ESD Inds

The Development of Indicators and Assessment Tools for CSO Projects Promoting Values-based Education for Sustainable Development

Deliverable Number 6:

Report on Links between Academic and Civil Society Organisations (CSO) Sustainable Development Indicators (SDIs)

Project Funding
SEVENTH FRAMEWORK PROGRAMME
RTD Partners
University of Brighton
Univerzita Karlova v Praze
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Earth Charter Initiative
ARC ALLIANCE OF RELIGIONS AND CONSERVATION
EBBF European Bahá'í Business Forum
People's Theater mitdenken, mitbewegen!

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Prepared for Core Group Meeting 2

University of Brighton, November 5 - 6, 2009

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Everything that can be counted does not necessarily count;
everything that counts cannot necessarily be counted
(Albert Einstein)

Introduction

Project's Term of Reference

The ESDinds project envisages developing and testing ethical and spiritual **value-based indicators at the project level** to complement existing **sustainability indicators**. The rationale for pursuing this aim is that many CSOs worldwide are often conscious of the importance of their values-based work but they lack the research tools and methodology to turn awareness or subjective evaluation into indicators that can be used more systematically and widely. Besides this need to define indicators of CSOs´ project impact in terms of spiritual values, a secondary goal of the project is to adapt and improve the more common indicators for monitoring environmental, social and economic progress. These **sustainable development indicators** (SDIs) provide information as to whether the organisation is on the sustainable pathway with its activities (and thus contributes towards understanding the overall level of sustainability by linking and comparing these ground-level indicators to national ones (which usually work on longer timescales and with coarser data and thus that they are impractical for project impact measurement).

Sustainable Development Indicators Relevant at the Project or Civil Society Level

Based on a profound knowledge of the indicators theory and practice, the ESDinds proposal reflects a high degree of novelty since value-based indicators, relevant at the project level for sustainability projects, is rather a new or underdeveloped concept. Also measuring projects´ impacts in terms of reaching some sustainability targets is not very common. Currently, civil society organization (CSO) and project level indicators are limited to 'litmus test' indicators, related to national and international frameworks[1]; or are focused on only one component of sustainable development [2]. While few comprehensive SDIs exist specifically for CSOs, some inspiration might be adopted from firms using sustainability reporting as a means of assessing their social, economic and environmental responsibility[3]. Additionally, inspiration may be drawn from indicator initiatives focused on measuring sustainable development at the community level[4].

[1] Lempert, D., and H.N. Nyugen. 2008. A sustainable development indicator for NGOs and international organisations. *International Journal of Sustainable Society*, 1 (1): 44-54.

[2] For example the eco-footprint approach described by: Wackernagel, M. and W. Rees. 1996. *Our Ecological Footprint.* Philadelphia: New Society Publishing.

[3] http://www.sustainabilityreporting.eu/index.htm

[4] See: Palmer, K. and Conlin, R. 1997. Sustainable Seattle: The Indicators of Sustainable Community, in P. Hardi and T. Zdan (eds.), *Assessing Sustainable Development: Principles in Practice*. Winnipeg, Manitoba: International Institute of Sustainable Development; Smolko, R., C.J. Strange and J. Venetoulis. 2006. *The Community Indicators Handbook.* Oakland, CA: Redefining Progress; Sustainable Seattle, 1998. *Indicators of Sustainable Community: A status report on long-term cultural, economic, and environmental health for Seattle/King County*. Available at: http://www.sustainableseattle.org/Programs/RegionalIndicators/1998IndicatorsRpt.pdf

Values and indicators

Human values are embedded within both indicators (as a specific type of information for decision making) and the concept of sustainable development. A famous catchphrase "it cannot be managed what cannot be measured" advocating for development and use of various indicators could be supplemented by "it needn't to be measured what is not valued". However, the mainstream activities in the field of sustainability indicators development has, so far, focused mostly on measuring those aspects of human life that can be measured and reported by relatively easily-performed **quantitative measurement methods** (emissions or number of species, unemployment rates or school enrolment numbers, national debt or labour productivity). Despite the results of these outcome or impact indicators being based on human values (emissions are low if people value the environment; school enrolment is high if the society values education), the resulting information tells us about these values very peripherally. Human values are, irregularly and just at a national level, searched by various organizations using questionnaires and similar types of surveys. For example, the European Union looks about public opinion on various issues (including people's values) and informs its citizens on that on the Public Opinion webpage[5]. Also, it publishes Standard Eurobarometres[6] twice a year. They examine the personal and financial situation of citizens, their main concerns and their expectations for the future and they also contain other aspects of social reality, which influence the daily life of Europeans. The analysis often measures citizens' trust in institutions at different levels. The latest Eurobarometer has, for example, recorded significant shifts in European public opinion, with the economic situation being the main driver of Europeans' perceptions and opinions. Concerns about the economic situation and unemployment increased while the normally stable 'life satisfaction' indicator became more variable. Trust in the European institutions became strongly negative. In the environmental domain, 52 % of Europeans think that the situation of the environment in their country is bad. There seems to exist a North–South division, with respondents from countries in Northern Europe being much more satisfied with the situation of the environment in their country than those from the South. It is also interesting that Swedes and Danes cited 'protection of the environment' as one of their main personal concerns (values) (Eurobarometer 71, Sept. 2009).

During the past ten years, some organizations such as the OECD or the European Union have made serious attempts (in particular the programs **Measuring progress of societies**[7], and **Beyond GDP**[8], respectively) to draw attention to more subtle aspects of development as wellbeing, quality of life, happiness, etc. Such a change in focus can be justified by many research results. For example, the recent report of the Asahi Glass Foundation[9]

[5] http://ec.europa.eu/public_opinion/index_en.htm

[6] The Standard Eurobarometer was established in 1973. Each survey consists of approximately 1000 face-to-face interviews per Member State (http://ec.europa.eu/public_opinion/index_en.htm)

[7] http://www.oecd.org/pages/0,3417,en_40033426_40033828_1_1_1_1_1,00.html

[8] http://www.beyond-gdp.eu/

[9] Asahi Glass Foundation (2009). *Results of the 18th Annual "Questionnaire on Environmental Problems and the Survival of Humankind".* Available at: http://www.af-info.or.jp/en/questionnaire/doc/2009jresult_fulltext.pdf

brings results of a broad international survey on the progress towards the Agenda 21[10] goals. Not surprisingly, significant progress has been made in scientific and technological contributions as well in activities by local governments and citizens´ groups while just very little progress has been identified in lifestyle alteration (which heavily depends on values changes).

Thus, it is necessary to distinguish between an assessment of **current well-being** or the **current state of the society** as it has to do with both economic resources, such as income, and with non-economic aspects of peoples' life - what they do and what they can do, how they feel, and the natural environment they live in -, an assessment of **sustainability** (usually based on mathematical models forecasting whether the current or desired/modelled state can last over time which depends on whether stocks of capital that matter for our lives – natural, physical, human, social – are passed on to future generations) and **assessment/measurement of spiritual values**. The concept of value-based indicators (or values measurement and reporting) is conceptually close to approaches developed and used in the field of education for sustainable development (ESD) since they also often use qualitative methods and approaches. Therefore, we have found it useful to refer briefly to the latest ESD developments further in the text.

An unclear picture

A number of intergovernmental organisations and national governments, but also regional and local authorities, local communities, business organisations, other economic actors, academic institutions and CSOs of many kinds are currently developing and using sustainability indicators. At present, **hundreds of different indicators** have been suggested and are used in many varied contexts, by different users and for diverse purposes. Specific indicators exist for all "pillars" of sustainable development (environmental, social, and economic). Some of them link selected phenomena to specific targets. So-called headline indicators seek to address the most important social, economic or environmental issues. Aggregated indicators (for example the Human Development Index of UNDP, the Environmental Performance Index developed by Columbia University, the Living Planet Index of WWF, the Ecological Footprint and many others) try to propose a single and simple policy-relevant index (number).

Indicators have become essential tools vital to the sustainable management of societal and natural resources. However, while sustainability indicators are used ever more extensively and intensively by a wide range of users and in many different contexts, it does not necessarily follow that they are scientifically sound and/or used appropriately. There has been no agreement or consensus on a common set of scientific and management criteria for selecting and evaluating indicators from several points of view (e.g. reliability of data, scientific rigor of definitions of indicators, validity of underlying assumptions and concepts, etc.). Already some time ago the SCOPE[11] research on SDIs concluded that there are two options for the future development of sustainability indicators: Letting the present "anarchy" continue until a set emerges from a process akin to survival of the fittest, or a more strategic intervention and guidance of the process emerges. The former might lead to the survival of the financially and politically strongest rather than the scientifically most appropriate (with a potential bias towards the wealthiest countries). It would be in the interest of the international community to try to make the process more balanced and objective by giving it some direction or even leadership. The

[10] Agenda 21 is a programme run by the United Nations related to sustainable development. It is a comprehensive blueprint of action to be taken globally, nationally and locally by organizations of the UN, governments, and major groups in every area in which humans impact on the environment

[11] Scientific Committee on the Problems of Environment based in Paris (http://www.icsu-scope.org/)

recently published Stiglitz report[12] states that the abundance of indicators and various measures is a serious drawback insofar as different synthetic indicators convey widely divergent messages. This leads to a great deal of confusion among statisticians and policymakers. Therefore the Report urges a return to the fundamental questions: What do we (people, societies) want to measure exactly?

Sustainable development indicators have recently experienced a shift from traditional approaches capturing isolated environmental, social and economic phenomena (which, after putting together, have provided a more complex but still a mosaic picture of the societal progress), towards measuring an ultimate goal of humanity's efforts for sustainability which is wellbeing and/or satisfactory quality of life (see a particular section further in the text). However, even the new and improved SDIs do not provide significant inspiration or methodological help for the development of **ethical and spiritual value-based indicators.** Therefore, and also because of overabundance of literature and other resources on sustainability indicators, this contribution just highlights and/or remains the most important or new aspect in sustainability research.

Sustainable development – a normative (value-based) concept[13]

The term **Sustainable development** was coined by the IUCN´s 1980 World Conservation Strategy where the section "Towards Sustainable Development" identifies the main causes of habitat destruction as poverty, population pressure, social inequity and the terms of trade. In 1987 "Our Common Future" (Brundtland Report) gives direction for comprehensive global solutions and brings the often quoted definition of sustainable development that "meets the needs of the present generation without compromising the ability of future generations to meet their own needs". This definition was rather enlarged by the Earth Summit in 1992 (UN Conference on Environment and Development) that produced the 40 chapters (1000+ words) of Agenda 21. The conception was further developed by the World Summit on Sustainable Development in 2002 with the notion of the three pillars – social, environmental, economic[14] – as symbolized by the Summit motto "People, Planet, Prosperity". At present, the term itself and its tenor has become so widespread and well known that we may take it as a legitimate part of common sense.

Needless to say, in quoted documents as well as in many others the meaning of sustainable development and sustainability is not identical. On the other hand, the fundamental sense is basically the same. We believe that the key is provided by the already cited Brundtland definition and also the important Article 1 of the Rio Declaration: "Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature". The message of these two very fundamental documents could be summarized in three brief points.

[12] Stiglitz, J., A. Sen and J. Fitoussi. 2009. *Report by the Commission on the Measurement of Economic Performance and Social Progress*. Available at: http://www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf

[13] This section is based on a paper by Moldan and Janouskova 2009, "How to understand and measure environmental sustainability" (in press).

[14] Recent authors have highlighted two additional pillars – political sustainability with a focus on participatory democracy and spiritual sustainability (See: Wooltorton, Sandra (2003). Education for sustainability, in *Hope for the future: The Western Australian State Sustainability Strategy,* Government of Western Australia. ISBN 0-7307-0214-6.).

Firstly, the idea of sustainable development is a pragmatic and anthropocentric one. An essential element of it is a primary focus on people and human well-being. It is based on needs, a broad concept with many interpretations starting perhaps with the Maslow´s pyramid. That means that human beings are motivated by unsatisfied needs, and that certain lower factors need to be fulfilled before higher needs can be satisfied. According to Maslow, there are general types of needs (physiological, survival, safety, love, and esteem) that must be satisfied before a person can act unselfishly.[15] And motivation for unselfish behaviour then certainly could be seen as one of the conditions of accomplishment of the idea of sustainable development. According to Millennium Ecosystem Assessment[16] essential elements of well being are security, basic material for good life, health, good social relations, and freedom of choice and action (13).

Secondly, human life should be "healthy, productive and in harmony with nature". This principle implies a quest for balance among and between the three sustainable development pillars. Human life is not an independent, isolated entity; it is part of a complex web of natural and social phenomena and depends on a myriad relationships and interdependencies. In particular, the necessary "harmony with nature" that addresses the environmental pillar is stressed.

Thirdly, the dynamic and long-term nature is also an essential feature of sustainability. The definitional formulation taking into account "present and future generations" points out the changing situation and emphasizes concerns for the future without any explicit time limitation or target. The time dimension is bound to the span of human life and accents the necessary extension – possibly a very long extension – beyond it. These three simple principles apply to all three pillars.

Just as there are many definitions of sustainable development, there are many approaches to particular pillars or sustainable development. The concrete definition of the **social dimension of sustainable development** is less clear-cut than the other two dimensions. It is understandable because the diversity of economic, social and culture conditions in individual countries makes development of a uniform definition of social sustainability very difficult. Black defined social sustainability as "the extent to which social values, social identities, social relationships and social institutions can continue into the future." Torjman characterizes social sustainability as follows: "From a social perspective in particular, human well-being cannot be sustained without a healthy environment and is equally unlikely in the absence of a vibrant economy." Some other authors perceive the social pillar of sustainable development as follows: Social sustainability requires that the cohesion of society and its ability to work towards common goals be maintained. Individual needs, such as those health and well-being, nutrition, shelter, education and cultural expression should be met.

However, these and other definitions are more or less listings of the general goals of social policy rather than serious attempts to define the social aspect as a constituting dimension of sustainable development. And yet it is precisely the social "pillar" of sustainable development that is probably the most important and critical for the long-term survival of human civilizations as witnessed by insightful studies of past (and contemporary)

[15] The view that human beings are motivated by unsatisfied needs reflects one understanding of human nature. The field of human developmental psychology also highlights other needs as being more powerful than the lower, base needs. The development of critical moral consciousness is seen as fundamental to helping people become morally motivated rather than motivated by expedient needs (Mustakova-Possardt, E. (2003). *Critical Consciousness: A study of morality in global historical context.* Westport, CT: Greenwood; See also Podger, D., Mustakova-Possardt, E. and Reid, A. (2009) "A Whole-Person Approach to Educating for Sustainability: Identity, Motivation, and Higher Order Dispositions", *Journal of Education for Sustainable Development* (in press)).

[16] UN program assessing the state of ecosystem services. http://www.maweb.org/en/index.aspx

societies. Another though indirect proof for this view is the finding of the authors of the Wealth of Nations that human and social capital is the most important component of the national wealth.[17]

Approaches to measuring quality of life

The Stiglitz[18] report claims that three main conceptual approaches have proved useful in thinking about the measurement of quality of life (QoL): the first is based on the notion of **subjective well-being**, the second on the notion of **capabilities**, and the third on economic notions drawn from **welfare** economics and from the theory of fair allocations. Each of these approaches informs different measurement strategies.

Subjective well-being

A long philosophical tradition views individuals as the best judges of their own condition. In economics, this approach is closely linked to the utilitarian tradition, which argues that QoL is reflected exclusively in the subjective states of each person. An approach based on **subjective self-reporting** has broad appeal due to the strong presumption in many streams of ancient and modern culture worldwide that making people "happy" and "satisfied" with their lives is a universal goal of human existence. Today, several methods have made subjective well-being amenable to systematic quantification. The greatest strength of this approach is its simplicity: relying on people's own judgments is a convenient shortcut and potentially provides a natural way to aggregate various experiences in a way that reflects people's own preferences. Further, this approach makes it possible to reflect the diversity of people's views about what is important in their lives.

In terms of measurement methods, the data on **life-evaluations** may be collected in representative surveys. For example, the World Values Survey[19] is based on qualitative responses, such as feeling "quite" or "fairly" happy with one's life, or on other scales that assess life satisfaction. **Hedonic experiences** are measured by a report that is made by each person either in real time or shortly after an event has occurred (there are variants as a Day Reconstruction Method by the phone etc.)[20]

Capabilities

While the previous methods have focused on people's own feelings, other approaches broaden the information beyond self-reports and perceptions. The most prominent of these approaches is rooted in the notion of **capabilities** that conceives a person's life as a combination of various "doings and beings" (functionings), and assesses QoL in terms of a person's freedom to choose among the various combinations of these functionings (capabilities).

[17] E.g. World Bank, 2006: Where is the Wealth of Nations? Measuring Capital for the 21st Century or R. Eisler 2007: The Real Wealth of Nations: Creating A Caring Economics.

[18] Stiglitz, J., A. Sen and J. Fitoussi. 2009. *Report by the Commission on the Measurement of Economic Performance and Social Progress*. Available at: http://www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf

[19] http://www.worldvaluessurvey.org/

[20] Several useful references at: http://sitemaker.umich.edu/norbert.schwarz/day_reconstruction_method

Functionings is a broad term used to refer to the activities and situations that people spontaneously recognize to be important. These can also be conceived as a collection of the observable achievements of each person (e.g. their health, knowledge or having a meaningful job). Some of these achievements can be quite elementary, such as being safe and well-nourished, and others quite complex, such as being able to express oneself in public without shame. As people in different places and times have different values and experiences, the list of the most relevant functionings depends on circumstances and on the purpose of the exercise.

Indicators used in education (for sustainable development)[21]

Education for sustainable development

A long tradition of economic research has recognized the **skills and talents** embodied in the population as a critical input into economic production. What is recognized less often is that education, literacy, reasoning and learning are also important for quality of life. However, evidence indicates that individuals who attended school for longer, or who achieved higher educational qualifications, are more likely to report greater subjective well-being, to participate more actively in society and to enjoy better health.

According to UNESCO, **education for sustainable development** (ESD) aims to achieve well-being in line with sustainable development by empowering people through education to assume responsibility for creating a sustainable future. It seeks to engage people from all walks of life, in both economically developing and developed countries, in change for a better world. ESD goes beyond teaching about the knowledge and skills associated with understanding the environment, society and economics; it aims to **foster respect and understanding for the values and perspectives** necessary for nurturing sustainable livelihoods, as well as build human capacity to be able to act upon these understandings. Education has come to be understood more broadly as **capacity building for civic competence for sustainability** and **learning-based strategies for change** towards sustainability. It can apply to all processes of social change[22]. All of the ESDinds CSO partners are contributing to this broader understanding of ESD in various ways – through engagement with businesses, youth, faith organisations and community led initiatives.

Indicator approaches in ESD

The development of ESD indicators is a new area and experience with them is limited worldwide. Many different indicators may allow describing the state of education. In general, some of these indicators refer to inputs (e.g. school enrolment, educational expenditures and school resources), others refer to throughputs and outputs (e.g. graduation rates, expected number of completed years of schooling, standardized test measures

[21] This section is based on: Stiglitz, J., A. Sen and J. Fitoussi. 2009. *Report by the Commission on the Measurement of Economic Performance and Social Progress*. Available at: http://www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf; and the Asia-Pacific Guidelines for the Development of National ESD Indicators (UNESCO, Bangkok, 2007). Available at http://www.unescobkk.org/fileadmin/user_upload/esd/documents/indicators/Guidelines.pdf

[22] Tilbury, D. & Cooke, K. (2005) *A National Review of Environmental Education and its Contribution to Sustainability in Australia: Frameworks for Sustainability,* Volume 1, Canberra, Australian Government Department of the Environment and Heritage and the Australian Research Institute in Education for Sustainability.

of student and adult achievement in terms of literacy and numeracy), and others to the characteristics of the education process (eg. pedagogy, teacher training).

UNESCO (2007) distinguishes three main **ESD indicator types**:

i. **Status Indicators**: assess variables that determine the position or standing of ESD in a country.

ii. **Facilitative Indicators**: assess variables that assist, support or encourage engagement with ESD (this category includes learning indicators).

iii. **Effect Indicators**: assess variables relating to initial, medium and long-term achievements during the DESD. Output, outcome, impact and performance indicators belong to this category.

Despite some inconsistencies in concepts, terminology and usage of indicators by different organisations, it seems to be useful for the ESDinds project to clearly distinguish between quantitative and qualitative indicators and between process, learning and effect/impact.

Indicators that are based on measurable data are called **quantitative indicators**. They have the form of numbers and ratios (e.g. number of primary school teachers with special training) while **qualitative indicators** are based on observational data and tend towards communicating the quality, details or nature of a policy or programme. Their main form is description (e.g. a content of the SD curriculum).

Process indicators help to identify and inform on the existence of ESD processes, activities and opportunities (e.g. % of national level CSOs that include an ESD component in their activities). **Learning indicators** are used to measure learning and knowledge built during the development, implementation and assessment of ESD efforts (e.g. level of awareness, knowledge or skills in the SD field). Learning indicators are also defined in a way that stimulates further learning. Finally, **effect indicators** try to assess impacts that result from ESD efforts (e.g. learners who use sustainable practices in daily life).

So far, status and facilitative indicators based on quantitative approaches tend to be the most commonly used in practice.

Data for ESD indicators

Some of the most relevant indicators for assessing the role of education for QoL are measures of **people's competencies** (in the UNESCO typology, they fall into the learning indicators, *i.e.* direct measurement of what people have learned in various settings). Several tools have been developed in recent years to provide data and other standardized measures of these competencies, such as:

- The OECD *Programme for International Student Assessment* (PISA). This survey covers 15-year-old students with tests focusing on reading, mathematics, and science.
- The *Trends in International Mathematics and Science Study* (TIMSS). This survey was developed by the International Association for the Evaluation of Educational Achievement (IEA), and covers 4th and 8th graders, with a focus on mathematics and science.
- The *Progress in International Reading Literacy Study* (PIRLS), also developed by the IEA. This survey covers 4th graders, and focuses on reading literacy.
- The *International Adult Literacy Survey* (IALS), which tests adults in prose, understanding of documents and quantitative skills.

- The *Adult Literacy and Life Skills* survey (ALL), which tests people aged 16-65 in the fields of prose and document literacy, numeracy, as well as reasoning and analytical problem-solving.

We may conclude that the main problem for ESD indicators is not the lack of more detailed information on education *per se*, but rather the lack of surveys providing measures of both education and other outcomes that matter for quality of life at the individual level.

Indicators and (some) values[23]

A central question for human values measurement is whether values can be measured[24]. **Values are intangible** and thus they cannot be weighted, measured or counted. Behaviours connected to intangibles such as values can be observed and measured. A precise definition of human values capable of being operationalised and identification of observable referents (variables) in the empirical world is of crucial importance for the research. Without any attempt of being comprehensive, we further highlight some knowledge relevant to value-based indicators that was accumulated within the SCOPE project two years ago.

Cultural Diversity

Different cultures usually have different views on what constitutes sustainable development. Such differences can be small variations in what types of economic or political policies should be adopted to promote sustainability, or they can represent significant divergences from the underlying development paradigm. This will influence both what a society would like to measure with indicators and which reference levels are seen as desirable or sustainable. The indicator sets most in use today are biased toward the dominant values of a Western-style market economy. For example, the reliance on GDP and related indicators reflects an economic development paradigm with a strong emphasis on the individual rather than the community and on material rather than social or spiritual dimensions of society, which may not be shared across all cultures.

This narrow focus also means that many aspects of society that are crucial to sustainability but are not part of the dominant political paradigm are absent in indicators. For example, there is a body of research on the importance of community values, such as trust, cooperation, and service for fostering collective action to manage common resources that could provide a basis for useful indicators.

The first challenge confronting indicator developers is to look again at the various indicator sets, particularly those used for intercountry comparison on sustainable development, to see whether significant **cultural biases** can be identified and made transparent, if not reduced. The second challenge is to develop indicators for a broader range of sustainable development issues identified within cultures that are largely underrepresented in the scientific and political debate on indicators. A third challenge is to develop indicators for the spiritual values that are critical in assisting individuals through to societies to work together for both individual and societal transformation for sustainability.

[23] This section is based on papers published by SCOPE (See Hak, T., B. Moldan and A.L. Dahl (eds) (2007), *Sustainability Indicators: A Scientific Assessment*. SCOPE Vol. 67. Washington, D.C., Island Press.)

[24] Handy, R (1970): The measurement of values. Warren H. Greene, Inc., St. Louis, Missouri.

Despite such cultural differences, there are still **many values common to all human beings** that should be reflected at the core of any indicator set. Everybody, regardless of culture, needs a minimum amount of food, clean water and air, shelter, space, health care, security, self-respect, social relations, respect for other living beings, and time, access, and opportunity to develop one's abilities.

The need to preserve the ecological balance of the world is also universal. The ability of diverse cultures and countries to agree on common values and priorities and to reflect them in indicators is exemplified in the Convention of Biological Diversity, where indicators to address different aspects of biodiversity at the ecosystem, species, and genetic level were agreed on in 2004 (Conference of the Parties 2004). Although a common target is set for these indicators to achieve a significant reduction in the loss of biodiversity by 2010, countries are free to choose more ambitious targets. Another example is the MDGs and their derived targets and indicators for areas such as food, water, and health (United Nations General Assembly 2000).

Equity

Global sustainability is a concept with solid physical limits, but sharing responsibility below that level is largely about how much is fair and for whom. **Equity and justice** are explicit in the concept of sustainable development, both temporally in intergenerational equity, respecting the development needs of future generations, and spatially in intragenerational equity, stressing poverty eradication today.

Most of the focus on equity and its measurement is at the lower end; at the extremes of poverty, focusing on the ability of people to meet basic needs. Less attention has been paid to the upper end of the equity continuum, the extremes of wealth and related overconsumption. For example, there are limited data on wealth at the national level, even for a proxy such as the number of millionaires, and few indicators of overconsumption. Because measurement often leads to management, there are strong incentives to ensure a lack of political attention on the issue of wealth. There is also a lack of focus on measuring the equity of social policies and understanding the norms in society that underpin these sustainability issues.

National-level indicators that aggregate data into averages can hide significant inequity. National economic statistics are not easily disaggregated to measure equity along the gradients between rich and poor, urban and rural, men and women, and children and adults, or between racial or ethnic groups. The Gini coefficient captures income inequity within countries, and recent editions of the United Nations Development Programme Human Development Report have highlighted aspects of social inequity. However, the conceptual challenge is to develop a range of indicators that capture the equity dimension of sustainable development.

Democracy

The concept of **participation and majority decision making** expressed in the term “democracy” is related to equity. Although democracy may be interpreted differently in various intercultural contexts, there is a claim for democracy as a universal principle for institutionalizing sustainable development (UNESCO, 2002). This can include access to and participation in processes of generating knowledge, developing indicators, and using them to guide action. There is a risk that certain ideas become embedded as authoritative in the conceptual framework and governance of sustainable development, whereas others are marginalized. Given the normative dimensions of indicators and the biases they contain, democratic processes are particularly necessary to ensure **access to and inclusion of different types and sources of knowledge** in indicator development. This entails engaging scientists and users from a much broader spectrum of countries (particularly developing countries), cultures, and disciplines.

Multistakeholder processes of dialogue, decision making, and implementation are increasingly institutionalised across governance levels, as in local Agenda 21 roundtables, the practices adopted by the Commissions for Sustainable Development, and the emphasis on partnerships at the World Summit for Sustainable Development. Principle 10 of the Rio Declaration outlines the right of access to information, participation, and justice embodied in the Aarhus Convention. Although there are indicators designed to account for the degree of implementation of democratic principles, most developed by nongovernment organizations, such as the Corruption Perceptions Index, the International Standards of Elections, the Worldwide Press Freedom Index, and key indicators for the violation of human rights (by Amnesty International), the challenge remains to develop indicators for democratic practice concerning sustainable development at the project level.

Criteria for Indicator Development

Selection criteria help "ensure that indicators meet standards for accuracy and usefulness"[25]. Criteria also create common guidance for a diverse team to work together. There are numerous criteria described in the academic literature, with various levels of operationalisation. The selection of the four criteria for ESDinds indicators listed below is driven by the project design and pragmatic concerns. The value-based indicators should be:

1. Relevant and important: The selected indicators need to be recognized as important for the users[26]. They also need to be relevant to the everyday experience of various decision making groups in a system (individuals, communities, businesses, organizations, etc.), and need to tell something about the system the people are interested in. Therefore it is important that the stakeholders be involved in their development[27]. Also, the indicators should bear clear meaning or sense to them – they should be meaningful.

2. Valid and reliable: Indicators should provide information, message or guidance that is reliable – there needs to be understandable rationales for using the specific indicator and needs to be accurate. The concepts of accuracy and validity imply that there is a "true" value to be estimated. The true value may have a theoretical definition or may be defined only operationally as that value resulting from a set of carefully specified empirical measurement steps.

3. (Easily) Measurable, affordable and accessible: Indicator needs to be measurable. The data for an indicator needs to be accessible and affordable (in terms of costs). Surveys are often expensive but often the only way of the data collection. Measurability will impact on cost-effectiveness of the indicator. Indicators need to be designed to be appropriate to the data capabilities of users, giving consideration to the availability of the data across the system and the ability to collect it. An important principle is that actors in the process of analysis

[25] Smolko, R., C.J. Strange and J. Venetoulis. 2006. *The Community Indicators Handbook.* Oakland, CA: Redefining Progress. p 31

[26] P. Hardi and T. Zdan (eds.) (1997), *Assessing Sustainable Development: Principles in Practice*. Winnipeg, Manitoba: International Institute of Sustainable Development; Smolko, R., C.J. Strange and J. Venetoulis. 2006. *The Community Indicators Handbook.* Oakland, CA: Redefining Progress.

27 Smolko, R., C.J. Strange and J. Venetoulis. 2006. *The Community Indicators Handbook.* Oakland, CA: Redefining Progress. p.9.

have the necessary basic knowledge that allows them asking the right questions (which may be instrumental in developing good indicators) as well as the ability to give the correct answers[28].

4. Understandable/comprehensible/interpretable: Indicators will only be useful if the project participants can interpret it and apply it[28] and if they are easily understood by a broad audience.

Inclusion of values-based indicators into existing CSO measurement approaches

The ESDinds Consortium CSOs use a variety of approaches to measure the impact of their work. Measurement methods used by the CSOs include questionnaires, interviews, observation, dialogue, key performance indicators, storytelling, and monitoring project progression and expansion. In the first phase of the ESDinds research, interviews and workshops revealed some specific tools in use by ESDinds partner organisations. The Earth Charter Initiative has developed an ethics based assessment tool called *EC Assess*[29] to monitor action towards specific principles of the Earth Charter. EBBF members also described a range of specific tools used to monitor and understand values within their organisations. These tools included the 'Seven Levels of Personal and Organisational Consciousness'[30] and the 'Caux Roundtable Principles'.[31]

Indicators developed in the ESDinds project will be complemented with a range of possible assessment methods to allow (where possible) inclusion of ESDinds indicators into the existing processes used by CSOs to monitor the impact of their work. To allow the indicators to be used within organisations with differing levels of capacity, suggested measurement approaches for ESDinds indicators will be described at two levels of rigour. The first is pragmatic and exploratory; the second is technical and precise. The **pragmatic/exploratory level of rigour** is suitable for situations where time, resources or expertise are not sufficient or necessary to investigate an issue at the highest level of rigour, but where systematic investigation and reflection can nevertheless bring clarity and improve decision making and advocacy at the project level. The goal is not maximum precision, but greater insight than before, and improved decision making. The **technical/precise level of rigour** often requires some technical expertise, whether already present in the project, or brought in from outside. Greater resourcing may be required, in the form of person-hours invested, and method-specific resources (e.g. statistical analysis software). The aim is maximum precision, general application, replicability and predictive power.

[28] P. Hardi and T. Zdan (eds.) (1997). *Assessing Sustainable Development: Principles in Practice*. Winnipeg, Manitoba: International Institute of Sustainable Development.

[29] http://www.earthcharterinaction.org/invent/images/uploads/EC-Assess.pdf

[30] The model of Seven Levels of Personal and Organisational Consciousness created by Richard Barrett is described in his book "*Liberating the Corporate Soul: Building a Visionary Organisation*" and extends the work of Abraham Maslow.

[31] http://www.cauxroundtable.org/index.cfm?&menuid=8

Conclusion

The design of the ESDInds project is inspired by principles of cultural diversity, equity, justice, and participatory democracy, involving a collaborative process between a geographically and culturally diverse group of civil society organisations (CSOs) and researchers to develop indicators that fill some of the indicator gaps mentioned. The focus is to identify indicators for ethical and spiritual values are that are critical for sustainable development projects to progress.