LEGAL ANTIPOLLUTION STANDARDS IN SWEDEN

BY

STAFFAN WESTERLUND

1. INTRODUCTION

In 1969 the Swedish Environment Protection Act (*miljöskyddslagen*, hereinafter referred to as the SEPA) was passed. Together with the Nature Conservation Act of 1964 and the 1973 Act on Products Hazardous to Health and to the Environment, it forms the basis of Swedish environmental law today.[1] There is, of course, much more legislation within the environmental field. But these two acts are the most important and far-reaching.

This paper is confined to the SEPA, being the basic legislation for controlling pollution from industry and other stationary sources. However, the Act on Products Hazardous to Health and the Environment is the only legal instrument available for the control of what is commercially distributed from the plants, that is in the form of products for sale. Sweden has not seriously began to exercise such a control. This means that such pollution from industry is still to a great extent unrestricted.

The SEPA is rather comprehensive. Nevertheless there are important limitations. It applies only to stationary sources of pollution and other nuisance, and not directly to mobile sources. Stationary sources include not only point sources (such as factories, waste pipes, etc.) but also non-point sources (such as pollution leaking from farming land and forestry land). The SEPA itself states that it applies to such use of land, buildings or other constructions as may harm the environment through pollution of surface water (ground water excluded), air, soil, etc., or through other nuisance in the environment originating from the source in question.

Another limitation is that radiation is excluded from the SEPA. Radiation is regulated exclusively by special legislation. Impact from electricity is also excluded from the SEPA. As regards water pollution, such pollution as occurs from construction works in water is excluded. The Water Act

[1] The SEPA is analysed in Swedish by Svärd-Rahmn in *Prövning enligt miljöskyddslagen*, Stockholm 1975, and by Westerlund in *Miljöfarlig verksamhet*, Lund 1975. The Act is translated into English and published together with a summary in *Environment Protection Act. Marine Dumping Prohibition Act. With commentaries. Information to the United Nations Conference on the Human Environment*, published by the Ministry for Foreign Affairs, Ministry of Agriculture, National Environment Protection Board, Sweden, Stockholm 1972.

applies in the latter case. (There are certain modifications to these rules on the application of the SEPA, but I will not elaborate on these here.)[2]

The SEPA uses one common term for everything to which it applies, namely *polluting activity (miljöfarlig verksamhet)*. Hereinafter that term, or the term *activity*, will refer exclusively to activities to which the SEPA applies.

Before 1969, there was no legislation (except for the Public Health Ordinance) which dealt with air pollution and similar issues.[3] As for water pollution, rules have existed since 1941 in the Water Act. Ground water and surface water were regulated separately, and for various practical reasons (though with somewhat impractical results) only surface water pollution rules were taken out of the Water Act and, after some modifications, introduced into the new SEPA in 1969.

The 1969 Act covers pollution of surface water, pollution of air and soil, etc. (with the limitations mentioned). It also covers other kinds of nuisance. As a result different kinds of impact on the environment are to meet the same basic set of standards on precaution laid down in the Act (there are also some special standards applicable to certain types of pollution activities and/or certain situations; some of these will be discussed later).

The subject of this paper is the standards of the SEPA concerning protective measures and the criteria for allowing polluting activity. Before the discussion can start, a few facts must be mentioned concerning decision-making under the SEPA and about the various cases where polluting activities can be examined by an authority under the Act.

2. DECISION-MAKERS

Even if a licence is not required for every polluting activity, nevertheless the SEPA is to a great extent based upon licensing requirements. These have been extended gradually since the introduction into the Water Act of legislation on pollution in the 1940s. Today most polluting activities, which are of common types and the size of which is not inconsiderable, require a licence or an equivalent permit. The details of these rules are not of general interest, especially as they are to be amended in the near future.

[2] When the SEPA was drafted, everyone was in a hurry and there was no time to consider the systematic effects from integrating water and environment law any further than as regards discharge of waste and similar problems. As a result, virtually all impact from construction in water, even if it includes pollution, is still governed by the Water Act.

[3] The basic principle in this ordinance was, and still is, that what is called *sanitary nuisance* must not be caused by anyone. Requirements aiming at preventing such impact are not as rigorous as are the standards of the SEPA.

However, one essential rule still needs to be mentioned, namely that everyone who operates a polluting activity is *entitled* to apply for a licence, even if the activity belongs to a category that does not *require* one. As a result, it is always possible for an operator to obtain a decision as to what protective measures he has to take under the Act. Having a valid licence the operator, provided that he does not change his activity, does not have to meet new requirements within a certain period of time (the main rule is ten years) unless the impact from the activity turns out to be quite different from what was expected.

Correspondingly, everyone who may suffer harm or nuisance from a polluting activity for which no licence is issued is entitled to take the operator to court (the Real Estate Court). The court then has to apply the standards of the SEPA. But the operator can neutralize the lawsuit by applying for a licence for his activity. The court then has to let the case rest until the application has been tried. And the licence, if issued, gives the operator a right to continue the activity.

In all circumstances, compensation has to be paid by the operator; it makes no difference whether he has a licence or not. The liability is strict, but does not cover small impact on the environment.[4] The compensation is decided by the Real Estate Court, and in that respect the lawsuit it not blocked by an application for a licence.

The licensing authorities under the Act have been the Franchise Board (*Koncessionsnämnden för miljöskydd*) and the Cabinet. As from 1981, the county administrations (*länsstyrelserna*) have been empowered to license moderate-sized activities. The Franchise Board (the English name of which is not very apt but is officially used) is a central authority, which—although an administrative body—follows a procedure similar to a court of law. It is situated in Stockholm but conducts hearings at the place of the intended activity. It has a small secretariat that prepares the "cases" but has no supervisory functions within the environmental field. The Board works in several divisions, each one constituting the Board in the individual case, the chairman of which is a judge. There are three other members, namely one technical expert member, one person experienced in issues which are under the supervision of the National Environment Protection Board (*Statens naturvårdsverk*) and finally one person with experience from industry (or—if the case concerns the operation of a municipal activity—from municipal work). The Cabinet appoints the members of the Board, but as regards the members with experience from the National Environment

[4] However, if the operator has caused environmental nuisance because of negligence, he has to pay compensation for that nuisance.

Protection Board, industry and municipalities, proposals are made by that Board and the organizations respectively.

The practice of the Franchise Board is the basic source as regards the application of the SEPA, although its decisions can always be appealed to the Cabinet. It is possible that in the future the picture will change, but so far the principles for applying the standards of the Act, as laid down or used by the Board, have usually been accepted by the Cabinet in the appeal cases (this refers to practice already established by the Board, and not to decisions on issues which have not been decided before). However, there is no systematic investigation that can confirm this general impression.

When this paper examines the basic principles for applying the standards of the SEPA on location, other protective measures and the allowability as a whole, the principles applied by the Franchise Board are the primary sources. But it must be observed that the standards are to be applied by other agencies in their supervisory work, even for activities which do not require a licence, but that for various reasons such application of the standards is often fragmentary. On the other hand, this does not necessarily conflict with the purpose of this paper, since if there is a clash of interests connected with the planning for or operation of a polluting activity, virtually everyone involved has the opportunity to take the activity to either the Real Estate Court or an appropriate licensing authority.

3. SUBSTANTIVE REQUIREMENTS FOR POLLUTING ACTIVITIES—AN OVERVIEW

The standards of the SEPA as regards protective measures and the allowability as such are to be found in secs. 4–7 of the Act. The title of these is sometimes translated as "Criteria of Consent". The standards are organized as follows.

First, according to sec. 4 the best reasonable location must be chosen for the activity. The choice is thus restricted by what best can be labelled as a test of reasonableness. That is to say, the extra cost for the choice of a better location must not be unreasonably high and the range of alternatives must be defined within reason.

This location standard has led to a rather clear and somewhat strict practice by the Franchise Board. This is interesting also because the applications are then examined under criteria that might conflict with—or promote—physical planning in general. The practice will be described in this paper.

Secondly, the principles for protective measures in general are set in sec. 5. In sec. 7, special and stricter standards are set for specific types of pollution sources.

As regards the general standards, a stable practice has been established based on the general principles that each and every operator of a polluting activity has to take all protective measures that are feasible and reasonable with respect to the environment in each case. That practice will also be analysed here.

The principles of the general standards focus on standards of performance and on measures to decrease the emissions, but not on environmental-quality standards. In this respect, Swedish environment law differs from the law of some other countries, which at least partially rely on ambient-air- and/or water-quality standards, etc. Discussions are under way in Sweden concerning quality standards, and there exist a few standards issued as *non-binding* guidelines.

Even if, as mentioned, the SEPA relies on the principle of standards of performance, no numerical standards are laid down in the Act. Instead, the Act only lays down the principles of best available technique, reasonable costs, etc. And then it is up to the decision-making authority to apply these principles and standards with respect to the circumstances in the individual case.

On the other hand, the National Environment Protection Board is entitled to issue guidelines for deciding the standards of performance. Those guidelines are not binding. The actual guidelines only reflect the opinion of the National Environment Protection Board regarding what protective measures are the best within reasonable limits for an average activity of the type in question. The guidelines are to assist the decision-makers, but not to bind them. And they become obsolete as soon as the technical or economic conditions for a specific branch change. This results from the principles laid down in the general standards of the Act.

Thirdly, sec. 6 deals with the criteria when to ban an activity. The basic principle is that if the best reasonable location is chosen, and all reasonable measures under the Act are taken, then the operation will be licensed provided the environmental impact that still occurs is deemed not to be *extensive*.[5] In practice, most activities meet this test and are therefore licensed.

But if the impact is deemed to be extensive, then a licence may be issued

[5] The translation of this term is dubious. The meaning of the term is to correspond to expressions like "considerable". The translation mentioned in footnote 1 above uses the term "substantial".

only if the benefits from the activity are deemed clearly to outweigh the negative impact from it, after the reasonable protective measures are taken. A few cases have met this test and been licensed, but some cases have failed this test and therefore been prohibited.

For activities which might meet this test but the magnitude of which is very great the decisions are to be made directly by the Cabinet. Then the Franchise Board, after having found that this is a case for the Cabinet under this rule, has to pass the case to the Cabinet together with a comment of its own. Such situations almost never occur because of a special requirement for a National Physical Planning licence for certain operations which typically have an extensive environmental impact. Such a licence is binding for the Franchise Board.

Fourthly, sec. 7 requires stricter standards to be met by certain types of water-polluting activities. These standards will not be dealt with in detail in this paper. It may be sufficient to say that they lay down rather precise minimum standards to be met by each activity mentioned in the section.

Finally, sec. 8 gives power to the Cabinet to ban all water-polluting activities in or near specific bodies of water. This power has been exercised a few times in order to preserve the quality of a lake or a stream which so far has not received much pollution. It can also be exercised for parts of the sea, but so far it has not (although this is under consideration as regards at least one region).

This section is sometimes regarded as part of the standards of the SEPA, but it is more closely related to the instruments of the Nature Conservancy Act for protecting certain areas. In this paper these issues will not be discussed further.

Reasonableness is the common denominator when deciding the best location, the standards of performance and other protective measures. Costs for the operation are also, in principle, a common denominator. And because of this, reasonableness can be translated into costs.

The primary task for the Franchise Board and other examining authorities is to deduce from the principles in the SEPA which measures should actually be ordered in the individual case. If a typical activity is examined (i.e., it will not cause extensive impact after the measures are taken, and it is not an old activity still going on), then the measures must not exceed what such an activity in general could afford and still remain in business.

As a result, location and other protective measures, according to the Act

as read in the context with its history, are to be deemed against the same standard of reasonableness, and the costs for the measures can be considered as taken from the same pot. The fact that location is regulated in a section of its own does not change this. And in practice, the Franchise Board usually does connect location and other measures. This should be borne in mind when reading the analysis in this paper. If for some reason another location, deemed to be preferable under the standards of the Act, cannot be chosen, then the money that would have been reasonable for choosing the other location can (in principle) be "transferred" to other protective measures, thus expanding the range of those.

This calls for a feedback in the decision-making process from the issue of protective measures in general back to the issue of location. So, even if the Act itself formulates the standards step by step, beginning with the location, the decision-makers have to start with only a preliminary standpoint as regards location, and then examine which protective measures are to be carried out in the operation in question. Not until then is it decided what will be the actual environmental impact from the operation. In the light of that knowledge, the location can be decided more definitely. (Since there might be more than two possible mixes between location and other measures, the two issues may interact several times before the best mix is found within the reasonable economic limits.)[6]

The entire SEPA is, with the exception of the rules on compensation and penalties, built upon the concept of a reversed burden of proof. This was emphasized very clearly by the legislator. The idea is that the authorities do not have to demonstrate that a certain impact will occur; instead, the mere risk (if not too remote) is to be deemed enough to warrant protective measures or a ban on the activity. Coupled with this is a rule in the Act stating that anyone applying for a licence must demonstrate the effects of the activity and a rule that the Franchise Board has to see to it that the case is properly prepared.

The same principle underlies the Act on Products Hazardous to Health and the Environment, by the way. However, even if this principle is well and explicitly founded in law, the authorities are often reluctant to make use of it—even though in theory they are obliged to do so.

[6] This description exhibits the principles, which can be used to explain many decisions. Judges of the Board have pointed out, however, that the individual decisions in practice are not always so clearly structured as the reader might believe when reading my description. However, the description also corresponds to the standards as laid down in the Act and explained in the *travaux préparatoires* and it does not fit too badly the decisions actually made (in general).

Before turning to the details of the standards, it should be mentioned that the SEPA is constructed and intended to protect public interests (but to some extent also typically private interests) such as health and the ecological environment. Such protection is possible without compensation even to those who are denied the opportunity to carry out an activity which might be beneficial for the operator but harmful to the environment. And since the SEPA applies also to activities started before the enactment of the Act, it is possible, without awarding compensation, to restrict or prohibit such operations too—even if they were once started legally but do not meet the more stringent standards in the Act.

This has been put to practice quite a few times. Old factories which were not able to meet the modern standards of performance have been shut down after examination by the Franchise Board.

Some legal issues concerning older operations will be discussed later in this paper.

4. THE BEST REASONABLE LOCATION

When applying the standard for the choice of location, three questions, deduced from the text of the section in question, have to be answered:

(1) Is the proposed location probably the best reasonable from environmental points of view?

(2) Can the purpose of the operation also be fulfilled with a better reasonable location under (1)?

(3) Will the extra cost—if any—for choosing a better location under (1) and (2) be reasonable?

These questions will be discussed in turn.

The authority is not to be restricted to alternative locations proposed by the operator. Since the SEPA is based upon the concept of a reversed burden of proof, the authority does not even have to demonstrate which other locations would be better. As soon as there is reason to believe that better reasonable locations could be found within reasonable time and to reasonable costs, then the application must be rejected if the operator does not overturn the presumption.[7]

When defining what is a good location, the impact from the activity in the environment and on the interests of people affected shall be the basis.

[7] To borrow a term from the practice under the United States' National Environmental Policy Act, a Rule of Reason also applies in the Swedish Act as regards the range of possible alternatives to consider or to presume. So, even if the Board is quite certain that there are even better locations, but to find one would involve an unreasonable amount of money and time as compared with the environmental benefit from that possible alternative, the Board excludes such an alternative as unreasonable.

The rule requires the best reasonable location from environmental points of view. Thus, *reasonable* and *location* are the key words of this requirement.

As is rather common in Swedish land-use law in general, even the SEPA is largely built upon the principle of disregarding the individual circumstances and opportunities of the operator in question. The relevant factor is instead the normal circumstances and opportunities for the *category of activities* in question. An example may illustrate this point.

If a landowner applies for a licence to have a large number of pigs on his farm, and this farm is located very close to a village so that the impact from it will cause unusually many people harm, the location might be deemed to be a bad one. Suppose that the landowner points out, quite correctly, that he is unable to choose any other location, since this is the only land he owns and the profit from raising the pigs is based upon this very fact. If his individual circumstances and conditions were relevant for deciding the location issue, then there would be no alternative to consider. But if, on the other hand, the Franchise Board is to disregard the problems stemming from the individual circumstances concerning the applicant, and instead only consider the circumstances, etc., which are typical for raising pigs in general, then there might be quite a few reasonable alternatives to consider. Those alternatives require that other people, and not the applicant, shall raise pigs on a better location, but that is not a problem for the Franchise Board. It has only to consider whether the typical costs of raising pigs in general will be unreasonable or not if on a better location, and then disregard the question who is to raise the pigs.

This is the essence of the principle of "objective consideration" laid down in the SEPA, and the effect of it on the choice of location is sufficiently demonstrated by this example. There are enough cases from the Franchise Board to enable one to say safely that this principle is recognized in practice as regards *new sources*. Partially it also affects the examination of existing sources (see, for further details, 7 *infra*).

Also the burden of proof, just mentioned, plays a distinct role in practice when it comes to location. There are quite a few cases where the Board has denied a permit because the applicant has not demonstrated that the proposed location did meet the requirements of best reasonable location. So, at least in cases where conflicting interests appear before the Board,[8]

[8] However, it does happen that the Board is very active itself and does not just sit back listening to information and suggestions as regards alternatives. As a matter of fact, it is the duty of the Board to see to it that the basis for its decision is reasonably good. On the other hand, it goes without saying that in cases where conflicts are articulated the acting parties and persons will introduce information and arguments that otherwise for natural reasons would not be known to the Board, or at least could easily have been overlooked.

the applicant cannot more or less force the Board to accept only those alternatives (if any) that the applicant puts forward. On the other hand, the rule of reason also applies to the burden of proof. The case is proved if there is no distinct reason to believe that there exist better *reasonable* locations.

After having described the rules regarding what impact is to be considered and how to define the purpose of an intended activity, there is still the issue of what costs are reasonable. The SEPA states that some extra cost can be imposed upon the operator in order to site the activity at a better location. How much higher the cost may be depends on what is reasonable under the general standard for reasonableness underlying both the location section and the section on other protective measures. Those general problems will be discussed later, bearing in mind that location and other measures together cost money, the sum of which is to reach the limit of reasonableness.

But there are some specific issues involved in location as such, which should be mentioned. The first issue is connected with the general question of reasonableness, but has some special implications here. If there is a better location, but the extra costs for choosing that better location are deemed to exceed the benefit from choosing the better location instead of the proposed one, then the originally proposed location may be permitted.

The second issue is that the benefit to the public and others from one specific location influences the choice between alternatives. In practice, and explainable with respect to the law, the positive impact from a location is considered and balanced against the negative environmental impact. So, the best way to describe the location standard would be to say that the net impact from each location is compared to that from all others.

This could mean, for an example, that if the benefit as regards employment is high at the proposed location, but at the environmentally better location it is not, then the first location may be approved. But if, on the other hand, the employment factor is the same at both locations (as well as other factors concerning reasonableness), the applicant will not be given a licence at the proposed location, if the alternative is significantly better from environmental points of view.

Thus the principle makes it possible for the authority to consider not only the purpose of the operator with the activity, but also the benefits from the public points of view. Even if this application is not spelled out explicitly in the Act or its *travaux préparatoires*, it is still in full accordance with the policy of the legislator when setting the standards.

5. THE EEST REASONABLE MITIGATION AND OTHER PROTECTIVE MEASURES

As mentioned earlier, the SEPA is based upon individual examinations of every activity, but not on binding, numerical standards. On the other hand, the *typical* operator and activity, and not the individual operator in the actual case, are to be the criteria when defining what is reasonable.

Technically, the Act sets some "levels of ambition", and then lays down the principles for how the examiner shall choose between these. By "level and ambition" I mean standards on protective measures. We can easily, as regards the SEPA, single out three levels. After having described them, I will turn to the choice between them.

The Act states explicitly, to begin with, that when defining which measures to take, the starting point is the best technique that is "possible". By this the legislator did not mean what is possible if all available knowledge was used to develop the technique. Instead it was meant that the best technique already in commercial or equivalent full-scale use—anywhere in the world—should be the reference. Provided that there are no other, more strict economic limits to be considered relevant in the individual case, then mitigation measures are ordered which are equivalent as regards performance to the best technique. (By this rule, the operator is given the opportunity to propose a solution that is really a new technique, and thus he does not necessarily have to use exactly the same technique as the reference method included.)

There are examples in practice of how this principle has worked. If someone in a case introduces the information that there is a new technique in use somewhere in the world which is superior to the existing Swedish ones, then the Franchise Board will take this new method as the reference technique when deciding which measures to order in the actual case.

However, the task of the examiner is not so easy that he can always order the best technique without further consideration. The legislator was quite well informed of the probability that the technical level might often be more advanced than what the Swedish operators could afford. A second level of ambition was therefore taken into the Act, implying that no new source should have to take more expensive measures than what a typical activity in the same branch (or equivalent) of the same size would be able to take without eventually going out of business. We can call this level "economic possibility".

Again we find an example of how the legislator intends to disregard the actual conditions and possibilities of the individual operator in question in

order to make the *typical* conditions and possibilities decide which measures are to be ordered. As long as the examination concerns a new source, the same standards of performance will apply to all activities of the same kind without respect to the financial position of the operator.[9]

However, it must be observed that now, as always when discussing the general standards on protective measures, there is one step left in the examining process, namely the consideration of whether the impact from the activity, after the mitigation measures have been taken, can be extensive. As will be demonstrated later, there is a chance that such extensive impact will occur. If so, the application will be rejected or—sometimes—the operator will be given the opportunity to take more extreme and more efficient and expensive measures in order to make the impact lower than what is considered to be extensive.

So far, it might look as if the legislator has made equal treatment of all operators in the same branch a primary goal, since they all are normally supposed to take all protective measures that are technically and—judged from what was possible for a typical activity of the same type—economically possible. However, there is in the SEPA an important "safety valve", which is to prevent unnecessary costs from being allocated to environment protection. This safety valve can be interpreted literally and with regard to the *travaux préparatoires*, but its existence is explicit only in the practice, especially that of the Franchise Board. It can be described in the following way.

If otherwise typical measures would cost more than the benefit from environmental points of view, the operator is ordered to take less extreme measures. This can also be described as a third level of costs, above which the benefits from the measures no longer match the costs.

There are many examples of this in practice. For example, waste water treatment in municipal facilities in Sweden normally includes mechanical, biological and chemical treatment aiming at a 90% reduction of BOD (Biological Oxygen Demand) and phosphorus. But when examining waste water facilities, especially those by the rivers in the northern two thirds of Sweden, the Franchise Board very often finds that it is not necessary to go so far, because the receiving waters have a high flow and a very low content of phosphorus. To allocate money for reduction of phosphorus would be to throw money into the river, so to speak.

On the other hand, there are situations when the Franchise Board requires even more far-reaching measures than the 90% reduction just

[9] It is possible that these principles are not really applied in all cases. Whether there are conscious deviations from them has not been investigated.

mentioned, namely when the treated water is to be discharged into lakes or other bodies of water which are ecologically highly sensitive.

What can be learned from this example is that less is required from municipalities than what is technically and economically possible; much less where many northern waters are concerned. But if the recipient demands it, the Franchise Board orders measures up to the limit of what is technically and economically possible.

There are also examples from industry to illustrate this. One common situation is when a plant emits noise, but is situated close to other sources of noise such as highways, railroads, etc. Provided that there is no reason to believe that the noise from the other sources will be substantially reduced within a reasonable time, and provided further that the noise from the plant being examined does not contribute significantly to the combined noise in the area, then the Franchise Board will not order noise-reduction measures even if they would be both technically and economically possible.

On the other hand, there is a principle underlying the standards of the Act and derived from the previous rules on water pollution in the Water Act that must be observed in these situations. This is that the operator cannot claim to be free from requirements for protective measures only because the area is already heavily polluted or otherwise affected. One basic object of the Act is to improve the environment where damaged. Combined with the rule that costs that are not necessary from environmental aspects may not be ordered, the law is as follows: As long as there is reason to believe that other sources will, voluntarily or by order, reduce their emissions in the area, the requirements for the source being examined must not be set lower than what is economically and technically possible, with the probable exception that some measures may be postponed until such time as the benefit from those measures will be detectable.

The synthesis of what is said above about the three levels, as regards new sources, is that the lowest of the three levels should—and often does—in fact define what requirements to order in each situation. Quite often the level for economic feasibility will be the lowest level. But sometimes the economic level might be above the level for technical possibility, the surroundings still being very sensitive. Then the technical level in principle will decide which measures should be taken. But it cannot be denied that the Franchise Board as well as the Cabinet has found ways to break through that principle to some extent. This will be discussed shortly.

A briefer way to describe the application of these levels is simply to say that requirements for protective measures must be technically and

economically the best possible, provided that the environmental benefits from them at least match their net costs.

Before turning to the special categories of activities (such as existing sources, etc.), a few more words must be said about the level of technical possibility just mentioned.

Sometimes it happens that the best available technology is not very efficient in preventing environmental damage. In some cases, those problems are solved simply by applying the rule prohibiting such extensive environmental impact as is not outbalanced by other benefits from the operation. But in some other cases such extensive impact will not occur, whereas at the same time the impact ought to be mitigated even if the costs for that would be higher than the costs for the best available technology.

On these occasions, the Franchise Board seems to be willing to give the applicant some time to improve the existing technological possibilities. This is usually done by issuing a licence, and at the same time prescribing that within a certain period of time investigations and experiments shall be carried out and proposals made as regards how finally to mitigate the environmental impact. This practice does not place heavier burdens upon the applicant—from economic points of view—than what is derived from the level of economic possibility, but serves (in this respect) only to make this applicant eventually take measures that (provided they prove efficient) do not cost more, nor less, than the mitigation costs considered *economically possible* for his average competitors.

The exact conditions making the Franchise Board act this way in certain cases, have not been studied in detail so far. Therefore it is not known how often an applicant, because no sophisticated technique is available for the time being, gets away with measures costing less than what corresponds to the level of economic possibility and environmental conditions.

There is, however, another more typical situation when an applicant can get away with less costs than his competitors. That is when the location is such that certain mitigation measures are not matched by environmental benefits from them. This situation is not uncommon, even if in many situations saving money on mitigation in one respect might, at least under the standards of the Act, mean more money for other mitigation measures. The law is constructed to make the examining authority choose a mix of measures which is the most efficient one not exceeding the lowest of the three levels described above.[10] The range of possible protective measures

[10] As stated, this is the construction of the law. There are many cases which could illustrate how this construction also affects the decisions. However, the Board itself does not articulate the decisions in such a way that one could say that the Board always seeks to find the best mix.

available for the examining authority could, because of this, be very important.

So, before discussing how to define extensive environmental impact, this range must be briefly touched upon.

The SEPA itself says that an operator must always limit his activity, and take other protective measures, to such an extent as is reasonable in the meaning defined above. So, if there are no other measures available within a reasonable economic limit, then the activity at least could be limited. This can be done by not operating during certain periods (at night or when the weather conditions are of certain kinds, for example) or by limiting the production quantity.

As regards protective measures in general, they include choice of technology for the production but not changes of the products as such. Of course, typical mitigation measures are included and—regulated in a section of its own, as mentioned above—choice of location. As a whole, the range is very openly defined. So the Franchise Board and other authorities may choose also unusual measures, depending on the kind of activity in question, as long as those measures will decrease the environmental impact from the activity. But in spite of this, situations occur when the Franchise Board rules that it has no power to order a specific type of measures. To some extent this has been studied,[11] and it seems that the Board has not so far developed a clear practice. It is not possible always to fit the decisions on these issues into a general scheme where the decisions harmonize.

But at least to some extent it is a fact that the Board orders measures even to mitigate such impact that was not intended to be covered originally by the SEPA. One example is pollution of ground water, which for some peculiar reasons is covered by the Water Act and not the SEPA.[12] On the other hand, the Board strongly refuses to order measures to restore such environmental conditions as have been damaged before the time of examination, with the exception of situations when restoring the recipient is a way to decrease the future environmental impact from the activity under examination. (As mentioned earlier, this does not influence the rights to compensation for those who are affected.)

All in all, the examining authorities have vast opportunities to order the best mix of measures, including choice of location and limitation of the activity, within the framework of what is economically reasonable. But sometimes, depending on the conditions in the individual case, the total

[11] Persson, Alf, *Olika typer av villkor enligt miljöskyddslagen* (5 § *ML*), the Law School of the University of Uppsala (mimeographed), 1980.
[12] The reason for this state of affairs is the same as mentioned in footnote 2.

measures can be less than what is economically possible even if a new source is examined. This result is reached only if for technical and economical reasons there are no more measures available which are matched by their respective environmental benefits.

As regards expansion of existing sources and the continuing of existing sources without expansion, see (7) *infra*.

6. EXTENSIVE ENVIRONMENTAL IMPACT STILL OCCURRING

The third step in the examining process is, ideally, to check whether or not after the measures taken on the best reasonable location the impact can be tolerated. If the impact is deemed not to be extensive, then the licence can be issued. But if the impact is found to be extensive, then a licence may not be issued unless it is demonstrated that the benefits from public points of view exceed the negative impact.

There are no precise standards on how to define extensive impact in a case. One principle, a rather obvious one as a matter of fact, is however found in practice, and that is that the impact is deemed proportionate to the activity causing it. A very minor activity, such as a small farm where pigs are raised, may in one case be deemed to cause an extensive impact; whereas a big industrial plant, causing severe damage the environment, may be deemed not to exceed the level of extensive impact. This practice is not due to a desire to favour owners of big industry in general, but to the concept of a reasonable relation between the magnitude of the activity and the magnitude of its impact.

Interestingly, it seems that the Franchise Board sometimes—but not as an articulated principle that is always acted upon—also considers such impact as was not intended directly to be subject to the SEPA itself. Once again ground water can be mentioned. On at least one occasion it has happened that an enterprise has been ordered by the Franchise Board to cease a polluting activity, the sole reason being that it might cause extensive damage on a ground-water supply. This activity (a dump) was once started quite legally, and the interest in the ground-water supply was first aroused a few years after the activity had started.

On the other hand, it is possible that the Franchise Board has not identified its own approach in these situations so clearly that it can be generalized to their examinations in general; if so, the problem here is the same as the one mentioned above about the type of protective measures to be ordered.

As mentioned before, some activities will be examined by the Cabinet because both the extensive impact and the benefits from the activity are deemed to be so vast that only the Cabinet should decide upon it. This happens very seldom, and those cases are of no special interest from legal points of view. The reason for this conclusion is that it can be safely assumed that the Cabinet then does not exactly apply the standard of the SEPA in general, but makes rather politically influenced decisions. (However, it must be pointed out that these very few cases have not been analysed in this respect, and also that the Franchise Board, after having heard the facts and arguments in the case, is to give its recommendation to the Cabinet on how to decide.)

One consequence of the rules described is that authorities are supposed not to require more than what is deemed technically and economically possible, and at the same time to deny a licence if the impact, still occurring from the activity, is extensive and not more than outbalanced by benefits from the same activity. But in practice it has happened that the Board first finds that the limit of technical and economical possibility in principle prevents it from imposing higher requirements, even if it is possible or obvious that the applicant does want a licence. Then the Board sets the requirements higher than the principal limit, and so high that the impact will not be extensive in the meaning of the Act. This way the Board lets the applicant choose: either stick to the standards of performance of the Act and thus no licence, or accept more expensive and efficient protective measures and thus pass the test of extensive impact in order to get the licence.

This means that there is in practice a feedback not only between the requirements for protective measures in general and location, but also between the examination of resulting impact and protective measures. This feedback is primarily put to use in cases of older, existing activities but has, as demonstrated, also been applied when examining an application for a new source.

7. EXISTING AND EXPANDING ACTIVITIES

I have chosen to deal specially with these particular but common categories. The basic problem is how to adapt the general principles described above to these categories. It is explicitly laid down that the SEPA applies also to activities in operation before the Act was passed. However,

the *typical* special circumstances for carrying out those activities have to be considered by the examining authorities. These will now be briefly described.

Even if the examiner has to disregard the individual circumstances connected with the personal or similar conditions for the applicant, he nevertheless has to pay attention to the fact that the activity was started at a time when environmental considerations were not as important as they turned out to be later. This does not give anyone a special right to pollute. Instead it only means that the typical extra costs to achieve a certain mitigation result, as compared with that of a new source, must be considered.

This means, in principle, that the level of what is both technically and economically possible for a typical, average *old* source or *old expanding* source has to be defined in the individual case. Once this is done, the basic principles of determining the protective measures can be applied.

In principle, this also goes for location issues. Normally the location for technical, economical and—not least—social reasons in the individual case is bound to the site of the existing activity (this is a typical dilemma for existing sources as such). This does not prevent the examiner from considering other locations, but usually such considerations end up with the statement that the existing location must be accepted. But as we saw earlier this means, on the other hand, that what is saved on the "location account" can be transferred to the "mitigation account". And especially when the case concerns *expansion* of an existing activity, then the examiner must consider the possibility of producing the same amount at another site, even if this measure would mean establishing a new source or expanding another existing one.

As regards the test of whether the environmental impact still occurring after mitigation measures will be extensive, the feedback between this test and decisions on mitigation measures have been put to use quite a few times. This means that, in practice, existing sources very often have had to take measures more expensive than the typical source of the same kind would have to take; but this is due to the fact that otherwise many old sources would in fact cause extensive environmental impact.

A final word on old sources, namely those which have a worse economy than the average activity of the same kind. At least when there are benefits from public points of view, especially as regards employment, the Franchise Board does go lower than the typical standard and instead only orders such measures as the activity itself can afford. However, as far as I know, such *individual* consideration is not given when new sources are examined.

8. CONCLUDING REMARKS

The SEPA has now been in force for more than eleven years, and the organization as regards decision-makers has been changed in 1981. A great many cases have been dealt with by the Franchise Board and a great many issues have been decided which I have not been able to mention in this paper. To conclude, I will try to put the legal principles and problems dealt with above into perspective—a Swedish perspective, admittedly, but still maybe of some general interest.

First, it is easy to see that such activities as are directly decided by the Cabinet are decided upon more freely than those decided by the Franchise Board. Exactly how big the difference is has not been evaluated though.

A special category to observe here, although barely mentioned, consists of activities requiring a special National Physical Planning permit. Such a permit excludes the Franchise Board from conclusively evaluating the location and from likewise considering whether the impact, after protective measures, will be extensive. However, the Board is required to comment to the Cabinet upon the application, and at the same time to give recommendations on how to decide. The Board conducts a hearing before commenting.

This permit system became law at the end of 1972. It is probable, although hard to verify, that the legislator at that time had found the examining procedures with the Franchise Board an obstacle not only to quick decisions but also to decisions based on other values than those that are the basis for the SEPA[13].

However, most polluting activities are still to be examined by other authorities than the Cabinet, and especially as regards the examinations and considerations by the Franchise Board and the National Environment Protection Board the principles mentioned in this paper are normally applied. But one fact must be kept in mind, and that is that there are many decisions, even by the Franchise Board, which could be described as mild and hazy, sometimes even a little absent-minded. Part of the explanation is, I believe, that in those cases there were no major conflicts articulated before the Board and therefore the decision may have turned out to be "a non-principle decision". Also, there are different people involved in the Board's decisions, and they differ more or less in their methods of formulating the decisions. Still, the basic principles demonstrated above will

[13] The Chairman of the Franchise Board, Lennart af Klintberg, disagrees with this theory; see af Klintberg, »Kommentar» (Comments) on my report *Miljöeffektbeskrivningar*, part 3, 1981, p. 53. The report together with the comments are published by *Naturresurs- och miljökommittén* under the auspices of the Ministry of Agriculture.

be applied in cases where conflicts are articulated and the Board has been, so to say, made aware of the principal problems.

It seems fairly safe to say that the standards of the SEPA play an important role. The interpretation, or way of application, of the standards by the Franchise Board seems to have aroused the respect of not only industry, but also of environmentalists. Of course, it would be easy to demonstrate cases and principles where the application has been heavily criticized, but as a whole the Board enjoys considerable confidence.

The most urgent problem in Sweden regarding the enforcement of the standards of the SEPA concerns supervision and criminalization. The amendments of the Act in 1981 aim at solving at least some of these problems. Supervision has been futile, and prosecuting of violators almost nil. Until there are considerable changes in these respects, there is no reason to modify the general standards of the Act which, anyway, have formed a rather far-sighted practice. Opinions in Sweden are divided as regards introducing quality standards as a complement (but not a substitute) to the existing standards of performance. Discussions are also being conducted regarding effluent fees and similar complements.

Furthermore, many environmental problems will not, even to a small extent, be solved until products control has developed to a much higher standard than it has at present in Sweden. In that environmental control sector (basically controlled by the Act on Products Hazardous to Health and the Environment) the main problem right now is the same as with the SEPA, namely not the substantive standards of the legislation, but the poor supervision and the awkward enforcement of the standards already laid down.

But, all in all, the EPA will in fact force most major polluters operating stationary sources to meet high technical standards of mitigation. And furthermore, anyone who intends to start or expand a polluting activity may risk having the application turned down because there are reasons to believe that there can be found locations and reasonable alternatives that would be better from environmental points of view. Equality as regards economical requirements within the same branch is a basic principle, which however may be set aside under certain conditions. And extensive environmental impact that is not balanced by benefits may result in an application being rejected and even an existing activity being shut down. But on the other hand, so long as an operator manages to keep his activity outside the examination of the licensing authorities, he may in fact for that time get off more cheaply—even if his activity is in fact in violation of the general standards of the Act that also apply to him.