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Analysis of Existing Concepts for Measuring Sustainable Consumption in Germany and Main Features of a Development Concept

Integrating ecological, economic and social aspects and a global implementation of international programmes for sustainable production and consumption patterns is vital for the implementation of the Johannesburg framework. The resulting proposal is a solution for assessing complex developments in the social-policy environment (Baedeker et al., 2005). The paper was presented at the Launch Conference of the Sustainable Consumption and Research Exchange (SCORE!) in Wuppertal, 23.-25.11.2006.

More information: <http://www.score-network.org>

Entscheidend für die Umsetzung des auf dem WSSD in Johannesburg beschlossenen Rahmenprogramms ist eine Integration von ökologischen, ökonomischen und sozialen Aspekten sowie die Umsetzung von internationalen Beschlüssen zur Förderung eines nachhaltigen Konsums und nachhaltiger Produktionssysteme. Das Papier präsentiert einen Ansatz zur Bewertung komplexer Entwicklungen im sozial-politischen Umfeld (vgl. Baedeker et al., 2005).

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Analysis of existing concepts for measuring sustainable consumption in Germany and main features of a development concept

A new study by the Wuppertal Institute

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1 Introduction

The past decade has seen the pavement of a way towards sustainable consumption and production patterns. International processes such as the World Summit on Sustainable Development (WSSD), which in 2002 produced a “Framework Convention on Sustainable Consumption and Production” for the coming ten years, and the Millennium Development Goals, agreed upon by 150 nations, have stirred the national and international arena with demands for changing unsustainable patterns. In 2003, with the initiation of the Marrakech Process, a further initiative has been taken forward, aiming to foster previously taken decisions into being implemented.

Key to the implementation of the Johannesburg framework is an integration of ecological, economic and social aspects and a global implementation of international programmes for sustainable production and consumption patterns. Based on the framework programme individual activities, programmes and approaches can be combined and interlinked on the international level. Programmes targeting sustainable consumption and production (SCP) already started on the national level in many countries. They make use of existing capacities and networks, for instance in integrated product policy, product marking, indicators or sets of indicators, consumer policy and protection or sustainability reporting.

Under the light of actions taken on the international sphere such as those mentioned above, the UNEP/Wuppertal Institute joined Centre for Sustainable Consumption and Production (CSCP) was created, to act as a scientific support to projects and actions.

In 2005, the Wuppertal Institute was commissioned by the German Government (Federal Ministry for Food, Agriculture and Consumer Protection) to undertake a study for measuring, monitoring and assessing sustainable consumption and production.

The resulting proposal is a solution for assessing complex developments in the social-policy environment (Baedeker et al., 2005). It follows the framework set out in the Johannesburg Plan of Implementation, thus pursuing actions that increase eco-efficiency, identify activities, tools, policies and mechanisms for measuring progress and that develop and adopt consumer information tools that are „effective, transparent, verifiable, non-misleading and non-discriminatory“ (UN, 2002: §15a). The proposed concept, initially developed for application in Germany, addresses the current demand for directories, guides and indicators to assist policy, industry and consumers in measuring and evaluating sustainable production and consumption.

1.1 Study Description

With the objective of offering a concept for measuring and assessing sustainable consumption and production (SCP), this study holds concepts, links and instruments of high potential for both national and international application. The survey has been structured as follows:

- Analysis of existing methods and concepts for assessing sustainable consumption and production; In total, 82 different concepts were analysed, 26 of which follow a German, and 56 an international approach. The concepts were screened according to criteria such as political adaptability, ease of communication and implementation, among others. The screening distilled the initial number to 32. The examination of existing concepts and indicators was compiled in an inventory which was a valuable input in the development of the concept proposed in this paper.
- Interviews and workshop with experts; In a second stage, 22 experts – four of them from outside of Germany – were consulted through guide-based interviews. Of these 22, three were not present at the interviews. Their input was a written survey and pointing out relevant literature.
- Analysis of communication aspects of existing well-known indicators, such as GNP- rate, stock-market index DAX, unemployment rate or the results of the PISA- Study (PISA – The Programme for International Student Assessment implemented by OECD). The third step of the survey examined nine indicators, including GNP-rate, “Grüner Punkt”/”Green Dot”, indicators in the PISA-study, unemployment rate, stock-market- index DAX, ISO-Eco-label 14020 ff, a.o. The core question was: Why are these indicators appropriate for communication?
- Summary of the results, drawing up main features of a concept for measuring and assessing sustainable consumption and production.

2 The results

The research made clear that a measurement system (which deals with quantitative aspects) can only produce reliable results and point out a direction towards sustainability if combined with an assessment system (which indicates qualitative aspects). Hence, to produce optimal, integrated results, both measurement and assessment are a part of the developed strategy.

The results of the research conclude that of the 82 analysed concepts, no one single-handedly fulfils the prerequisites established by the study – neither does a combination of the existing concepts. Both these alternatives either fail to communicate the overall idea, or they are insufficiently transparent to the costumer, or they fail in both aspects. Nonetheless, some aspects of the researched material are of use for the development of a more comprehensive measurement and assessment system.

For the short run (1-2 years), the strategy foresees the creation of TRIangel, a meta-label that uses and combines existing approaches and labels. This is seen as a step towards the generation of a single and integrated indicator. The meta-label could be based on the examples of “Label-online”, “Leitsysteme zur Förderung nachhaltiger Produkte” (guidance systems for enhancement of sustainable products), “Stiftung Warentest”, “EcoTopTen” and “TopRunner” (Japan) or the “Ethical Purchasing Index” (EPI, Great Britain). In the medium and long run this approach should be developed further, reacting to problems that might occur.

The system needs to be persuasive in a transparent and coherent approach. Examples of existing methods are, the “Nachhaltiger Warenkorb” (sustainable basket of commodities), “Leitsysteme” (guidance systems), IFEU-Nachhaltigkeitsindikatorenset (IFEU sustainability indicator set), UNEP-Indikatorenset zu nachhaltigem Konsum (UNEP indicator set on sustainable consumption), decoupling indicators from Great Britain or OECD-Indicators, Total Material Requirement/Material Input Per Service Unit and/or the Ecological Footprint. Furthermore, the media should be treated as an important communication tool for achieving acceptance of the concept with the public and in the economy.

The developed system bears potential for policy use, producing reliable assessments of complex socio-political developments. The assessment system needs to be open to be controlled from external authorities. Clear objectives should be defined, producing measurable and comprehensive results. Up to now, measurement and assessment systems were successful when they confronted the target groups in the moment of decision-making. This has been true for consumers as well as for entrepreneurs and politicians. Hence, a specification and differentiation with regard to needs and target groups is inevitable.

The result of the scientific status-quo analysis is the standard that product- and value-chains must be assessed from the very beginning. Otherwise, so-called “rebound-effects” can occur and diminish the success. Rebound-effects are often referred to as outsourcing processes with the objective to externalise social or ecological costs. Pro-active entrepreneurs and companies already try to evade those risks, as well as child labour in the supply chain or oil spills caused by Exxon Valdez-type accidents, for example. International processes like the Global Reporting Initiative (<http://www.globalreporting.org/sme>) or High5!, an initiative for small and medium-sized enterprises (SME) in the European Aluminium Industry, already showed that stakeholder-based target- and indicator-setting is important. In this context, there is a need for better coordinated and target oriented reporting on sustainability on the firm and political level – including consumption. Existing statistical and institutional capacities in the fields of environment, economy and about social aspects can be used to foster this process in Germany.

2.1 The design of a measurement and assessment system for sustainable consumption

According to this analysis a unique and promising concept for measuring and assessing sustainable consumption does not exist. However, twelve to fourteen selected concepts contain aspects that promise potential to develop a consistent and target oriented measurement and assessment system, which will have to:

- Provide an assessment of the status quo and describe trends towards SCP, generating information for monitoring and assistance of decisions on the macro-level;
- Target the consumer at the point of sale (POS) – while making purchasing decisions – influencing decisions with a simple information structure suitable for everyday use;
- Allow for the measurement of the achievement of companies, giving them the opportunity to communicate them to the public.

The design for the development of the measurement and assessment system is module based, envisaging addressing different target groups. Developments are planned for the short (1-2 years), medium (3-4 years) and the long run (5-6 years), leading to the creation of five new indicators/concepts to measure and assess SCP. The development is process-oriented and integrated. This should offer great opportunities and advantages for the different target groups. Since the approach is module based, it is also possible to develop and implement individual modules independently of each other.

Key to the development and implementation of the different modules are cooperation and dialogue with stakeholders (1) and a foresight study (2):

1. The proposed modules for SCP measurement and assessment must be based on uniform criteria, which is to be developed with stakeholder engagement. Importantly, the criteria must address the three fields of sustainability (ecological, social and economic sustainability) and define according indicators. As explained before, this must be based on an examination of value chains from their very beginning. This close cooperation with stakeholders will ensure transparency and acceptance of the results as well as integrate stakeholders into an enduring process of amelioration.
2. The system must account for future trends and developments that may influence consumption and production. Brand (2002) identifies the current most important mega-trends as: globalisation, the development of the information and knowledge-based society, structural change of employment, individualisation and the change of values. They create new forms of cooperation and communication throughout spatial and hierarchical structures. These trends will be analysed in cooperation with stakeholders and experts and assessed according to the established criteria (see 1.).

The criteria for SCP established in (1) are important to all – short, medium and long-term – modules, while the trend analysis in (2) is only

important to some. Both elements are instruments that help achieving transparency and public acceptance. The concept is process oriented and must have well-defined targets, thus enabling for transparent and easy to control timing and implementation cost. One good example of an international process that takes into consideration sustainability along the entire product chain is the European Aluminium Industry's sustainability report according to the Global Reporting Initiative (GRI).

2.2 Proposed modules for the concept

When implemented, the strategy will generate five tools:

1. A "Meta-label" ("TRIangel") that addresses the sustainability of products according to ecologic, social and economic criteria;
2. A tool for consumers to verify the "sustainability performance" of their households;
3. An index of Meta-label ("I-CON") certified products, indicating their market share;
4. A "basket of goods" ("BALANCE") containing selected leading products and services, its purpose is to indicate current household consumption trends;
5. An indicator of consumption patterns, to be used by policy-makers ("GO-21" – consumption trends).

The concepts and instruments proposed target and link different sectors of society. Its three main stakeholders, who are expected to implement the information generated in their own decision-making processes, are:

- Consumers/Households,
- Policy-makers,
- Industry/Businesses.

2.2.1 Target group Consumers/Households (figure 1)

1. Sustainability-label **TRIangel** at the point of sale (POS) (level 1: 1-2 years; level 2: 2-3 years)

Product and service labelling have been identified as appropriate instruments for SCP, being relevant for the consumer's purchasing decisions. The existing labels do not fulfil all criteria for a complete and systematic assessment of SCP. In the proposed strategy, TRIangel will harmonise and classify existing labels using a portfolio of sustainability. In the medium run (level 2), an integrated indicator will be developed on grounds of the criteria for sustainable consumption (and indirectly for sustainable production) defined earlier in the stakeholder process. The consumer will be confronted with the label at the POS, when making a purchasing decision. In the long run, TRIangel could also differentiate with regard to live spans of different products. Being thought of as a process-label, developments of marked products and services will be fostered.

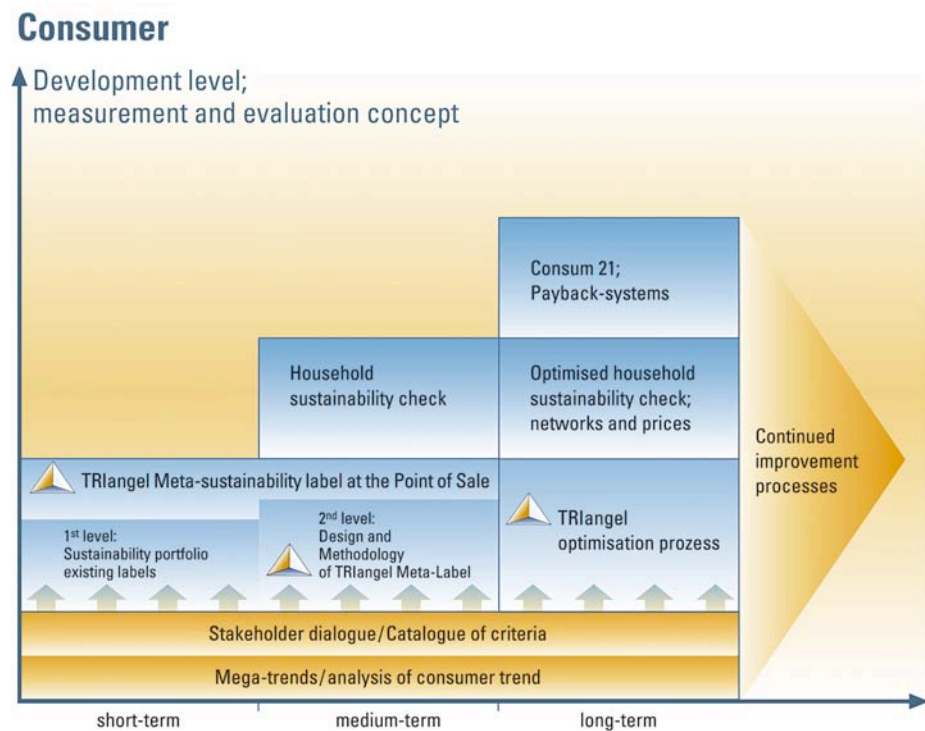


Figure 1: Target group Consumers (source: Wuppertal Institute)

2. Sustainability Check Household (3-4 years)

The role of households as active stakeholders has often been undermined in market studies. They are, nonetheless, important for the development of sustainable production and consumption patterns. Behavioural patterns are often learnt at household level. They often persist through generations and influence other market players such as politicians, businessmen or administrative patterns. For this reason, viewing households as an important target group, the here proposed strategy includes a system for consumers to get information about their household performance towards sustainable consumption. One solution is that the information is printed on receipts in the form of bar codes. In the long run, households will be able to verify the proportion of ‘sustainable products’ present in their “shopping basket” by scanning the bar codes at home (For related examples verify www.efficient-entrepreneur.org and www.smart-business.bz). Consumption patterns could be influenced with incentives, for example through prices, competitions or payback-systems.

2.2.2 Target group policy-makers (figure 2)

3. Index of consumption I-CON (level 1: 1-2 years; level 2: 3-4 years)

In the short run (level 1), this index builds on the market shares of externally evaluated labels, similar to the “Leitsysteme der Verbraucherinitiative Germany” (guidance systems of the consumer initiative). In the medium to long run I-CON should refer to TRIangel, a sustainability label that works on the Meta level. TRIangel is developed according to the criteria developed in the stakeholder dialogue described earlier. Its conception is quite similar to the Ethical Purchasing Index (EPI)

developed in the UK. TRIangel should provide politicians with valuable information on the status quo and developments towards more sustainable consumption and production patterns. The increase of the EPI in Great Britain justifies hope for a success in Germany. Again, methodological issues as well as transparency are of great importance. One can benefit from experiences and the systematic concepts of the “Stiftung Warentest”. Methodology created by Stiftung Warentest can partly be a valuable input.

Policy

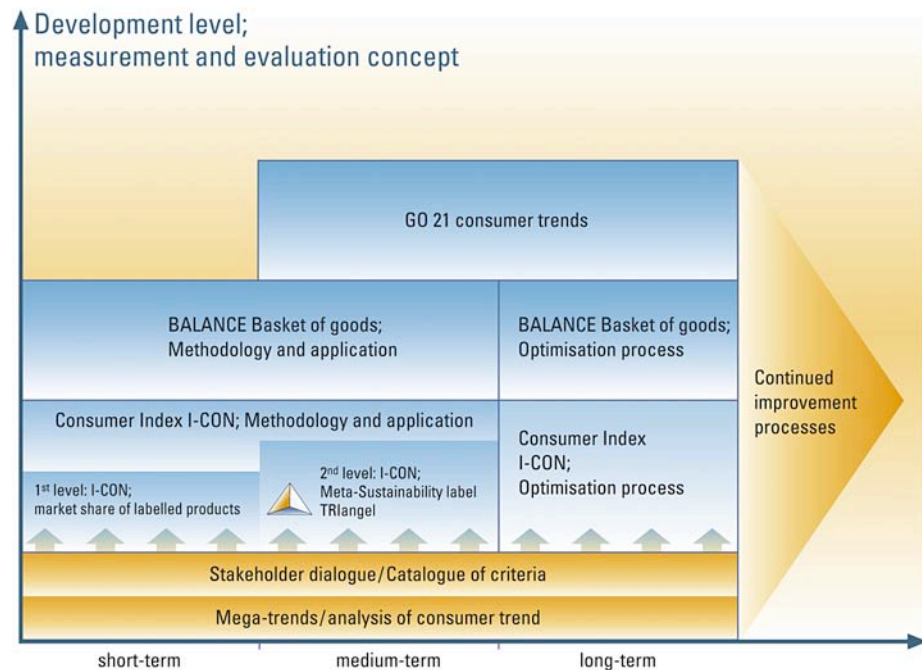


Figure 2: Target group policy makers (source: Wuppertal Institute)

4. The basket of commodities **BALANCE** (3-4 years):

BALANCE is a simplified version of the German “statistical basket of goods” (Statistischer Warenkorb), an account of approximately 750 products and services structured by areas of demand, used by the government to track national consumption patterns. In the case of **BALANCE**, the ‘basket’ will contain a relatively low number of “lead-products” of significant social, environmental and economic impact. These lead products will be selected by experts from a variety of fields, such as social sciences, market analysis, technology and engineering. Their status in the economy will be followed, enabling an understanding of the consumption trends of households – at a macro level. While I-CON contains TRIangel accredited products only, and provides the evolutionary status of these products in the market, **BALANCE** will provide an overall market status of products. Both tools, together, provide information on the overall consumption at a micro-economic level. The results of this process will be disclosed to the public at frequent time intervals, providing information on the development and structure of **BALANCE**.

5. The trend of consumption **GO 21** (2-6 years):

GO 21 is designed on the basis of BALANCE, defining key products that have been developed on the international influence. They might as well be products which, based on the criteria of sustainability, are identified as “hot spots” for SCP. Hence, GO 21 functions as a barometer for positive and negative trends in consumption. Understanding current trends is a prerequisite to influence future trends. GO 21 is a result of the process oriented, time and cost efficient foresight process described above.

2.2.3 Target group economy (figure 3)

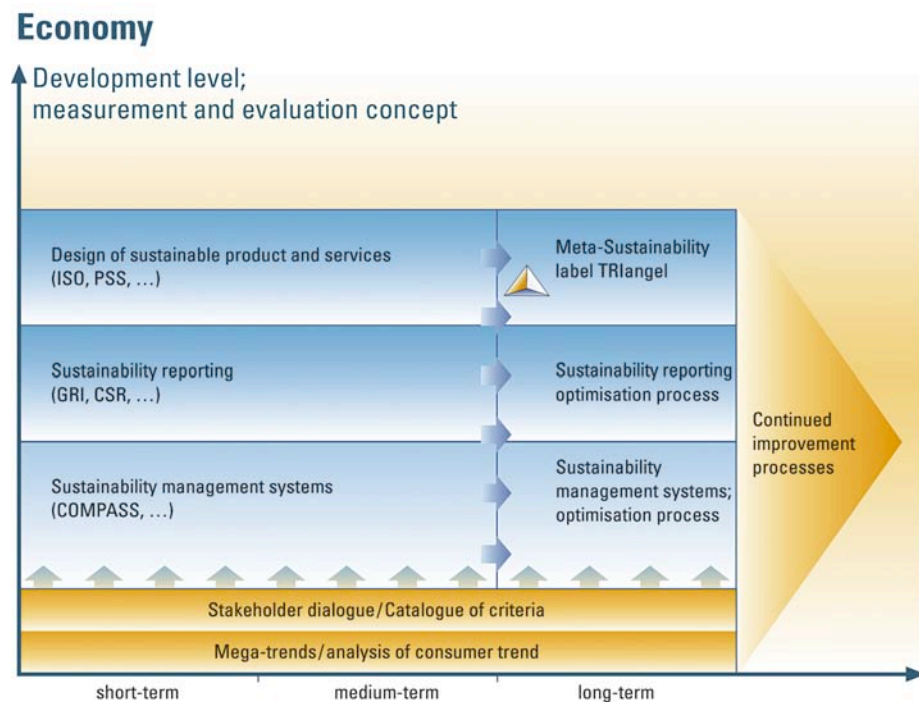


Figure 3: Target group economy (source: Wuppertal Institute)

The economic field present great opportunities for actions towards SCP, since companies decide on production processes of services and products. These processes encompass social, ecological and economic aspects. Measurement and assessment systems that are relevant for sustainability in these fields have two functions: On the one hand, they should point producers in the direction of sustainability, enabling them to optimise their processes towards this goal. On the other hand, they must offer tools for evaluating their progress (see figure 3).

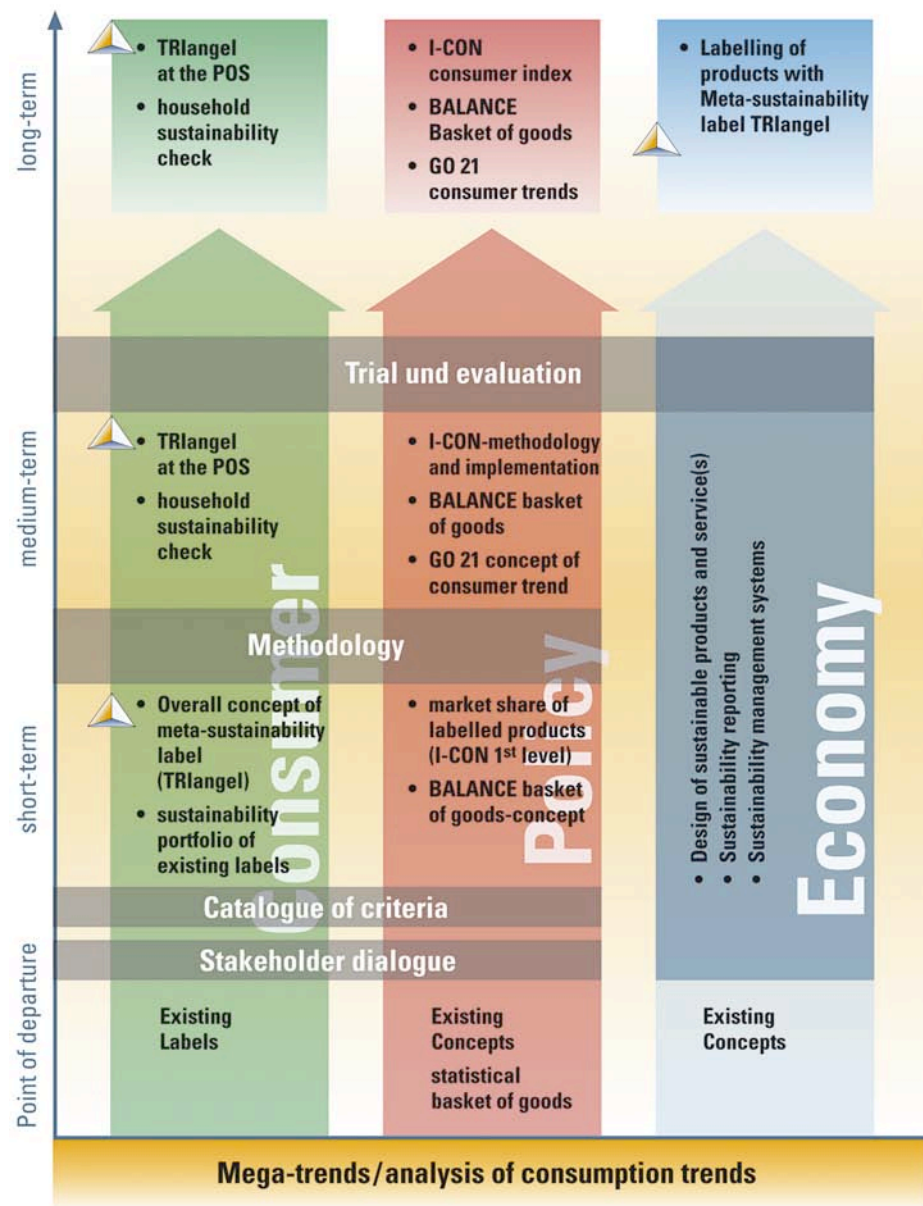


Figure 4: Measuring sustainable consumption – options for a governance strategy (source: Wuppertal Institute)

Today, companies as well as academics have developed a fair number of instruments and methods to measure and assess sustainability of products and firms. Examples include the Global Reporting Initiative (GRI) with its supplements for different industries and SMEs, the GeSI activities that are implementing the UN Millennium Development Goals in the telecommunication sector (GeSI, 2006; GRI, 2003), the ISO processes and the UNEP activities for sustainable consumption and production. The measurement and assessment concept presented here builds up on these initiatives.

The meta-sustainability label TRIangel identifies and marks products that fulfil the sustainability criteria along the value chain. This can be useful for companies that want to communicate their efforts to make production sustainable along the value chain. Companies have complained that consumers did not appreciate their production methods simply due to a lack of knowledge. Here, TRIangel acts as a valuable tool, filling in a communication gap (see figure 2 and 3).

The incentives for product marking should be given through the market, with a participation in the I-CON index compelling companies to communicate a clear commitment towards sustainability.

Figure 4 summarises a possible timeline for the implementation of the five modules proposed in this strategy. Initially – building up on existing concepts and on the criteria defined by the stakeholder process described above – issues concerning the conception and methodology of the instruments. Hereby first levels of TRIangel, I-CON, BALANCE should be addressed. In the medium run these instruments should be further developed, tested and evaluated. Additionally, the GO 21 instrument should be developed and tested. Simultaneously, production and value chain optimisation will be implemented in selected firms and industries.

In the long run (5-6 years) an integrated and optimised measurement and assessment system, consisting of five distinct but coordinated elements (TRIangel, sustainability check for households, I-CON, BALANCE and GO 21), will be developed and communicated.

3 Outlook

The development and implementation of a targeted measurement and assessment system will prove to be an asset in implementing SCP in an economy and society. Many existing data and methods can be integrated to the system, generating a cooperation and valuable support. Complex stakeholder processes have indicated that know-how and acceptance can be integrated even within a small time span. It is possible to anticipate and integrate costs of implementation and application of such a measurement and assessment system into the existing institutional structure. The here-proposed strategy allows for a synergy effect between politics and economy. Marketing campaigns, competition and communication can be coordinated with existing activities. Time and cost of implementation of the different modules can be calculated, thus facilitating decision processes towards embracing the strategy. Based on the results of this preliminary study, and in the belief that societies and economies will benefit from it, the Wuppertal Institute recommends a continuation of this study.

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