



# From waste prevention to promotion of material efficiency: change of discourse in the waste policy of Finland

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## ABSTRACT

This article analyses the process of preparing the proposal for a new Finnish National Waste Plan (NWP 2007–2016). The focus of this study is on the use of the alternative concepts of waste prevention or material efficiency and on the shift in discourse from the former to the latter concept.

The strengths and weaknesses of these competing concepts were analysed using criteria such as synergy, semantic aspects, legal context and applicability to monitoring. The discourse presented by different stakeholder groups was analysed. The implications of choosing either of the concepts were illustrated. The author concludes that waste prevention can be promoted just as well, or even better from the perspective of improving material efficiency. The concept must be complemented by policy instruments within the chemical policy sector to cover the aspect of qualitative waste prevention.

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## 1. Introduction

Waste prevention was stated as an obligation in Finnish waste legislation for the first time in 1993, when the Waste Act [1] was promulgated. In EU legislation the waste prevention goal was already included in the Waste Framework Directive (WFD) in 1975 [2]. Waste prevention is further emphasized in the new draft WFD proposed by the EU Commission [3]. The proposal requires each Member State to prepare a Waste Prevention Plan (WPP). In Finland this obligation was anticipated by incorporating a WPP already into the National Waste Plan (NWP) for the period 2007–2016 [4].

The process of preparing the WPP revealed the difficulty of defining which actions should be labelled as furthering waste prevention. Other current developments in environmental

concepts and policies have strong overlaps with waste prevention. The sustainable consumption and production (SCP) programmes deal with similar goals and propose the same policy instruments as the proponents of waste prevention. Examples of such concepts and instruments are those of material efficiency or eco-efficiency, green public procurement, eco-design, environmental taxes, etc. All these instruments were proposed for the Finnish National SCP programme in 2005 [5]. The same concepts can be identified among the waste prevention instruments that were proposed in the former NWP for Finland for the period 1997–2005 [6]. Further overlaps can be expected in the preparation of the national plan for the sustainable use of natural resources, required by the corresponding EU strategy [7].

The research question that arose during the process of preparing the new NWP was whether the concept of waste prevention offered anything that would complement the instruments already proposed in the SCP programme. The intention of this article is to analyse the differences between a discourse based on the concept of waste prevention and one based on the concept of material efficiency. This shift in discourse was in fact adopted in the proposal for a new NWP for Finland. This article analyses the strengths and weaknesses of this new discourse. This discussion is relevant to any EU Member State since the same parallel and overlapping processes of preparing strategies for SCP, for waste prevention, and for the sustainable use of natural resources are on-going in most member countries and in EU itself.

*Abbreviations:* EE, eco-efficiency; EU, European Union; IPP, integrated product policy; IPPC, integrated pollution prevention and control; MEf, material efficiency; MIPS, material input per service unit; NGO, non-governmental organisation; NWP, National Waste Plan; SCP, sustainable consumption and production; SEA, strategic environmental assessment; SLL, Finnish Nature Conservation League; SYKE, Finnish Environment Institute; TT, Central Organisation of Finnish Industry; WBCSD, World Business Council for Sustainable Development; WFD, Waste Framework Directive; WPP, Waste Prevention Plan; WPr, waste prevention; YTV, Helsinki Metropolitan Area Council.

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## 2. Research approach and material

The hypothesis of this study was that the concepts of MEf and EE could substitute the concept of WPr and that such a transition in the environmental discourse would have positive implications in promoting the quantitative and qualitative preventions of waste.

A basic assumption in discourse analysis is that the definitions of concepts and the contexts where different stakeholders use these are reflections of the cultural assumptions, values and goals of the stakeholders in their different actor roles. The definitions, their linkages with each other and the arguments used for and against different goals are *tools for changing* the social reality – not only instruments for *describing* the reality [8]. For example Joutsenvirta [9] used discourse analysis for analysing the speech of antagonistic stakeholders in sustainable forest use. As Joutsenvirta points out, changes in discourse imply cultural and social transitions and reflect the different actant roles of the speaker.

This article can be seen as a documentation of an action research intervention as the author was playing an active role in designing the new mode of discourse for the proposed new NWP for Finland. In the process of drafting the WPP within the NWP the implications of using the alternative concepts of WPr and MEf were assessed. The definitions given to these concepts and the context where they were presented by key stakeholders and participants were analysed.

The following angles and tools were used in comparing the strengths and weaknesses of the two concept systems:

- Visualising the scope and limitations of the definitions of the concepts;
- Visualising the oppositions and negations of the concepts using the Greimas semantic rectangle;
- Comparing the legal backing provided by the present or proposed EU and national legislation;
- The simplicity of monitoring the progress towards the objective;
- Backing or opposition of key stakeholders of either concept; and
- The implications of choosing either of the concepts on selecting practical policy actions.

The research material consisted of the following:

- EU and Finnish waste legislation, current and proposed;
- The existing Finnish NWP, revised in 2002 [6];
- Stakeholder interviews conducted in 2005–2006 by the author;
- Written statements received on the drafts of the NWP during the Strategic Environmental Assessment (SEA) process in 2005–2006;
- Minutes of meetings of the working group preparing the NWP proposal 2005–2006;
- Web sites of the key stakeholders in the working group preparing the new NWP;
- The expert report on alternative MEf policy strategies prepared for the SEA of the NWP [10];
- The final report of the working group and the minority reports included in the final report of the working group [11];
- The background report prepared by the Secretariat of the working group [12];
- The discussion paper produced by the NWP working group on the alternative approaches to revising the Finnish waste legislation [13]; and
- The summary of written statements on the final proposal for the new NWP [14].

Quotations of Finnish sources and interviews in Finnish are translated by the author and may not be exact translations.

Web sites and publications of the EU, OECD, some other international organisations and some national environmental institutes were reviewed for background information and definitions.

## 3. Results

### 3.1. Review of definitions of waste prevention

Waste prevention (WPr) is regulated in EU by the article 3 of the WFD revised in 1991 [2]. WPr is not directly defined in the existing WFD, but it states that Member States are obliged to take measures to encourage:

- “(a) ... the prevention or reduction of waste production and its harmfulness, in particular by:
- the development of clean technologies more sparing in their use of natural resources,
  - the technical development and marketing of products designed so as to make no contribution or to make the smallest possible contribution, by the nature of their manufacture, use or final disposal, to increasing the amount or harmfulness of waste and pollution hazards,
  - the development of appropriate techniques for the final disposal of dangerous substances contained in waste destined for recovery;”

As can be seen, the scope given to waste prevention is very wide and encompasses such concepts as Cleaner Production, Design for Environment and Green Marketing as some of the strategies. The last point in the article is formulated in a way that can be considered as illogical to be included under WPr, as this point deals with techniques for final disposal. Slightly different definitions of terms related to WPr have been provided among others by OECD [15], ETC [16], and EPA [17].

Pongracz [18] proposed an innovative approach to defining WPr by focusing on the various reasons for disposing an object or material as waste. She argues that the present definition of waste tends to encourage the generation of waste instead of promoting reuse or recycling. She concludes that material or objects that are reused or recycled or otherwise have a “purpose” should not be defined as waste [18, p. 83–4].

In the Finnish Waste Act the title of Chapter 2 is “Prevention of waste generation and reduction of its quantity and harmfulness” [1]. Under the general duties of care of this Chapter the substitution of raw material with waste, designing the products to be re-usable or recoverable and the duty of authorities to use recyclable products or products manufactured from recycled materials are also listed.

In a proposed revision of the EU WFD in October 2006 a definition for WPr is provided [19]:

- (h) “prevention” means measures taken before a substance, material or product has become waste, that
- reduce the quantity of waste, including the re-use of products or the extension of life span of products; and
  - reduce the negative impacts to the environment and health of the waste generated, and reduce the content of harmful substances in material and products.

This definition seems clearer than the previously quoted ones in including only measures taken before an item has become waste and excluding the use of recycled materials.

One of the foremost advocates of waste prevention in Finland is the Helsinki Metropolitan Area Council (YTV in Finnish). In YTV's Waste Prevention Strategy 2007 the concept of WPr “includes all measures preventing the production of waste in the first place. ... Waste prevention can be observed through the reduction of

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