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Background: theoretical contributions, eco-labels and environmental policy

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In Section 2.1 we discuss environmental product information schemes (EPIS) in light of recent theoretical developments in the social sciences. In Sections 2.2 and 2.3 we will deal with integrated product policy (IPP) and the shift in focus of environmental policy towards products, with the definition and classification of EPIS and first-party and third-party environmental labelling.

2.1 Theoretical contributions from the social sciences

Lately, sociologists, anthropologists and political scientists have turned their focus more in the direction of consumption. Interest in consumption has traditionally been stronger within economics and psychology, because these disciplines have been used by business to predict consumer behaviour. Today consumer research within the social sciences is multidisciplinary, perhaps reflecting the increasing importance of consumption in modern, or postmodern, societies.

Concepts from consumer research have become part of everyday language in the social sciences. We are familiar with the idea of a 'risk society', 'distinctions', identity', 'conspicuous consumption' and 'compensatory consumption'. Our aim here is to link recent theoretical developments to EPIS. Some perspectives throw new light on the relevance of environmental information, whereas others are more relevant for understanding other aspects of consumption.

EPIS are product information tools. They provide environmental information from producers to other producers and to professional and private consumers about the environmental features of a product. This information can be supplied as quantitative information (e.g. giving 'exact' figures for emissions of carbon dioxide in making the product, percentage recycled components used, etc.), qualitatively (e.g. with use of written descriptions of the provenance of the product) and graphically (through use of various kinds of symbols. Further, information might be multi-dimensional or one-dimensional; labelling can be voluntary or mandatory and its scope might be national, regional or global. The main idea behind these schemes is that information is crucial for consumer choice and that EPIS will make it easier for interested actors to make eco-friendly choices.

The aim of this chapter is to try to see EPIS in a theoretical light. We will review the following set of relevant contributions from social science:

- The theory of ecological modernisation
- The relation between attitudes and behaviour, as expounded by Ajzen and Fishbein (1977, 1980)
- The risk society, as described by Beck (1992)
- The dream society presented by the futurist Jensen (1999)
- Ordinary consumption and the consumption of everyday life, as described by Gronow and Warde (2001)

2.1.1 Ecological modernisation

'Ecological modernisation' is a modern social science 'catchphrase' much used in environmental sociology and in ecological discourse. Ecological modernisation has been regarded as the real principle guiding the World Commission for Environment and Development (WCED), representing a move in the focus of environmental sociology from small, low-technology, rural utopias, a political 'right turn' for the environmental movement and a 'left turn' for industry. It is simultaneously a new name for the main trends in current environmental politics of the European Union and the theory behind that change.

We regard ecological modernisation as a two-dimensional phenomenon. First, we see it as a mainly historical-sociological description of pragmatic changes in environmental policy in some European countries. Second, we see it as representing a more theoretical approach in environmental sociology, conceptualising sustainability for industrialised and rich societies

The 'modernity' aspect of the concept refers mainly to what Giddens usually calls 'simple modernity'. According to Giddens (1991: 15), "Modernity" can be understood as roughly equivalent to "the industrialised world", so long as it be recognised that industrialism is not its only institutional dimension'. This kind of modernity is correlated with a belief in rationality, in science and, more generally, in rational actors and planning. In this context it presupposes at least 'quite rational consumers' (see Section 2.1.3). In the ecological modernisation of consumption we expect consumers to have

some confidence in experts and in macro actors as well as having a general trust in systems they often are not able to understand, such as airlines, hospitals and eco-labelling bodies. The popular critique of science tends to obscure the rather widespread confidence in science-based systems.

2.1.1.1 New politics

In its report *Our Common Future* (known as the Brundtland Report) the WCED (1987) introduced, or at least popularised, the concept of sustainable development. This concept actually entails the idea of eco-friendly economic growth, an idea that would have been plainly absurd to environmentalists in the 1970s and to environmentalists still operating in a 1970s paradigm. The environmental movement might have believed that it could maintain its position and even regain momentum by focusing on the definition of sustainability, but in hindsight sustainability was less about definitions than about a change in practice. As the environmental issue was about to move from the periphery to the centre of political attention, the initiative crossed over from social movements to social elites in business, administration and politics.

Whereas sustainable development might be regarded as representing a UN perspective, with its concern over developing-world poverty, fair trade, social rights and biodiversity, ecological modernisation should be seen as an OECD perspective, focusing on industrial processes and pollution prevention (Strandbakken 1999: 4). The new politics, and the debate surrounding it, seems to date back to around 1980, and it probably achieved its definitive breakthrough as a policy approach in the aftermath of the Brundtland Report.

What, then, are the main elements of this approach? First, and most important, is the idea that environmental measures might be profitable for, and not necessarily a financial burden on, industry. 'Pollution prevention pays' (PPP) and the creation of 'win-win' situations are modern slogans expressing this view (Spaargaren 1997: 12, Weale 1992: 31). Prior to this, environmental problems had to be seen as solvable and elites had to believe that challenges could be effectively met by the present economical-political system. The 1970s idea of 'revolution or doom' was too inflexible to encourage pragmatic environmental measures.

Second, ecological modernisation redefines the relationship between the state, its citizens and business. Environmental authorities seek co-operation with selected social movements and with the more enlightened actors in industry. In addition, participation in legislation and regulation encourages environmentalists and business to seek consensus and step-by-step approaches.

Third, it encourages the more active use of technology and takes a positive view of the role of technology. Last, there is a gradual recognition of the fact that some of the most important environmental problems go beyond the limits of the nation-state, encouraging international agreements and control regimes

This 'new politics of pollution', as Weale (1992) called it, has been quite successful in Western Europe. Industry has introduced clean technology, often with help from state subsidies, and emissions to water and air have been greatly reduced. Specific examples of successful change are the introduction of unleaded petrol (Russel and Millstone 1995; Throne-Holst 2000), the development of phosphate-free detergents (Nork-Staehle 1995; Throne-Holst 1999) and the ban on chlorofluorocarbons (CFCs; Conrad

1995); more generally, there are moves to reduce the amount of municipal waste going to landfill, the treatment of municipal sewage (so that raw sewage is not released into waterways, etc.) and the encouragement of energy efficiency in a broad range of appliances, in industry and domestically (see von Weizsäcker *et al.* 1997). In these and similar fields the new politics of pollution that we call ecological modernisation has been very successful.

The limitations of this approach can be summarised as follows. First, there is a difference between reducing poisonous emissions and reducing emissions of greenhouse gases (GHGs, believed to lead to global warming, or 'the greenhouse effect'), because emissions of GHGs are more a function of overall economic activity. So far, the policy approaches of ecological modernity have failed to effectively address questions relating to the greenhouse effect. This weakness might be generalised as follows: modern societies do things more effectively, but they do increasingly more things.

Second, the general focus on the problems of rich and developed countries deflects attention away from the developing world, world economic systems, distribution, fair trade and so on.

Last, ecological modernity has so far mainly been an approach to changing the production side of the economy. The consumption side has not received the same amount of attention. We will elaborate further on this last point in Section 2.1.1.3.

2.1.1.2 New theory

Theoretically, ecological modernisation remains close to political and economic reality. It mainly describes the broad changes in policy and approach in an attempt to account for the reasons behind these changes. Ecological modernisation theory is based on what might be regarded as common sense and generally tends not to employ very abstract concepts.

The theoretical foundations were laid in Germany in the 1980s, when Jänicke and Huber started to renew the approach to thinking about society and the environment after observing the development of German environmental policy. In his early works, Jänicke strongly advocated state-supported ecological modernisation processes and therefore also an increase in state steering capacity. Innovation, he believed, should be used for reducing environmental burdens through a kind of system-conforming innovation path for environmental policy. His view on agency is summarised by the words of Spaargaren (1997: 14): 'Although ecological modernisation is targeted primarily at market actors and the industrial sector, its main bearer should still be the state'. In his later writings Jänicke has put more emphasis on the new relationships between civil society and the state, a relationship, he believes, results partly from the roles of these two actors in environmental problem-solving.

Huber also discusses the role of the state in promoting environmental change, taking a less optimistic view of state intervention than Jänicke, fearing that such intervention might frustrate the innovation process. However, Huber's main contribution to the field is his break with the 'counter-productivity' or 'demodernisation' theories of Gorz, Commoner, Schumacher, Illich and others that dominated the environmental discourse from the early 1970s (Spaargaren 1997: chs. 1, 3). The background perspective of these thinkers is the Malthus-inspired 'limits-to-growth' perspective of the Club of Rome (Meadows *et al.* 1972), and their solution or response usually advocated zero-

growth, small-scale rural utopias and simpler, more 'humane' technology. Spaargaren (1997: 15) points to this aspect of Huber's work, stating: 'Notice the fact that Huber's theory implies a radical break with the demodernisation ideology in the sense that he calls for a further modernisation of the existing institutions of industrial society'.

This might seem uncontroversial today, but it was a very brave move in the early 1980s. Another aspect of Huber's writings that has remained relevant is his formulation of the 'two processes' of ecological modernisation: the 'ecologising of the economy' and the parallel 'economising of the ecology'.¹ Weale (1992) compares the reaction to acid rain in Britain and Germany in the 1980s. In Germany, this challenge led to a kind of policy renewal and new patterns of co-operation between actors, whereas in Britain there was a lack of policy momentum. Initially, this change in Germany obviously concerned 'the old politics of pollution', using end-of-pipe-techniques and so on, but in the longer run new attitudes were developed and new technology was introduced. At a later stage, ecologically better technology may be expected to be seen as an asset. Weale (1992: 71) concludes that

Since 1980, therefore, Britain and Germany's environmental policies have followed divergent paths of development. Germany has moved from a position of reluctant environmentalism to one in which it is now legislating some of the most stringent pollution control standards in Europe and pressing internationally for more vigorous action on a wide range of issues. The UK, by contrast, has been laggardly in its adoption of environmental measures, and has acquired the reputation in international negotiations of resisting the development of more forceful pollution control.

Weale suggests that Germany was able to compromise and to balance the priorities of clean air and economic reason. However, according to Weale (1992: 76), in the next step, ecological modernisation will build on a new understanding of the relationship between the environment and the economy:

Instead of seeing environmental protection as a burden on the economy the ecological modernist sees it as a potential source of future growth. Since environmental amenity is a superior good, the demand for pollution control is likely to increase and there is therefore a considerable advantage to an economy which has the technical and production capacity to produce low polluting goods or pollution control technology (Weale 1992: 76).

Weale's concept of ecological modernisation reveals him to be as critical of the conservatism of environmental activists as of conservative business leaders. Hajer (1995: 25) points to a rather similar double departure: the discourse that is aware of the structural character of environmental problems but still believes that existing economic, political and social institutions are able to internalise environmental protection.

The two-nation comparative study of Weale brings ecological modernisation literature into themes elaborated in the general 'modernity theory' of the 1990s (Giddens 1991, 1994; Beck 1992). Society's reaction—or lack of a reaction—to the ecological

- 1 Apart from a discussion paper from Jänicke (1985), it appears that Jänicke's and Huber's work in the early and middle 1980s was not translated into English, so their contributions had little impact outside the German-speaking world. To a large extent, it was Hajer (1995) and Weale (1992) who introduced the new concepts to the world beyond Germany, Austria and Switzerland.

challenge is an interesting case of social reflexivity, indicating institutional and ideological conditions for, and constraints on, adequate responses to new problems. Why this reflexivity worked better or more adequately in Germany than in Britain we do not know, but we might speculate on the possible effects of party political and electoral systems and the nature of societal discourse. The greater flexibility and reflexivity of Germany might mean that German society is more 'modern' (more 'high modern', in Giddens's terminology [Giddens 1991: 27-32]) than British society.

2.1.1.3 Ecological modernisation of consumption

As indicated by the above discussion, most literature on ecological modernisation so far has focused on the production side of the economy; however, the perspective is just as relevant to consumption. We might even say that most of the environmental initiatives directed at consumption in the past 10–15 years in the rich countries actually presupposes a 'modern' view of environmental issues. The introduction of 'classical eco-labels' is one example. When Germany initiated an eco-label in the late 1970s the initiative presupposed some consumer and business interest and a general view of environmental problems as being solvable; schemes for waste handling also have to rely on consumer interest and co-operation. At the most general level, an environmental concern with consumption suggests a pragmatic and anti-apocalyptic view of environmental issues. To advocate incrementalism (small changes in a positive direction for a large number of persons) indicates that one believes that it is possible to respond to the challenge even under the present economic-political conditions, and it also indicates a view of solving or at least reducing environmental problems that arise from a great number of small and individually insignificant acts. This is again a break with some of the more radical environmentalism of the 1970s.

EPIS, like eco-labels, are often developed within a multi-stakeholder logic, consisting of, for example, interest-group initiatives, state support, business co-operation and so on. Without the redefined relationship between the state, its citizens and business, eco-labelling would not have come about in its present form. Neither mandatory energy labelling nor successful Type I labels would seem very likely under a political climate such as that of the 1970s, when eco-problems were supposed to be incompatible with capitalism and when it was common 'knowledge' that the environmental challenge would overturn the present system.

As indicated, the same should probably be said about collecting and handling consumer waste. Some sort of state or municipal overall responsibility is common, but co-operation from households and often also from business is necessary. In addition, a degree of green public procurement often seems to be necessary to give eco-labelled and organic products enough volume to survive in the market; again emphasising new relationships between actors.

A corporatist approach to legislation and control in the field of environmental consumption brings interest groups together in ad hoc committees and encourages compromise. This probably gives 'enlightened' business and 'modernised' environmentalists a market advantage (even if this strategy may backfire for environmental organisations accused of corruptibility and sell-out).

As a kind of 'modernism', ecological modernisation of consumption takes a positive view of technology, bringing science and product development into the service of the environment.

2.1.1.4 Some limitations of ecologically modernised consumption

We regard these attempts at developing ecologically modernised lifestyles as positive and as an interesting perspective on the chances of success of eco-labels. There are, however, still some limitations and problems with this approach:

- The pragmatic way solves some types of problems better than others. It generally deals more successfully with matters of consumption patterns than with consumption levels. This dilemma is also present in the race between efficiency and economic growth. We purchase more fuel-efficient cars, but there are more cars and each car covers more kilometres.
- The 'new responsibility' of environmental organisations might undermine their integrity and independence, and at a later date it might jeopardise their popular support.
- It is probably not true that pollution prevention always pays, and expectations that it might create an image of painless sustainability. We might still have to deal with changes that demand effort—perhaps even sacrifice.
- Related to the former point, ecological modernism as a movement has so far—for production as well as for consumption—probably gone for the 'low-hanging fruits'. In the future we might have to pick other fruits, dealing with the volume of activity in society (leading to carbon dioxide emissions and relating to standards of living, etc.) rather than mere product substitution in closed production chains.
- The demand for more environmentally friendly consumer products might work as a trade barrier to developing countries, hindering market access, and therefore may present an obstacle to sustainable development outside the OECD countries.
- The modernist approach (Giddens's 'simple modernity') has a blind spot regarding issues that go beyond use value and exchange value (price) in consumption. When symbolic and cultural aspects of consumption are overlooked or misunderstood, policies will fail and products will remain on the shelves.

2.1.1.5 Ecological modernisation, consumer knowledge and trust

In order to achieve a successful ecological modernisation of lifestyles and consumption practices in the rich parts of the world, parallel to the changes achieved in large parts of the production sphere we have to communicate with citizens as customers and as domestic managers. As mentioned above, this means that in the sphere of ecologically modernised consumption we have to presuppose at least a relatively rational actor, able to seek and process information and willing to act on that information.

Without such an image of the consumer, eco-labels are meaningless. Producers and retailers communicate with consumers via labels administered by third parties. That is the logic behind both mandatory and voluntary ISO Type I labels and, given such a logic, we have to take for granted that labelled products are environmentally better than unlabelled products, that consumers are concerned with the environment in

general and that they are interested in expressing this concern through their buying behaviour. This rationality is, however, supposed to be triggered by simple symbols. This again means that for ecologically modernised consumption, questions of consumer knowledge of eco-labels and of consumers' perception of the meaning of eco-labels are important, as are questions of what kind of information they demand for durables, consumables and services and, more generally, what information sources they tend to trust in environmental matters. These are important questions in any assessment of the ecological modernisation of high-consumption, affluent lifestyles. Consumer trust is important because individual consumers are not able to verify the scientific data from the production process of consumer goods. One important question is how eco-labels should be institutionalised to create consumer trust. Who do consumers trust—the EU Commission, national governments, businesses, the scientific community or environmental and consumer NGOs?

2.1.2 The relation between attitudes and behaviour

A central objective for the social sciences in the past 20 years has been the development of the ability to predict behaviour from attitudes. For many years the theoretical framework and the predicting model created by Ajzen and Fishbein (1980) was the focus of this discussion. Since the early 1980s the model for predicting behaviour based on attitudes and other determinants has been further developed as well as criticised. Within the economic psychology and the marketing disciplines, Ajzen and Fishbein's perspective or paradigm still plays an important role. Their point of departure is that most actions of social relevance are under volitional control. The central element in the model is that behavioural **intentions** are the immediate determinant of behaviour. Intentions are based on two dimensions: attitude towards the behaviour, and subjective norms.

With subjective norms the authors refer to the perception of the social pressure put on the individual to perform or not to perform the action. The attitudes are more concretely determined by a set of **behavioural beliefs**, concerning the possible consequences of the behaviour, and by the evaluation of these beliefs. This model was developed further by Ajzen (1991), in his theory of perceived behavioural control, to include behaviour that is not under complete volitional control—representing a new, third, independent determinant of intention and behaviour.

Other authors have developed the original Ajzen and Fishbein model further by introducing moderators of the attitude–behaviour relationship, where one important element is the involvement with attitude object and another is the strength of the attitudes (Alwitt and Berger 1992). Central variables include attitude accessibility, experience with the attitude object, attitude confidence and the amount of information available in memory.

However, even if all these critical elements have contributed to the improvement of the model, they have criticised the attitude–behaviour paradigm from within. These improvements have been necessary because the model had problems with the main intention: to predict consumer behaviour.

This is still the main critique against the Ajzen and Fishbein model; even the improved model is too simple to predict the complicated behaviour of modern consumers. The critique is developed along two dimensions. First, it is argued that individ-

ual consumers do not behave in the rational ways the model presupposes. Second, the context of social behaviour is missing in the model. Consumers are not merely individuals; they belong to households or communities with values and norms, and they act within a political and economic context created by businesses and political authorities.

We find this critique relevant, even though we have respect for the strength of Azjen and Fishbein's original model, as long as it is used within the context of product-related choices in the marketplace. In our opinion it is possible to develop the critique one step further. Within the paradigm of economic psychology, consumers are synonymous with customers, but this is not necessarily the case. Consumers might have interests and attitudes that go beyond the market. Environmentally concerned consumers might regard environmental impact as more important than price. Consumers might refuse to buy French wine and cheese because of opposition to the testing of nuclear arms, and so on.

It is also possible to question the direction of the relationship between attitude and behaviour, where behaviour is the **dependent variable** in the model of Ajzen and Fishbein. We argue that in some cases this relationship can be turned upside down, with behaviour as the **independent variable**. When you start to recycle paper, because the local community has decided you have to do it, you will soon realise that you use or receive large quantities of paper for packaging, advertising and reading. This discovery could, in a next phase, influence your attitudes to the environmental question in general and more specifically towards forest conservation and paper production. However, the logic of EPIS nevertheless probably has to follow the scheme where attitudes trigger behaviour. Eco-labelling is a guide for translating values and attitudes into practice. Thus we presuppose that the attitude comes first and that buying eco-labelled products is an attempt to bring behaviour in line with attitudes.

2.1.3 The risk society

Much attention in environmentally concerned sociology, political science and journalism has recently focused on Beck's concept of the 'risk society' (1992).² The basic idea behind risk society is that, today, we are to a large extent exposed to human-made risks. This does not mean that it is more dangerous to live today than it was in older times; rather, the opposite. It means that individuals in premodern times feared famine, natural catastrophes, illness and wild animals, whereas now they fear products of civilisation such as toxic waste, nuclear disasters, 'mad cow disease' (bovine spongiform

- 2 Beck's work is not without problems. One point is that he is very hard to read, with many metaphors and presupposing much advanced knowledge in the reader. More importantly, the tabloid success of the book—partly resulting from the German version being published a few weeks after the nuclear accident at Chernobyl—has created confusion as to what the book is all about, and to what the 'risk society' is all about. The subtitle, 'Towards a New Modernity', is actually much better, because it relates better to the content of the book. It is really a book about 'high' or 'reflexive' (perhaps even 'post') modernity, and Beck is more concerned with unemployment than with toxins. He makes more references to nuclear *families* than to nuclear *risks* and makes twice as many references to *gender* than to *chemical industry*. He is studying the same kind of 'reflexive modernity' as Giddens (1991)—reflexive because it is modernity concerned with itself and because society as well as personality are objects of conscious intervention.

encephalopathy [BSE]), polychlorinated biphenyls (PCBs), mercury and so on. Modern risks typically result from attempts at controlling risk, such as when an insecticide such as DDT (dichlorodiphenyltrichloroethane), developed to protect crops, becomes hazardous to birds. The concept of risk society means more or less the same as Giddens's concepts of high modernity or reflexive modernity. Beck has some very interesting observations on the role of science in modern society, and he forcefully demonstrates how natural sciences today may become entwined with moral or social sciences. He gives a vivid description of how modern society is becoming more and more dependent on science, and simultaneously more and more sceptical of its claims, and more and more aware that 'truth' is at best a preliminary concept. This 'Janus' aspect of science is relevant to questions of trust in information sources and eco-labels. Here, Beck has clearly contributed to the sociology of science. In the big picture, he probably has to be regarded as a modernity theorist, much in the same tradition as Giddens. What sets Beck apart is his pessimism and his rather apocalyptic way of expressing himself (the first part of the book is called 'Living on the Volcano of Civilisation').

Is he, then, also in line with ecological modernity? Again, it is problematic to compare a pessimistic and apocalyptic theory with an optimistic and pragmatic theory, 'eco-alarmism' with ecological modernisation, but most of Beck's more specific points on science, on technology and on reflexivity seem to encourage the expansion of the scope and content of existing theories on modernity (Spaargaren 1997: 106).

His policy recommendations are in line with perspectives from ecological modernisation, even though he has a more conflict-oriented view, emphasising the need to encourage 'sub-politics' and popular resistance, encouraging democratisation of techno-economic development. His criticism of present conditions never takes the form of a return to 'simpler' societies. Beck is aware that even utopia is a knowledge-based, productive high-technology society.

Beck's contribution to environmental sociology and to the environmental discourse is important but hard to categorise. His popularity makes him 'hard to see', and his pessimism colours his writings. The risk society concept creates misunderstandings, and a mass media focus on pollution diverts attention from Beck's subject matter. Nevertheless, we regard his work as making a contribution to ecological modernity.

Finally, it appears as if the political consequences drawn by Beck are rather similar to those drawn by Weale, Huber and others: use (democratically organised) science to control the risks of science; increase political control over technological development; encourage new forms of co-operation between interest groups, social movements, stakeholders, scientists and political bodies; and make science more politicised and politics more sensitive to science.

The set of recommendations and comments on the consumption side of ecological modernism should be relevant to Beck's work. Multi-stakeholder co-operation to develop EPIS seem to be in line with his policy recommendation. More important is his rather sophisticated view of the relation between science and politics—using science in ecological discourse yet remaining critical of it, being aware of even natural science as politically and socially constructed.

2.1.4 The dream society

Another perspective is that of the 'dream society'. This theory, developed by Jensen (1999), is a rather controversial, and superficial, theory, where especially the title of the phenomenon—the dream society—may function as an obstacle for many readers and researchers. With a very broad brush, Jensen draws human history beyond the information society. The icons and the heroes have changed from hunters and farmers to factory workers and computers. In the dream society the icon is the history, and the hero is the man or woman able to tell a good story!

Jensen is truly inspired by the postmodernist 'tradition', where the symbols are the clue. Goods are not produced and consumed (mainly) for material reasons in affluent societies but for emotional reasons. Future products have to appeal to people's hearts more than to their heads. That is why, he believes, we are moving beyond the information society—the computer appeals only to our heads. His main idea is that industries and business that do not understand this fundamental change will, in the long run, lose the market competition. The market for physical products is diminishing; the market for dreams is growing.

However, the dream society is not a postmodern project, because Jensen links the dream society to traditional ethical and even political consumer values. Jensen is not arguing that these values are unstable and shifting constantly among consumers searching for another new identity. On the contrary, he is talking about more stable and traditional values. However, inspiration from the postmodernists is found in the concept of symbols and meaning.

His introductory example is highly relevant to EPIS—that of the production of eggs. Eggs are produced in many ways and of various qualities. In Denmark, eggs from free-range hens have conquered over 50% of the market, and the consumption of organic eggs has increased substantially in recent years. Consumers do not want eggs produced in small cages; they want hens to have access to earth and sky, in the old, traditional, ways—and they are, to a large degree, willing to pay the extra price of 15–20% for these eggs. The reason for this is—according to Jensen—that consumers love the story behind the free-range hens and dislike the story behind the conventional industrially produced eggs. If you are served an omelette made from eggs from free-range hens, together with organic bread, you will probably be told the positive history both about the eggs and the bread. If you are served conventionally produced products nobody will tell you because that is not really a story. Some Danish retailers have used both positive and negative labelling as a tool for increasing the consumption of eggs from free-range hens. The negative marketing has been especially effective. Who will buy eggs produced by hens in tiny cages?

The main message from Jensen is that consumers link positive or negative histories to their goods and services. Consumers prefer the good histories. They want to look at themselves in the mirror without shame. This is a trend that is developing slowly, but constantly, like the movement of a glacier. If businesses worldwide are not prepared for this trend, they will lose, perhaps even without knowing why, because they are producing and marketing their goods in the same, 'traditional', way. However, consumers will increasingly be concerned with the ethical, political and environmental aspects of production and distribution of consumer goods, asking: Are the industries using child labour? Are they taking care of the environment at the local and global level? What are their attitudes and behaviour concerning human rights?

The theory of the dream society is controversial. The main criticism has been that it is not based on empirical research, only on selected positive ‘histories’, and, even if the tendency is correctly observed, many will argue that Jensen is vastly exaggerating the change. However, he seems to have identified an important driver behind eco-labelling. Positive eco-labelling is offering positive histories for consumers to tell about themselves, to others and to themselves. The higher price for (or reduced convenience of) eco-labelled products should be balanced by a ‘feelgood factor’ of the kind that Jensen has identified. Different types of ‘green consumerism’ will work much better when connected to positive identities, good ‘histories’ and dreams.

2.1.5 Ordinary consumption and the consumption of everyday life

Some years ago, Gronow and Warde (2001) focused on a very important phenomenon in the green consumption discourse. According to Gronow and Warde, during the 1990s the focus of consumer research went from **spectacular** to **ordinary** consumption, and that consumption is about the everyday life of ordinary consumers and should be reflected more in contemporary research. They used the history of consumer research to place their contribution within the main trends in social sciences.

The sociology of consumption has developed in phases. Critical theory dominated the 1960s and 1970s, inspired by Marxism, neo-Marxism and the Frankfurt school. Consumption should fill only the basic needs, and consumers were victims of the manipulative advertising industry. The main concept was **compensatory** consumption. The postmodernist trend of the 1980s and 1990s changed this picture completely. Consumption is no longer seen as a question of basic needs but as a cultural matter. Consumers are not viewed as victims but as active searchers for new identities and symbols. The main concepts are conspicuous consumption, distinction, identity and creativity.

The new platform is not built on a criticism of postmodernism and critical theory—central elements of these ‘schools’ survive in this new paradigm of consumers and consumption for a new century. However, Gronow and Warde argue against the elitism of critical theory and the focus on spectacular consumption in postmodernism. We must not forget that consumption in modern societies to a large degree is the mass consumption of ordinary products, with few opportunities for excitement. Their criticism—especially of the postmodern tradition—is developed along the following lines. According to Gronow and Warde (2001: 4), postmodernists:

- Highlight extraordinary rather than ordinary items
- Focus on conspicuous rather than inconspicuous consumption
- Are interested in individual choice rather than contextual and collective constraint
- Study conscious, rational decision-making rather than routine, conventional and repetitive conduct
- Describe purchase decisions too narrowly rather than looking at contexts of appropriation and use

- Focus on commodities rather than other types of exchange
- Consider individualistic personal identity rather than collective identification

Gronow and Warde are inspired by anthropology, where routines of everyday life have always played an important part. Their other main concern is to link modern studies of consumption to classical sociology, most notably to the work of Weber (1914) and Bourdieu (1979).

For the long-term establishment of EPIS, we focus on individual consumer choices in the market of consumer goods and services. EPIS are supposed to guide consumers in their everyday life, making their choices easier and more rational. Gronow and Warde tell us that it is not primarily a matter of reflexive consumer choice but a matter of routines, where selection of goods might be based on choices taken many years ago. If the challenge is to change everyday routines in a more environmental direction EPIS may have a part to play. If the management of household waste is among the success stories of environmentally concerned consumption, it is also because the sorting of different waste fractions has become an everyday routine in life for many people. It is environmentalism built into low-involvement practice rather than extraordinary acts. Here, we might see a difference between *introducing* new habits and *maintaining* those habits.

2.1.6 Concluding remarks: environmental product information schemes and recent trends in social sciences

We have seen that different theoretical approaches throw some light on EPIS. Eco-labels somehow cross the modernity–postmodernity divide because they simultaneously play on rationality and the attitude–behaviour model and on symbolic consumption and dream society concepts. We might want consumers to engage in ecologically modernised consumption and to internalise environmental consciousness in ordinary consumption patterns but we still want to highlight an eco-friendly lifestyle as a positive identity, and we also want the eco-label to work as a symbol, much in the same way as brands operate.

The challenge is to use consumers' concern for the environment to change their habits: first via the symbolic signal aspect of the eco-label and then by integrating more environmentally acceptable lifestyles into their everyday routines. But, even after the new habits have become routines, we expect citizen-consumers to maintain a reflexive view of science, and of societal change, and we even expect them to maintain their environmental concern; on the one hand, we expect them to incorporate environmentally responsible behaviour as an everyday habit and, on the other hand, associate it with a positive value-laden orientation. This might be hard to achieve.

2.2 Environmental product information schemes: definitions and classification

EPIS have become a widespread communication tool with the aim of providing professional and private consumers with information on the environmental characteristics of products and services. EPIS are also an important tool for environmental policy-makers. But how can EPIS be a suitable (policy) tool to cope with environmental challenges? Market failure has been identified as one main reason to argue in favour of additional environmental product information. Market failure is due to so-called asymmetric information among market participants. In general, the argument states that there is a lack of knowledge and information on specific characteristics of products among retailers and, in particular, among consumers, whereas producers, when developing and manufacturing products, accumulate detailed product information with regard to the technical, quality and, potentially, environmental features of their products. This asymmetric allocation of information puts consumers at a potential disadvantage when making their purchases. But why are consumers interested in information on products? Beales *et al.* (1981) relate the interest of consumers in product information to the simple fact that consumers demand 'purchase satisfaction', the definition of which may vary according to motivation. One consumer may be interested in environmental information because of individual safety and healthcare; another may be trying to minimise environmental pollution caused by 'their' products.

2.2.1 Environmental product information schemes: coping with asymmetric information allocation

Product information is in most cases asymmetrically allocated between buyers and sellers (Karl and Orwat 1999: 114). According to Nelson (1970) and Darby and Karni (1973), consumers are not able to judge all qualities of products. Nelson introduced the differentiation between search, experience and credence goods (and qualities):

- **Search attributes.** Product information is available for demanders prior to purchase when buyers are willing to search intensively for that information. The main challenge to buyers is to inform themselves in advance of the purchase act (transaction costs). In general, environmental quality aspects do not belong to search attributes.
- **Experience attributes.** Product information is based on experience the purchasers have in the usage or consumption phase of products. That is, product quality aspects can be provided only after the purchase. The buyer is only able to learn during product usage whether or not he or she is satisfied with the product attributes. Again, environmental issues rarely fit into the category of experience attributes.
- **Credence attributes.** Product information is based on credence or trust in the product's attributes, no matter whether this is obtained prior to or after purchase. Such product characteristics cannot be identified merely by using a product. One needs more detailed information than the product itself is not

able to give. Most environmental qualities of products fall into the category of credence attributes because, for consumers, the transaction costs of investigating the wide range of ecological impacts caused by the product are not feasible or may even be prohibitive. Consumers cannot usually gauge, for instance, the environmental impact of a product during its production process, because such information tends to be available to the producer only. Such information is in most cases therefore a private good of the firm (Karl and Orwat 1999: 115).

In order to cope with asymmetric information, consumers need external support in purchasing experience and credence goods. Eco-labels and EPIS claim to fill the information gap that so-called 'credence goods' leave behind, providing information transmission. Under normal circumstances, the information delivered to professional and end-consumers cannot be judged to be valid either prior to or after purchase; justification of the information requires the products to be tested to make the environmental performance obvious—a procedure not feasible because of the high transaction costs.

EPIS and, in particular, eco-labels therefore aim to establish a reliable and trustworthy information system on product features. They are based on the belief in the rational behaviour of the target groups and the influence this rationality has on decision-making. Since consumers are not able to judge the validity of the environmental information by itself, they require information resources they can trust. Scrutiny of the validity of environmental information results in a scrutiny of the validity of the information resource—that is, of the procedure of how this information is generated. It becomes clear that, through EPIS, consumers become able to judge the reliability of environmental information content by judging the reliability of the third-party information schemes concerned. Reliability and trust in information disclosure schemes is thus a crucial issue of EPIS—at least in terms of distributing (previously asymmetric) information among producers, retailers and consumers.

Influential EPIS activities, therefore, rely on both market efficiency and environmental effectiveness (for more detail, see Section 8.2). Though the general objective of EPIS to be efficient and effective is widely acknowledged, opinions differ whether 'real-world' EPIS are able to be so. Cautious estimates show it is difficult to tell how much EPIS have already contributed to reducing environmental impacts, since environmental benefits will be achieved only gradually, over the space of years (Yang 1998: 7). Others even state a 'perverse effect' caused by EPIS, stating that the

adoption of green production processes and the supply of more environmentally benign products may be accompanied not only by conservation of conventional production lines . . . but also by an increase in investment in 'polluting capital' before the adoption of the technology required to submit products which qualify for the label (Dosi and Moretto 2001: 121).

2.2.2 Towards a classification of environmental product information schemes

But what is the ‘real-world’ landscape of EPIS? Several attempts to categorise environmental labelling have been made. One can differentiate EPIS according to programme type, participation access, label type, level of information content or type of regulation. The US Environmental Protection Agency (US EPA 1998), for instance, chose regulation, concluding that the most important aspect is whether or not a programme relies on first-party or third-party verification. First-party verification is performed by marketers on their own behalf to promote the positive attributes of their products, whereas third-party verification is carried out by an independent source that awards labels to products based on certain environmental criteria. In a second step, the US EPA further classifies third-party labelling as either mandatory or voluntary, resulting in the issuing of report cards, the awarding of a seal of approval or of a single-attribute certification (see Fig. 2.1).

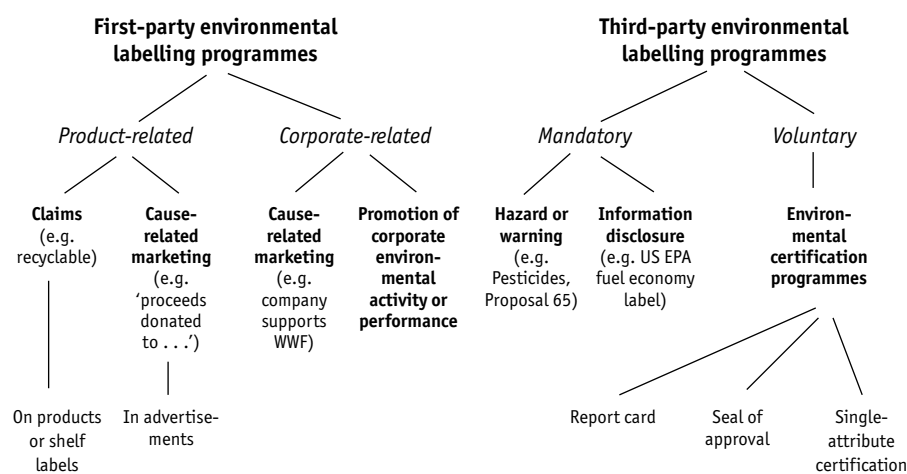


FIGURE 2.1 Classification of environmental labelling according to the United States Environmental Protection Agency

Source: US EPA 1998: 10

The classification includes not only product-related but also corporate-related environmental labelling programmes, particularly among first-party schemes. What can be seen at once is the fact that first-party environmental labelling programmes are first of all voluntary programmes—or, better, initiatives—established predominantly by firms or business associations.

In our opinion, a classification of EPIS should therefore first of all focus on the mandatory compared with the voluntary approach of the schemes, as this is the first and principal level of differentiation. Mandatory labelling is always independent third-

party labelling, whereas voluntary labelling can be both first-party and third-party labelling.

Mandatory EPIS are prescribed by law. Every producer or retailer introducing products in the market is obliged to fulfil prescriptions on the provision of product information. Compulsory product information refers most often to the health and safety aspects of products, giving details of chemical substances contained within the product or information on the proper usage and disposal of the product. Among mandatory EPIS, one can distinguish four types (Rubik and Teichert 1997: 261).

- **Declarations of content** aim at informing consumers of the composition of products and substances. The information can be used by consumers to influence their purchase decision. Requirements for the declaration of contents are widespread in the area of food or chemical products.
- **Usage and disposal information** aims to inform consumers on the health and/or environmental risks during the use or disposal of the product. Again, mandatory usage and disposal information is most common for chemical substances and products (e.g. including details relating to risk and safety issues).
- **Product labelling** in a narrower sense refers to compulsory labelling using simple symbols. It aims to inform consumers on specific product characteristics. In the EU the best-known mandatory labelling symbols are the so-called 'danger symbols' as prescribed in Annex I of 67/548 EEC. The danger symbols have to be given on containers of chemical substances and products (e.g. of glue, batteries and paints).
- **Certification of conformity** states that a product fulfils specific (regulatory) requirements when it is introduced in the market. The most significant certification of conformity in the EU is the so-called CE sign, which indicates that labelled products fulfil all legal prescriptions. The CE sign is mandatory for, among other items, toys, construction products, machines, safety equipment and telecommunication installations.

In contrast to compulsory product EPIS, voluntary EPIS leave to market actors the decision of whether to sign or label products with environmental information. Currently, there is a wide range of voluntary EPIS (e.g. voluntary seal of approval programmes, single-attribute programmes, hazard warning programmes, information disclosure programmes, environmental self-declaration by individual firms or test reporting).

Much effort has been made by the International Organisation for Standardisation (ISO) to structure environmental labelling. ISO is made up of national standards institutes from countries in all regions of the world intending to develop voluntary technical standards that add value to all types of business operations. In 1993 a new technical committee (ISO/TC 207) was established to take over responsibility of developing environmental standards placed in the so-called ISO 14000 series. Published documents and ongoing work address the following areas: environmental management systems (EMSS), environmental auditing and other related environmental investigations, environmental performance evaluation, environmental labelling, life-cycle assessment (LCA), environmental aspects in product standards and terms and definitions.

With regard to EPIS, ISO/TC 207 has developed three types of voluntary label, Types I–III. A Type I programme is a

voluntary, multiple criteria-based third party programme that awards a licence authorising the use of environmental labels on products. These indicate the overall environmental preferability of a product within a particular product category based on life-cycle considerations. These labels provide qualitative environmental information (ISO 1999a: 1).

Such labels are covered by ISO 14024, published in April 1999 (ISO 1999a).

A Type II claim is a

self-declared environmental claim made by manufacturers, importers, distributors, retailers or anyone else likely to benefit from such a claim without independent third-party certification (ISO 1999b: 3).

They are covered by ISO 14021, published in 1999 (ISO 1999b).

Type III data is

quantified environmental data for a product with pre-set categories of parameters based on the ISO 14040 series of standards, not excluding additional environmental information provided by a Type III environmental declaration programme (ISO 2000: 3).

They are covered by the technical report ISO TR 14025 published in March 2000 (ISO 2000).

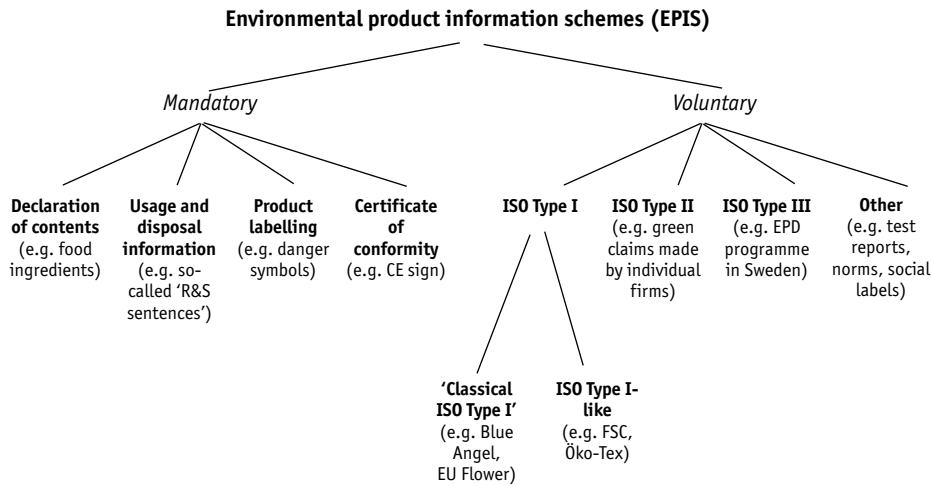
Thus, in its differentiation of environmental labelling, ISO does not encompass the whole labelling landscape. It omits instruments such as obligatory labels, test reports and trademarks, and other interesting issues that are of some importance, such as social affairs, are not included.

Within eco-labelling, Type I labels can be seen as making a positive statement that identifies products and services as less harmful to the environment than products in the same product category that do not carry such a label. Eco-labelling is fundamentally different from the setting of minimum product standards or requirements, the key difference being to reward environmental leadership. Eco-labels include multi-issue environmental labels that cover different aspects of a product or service based on life-cycle considerations.

Currently, it is not clear which of the actual labelling programmes or environmental claims refer explicitly to the three ISO types or act in accordance with ISO 14024, ISO 14021 and ISO/TR 14025 and which of the label programmes do not. Thus, in order to analyse the proliferation of ISO Type I information schemes it is necessary to introduce new categories, since very often it is not altogether clear whether a programme refers explicitly to ISO 14024. We propose the following classification:

- **Classical ISO Type I approaches.** These are third-party labels referring—explicitly or implicitly—to the standard and/or meeting most of the requirements stipulated therein.
- **Other third-party, ISO Type I-like labelling.** These are third-party labels containing not most but major elements of the ISO Type I standard (e.g. that use third-party verification and that are based on multiple criteria).

To summarise, we structure EPIS according to the their status as mandatory or voluntary approaches as a first level of differentiation (see Fig. 2.2). Our main focus is on mandatory and voluntary EPIS in general terms. Detailed analyses, however, are carried out in particular on the three ISO types of environmental labelling, with special emphasis on ISO Type I labels—that is, in the area of eco-labels.



EPD = environmental product declaration; FSC= Forest Stewardship Council; R&S = risk and safety

FIGURE 2.2 Classification of environmental product information schemes (EPIS)

2.3 Integrated product policy: approach, state and plans

2.3.1 The shift towards products

The environmental context of products emerged as a topic three decades ago but during the 1990s it began to increase in relevance. This increase is partly a result of the successes of production process-oriented environmental policy and partly a consequence of a strong critique of previous environmental policy:

- Problems tended to be shifted from one environmental medium to another. previous environmental policy was oriented towards environmental media. Quite often, problems appeared to be ‘solved’ but were in reality only moved to another medium (especially the sea and the soil, as sinks; for a classification of five types of shift [spatial, factual, temporal, social and institutional], see Von Prittwitz 1990). For example, end-of-pipe filters still included hazardous substances that had to be disposed of to landfills for hazardous waste (on this point, see Jänicke 1978).

- Policies failed the economic efficiency principle. End-of-pipe technologies are expensive and are liable to become progressively more costly with each additional unit to reduce emissions. Standards do not consider different site-related or production-related cost patterns and result in Pareto-suboptimal solutions.
- Incentives are insufficient. Standards, as a classical tool, prescribe a static technical objective that does not stimulate innovation. It also fails to generate a dynamic incentive to reduce emissions beyond the prescribed level.
- An implementation deficit is created. Enforcement is difficult and expensive from the viewpoint of the overseeing public administration (see Mayntz 1978).
- There is a missing link between environmental policy and other policy fields. Co-operation between environmental policy and environmentally relevant policy-making in other policy areas is insufficient, and no integrated approach is apparent.
- The focus is on the state as a responsible and executive environmental actor. Process-oriented environmental policy is based on a 'simple' governance model in which the state is regarded as the responsible actor with the task of applying policy instruments and prescribing standards regarding how business is to produce in an environmentally benign manner. In a strict sense, this interpretation of governance is based on a simple, but mechanistic, stimulus-response model.

These critical points form the background of the theoretical debates covered in Section 2.1 and of a more general paradigm shift from a 'command-and-control' approach to a 'push-pull' approach in which responsibility is shared among several different actors and stakeholders. These critical points and the paradigm shift contribute to the orientation towards products rather than processes.³

There are several additional specific reasons for raising the environmental importance of products:

- The share of product-related environmental impacts has increased over the past two decades.
- In the past, emissions tended to originate from site-specific sources whereas now they tend to have non-point and diffuse sources.
- The environmental life-cycles of products are receiving increased consideration and attention.
- Products are 'globetrotters' in a global economy.
- Products connect sources (i.e. the place of extraction of resources) and sinks (e.g. the oceans).

3 We use the term *product* in a general sense, to encompass both (tangible) goods and (intangible) services.

Altogether, a focus on products could supplement the 'traditional' process-oriented approach and help in taking an integrated approach. Policy would thus cover the environmental and economic life-cycles of products and issues relating to information and communication along the supply chain. A product orientation in environmental policy is regarded as an approach that can 'kill several birds with one stone'.

2.3.2 Integrated product policy in general

Research on IPP can be traced back to two areas: one general and the other more specific. Research into various specific areas of IPP arose in parallel to the more general concerns. On the one hand, discussion was aimed at further developing the IPP toolkit; on the other hand, there was an attempt to evaluate policy in practice against the background of criteria, such as economic efficiency, ecological effectiveness, feasibility and so on. Quite early, eco-labelling became a major focus of the debate (on the state of the art, see OECD 1991; US EPA 1993; on the effectiveness of various labelling programmes, see OECD 1997b; US EPA 1994). At the same time, there has been great discussion regarding the appropriateness and diffusion of economic instruments, well documented in several OECD and other publications (see e.g. OECD 1994a, 1994b, 1995, 1997a; EEA 1996). During the past couple of years this discussion has been concentrated on public procurement as a means to create economic incentives for greener markets. The OECD Workshop on Greener Public Purchasing, held in Switzerland in 1997, marks an essential milestone, and the proceedings of that meeting summarise the state of the art in this policy area (OECD 1997b). Another IPP-related area comprehensively analysed is product take-back (the OECD has worked on this issue [OECD 1996], and several research groups exist around the globe, such as the group at the University of Lund). Beyond these policy instrument-oriented discussions, there has been and still is much work on assessing the environmental impacts of products throughout their life-cycle. LCA methodology has progressed and patterns regarding the industrial application of LCA are receiving increasing attention.

Product-related environmental issues that are nowadays called by the term 'integrated product policy' gained scientific attention in the early 1990s. There has been comprehensive research both at a conceptual level and into specific questions, such as the effectiveness of certain policy instruments. The first conceptual, empirical and EU-wide research into IPP was undertaken by Oosterhuis *et al.* (1996). A few months later Ernst & Young and the Science and Policy Research Unit (SPRU) of the University of Sussex started their work on behalf of DG Environment (also known as DG XI) to analyse national and international developments with regard to product policy with a special focus on the potential for a common European policy (Ernst & Young/SPRU 1998). The study was intended to lead to the proposal of a first conceptual draft on European product policy. It was in this 1998 publication that the term 'integrated product policy' was introduced, defined as: 'public policy which explicitly aims to modify and improve the environmental performance of product systems' (Ernst & Young/SPRU 1998: 33; see also Section 2.3.3).

The challenge for IPP is to create a policy framework that influences the innovation processes surrounding products in an environmentally benign way. The use of environmental policy that leads to direct product-oriented intervention is possible, but such policies are and should be restricted to particular, exceptional cases where the

prevention of specific risks and problems is required.⁴ IPP (and also environmental policy) should facilitate businesses in becoming environmentally sound in terms of their operational and strategic behaviour. To do this, IPP should stimulate and facilitate where possible, and regulate where necessary, for the following reasons:

- Externalities are extremely complex, characterised by a huge number of different substances that are continuously increasing and which combine to form an exponentially increasing number of interactions (Minsch *et al.* 1998).
- There is insufficient knowledge regarding allocation calculations and decisions relating to microeconomic actors. The state can neither theoretically nor empirically provide the necessary information needed for a full treatment of microeconomic actors (Wegner 1995).
- Given the hypothetical assumption that information would be available to the state, there would immediately arise an information overload that could not be dealt with.
- Further, transmission of information from business to policy-making bodies will not occur because of secrecy.
- In addition, it is both theoretically and empirically necessary that competition 'organises' innovation and seeks out the best solutions and innovations (i.e. through decentralised search processes). However, public policy and IPP are unable to predict the outcomes of such search processes, either on the supply side or on the demand side. Therefore, the role of IPP is limited to using the innovation processes of business as transmission mechanisms to achieve environmental reorientation and restructuring in such a way that innovations are not just benign but also environmentally oriented and able to transform market(s).

Altogether, IPP stands on three important pillars:

- Co-operation among stakeholders and actors, resulting from the new understanding of governance
- Integration of consideration of environmental media and the life-cycle of products
- Information and communication among all stakeholders and actors

Comparing the new approach of IPP with the 'traditional' product approach of environmental policy (see Table 2.1) it becomes clear that the foundation of IPP is based more on prioritised environmental problem areas (as determined, for example, by supply-chain analysis or LCA) rather than on perceived political 'hot potatoes'. The actors involved are not only the state but a multitude of stakeholders and actors. The policy toolkit is not restricted to command-and-control instruments, having a range of instruments on which to draw. Co-operation, in the sense of a sharing of responsibilities and of networking, is an important principle; traditionally, the concerns of affected stakeholders may be heard, but that was all.

4 An example is the case of high-risk substances in products—asbestos, for example.

Charac- teristics	Policy	
	<i>'Traditional'</i>	<i>IPP</i>
Base	A perceived important environmental problem, sometimes a political 'hot spot'	An identified prior product group, selected by chain analyses or LCAs, etc.
Actors	The state, sometimes using initiatives of stakeholders	The state, with other actors and stakeholders
Instruments	Quite often regulatory and prescriptive, with a command-and-control approach	Consumer-related instruments, voluntary agreements, use of voluntary and mandatory information, economic instruments and regulatory instruments
Co-operation	Hearings for affected stakeholders	Joint activities, networking, 'own contributions'; shared responsibilities and 'product management'
Duties	Governmentally prescribed, including detailed plans with standards and time schedules; theoretically, target groups do not have the option of refusing to fulfil duties	Jointly agreed, flexible possibilities of activities determined according to target setting; target groups have different options for (re)acting
Product responsibility	Specified with regard to specific product features	Holistic or shared, in relation to the life-cycle of the product and environmental burdens the product creates; only partly mandatory
Control or sanctions	Administrative; use of prohibitions and sanctions	Reporting duties, public control, loss of image, competition
Environ- mental action	On specific environmental aspects at specific life-cycle stages	Along the product life-cycle and across environmental media
Target groups	Specific actors, mostly companies	Actors along the product life-cycle
Model of action	Adaptation	Innovation
Policy type	Reactive	Anticipative and proactive

TABLE 2.1 Characteristics of 'traditional' product-related environmental policy and integrated product policy (IPP)

Source: Rubik 2002: 193

In summary, the target areas of IPP are situated throughout the life-cycle of products, and their mode of action is perceived in terms of encouraging innovation. Compared with the short-term, reactive, nature of 'traditional' policy, such policy, we believe, may be regarded as anticipatory and proactive, focusing on the future.

2.3.3 Integrated product policy and the European Union

Product-related environmental policy measures in the EU and its member states can be traced back to the 1970s (for an overview and details on member state activities in this policy field, see Ernst & Young/SPRU 2000; Rubik 2002; Rubik and Scholl 2002). We distinguish between conceptual, cross-sectoral and product-group-specific activities and measures. Examples of cross-sectoral activities and measures are guidelines for environmentally related taxes and charges (such as Communication [COM] [97] 9; see CEC 1997a), the recommendation of the Commission of the European Communities (hereafter referred to as the Commission) with regard to voluntary agreements (COM [96] 561 final; see CEC 1996a),⁵ the communication of the Commission with regard to public procurement (COM [98] 143 final; see CEC 1998a) or regulations on a European eco-label scheme (COM 1980/2000/EEC; CEC 2000a). As well as these broad activities, the EU has agreed on a series of initiatives that refer to specific aspects of individual product groups.

Primarily, these activities and measures are *singular* events that are not derived from a general conceptual framework. The Commission mentioned product policy for the first time in a progress report on the implementation of the 5th Environmental Action Programme (EAP; i.e. in COM [95] 624; see CEC 1995). The next impulse towards a conceptual development in product policy was provided by the above-mentioned (Section 2.3.2) DG Environment project carried out by the British consultants Ernst & Young and the University of Sussex. As already stated in Section 2.3.2, the study, which started in 1996, was intended to lead to a first conceptual draft for a European IPP; submitted in 1998, it elaborated a framework and introduced the term ‘integrated product policy’. In addition, it introduced five policy action fields—called ‘building blocks’—which were defined as ‘a cluster of policies which share a common objective’ (Ernst & Young/SPRU 1998: 34). The five blocks concern:

- Waste management, including management of ‘dissipative waste’ (material waste generated in ‘using up’ a product) and ‘non-dissipative waste’ (material streams that may be recovered and re-used or recycled)
- Market creation, covering measures that encourage the adoption of environmentally friendly products and services in the market, both in the private and in the public sector
- Green product innovation, including measures aimed at stimulating research and development (R&D) of technologies and products as well as measures to encourage the environmental management of products
- Allocation of responsibility, including the allocation of legal and financial liability for environmental impacts arising from the product-system and covering potential impacts (related to the design of the product) as well as actual impacts (related to the actual use and discarding of products)
- The transmission of environmental information to encourage greater transparency regarding the environmental impacts caused by and the full environ-

5 Over recent years three voluntary agreements have been settled—in the fields of washing machines, cars and televisions.

mental costs attributable to product systems, with such information and price signals serving to alter customer behaviour across the product system

The report provoked intense discussion.

In December 1998, the report was presented to the public and to interested organisations at a workshop in Brussels. More than 180 people from government, business associations, companies, non-governmental organisations (NGOs) and research groups joined the workshop (DG XI 1999). After having carried out this IPP workshop, DG Environment concluded that the following steps were desirable (DG XI 1999: 12):

- To intensify the focus on products and the life-cycle approach within the EU Eco-Management and Audit Scheme (EMAS) and to strengthen the link between EMAS and the EU eco-label
- To broaden the approach to product labelling
- To integrate environmental considerations into product standards through appropriate mechanisms
- To 'green' public procurement
- To further develop and disseminate thinking and progress on ecodesign
- To implement the policy through environmental agreements, which will emerge as a new option as a policy instrument

IPP was given additional stimulus by the European presidency of Germany during the first half of 1999. At the European Council, which took place in Weimar in May 1999, the German initiative was welcomed and supported by all ministers. Thus, IPP became part of the political agenda. Some measures at the EU level were proposed in the background document prepared for the Informal Council. Today, this document (BMU 1999) forms the basis for 'common ground' within the EU. It contains a slightly revised definition of IPP, describing it as 'a public policy which aims at or is suitable for continuous improvement in the environmental performance of products and services within a life-cycle context' (BMU 1999: 3).

In order to support further conceptual progress within DG Environment, several studies were commissioned in autumn 1999. Ernst & Young and SPRU were commissioned to update their previous report. They presented some arguments and recommendations for IPP, stating:

The dynamic vision of IPP . . . implies that any effort, whether taken by the Commission or member states, should be focused on working with the market to encourage and promote innovation and dynamism among firms . . . [This] effort should be directed towards achieving the goal of minimising the life-cycle environmental burden of final consumption. In delivering this, consumers, industry and public policy-makers all have a role to play (Ernst & Young/SPRU 2000: 27).

The following roles and tasks for the Commission have been proposed (Ernst & Young/SPRU 2000: 27):

- To provide leadership and to diffuse good practice

- To ensure that measures that focus on products are integrated not only among themselves but also with other environmental policy measures
- To safeguard the internal market
- To promote measurement and evaluation

In February 2001 the Commission published the Green Paper on IPP (DG XI 2001). According to this, the objective of an IPP is to reduce the environmental impacts of products throughout their whole life-cycle. The Green Paper is based on the use of market forces as a means of environmental governance. According to DG Environment this means:

The general idea is that policy should focus on setting the main objectives and providing the different stakeholders with the means and incentives to achieve these objectives. Depending on the context, the IPP approach may also be useful in finding business-oriented solutions to environmental problems in discussion and co-operation with stakeholders and/or the preparation of legislation (DG XI 2001: 5).

This interpretation of IPP is the dominating political philosophy of the whole Green Paper. Thus it allocates an important—if not leading—implementation role to the various stakeholders.

The implementation strategy of the Commission is concerned with strengthening the environmental orientation of both the supply side and the demand side, each of which perspectives has listed a series of proposals and possible actions. Four different areas to the IPP approach of the Commission are listed, each of which contains several proposals.

First, price mechanism is to be used. It is proposed that market failures be corrected by internalising external costs. The most prominent role is played by value added tax (VAT) by application of different tax rates. It is proposed that lower rates of VAT be applied to products certified under the European eco-label system. Other possible instruments relate to producer responsibility, governmental fiscal aid and the assignment of environmental liability.

Second, greener consumption is to be encouraged. It is proposed that a distinction be made between private consumption and public and professional procurement. Private consumers should have easy access to understandable, relevant and credible information either by means of labelling on the product or from another readily accessible source (e.g. from the Internet or NGOs). Proposed actions are to:

- Extend the European eco-label to more products
- Provide more public funding for the marketing of the eco-label and to reduce fees paid by manufacturers wishing to use the label
- Undertake a review of EU labelling strategy
- Apply eco-label requirements to other tools (e.g. to public procurement, benchmarking, eco-funds, indicators, self-declarations)
- Monitor the use of ISO Type II self-declared claims

- Prepare guidelines for ISO Type II claims
- Provide a framework to support environmental declarations according to ISO Type III requirements

Third, business leadership in greener production is to be sought. The Commission regards the improvement of information as a central mechanism to diffuse environmental thinking within business. Proposed actions are to:

- Link existing information on the life-cycle impacts of products
- Provide support for the development and dissemination of easily applicable tools to evaluate the life-cycle impacts of products (in particular for small and medium-sized enterprises [SMEs]) and to improve the information flow along the product chain
- Host workshops on the most efficient ways to achieve these goals
- Investigate the potential for schemes to encourage producers to provide key information on the environmental characteristics of their products

It is also intended that LCA should be promoted as a supporting tool. Furthermore, ecodesign guidelines should be elaborated, and standardisation through the Comité Européen de Normalisation Electrotechnique (CEN; the European Committee of Electronic Standardisation) should focus on environmental aspects.

In addition, some pilot projects, involving the creation of 'product panels', have been proposed.⁶

Last, in addition to the first three areas, other instruments such as environmental management, R&D and environmental reporting should be strengthened for the IPP.

The proposals with regard to eco-labelling have been presented within the area of 'greener consumption'. Interesting to note is that within another area—business leadership in greener production—the generation of product information is also mentioned. The Commission regards the generation and collection of information on the environmental impacts of products along their life-cycle as an important approach. It is also envisaged to check whether 'a possible instrument to increase the generation and availability of information is to oblige and/or encourage producers to supply key data along the product chain and to consumers' (DG XI 2001: 18).

However, there is a strange dichotomy within the Green Paper. The internalisation strategy is regarded as the main governance principle and the most effective instrument. Other instruments are treated as supplements:

6 Product panels, a concept developed and practised in Denmark, 'are to promote the establishment of a binding dialogue and strengthened co-operation between the participating stakeholders who can promote the development and marketing of cleaner products within their line of business' (MEE *et al.* 1999: 36). They consist of the relevant actors who are important along the product chain and elaborate action plans describing agreed measures to be taken within a specific product group (for more information, see Rubik 2002: 102f.).

As economic interests are the main driver, the instruments probably most effective are those, like taxes and subsidies, that help to '*get the prices right*', to internalise external costs . . . However, as long as this is not the case, supplementary action to better inform consumers on the environmental characteristics of products and to encourage producers to develop a better design of products is needed (DG XI 2001: 9, emphasis in original).

Whereas, first, a co-operative approach has been introduced, this quotation introduces a new priority list of governance philosophies. The market regulatory approach and then—because of its (political) failure—the market regulation governance philosophy is substituted by a more self-regulatory approach based on voluntary information instruments supporting the supply and demand sides. Altogether, the impression is that information instruments such as eco-labels play a dominant role in the proposed toolkit of the IPP Green Paper of the Commission.

To collect ideas and opinion from stakeholders and research, DG Environment carried out several workshops for experts and stakeholders in spring 2001, of which one was dedicated to 'ISO Type III labelling' (Brussels, 17 May 2001). In addition to that, the Commission presented the Green Paper to the Environmental Council (Luxembourg, 7 June 2001). The conclusions referring to EPIS and eco-labelling of the Council were that:

- IPP should emphasise market-based and voluntary instruments.
- The Commission should prepare a coherent labelling strategy referring to all three ISO label types, including guidelines clarifying the roles and responsibilities of several involved stakeholders for preparing and disseminating information.

The Green Paper offered stakeholders the opportunity to comment. About 100 different organisations, interest groups, individuals and so on delivered comments on the IPP Green Paper. From an analysis of their background, it is very obvious that most of the comments derive from industry associations; only one environmental organisation delivered a comment. Some consumer organisations commented on the Green Paper, but trade unions made no comment at all. Comments from the scientific community were also very sparse. Some controversially discussed issues were the allocation and acceptance of responsibilities—the general idea that for IPP there is no single stakeholder responsible for environmental issues of a product along the life-cycle. In the comments on the Green Paper, the different stakeholders seem to shift responsibilities away from themselves to other actors and stakeholders.

In addition, the role of information was stressed several times by stakeholders, with different objectives. This is demonstrated by the question of bringing (the 'bringing principle') in contrast to collecting information (the 'collecting principle'). Business representatives felt that the Internet would offer more possibilities and flexibility than 'traditional' paths of information transmission. Not explicitly, but more implicitly, it is can be inferred that eco-labels are not of importance for the future. Predictably, reference to the Internet by consumer NGOs was in relation to it being an additional service, not a strategic substitute (as seen by business) for eco-labelling.

The European Parliament has also discussed IPP issues. At its session on 17 January 2002 it agreed a decision with respect to IPP. The decision:

considers the Commission proposal to be unsatisfactory albeit interesting; believes that a more exhaustive and more cohesive policy proposal would be required which takes due account in a clearer manner of each link in the production chain, such as raw materials, energy consumption, packaging and transport; considers, however, that, with a view to establishing more precise and better co-ordinated bases from which to launch the proposal, a more exhaustive study should have been carried out into the achievements and failures of existing IPP policies (European eco-label, EMAS, New Approach legislation such as the directive on packaging, etc.) (European Parliament 2002: point 1).

This decision pushed the Commission considerably.

IPP was also mentioned in the EU strategy for sustainable development (CEC 2001e) and was described as a dominant concept for implementation. Also, the 6th Environmental Action Programme (EAP), adopted in late 2002, promotes IPP:

promoting an integrated product policy approach throughout the Programme that will encourage the taking into account of environmental requirements throughout the life-cycle of products, and more widespread application of environmentally friendly processes and products (EAP 2002: 5).

It also stresses the role of information:

To help ensure that individual consumers, enterprises and public bodies in their roles as purchasers are better informed about the processes and products in terms of their environmental impact with a view to achieving sustainable consumption patterns (EAP 2002: 5).

The Green Paper was intended to preface a White Paper on IPP. Originally, the Commission announced its publication for autumn 2001, but nearly two years later, in June 2003, the Commission published an official communication on the subject of IPP (CEC 2003a) in which its ideas, some new, some modified, on the subject of IPP were presented and in which IPP was brought into the context of sustainable development. The measures proposed by the Commission are based on five basic principles:

- Life-cycle thinking
- Working with the market
- Stakeholder involvement
- Continuous improvement
- Variety in policy instruments

Given these five principles the Commission proposes two sets of measures. The first set of measures is intended '[to establish] the framework conditions for the continuous environmental improvement of all products throughout the production, use and disposal phases of their life-cycle' (CEC 2003a: 7). With regard to this first set of measures, there are three categories of measure.

The first category relates to actions and tools for creating the right economic and legal framework, such as taxes and subsidies for getting the prices right, an interpretative communication on public procurement and initiatives such as the White Paper

on Chemicals (COM [2001] 88 final; see CEC 2001b) and the proposed directive for the ecodesign of energy-using products (the originally intended link between VAT and the EU eco-label will not be pursued further by the Commission, because of negative feedback from member states and interest groups).

The second category relates to the promotion of life-cycle thinking applications. Actions listed in this category aim to establish and disseminate life-cycle data, to link EMSS (and, in particular, the European EMAS) with products and to produce a discussion document on the implementation of the IPP approach in companies. In addition to that, the Commission is attempting to find ways to ensure information relating to the environmental performance of products reaches the public.

The final category in this first set of measures relates to actions to assist consumers in making fully informed decisions, especially with respect to the greening of public and corporate procurement. The question of informing private final consumers is dealt with under the heading of 'environmental labelling'. There, one sees the intention to expand the application areas both of the EU energy label and the eco-label to provide consumers with more choice. Also, the directive on misleading advertising (84/450/EC; see CEC 1984) will be modified. The ISO Type III label, the environmental product declarations (EPDs) and strategies of the Commission will be discussed with stakeholders.

The second set of measures deals with 'developing a focus on products with the greatest potential for environment improvement' (CEC 2003a: 7) and encompasses several actions, such as conducting several voluntary pilot projects with a view to examining and demonstrating the benefits of IPP and devising and applying a method for identifying and assigning priorities to products with the greatest potential for environmental improvement.

In summary, some of the actions listed in the communication are more precise than the proposals in the Green Paper. The time schedule presented is important for judging the state of implementation. However, a series of actions announced in the Green Paper, especially the ones addressed towards business, have been weakened. Observation of the linkages between environmental information schemes and other instruments (e.g. VAT) disappeared. In the end, the 'classical' EU eco-label and energy label are the approaches that will be pursued by the Commission in conjunction with a discussion with stakeholders about EPDs.