

PERFORMANCE AUDIT

# A measure of protection

A baseline report on performance measurement  
in the Scottish Environment Protection Agency



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## A measure of protection: a baseline report on performance measurement in SEPA

A report to the Scottish Parliament by the Auditor General for Scotland

### Auditor General for Scotland

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He is responsible for investigating whether public spending bodies achieve the best possible value for money and adhere to the highest standards of financial management.

He is independent and not subject to the control of any member of the Scottish Executive or the Parliament.

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The following bodies fall within the remit of the Auditor General

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- executive agencies eg the Prison Service, Historic Scotland
- NHS boards and trusts
- further education colleges
- water authorities
- NDPBs and others eg Scottish Enterprise.

### Audit Scotland

Audit Scotland is a statutory body set up in April 2000 under the Public Finance and Accountability (Scotland) Act 2000. It provides services to the Accounts Commission and the Auditor General for Scotland. Together they ensure that the Scottish Executive and public sector bodies in Scotland are held to account for the proper, efficient and effective use of public funds.

*On the front cover:*

Sampling from waste tanks, SARP - Special Waste, Falkirk

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## Preface

Performance measures assist organisations to articulate their objectives and priorities, measure what they deliver and report publicly on what they achieve. Performance measurement is intrinsic to the whole process of successful management, including planning, monitoring, evaluation and public accountability. Key principles of good performance measurement systems in the public sector include:

- aligning performance measures with organisations' aims and objectives
- reporting the outcome of activities against Ministerial and internal targets
- considering the interests and needs of stakeholders
- providing a comprehensive picture of performance across all the organisation's activities.

This summary baseline report records the progress the Scottish Environment Protection Agency (SEPA) has made in developing performance measures for each of its functions and the extent to which it has achieved its targets. The report identifies improvements in performance measurement and management information which are needed for SEPA to:

- assess its success in meeting environmental improvement targets set by EU Directives and its own environmental strategy papers
- monitor the level and quality of its regulatory operations
- deliver improvements in its operational efficiency and fee setting.

SEPA has already recognised the need for these improvements so that its reported results can, in future, present a more complete picture of its achievements.

I intend to use this report as a baseline against which future progress can be measured. I have asked Audit Scotland to monitor developments and to produce a follow-up report after a suitable period. I shall report back to Parliament at that stage.

I am grateful to everyone in SEPA and the Rural Affairs Department who has cooperated in providing information for this study, against tight deadlines, and I would also thank the staff of Audit Scotland who worked on the study.

Robert W Black  
Auditor General for Scotland  
Edinburgh  
December 2000



## Summary and conclusions

This report records the results of an Audit Scotland examination of the performance measurement system operated by the Scottish Environment Protection Agency (SEPA) since it was established in 1996. The report shows that SEPA has developed performance measures for each of its key functions and that the organisation has made progress against most of the targets set for it. SEPA recognises that the reported results do not present a complete picture of its achievements and is developing the performance measurement framework and the information systems to support it.

Important messages emerging from this report include:

### Environmental improvement

SEPA is responsible for providing an environmental protection system which will improve the environment and contribute to sustainable development. It cannot do this alone but works in partnership with a range of other agencies. SEPA has published a number of environmental strategies, and the measures in place provide information on some targets for improvements in water quality, bathing waters and bio-degradable waste. Reported results show improvements in water quality but these fall short of targets. Robust information on progress towards the waste target has yet to be developed.

SEPA recognises the need to further develop its performance measures to provide a comprehensive picture of progress in improving Scotland's environment. Audit Scotland has offered to provide assistance in taking that initiative forward. An important element in the development will be measures of the extent to which SEPA is contributing to improvements (**Recommendations (i)-(iii)**).

### Regulatory operations

SEPA regulates bodies which produce environmental pollution by issuing and reviewing licences for the storage of waste products or the discharge of specific pollutants into the environment. Assurance that licence conditions are met is monitored through regular inspections of licence holders' sites. SEPA measures its regulatory operations by monitoring the numbers of licences issued, inspected and reviewed. It also monitors the extent to which licence holders comply with licence conditions. SEPA's performance has improved over time and operational targets are now being achieved.

However the measures in use could be improved. Activity targets would be enhanced by:

- ensuring all activity is included
- providing a clear reference to national standards
- reflecting differences in activities
- improving documentation of the risk assessments which underpin decisions on the level of activity.

SEPA uses several proxy measures for the quality of regulatory work but there is no formal framework for assessing the quality of licensing and inspection. A number of inconsistencies were identified across Scotland. (**Recommendations (iv)-(vii)**).

### **Measuring efficiency**

SEPA has consistently achieved targets for cost savings from initiatives designed to improve operational efficiency. The measure does not, however, compare all of SEPA's costs with the outputs it delivers and cannot therefore present a complete picture of operational efficiency for the organisation as a whole. SEPA has produced an Information Systems Strategy setting out the core information systems required to monitor its activities. These systems are timetabled for completion in the next two years. Once they are available they should enable SEPA to introduce measures of operational efficiency and to identify more precisely the costs which should be recovered from SEPA customers. (**Recommendations (viii)-(xi)**).

## Background

The Scottish Environment Protection Agency (SEPA) is the national public body responsible for environmental protection and improvement in Scotland. It has a key role in ensuring that Scotland has an environment fit for us and for future generations.

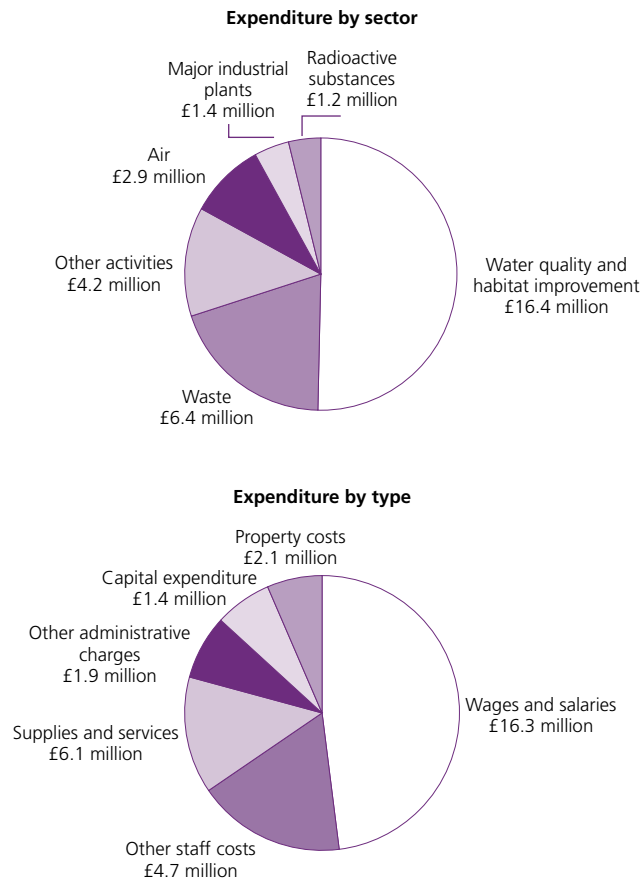
SEPA was formed in April 1996 from a merger of staff from some 60 bodies including river purification boards, local authorities and HM Industrial Pollution Inspectorate. By bringing the various pollution control responsibilities of its predecessor bodies within a single national body, the government expected SEPA to achieve a more coherent and integrated approach to environmental protection and to provide a more streamlined service to industry and the public.

SEPA is responsible for:

- Monitoring the level of pollutants present in the environment;
- Establishing a strategic approach to identifying environmental priorities and action to reduce the level of pollution;
- Regulating potential pollution to land, air and water, the storage, transport and disposal of controlled waste and the safe-keeping and disposal of radioactive materials;
- Providing environmental advice and information; and
- Working in partnership with many public, voluntary and private sector organisations to deliver environmental improvements.

In 1999/2000 expenditure on SEPA's activities amounted to £33 million (Exhibit 1). Expenditure is partly funded by grant-in-aid from the Scottish Executive Rural Affairs Department and partly met from income levied on chargeable activities. In 1999/2000, £19 million of SEPA's total income of £33 million came from grant-in-aid.

**Exhibit 1: Where SEPA spent their resources 1999-2000**



Source: SEPA's Annual Report 1999-2000

Since 1996, SEPA has been developing a structure for reporting its annual objectives and planned activities through a Corporate Plan approved by the Scottish Executive. The Plan sets out operational objectives, descriptions of key tasks, performance measures and targets for each of SEPA's main functions and the environmental media it regulates (water, land and air). The measures and targets provide indicators of SEPA's performance in terms of environmental improvement and for the levels of activity and quality of its regulatory functions. The framework of measures and targets provides a base for SEPA to monitor achievements for its own management purposes and for formally reporting performance to the Scottish Executive.



## Monitoring environmental improvements

Scottish Ministers have defined SEPA's aim as:

*“to provide an efficient and integrated environmental protection system for Scotland which will both improve the environment and contribute to the Government's goal of sustainable development.”*

Each of SEPA's functions is governed by either or both European Commission and UK legislation and each presents its own challenges for environmental improvement and protection. Since 1996 SEPA has been developing strategies for improving different elements of the environment including an Environmental Strategy, two State of the Environment Reports (Improving Scotland's Water Environment and Air Quality Report), and a National Waste Strategy for Scotland (Exhibit 2).

### Exhibit 2: SEPA's functional environmental strategies

#### **Scottish Environment Protection Agency Environmental Strategy**

Published June 1998. Sets out a vision for Scotland's environment and reviews global and national environmental issues. Sets out how SEPA's regulatory duties and their advisory and influencing functions will be used to effect change through national guidelines and working in partnership.

#### **SEPA State of the Environment Report: Improving Scotland's Water Environment**

Published May 1999. Classifies the state of Scotland's water environment. Analyses the causes of pollution and pressure on the water environment. Introduces targets for improving water quality over time and sets out how water quality targets will be achieved through regulation, working in partnership with other organisations and encouraging dischargers to reduce the discharge of effluents below the standards required by the regulatory framework.

#### **National Waste Strategy: Scotland**

Published December 1999. Brings together for the first time waste management issues at a strategic level for Scotland as a whole. Reviews current waste management practices and the key principles which need to be taken into account in establishing a sustainable future for waste management. Supports the concept of a waste hierarchy to identify the most desirable option for waste treatment. Reviews the drivers for change, the key players involved and the constraints to reducing the amount of waste Scotland produces. Identifies how SEPA will use their regulatory powers to control and reduce waste. Establishes targets for landfill (based on 99/31/EC Landfill Directive), for reducing and recovery of waste and for maintaining a forward capacity of licensed waste disposal and treatment sites.

#### **State of the Environment: Air Quality Report**

Published June 2000. Reviews the role of SEPA in regulating air pollution and the duties of local authorities in managing local air quality to meet the objectives and targets of the UK National Air Quality Strategy. Sets out current air quality in Scotland and the impact of emissions on the environment including human health. Reviews strategic and local air quality issues likely to be faced in the future. Establishes SEPA's goals and targets for improving air quality and how these will be achieved.

Source: Audit Scotland

### Meeting current environmental targets

The measures used to monitor SEPA's performance address some environmental improvements set out in two of the EC Directives and one of SEPA's strategy papers (Exhibit 3). Measures of improvements in water quality through reductions in the proportions of rivers, estuarine waters and coastal waters classified as polluted reflect goals established by SEPA in the strategy paper *'Improving Scotland's Water Environment'*. Measures of compliance with standards for bathing waters reflect requirements set out in EC Directive 76/160/EEC. Those for reduction in the proportion of biodegradable waste disposal to non-engineered sites are derived from EC Directive 99/31/EC. There are, however, no measures to monitor progress towards the requirements of other Directives and strategy papers.

In 1996 SEPA identified some 1,600 kilometres of rivers, estuaries and coastal waters as poor/unsatisfactory or seriously polluted. SEPA's targets for water quality are time based and require a 15 to 20 per cent reduction in the length of poor/unsatisfactory or seriously polluted waters to be achieved by the end of 2000 compared to 1996 (equivalent to 1,300 kilometres), while maintaining the quality of existing good quality surface waters. Based on performance to date it is unlikely that these targets will be met.

In 1997 the Scottish Executive initiated a review of beaches and inland waters used for bathing. This increased the number of beaches in Scotland defined as bathing waters from 23 to 60. By 1999/2000, 53 of the 60 identified bathing waters met mandatory standards.

**Exhibit 3: Measures related to SEPA's strategic targets**

Targets	Performance against targets		
	1997	1998	1999
<b>Rivers</b>			
1. Reduce the length of rivers classified as poor and seriously polluted by 20 per cent between 1996 and the 2000	Cumulative reduction of 16 km or 1.2%	Cumulative reduction of 47 km or 3.6%	Cumulative reduction of 52 km or 4.0%
2. Maintain the quality of existing good quality surface waters	45,618 km (312 km or 0.7% less than target)	45,242 km (688 km or 1.5% less than target)	45,464 km (467 km or 1.0% less than target)
Explanation for targets: SEPA grades river water quality using five classifications. The targets require a reduction in the length of rivers with the worst quality classifications (ie, to reduce poor and seriously polluted rivers by 264 km to 1,053 km) whilst maintaining the length of rivers with the best quality classifications (equivalent to 45,930 km).			
<b>Estuaries</b>			
1. Reduce the area of estuarine waters classified as fair/poor and seriously polluted by 20 per cent between 1996 and 2000	Cumulative reduction of 2 km <sup>2</sup> or 3%	Cumulative reduction of 5 km <sup>2</sup> or 15%	Cumulative reduction of 3 km <sup>2</sup> or 6%
2. Maintain the quality of existing good quality surface waters	779 km <sup>2</sup> (0.5 km <sup>2</sup> or 0.6% more than target)	779 km <sup>2</sup> (5 km <sup>2</sup> or 0.6% more than target)	777 km <sup>2</sup> (3 km <sup>2</sup> or 0.4 per cent more than target)
Explanation for targets: SEPA grades estuarine water quality using four classifications. The targets require a reduction in the area of estuaries with the worst quality classifications (ie, to reduce unsatisfactory and seriously polluted estuaries by 7 km <sup>2</sup> to 28 km <sup>2</sup> ) whilst maintaining the length of coastal waters with the best quality classifications (equivalent 774m <sup>2</sup> ).			
<b>Coastal waters</b>			
1. Reduce the length of coastal waters classified as fair/poor and seriously polluted by 15 per cent between 1996 and 2000	Cumulative reduction of 17 km or 7%	Cumulative reduction of 10 km or 4%	Cumulative reduction of 12 km or 4%
2. Maintain the quality of existing good quality surface waters	6,701 km (14 km or 0.2% more than target)	6,701 km (14 km or 0.2% more than target)	6,679 km (8 km or 0.1% less than target)
Explanation for targets: SEPA grades coastal water quality using four classifications. The targets require a reduction in the length of coastal waters with the worst quality classifications (ie, to reduce unsatisfactory and seriously polluted estuaries by 39 km to 222 km) whilst maintaining the length of coastal waters with the best quality classifications (equivalent 6,687 km).			
<b>Bathing Waters</b>			
1. Make continual progress towards full compliance of currently identified bathing waters by the end of the 1999 bathing season taking account of 37 new nominations	18 passes, 5 fails (78% compliance)	12 passes, 11 fails (52% compliance)	53 passes, 7 fails (88% compliance)
Explanation for targets: Physical, chemical and microbial standards for named bathing waters are laid down in EC Directive 76/160/EEC. In 1997 the Scottish Executive initiated a review of beaches and inland waters used for bathing. The review resulted in a further 37 new waters being identified as bathing waters in addition to the 23 already identified. The target measures the number of bathing waters meeting the laid down standards.			
<b>Waste management landfill sites</b>			
1. Reduce the proportion of biodegradable waste disposed of to non-engineered landfill sites by 25 per cent by 2002 compared with 1993	Information not available	Information not available	Information not available
Explanation for targets: Non-engineered landfill sites lack pollution containment systems built in to prevent pollution leaching into surrounding soil. SEPA believes this target has been met but cannot be sure because of the difficulty in obtaining accurate data on the amount of biodegradable waste deposited to landfill in 1993. It has appointed consultants to assist with this work.			

Source: SEPA's Annual Reports

### Developing further measures for environmental improvement

The measures used to assess environmental improvement performance are not complete because they do not reflect all the strategic objectives set out in SEPA's strategy papers. SEPA has begun to develop a performance measurement framework which will do more to provide a clearer link between its overall aim, objectives, strategic plans and operational targets for addressing key environmental issues and the level of environmental improvement actually achieved. This work will involve developing new environmental improvement measures for Scotland reflecting the requirements set out in EC Directives, policies set by Scottish Ministers and SEPA's own strategic priorities. This will be a challenging task and Audit Scotland has offered to provide assistance to help SEPA take this initiative forward.

### Measuring SEPA's contribution towards environmental improvements

SEPA has identified discharges of sewage effluent and agricultural run-off as the main causes of water pollution. Similarly, while weather conditions can affect bathing water quality, a major cause of bathing waters failing to meet the standards is the discharge of sewage effluent to the sea. None of these causes is within the direct control of SEPA. Agricultural run-off is a by-product of farming activity and is not normally covered by licences for the discharge of pollutants into rivers. Sewage effluent can often only be reduced through Water Authorities making significant financial investment in improvements to treatment works.

SEPA contributes to the improvement of water quality through the development of joint action plans with Water Authorities and others, which address specific stretches of polluted waterways. In some cases, these action plans involve identifying the actual sources of discharge causing pollution, and taking a proactive approach to inspection, sampling, education and enforcement to ensure that discharges are eliminated or reduced to consented limits. In other cases, SEPA acts as a source of advice and encourages land and water users to reduce inputs of pollutants to levels which will not affect environmental quality. Local managers allocate resources to take forward initiatives to improve stretches of water during the business planning process, but the performance measurement framework does not include targets or other indicators against which the success of these initiatives can be judged. In devising an appropriate measurement framework it will therefore be necessary to establish a complementary set of measures which clearly identify the contribution made by SEPA on progress towards environmental improvement targets.

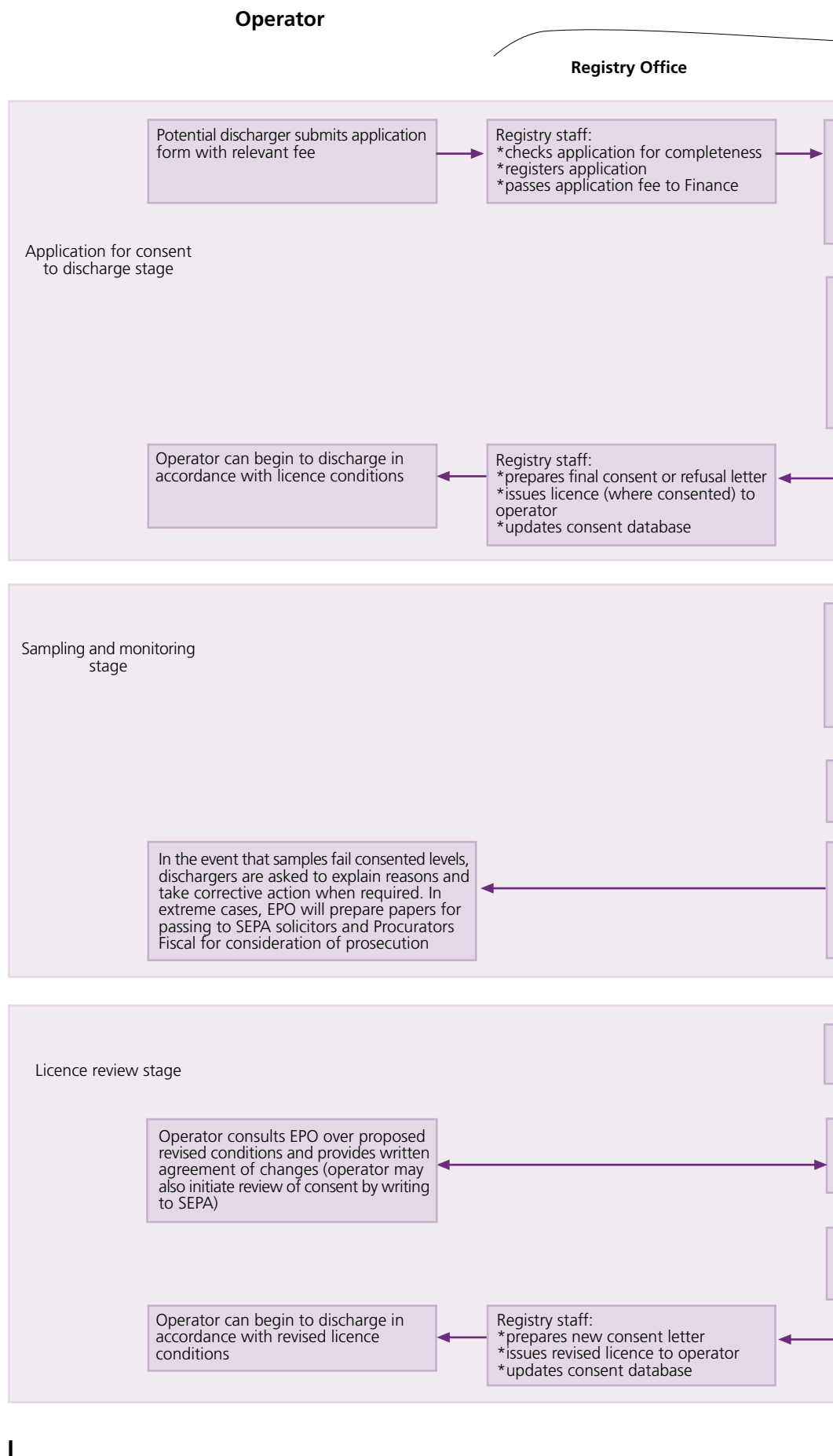
## Regulatory operations

A key role for SEPA is the determination of licence applications. Licences are granted for specific sites and set out conditions for the storage of waste products or the discharge of specific pollutants to the environment. Sites are monitored and inspected on a regular basis and licence conditions are subject to a cyclical review (Exhibit 4). In 1999/2000 SEPA determined some 4,400 new licences, carried out 35,900 inspections on 8,500 sites and installations and took 14,200 routine samples of water to ensure compliance with licence conditions, and reviewed the conditions relating to some 430 existing licences.

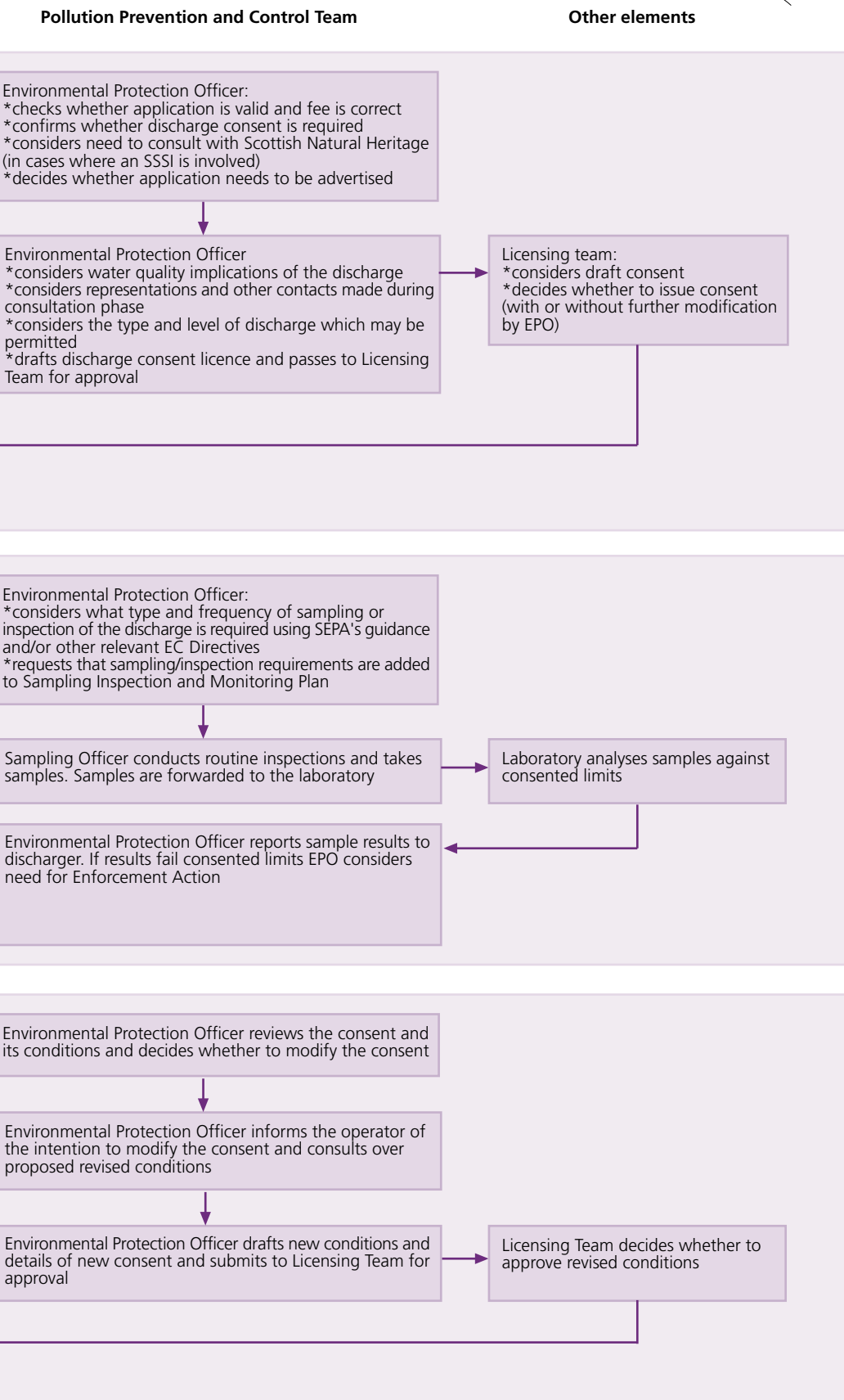
### Measuring regulatory activity

SEPA has nine targets and measures covering the volume of its regulatory activities. Since 1997/98 SEPA has reported general improvement in performance against each of these measures (Exhibit 5). Its Annual Report for 1999/2000 recorded that the mechanisms in place to identify increases in water flow which might lead to flooding were operating satisfactorily; that the number of inspections of waste sites undertaken in the year matched the number of planned inspections; and that the numbers of planned reviews of licences was broadly in line with expectations.

**Exhibit 4: SEPA's role in determining applications to keep or discharge waste, monitoring compliance and**



## Scottish Environment Protection Agency



**Exhibit 5: Performance against operational objectives**

Targets	Performance against targets		
	1997/98	1998/99	1999/2000
<b>Water resource management and flood warning</b>			
1. Operational readiness of SEPA's flood warning systems to be greater than 90% with no single system falling below 80%	Overall 97% operational readiness with one system failing below 80% operational readiness	Overall 99% operational readiness with no system below 80% operational readiness	Overall 98% operational readiness with no system below 93% operational readiness
2. Ensure collection of at least 90% of planned, quality-assured daily mean flows	Information not available	97% collected	99% collected
Explanation for targets: SEPA is responsible for monitoring certain rivers and other waters at risk of flooding and to notify the police and local authorities when flooding is likely. The targets measure the operational readiness of SEPA's systems used to monitor flooding risk and the extent to which measurements of the flow rate of waters susceptible to flooding are taken in accordance with plans.			
<b>Waste management targets</b>			
1. Achieve planned numbers of inspections of waste management sites	No target set: 12,479 inspections undertaken	Target 16,100: 14,225 inspections undertaken (88% of planned)	Target 15,800: 15,779 inspections undertaken (100% of planned)
2. All major landfill site licences to be formally reviewed on a four-year cycle	No target set: 12 licences reviewed	Target 18: 20 licences reviewed	Target 18: 13 licences reviewed
3. Licences for civic amenity sites, treatment sites and transfer stations to be formally reviewed on a five-year cycle	No target set: 145 licences reviewed	No target set: 85 licences reviewed	Target 100: 96 licences reviewed
Explanation for targets: The number of planned inspections and licence reviews are identified through SEPA's annual planning process. Minimum frequencies for licence reviews are laid down in the Environmental Protection Act 1990.			
<b>Integrated pollution control targets</b>			
1. Review all IPC licences on a four-year cycle	57 reviews planned: 21 reviews completed	88 reviews planned: 94 reviews completed	32 reviews planned: 32 reviews completed
Explanation for targets: The number of planned licence reviews is identified through SEPA's annual planning process. Minimum frequencies for licence reviews are laid down in the Environmental Protection Act 1990.			
<b>Local air pollution control targets</b>			
1. Review all LAPC licences on a four year cycle	506 reviews planned: 151 reviews undertaken	468 reviews planned: 502 reviews undertaken	290 reviews planned: 290 reviews undertaken
Explanation for targets: The number of planned licence reviews is identified through SEPA's annual planning process. Minimum frequencies for licence reviews are laid down in the Environmental Protection Act 1990.			

Source: SEPA's Annual Reports



The targets used for measuring the volume of regulatory activity are intended to provide a sound base for comparing operational achievements against standards SEPA might be expected to achieve. They are derived from planning guidance reflecting SEPA policy in implementing statutory and national standards but SEPA recognises that local circumstances can affect the level of planned activity. In these cases local managers can exercise discretion on the basis of a full risk assessment of their situation.

In practice, however, the targets used do not provide a firm basis for assessing achievements because:

- **Some important operational activity measures are not published.** The only operational activity measures published in SEPA's Annual Report are those specifically required to be published by the Scottish Executive. Other important measures, such as the extent to which statutory time limits for processing licence applications are met, measures of inspection activity in respect of Integrated Pollution Control and other regimes, and the number of reviews of water discharge consents, are planned and monitored by management and the results are reported to the SEPA board but not published.
- **Guidance used varies from national standards.** For example the frequency of inspections of waste disposal sites are set down in national standards published in 1994 by the Department of the Environment. The standards reflect academic research on the frequency of inspection necessary to ensure compliance with licence conditions in relation to environmental risks associated with different types of waste sites. The standards are not mandatory and SEPA has decided that the resources available do not allow the standards to be met in full. Planning guidance therefore provides for local managers to decide on inspection frequencies for sites in their area on the basis of a risk assessment of each situation although it is expected that on average SEPA's inspection frequencies will not be greater than 50 per cent of that set down in the national standard.
- **Targets do not address all factors relevant to the activity.** The targets set for inspection and review activity assume that work involved within each unit of activity is uniform. In practice the amount of work might vary significantly. For example inspecting waste sites which are in full use and experiencing operational difficulties will take much more staff time than sites no longer in use, where SEPA's visit may only ensure that the site is secure. However, the measurement system regards the two activities as identical.
- **Local managers' risk management decisions cannot be reviewed.** Audit Scotland's examination of 240 licences found that in 19 per cent of cases the level of planned inspection activity was lower than that set out in the guidance. The reasons for variation from guidance could not be established, however, because local managers did not document their risk assessment decisions.

### Measuring the quality of regulation

SEPA seeks to achieve a uniformly high standard of approach to both licensing and enforcement of licences across Scotland. Policies, guidance and procedures have been produced for all licensing regimes and a comprehensive staff training programme is in place. These are expected to create a framework to ensure that SEPA's regulation is fair, reasonable and equitable across licensing regimes and

operators whilst recognising the need for every application, process, activity or event to be considered on its own merits. Judgement on local factors, within the national framework, is delegated to local management.

There are six proxy measures of the quality of SEPA's regulatory work. These measure the extent to which licence holders are operating satisfactorily within their licence conditions. They also enable SEPA to assess the overall effectiveness of its regulation of licensed sites and to target effort towards those sites which are failing to meet standards. Since 1997/98 SEPA has reported continuing improvement against targets for each of these measures (Exhibit 6).

**Exhibit 6: Measures assessing the quality of SEPA's regulation of licences**

Targets	Performance against targets		
	1997/98	1998/99	1999/2000
<b>Water quality targets</b>			
1. Improve the level of consent compliance for sewage and industrial discharges to 90 per cent by 2001/02 (target was 80% consent compliance up to and including 1999/2000)	No. of samples 1,774 No. complying 1,415 (80 per cent)	No. of samples 1,742 No. complying 1,427 (82 per cent)	No. of samples 1,779 No. complying 1,452 (82 per cent)
Explanation for target: The target measures the proportion of samples of sewage and industrial sewage which meet conditions laid down in water consents.			
<b>Waste management targets</b>			
1. Ensure that 80 per cent or more of waste management sites demonstrate satisfactory operator performance	Operator performance scheme not in place	67 per cent satisfactory operator performance	80 per cent satisfactory operator performance
Explanation for target: SEPA has developed a scoring system to assess operator performance using a range of criteria based on standard conditions laid out in waste management site licences. The target measures the proportion of sites which achieve or exceed a certain number of points using the scoring system.			
<b>Integrated pollution control targets</b>			
1. Ensure that 80 per cent of IPC sites demonstrate satisfactory operator performance	Operator performance scheme not in operation	No. assessments 110 No. satisfactory 99 (90 per cent)	No. assessments 128 No. satisfactory 112 (88 per cent)
Explanation for target: SEPA has developed a scoring system to assess operator performance using a range of criteria based on standard conditions laid out in IPC site licences. The target measures the proportion of sites which achieve or exceed a certain number of points using the scoring system.			
<b>Local air pollution control targets</b>			
1. Ensure that 80 per cent of LAPC sites demonstrate satisfactory operator performance	Operator performance scheme not in operation	No. assessments 931 No. satisfactory 691 (74 per cent)	No. assessments 1,563 No. satisfactory 1,287 (82 per cent)
Explanation for target: SEPA has developed a scoring system to assess operator performance using a range of criteria based on standard conditions laid out in LAPC site licences. The target measures the proportion of sites which achieve or exceed a certain number of points using the scoring system.			
<b>Radioactive substances targets</b>			
1. Achieve 100 per cent checking of compliance with emission/discharge limits at nuclear sites	100% checking of 40 authorisations and agreements in force sites. All within limits	100% checking of 43 authorisations and agreements in force sites. All within limit	100% checking of 43 authorisations and agreements in force sites. All within limit
2. Ensure 100 per cent compliance with dose limits applicable to the critical groups at all nuclear sites. (Critical groups include certain categories of on site staff such as under 18's, pregnant women.)	100% within limits	100% within limits	Information not yet available
3. Achieve 100 per cent assessment of the dose to critical groups at all nuclear sites	100% assessment achieved	100% assessment achieved	Information not yet available
Explanation for target: Radioactive substances licences for nuclear establishments require operators to make returns to SEPA on the level of emissions and discharges. The first target measures the extent of SEPA's checking of monitoring returns against emission/discharge limits laid down in licence conditions. The other targets measure the extent to which SEPA assesses exposure to radioactive substances against plans and the actual level of exposure. SEPA and the Food Standards Agency are shortly due to publish annual statistics showing the actual level of exposure to radioactive substances.			

Source: SEPA's Annual Reports

SEPA has no formal framework for the quality assurance of licensing and inspection work and its performance measures do not directly address the quality of service provided. No process, such as peer review, is in place to ensure that licensing, inspection and enforcement activities are performed consistently across Scotland although some local action has been taken to address this issue (Case Study A). SEPA expects that it will attain the ISO 9000 quality standard by April 2001. This will provide assurance that documentary evidence is available to support measures of quality.

#### Case study A: Peer review arrangements within SEPA's east region

SEPA's East Region has formal peer review arrangements for air pollution control, waste management and water discharge licence applications and reviews. These arrangements provide a vehicle for local managers to submit draft licence applications and licence reviews to regional working groups for peer review before they are submitted to the regional licensing team. The licensing team has a multi-functional officer make-up and is tasked with ensuring the licence delivers environmental protection or improvement in a fair and equitable way. Typical draft licences that are referred for peer review are those that are for a novel process, or those that have been of significant interest in the past; for example those that have a poor compliance record or have been subject to substantial public interest.

Audit Scotland found some evidence that the proxy measures of quality may mask inconsistencies in approach to regulatory work across Scotland:

- SEPA inherited extant licences from some 60 separate organisations which had been previously charged with environmental regulation. Many of these licences varied in terms of the presentation and content of the conditions they contained. SEPA is updating the terms and conditions of licences through the on-going licence review process but until that process is complete the conditions contained in similar licences in different parts of the country will continue to vary.
- An Audit Scotland survey of customers holding 270 licences issued by SEPA found that SEPA was regarded as a professional organisation but some concern was expressed about the consistency of approach to licensing and licence enforcement and about the level of technical competence and experience of some inspectors.
- 34 per cent of a sample of 56 waste sites were judged to be unsatisfactory against standard criteria used by SEPA but only one of the eight offices visited had produced action plans to improve performance. Local offices held no documentary evidence of responses to five of 24 cases where SEPA took action on non-compliance with water discharge licences.

## Measuring efficiency

### Overall efficiency

SEPA reports one measure of overall efficiency improvements; since 1997/98 SEPA has achieved targets for efficiency savings equivalent to three per cent of its operating costs. In the three years to 1999-2000 initiatives contributing to the achievement of the target have resulted in savings of some £2 million (Exhibit 7).

**Exhibit 7: SEPA's Business efficiency targets**

Business efficiency target	Performance against target		
	1997/98	1998/99	1999/2000
Achieve efficiency savings of three per cent on total running costs	Efficiency savings generated £458,000  (3 per cent of total running costs)	Efficiency savings generated £625,000  (3 per cent of total running costs)	Efficiency savings generated £921,000  (3 per cent of total running costs)

Source: SEPA's Annual Reports

However, the measure used covers only inputs, rather than providing an objective comparison of the use of all SEPA's resources against its outputs. It cannot therefore be regarded as a true measure of efficiency presenting a complete picture of changes in operational efficiency achieved by SEPA over time.

### Operational efficiency

Few of the business systems inherited from predecessor bodies proved suitable for the needs of the integrated service SEPA is expected to provide. In the absence of a comprehensive management information system, SEPA has sought to match available resources with the operational activities it is required to undertake through a system of business planning. Audit Scotland found that some key assumptions underpinning business planning were weak and that local managers did not use plans to monitor business activity. Instead they concentrated on achieving measured outputs such as achieving planned numbers of inspections.

SEPA has produced an Information Systems Strategy setting out the core information systems required to provide an appropriate level of management information for monitoring its activities. Key features of the strategy should come on line during 2000/01 and others are programmed for completion by 2001/02 (Exhibit 8).

**Exhibit 8: Information systems being developed for SEPA**

Project	Purpose	Planned development/ implementation timescale
National Electronic Time Recording	To improve monitoring of activities, to better quantify the costs of activities in relation to individual charging schemes and to assist with workload planning	On schedule to be implemented before April 2001
Environmental Licence Management System	To provide a systematic register of environmental permits and associated information as well as a database for recording complaints, pollution events and enforcement action	COPA and Environmental Events modules final development and implementation before April 2001. Remaining modules phased implementation to be completed during the first quarter of 2001/02
Support for laboratory management	Sample tracking and environmental information databases to support laboratory management of samples and to record environmental information	Development and implementation planned for completion during first quarter 2001/02
Air Emissions Database	To provide information on the nature and quality of regulated emissions to the atmosphere	Project is to be re-scoped due to changing business requirements and to focus on IPPC requirements
Database of waste arisings	To provide information to support SEPA's waste management functions and to underpin the development of the National Waste Strategy: Scotland	On schedule to be completed by April 2001
Geographic Information System	To provide a framework for presenting environmental data in a geographic and pictorial format	Implementation scheduled for January and February 2001

Source: Audit Scotland

The introduction of these systems will enable SEPA to monitor where time is spent and to introduce measures of operational efficiency for each of its functions and for 29 area pollution prevention and control teams, each of which faces its own challenges in carrying out SEPA's regulatory activities (Appendix 1).

**Ensuring full cost recovery**

SEPA may levy charges for the cost of activities associated with the regulation of licence holders. Costs include not only those linked with the application, processing and monitoring of licences but also relevant research, technical guidance and policy work. In 1999/2000 SEPA spent £18 million on those regulatory activities classified as chargeable and recovered £14 million. Scottish Ministers expect that, by 2000/01, SEPA should recover all costs of chargeable activities from fees.

In line with the Code of Practice on Access to Government Information and the Environmental Information Regulations, SEPA responds positively to requests for environmental information. SEPA has agreed with the Scottish Executive that it will only charge for providing information that takes more than two hours of staff time to provide. Area offices do not record or monitor time spent on ad hoc information requests although the total time spent can be substantial. Area office managers were aware of the policy of charging for information services but told Audit Scotland that, in practice, few invoices are raised.

The improvements in management information noted above should enable SEPA to identify the full cost of the services it supplies, to set appropriate charges in the light of those costs and to ensure that invoices are raised on all occasions where SEPA policy indicates services are chargeable.





## Recommendations

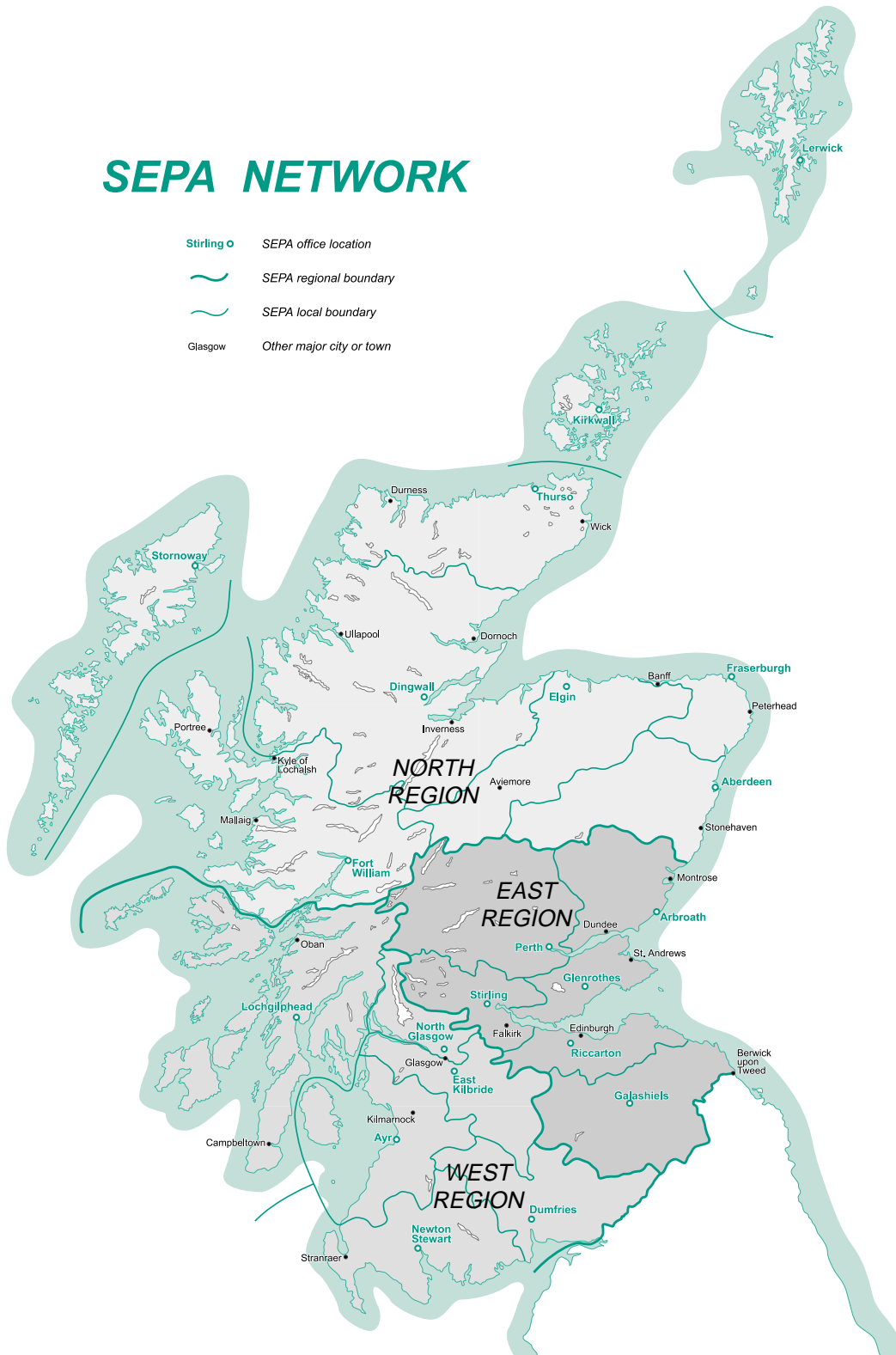
- (i) The Scottish Executive and SEPA should review strategic and management objectives. These should have clear goals and measurable targets which can provide a complete picture of SEPA's performance.
- (ii) Development of SEPA's performance framework should introduce greater focus on environmental improvement and on the environmental outcome of SEPA's regulatory activity.
- (iii) SEPA should use management information already at hand (such as water improvement action plans) to monitor whether its planned contribution to improvements has been achieved.
- (iv) SEPA should extend its quality control procedures to ensure regulatory functions are undertaken consistently and that required standards are met.
- (v) Targets used by SEPA should reflect guidance and provide a complete picture of performance against expectations.
- (vi) Where the planned frequency of inspection and sampling differs from expected levels, the reasons for the differences and the associated risks should be assessed and documented.
- (vii) SEPA should ensure that enforcement policies are consistently applied across all similar types of licence. Where compliance is based on operator assessments, these assessments should be undertaken consistently.
- (viii) The new performance measurement framework should include more meaningful measures of overall efficiency.
- (ix) SEPA should ensure that its Information Systems Strategy delivers the additional information required in the timescales identified.
- (x) The additional information available should be used to provide managers at all levels within SEPA with a clearer view of operational efficiency.
- (xi) SEPA should investigate whether the level of income raised from providing ad hoc advice is an accurate reflection of the resources devoted to such activities.



# Appendix 1

## SEPA NETWORK

- Stirling  SEPA office location
-  SEPA regional boundary
-  SEPA local boundary
- Glasgow  Other major city or town







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