INTEGRATING POLLUTION REGULATION REGIMES: A COMPARATIVE SURVEY OF THE FINNISH AND SOUTH AFRICAN LEGAL SYSTEMS*

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SUMMARY

The South African environmental governance, particularly the pollution regulation regime, is fragmented. Fragmentation ultimately leads to an unsustainable governance effort which negatively impacts on the environment and development in general. In 2000, Finland comprehensively revised the legal structure on which its pollution regulation regime is based. This new regime provides for an integrated environmental authorisation for polluting activities, integrated authorisation procedures and institutions, which result in a more integrated and efficient governance regime. The integrated Finnish approach is based on an European Union framework directive that provides for Integrated Pollution Prevention and Control (IPPC). The Finnish reforms may suggest strategies to integrate the fragmented South African regime. This article commences by investigating the nature and extent of fragmentation in South Africa. It then proceeds to analyse the European framework directive on IPPC, and then to reflect in detail on the new Finnish approach. It concludes by providing some comparative suggestions to achieve integration in South Africa.

1 INTRODUCTION

The South African environmental governance regime is fragmented in a institutional, procedural and environmental sectoral/media sense.[1]

* My sincere thanks to the following individuals for their helpful comments on an earlier version of this publication: Erkki Hollo, Faculty of Law, University of Helsinki; Marianne Lindström, Finnish Environment Institute; Elise Sahivirta, Finnish Ministry of the Environment; Katrinna Koivisto, Central Finland Regional Environment Centre, Jyväskylä; Dr Risto Palokangas, Central Finland Regional Environment Centre, Jyväskylä; and Willemien du Plessis, Faculty of Law, North West University. Any views expressed herein and any errors remain my own. The financial assistance rendered towards this research by the Centre for Environmental Management, North West University, and the Finnish Environment Institute, is greatly acknowledged. Thanks also to the Finnish Environment Institute and the Central Finland Regional Environment Centre for accommodating me during a research visit.

Fragmentation may lead to unsustainable results. This is evident from the various disadvantages posed by a fragmented environmental governance regime that may include, amongst others: duplication and overlap of the governance effort, costly delays in decision-making, inefficient arrangements between organs of state that control similar activities, significant gaps in control arrangements, conflicting conditions in environmental authorisations, ineffective governance as well as externalisation of governmental inefficiencies to development costs that may result in negative impacts on development.[2] Moreover, the various disadvantages posed by fragmentation ultimately may inhibit the achievement of sustainable service-delivery.[3] Fragmented environmental governance, furthermore, is contrary to the very nature of the environment, which is an integrated, inter-related and holistic concept.[4] In short, fragmented governance is the direct opposite of holistic governance, and may, based on the disadvantages listed above, lead to unsustainable results.[5]

Finland experienced similar challenges caused by a previous fragmented environmental governance regime. Fragmentation was, however, addressed[6] recently when the Environmental Protection Act 86 of 2000 (EPA) and its accompanying Environmental Protection Act Decree 169 of 2000 (EPA Decree) were enacted.[7] The EPA is based on the European

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1 "Environmental governance" is defined for the purpose of this article as

> "the collection of legislative, executive and administrative functions, processes and instruments used by any organ of state [and the private sector] to ensure sustainable behaviour by all as far as governance of activities, products services, processes and tools are concerned".

Adapted from Nel and Du Plessis "Unpacking Integrated Environmental Management – A Step Closer to Effective Co-operative Governance?" 2004 *SAPL* 183.

2 Kotzé, Nel, Du Plessis and Snyman "Strategies to Integrate Environmental Policy at the Operational Level: Towards an Integrated Framework for Environmental Authorisations" 2007 (to appear in *SAJELP*).

3 Further disadvantages of fragmented environmental governance include: It is costly and time-consuming, it negates the achievement of common problems and concerns, it does not lead to sustainable governmental service delivery efforts, it is not an all-inclusive process that involves interested and affected parties that may be affected by government action, it does not provide for streamlined and aligned governance efforts, it does not enable the utilisation of various tools for governance and it is aimed at achieving single policy-based objectives rather than objectives that may be common to various policies.

4 The integrated and holistic nature of the environment is evident from s 1 of the National Environmental Management Act 107 of 1998, which explains that "environment" means:

> "[T]he surroundings within which humans exist and that are made up of the land, water and atmosphere of the earth; micro-organisms, plant and animal life; any part or combination of the foregoing and the interrelationships among and between them; and the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being."

5 For a discussion on holistic governance, see Kotzé "Improving Unsustainable Environmental Governance in South Africa: The Case for Holistic Governance" 2006(1) *PER* 1-39.

6 The EPA came into force on 1 March 2000.

7 Silvo, Melanen, Honkasalo, Ruonala and Lindstrom "Integrated Pollution Prevention and Control: The Finnish Approach" 2002 *Resources, Conservation and Recycling* 45. The EPA, as is the case with other Finnish environmental legislation, is based on, amongst others, the Constitution of Finland 731 of 1999, and particularly, s 20-the environmental clause. S 20 states that nature and its biodiversity, the environment, and the national heritage, are the responsibility of everyone. Public authorities must endeavour to guarantee everyone the right to a healthy environment and the possibility to influence the decisions that concern their own living environment. Apparent focus is placed on the role of public authorities in both governmental and public endeavours to give effect to s 20. See for a discussion in this

Union's (EU) Integrated Pollution Prevention and Control Directive, 1996 (IPPC Directive)[8] which aims to establish integrated pollution prevention and control (IPPC) regimes in all Member States. IPPC is the foundation of this integrated environmental governance effort and has as its main objective to achieve integration by way of an integrated environmental authorisation. IPPC may be defined as:

> "A holistic regulatory regime that employs technology-based pollution standards, with the main objective to control industrial pollution through an integrated authorisation procedure and a centralised, or fully co-ordinated administration, by having regard to all emissions from an industrial installation to all environmental media in a coherent, holistic, inter-related and inter-dependent fashion."[9]

The enactment of the EPA was the first formal attempt by the Finnish government to transpose comprehensively the provisions of the IPPC Directive into domestic legislation.[10] The Finnish approach to IPPC and industrial activities in general are reflected in this legislation. This new approach espouses three general principles, including participation of industry and other stakeholders in environmental target setting and preparation of new environmental legislation,[11] strict, but practical and cost-effective implementation of regulations, standards and authorisation provisions and transparency and general access to information.[12] The rationale behind the aforementioned principles is to foster an integrated, informed and participatory approach where prevention, rather than detailed enforcement, is of the essence.[13]

The overall focus of the Finnish integrated approach is to establish and further IPPC by way of, *inter alia*, an integrated authorisation system. This is evident from the rationale behind the EPA that focuses, amongst others, on integrated pollution standards in the form of Best Available Techniques

regard, Suksi "Developments in Zoning Law against the Background of the Constitution" 2002(8)1 *European Public Law* 2-7, and Vihervuori "Public Environmental Law in Finland" in Seerden, Heldeweg and Deketelaere (eds) *Public Environmental Law in the European Union and the United States* (2002) 138. S 22 furthermore provides that public authorities, including authorities responsible for environmental administration, shall guarantee the observance of basic rights and liberties and human rights. These rights arguably include the environmental right. With regard to governmental administration, s 119 furthermore states that the central administration of the state may consist of agencies, institutions and other bodies, that include regional and local authorities, or in the context of environmental authorities, municipal environmental authorities, regional environment centres and environmental authorisation authorities. See further the discussion below.

8 European Union Directive on Integrated Pollution Prevention and Control 96/61/EG 1996.

9 See in this regard, Kotzé *A Legal Framework for Integrated Environmental Governance in South Africa and the North West Province* (2006) 62.

10 Vihervuori "Finland" 2000(1) *Yearbook of European Environmental Law* 478.

11 Preparation of environmental legislation in Finland involves industry, other relevant ministries and all relevant stakeholders. This participatory approach allows for conflict resolution between different ministries and between industry and environmental authorities. By involving industry in the legislative preparation process, industry is afforded the opportunity and time to adequately prepare for any changes that may be required by newly prescribed authorisation provisions. Silvo *et al* 2002 *Resources, Conservation and Recycling* 51.

12 Silvo *et al* 2002 *Resources, Conservation and Recycling* 45 and 51.

13 Silvo *et al* 2002 *Resources, Conservation and Recycling* 45.

(BAT),[14] a holistic and integrated approach to IPPC and environmental authorisations, and a high level of sustainable environmental protection.[15] It is acknowledged that "by the year 2000, the legislative and organisational hindrances to a fully integrated, BAT-based approach to environmental authorisation and enforcement were abolished",[16] which arguably resulted in a more integrated approach to environmental governance efforts that relate to industrial pollution regulation.

In light of the foregoing, this article briefly reflects on the fragmented nature of the South African environmental governance regime, discusses the most relevant provisions of the IPPC Directive and comprehensively investigates the provisions of the EPA, incidental legislation as well as other mechanisms that are available for integration in terms of the Finnish pollution regulation regime.[17] Based on suggestions derived from the Finnish experience, the article concludes with some recommendations on how the South African environmental governance regime may be integrated to achieve more sustainable environmental governance results.

2 FRAGMENTATION OF THE SOUTH AFRICAN REGIME[18]

Fragmentation remains one of the main challenges facing the current environmental governance effort in South Africa. This is mainly because fragmentation may prevent or inhibit sustainable service-delivery by government departments responsible for the execution of environmental governance mandates.[19]

A comprehensive survey of the environmental governance regime suggests that fragmentation manifests in various ways.[20] Firstly, one may speak of vertical and horizontal fragmentation of the environmental governance structure (institutional fragmentation). Vertical fragmentation refers to the three separate and autonomous spheres of government, namely the national, provincial and local spheres. In each sphere, one finds

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14 See par 3 below for discussion.

15 Silvo *et al* 2002 *Resources, Conservation and Recycling* 45; and Vihervuori 2000(1) *Yearbook of European Environmental Law* 478.

16 Silvo *et al* 2002 *Resources, Conservation and Recycling* 48.

17 The research methodology employed in this article mainly consists of a literature study of primary legal sources where available in English, as well as information collected by way of unstructured interviews with a variety of experts involved in Finnish environmental law, governance and administration.

18 A part of this paragraph also appears in Kotzé "On Integrated Environmental Governance in the Netherlands: A Comparative Study in Possible Reforms for South Africa" 2007 (to appear in *CILSA*). For a comprehensive discussion on fragmentation in terms of South African environmental law, see Kotzé 72-86.

19 It has, *eg*, been reported that the cost of red tape in South Africa amounted to an estimated R79-billion in 2004 (costs incurred by the business sector as a result of inefficient governmental regulation). Environmental governance is part of the whole governance effort, and is necessarily included in this estimation. See in this regard Strategic Partnerships for Growth in Africa *Counting the Cost of Red Tape in South Africa* (2005).

20 For the full report, see Centre for Environmental Management *Report on an Environmental Management System for the North-West Province* (2004).

various independent and autonomous environmental departments, or line functionaries. These line functionaries include, amongst others, the Department of Environmental Affairs and Tourism (DEAT), the Department of Water Affairs and Forestry (DWAF), the Department of Minerals and Energy (DME), the Department of Agriculture (DoA) and the South African Heritage Resource Agency (SAHRA). The mere existence of these various line functionaries gives rise to fragmentation in a horizontal sense.[21]

Secondly, the corpus of environmental law in South Africa consists of a multitude of acts that are issue- or environmental media-specific.[22] The current framework of environmental legislation prescribes a multitude of procedures, processes and environmental governance mechanisms which cause an overlap of jurisdictions and give rise to confusing authorisation processes and procedures that must be followed by a prospective authorisation applicant. There also are various relevant competent authorities involved, conflicting mandates and jurisdictions as well as other legislation that, in addition, may be applicable directly or indirectly.[23]

Fragmentation, as postulated above, is illustrated clearly by the fragmented pollution prevention and control regime. Glazewski[24] observes in this regard that:

> "Pollution control laws have traditionally been applied by different national, provincial and local levels [sic] of government, corroborating the general criticism that the administration of environmental laws is diffuse and unco-ordinated. This situation has been exacerbated rather than simplified by the new Constitution, as seen in chapter 4, which creates concurrent national, provincial and, in some instances, local government legislative competence in the sphere of pollution control. Moreover, administrative acts, such as the issuing of permits and the granting of exemptions, are carried out by officials at all levels [sic] of government."[25]

The South African environmental governance regime in general, and specifically the pollution regulation regime, is environmental media-specific, based on various acts, different competent authorities that lead to a discontinuous governance effort. For example, there is no single integrated

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[21] See also Besdziek "Provincial Government" in Venter (ed) *Government and Politics in the New South Africa* 2ed (2003) 191, on horizontal and vertical fragmentation.

[22] This exposition is based on a study recently concluded in terms of which various environmental acts were analysed in order to determine the fragmented nature of authorisation provisions, various competent authorities, and various processes contained in environmental acts. See for the full text, Centre for Environmental Management 82-200. This report specifically discusses authorisation processes and relevant competent authorities in terms of the National Nuclear Regulator Act 47 of 1999; the Hazardous Substances Act 15 of 1973; the Subdivision of Agricultural Land Act 70 of 1970; the Conservation of Agricultural Resources Act 43 of 1983; the National Water Act 36 of 1998; land use and planning legislation, and environmental impact assessment in terms of the Environment Conservation Act 73 of 1989; the Atmospheric Pollution Prevention Act 45 of 1965; and the National Heritage Resources Act 45 of 1999.

[23] Kotzé 2006(1) *PER* 4-14.

[24] Glazewski *Environmental Law in South Africa* 2ed (2005) 533-536.

[25] See also Bosman, Kotzé and Du Plessis "The Failure of the Constitution to Ensure Integrated Environmental Management from a Co-operative Governance Perspective" 2004 *SAPL* 19(2) 411-421 for a discussion on fragmentation of governance efforts caused by the Constitution of the Republic of South Africa, 1996.

act, nor a single integrated environmental authorisation that regulates land, air, water and noise pollution in an integrated fashion. Instead, the regulatory framework for pollution consists of a multitude of acts, including, amongst others the National Environmental Management Act 107 of 1998, the Environment Conservation Act 73 of 1989, the National Water Act 16 of 1998, the Health Act 63 of 1977, the Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972, the International Health Regulations Act 28 of 1974, the Nuclear Energy Act 46 of 1999, the Nuclear Regulator Act 47 of 1999, the Conservation of Agricultural Resources Act 43 of 1983, the Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act 36 of 1947, the Agricultural Pests Act 30 of 1983, the Occupational Health and Safety Act 85 of 1993, the Advertising on Roads and Ribbon Development Act 21 of 1940, the National Building Regulations and Building Standards Act 103 of 1977, the Aviation Act 74 of 1962, the Criminal Procedure Act 51 of 1977, provincial legislation and various by-laws.[26] Moreover, issue-specific acts require several authorisations for possible polluting activities and various competent authorities including, amongst others, the DEAT, DWAF, DME, the Department of Transport (DoT), the DoA, and the Department of Health (DoH). A practical example in this regard is the place where a waste disposal site is established. One needs to apply for various authorisations in this regard. Section 20 of the Environment Conservation Act 73 of 1989, requires, for example, that no person shall establish, provide, or operate any waste disposal site without a permit issued by DEAT. Sections 21(f) and 21(g) of the National Water Act 36 of 1998 contain similar provisions that require a water-use licence to be issued by DWAF for discharging waste, or water containing waste, into a water resource through a pipe, canal, sewer, sea outfall or other conduit and the disposal of waste in a manner that may impact detrimentally on a water resource. One also may be required to conduct an environmental impact assessment as required by chapter 5 of the National Environmental Management Act 107 of 1998 and obtain a subsequent authorisation before commencing a listed activity in this regard. It is clear that three different authorisations for the same activity, based on three different acts and administrative processes, administered by two competent authorities, are required.

Fragmentation caused by this diffuse regime is exacerbated by the fact that South Africa does not have effective legislation that deals with IPPC.[27] A policy and subsequent draft bill (Draft National Environmental Management: Waste Management Bill, 2006) has been formulated to provide for some form of integration in the form of the White Paper on Integrated Pollution and Waste Management for South Africa: A Policy on Pollution Prevention, Waste Minimisation, Impact Control and Remediation, 2000.[28] Despite the

[26] See further Glazewski 533-630. Apart from the plethora of sectoral legislation that regulates pollution control and waste management, principles of common law, including the law of delict, criminal law, neighbour law and the law of nuisance also may be applicable.

[27] Kidd "Integrated Pollution Control in South Africa: How Easy a Task?" 1995 2(1) *SAJELP* 37-54; and Glazewski 550-557.

[28] South Africa (Republic) White Paper on Integrated Pollution and Waste Management for South Africa: A Policy on Pollution Prevention. Waste Minimisation, Impact Control and Remediation N227/2000 in *GG* 20978, 17 March 2000.

fact that this policy provides for integrated structures, procedures and mechanisms for pollution and waste management, to date none of these measures have been implemented effectively.[29] The pollution regulation regime accordingly remains fragmented.

3 THE IPPC DIRECTIVE

3 1 Background

The EPA and EPA Decree are based on the IPPC Directive. The EU established the Directive to address fragmented pollution regulation regimes. The Directive is based on the concept of IPPC which primarily employs environmental authorisations as the main regulatory or governance mechanism. Environmental authorisations are employed widely as "command-and-control" tools in most pollution regulation regimes.[30] It may, therefore, form one of the primary mechanisms that may be utilised to achieve integration of fragmented environmental governance efforts. An environmental authorisation may be defined as:

> "A written order, document or certificate that may be issued by a competent authority (government department, minister, authorised official) to an applicant to grant the applicant permission to perform certain acts or activities that may have an impact on the environment."[31]

All installations covered by the IPPC Directive are required to obtain an authorisation from the relevant authorities in the EU country in which they are situated.[32] The IPPC Directive further aims to harmonise authorisation procedures and conditions in the EU and contains directive provisions pertaining to integrated authorisations.[33]

3 2 Integration in terms of the IPPC Directive

The Directive aims to give effect to an integrated approach to pollution prevention and control by way of, *inter alia*, procedural integration, organisational integration, and substantive integration. Procedural integration relates to the procedures associated with authorisations. Procedural integration may be established through a single authorisation, a single authorisation-issuing authority, or by way of co-ordination and integration efforts of procedures and structures pertaining to various administrative organs involved in the authorisation process. This approach arguably describes a one-stop environmental authorisation shop.

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[29] For an in-depth critique on the White Paper and Draft Bill, see Kotzé 131-140; and Kotzé "Revisiting the South African Integrated Pollution Prevention and Control (IPPC) Regime: A Critical Survey of Recent Developments" 2007 *SAPL* 35.

[30] Kotzé 60-61.

[31] Wessels *Environmental Authorisations and Mining Organisations* (2005) 19.

[32] Jongma "De IPPC-richtlijn als Inspiratiebron" in Gilhuis and Verschuuren (eds) *Is er nog Verschil tussen Europees en Nederlandse Milieurecht?* (2003) 36.

[33] Jongma 36.

Organisational integration refers to integration of administrative or institutional structures of the authorisation system.[34] This manifestation of integration entails co-operation and co-ordination of administrative structures and procedures that are controlled through a central lead agent.[35]

Substantive integration relates to the content of authorisations and authorisation decisions. In terms of substantive integration, authorisations should display an integrated and holistic approach to all emissions from an installation by simultaneously considering emissions to air, land and water. Authorisations should also be based on uniform emission limit values that are based on a uniform pollution standard, namely BAT.[36] BAT is a process, or specification standard, used to specify the use of, or abstention from, certain technologies, materials or practices. Emission limit values, parameters or equivalent technical measures that should be included in an authorisation must be based on BAT. A uniform regional BAT standard may also contribute to promote integration at regional level. Moreover, procedural and substantive integration may be achieved in individual Member States, since BAT provides a uniform standard that is applicable to all authorisations in the context of industrial emissions. In this context, BAT may contribute specifically to achieve integration since the harmful effects of pollution are considered simultaneously in a cohesive and integrated way.

4 THE PRE-2000 FINNISH REGIME

The past approach to environmental governance in Finland was characterised by fragmentation at both policy and operational level.[37] Fragmentation at policy level is evident from the various sectoral acts that covered a vast number of environmental sectors. The fragmented legislative framework included, *inter alia*, the Water Act 264 of 1961 (WA), the Air Pollution Prevention Act 67 of 1982, the Waste Act 1072 of 1993, the Health Protection Act 763 of 1994, the Neighbourhood Relations Act 26 of 1920, the Seas Protection Act 1415 of 1994, the Chemicals Act 744 of 1989, the Pesticides and Herbicides Act 237 of 1969, the Nature Conservation Act 555

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[34] Organisational integration has several benefits, including that it allows for a comprehensive availability of expertise that relate to different environmental aspects, whereas this might not have been the case with a single authority or authorisation with competence over the whole environment. A fully co-ordinated system may also prove to represent all environmental media more comprehensively in decision-making, by not sacrificing one medium to the benefit of another. As such, organisational integration may be the most appropriate approach for achieving the objective of an integrated approach to pollution prevention and control. See further Kotzé 158-160.

[35] *Ibid*.

[36] BAT is defined in art 2(11) of the Directive as

> "the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally reduce emissions and the impact on the environment as a whole".

[37] Swanljung and Riska "Practical Questions of Environmental Law" in Koeman (ed) *Environmental Law in Europe* (1999) 195; Vihervuori (2002) 124, Vihervuori "Environmental Law in Finland" in Koeman (ed) *Environmental Law in Europe* (1999) 183, Vihervuori 2000(1) *Yearbook of European Environmental Law* 477, and Vihervuori "Finland" 2002(2) *Yearbook of European Environmental Law* 469.

of 1981, the Soil Excavation Act 555 of 1981, the Rapids Protection Act 35 of 1987, the Building and Planning Act 370 of 1958, the Cultural Monuments Protection Act 60 of 1985, the Nuclear Energy Act 990 of 1987 and the Mining Act 503 of 1965.[38] As is currently the case in South Africa, these acts were to a large extent sector- or environmental-media specific, which resulted in a fragmented legal framework and a fragmented regulatory approach to environmental governance in general, and pollution control specifically.[39]

Fragmentation at policy level resulted in fragmentation at operational level. Regulation of especially pollution activities, was and still to a large extent is based on an authorisation system that includes emission standards and emission limit values.[40] Various separate authorisation procedures were prescribed under these acts with no internal coordination.[41] In terms of pollution control, these systems included authorisation procedures for air pollution, water pollution, waste management, public health, and neighbourhood relations.[42] This resulted in a fragmented, discontinuous and circumstantial policy framework for pollution regulation, especially in so far as environmental authorisation structures and processes are concerned.

In 1992, an attempt towards integration was made with the promulgation of the Environmental Permit Procedure Act 735 of 1991 (EPPA).[43] The objective of the EPPA was to integrate the procedural elements of the authorisation systems of the Air Pollution Prevention Act 67 of 1982, the Health Protection Act 763 of 1994, the Waste Act 1072 of 1993 and the Neighbourhood Relations Act 26 of 1920.[44] The idea was that a single authorisation decision is issued that should consist of sub-authorisations with their own requirements.[45] However, these reforms were regarded as temporary and at the time no significant integration was achieved. A possible

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38 See Kuusiniemi "Environmental Law" in Pöyhönen (ed) *An Introduction to Finnish Law* (1993) 345-386 for a review of some of these acts.

39 Whilst most of these acts are still in force, at least in a substantive sense, some of the procedural provisions pertaining to environmental authorisations have been repealed and usurped by the EPA.

40 Vihervuori 2000(1) *Yearbook of European Environment Law* 478, however, opines that the Finnish authorisation system is not only a vertically applied "command and control" tool, but also an instrument for the protection of private individuals and a framework to facilitate public participation.

41 It is furthermore stated in this regard that:

> "Unlike most other Nordic countries, Finland has[d] no single comprehensive environmental law, but rather various individual acts and secondary regulations. The fact that each act covers only one specific field of environmental protection has resulted in considerable variations in the aims, control systems and licence procedures stipulated in the various acts."

See Swanljung and Riska 195.

42 Vihervuori (2002) 132.

43 Vihervuori 2002(2) *Yearbook of European Environmental Law* 469.

44 Vihervuori 2000(1) *Yearbook of European Environmental Law* 477. See Swanljung and Riska 195-198 for a discussion on the various authorisation requirements in terms of these acts. See also Vihervuori 2002(2) *Yearbook of European Environmental Law* 470 for a discussion on the background and context within which the EPPA was established.

45 Vihervuori (2002) 132. Swanljung and Riska 198, state in this regard that the aim of the EPPA was to standardise the processing of authorisations, to intensify supervision, to speed up authorisation procedures, and to integrate environmental impact assessment in the processing of authorisations.

reason for this is that the integration reforms only focused on procedural aspects whilst substantive considerations were excluded. Moreover, apart from the fact that land-use and planning were not integrated in terms of the EPPA,[46] protection of sectoral interests and political considerations furthermore hampered effective and comprehensive integration reforms.[47] Integration efforts also failed to include the vast range of authorisation procedures under the WA. Amongst various authorisations relevant to the environment, the WA also included authorisations specifically relating to environmental pollution.[48] These authorisations were not issued by the Regional Environmental Centres or Municipal Environmental Authorities as is the case with the bulk of authorisations under the EPPA, but by Water Courts.[49] Hence, real integration in terms of administrative structures also was not achieved, because governance mandates and subsequent efforts were divided between administrative authorities and independent courts.[50]

The drawbacks of this fragmented approach necessitated more integrated and sustainable reforms. Moreover, policy-makers recognised the need to, *inter alia,* unify and further develop environmental and connected legislation, implement the provisions of the IPPC Directive, renew and streamline the authorisation and administration system, advance sustainable environmental protection and governance, control environmental effects as a whole with reference to air, land and water, promote cost-effective measures for environmental protection and establish a "one-authorisation-one-authority" approach or the so-called one-stop shop.[51]

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[46] See Modeen "Town and Planning Law in Finland" in Garner and Gravells (eds) *Planning Law in Western Europe* 2ed (1986) 134-151, for some historical perspectives on planning law in Finland. There is, to date, still no effective integration of planning aspects with environmental authorisation considerations (sometimes referred to as external integration). Although there is no formal and direct link, some planning aspects have been, and still are, relevant for the authorisation process, especially in so far as they relate to the interpretation of permissible norms in terms of authorisations. See in this regard Vihervuori (1999) 152-153.

[47] Vihervuori (2002) 132-133. It is also stated in this regard that the main reason for the persistence of fragmentation in the past, may be attributed to political controversy on whether water pollution prevention should be part of traditional water law, instead of general environmental law. See in this regard Vihervuori (1999) 139.

[48] Chapter 10. See also Swanljung and Riska 197 for a detailed discussion of the authorisation requirements in terms of the WA.

[49] Water Courts consisted of legal, technical and ecological experts and mainly dealt with matters relating to water resources, water management, construction in water areas, drainage, and water pollution. Apart from the foregoing, Water Courts also dealt with matters relating to private law suits, criminal cases, authorisation enforcement and administrative appeals.

[50] Vihervuori (1999) 150.

[51] Interview Hollo, Professor of Law, University of Helsinki (2003), and Interview Sahivirta, Senior Environmental Law Officer, Finnish Ministry of Environment (2003).

4 1 Relevant provisions of the EPA and the EPA Decree

4 1 1 Contextual background

It was only with the introduction of the EPA in 2000 that comprehensive integration of procedural and substantive elements of the fragmented approach was achieved.[52] The EPA and its accompanying EPA Decree incorporate all the basic requirements and provisions of the IPPC Directive[53] and may be seen as a single codification act that essentially aims to reform decision-making mechanisms in the Finnish environmental governance sphere.[54] The legislative reforms brought about by the introduction of the EPA were very extensive and particularly difficult to attain. According to article 7 of the IPPC Directive, a shared competence may have been maintained between the courts and the environmental authorities if all integration and co-ordination requirements were observed and met. Reforms, however, involved an infringement of the mandate of both the judiciary (Water Courts), and the environmental administration. Reforms accordingly included an amendment of substantive environmental law in the form of legislation, abolition of a sector of the judiciary and the creation of a completely new division in environmental administration and governance.

In the foregoing context, the EPA led to the repeal of the EPPA, the Noise Abatement Act 382 of 1987 and the Air Pollution Prevention Act 67 of 1982.[55] All the provisions of the WA relating to water pollution were repealed and integrated in the EPA.[56] In terms of the Health Protection Act 763 of 1994, relevant provisions pertaining to authorisation for localisation were incorporated in the EPA. With regard to the Waste Act 1072 of 1993 and the Neighbourhood Relations Act 26 of 1920, all provisions pertaining to authorisations for polluted areas and emissions also were repealed and incorporated into the EPA. The EPA furthermore established a system of more integrated and structured permit authorities that currently are divided into three levels, namely Municipal Environmental Authorities,[57] Regional Environmental Centres[58] and Environmental Permit Authorities.[59]

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52 Vihervuori (1999) 183.

53 Whilst environmental acts are promulgated by parliament, complementary decrees, such as the EPA Decree, are issued by the President, and essentially contain minor or technical detail with regard to the main act. Chapter 2 of the EPA deals extensively with decrees and regulations that may be stipulated in terms of the act. Decrees and regulations may be established for matters including environmental quality and emissions, motor vehicles, machinery and equipment, soil, substances, preparations and products, exceptions, household sewage and municipal environmental protection regulations.

54 The EPA Decree contains, *inter alia*, lists of activities and installations, specific provisions on authorisations, competencies of the various authorisation authorities, and obligations with regard to existing activities.

55 Vihervuori 2002(2) *Yearbook of European Environmental Law* 470.

56 Swanljung and Riska 199.

57 There are currently 448 municipal environmental authorities in Finland.

58 There are currently 13 regional environmental centres in Finland.

The EPA currently is the basic statute for regulating environmental pollution in Finland.[60] Its primary objective is to prevent pollution to air, soil and water in a holistic and integrated fashion, by integrating authorisation decision-making mandates, procedures and structures.[61] The EPA is based on the concept of IPPC as it is embodied in the IPPC Directive and it is envisaged that the integrated environmental governance effort proposed by the EPA may contribute to a more streamlined, cost-effective and timeous procedure for the regulation of environmental authorisations (and hence pollution) in Finland.[62] It is stated in this regard that "the new legislation [the EPA] clearly represents more than just the sum of the present sectoral provisions".[63] Whilst the EPA does integrate some of the provisions of sectoral acts, its primary objective is to create a uniform substantive and procedural legal regime for the integrated regulation of environmental pollution.[64]

The regulatory approach of the EPA makes extensive use of authorisations. Whereas the prescribed authorisation system provides mandatory requirements for an operator to conduct its activities, it also serves as a framework that allows the operator to exercise self-regulation to some extent,[65] provided that it is executed within clearly defined limits set out by authorisations.[66] It is noteworthy that the EPA is based essentially on a "command and control" approach, where the authorisation system "serves certain crucial functions in environmental regulation that cannot be substituted by other means".[67] The main reasons behind the strong focus on a "command and control" approach may be attributed to the apparent benefits it provides. These include: that authorisations to be used to more effectively implement international, regional and national environmental policies and targets (such as those provided by the IPPC Directive), authorisations may serve as effective instruments which consider specific local environmental features and authorisations may be utilised to facilitate public participation, access to information, appeals and indemnities.[68] Although the strong emphasis on a "command and control" approach is questioned in the wake of European developments to the contrary, it is generally accepted that the high level of environmental protection in Finland

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59 3 environmental authorisation authorities have been established in Finland at the time of writing.

60 Vihervuori 2000(1) *Yearbook of European Environmental Law* 388.

61 Vihervuori "Finland" 2003(3) *Yearbook of European Environmental Law* 591.

62 Vihervuori 2000(1) *Yearbook of European Environmental Law* 388.

63 Vihervuori 2000(1) *Yearbook of European Environmental Law* 477.

64 Vihervuori 2000(1) *Yearbook of European Environmental Law* 478.

65 Silvo *et al* 2002 *Resources, Conservation and Recycling* 49.

66 Self-regulation allows the operator of an industrial installation to choose the techniques and other methods by which to reach the objectives of the EPA. The rationale behind self-regulation is to provide the necessary flexibility to introduce and further develop the most appropriate and cost-effective environmental measures. Silvo *et al* 2002 *Resources, Conservation and Recycling* 50.

67 Silvo *et al* 2002 *Resources, Conservation and Recycling* 49.

68 *Ibid*.

may be attributed to the strict implementation of this "command-and-control" approach.[69]

The EPA contains, *inter alia*, general principles, obligations and prohibitions, a delegation of normative competencies, rules on environmental authorisations, notification procedures, provisions on compensation, regulations on remedying effects of pollution, surveillance measures, administrative sanctions and the right to appeal. Subsequent paragraphs examine the most relevant provisions of the EPA and EPA Decree that are utilised to achieve integration.

4 1 2 Objectives, scope and principles of the EPA

Sections 1(1)-1(7) of the EPA set out the objectives of the Act. These objectives include the prevention of environmental pollution and repair and reduction of pollution damage. The objective are further the safeguarding of a healthy, pleasant, ecologically diverse and sustainable environment, the preventing of waste generation and harmful effects of waste, the improvement and integration of the assessment of polluting activities, the promotion of sustainable use of natural resources and the combating of climate change and supporting sustainable development. The scope and aim of the EPA are based on some general principles that include prevention of negative impacts and reducing harm, precaution and care, BAT and the polluter-pays principle.[70]

The objectives of the EPA, together with all its provisions, are applicable to all activities that lead, or may lead to environmental pollution.[71] "Environmental pollution" is comprehensively defined as emissions or deposits of a substance, energy, noise, vibration, radiation, light, heat or odour caused by human activities in the environment.[72] The provisions of the act, and hence, the integrated authorisation system, are applicable to the wood-processing industry, the metal industry, energy production industry, the chemical industry, storage, use or disposal of chemicals and fuels, activities involving the use of volatile organic compounds, excavation of ores or minerals and extraction of geological materials, mineral products, industrial production and handling of leather or textiles, preparation of

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69 *Ibid*.

70 S 4. Ss 5-9 contain further provisions on, *inter alia*, general duties of operators by stating that operators must have sufficient knowledge of their activities' environmental impact and risks and of ways to reduce harmful effects, selection of the best location for an installation, soil pollution prohibition, groundwater pollution prohibition and specific prohibitions pertaining to the Finnish seas.

71 S 2. When considering the broad definition of "pollution", it is evident that the scope of application of the EPA is very comprehensive. There are, however, certain general exclusions to which the EPA is not applicable, such as discharges caused by the normal use of vessels.

72 S 3(1). This definition includes: Sanitary nuisance, harm to nature or its functions, hindrance or significant inconvenience to the use of natural resources, deterioration of the general amenity of the environment or of specific cultural values, reduction of the suitability of the environment for the public, damage or harm to another's property or its use, and other comparable violations of the public or private interest that are caused or may be caused by a discharge or emission.

foodstuffs and animal feed, livestock shelters and fish farms, transport and waste and water management.[73] It may be derived from the foregoing that the scope of application of the EPA is very comprehensive and results in an even broader scope of activities and installations requiring authorisations when compared to the IPPC Directive.[74]

4 1 3 The integrated environmental administration regime

Integration efforts under the EPA also transformed the fragmented environmental governance and administration regime in Finland.[75] The EPA created a three-tiered administrative system for the regulation of environmental authorisations.[76] The division of the authorities is based on the type and size of activity for which authorisation is required.[77] The first important factor in this regard was the abolition of the Water Courts that were responsible for authorisations in terms of the WA. Instead of the Water Courts, three Environmental Permit Authorities were established.[78] The Environmental Permit Authorities deal with authorisation applications concerning the most important activities and installations in terms of the EPA.[79] According to section 5 of the EPA Decree, these activities include large-scale activities that may have a significant detrimental impact on the environment.[80]

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73 S 1; and Vihervuori 2002(2) *Yearbook of European Environmental Law* 471.

74 Vihervuori 2003(3) *Yearbook of European Environmental Law* 591.

75 See Vihervuori (1999) 133 for a historical background on the Finnish environmental administration. Whilst the EPA provides for a comprehensively integrated authorisation system with regard to activities that may cause pollution, there still are other authorities that may be involved in the environmental governance effort. Whereas Environmental Permit Authorities, Regional Environment Centres and Municipal Environmental Authorities have exclusive competence with regard to emission issues, building authorities may, for example, also be involved as far as they must prescribe conditions relating to the environmental impact of building activities.

76 Environmental Permit Authorities deal with issues at IPPC or environmental impact assessment level, or in other words, larger projects, installations and activities that may cause significant harm to the environment. Issues that may have a moderate impact are dealt with by Regional Environment Centres and all remaining or less significant issues are considered by Municipal Environmental Authorities. It is further important to note that the environmental administration also operates under the ambit of the recently promulgated Administrative Procedure Act 434 of 2003. The provisions of this act are complemented by the provisions of the WA and the EPA. See Niemivuo "The Finnish Administrative Procedure Act" 2004(1)3 *European Public Law* 461-468, for a detailed discussion.

77 Silvo *et al* 2002 *Resources, Conservation and Recycling* 48.

78 The Permit Authorities in many respects resemble the previous Water Courts. In terms of the WA, the Environmental Permit Authorities also deal with, *inter alia*, construction in water bodies, hydro-electric plants, water regulation, water abstraction, embankment and timber floating. See in this regard Vihervuori 2000(1) *Yearbook of European Environmental Law* 479.

79 S 23. Environmental Permit Authorities are of an administrative nature, although "court-like" in a sense. They have an independent mandate and competence in certain authorisation and coercion procedures in terms of the WA and the EPA. Unlike the Regional Environment Centres and the Municipal Environmental Authorities, these authorities have no additional tasks.

80 These activities include, *inter alia*, pulp, paper, or board mills, ore roasting plants, ironworks and metal works, nuclear power stations, electric power station, oil and gas refineries,

Regional Environment Centres[81] and Municipal Environmental Authorities[82] also serve as authorisation authorities for the remainder of issues not dealt with by Environmental Permit Authorities. A vast number of issues are detailed in the EPA Decree in this regard and include, amongst others: Wood impregnation plants, rolling, or hammer mills for ferrous metals, shipyards, smaller power stations, chemical plants producing inorganic chemicals, factories producing explosives, cement or lime works, brickworks, sugar refineries, dairies, breweries, fur farms, composting facilities, raw water treatment plants,[83] small sawmills, lubricating oil facilities, coal stores, stone quarries, ceramic or porcelain factories, feed mixing plants, coffee roasteries, zoological gardens and crematoria.[84]

Chapter 3 of the EPA specifically deals with environmental authorities and their duties. It is so provided that the current administration falls under the auspices of the Ministry of the Environment which is responsible for general steering, surveillance and development of all matters arising from the EPA, including pollution regulation.[85] Apart from the regulation of authorisations, some authorisation authorities are, in addition, responsible for monitoring the state of the environment,[86] and maintaining an environmental protection database.[87]

Chapter 5 of the EPA further provides for the jurisdictional competence of authorisation authorities. Environmental Permit Authorities may deal with authorisation issues when the activity may have a substantial environmental impact, where the activity, in addition, requires an authorisation in terms of the WA and where the applicant is a Regional Environment Centre.[88] Regional Environment Centres are responsible for processing of authorisations where, *inter alia*, the environmental impact of the activity concerns an area substantially wider than that of the municipality where the activity is located and where an authorisation is warranted under sections 28 and 29 of the EPA.[89] For an authorisation for the alteration of an activity, the responsible authority will be the one under whose competence the

mining, peat production, plants handling asbestos, harbours intended for merchant shipping, airports, municipal waste treatment plants and oil or gas exploration and drilling.

81 The 13 Regional Environment Centres are spread more or less equally throughout Finland for the sake also of geographic representation of the different regions.

82 Municipal Environmental Authorities are an important part of the public administration system in Finland. They have extensive powers when compared to other local government authorities in Europe. Municipalities are mainly responsible for issuing of authorisations with regard to small industries, as well as some issues pertaining to land-use and zoning. See further Vihervuori (1999) 132-133.

83 S 6 states that Regional Environment Centres are responsible for these activities.

84 These activities will be the responsibility of the Municipal Environmental Authority. S 7.

85 Ss 20-22. It should, however, be noted that Regional Environment Centres are also answerable to the Ministry of Agriculture and Forestry in so far as water management issues are concerned. See Vihervuori (1999) 131-132.

86 S 25.

87 S 27.

88 Ss 31(1)-31(3).

89 Environment Permit Authorities and the Regional Environmental Centres regulate most of the activities stipulated in the IPPC Directive. Vihervuori (1999) 151.

processing of applications for corresponding new activities would fall.[90] Where it becomes evident that an activity may pollute a water body, or where special expertise is required and it is not available locally, a Municipal Environmental Authority must refer the matter to the relevant Regional Environment Centre.[91] With regard to territorial jurisdiction, section 34 states that authorisation applications are processed by the authority within whose territory the activity concerned is to be situated. Where territories of several authorities are involved, the competent authority is the one in whose territory the main part of the activity is to be located.[92]

Regional Environment Centres, Environmental Permit Authorities and Municipal Environmental Authorities, to a lesser extent, consist of a highly skilled team of experts drawn from a multi-disciplinary field. The typical composition of a authorisation panel responsible for the issuance of an authorisation depends on the nature of the authorisation applied for and may include hydraulic, sanitary and chemical engineers, biologists, experts in water affairs, air pollution, noise pollution, waste control, environmental law and support personnel.[93]

In addition to the authorisation authorities, the Finnish Environment Institute (SYKE) has been established and acts as a research and development centre responsible to, amongst others, conduct research in support of authorisation authorities' administrative functions, as well as to render technical support to industrial operators.[94] SYKE also acts as an information centre to provide support for the achievement of ecologically sustainable development.[95] Together with the activities of SYKE, the Ministry of the Environment has established a BAT Network that includes authorisation authorities, enforcement authorities and representatives of industry. The BAT Network aims to enhance the implementation of the IPPC Directive's provisions by promoting innovative pollution prevention and control techniques, enhancing the availability of information on authorisation requirements and furthering the utilisation of the most effective methods to address IPPC.[96]

Section 24 of the EPA states further in this regard that other state authorities and research institutions may function as expert authorities in the course of the authorisation process. The role of these authorities and institutions is to provide expert advice to other authorities and conduct necessary research that may assist authorities in their environmental governance tasks, including environmental authorisations.[97] The expert

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90 S 32.
91 S 33.
92 S 34.
93 Interview Kovanen, Environmental Counsellor, Western Finland Environmental Permit Authority (2003).
94 Ss 32-33 of the EPA Decree. See also Silvo *et al* 2002 *Resources, Conservation and Recycling* 48.
95 Interview Lindstrom, Project Manager, Department of Expert Services, Finnish Environment Institute (2003).
96 Silvo *et al* 2002 *Resources, Conservation and Recycling* 52.
97 S 24 of the EPA.

authorities and institutions include: the Ministry of Agriculture and Forestry, the Ministry of Social Affairs and Health, the Finnish Forest Research Institute, the Agricultural Research Centre, the Finnish Game and Fisheries Research Institute, the National Veterinary and Food Research Institute, the Finnish Meteorological Institute, the Institute of Marine Research, the Technical Research Centre of Finland, the Geological Survey of Finland and the National Public Health Institute.[98]

4 1 4 Environmental authorisation requirements

Section 28 of the EPA states that an authorisation is required for activities that threaten to pollute the environment.[99] These include authorisation for activities that may cause pollution of a water body, activities involving wastewater, activities that may place an unreasonable burden on surroundings, institutional or commercial recovery and the disposal of waste and test drilling for oil or gas in Finnish territorial waters.[100] An authorisation is also required for any alteration of an activity that increases emissions or the effect thereof, where the activity already has been authorised. An authorisation may be required for emissions to waters, a public sewer or the ocean, irrespective of the fact that it may cause pollution or not.[101] An authorisation is not necessary for some short-term activities undertaken on an experimental basis, such as testing of raw materials for fuel.[102] Section 1 of the EPA Decree specifically states that an authorisation is required for certain activities in respect of the following sectors: Wood-processing, the metal industry, energy production, the chemical industry, storage, use, or disposal of chemicals or fuels, work involving the use of volatile organic compounds, excavation of ores, or minerals, or extraction of geological materials, manufacture of mineral products, industrial production or handling of leather or textiles, preparation of foodstuffs or animal feeds, livestock shelters or fish farms, transport, waste and water management and activities including shooting ranges, industrial sandblasting, zoological gardens and crematoria.[103]

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98 S 32. The existence of these additional authorities neither contributes to, nor exacerbates fragmentation since the authorities do not act as competent authorities, but rather as commenting and supporting authorities.

99 Vihervuori 2002(2) *Yearbook of European Environmental Law* 473.

100 Ss 28(1)-28(5).

101 S 29. This provision is supported by s 3 of the EPA Decree which states that activities are considered to cause a discharge unless it is clear that the discharge poses no danger of water contamination.

102 S 30. An authorisation furthermore is not required if the activity relates to the recovery or disposal in agricultural and forestry operations of natural, non-hazardous waste, activities that relate to non-hazardous soil or rock waste, the recovery of treated, non-hazardous sludge from, *inter alia*, wastewater and septic tanks and temporary aerodromes, harbours, storage facilities, fuel distribution points, firing ranges or other comparable activities of the Defence Force. S 4.

103 S 1. The activities referred to in s 1 must be understood to include primary activities plus supplementary support activities, in so far as these activities for a technically and productively integrated operational unit whose environmental impacts or waste management, require to be examined together. S 2.

Regarding existing activities, and based on authorisation requirements in terms of previous sectoral legislation, a new integrated authorisation also may be required as specified in the EPA Decree[104] or when required by the IPPC Directive or for any activities relating to air pollution.[105] However, as a general rule, if any essential change is made to a previously authorised activity, a new integrated authorisation will be required.[106]

4 1 5 The authorisation application procedure

Chapter 6 of the EPA deals with the authorisation application procedure. Authorisation applications must be submitted to the relevant competent authority.[107] All authorisation applications to the competent authority are deemed to have become pending when the application is submitted.[108] All applications must include a report on the activity, its impacts, information on all parties involved, as well as any additional information required under the EPA Decree.[109] If the activity requires an environmental impact assessment, details of this assessment must be included in the application. It is required that an authorisation applicant provide three copies of the application.[110] The application must also indicate, where relevant, the material and methods of calculation and research and evaluation on which the information it provides is based.[111] It is further required by section 8 of the EPA Decree that the person drafting the application must possess adequate specialist knowledge of the subject.

All authorisation applications must include, *inter alia*, the name and contact details of the applicant, details of the installation, a general description of the activities concerned, information on output, processes, equipment and structures, information on location of activities and local environmental conditions, information on the quality and quantity of discharges, information on the types, quantities, and properties of waste, an environmental impact assessment where applicable, dates for commencement of activities, an account of immediate neighbours, information on the quality of the environment, information on the proposed use of raw materials and energy-use, a risk assessment, information on types and sources of discharges and noise levels, an assessment of the application of BAT,[112] an account of the proposed action to reduce and clean up discharges, details on water procurement and disposal, details of transport arrangements, an account of methods to reduce and recover waste

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[104] Ss 41-43.

[105] Vihervuori 2002(2) *Yearbook of European Environmental Law* 473.

[106] *Ibid*.

[107] S 35. If the application is not submitted to the correct authority, the authority must, without delay, transfer the application to the authority it deems to be the relevant competent authority. See in this regard s 21 of the Administrative Procedure Act 434 of 2003.

[108] S 35.

[109] *Ibid*.

[110] S 8.

[111] *Ibid*.

[112] S 37 of the EPA Decree specifically deals with factors that must be taken into account when assessing BAT.

and information on environmental management systems to be implemented by the installation.[113] Certain additional information must accompany the authorisation application. This information includes other authorisations granted relating to sewers, a map of the activities, sources of discharge and other facilities, a site map, a process chart setting out significant sources of discharge, an extensive account to facilitate assessment of the potential risk of a major accident, a proposal on how monitoring is to be facilitated, an assessment in terms of the Environmental Impact Assessment Procedure Act 468 of 1994 and an assessment in terms of section 65 of the Nature Conservation Act 1996 of 1996,[114] additional information relating to discharges into water,[115] additional information on water and waste management[116] and additional information on groundwater basins.[117] The EPA Decree also details requirements pertaining to applications for change of use,[118] for review of an authorisation decision, and renewal of a temporary authorisation.[119]

Opinions on the application may be required from the Regional Environment Centre and the Municipal Environmental Authority, as well as all other relevant authorities that may be affected by an environmental impact of the activity.[120] This provision arguably is meant to establish a procedure of rapport-building, co-ordination and consultation between the different authorities where the environmental impact may be relevant for the jurisdiction of these authorities. Section 17 of the EPA Decree further provides in this regard that, when processing the authorisation application, the authorisation authority must maintain all necessary contacts with other authorities who are simultaneously processing other authorisation applications and plans bearing on the same activities. When the eventual authorisation decision has been issued, it is also required that the relevant authorisation authority must forward a copy of the authorisation decision to all those authorities from whom it requested an initial opinion on the authorisation application.[121]

Before passing a decision on an application, the application must be published and all relevant stakeholders must be given the opportunity to lodge complaints.[122] An application for an activity concerning water pollution and pollution activities under the WA must be lodged jointly and processed, considered and included in a single decision.[123] Applications for different

[113] S 9.
[114] S 10.
[115] S 11.
[116] S 12.
[117] S 13.
[118] S 14.
[119] S 15.
[120] S 36. S 17 of the EPA Decree requires that, where necessary, the relevant authorisation authority must arrange a meeting with all stakeholders to review opinions and objection. These stakeholders include other relevant authorisation authorities and ministries such as the Ministry of Transport and Communication, and the Ministry of Social Affairs and Health.
[121] S 23.
[122] Ss 37 and 38.
[123] S 39.

activities also must be considered and processed simultaneously, unless for a specific reason this is deemed to be unnecessary.[124]

4 1 6 Authorisation consideration procedures

Authorisations will be granted only for activities that meet the requirements of the EPA, the Waste Act 1072 of 1993, and relevant decrees issued in terms of these acts.[125] No authorisations may be granted where, amongst others, the activity may result in harm to health, significant environmental pollution or the risk thereof and deterioration of special natural conditions or risk to water supply and unreasonable nuisance.[126] All authorisations must contain necessary regulations, or conditions regarding emissions, waste and reduction of their generation and harmfulness, measures to be taken after discontinuing activities, measures on prevention, reduction or evaluation of pollution, regulations pertaining to fisheries, waste management, monitoring, and emissions into a sewer and outlet pipes.[127]

When authorisation regulations are issued, certain considerations need to be considered. These include the nature of the activity, the properties of the area where the impact of the activity shows, the impact of the activity on the environment as a whole, the significance of measures intended to prevent pollution of the environment as a whole and the technical and financial feasibility of these actions.[128] Authorisation regulations concerning the prevention and limitation of emissions must be based on BAT.[129] Energy efficiency and precautions, prevention of accidents and ways to limit their consequences also must be considered.[130]

Section 46 provides for monitoring regulations. It is stipulated that operative monitoring of the activity and monitoring of emissions, waste and waste management, the impact of the activity and monitoring of the state of the environment following the discontinuation of the activity, must be issued in the authorisation. In addition, the operator may be ordered to provide information necessary for monitoring. In order to streamline the monitoring process, it is so provided that the authorisation authority may order several

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[124] S 40.

[125] The authorisation authority furthermore must inspect the opinions issued, and complaints made in the matter and the pre-conditions for granting the authorisation. The authorisation authority must also consider relevant legislative provisions on the protection of public and private goods. See s 41; and Vihervuori 2002(2) *Yearbook of European Environmental Law* 475.

[126] S 42.

[127] Ss 43-49. An authorisation regulation may be stricter than a specific environmental protection requirement included in a decree issued under the EPA or Waste Act 1072 of 1993 for meeting the pre-conditions for granting an authorisation; to ensure that environmental quality requirements issued by decree are met or to protect water resources. S 51.

[128] S 43.

[129] *Ibid*.

[130] *Ibid*. Ss 44 and 45 provide for specific regulations in terms of fisheries and waste and waste management. Ss 47 and 48 deal with sewers, whilst s 49 specifically provides for regulations pertaining to outlet pipes.

authorisation holders jointly to monitor the impact of their activities.[131] According to section 46, the operator furthermore may be required to provide the relevant authorisation authority with a monitoring plan in sufficient time so that monitoring may be initiated when the activity commences or at another stage which is appropriate in relation to the impact of the activity. With regard to monitoring requirements, there rests a reciprocal duty on the relevant authorisation authority that issued the authorisation. Section 29 of the EPA Decree states in this regard that the authority must carry out inspections of activities that have been authorised as often as it is deemed necessary in order to monitor operations. Specific provision is made for co-operative measures in those instances where inspections need to be carried out by more than one authority.[132]

4 1 7 The authorisation decision

Depending on the nature of the application, authorisations either are issued until future notice, or for a fixed period, or by the date indicated by the relevant authority.[133] Grounds and jurisdiction for the decision also must be indicated in the decision.

When the Environmental Impact Assessment Procedure Act 468 of 1994 is applicable to a project, the authorisation decision must indicate how the assessment has been considered in the authorisation consideration.[134] The more formal points of procedure in the environmental impact assessment process in most instances are linked with the authorisation procedure of the relevant authorisation authorities.[135] Generally speaking, the authorisation application documents already contain a completed environmental impact assessment statement, and it is further required of authorisation authorities to indicate in the authorisation decision how the environmental impact assessment has been considered during decision-making.[136]

The authorisation decision must be delivered to all relevant stakeholders, and a notice of the decision must be published in the municipal area where the activity is located, and in other municipalities where the activity may have an impact.[137] Decisions of all authorities acting within the ambit of the EPA

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131 S 46.

132 S 29. S 30 of the EPA Decree arguably is meant to assist relevant authorities in their inspection tasks. It provides that the operator shall notify the authority that has served as the authorisation authority of any operational changes, or any events that have taken place which are not a normal part of the activities covered by the authorisation.

133 Ss 52-53.

134 S 52. See further on the relationship between the environmental impact assessment process and environmental authorisations, Vihervuori (1999) 155-156.

135 *Ibid*.

136 *Ibid*.

137 S 54. S 16 of the EPA Decree furthermore provides for detailed arrangements with regard to the publication of authorisation applications and display of documents for public inspection.

may be appealed to the Vaasa Administrative Court and the Supreme Administrative Court.[138]

Section 18 of the EPA Decree details specific information that must be contained in the recital section of the authorisation decision. This information includes the name and contact details of the applicant, the grounds of the authorisation application, commencement of processing the application, an account of existing authorisations, information on the condition and quality of the environment, a description of and key information on the activities and their extent, details of provision for monitoring, details of waste and other discharges, details of environmental impacts, details of proposed environmental protection measures and recovery and disposal of waste, details of proposed risk assessment and accident prevention measures, information on processing of the application, official opinions, objections and opinions from interested parties, responses and their content and details of any inspections that have been carried out. The decision section of the authorisation must contain the final decision and how any requirements, statements and environmental impact assessments have been considered, the conditions of the authorisation, provisions regulating discharges, provisions governing measures to prevent environmental pollution, provisions relating to monitoring, provisions relating to compensation for loss or damage, the validity and review of the authorisation and the terms thereof, the processing fee, a statement of reasons for the decision, a statement of how environmental management systems and measures for energy-saving have been considered and any order for the enforcement of the authorisation decision.[139]

An authorisation granted for a fixed period expires when the period lapses, unless stipulated otherwise.[140] It also may be decided by the issuing authority that an authorisation expires when the activity has been suspended for five consecutive years, when the activity has not been started within five years, or when an application for review has not been made.[141] An authorisation may be amended if pollution or the risk of pollution is materially different than was expected, if the activity has a consequence prohibited by the EPA, if emissions may be reduced significantly by way of new BAT applications, if circumstances have changed substantially since the issuance of the authorisation, or if an international obligation necessitates such amendment.[142] An authority also may revoke the authorisation if the applicant has provided erroneous information, if authorisation regulations

[138] Ch 14. See also Vihervuori 2002(2) *Yearbook of European Environmental Law* 478-479; and Niemivuo 2004(1)3 *European Public Law* 461-468, on some general perspectives pertaining to administrative procedures in Finland.

[139] S 19. Ss 20-22 of the EPA Decree also deal in detail with terms that must be included in authorisation decisions for land-fill sites; authorisation decisions that deal with a change in use; and authorisation decisions dealing with review of an authorisation.

[140] S 55.

[141] S 57.

[142] S 58.

have been violated repeatedly or if pre-conditions for continuing the activity cannot be met by amending the authorisation.[143]

4 2 The VAHTI system

Environmental databases of the environmental administration in Finland, which include, amongst others, data on environmental authorisations issued to industry and information on discharges into water and information on emissions into air and wastes, first were established in 1987. These were independent databases that were created and operated for industrial effluents, water supply and sewage utilities, air pollution control and fish farms.[144] With the development of information technology and the increased and widespread use of this technology in the public administration, the need arose to develop further the efficiency of the various databases and integrate them into a single, national database system. Another apparent reason for the establishment of a national database system is that information needed to be collected and centralised to promote an integrated approach to authorisation administration. During the development of the integrated authorisation system, it also became apparent that increased use of documentation (for example authorisation application forms) necessitated the establishment of an electronic documentation format that should aim to lessen the amount of paper used, counter bureaucracy, speed up the process of documentation flow, lessen the impact on human and financial resources and streamline the administration of authorisations.[145]

These developments led to the establishment of the Monitoring and Environment Loading Data System (VAHTI) in 1997. VAHTI consists of a client application, a database server and a nation-wide network that connects the database and workstations. A web-application also is employed to browse the database and to generate various reports that include reports on compliance monitoring.[146]

The Finnish environmental authorisation administration, which includes all three divisions of administrative authorities, makes extensive use of this database system. The principle objective of the system is to function as a tool to assist Regional Environment Centres in environmental governance efforts.[147] VAHTI also serves as a database for the input and storage of information on environmental authorisations of industries, as well as information on discharges into water, emissions into water, waste generation and discharge of waste. Whilst the system produces baseline environmental data for internal administrative use and for use by various other interested parties, such as the public, industry and concerned environmental

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[143] S 59.

[144] Nurmio *The Monitoring and Environment Loading Data System: VAHTI Information Document* (1999) 1; and Interview, Koivisto, Senior Environmental Officer, Central Finland Regional Environment Centre, Jyväskylä (2003).

[145] Nurmio 1.

[146] *Ibid*.

[147] Silvo *et al* 2002 *Resources, Conservation and Recycling* 48; and Nurmio 1.

associations, it furthermore provides a comprehensive selection of reporting and monitoring tools for the diverse needs of administrative authorities. The system is used, in addition, to facilitate task management and electronic document management and to serve as a tool for operative monitoring of the authorisation procedure. At present there are 250 active users (authorisation administration officers), with more or less 29 000 clients (industries) that employ the system on a regular basis to aid in the rigorous process of authorisation application and compliance monitoring.[148]

4 3 Evaluation and recommendations

The following comparative lessons may be distilled:

The previous Finnish pollution prevention and control regime displays various similarities when compared to the current South African regime, especially as far as fragmentation is concerned. The Finnish system consisted of various authorities, acts regulating pollution and pollution regulation mechanisms and procedures available in terms of these sectoral acts. No single integrated authority or single integrated act and authorisation procedure existed in terms of the previous regime. The regime was discontinuous, fragmented and silo-based, resulting in duplication, overlap and a time-consuming and unsustainable pollution control effort. This also is the case in South Africa at present.

Substantive and procedural reforms were required to establish the current integrated regime. South Africa must take cognisance of the various drawbacks inherent to the current fragmented regime and should consider addressing fragmentation both in a substantive and procedural sense when embarking on its own reform initiatives. This may entail, amongst others abolishing the multitude of acts currently available for pollution regulation and establishing a single act that deals with pollution of all environmental media, establishing an integrated authorisation that covers all pollution aspects to all environmental media in an integrated fashion, abolishing the various procedures and processes together with the plethora of authorisations and creating a co-ordinated administrative procedure to streamline and fast-track decision-making. Substantive reforms furthermore may include setting a single pollution standard for the whole country, such as BAT, in terms of which emission limit values and parameters must be formulated and established. This may result in a more integrated and uniform consideration of all emissions to all environmental media whereby indiscriminate transfer of the ill effects of pollution between such media will be avoided.

The Finnish system provides for a clearly structured administrative system in terms of which decision-making is executed by three authorities. The roles, mandates and obligations of these authorities are clearly delineated and various procedures are established to facilitate co-ordinated decision-

[148] Interview, Koivisto, Senior Environmental Officer, Central Finland Regional Environment Centre, Jyväskylä (2003).

making where more than one authority is involved. It has been indicated that various environmental authorities are responsible for pollution regulation in South Africa. This institutional fragmentation exacerbates the already fragmented regime since various authorities need to build rapport with one another and co-ordinate and co-operate where mutual interests are concerned. The Constitution of the Republic of South Africa, 1996, amongst others, provides for co-operative governance that requires of environmental authorities to

> "exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of government in another sphere; and
> (h) co-operate with one another in mutual trust and good faith by –
> (i) fostering friendly relations;
> (ii) assisting and supporting one another;
> (iii) informing one another of, and consulting one another on, matters of common interest;
> (iv) co-ordinating their actions and legislation with one another;
> (v) adhering to agreed procedures; and
> (vi) avoiding legal proceedings against one another".[149]

Evidence, however, suggests that co-operative governance is not realised in practice despite these integration attempts at policy level.[150] The result is that unco-operative behaviour remains at the operational level of governance. It is suggested that institutional fragmentation be addressed by either establishing clearly delineated roles, responsibilities and mandates of the various authorities, accompanied by practical procedures for co-operation and coordination, or by abolishing all existing institutions and creating a single integrated environmental lead agent which will solely be responsible for regulating pollution (the so-called one-stop shop). The latter may prove to be a nearly impossible exercise due to, *inter alia*, political considerations. Thus, it may be more appropriate and feasible to, as is the case in Finland, assign specific pollution regulation tasks to specific environmental departments and setting practical procedures for co-ordination that ultimately should aim to avoid, or at least significantly reduce, red tape, duplication, turf wars and bureaucracy. The provisions on co-operative environmental governance then may be utilised effectively to give practical effect to co-operation and co-ordination between these authorities. Institutional reforms also may include establishing a specialist scientific authority resembling SYKE, which can provide technical assistance and expertise to both government departments and industry. This ultimately may strengthen the governance role of environmental authorities. It also may fast-track the authorisation application procedure, since industry arguably

[149] The Intergovernmental Relations Framework Act 15 of 2005 has been promulgated to enhance and give effect to the constitutional provisions on co-operative governance. It is not clear yet what the effect of this act will be on the fragmentation in the pollution regulation sphere. In environmental context, this act is supported by the Chapter 3 provisions of the National Environmental Management Act 107 of 1998 which relate to co-operative environmental governance. See for a more comprehensive discussion Kotzé 2006(1) *PER* 26-31.

[150] Kotzé, Nel, Du Plessis and Snyman 2007 *SAJELP* (forthcoming).

will be capacitated more adequately to interact with government by providing correct information during authorisation applications and by lessening the "command-and-control" governance approach by way of self-governance through exemplary environmental performance.[151]

In addition to the above, it is pertinent that any reform initiatives in South Africa also should consider providing clear guidelines to authorisation applicants as to what information should be included in applications. Guidelines for decision-making also should be developed and made available to the competent authority to guide decision-making. Legislation or guidelines should provide specifically for communication of decisions by authorities, as well as provisions for monitoring and post-decision follow-up by both the competent authority and the authorisation applicant. This may contribute to legal certainty and a more time-efficient administrative procedure since all interested and affected parties will be aware of what is required of them during authorisation application procedures.

More informal and non-legislative reforms may include establishing mechanisms similar to the VAHTI system. Such a computer-based system should provide baseline environmental data for internal administrative use and use by various other interested and affected parties, such as the public, industry and concerned environmental associations. It also may provide a comprehensive selection of reporting and monitoring mechanisms to facilitate continual monitoring and post-decision follow-up by authorities and industry alike. Electronic document management may be facilitated by way of such a system that may address current bureaucratic and red-tape practices that characterise the environmental administration in South Africa.

5 CONCLUSION

The aim of this article was to emphasise the fragmented nature of South Africa's environmental governance regime in general and, more particularly, the fragmented domestic pollution prevention and control regime. The integrated approach to pollution prevention and control employed by Finland was discussed in order to distil comparative solutions to current challenges facing South Africa in this regard. Procedural and substantive reforms of legislation, mechanisms for pollution regulation and integrated institutions and procedures in Finland resulted in a more streamlined and effective environmental governance effort that is aimed specifically at integrating pollution prevention and control measures. South Africa should take cognisance of integration strategies employed by foreign countries such as Finland and of the benefits these strategies pose as methods to address bureaucracy, red tape, duplication and the time-consuming and expensive and undesirable consequences of fragmentation. Domestic reforms of the fragmented regime ultimately may lead to a more sustainable environmental governance effort that will be beneficial to government and the private sector.

[151] Self-governance or regulation may be facilitated by way of, for example, the ISO 14001 Environmental Management System.