-ante	
Type of policy instrument	Tax regime	
Use of evaluation guideline	No	
Brief description of purpose, results, and main learnings from the evaluation	By Royal Decree August 15, 2014, a committee was appointed to assess how a green tax reform can contribute to better resource utilization and to fulfill the goals of the climate settlement. The report is very general and does not consider one specific	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	There is no clear definition of impacts, but several impacts are covered
2.3 Use of analytical methods for measuring impacts	M	The methods used are not obvious but the report refers to several research articles continuously.
2.5 Stakeholder consultation	M	Stakeholders are not involved directly, but the total impact is considered
2.6 Independency	M	Experienced evaluation team, stated by the government for this task only
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	M	Advice on further tax regime, to the Ministry of Finance
3.2 Comparability of economic instruments with other policy instruments	L	Only economic instruments are considered

Ex-post evaluations

Table B-13: Norway, No. 5

Title	Consequences of low carbon prices in the EU ETS	
Date	2014	
Source	http://www.miljodirektoratet.no/Documents/publikasjoner/M151/M151.pdf	
Client	Norwegian Environment Agency	
Evaluator	Carbon Limits AS in cooperation with Norsk Energi	
Ex-ante/ex-post evaluation	Ex-post	
Type of policy instrument	Carbon quota	
Use of evaluation guideline	No	
Brief description of purpose, results, and main learnings from the evaluation	The objective of the study was to investigate how the EU ETS price level and the expectations for future ETS prices might impact investments and operational mode of those companies who operate in Norway and are subject to the ETS system. Specifically the potential impact of the current low price level on possible locking in of long term investments or investments that ought not to have been carried out with higher price level was analyzed. Use of other means (than ETS) that could supplement or alternatively be used to achieve the desired result was also part of the scope.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	Quota prices and how it affects the carbon emission and capture
2.3 Use of analytical methods for measuring impacts	M	To some extend by looking at EU ETS price level
2.5 Stakeholder consultation	H	Interviews with related businesses
2.6 Independency	H	Experienced and independent evaluation team.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	L	No particular role
3.2 Comparability of economic instruments with other policy instruments	L	No other instruments are evaluated

Table B-14: Norway, No. 6

Title	Miljøvennlige ferjer Realisering av null- og lavutslippsløsninger i anbudprosesser for ferjesamband	
Date	08.02.2016	
Source	http://www.nhosjofart.no/getfile.php/Dokumenter/Publikasjoner/Null-%20og%20lavutslippsferjer%20i%20fylkene.pdf	
Client	Norwegian Environment Agency	
Evaluator	DNV GL AS Maritime	
Ex-ante/ex-post evaluation	Ex-ante/Ex-post	
Type of policy instrument	Economic instruments through tender processes	
Use of evaluation guideline	N/A	
Brief description of purpose, results, and main learnings from the evaluation	To achieve policy-based climate targets, it is necessary to change to zero and low-emission technology in a number of sectors. This report looks at ferry traffic as one of the transport sectors where it is now becoming necessary to switch from fossil fuel to electricity and other zero and low-emission solutions. DNV GL has, on behalf of the Ministry of the Environment and Environment, carried out a survey of barriers and solutions in order for such technologies to win on county municipal ferry connections. The work was initiated on the basis of the government's maritime strategy, and will be part of the basis for further follow-up of the strategy. Along with the report, The Norwegian Parliament has also made a decision that provides important guidance in further work on low and zero emissions in the ferry industry.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	Goal on ferries to be electrified but no clear goal of the emission reduction due to electrical ferries.
2.3 Use of analytical methods for measuring impacts	L	Little use of measuring impacts.
2.5 Stakeholder consultation	H	Interviews with related businesses
2.6 Independency	H	Experienced and independent evaluation team.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	M	Evaluation to implement future tenders
3.2 Comparability of economic instruments with other policy instruments	M	Economic instruments are evaluated together with technological facilitation

Table B-15: Norway, No. 7

Title	Undersøkelse av myndighetenes arbeid for å sikre god luftkvalitet i byområder	
Date	24.11.2015	
Source	https://www.riksrevisjonen.no/rapporter/Documents/2015-2016/LuftkvalitetBy.pdf	
Client	The Norwegian Parliamentn (Stortinget)	
Evaluator	Riksrevisjonen	
Ex-ante/ex-post evaluation	Ex-post	
Type of policy instrument	General policy	
Use of evaluation guideline	Yes	
Brief description of purpose, results, and main learnings from the evaluation	The aim of the survey has been to assess the authorities' efforts to ensure good air quality. The study highlights the development and status of concentration levels of particulate matter (PM10) and nitrogen dioxide (NO2) in 14 Norwegian "kommuner" and urban areas, with a total population of 1.9 million, which have so high levels of dust and / or nitrogen dioxide that they are required to monitor pollution levels.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	H	Clear aim on goals and impacts
2.3 Use of analytical methods for measuring impacts	H	Clear on the impacts measured
2.5 Stakeholder consultation	M	Riksrevisjonen has been in contact with the authorities during their work.
2.6 Independency	M	Governmental monitor
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	H	Evaluating the general policy and giving feedback directly to the government
3.2 Comparability of economic instruments with other policy instruments	M	No instruments are evaluated in particular, but the general policy.

Table B-16: Norway, No. 8

Title	Byer og miljø. Indikatorer for miljøutviklingen i «Framtidens byer»	
Date	16th of April 2015	
Source	https://www.ssb.no/natur-og-miljo/artikler-og-publikasjoner/_attachment/225738?_ts=14d1deb5aa8	
Client	Ministry of Local Government and Modernisation	
Evaluator	Statistics Norway (SSB)	
Ex-ante/ex-post evaluation	Ex-post	
Type of policy instrument	No particular instrument is evaluated but decision from The Norwegian Parliament no. 26 (2006-2007) on the nation's environmental status and the governmental policy.	
Use of evaluation guideline	Different parameters are measured, but not according to any particular guideline.	
Brief description of purpose, results, and main learnings from the evaluation	This report contains selected indicators and statistics that describe the environmental status and development in two large urban settlements and 10 of the most populous municipalities in Norway. These 13 areas were included in the programme "Cities of the Future", As of 1 January 2015, there were just under 1.9 million inhabitants in the "Cities of the Future", which corresponds to 36 per cent of the population of Norway.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	Several impacts are measured, but little or no focus on economic instruments used to achieve or implements the environmental goals.
2.3 Use of analytical methods for measuring impacts	M	The use of analytical methods are mostly statistics on different parameters of interest. No particular guideline on economic measurements are discussed.
2.5 Stakeholder consultation	H	Cooperation led by the Ministry of Climate and Environment through an annual top meeting with political leadership on national and local level together private businesses in the 13 most densely populated areas/cities.
2.6 Independency	H	Statistics Norway is both a statistical publisher and politically independent research institute, which also has to protect the confidence of independence among the population.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	M	The report doesn't specify the role in the evaluation cycle, but due to the for the report is considered, it is natural to believe the results are considered in further political work.
3.2 Comparability of economic instruments with other policy instruments	L	Doesn't give any comparability on different instruments neither economic, law or administration.

Sweden

Ex-ante evaluations

Table B-17: Sweden, No. 1

Title	"Minskad förbrukning av plastbärkassar" "Reduced consumption of plastic carriers"	
Date	21.03.2016	
Source	http://www.naturvardsverket.se/upload/miljoarbete-i-samhallet/miljoarbete-i-sverige/regeringsuppdrag/2016/rapport-plastbarkassar-v16.pdf	
Client	Ministry of environment and energy	
Evaluator	Swedish Environmental Protection Agency	
Ex-ante/ex-post evaluation	Ex-ante	
Type of policy instrument	Economic, administrative and information	
Use of evaluation guideline	No use of evaluation guideline	
Brief description of purpose, results, and main learnings from the evaluation	The purpose of the study was to propose a policy instrument aiming to reduce the private consumption of plastic carriers to the year of 2025. Several different policy instruments were analyzed, including economic instruments, ban and information.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	Environmental impacts are analyzed in terms of effects on littering and CO ₂ emissions. Implications for retail trade and consumers are covered. No social impacts are analyzed.
2.3 Use of analytical methods for measuring impacts	L	Qualitative assessments of impacts are performed. No use of quantitative estimates and no use of a model such as cost-benefit analysis.
2.5 Stakeholder consultation	L	Dialog performed with retail industry for collection of data, but no consultation of results.
2.6 Independency	M	Experienced evaluation team, but commissioned and formulated by the government.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle		
3.2 Comparability of economic instruments with other policy instruments	H	The analysis covers a range of different policy instruments.

Table B-18: Sweden, No. 2

Title	Förslag till utvecklad nationell strategi för energieffektiviserande renovering "Proposals for developed national strategy for energy-efficient renovation"	
Date	December 2015	
Source	https://www.google.se/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwilmqaH3P3YAhWFXCwKHXS1A2MQFggyMAE&url=https%3A%2F%2Fwww.boverket.se%2Fglobalassets%2Fpublikationer%2Fdokument%2F2015%2Fforslag-till-utvecklad-nationell-strategi-for-energieffektiviserande-renovering.pdf&usg=AOvVaw23vatf2uv8joXINDxCyggf	
Client	Ministry of environment and energy	
Evaluator	National Board of Housing, Building and Planning and the Swedish Energy Agency	
Ex-ante/ex-post evaluation	Ex-ante	
Type of policy instrument	Economic/financial instrument	
Use of evaluation guideline	No use of evaluation guideline	
Brief description of purpose, results, and main learnings from the evaluation	Two instruments, one based on information and one financial instrument, are evaluated based on potential effect on energy efficiency and renovation rate for buildings. The study proposes that existing credit guarantees are extended to include renovation measures aimed at increasing the rate of renovation.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	L	Cost effectiveness i.e. potential of goal fulfillment is evaluated. So are consequences for stakeholders (the industry). Environmental and social impacts are not analyzed.
2.3 Use of analytical methods for measuring impacts	M	The analyze addresses cost effectiveness.
2.5 Stakeholder consultation	M	Stakeholders had the opportunity to comment on main results and comments are addressed in the written report.
2.6 Independency	M	
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle		
3.2 Comparability of economic instruments with other policy instruments	M	Two different instruments are analyzed, one information based and one financial instrument.

Table B-19: Sweden, No. 3

Title	Kemikalieskatt, Skatt på vissa konsumentvaror som innehåller kemikalier Chemical tax, Tax on certain consumer goods containing chemicals	
Date	March 2015	
Source	http://www.google.se/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwj4nS4v3YAhWNYIAKHZM_AJYQFggzMAI&url=http%3A%2F%2Fwww.regeringen.se%2F49bb0f%2Fcontentassets%2F4a79d2c36415435fb2c202dbf54b0bda%2Fkemikalieskatt-skatt-pa-vissa-konsumentvaror-som-innehaller-kemikalier&usg=AOvVaw1Uii9NaXGWJ_4Mg-6c5hr1	
Client	Ministry of Finance	
Evaluator	Kemikalieskatteutredningen (Public committee)	
Ex-ante/ex-post evaluation	Ex-ante	
Type of policy instrument	Economic instruments	
Use of evaluation guideline	No evaluation guideline used	
Brief description of purpose, results, and main learnings from the evaluation	The main purpose of the study was to analyze the need for economic instruments applied to chemicals and to propose an instrument design to efficiently and cost effectively reduce the occurrence or risk for exposure and spread of environmentally hazardous substances from different product groups. They propose to implement tax on to different product groups, certain electronics and certain materials including PVC.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	H	Several effects of the policy are analyzed, such as health effects, economic effects for stakeholders including substitution effects and effects on public finance. A distributional analysis is performed. Environmental impacts are not covered.
2.3 Use of analytical methods for measuring impacts	H	Cost benefit analysis performed.
2.5 Stakeholder consultation	M	The instructions for the analysis include that consultation should be conducted with relevant authorities as well as relevant stakeholder groups and community actors.
2.6 Independency	M	Conducted by independent expert group.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle		
3.2 Comparability of economic instruments with other policy instruments	L	Only economic instruments are analyzed.

Table B-20: Sweden, No. 4

Title	Styrmedel för en hållbar åtgärdstakt av små avloppsanläggningar Policy instruments for a sustainable pace of action for small sewage plants	
Date	13.09.2013	
Source	https://www.havochvatten.se/download/18.16a42a771405a5e96072fe6/1379305996556/regu-ppdrag-slutrapport-styrmedel-hallbar-atgardstakt-enskilda-avlopp.pdf	
Client	Ministry of environment and energy	
Evaluator	Swedish Agency for Marine and Water Management	
Ex-ante/ex-post evaluation	Ex-ante	
Type of policy instrument	Economic, administrative and information based instruments	
Use of evaluation guideline	N/A	
Brief description of purpose, results, and main learnings from the evaluation	The analysis is performed with the main purpose of identifying several policy instruments and proposing one that decrease emissions from small sewerage plants. Targeted environmental problem was eutrophication. Several different policy instruments are analyzed, both economic, administrative and information based instruments. Recommendations are made to strengthening already existing administrative regulation.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	H	High coverage of impacts including effects on environment, public and private finance. No social impacts analyzed. Use of scenario analysis for dealing with uncertainty.
2.3 Use of analytical methods for measuring impacts	H	Cost benefit analysis performed.
2.5 Stakeholder consultation	H	Use of a reference group with representatives from relevant industry, research, municipalities, state agencies.
2.6 Independency	M	Experienced evaluation team, but commissioned and formulated by the government.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle		
3.2 Comparability of economic instruments with other policy instruments	H	Several different policy instruments are analyzed.

Ex-post evaluations

Table B-21: Sweden, No. 5

Title	Ekonomiska stöd i skogsbruket Economic subsidies in the forestry	
Date	November 2015	
Source	https://www.ivl.se/download/18.4b1c947d15125e72dda144d/1449742309518/C132.pdf	
Client	Swedish Forests Agency	
Evaluator	IVL Swedish Environmental Institute	
Ex-ante/ex-post evaluation	Ex-post	
Type of policy instrument	Economic instruments	
Use of evaluation guideline	N/A	
Brief description of purpose, results, and main learnings from the evaluation	Two subsidy programs implemented in Swedish forestry are evaluated with respect to cost effectiveness and efficiency.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	Some effects covered, including goal fulfillment, administrative costs. A qualitative assessment of impacts on ecosystem services are performed.
2.3 Use of analytical methods for measuring impacts	L	No systematic or stringent use of established methodology, and different methodologies are being used.
2.5 Stakeholder consultation	L	Data collection made through stakeholders, but no consultation.
2.6 Independency	M	Experienced evaluation team, but commissioned and formulated by client.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle		
3.2 Comparability of economic instruments with other policy instruments		N/A

Table B-22: Sweden, No. 6

Title	Förgröningen i praktiken - kostnader kontra miljönyttor Greening in practice - costs and environmental benefits	
Date	27.09.2016	
Source	http://www2.jordbruksverket.se/download/18.36b894651576a404e02f139/1474966108018/ra16_18.pdf	
Client	Ministry of Environment and Energy	
Evaluator	Swedish Board of Agriculture	
Ex-ante/ex-post evaluation	Ex-post	
Type of policy instrument	Economic instruments	
Use of evaluation guideline	No use of evaluation guidelines	
Brief description of purpose, results, and main learnings from the evaluation	An ex-post evaluation of different economic subsidies aimed at agricultural businesses is performed. Assessment of effectiveness and achieved environmental benefits is included as well as costs related to administration and implementation of actions. Recommendations are made to change or take away the subsidies based on results showing little environmental benefit.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	Limited scope of transaction and administrative fees is included, valuation of environmental benefits is made. No social effects
2.3 Use of analytical methods for measuring impacts	M	A limited CBA is performed
2.5 Stakeholder consultation	L	Use of stakeholder consultation not mentioned in report
2.6 Independency	M	Experienced evaluation team
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle		
3.2 Comparability of economic instruments with other policy instruments		N/A

Table B-23: Sweden, No. 7

Title	Styrmedels förutsättningar att styra mot ökad energieffektivisering - en utvärdering av 24 styrmedel Possibilities for steering towards increased energy efficiency – an evaluation of 24 policy instruments"	
Date	18.02.2014	
Source	http://extra.lansstyrelsen.se/energi/SiteCollectionDocuments/Uppföljning/En%20utvärdering%20av%2024%20styrmedel_Sweco_%2020140218.pdf	
Client	Ministry of Enterprise and Innovation	
Evaluator	Sweco energuide AB	
Ex-ante/ex-post evaluation	Ex-post	
Type of policy instrument	Economic, administrative, information and research	
Use of evaluation guideline	No use of evaluation guideline	
Brief description of purpose, results, and main learnings from the evaluation	24 different policy instrument in the energy area is evaluated with respect to contribution to energy efficiency. Economic, administrative, information based and research based instruments are included.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	The large number of instrument analyzed limits naturally the coverage of impacts. Cost effectiveness and efficiency is analyzed.
2.3 Use of analytical methods for measuring impacts	L	No use of quantification of effects. Different methods are used for different instruments
2.5 Stakeholder consultation	L	Use of stakeholder consultation not mentioned in report
2.6 Independency	M	Experienced evaluation team.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle		
3.2 Comparability of economic instruments with other policy instruments		N/A

Table B-24: Sweden, No. 8

Title	Brännheta skatter! Bör avfallsförbränning och utsläpp av kväveoxider från energiproduktion beskattas?	
Date	November 2017	
Source		
Client	Ministry of Finance	
Evaluator	Förbränningsutredningen (Public committee)	
Ex-ante/ex-post evaluation	Ex-ante/ex-post	
Type of policy instrument	Economic instruments	
Use of evaluation guideline	No use of evaluation guideline	
Brief description of purpose, results, and main learnings from the evaluation	The analysis have several different purposes. Conditions for implementing a tax on waste incineration are analyzed. One concluding recommendation drawn from the analysis is to not implement a tax on waste incineration for the reason that the tax is not expected to reduce waste since the cost burden is not allocated at the consumption where waste is generated. Also an ex-post evaluation is performed on an already implemented economic instrument for reduction of NO _x emissions from large combustion plants, the so called NO _x -fee. Only the ex-post evaluation is evaluated with scores below.	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	H	Clear description of evaluated impacts, high coverage including environmental and health effects and economic costs for relevant industry.
2.3 Use of analytical methods for measuring impacts	M	
2.5 Stakeholder consultation	M	Use of reference group with wide representation from different ministries. No description of a wider stakeholder consultation in the report.
2.6 Independency	H	Experienced evaluation team.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle		
3.2 Comparability of economic instruments with other policy instruments	H	Comparability with other instrument designs are made.

Finland

Ex ante evaluations

Table B-25: Finland, No. 1

Title	Energia- ja ilmastostrategian vaikutusarviot: Yhteenvetoraportti [Impact assessments of the Energy and Climate strategy: The summary report]	
Date	2.2.2017	
Source	http://tietokayttoon.fi/documents/10616/3866814/21_Energia-+ja+ilmastostrategian+vaikutusarviot+Yhteenvetoraportti/40df1f5f-c99c-47d1-a929-a4c825f71547?version=1.0	
Client	Prime Minister's Office	
Evaluator	Teknologian tutkimuskeskus VTT Oy, Suomen ympäristökeskus SYKE, Luonnonvarakeskus LUKE, Terveyden- ja hyvinvoinninlaitos THL, Helsingin yliopisto	
Ex-ante/ex-post evaluation	Ex-ante evaluation	
Type of policy instrument	Strategy	
Use of evaluation guideline	Not explicitly mentioned, but the applied impact assessment methodology is consistent with the Ex-ante Evaluation Guidelines of the Ministry of Justice (2007)	
Brief description of purpose, results, and main learnings from the evaluation	<p>This report summarises the outcome of the various impact assessments conducted in respect of the proposed National Energy and Climate Strategy (issued in November 2016).</p> <p>The ex ante evaluations informing the summary report include (but are not limited to) the following:</p> <ul style="list-style-type: none"> Impact Assessment of the EU's 2030 climate and energy policies for Finland (link); Report on the evolution and reduction measures of emissions in the relevant sectors by 2030 (link); Study: "How to Reach 40% Reduction in Carbon Dioxide Emissions from Road Transport by 2030: Propulsion Options and their Impacts on the Economy" (link); Energy efficiency measures of the transport sector as part of the EU's 2030 climate and energy targets: impacts, costs and burden sharing (link); Impacts of the energy and climate policy in the agricultural sector by 2030 (link); Study: "The development of energy efficiency in Finland. Assessments of the past and the future" (link). <p>The summary report concludes that the proposed actions and measures overall allow Finland to reach the targets of the EU Effort Sharing Decision as well as the related national targets to increase the use of renewable energy, to reduce fossil fuel consumption, and to increase self-sufficiency of energy consumption. The largest contribution to reducing emissions would be achieved in the transport sector followed by the heating of buildings, work machinery, waste management, F-gases and agriculture. Forest biomass is estimated to be the largest growing renewable energy source between 2015 and 2030.</p>	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	H	The summary report demonstrates that the impacts of the National Energy and Climate Strategy have been evaluated in a comprehensive way. The impacts are assessed both quantitatively and qualitatively. The report also highlights the limitations and uncertainties related to the evaluation.
2.3 Use of analytical methods for measuring impacts	H	The evaluation is underpinned by a wide range of analytical methods and tools, including modelling techniques concerning economic and environmental aspects.
2.5 Stakeholder consultation	M	Stakeholder consultation has been part of the overall strategy development process. However, as pointed out in the summary report (p. 110), its role could be further enhanced by enlarging the consultation's scope to a larger group of experts and other relevant stakeholders.
2.6 Independency	H	The evaluation has been conducted by a qualified and experienced team, representing independent research institutions.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	H	Evaluation was an integral part of the policy-making process for the establishment of the National Energy and Climate Strategy.
3.2 Comparability of economic instruments with other policy instruments	H	Economic policy instruments are evaluated alongside other policy measures.

Table B-26: Finland, No. 2

Title	Päästökauppadirektiivin uudistamisen vaikutukset Suomen energiasektoriin ja teollisuuteen [Impacts of the renewal of the EU emissions trading system directive to the Finnish energy sector and industry]	
Date	30.6.2017	
Source	http://tietokayttoon.fi/julkaisu?pubid=21101	
Client	Prime Minister's Office	
Evaluators	Pöyry PLC	
Ex-ante/ex-post evaluation	Ex-ante evaluation	
Type of policy instrument	Legislative act (EU), Economic policy instrument	
Use of evaluation guideline	No express reference to evaluation guidelines	
Brief description of purpose, results, and main learnings from the evaluation	<p>The report analyses the proposed changes to the EU emissions trading system directive from the perspective of Finland. The report was produced during the legislative process at EU level and aimed to provide additional information to decision-makers. It compares various scenarios based on the positions of the European Commission, the European Parliament and the Council.</p> <p>The purpose of the study was not provide a comprehensive impact assessment, but to focus specifically on evaluating impacts on the Finnish energy sector and on the competitiveness of the Finnish export industry. The addressed aspects in particular the following points:</p> <p>How do the various options for amending the directive impact the number of free allowances available to the Finnish industries?</p> <p>How does the revision of the directive impact the price of electricity and district heating in Finland, as well as energy production?</p> <p>How does the allocation of free allowances impact the energy-intensive Finnish export industries in terms of costs and competitiveness?</p> <p>Which sectors and technologies could benefit from the funding of the envisaged Innovation Fund and when would financial support be needed?</p>	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M/H	The study defines specifically which impacts it is evaluating, namely economic impacts on the Finnish industries. Other impacts are deliberately scoped out of the study.
2.3 Use of analytical methods for measuring impacts	H	The study makes use of modelling techniques, and provides detailed economic estimates in connection with the examined options.
2.5 Stakeholder consultation	L	Not performed as part of this study.
2.6 Independency	H	Independent consultancy firm and experienced evaluation team
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	N/A	This ex ante evaluation is not part of formal policy processes, but provides complementary information to decision-makers in the context of an ongoing EU legislative procedure.
3.2 Comparability of economic instruments with other policy instruments	H	The study is focused on the Emissions Trading System which is an essential economic instrument of environmental policy.

Table B-27: Finland, No. 3

Title	Kohdennetut keinot kierrätyksen kasvuun [Policy instruments for increasing waste recycling]	
Date	22.11.2016	
Source	http://tietokaytoon.fi/documents/10616/2009122/53_2016+Kohdennetut+keinot+kierr%C3%A4tyksen+kasvuun.pdf/e883402b-13dc-4d69-8126-953c80cc1b8f?version=1.0	
Client	Prime Minister's Office Finland	
Evaluators	SYKE [Finnish Environment Institute], VTT [VTT Technical Research Centre of Finland], Tilastokeskus [Statistics Finland]	
Ex-ante/ex-post evaluation	Ex-ante evaluation	
Type of policy instrument	Legislative / Non-legislative	
Use of evaluation guideline	Yes – the report refers to the general ex ante evaluation guidelines issued by the Ministry of Justice (2007) as well as to the specific ex ante evaluation guidelines issued by the Ministry of Environment (2013).	
Brief description of purpose, results, and main learnings from the evaluation	<p>The rationale for the report is to determine how Finland could reach the recycling rate target set by EU waste directive, i.e. 50% for municipal solid waste and 70% for construction and demolition waste. The report aims to identify and assess the most relevant and effective policy instruments in this respect.</p> <p>In terms of municipal solid waste, the evaluated policy options comprise an incineration tax, tightening the municipal waste management regulations, recycling advice for households, pay as you throw -systems, the obligation to separate the waste for non-residential properties and establishing a national advising network. As regards construction and demolition waste, the assessed policy options include a voluntary agreement for the construction sector, pre-demolition audits and the use of green public procurement.</p> <p>The report is underpinned by the modelling of municipal solid waste volumes – this provides essential quantitative data for the evaluation. In respect of each analysed policy option, the report includes the assessment of environmental, economic and other impacts. Economic impacts are mainly evaluated on a qualitative basis.</p>	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	H	The report examines the environmental, economic and other impacts of each identified policy instrument.
2.3 Use of analytical methods for measuring impacts	L/M	The report sets out an overall quantitative evaluation of the impact of policy options for increasing the municipal solid waste recycling rate. However, the assessment of the specific impacts is performed mainly on a qualitative level. The report is underpinned by a robust model quantifying waste volumes – however, a more extensive use of analytical evaluation methods could have been useful (for example cost-benefit analysis or SWOT analysis).
2.5 Stakeholder consultation	H	The study makes good use of stakeholder inputs (including specific workshops gathering experts and industry representatives).
2.6 Independency	H	The independent team comprises highly qualified experts in the topic covered by the study.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	H	The evaluation supports the national implementation of the EU waste directive.
3.2 Comparability of economic instruments with other policy instruments	H	The evaluation covers a range of economic policy instruments.

Table B-28: Finland, No. 4

Title	Yhden luukun periaatteen toteuttaminen ympäristöasioissa [The implementation of the one-stop shop principle in environmental matters]	
Date	22.6.2016	
Source	http://tietokayttoon.fi/documents/10616/2009122/29_Yhden+luukun+periaatteen+totuttaminen+ymp%C3%A4rist%C3%B6asioissa.pdf/a2c01baa-48f9-4719-88b7-e74ff7837eb7?version=1.0	
Client	Prime Minister's Office	
Evaluators	University of Eastern Finland (research group on environmental law) Enlaw Consulting Oy	
Ex-ante/ex-post evaluation	Ex-ante evaluation	
Type of policy instrument	Legislation	
Use of evaluation guideline	Not explicitly, but the applied impact assessment methodology is broadly consistent with the Ex-ante Evaluation Guidelines of the Ministry of Justice (2007)	
Brief description of purpose, results, and main learnings from the evaluation	<p>This study examines the feasibility and impacts of combining existing environmental permit procedures under a one-stop-shop model. The report is backed by comprehensive background research in a number of relevant topics, and follows recommendations issued by a high-level expert panel of the Ministry of Environment. The report provides a comprehensive and detailed description of the status of existing procedures (incl. regarding the competent authorities). The report presents three case studies, which analyzes the relevant one-stop-shop models applied in the Netherlands, Germany and Sweden. The report then compares a set of policy options enabling the envisaged one-stop-shop approach. On this basis, the preferred policy option is identified and is further outlined in terms of legal, procedural and technical aspects. An impact assessment is contained in chapter 10 of the report.</p> <p>The proposed one-stop-shop model incorporates three key environmental permit procedures (related to the Environmental Protection Act, the Land Extraction Act and the Water Act).</p>	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	The report (chapter 10) covers economic impacts, impacts on public authorities, environmental impacts, and other societal impacts. However, the impact assessment only covers the proposed policy option (the impacts of alternative options are not evaluated).
2.3 Use of analytical methods for measuring impacts	L	The impacts are assessed only on a qualitative level. There are no analytical tools used in support of the ex-ante evaluation.
2.5 Stakeholder consultation	M/H	The interim report of the study was subject to public consultation (it was published on the website of the Ministry of Environment). In addition, the study included a stakeholder workshop and interviews with a wide range of public and private sector stakeholders. However, stakeholder views are not explicitly reflected in the impact assessment chapter (chapter 10) so it is not clear how they have been considered in this respect.
2.6 Independency	H	Highly qualified experts in the field.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	H	The conducted impact assessment was part of preparatory activities aiming to transform the legislative framework.
3.2 Comparability of economic instruments with other policy instruments	N/A	Not applicable in respect of the examined matter.

Ex-post evaluations

Table B-29: Finland, No. 5

Title	Kansallisen materiaalitehokkuusohjelman arviointi [Evaluation of National Material Efficiency Programme]	
Date	21.09.2017	
Source	http://tietokayttoon.fi/documents/10616/3866814/64_Kansallisen+materiaalitehokkuusohjelman+arviointi.pdf/9416e1e8-3afa-417c-ba47-468fb55a0707?version=1.0	
Client	Prime Minister's Office	
Evaluator	Ramboll Finland Oy Luonnonvarakeskus Luke [National Resources Institute Finland]	
Ex-ante/ex-post evaluation	Ex-post evaluation	
Type of policy instrument	Programme	
Use of evaluation guideline	N/A	
Brief description of purpose, results, and main learnings from the evaluation	<p>The purpose of the report is to evaluate the implementation of the "national material efficiency programme" (launched in December 2013), which is composed of eight measures (and further divided into 40 different projects). The report also provides recommendations on how the programme and its components should evolve in the future.</p> <p>The study is underpinned by a tailor-made analytical framework which enables a comprehensive evaluation of the programme in terms of effectiveness, efficiency and relevance. Several analytical tools are used and the results of the evaluation are presented both in quantitative and qualitative terms.</p> <p>The evaluation concludes that whilst only half of the projects within the programme are focused on material efficiency, these projects have overall been effective in achieving the set objectives. The report recommends an update of the national material efficiency programme and a stronger focus on projects which directly promote material efficiency.</p>	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	H	The scope of the evaluation (in terms of assessed impacts) is well defined and the coverage of impacts is in line with the objectives of the study. The evaluation of impacts is supported by a set of evaluation questions. Both direct and indirect impacts are considered.
2.3 Use of analytical methods for measuring impacts	H	The evaluation is conducted on the basis of a robust analytical framework, including appropriate qualitative and quantitative methods/tools for reviewing and assessing the impacts of the examined measures.
2.5 Stakeholder consultation	M	The study included a stakeholder workshop which gathered relevant public and private sector actors. However, the study could have included even more extensive stakeholder consultation and the stakeholder views could have been highlighted in a more detailed way as part of the report.
2.6 Independency	H	Qualified study team composed of consulting firm and research institute.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	H	The evaluation was conducted in the context of the Government's action to reform the national material efficiency programme.
3.2 Comparability of economic instruments with other policy instruments	N/A	

Table B-30: Finland, No. 6

Title	Biotalous ja cleantech Suomessa – strategioiden arviointi ja toimenpidesuosituksset [Bioeconomy and cleantech in Finland – Assessment of Strategies and development suggestions]	
Date	12.12.2016	
Source	http://tietokayttoon.fi/documents/10616/2009122/51_Biotalous+ja+cleantech+Suome+ssa+%E2%80%93+strategioiden+arviointi+ja+toimenpidesuosituksset/5b3f622c-d593-4a84-a380-ad55089fb75f?version=1.1	
Client	Prime Minister's Office	
Evaluators	SYKE [Finnish Environment Institute] VTT [VTT Technical Research Centre of Finland] Gaia Consulting Oy	
Ex-ante/ex-post evaluation	Ex-post evaluation	
Type of policy instrument	Strategies (range of policy measures)	
Use of evaluation guideline	N/A	
Brief description of purpose, results, and main learnings from the evaluation	<p>The report provides an assessment of the Finnish Bioeconomy Strategy and of the Government Strategy to promote the cleantech sector in Finland (both published May in 2014). The specific objectives of the study were to identify the level of development achieved so far with the measures laid out in the strategies, examine whether these measures are appropriately directed in response to the needs of the constantly changing bioeconomy and cleantech market, and to put forward recommendations for the further development of policy measures. The report also includes case studies looking into six focus areas of the bioeconomy and cleantech sector and reviewing examples of Finnish companies/products in these focus areas.</p> <p>The report concludes that the evaluated strategies overall deliver good results. However, the report also advocated renewed strategy processes as well as actions to ensure a more effective monitoring and evaluation of its implementation. This entails in particular the collection of relevant numerical data to enable the measurement of the progress made against the set strategic objectives.</p>	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	L	<p>The report reviews and examines the impacts of the strategy mostly on a general, high-level basis. Evaluation results are presented within five thematic areas: (1) internationalisation/international impact; (2) educational aspects and creation of conditions for demonstration projects; (3) framework supporting competitiveness and sustainability; and (4) new business opportunities and investments.</p> <p>The analysed impacts are not scoped or categorised; the focus is however on economic impacts. The authors point out, as a limitation to the evaluation, the short timeframe between the roll-out of the strategies (published in May 2014) and the time of production of the evaluation (March 2016 – December 2016).</p>
2.3 Use of analytical methods for measuring impacts	M	<p>The report is underpinned by econometric and statistical analysis and supported by case studies. The report recommendations are also backed by the modelling of future forest biomass resource availability, considering different scenarios.</p> <p>The report examines the results of the strategies and provides indications on their impacts (especially based on expert views and stakeholder feedback), but these impacts are not investigated/assessed in detail. The impacts could have been evaluated in a more structured and thorough manner through the use of analytical methods/tools.</p>
2.5 Stakeholder consultation	H	The report makes extensive use of stakeholder inputs and views. Numerous interviews and a workshop were conducted in connection with the study.
2.6 Independency	H	The team of evaluators comprises comprehensive expertise in the covered fields.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	M	It is not clear how the evaluation results will be followed up or utilised in the policy-making process.
3.2 Comparability of economic instruments with other policy instruments	H	Economic instruments are an integral part of the evaluated policy measures.

Table B-31: Finland, No. 7

Title	Vuoden 2011 energiaverouudistuksen arviointia [Evaluation of 2011 energy tax reform]	
Date	19.12.2016	
Source	http://tietokayttoon.fi/documents/10616/2009122/61_Vuoden+2011+energiaverouudistuksen+arviointia/73aa9c40-c490-4b83-bb9a-eb4d3a9f193b?version=1.0	
Client	Prime Minister's Office	
Evaluator	Valtion Taloudellinen Tutkimuskeskus VATT [VATT Institute for Economic Research]	
Ex-ante/ex-post evaluation	Ex-post evaluation	
Type of policy instrument	Legislation (economic policy instruments)	
Use of evaluation guideline	Not applicable	
Brief description of purpose, results, and main learnings from the evaluation	<p>The report examines the results of the energy tax reform implemented in 2011 and 2012, which comprised the following two measures: Increase of the taxation of fuels and revision of the energy tax regime based on CO₂ emissions; Increase of the tax refunds granted to the energy-intensive industry, and extension of the tax refund scheme to a larger number of beneficiaries.</p> <p>The study aims to evaluate two specific elements: 1) Have the energy tax refund system and its revision in 2012 achieved the set policy objectives? 2) What was the impact of the changes in terms of transport fuel taxation?</p> <p>The evaluation is backed by a review of relevant research literature as well as thorough statistical analysis.</p> <p>The study concludes firstly that the energy tax refund system has not achieved the set policy objectives in terms of enhancing the competitiveness of export industries and may have led to distortions in terms of competition both between and within sectors. Secondly, as regards the increased taxation of transport fuels (in particular of diesel), the study estimates that approximately 70% of the diesel tax increase was passed on to consumer prices. The demand for diesel was deemed to be rather inelastic to the price and the analysed data also indicate that the tax increase was anticipated by fuel retailers and transferred to customer prices already several months before the change entered into force.</p>	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	The study is focused on the evaluation of the economic impacts of the tax reform. These impacts are thoroughly investigated and quantified. Environmental impacts are not directly examined as part of the study but are covered indirectly – it would have been useful to include a specific focus on environmental impacts as part of the study, in order to better evaluate the overall effectiveness of the tax reform.
2.3 Use of analytical methods for measuring impacts	H	The study makes use of statistical/numerical analysis and related specific methods such as panel data regression. In addition, the study has conducted simulations in order to compensate for the lack of data on certain key aspects.
2.5 Stakeholder consultation	L	Stakeholders have not been consulted in the context of the study.
2.6 Independency	H	Well-known research institute; qualified study team.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	M	This evaluation was commissioned in order to support future policy developments, but there is no clarity on whether and how the evaluation will be taken into account in the policy-making process.
3.2 Comparability of economic instruments with other policy instruments	H	The examined policy measures are economic policy instruments.

Table B-32: Finland, No. 8

Title	Väliarvio Suomen luonnon monimuotoisuuden suojelun ja kestävän käytön strategiasta ja toimintaohjelmasta vuonna 2016 [A mid-term review of the Finnish strategy and action plan for the conservation and sustainable use of biodiversity in 2016]	
Date	May 2017	
Source		
Client	Ministry of the Environment	
Evaluator	Ministry of the Environment	
Ex-ante/ex-post evaluation	Ex-post evaluation	
Type of policy instrument	Strategy (various policy measures)	
Use of evaluation guideline	No	
Brief description of purpose, results, and main learnings from the evaluation	<p>The report provides a mid-term review of the Strategy for the Conservation and Sustainable Use of Biodiversity in Finland for the years 2012–2020, adopted by the Finnish Government in December 2012. The strategy (and the associated roadmap) includes 105 implementation measures. In connection with the strategy adoption, the Government established a process for monitoring and assessing its implementation. The report examines the status and prospects of biodiversity in Finland, and takes stock of the progress made in the implementation of the strategy actions. The report identifies the completed, ongoing and pending measures. The environmental impacts of the strategy are analysed in the key domains of the strategy.</p> <p>The report concludes that the implementation of the strategy is mainly progressing well. Some measures are observed to have already had a positive impact, but there are also continuing negative trends in terms of habitats and species. Accordingly, the report underscores that additional measures would be needed in order to halt the decline of biodiversity.</p>	
Quality score	Score	Explanation
2.1 Definitions and coverage of impacts	M	The report aims to provide a mid-term review of the strategy, and as such its purpose is not to lay out a full-fledged evaluation of impacts. However, it would have been useful, as part of the report, to include at least a section summarising the observed environmental, economic and societal impacts of the strategy measures.
2.3 Use of analytical methods for measuring impacts	L	No use of analytical tools for measuring impacts.
2.5 Stakeholder consultation	M	<p>This mid-term review was developed under the auspices of a steering group gathering representatives from 10 ministries, several government agencies, research institutions, private sector entities, NGOs and other stakeholder groups.</p> <p>However, it is not clear how stakeholder views have been taken into account in the report conclusions and recommendations. A specific stakeholder consultation process in the context of the mid-term review could have been helpful to substantiate the report findings.</p>
2.6 Independency	H	The authors are civil servants with a high level of knowledge in the covered field.
Consistency score	Score	Explanation
3.1 Role of evaluation in policy cycle	H	This mid-term review was required by the Government in order to take stock of the progress made in the strategy implementation.
3.2 Comparability of economic instruments with other policy instruments	N/A	Not applicable, as the examined measures do not comprise economic policy instruments.

Appendix C: Stakeholders consulted

Denmark

- Ministry of Environment and Food of Denmark
- Danish Ministry of Energy, Utilities and Climate
- Brian H. Jacobsen from Department of Food and Resource Economics, Copenhagen University

Norway

- Ministry of Climate and Environment in Norway
- Norwegian Environment Agency
- Norwegian Government Agency for Financial Management

Sweden

- Ministry of Finance
- Swedish Environmental Protection agency
- Prof. Patrik Söderholm from Department of Business Administration, Technology and Social Sciences, Luleå University of Technology

Finland

- Ministry of Environment
- Ministry of Finance

Appendix D: Literature

- Direktoratet for økonomistyring (DFØ) (2011), "Strategisk og systematisk bruk av evaluering i styringen" <https://dfo.no/filer/Fagomr%C3%A5der/Evaluering/Strategisk-og-systematisk-bruk-av-evaluering-i-styringen.pdf>
- Direktoratet for økonomistyring (DFØ) (2014), "Veileder i samfunnsøkonomiske analyser", <https://dfo.no/filer/Fagomr%C3%A5der/Utreddinger/Veileder-i-samfunns%C3%B8konomiske-analyser.pdf>
- Direktoratet for økonomistyring (DFØ) (2016), "Veileder til utredningsinstruksen" <https://dfo.no/filer/Fagomr%C3%A5der/Utreddinger/Veileder-til-utredningsinstruksen.pdf>
- EEA (2016), "Environment and climate policy evaluation", <http://www.eea.europa.eu/publications/environment-and-climate-policy-evaluation>
- Energimyndigheten (2015), Metoder för utvärdering av styrmedel – En metautvärdering grundad på litteratur och två fall
- Energistyrelsen (2007), "Vejledning i samfundsøkonomiske analyser på energiområdet", https://ens.dk/sites/ens.dk/files/Analyser/vejledning_2005-rev2007.pdf
- Erhvervsministeriet (2012), "Manual til Aktivitetsbaseret Måling af Virksomhedernes Administrative Byrder" (AMVAB) , <https://erhvervsstyrelsen.dk/sites/default/files/media/amvab-manual.pdf>
- Erhvervsministeriet (2015), "Vejledning om Erhvervsøkonomiske konsekvensvurderinger", https://erhvervsstyrelsen.dk/sites/default/files/media/vejledning_om_erhvervsøkonomiske_konsekvensvurderinger.pdf
- European Commission (2017), "Better Regulation Guidelines", Commission Staff Working Document, SWD (2017) 350. <https://ec.europa.eu/info/sites/info/files/better-regulation-guidelines.pdf>
- Finansministeriet, Indenrigs- og Sundhedsministeriet, Ligestillingsafdelingen, Miljøministeriet, Skatteministeriet, Socialministeriet, og Økonomi- og Erhvervsministeriet (2005), "Vejledning om konsekvensanalyser" [Ministry of Finance et.al., "Guidance on impact assessments"]. <https://erhvervsstyrelsen.dk/sites/default/files/vejledning-om-konsekvensanalyser.pdf>
- Finansministeriet (2017), "Vejledning i samfundsøkonomiske konsekvensvurderinger" [Ministry of Finance, "Guideline for socioeconomic assessments"]. <https://www.fm.dk/publikationer/2017/vejledning-i-samfundsoekonomiske-konsekvensvurderinger>
- Klimarådet (2016): "Afgifter der forandrer - Forslag til klimavenlige afgiftsomlægninger", <http://klimaradet.dk/da/rapporter/afgifter-der-forandrer>
- Konjunkturinstitutet (2011): "Making Climate Policy efficient. Implementing a model for Environmental Policy Efficiency, Environmental economics, Working Paper no 125"
- MH Treasury (2011), "The Magenta Book - Guidance for evaluation", https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220542/magenta_book_combined.pdf
- Miljøministeriet (2010), "Samfundsøkonomisk vurdering af miljøprojekter" [Ministry of Environment, "Socioeconomic assessment of environment projects"]. http://www2.mst.dk/udgiv/publikationer/2010/978-87-92548-71-9/pdf/Endelig%20Vejledning%20i%20samfundsøkonomisk%20vurdering%20af%20miljøprojekter_net.pdf
- Miljø- og Fødevareministeriet (2015), "Nøgletalskatalog, miljøøkonomiske nøgletal 2015" [Ministry of Environment and Food of Denmark, "Environmental Economic Indicators"]. <http://mfvm.dk/miljoe/miljoeoekonomiske-noegletal/>

Miljø- og Fødevarerministeriet (2016), "Koncept for effektivvurderinger", Internal guideline.

National Audit Office (2013), "Evaluation in government", https://www.nao.org.uk/wp-content/uploads/2013/12/10331-001-Evaluation-in-government_NEW.pdf

Naturvårdsverket (2003), "Konsekvensanalys steg för steg", <https://www.naturvardsverket.se/Documents/publikationer/620-5314-0.pdf?pid=2959>

Naturvårdsverket (2014), "Samhällsekonomiska analyser av miljöprojekt – en vägledning" [Environmental Protection Agency: "Socio-economic analyses of environmental projects - a guide"]. <http://www.naturvardsverket.se/Documents/publikationer/6400/978-91-620-6628-4.pdf?pid=13982>

Norden (2014), "The use of economic instruments in Nordic environmental Policy", TemaNord 2014:549, <http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A738535&dsid=-4403>

Oikeusministeriö (2007), "Säädösehdotusten vaikutusten arviointi"

Riksanantikvarieämbetet (2008), "Metodhandledning I samhällsekonomisk konsekvensanalys", <http://samla.raa.se/xmlui/handle/raa/270>

Statens Vegvesen (2014 "Håndbok V712 Konsekvensanalyser" https://www.vegvesen.no/_attachment/704540/binary/1132472?fast_title=H%C3%A5ndbok+V712+Konsekvensanalyser.pdf

Statsministeriet (1998), "Cirkulære om bemærkninger til lovforslag mv. CIR nr 159 af 16/09/1998", http://www.stm.dk/_p_5430.html

Suomen Ympäristökeskus (2006), "Ympäristöpolitiikan taloudellisten vaikutusten arviointi"

Trafikverket (2018), "Analysmetod och samhällsekonomiska kalkylvärden för transportsektorn: ASEK 6.1", <https://www.trafikverket.se/for-dig-i-branschen/Planera-och-utreda/Planerings--och-analysmetoder/Samhallsekonomisk-analys-och-trafikanalys/analysmetod-och-samhallsekonomiska-kalkylvarden-for-transportsektorn-asek/>

Transportministeriet (2015), "Manual for samfundsøkonomisk analyse på transportområdet", <https://www.ttm.dk/da/publikationer/2015/manual-for-samfundsoekonomisk-analyse-paa-transportomraadet>

Ympäristöministeriö (2011), "Kestävään kehitykseen liittyvien vaikutusten ennakoarviointi politiikansuunnittelussa ja päätöksenteossa: Suositus arvioinnin työkaluksi" [Finnish Ministry of the Environment, "Ex-ante assessment of sustainable development impacts in policy planning and decision-making: Recommendation for an assessment tool"]. <http://www.ym.fi/download/noname/%7BCA2BC13C-994B-455B-AD9A-8F8D07F17DB6%7D/27133>

Ympäristöministeriö (2013), "Menetelmiä ja tietolähteitä politiikkatoimien vaikutusten arviointiin" [Finnish Ministry of the Environment, "Methods and sources for impact assessment of policies"]. <http://www.ym.fi/download/noname/%7B70DCoDC5-DoBB-4F1C-9128-437A80AC6DD8%7D/40144>

See appendix A for reference to specific evaluations.



Nordic Council of Ministers
Nordens Hus
Ved Stranden 18
DK-1061 Copenhagen K
www.norden.org

Policy instrument evaluation

What role do evaluations for environmental policies have in the Nordic countries (Denmark, Finland, Norway and Sweden)? And could evaluations be better implemented in order to create and uphold effective and efficient environmental policies? These are the two questions this study aims at answering.

The study focuses on three main areas in regard to ex-ante and ex-post evaluations for environmental policies: Organisation, guidelines and specific evaluations. As a result of the analysis, a number of lessons learnt for the three investigated areas are found and a set of recommendations on how to improve the evaluation of environmental policies in the Nordic countries in the future are provided.



9 789289 359344