

## CO-OPERATIVE INDICATORS DEVELOPMENT AS AN INSTRUMENT FOR JOINT IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT

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### ABSTRACT

In this paper the hypothesis is followed that the development and use of indicators could have positive effects on co-operations that seek to implement the vision of sustainable development. A tool called “Co-operative Indicators Development” is presented. First the methodology of Co-operative Indicators Development is illustrated in eight steps. Additionally, positive effects of the use and development of indicators for co-operations are described.

### KEY WORDS

Co-operative indicators, sustainable development, stakeholders engagement

### RESUMO

Neste artigo a hipótese é de que o desenvolvimento e uso de indicadores pode ter efeitos positivos em cooperações que buscam a implementação da visão de desenvolvimento sustentável. Uma ferramenta chamada “Desenvolvimento de Indicadores Cooperativos” é apresentada. Primeiramente a metodologia do “Desenvolvimento de Indicadores Cooperativos” é ilustrada em oito passos. Adicionalmente, efeitos positivos do uso e desenvolvimento de indicadores para cooperação são descritos.

### PALAVRAS-CHAVE

Indicadores cooperativos, desenvolvimento sustentável, participação de partes interessadas

Already at the 1992 United Nations Conference on Environment and Development (UNCED) sustainability indicators were discussed as a tool to support the implementation of the vision of sustainable development.<sup>1</sup> In this paper I follow the hypothesis that the development and use of indicators could have positive effects on co-operations for sustainable development that seek to implement the vision of sustainable development. Starting from this I have elaborated a tool I call "Co-operative Indicators Development" presented below.

## CO-OPERATION AND INDICATORS FOR SUSTAINABLE DEVELOPMENT

Because of the complexity of sustainability the capabilities of different actors are needed for its effective implementation and co-operation is seen as a way to open up these capabilities. Co-operation means the voluntary teamwork of a limited number of different people to reach a collective goal. In an ideal case of a co-operation all voluntary people have equal rights in the decision process. Furthermore the people joining the co-operation should be willing and able to contribute to implement those decisions.

Agenda 21, one of the final documents of the UNCED, identifies different actors to be relevant for the implementation of the vision of sustainability. Figure 1 provides an overview of groups of these actors.

If actors join a co-operation their knowledge potentials can be opened up<sup>2</sup> and collective learning processes can be initiated<sup>3</sup>. Furthermore, different resources for the implementation of

sustainability can be activated through co-operation. In turn the co-operation raise acceptance of measures for sustainability by those actors being involved in the co-operation. Through their involvement these actors discern the need for action. In addition, co-operation offers a frame for negotiations.<sup>4</sup>

As much as the importance of co-operation for sustainability is out of question, as much its implementation faces several problems. Some of these problems are: a) seldom all powerful people or institutions are involved; b) the people involved often do not manage to find a consensus on their understanding of sustainability as the basis for common action;<sup>5</sup> c) because of the complexity of sustainability there is on the one hand the danger of being too general, on the other hand the danger of inability to take any decisions; d) the availability of solid data is still weak and e) success or failure of the activities of the co-operation is often not visible.

Sustainability is a complex vision that covers lots of global and local issues ranging from climate change to human

health, from justice to biodiversity to name only a few. To achieve sustainability, these issues are to be addressed coherently.

Indicators are representatives for complex matters of fact that are not directly measurable. Defining indicators and collecting the relevant data is the basis for analysis and forecasts. Also, a new body of information useful for decision making can be generated through indicators. These are the functions of indicators in general.

But indicators are more than just numbers. J.K. Gailbraith while describing the aura of indicators observed that: "If it is not counted it tends not to be noticed." (quoted in: Mc Gillivray, Zadek 1995: 3). By these words, he points out that a society needs indicators despite their limitations of significance. No indicator is able to give a full picture of reality, but the alternative would be – to use the words of Gailbraith – not to notice important things. Put the other way around, one can construe his words to mean important things should be represented by indicators. At this point it is important to think about

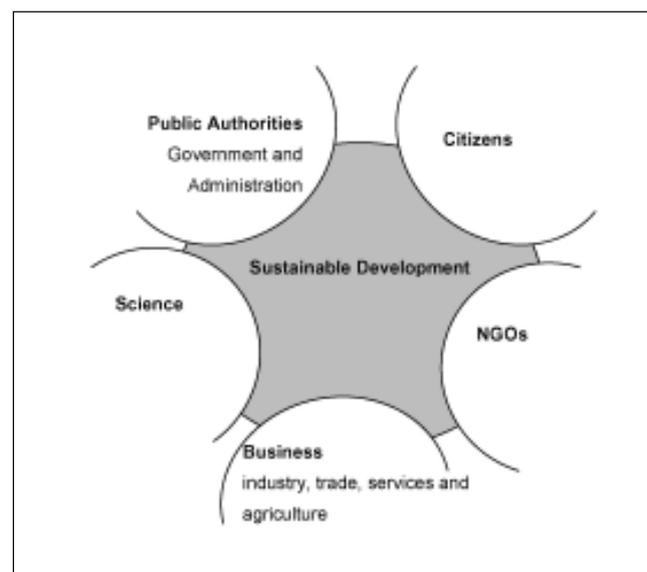


Figure 1: Actors needed for sustainable development  
Source: based on Köckler 2005: 81

whose responsibility it is to develop indicators for sustainable development and thereby to define relevant aspects of sustainability. This could be by a single group of actors or a mix of actors representing all groups mentioned in figure 1. In this context Cobb and Rixford point out: *"There is no such thing as a value-free indicator. Whatever anyone tells you to the contrary, all serious indicators work is political. The very act of deciding what to count and how to count it involves making value judgements."* (Cobb, Rixford 1998: 17). As mentioned in this quote and shown in figure 2 all indicators are based on knowledge and values. So the indicators themselves representing a part of the real world are determined by knowledge and values which both change over time and place.<sup>6</sup> This shows that sustainability indicators differ from region to region and will change in the long-run. Hence sustainability indicators for Sao Paulo have to be necessarily different from ones for the city of Berlin. And indicators for Sao Paulo in the year 2006 will differ from those of the year 2020

## CO-OPERATIVE INDICATORS DEVELOPMENT

The basic idea of co-operative indicators development is to merge co-operation and indicators development to meet some of the problems that co-operations have to face. For this, relevant effects of the development and use of indicators must be identified. The conclusions presented below have mainly been drawn from qualitative field research in the USA (Koitka 2001) In the year 2000 I analysed the development and use of two regional sets of indicators that have been developed by different stakeholders: the Quality of Life Indicators for the county of Jacksonville and the Oregon Benchmarks for the state of Oregon. Furthermore, I evaluated a process of Co-operative Indicators Development through accompanying research from 1999 to 2001. This process was a first application of Co-operative Indicators Development and took place in a German county called Märkischer Kreis.

The outcome of these analyses was the development of a special

methodology of indicators development with specific functions of supporting co-operations for sustainable development. This special type of indicators development is called "Co-operative Indicators Development". Co-operative Indicators Development means that actors of a co-operation for sustainable development, ...

- develop indicators for sustainable development together,
- develop indicators that are specific for the region they are working in,
- develop a set of indicators that consists of as many indicators as needed to be appropriate specific and at the same time of only few indicators to remain manageable,
- define quantified aims for single indicators and prioritise indicators within the indicator set,
- publish regularly the indicators and the concept of indicators development,
- improve their concept of indicators development continuously.

Following is a description of how Co-operative Indicators Development works. Afterwards it is explained how this methodology of indicators development supports co-operations for sustainable development.

### HOW TO DEVELOP INDICATORS CO-OPERATIVELY

Based on the analyses of the US-American and the German case studies, the following procedure of indicators development is recommended as shown in figure 3. First of all the indicators development should be integrated in a functioning co-operation, e.g. a local agenda 21 process. It could be helpful to develop indicators at an early stage of a co-operation formation, so that the effects described in the next chapter are as strong as possible.

It is important to realise, that people do not co-operate to produce a set of indicators, but mainly to contribute to a

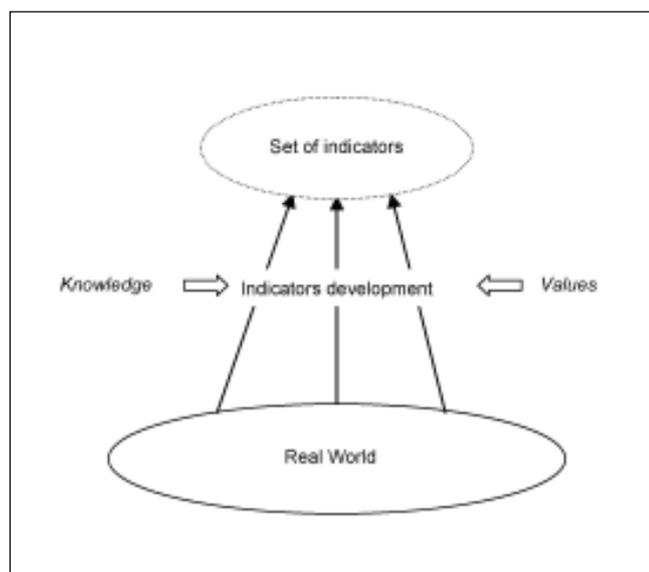


Figure 2: From matter of fact to indicator  
Source: based on Köckler 2005: 9

more sustainable city or region. From an organisational perspective, such co-operations are usually divided into a steering committee and working groups. In the steering committee, decision makers are mainly responsible for strategic decisions, while in the working groups specialists work together on strategies for certain tasks that have already been defined by the steering committee. In Jacksonville and Oregon the indicators development was for each region technically supported by its secretary.

Following is a brief description of nine steps of co-operative indicators development as shown in figure 3.<sup>7</sup>

1) First the co-operation has to decide to develop indicators. At the beginning the steering committee has to define and outline the indicators. Initially this includes decisions such as the purpose of the indicators, the overall number of indicators and a basic organisational structure of indicators development. For instance, in the case of Jacksonville, it was decided to develop

the indicators in nine thematic working groups<sup>8</sup>, while in the case of Oregon the stakeholders had been invited to join one of the already formed six working groups<sup>9</sup>. The predefinition of the nine resp. six working groups in the two case study regions was a first step in reducing the complexity of the real world to be represented by the indicators. If a co-operation already has established working groups it is reasonable to develop indicators in this structure.

2) The indicators are developed in the working groups by its members. The indicators should stand for topics that represent the understanding of sustainable development by the members of the working groups. Very important is the fact that only such indicators that could be influenced by measures which could be implemented by members of the co-operation are to be selected.

In the German case study the use of an indicator sheet (see figure 4) was very helpful. The use of the sheet facilitated the discussion and documentation of single indicators. In

order to get a sound set of indicators out of parallel working groups, first drafts of indicators of each working group should be discussed cohesively.

3) The final set of indicators has to be adopted by the steering committee. This is mainly to let the steering committee take responsibility for the decisions expressed through the indicators. Additionally, the steering committee has the task to ensure the development of a sound indicators concept.

4) In the case studies of Jacksonville and Oregon the secretaries were responsible for data collection. Both used data from official statistics and carried out telephone surveys to get data on aspects that had not been collected. In the German case study, non official actors joining the co-operation either provided data they already had or collected new data on their own. For example the local energy supplier provided existing data on renewable energy and the chamber of agriculture extended a biannual survey with questions on income of farmers by direct sale.

Figure 3: Procedure of co-operative indicators development

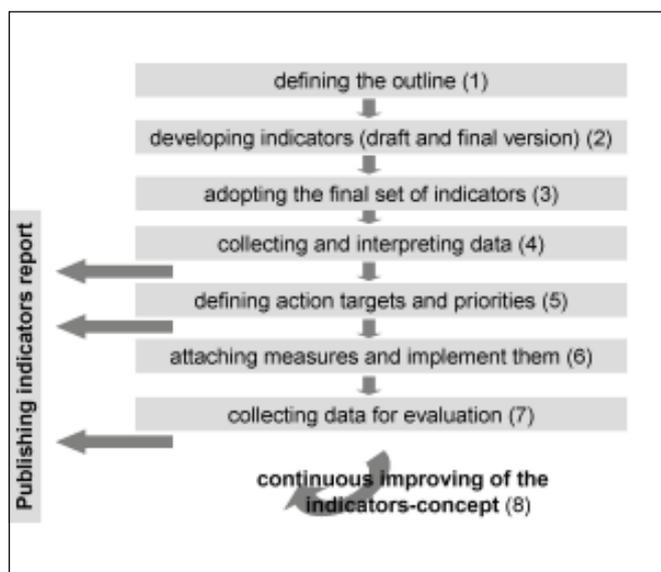


Figure 4: Indicator sheet  
Source: translation of Koitka 1999: 94

Indicator:	_____
Aim Reference:	_____
Data-collection:	
a) source:	
b) way of calculation/validity:	
Interlinkages:	
a) within the working group:	
b) with other working groups:	
Priority of the indicator:	
Action target:	
Action to reach the aim (incl. responsibility and time):	

5) Defining action targets for each indicator makes them a tool for change. By the definition of targets, the people involved in the co-operation have to express how much they would like to achieve. Furthermore, out of the whole set of indicators some could be prioritised. This is important as the need for action usually goes beyond the amount of resources available for implementation.

6) Once action targets have been set, actions which should be realised to reach the targets could be attached to each indicator. At least one institution of the co-operation should be responsible for the implementation of each action.

7) After one or two year data for the indicators should be collected again. At the same time the significance of the indicators should be evaluated.

8) The indicators concept should be improved continuously. This includes improvement of single indicators as well as advancement of the whole concept of the indicators. For example, new indicators may need to be developed for topics that are not represented by the existing indicators but have gained more in importance since the previous set of indicators was adopted.

9) At different steps of the procedure the public should be informed about the indicators development. It is important not only to present data, but also to unfold the decisions that underlie the indicators development.

## EFFECTS OF CO-OPERATIVE INDICATORS DEVELOPMENT<sup>10</sup>

The hypothesis that the development and use of indicators could have positive effects on co-operations for sustainable development has been strengthened through the analysis of my case studies.

Having a closer look at the case studies of Jacksonville and Oregon that started their work on indicators in the late 1980s and are still active today allowed the identification of several effects shown in figure 5.

Figure 5 gives an overview of the effects that arise from the development and use of the indicators. It is important to realise that not only the use of the indicators has positive effects, but also its development. Co-operative Indicators Development gives an own outstanding value to the process of development itself. The development is not a necessity or a burden that has to be tackled. In total ten effects have been named that could arise through Co-operative Indicators Development and could support co-operations. Four of these effects have been identified to emerge through the development of indicators.

The following is a description of three of the ten effects.

### EXPRESS TACIT KNOWLEDGE

To work out adequate actions for the implementation of the vision of sustainable development, it is important to gain new knowledge and to impart knowledge that has already been gained. People working together in a co-operation for sustainable development are local experts. They usually have profound knowledge on their region,

domain and sustainability. One problem is that a lot of this knowledge is tacit knowledge that is inexplicable. Often people “feel” that things are the way they think about them; but they are not sure about it. Furthermore, sometimes they may not express their knowledge explicitly, thus hindering effective co-operation with others on these aspects. To give an example, in the German case study, a working group on regional trade wanted to follow the vision of protecting the cultural landscape. During the discussion on a meaningful indicator to present this vision, a diverse line of arguments was developed. In the end, they formulated an indicator on direct sale of self-grown products by local farmers. The line argument put together lots of knowledge from different local experts even some that was not explicit before.

To give another example that could have been observed, in both the US-American case studies, a lot of people felt that teen-pregnancy was an important topic. But there were no numbers declaring how many teenage girls give birth per year. In this case, a first step was to collect solid data on teen pregnancy and to express the feeling that “many” are affected by teen-pregnancy.

An important first step during the indicators development is to be open for

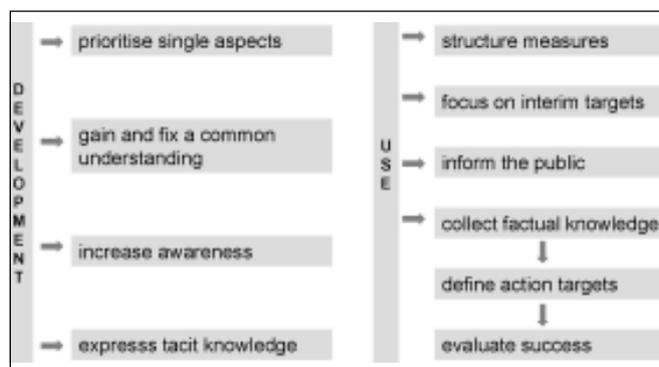


Figure 5: Effects of the development and use of indicators for sustainable development on co-operations

Source: translation of Köckler (2005: 149)

such "feelings" about underlying reasons. Often wish-indicators are developed that are not already collected by official offices. For this case Co-operative Indicators Development offers a potential to open up existing databases of actors joining the co-operation or to find ways to collect the data.

Particularly the effect "express tacit knowledge" shows the limits of indicators, as not everything can be measured. But thinking of Gailbraith one should try to measure it, because if it is not counted it tends not to be noticed.

## INFORM THE PUBLIC

For several reasons it is important to inform the public. The most important reasons are: inform many people about background of sustainability, the work and success of the co-operation and to win new members over to join the co-operation. The last reason is very important for the long term power of the co-operation, because the more powerful people join voluntary over the years the stronger will the co-operation be. Therefore it is important to convince people to join the co-operation.

In both case-studies, indicator reports are published on a regular basis on both web and printed media. Furthermore, press conferences are held whenever a new report is released. But in both regions the indicators are not well known in the public. To reach a wide range of people, specific ways of information dissemination have to be found. In some cases, for example, the indicators are presented in the form of a poster, presented and discussed on the radio or printed in local newspapers. For cities with many immigrants, it is important to translate reports in different languages.

It is essential also to inform people and institutions in power. This could be a starting point to win over new relevant actors for the co-operation.

## DEFINE ACTION TARGETS

As mentioned above, the definition of action targets is a step in the procedure of indicators development. Action targets are quantitative targets that express both the need for action and the willingness to act. For instance, the CO<sub>2</sub>-reduction target of the Kyoto-Protocol is such an action target. From a pure scientific perspective it would be reasonable to have stricter targets. But this target expresses what those countries who adopted the Kyoto-Protocol have valued as being possible to realise.

In the context of sustainability indicators it is not self-evident to develop action targets. Several sets of indicators for sustainability are only seen as a monitoring tool. By the definition of action targets indicators get a strategic management function. The need for action is fixed and expressed.

## CONCLUSION

Co-operative Indicators Development is one concept of indicators for sustainable development among others. The use of an indicators concept depends on the purpose that is followed through the indicators development. Specific characteristics of indicators must all be seen with regard to the objective that is followed. Hence the decision must be taken whether the indicators are used as a basis for a comparison or to give precise information on the local situation; whether they should give a scientifically most precise picture of sustainability or illustrate the values and engagement of a group of actors working mainly on sustainability. These are only but two contrasts to show the width of purposes sustainability indicators could be used for. However, one has to realise that some purposes exclude one another and that no set of indicators could carry

out all requirements. Most important is the fact that indicators are no end in themselves they are no more or less than means to an end.<sup>11</sup>

The description of some of the effects that could emanate from Co-operative Indicators Development has shown that these ends could be manifold.

Although there are these positive effects, Co-operative Indicators Development needs an active co-operation with actors that are willing and able to implement the vision of sustainability.

It is worth noting that the indicators are just a tool. Having indicators does not make the real world more sustainable. Implementing sustainable development is the superior task people have to solve.

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## NOTES

1 see Agenda 21: Chapter 40, Bellagio Principles (Hardi, Peter; Zdan, Terrence 1997)

2 This was pointed out in the mid 1960th years by Krüger (see Ritter 1979: 391) and was proofed in different topics.

3 See Busch-Lüty (1998:14), Fürst (1994: 186f.) Türk (1980: 195)

4 in detail see Köckler (2005: 72pp.)

5 see e.g. Partners for Human Investment (1993: 10), Fürst et al. (1999)

6 Thierstein; Lambrecht (1998:105); Cobb, Rixford (1998: 13); Innes (1990: 194)

7 see in detail Köckler (2005: Chapter 11)

8 The nine working groups in Jacksonville were education, economy, public-safety, natural environment, health, social environment, government/politics, culture/recreation, mobility

9 The six working groups in Oregon were exceptional people, exceptional quality of life, quality of public facilities and services, a business sensitive regulatory climate, diverse industry/productive jobs/increasing incomes, equitable tax structure responsive to growth

10 A detailed description of all effects can be found in Köckler 2005: 21pp and 148pp.

11 More remarks on different characteristics of indicators corresponding to different means in Köckler 2005.