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**INDICATORS OF "SOCIETAL PROGRESS": LESSONS FROM INTERNATIONAL EXPERIENCES**

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**WORKING PAPER No 33**

*This paper contributes to work on measuring well-being and progress. It has been prepared by Katherine Scrivens and Barbara Iasiello*

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**Katherine Scrivens and Barbara Iasiello**

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## ABSTRACT

This paper looks at different experiences in the development and use of societal progress indicator sets – at the European, national and sub-national level – with the aim of identifying useful lessons from these experiences. Five case studies are presented: the indicators used to support the EU “Lisbon Strategy”; the UK Sustainable Development indicators; *Measures of Australia’s Progress*; *Measuring Ireland’s Progress*; and an example of a local community indicator initiative – the Santa Cruz Community Assessment Programme, in California. The paper concludes that for societal progress indicators to be used and applied in decision-making processes, then three conditions need to be met. First, the indicators should be seen as *legitimate* by the intended users. Second, the indicators should be set within a wider *system* that provides ‘fit-for-purpose’ information. Third, an appropriate *incentive* structure must be in place for stakeholders to act on that information.

## RESUMÉ

Cet article relate une variété d’expériences liées au développement et à l’emploi des séries d’indicateurs de progrès sociétal, aux niveaux européen, national et infranational, et cherche à identifier les leçons qui peuvent être tirées de ces expériences. Cinq études de cas sont présentées : les indicateurs utilisés pour soutenir la Stratégie de Lisbonne de l’UE ; les indicateurs du développement durable du Royaume-Uni ; Mesures des progrès de l’Australie ; Mesurer les progrès de l’Irlande ; et, un exemple d’initiative d’indicateurs d’une communauté locale, le Programme d’évaluation communautaire de Santa Cruz en Californie. L’article conclut qu’afin d’employer et d’appliquer les indicateurs de progrès sociétal dans le processus de prises de décisions, les conditions suivantes doivent être réunies. Premièrement, les indicateurs devraient être perçus comme légitimes par ceux qui s’en serviraient. Deuxièmement, les indicateurs devraient être placés dans le contexte d’un système plus étendu qui fournit des informations « adaptées au besoin ». Troisièmement, des incitations appropriées doivent exister afin que les parties intéressées agissent sur ces informations.

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## 1. Introduction

1. Answering the question of whether or not societies are “making progress”, and at what rate, is complex. Even deciding what progress should look like is not straightforward as this involves a value judgement about the desirable goals for a society across multiple economic, social and environmental dimensions.<sup>1</sup> For many decades, this problem has largely been managed by using indicators of economic growth (such as GDP) as a proxy measure for overall societal development or progress. There are many reasons for taking this approach, not least the fact that economic growth is often strongly correlated with other important aspects of societal progress, such as increased life expectancy, reduced child mortality, and higher literacy rates. However, the focus on GDP and related indicators has encouraged a narrow and partial view of what societal progress means.

2. In recent years, increasing attention has been given to the question of how to develop broader and more representative statistical measures of economic, social and environmental progress. Indeed, this is not a new challenge for statisticians, as evidenced by the social indicators movement of the 1960s and 1970s, work on environmental indicators in the 1980s, and assessments of sustainability and human development emerging in the 1990s and continued today. Work on the measurement of wellbeing, happiness and quality of life has also contributed to the current debate. High-level initiatives such as the European Commission’s “Beyond GDP” events and related research, or the Commission on the Measurement of Economic Performance and Social Progress, show that the issue of societal progress measurement is of direct policy relevance, and not just an academic concern.

3. One approach that has been applied in a variety of different contexts is that of selecting a list of indicators to represent aspects of societal progress deemed to be significant for the purpose at hand. The resulting indicators are presented together as a set so that users may assess the level and direction of change in each indicator in order to obtain an overall picture of progress (or regress) across the different dimensions. Indicator sets represent a compromise between comprehensiveness on the one hand and accessibility on the other in that they aim to provide a manageable amount of information without overly simplifying the issues.<sup>2</sup> One high profile example at the international level is the Millennium Development Goals and associated indicators.

4. This paper looks at different experiences in the development and use of indicator sets – at the European, national and sub-national level – with the aim of identifying useful lessons from these experiences. The next section looks at indicator use in general, drawing from a brief review of the literature. This is followed by a historical overview of how indicators have been developed and used to measure different aspects of societal progress. Five case studies are then presented: the indicators used to

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<sup>1</sup> “Progress” and “societal progress” are not well-defined or widely used terms, and an attempt to provide a definition will not be made here. This paper uses the concept of “societal progress” to cover a wide range of initiatives including international benchmarking indicators within the EU Lisbon Strategy, national sustainable development strategies and local community quality-of-life assessments. The commonality between these different projects is the desire to make some kind of multi-dimensional assessment of societal conditions and change beyond a narrow economic focus. For convenience, the terms “progress” and “societal progress” will henceforth be used without inverted commas; this is not to ignore the fact, that some may dispute their application to such wide-ranging contexts.

<sup>2</sup> Indicator sets may have less impact on public debate than approaches which summarise the information in a single number such as the Human Development Index or the Ecological Footprint. Such composite indexes have more communicative power and can be effective tools for awareness-raising and campaigning. However, composite indexes also draw criticism for oversimplifying the issues and for being based on assumptions and methodology that are not always transparent to users (see OECD 2008a for more on composite indicators). Indicator sets avoid these criticisms as the choice of components making up the set is transparent, and they are less reductive than the single-number approach. However, indicator sets are still selective, and are unlikely to provide the in-depth information needed for detailed policy analysis provided by larger datasets.

support the EU “Lisbon Strategy”; the UK Sustainable Development indicators; *Measures of Australia’s Progress*; *Measuring Ireland’s Progress*; and an example of a local community indicator initiative – the Santa Cruz Community Assessment Programme, in California. A final section brings together some conclusions and lessons.

## 2. What is an indicator?

5. There is no single, universally accepted definition of the term ‘indicator’. This simply reflects the fact that purpose, scope and methodology can vary greatly from one indicator, or set of indicators, to the next. Most indicators are developed in order to describe important features of a larger system. They are “succinct measures that aim to describe as much about a system as possible in as few points as possible” and which “help us understand a system, compare it and improve it” (Pencheon, 2008).

6. All statistics, in one way or another, are developed in order to provide information about a wider system, organisation or product. Can we differentiate between indicators and statistics? The two terms are often used interchangeably, yet in the current context an indicator is understood to be a particular kind of statistic. Van den Berghe (1998) highlights two characteristics which can be applied to indicators in general. The first is that indicators are produced with *a particular type of use* in mind, unlike more neutral, purely descriptive statistics. This can be illustrated through the analogy of a car’s dashboard: “There are thousands of statistics which could be provided about the actual performance of a car, but the dashboard provides only those which are useful (or even essential) to the driver” (Van den Berghe, 1998). Indeed, many indicator sets are referred to as ‘dashboards’ or ‘scoreboards’, reflecting this function.

7. Secondly, indicators are meant to *facilitate relevant comparison*, either over time or between different units, and to measure performance against a standard that has been set (Van den Berghe, 1998). Comparison over time is probably the most common function of an indicator. An early influential report on social indicators states that “indicators are statistics and any other forms of evidence that help us assess where we stand and where we are heading” (Bauer, 1966). Comparison between units is also an important function of indicators, such as between countries or local authorities. For such comparison to be valid, it is necessary for the data to be harmonised, which is often difficult. Measuring performance against a standard could refer to a narrowly defined quantitative target (for example ‘smaller class sizes in primary schools’) or a more abstract goal (such as ‘improved quality of life’). Obviously, the more abstract the standard, the harder it is to compare the current situation and the ideal one.

8. The OECD defines an indicator as “a parameter, or a value derived from parameters, which points to, provides information about, describes the state of a phenomenon/environment/area, with a significance extending beyond that directly associated with a parameter value” (Linster 2003).<sup>3</sup> The policy relevance of an indicator is one example of such extended significance; indicators of societal progress are generally developed to inform policy decision-making in some way.

## 3. The use and impact of indicators

9. Indicators are developed for wide-ranging purposes and user groups. They can be used for policy management, public information, advocacy, organisational decision-making, allocation of resources, programme evaluation or performance ranking, to name just a few potential uses. They can be developed to monitor the progress of an individual organisation, to measure the well-being of people living in a single neighbourhood, or to track changes across a range of issues in an entire country, group of countries, or even the whole world. They can be produced by governments and international organisations, or by community organisations consisting of a handful of committed volunteers.

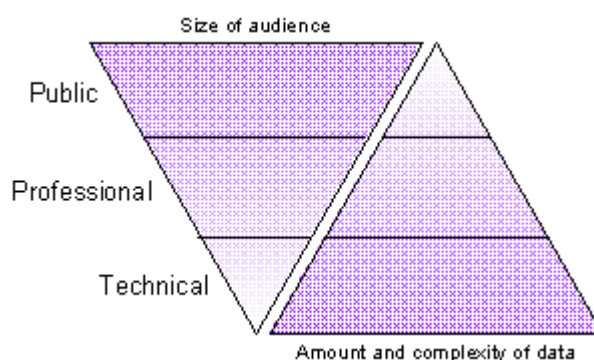
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<sup>3</sup> With a “parameter” being defined as “a property that is measured or observed” (Linster, 2003).

10. Indicators are invariably developed to inform and influence different societal, political, technical and institutional processes. The different characteristics of the indicator (or indicator set) as outlined above can shape the nature and extent of its impact on the relevant process. For example, a composite indicator developed by an environmental NGO will probably have more success raising awareness among the general public, than as a widely-accepted information tool among government analysts. For this reason, indicator producers need to bear in mind the type of outcomes they are aiming for throughout the design and development process. This then leads to the question of what types of outcomes indicator producers can realistically expect from their work.

11. The types of outcomes an indicator set can lead to depends largely on the target user group. Statistical products generally have three types of audience: technical users (statisticians/researchers); policy users (policy makers/policy analysts), and the public (media, civil society, interested non-experts). Each of these target groups requires a different amount and complexity of data for their uses. Figure 1 below gives a visual representation of the relative size and user needs of each group. The model uses the term ‘Professionals’ to denote policy users, defined as: “professionals in the public, private and educational sectors who use and analyse statistics for the purposes of policy-making and other high-level endeavours” (Statistics New Zealand, undated).

**Figure 1. Audience Model for Statistical Products**



Source: Statistics New Zealand, undated.

12. The focus of this report is on indicator sets measuring “societal progress”. In terms of the “amount and complexity of data” they present, indicator sets lack the level of detail necessary for a specialised technical audience; the emphasis here will therefore be on indicators to inform policy processes and to educate the public.

### *Indicators and policy*

“[M]ore is required to inform policy than simply producing academically certified data and handing it to policy makers” (Innes, 1990, p. 8).

13. Despite the rise in interest in “evidence-based policy-making” in recent years, much of the research on the use of scientific knowledge in policy shows that the assumptions of the rational model rarely hold in the actual policy process.<sup>4</sup> Although there are undoubtedly cases where indicators play an important and clearly-defined role in policy decision-making (such as the unemployment rate, GDP or the inflation rate to give a few examples), in general, tracing the influence of indicators on policy is not

<sup>4</sup> In the rational model, policy makers and organisations make decisions in a linear process of problem identification, followed by a rational, informed choice on the basis of the available data.

straightforward. Furthermore the examples of influential indicators given above refer to well-established *individual* indicators. Little research has been undertaken on the policy impact of indicator *sets*.

14. In order to better understand the different ways indicators may impact the policy process, it is worth briefly reviewing some of the key ideas about the use of knowledge in the policy process. Until the 1970s, the prevalent view of the policy process was the ‘rational’ model mentioned above. This model, also known as the linear, mainstream, or common-sense model, is based on the idea that decisions are made in a linear series of steps: first, defining the problem; second, identifying the different possible courses of action; third, setting out the pros and cons of each option; fourth, selecting the option which offers the best solution; fifth, implementing the policy; and finally, evaluating the outcome (Sutton, 1999).

#### *Knowledge use and policy processes*

15. Carol Weiss was one of the first scholars to provide alternative models of knowledge utilisation (Weiss, 1977 and 1979; Weiss and Bucuvlas, 1980). In 1979, she laid out several models on how knowledge is used in policy making, including problem-solving, knowledge-driven, interactive, political, tactical, and enlightenment uses. The different models can be describes as follows:

- The *problem-solving* model is basically the linear, rational model just described. While it probably describes most people’s idea of the policy process, its weakness is that it ignores the role of politics (i.e. ideology, conflicting interests, and practical constraints) in the policy process.
- The *knowledge-driven* model sees academic research as the driving force of policy development. Although many academics may assume this to be the norm, Weiss argues that this model is rare in real-life policy, as social science knowledge is usually not undisputed or authoritative enough to lead directly to implementation.
- The *interactive* model recognises the complexity of policy-making. Although we are used to thinking in terms of there being a single, clearly-defined ‘decision-maker’, this model reflects the plurality of policy actors – including, practitioners, aides, researchers, lobbyists, journalists, and friends – that can provide formal or informal input. While each actor can provide an important piece in the puzzle, it is rare that any one source alone can provide a complete answer.
- The *political* model describes situations where political interests around an issue predetermine the position that decision makers take, or where discussion around an issue has gone on for so long that opinions are hardened and new evidence or information is unlikely to change these positions. In this situation, information is used selectively as ammunition to support previously held positions.
- The *tactical* model refers to uses of information for purposes unrelated to the actual content it presents. For example, when a politician includes key indicators in a speech merely to give the impression that his or her approach is more ‘evidence-based’ than it actually is.
- Finally, in the *enlightenment* model, research and data are diffused through various channels (such as presentations at conferences, discussions with colleagues, indicator reports, media coverage). The generalisations which emerge provide decision makers with the means of framing issues in a certain way. In this model, data helps to frame the issues, make policy makers more sensitive to emerging issues and help to define problems. Weiss argued that this was the most common way that social science research contributes to policy making.

16. The policy process, and the role of knowledge in that process, is therefore much more complex than the conventional ‘linear’ model of policy making suggests. A broad distinction can be made between instrumental and conceptual uses of scientific knowledge, where instrumental uses can be understood as direct use in decision making and problem solving; and conceptual uses have a broader educative and communicative function. A third group of uses (following on from Weiss’s tactical model) can be seen as a symbolic, or political, use of knowledge (Shulha et al., 1997). In reality, it is likely that elements of each of these models will emerge in different situations, depending on the actors involved, the nature of the problem or issue at hand, and the type of ‘evidence’ being presented.

17. If the outcomes of an indicator set cannot always be measured in terms of a direct change in policy, how can we understand the potential policy impact of indicators? Sumner et al. (2009), in a study on the impact of development research, emphasise the complexity of measuring impact and influence.<sup>5</sup> However, they provide a typology of different types of policy changes that may result from development research. They state that outcomes can be understood in terms of changes in policy content, agenda setting, policy framing, procedural change and shifts in policy implementation, where:

- Policy *content change* is change in the content of policy and/or resources allocated.
- Policy *agenda setting change* is where change is made in policymakers’ priorities and where attention is drawn to new issues that were previously under-emphasised.
- Policy *framing shift* changes the way that policymakers understand a problem or the possible responses to it.
- Policy *procedural change* changes how policy itself is made by procedural/institutional change that leads to new actors or new evidence being part of the process of decision making.
- *Behavioural changes* in policy implementation change how policy is implemented.

18. Sumner et al. go on to identify three groups of factors influencing the policy impact/influence of research, which they label ‘sticky messages’, ‘knit-working’ and ‘strategic opportunism’.<sup>6</sup> They argue that the creation of ‘sticky messages’ (or, in other words, messages from the research or data that ‘stick’ in the minds of users) occurs through knowledge generation processes that involve the engagement and participation of users of research at the outset and during the research; ‘knit-working’ refers to the building of coalitions of connectors and champions around ideas that lead to change; and ‘strategic opportunism’ refers to the role of mapping contexts in identifying windows of opportunity for impact/influence (including serendipity). According to Sumner et al.: “Each of these has a political dimension. ‘Sticky messages’ are often a reflection of whose knowledge counts (i.e. power as discourse). ‘Knit-working’ and ‘strategic opportunism’ are products of political interests, incentives and capacities (i.e. power as material political economy and power as institutions, norms, conventions and behaviours)” (2009, p.33).

19. Looking at indicator sets in particular, Gudmundsson (2003) differentiates between ‘information’, ‘monitoring’, and ‘control’ frameworks, which each type playing a different role regarding policy outcomes. Gudmundsson explains:

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<sup>5</sup> They state: “The meanings of the terms ‘impact’ and ‘influence’ are multiple, multi-layered and complex to track. They may refer to use (i.e. consideration) or actual outcome(s) of social change. They can be visible or invisible; progressive or regressive. Impacts and influence can be intended or unintended and immediate or long-term. The processes of impact and influence are acknowledged to be non-linear, iterative and complex.” (Sumner et al. 2009, p. 7).

- “*Information* frameworks are the most unspecified in terms of use. The indicators are provided to a broad audience which may use the information or not as they see fit. The frameworks typically employ descriptive indicators that are not defined in the agency mode.<sup>7</sup> Accountability mechanisms are not specified other than as an implicit plea to take the information into account”;
- “*Monitoring* frameworks provide regular reporting on the progress of policies or programmes in order to enable feedback. They may include performance indicators in addition to descriptive ones. Policy makers, administrators and stakeholders are main users. Notions of accountability may appear in those frameworks, e.g. as a normative impetus to change a course of action if some indicator suggests policy failure”;
- “*Control* frameworks aim to regulate policy making directly in terms of where and how to act. They provide even stronger links to policy making than monitoring frameworks, and they measure results strictly on the basis of performance indicators compared to a standard, target or benchmark. Accountability is a key concern and regulative mechanisms of accountability are present” (Gudmundsson, 2003, p.4).

20. Gudmundsson (2009) sets out a number of ways that indicators can influence policy, at individual, interpersonal and collective level. According to Gudmundsson, at individual level, possible outcomes from indicator use include attitude change, increased awareness of an issue, skill acquisition (learning new ways to measure a problem) and behaviour change (adopting new practice). At interpersonal level, outcomes can include persuasion (providing more convincing argumentation), justification and mobilising stakeholders to actively pursue change (i.e. indicators as “change agents”). At collective level, outcomes include agenda-setting, policy-oriented learning, policy reform and diffusion (where evidence of policy success stimulates adoption elsewhere).

#### *The role of values and understandings*

21. Lindblom and Cohen (1979) argued that scientific knowledge is almost never independently authoritative, but must be “joined in mutual support” with other forms of knowledge to become authoritative. In their view, “ordinary knowledge” can play just as important a role in policy decision-making as scientific evidence. They define ordinary knowledge as “knowledge that does not owe its origin, testing, degree of verification, truth status, or currency to ... professional techniques but rather to common sense, casual empiricism, or thoughtful speculation and analysis.” (Lindblom and Cohen, 1979, p.12). In other words, an indicator set alone will not necessarily have an impact if the information it presents diverge from the ordinary knowledge of users, by seeming counter-intuitive or by fundamentally challenging their experience or previously-held beliefs and values.

22. The importance of previously held values was also highlighted through the “two communities” theory. Practitioners of this theory argue that the cultural differences between researchers and government officials impede interaction between the two groups (Webber, 1986). This framework implies that in order to encourage the use of scientific knowledge in the policy process, there needs to be some way to bridge the cultural gap between producers and users. Unless there is a shared understanding of the issues, little direct use of research by policy makers can be expected.

23. This message has been underlined by Judith Innes (Innes, 1989, 1990, 1998 and 2002; Innes and Booher, 2000). Innes argues that: “When information is most influential, it is also most invisible. That is, it

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<sup>7</sup> According to Gudmundsson, ‘agency’ indicators, “focus on the activities of an agent (organisation, government, etc.) and assigns a responsibility to it (e.g. measuring in terms of ‘input to’, ‘output from’ or ‘outcome of’ the agents’ activities...the agency mode is inherently more policy related”) (Gudmundsson 2003, p. 3).

influences most when it is part of policy participants' assumptions and their problem definitions, which they rarely examine. Thus, rather than saying that policy makers consciously apply information to make a choice, it is more accurate to say that information frames, or in other words limits the available choices in the first place" (Innes, 1998, p. 54). Put a different way: "Indicators arise from values (we measure what we care about), and they create values (we care about what we measure)" (Meadows, 1998, p. 12).

24. Much of Innes' recent work explores the merit of collaborative processes of knowledge creation. She argues that the influence of the most successful indicator reports has come about through "the learning and change among key players that took place during the course of their development and the new shared meanings and changed discourses" (Innes, 2000, p. 174). Following this reasoning, indicators have been argued by some to be useful "boundary objects", which can transcend the communication barrier between the scientific and policy world to help arrive at a common understanding of the issues at stake (Pülzl and Rametsteiner, 2009).<sup>8</sup>

25. Beyond the scientific and policy communities, in many areas there is now an increasing interest in the involvement of public stakeholders and non-experts in the selection of indicators. The benefits of an interactive development process are often affirmed in the indicators literature (Redefining Progress, 2006; IISD, 1997 and 2009; Salvaris, 2000; Meadows, 1998). According to one observer: "the selection process is where legitimacy and comprehension are built, as people see their values and worldviews incorporated into the indicators" (Meadows, 1998, p. 25). This has been particularly important in the 'community indicators' movement which has developed over the last couple of decades. In the United States alone, where the local community indicators 'movement' has its longest history, there were over 200 efforts by 2001 (Gahin and Paterson, 2001). Canada, Australia, and to a certain extent Europe, have also seen a proliferation of local community indicator efforts, and examples of similar projects exist around the world (see Box 1). While local indicator projects differ in their approach and conceptual underpinnings, they tend to have in common an emphasis on community participation (Gahin and Paterson 2001).<sup>9</sup>

26. Indeed, those endorsing participative processes see this approach as both a means to a better selection of indicators as well as an end in itself, by allowing citizens a more active role in community governance. For example, Donella Meadows argues that while technical experts bring the necessary knowledge, realism and credibility to the process, they can "get lost in details" and lose sight of what is policy-relevant, while non-experts bring a different perspective, pushing to make the indicator more relevant and understandable (Meadows, 1998). The Bellagio Sustainability Assessment and Measurement Principles (Bellagio STAMP) also enshrine the notion of "broad participation" as a key principle to strengthen the legitimacy and relevance of sustainability assessments (IISD 2009). Salvaris (2000) takes this farther by stating that "the process *is* the product" and that desirable outcomes of community indicator projects should include increased community activity, improved standards in government processes, increased awareness and understanding of government and community priorities, and in the long-term, a strengthened capacity for participation leading to more empowered communities.

27. However, the emphasis on citizen participation in community indicators production has also been criticised as a "folk culture", as without technical guidance from qualified social scientists such projects risk being "unfocused, pregnant with unrealistic expectations, poorly developed and designed and doomed to be ignored" (Sawicki, 2002).

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<sup>8</sup> Boundary objects are defined as having "different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable means of translation. The creation and management of boundary objects is key in developing and maintaining coherence across intersecting social worlds." (Star and Griesemer 1989).

<sup>9</sup> For example, David Swain has identified four general approaches in the United States, broadly centred on the notions of quality of life, sustainability, healthy community, and benchmarking (Swain 2002).

### Box 1. Three Examples of Local Community Indicator Initiatives From Around the World

#### *Australia: "Tasmania Together"*

Tasmania is an Australian island state with just under half a million inhabitants. 'Tasmania Together' is a plan encompassing community goals for the future of the state up to the year 2020. It is designed both to give a long-term focus to community aims in the social, economic and environmental domains and to provide a framework for planning, budgeting and policy prioritisation for the government and non-government sectors. The goals of *Tasmania Together* were decided after a two-and-a-half year period of consultation with Tasmanian citizens through open meetings, surveys and written feedback. Once the goals were agreed, a further period of deliberation took place over several months, involving over 100 community representatives from the public, private and civil society sectors, to determine the quantitative benchmarks to be used to measure progress towards the goals.

A 2001 government act enshrined in state law the existence of an independent statutory authority, the Tasmania Together Progress Board. The membership of the Progress Board is designed to be broadly representative of the wider community and it has a mandate to monitor, promote and report on progress towards achieving the goals and associated benchmarks. The Board produces a regular report – every 3 years at first and, since 2004, every 2 years - to inform the community and policy makers. For each report, 143 indicators measure progress towards the 12 goals. Of these indicators, 12 headline indicators are selected to communicate general progress for each of the goals. The Progress Board distributes an annual 'snapshot' describing progress (or otherwise) towards the 12 goals, using traffic lights (red or green) to indicate whether an indicator has made a positive or negative change. Individuals, businesses, community groups and state agencies are encouraged to commit to working towards the goals and benchmarks of the Tasmania 2020 plan.

#### *Colombia: "Bogotá Como Vamos"*

The "Bogotá, Como Vamos?" project (English: "Bogotá, How are we doing?") was set up by the publishers El Tiempo, the non-profit Fundación Corona and the Bogotá Chamber of Commerce during the city mayoral campaign of 1997. It uses progress indicators to monitor quality of life in the city, to evaluate the impact of local government policy, and to increase the accountability of city government to its citizens. The project evaluates quality of life in terms of poverty and equity, public finances, education, health, public services, culture, participation, public spaces, environment, decentralisation, civic responsibility, public safety, public administration, economic development and housing.

The project has evaluated the administrations of Mayor Enrique Peñalosa (1998-2000), Antanas Mockus (2001-2003), Luis Eduardo Garzón (2004-2007), and Samuel Moreno (2008-2011). According to a UN Habitat assessment of Bogotá Como Vamos<sup>10</sup>, the results of the evaluations have led to an increase in the quality of electoral debates. Both Antanas Mockus and Luis Eduardo Garzón articulated their plans in terms of measurable goals; in particular, Garzón based his campaign on one of the project's poverty and income inequality reports, after attending a forum conducted by the project on this subject. In addition, the local government administration has become keen on responding to these evaluations, including the results of the public opinion survey, which contain ratings for the administrations.

The project was selected as one of the 100 best practices by the International Dubai – Habitat 2000 Prize as well as the International Dubai – Habitat 2002 Prize. Beginning in 2005, the project has been replicated in three other Colombian cities (Cali, Cartagena, and Medellín) under the guidance of 'Bogotá, How Are We Doing?' and its Technical Committee (the same three partners are involved in the other two projects). A network of city projects was thus created, with the purpose of facilitating comparable studies, as well as fostering learning and cooperation between cities. Additionally, a parallel project in Bogotá ("Concejo Cómo Vamos", English: "Council - How are we doing?") was initiated in 2002 to evaluate the city council.

In Bogotá, the project is now recognised – by politicians and the public – as an important space for debating the most important issues related to the quality of life in the city. It has also established itself as a valuable source of information, bringing together data both from government entities and from its own surveys.

#### *The United States: "Jacksonville Community Council Inc. (JCCI)"*

The community indicators project at Jacksonville, Florida has been the model and inspiration for many subsequent initiatives. Jacksonville Community Council Inc. (JCCI) is a non-profit, civic organisation established in the mid 1970s with the goal of improving the quality of life in Northeast Florida through encouraging citizen participation in the political process. The founders of the JCCI came from a mix of professions – including business, charity, and local politics. Collaboration between different sectors led to the first set of Indicators for Progress in 1985. By the mid 1980s, Jacksonville Chamber of Commerce was finding that potential business prospects were asking a lot of questions about

<sup>10</sup> See entry on Bogotá Como Vamos in UN Habitat 'Best Practices database: [www.unhabitat.org/bestpractices](http://www.unhabitat.org/bestpractices).

the quality of life in the area for which the data simply was not available. Around the same time, JCCI was trying to find ways of better understanding and measuring community progress on a wide range of issues. The two institutions decided to form a partnership – with the JCCI mobilising a volunteer workforce and the Chamber of Commerce providing financial support – in order to develop a first range of community indicators. A key figure in this process was the executive director of JCCI, Marian Chambers. Chambers pushed for the involvement of citizens in the process of selecting and developing the indicators. At the time, such democratic principles were unheard of at the local level.

Since 1985, the indicators have continued to evolve and the methods to be updated. Initially, the purpose of the indicators was simply to provide quality-of-life information to the wider community. As time has passed, the objectives have become more ambitious with the emphasis increasingly being put on the ability of the indicators to be used to promote positive change. By 1998, the emphasis was firmly on moving indicators into action. After widespread consultation among community leaders, the JCCI released the following vision statement:

*“By 2002 JCCI’s indicators reports will be the premier source of local summary-level information on the quality of life in Jacksonville. Each annual update will be the community’s report card containing vital, valid and relevant information that is actively used to inform the community, guide decision makers, ensure public accountability, and promote a continuously improving quality of life for all citizens”* (Besleme et al 1999, p 13).

The work over the past two decades has led to several successful outcomes. The emphasis on consensus-building among the volunteers who take part in the indicator process has built a relationship of trust and cooperation among diverse interests and institutions with a stake in the progress of the community. The data provided by the indicators project has become a trusted source of information by the local media and government. Media coverage has increased the political impact of the indicators and the data is used to plan and allocate resources in the public and non-profit sectors. Furthermore, the in-depth advocacy campaigns following the Community Studies, has led to improvements in issues as diverse as education quality, teen pregnancy and proliferation of unwanted billboard advertising.

28. The practice of consulting with different stakeholders has also been implemented at a national level. The Australian and UK case studies presented later in this paper provide examples of this approach. One of the main reasons for consulting widely is that numbers are rarely politically neutral; when a government or other entity chooses which indicators to measure and pay attention to, it is making an implicit statement about what it considers important. Stone (2001, p.176) lists eight reasons why numbers can be considered ‘political’:

1. Counting requires decisions about categorising, about what (or whom) to include and exclude;
2. Measuring any phenomenon implicitly creates norms about what is too little, too much, or just right;
3. Numbers can be ambiguous, and leave room for political struggles about their interpretation.
4. Numbers are used to tell stories, such as stories of decline (e.g. “we are approaching a crisis”);
5. Numbers can create an impression that a very complex and ambiguous phenomenon is simple, countable, and precisely defined.
6. Numbers can create political communities out of people who share some trait that has been counted.
7. Counting can aid negotiation and compromise, by making intangible qualities seem divisible.
8. Numbers, by seeming to be so precise, help bolster the authority of those who count.

29. Finally, Cash et al. (2003) argue that in order to be effective, scientific information must be credible, salient and legitimate. In this context, credibility refers to the scientific adequacy of the technical evidence; saliency deals with the relevance of the information to the needs of decision makers; and legitimacy reflects the perception that the production of information and technology has been respectful of

stakeholders' divergent values and beliefs, unbiased in its conduct, and fair in its treatment of opposing views and interests.

#### *Indicators and the public*

30. Societal progress indicators are often intended for a broad public audience as well as policy users. However, understanding how such information is received by the public, and how it impacts upon public opinion and behaviour, is every bit as complex as understanding its role in the policy process. Furthermore, it is difficult to separate the influence of indicators on the two groups as there is a lot of overlap. For example, public opinion is widely regarded as one factor in political decision-making.

31. Early theories of communication, as with early theories of the policy process, were based on a linear model. In this model, a message is transmitted by a sender to an audience, via a particular medium in order to exert an influence. In other words, "Who says what, in which channel, to whom and to what effect" is what matters.<sup>11</sup> In this model, the direction of influence is one-way, from sender to receiver.

32. Later models have incorporated more complexity, recognising that simply transmitting information to an audience does not ensure that the intended audience will retain or bring meaning to that information. For example, William McGuire (1981) extended the source-message-channel-receiver model to take into account what he called "output factors", such as attention, liking, comprehension, yielding, remembering, and action on the part of the receiver.

33. In a paper surveying public knowledge of economic indicators in the United States, Blinder and Krueger (2004) underline this complex relationship between the production and dissemination of information, on the one hand, and the creation of public knowledge, on the other. They state that "people's self-interest, ideology, education, and desire to be informed combine to determine how much information they acquire—and what kinds of information. This information, along with their education and desire to be informed, determines their knowledge of an issue. And this knowledge, along with their ideology and self interest, determines their opinions" (Blinder and Krueger, 2004, p.5)

34. The medium of communication, of course, determines the impact too. When a set of indicators is published in print or on the internet, very few ordinary members of the public will consult the data or even be aware of their existence. However, if the indicators are then picked up and reported on by the media, they will find a much larger audience. Blinder and Krueger (2004) found that television was by far the most important source of information for economic policy data among respondents, followed by local and national newspapers, friends or relatives, radio, and the Internet. Of course, when data is reported on in this way, or used by other intermediary organisations such as NGOs to reach a wider audience, the data producer loses control over the way the indicators are presented; they may be used for more overtly political statements than a data producer who wishes to remain impartial, may feel comfortable with.

#### *The policy impact of progress indicators*

35. Most of the research above refers to 'knowledge' or 'social science research' in general terms, rather than to indicators and indicator sets. However, many of these observations are also relevant for indicator use. From this research, it is possible to see that predicting or tracking the direct influence of an indicator set on policy is far from being an easy task. The types and level of impact may depend on contextual factors beyond the control of indicator producers, such as the political/ideological context, windows of opportunity, or the way the indicators are presented/interpreted by intermediate users in policy documents or presentations.

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<sup>11</sup> Known as 'Lasswell's maxim', after the early communications theorist Harold Lasswell (see Lasswell, 1948).

36. However, there do seem to be some factors that indicator producers can control. For example, there is a strong argument for the idea that the way the process of indicator development is managed can affect the efficacy of the indicators. If indicator users are involved in developing and selecting the indicators, then there is a greater chance that indicators will convey ‘sticky messages’, which are based on shared values and understanding.

37. Further, the design of the indicator set itself will impact its use, as Gudmundsson’s typology of indicator frameworks shows. Of the three frameworks presented by Gudmundsson, indicators of societal progress are more likely to be used for “information” and “monitoring” purposes rather than “control” purposes. This is because progress indicators tend to focus on societal outcomes. Outcomes can be defined as “those events, occurrences, or conditions that are the intended or unintended results of government actions. They are generally of direct importance to customers or the public. In distinction to outputs, outcomes cannot usually be simply attributed to government actions or processes - other factors often outside of government's control can be implicated.” (OECD, 2006a). As societal outcomes depend on factors beyond the control of any one institution, it is hard to link an entire set of progress indicators to the accountability mechanisms necessary for control frameworks to be effective, although one could argue that individual indicators could follow the “control” approach.

#### **4. Progress indicators: a brief history**

38. The idea that, as a society, we care about more than material conditions and economic resources is not a new one. Over the years, various statistical attempts have been made to capture non-economic notions of progress such as quality of life, sustainability, human development, etc. This section presents a brief overview of the main conceptual approaches to developing indicators of societal progress.

##### *The emergence of national accounts*

39. The idea of quantifying critical aspects of our societies in order to better understand our situation is not a new one. Since ancient times, governments have collected data on the population and resources under their command. For many centuries, the main purposes of this data-gathering were to raise taxes. In 17<sup>th</sup> century Europe, early attempts at producing national accounts were made in Britain and France. In 1664, Sir William Petty in Britain took a broad view of national wealth in order to arrive at a figure of £250 million; he also devised a methodology for estimating the value of the labour force, thereby calculating the cost in economic terms of Black Plague deaths (Perlman and McCann, 1998). In France, the dominant school of thinkers, known as the Physiocrats, believed that national income came principally from agriculture and developed an estimate based on agricultural output (Cobb et al., 1995). These early examples show how, even when focusing on economic matters, significant differences of opinion about what should be counted can arise.

40. Modern national accounting emerged in the 1930s in the United States when, in an attempt to better understand the state of the economy during the Depression, the U.S. Commerce Department assigned the task of developing national accounts to Simon Kuznets. Kuznet’s work led to the first comprehensive estimates of national output, laying the groundwork for what we now call GDP. Not long afterwards, John Maynard Keynes published his *General Theory of Employment, Interest and Money*. During the 2<sup>nd</sup> World War, these tools were used to measure and maximise productive capacity during the conflict. Cobb et al. (1995) go as far as to argue that Kuznets’ national account system and Keynes’ theory of effective demand were a key factor in the Allied Forces’ victory.

41. The impact of indicators of economic production on policy cannot be underestimated. Before the war, economists had little public or political influence. After the war they became the ‘ultimate authority of policy’ (Cobb et al., 1995). Throughout this period, there was optimism that Keynesian demand

management techniques and the monitoring of the state of the economy through the national accounting system would have enabled economic success. J.K. Galbraith declared: “One good reason for expecting prosperity after the war is the fact that we can lay down its specifications. For this we can thank a little-observed but spectacular improvement in the statistical measures of the current output of the U.S. plant” (cited in Cobb et al., 1995). To some, economic indicators seemed to have contributed to unlocking the secret of national prosperity and began to play a central role in policymaking decisions.

*Gross Domestic Product as an indicator of societal progress*

42. GDP has been the most influential indicator of the last century. GDP is an estimate of the market value of all final goods and services produced within a geographical entity over a given period of time.<sup>12</sup> By aggregating the myriad of sources of a country’s economic production into one number, GDP provides a powerful means for assessing national income.

*“It can be elegantly used to calculate many relevant (macro-) economic measures: it will produce decent accuracy in measuring tax revenues and productivity, and it will help macro-management through estimations of output gaps and inflation. In short, it has a legitimate and strong role in modern economic management”.* (European Parliament, 2007, p. 16)

43. The success of GDP for charting a nation’s economic fortunes meant that very quickly it came to be seen as an overall indicator of national progress by policy makers and the public. This, however, had never been its intended purpose. Simon Kuznets, the architect of national accounting, warned that “the welfare of a nation can scarcely be inferred from a measurement of national income” (Senate report, 1934). Nevertheless, for a large part of the 20<sup>th</sup> century and into the 21<sup>st</sup>, GDP has been the foremost indicator of national progress. On one hand, it can be argued that there are good reasons for this. For example, there is a strong correlation between GDP levels and important welfare indicators such as literacy rates, nutrition, health care, communications technology and life expectancy (European Parliament, 2007). However, this correlation is not accepted without questioning, and there is now a complex debate around the relationship between GDP and other measures of wellbeing.<sup>13</sup>

44. The main problem with the use of GDP as an indicator of societal progress lies in what it does and does not measure. GDP counts as contributing positively to economic production many activities that most people would regard as reducing societal progress. For example, obesity, cancer and AIDS all increase healthcare expenditure and so make a positive contribution to GDP. Similarly, high levels of crime lead to more prisons and policing costs which are also counted positively.

45. Senator Robert Kennedy, speaking in 1968, eloquently highlighted the limitations of GNP (Gross National Product)<sup>14</sup>:

*“[It] counts air pollution, and cigarette advertising, and ambulances to clear our highways of carnage...It counts the destruction of the redwoods and the loss of our natural wonder in chaotic*

<sup>12</sup> The official definition of GDP, from the System of National Accounts Handbook is: “an aggregate measure of production equal to the sum of the gross values added of all resident institutional units engaged in production (plus any taxes, and minus any subsidies, on products not included in the value of their outputs). The sum of the final uses of goods and services (all uses except intermediate consumption) measured in purchasers’ prices, less the value of imports of goods and services, or the sum of primary incomes distributed by resident producer units.” (UN DESA, 1994).

<sup>13</sup> See, for example, the Stiglitz Report pp. 85-143 (Stiglitz et al., 2009) for a discussion of the correlation between GDP and measures of living standards.

<sup>14</sup> GNP differs from GDP in that it measures national income generated outside the borders of a country. Until the early 1990s it was the primary indicator of national income in the United States; the change to GDP was made in order to facilitate comparisons with other countries.

*squall...Yet, [it] does not allow for the health of our children, the quality of their education, or the joy of their play... It measures neither our wit nor our courage neither our wisdom nor our learning, neither our compassion nor our devotion to our country. It measures everything in short except that which makes life worthwhile.”<sup>15</sup>*

46. There have been some notable attempts to modify GDP to counteract some of these weaknesses. In 1972, William Nordaus and James Tobin introduced the “Measure of Economic Welfare” (MEW). In their article “Is Growth Obsolete?” (1972) they called for an index measuring consumption rather than production as this comes closer to representing welfare. To reach the MEW, they modified GNP by adding estimates for the value of leisure time and non-market production such as unpaid domestic services (for example, cleaning and child care) and subtracted estimates of the value of negative outputs (such as pollution and commuting time) and ‘regrettable necessities’, such as defence spending and policing. As the MEW is heavily dependent on estimates of the market value of non-market activities and outputs, the authors themselves called it a ‘primitive and experimental’ measure of welfare (Nordaus and Tobin, 1972). Following on from Nordaus and Tobin’s work, Herman Daly and John Cobb developed the Index of Sustainable Economic Welfare (ISEW) in the 1980s, to take into account the links between environment, economy and society (Daly and Cobb, 1989). Cobb later modified the ISEW to propose the Genuine Progress Indicator, which incorporates indicators on additional dimensions such as crime and divorce (European Parliament, 2007). In recent years, there have been many other attempts to modify GDP in order to come up with a meaningful single number to measure economic progress.<sup>16</sup> Nevertheless, the dominance of GDP as a measure of economic production and its use as a proxy for overall progress and societal welfare has persisted.

#### *Social indicators<sup>17</sup>*

47. The history of social statistics is as old as that of economic statistics, and has often mirrored its evolution. As far back as the 17<sup>th</sup> century, John Graunt, a contemporary of William Petty, used the data in London’s Bills of Mortality to build up a statistical picture of the health of Londoners (Perlman and McCann, 1998).<sup>18</sup> In the 19<sup>th</sup> century, reformers in the US and Europe collected social data to prove links between poverty and disease, and between alcoholism and crime, in order to campaign for change in policies bearing on these issues (Cobb and Rixford, 1998). From 1929 to 1933, around the same time that the Department of Commerce was looking into national accounts, President Hoover set up the Research Committee on Social Trends, whose aim was to use statistical data to measure social phenomena. The committee’s final report *Recent Social Trends*, while impressive in scope (counting over 1500 pages in length), failed to lead to the reorientation of policy that its proponents had hoped for (Cobb and Rixford, 1998).

48. In the decades that followed, relatively little attention was given to the development of social indicators. The 1960s saw a resurgence of attention on social indicators, with one of the main catalysts coming from a seemingly unlikely source – the National Aeronautics and Space Administration, or NASA. NASA approached the American Academy of Arts and Sciences to evaluate the impact of the space programme on American society. However, the scholars involved in this undertaking found that the data, conceptual framework and methodology needed to complete the task were all unavailable. As a result,

<sup>15</sup> The text of the full speech can be found at the John F. Kennedy Library website at: <http://www.jfklibrary.org/Historical+Resources/Archives/Reference+Desk/Speeches/RFK/RFKSpeech68Mar18UKansas.htm>.

<sup>16</sup> For an exhaustive overview from the perspective of sustainable development, see European Parliament 2007.

<sup>17</sup> This section draws on Cobb and Rixford, 1998.

<sup>18</sup> Detailed tables listing the deaths of London citizens with age, gender, cause of death and geographic location.

efforts were made to develop a comprehensive system of social indicators, and the findings were published in the report *Social Indicators* in 1966 (Bauer, 1966).

49. A series of publications in the 1960 and 1970s increased interest in social indicators. Mounting public concern over various issues such as poverty, race relations, unemployment and housing also spurred efforts towards finding better measures of societal outcomes and progress (Gahin and Paterson, 2001). By the mid-1970s, a full-blown movement had emerged around social indicators. The journal *Social Indicators Research* was established in 1974 and social reporting was being carried out in the United States, Great Britain, France, Germany and the Netherlands (Cobb and Rixford, 1998). International organisations also formed part of this movement. The OECD established a social indicators programme in 1970, which led to the development of the 'OECD List of Social Indicators'. This list and accompanying guidelines aimed to assist all OECD member countries to measure social phenomenon. It included 33 specific indicators under the eight major headings of health, education and learning, employment and quality of working life, time and leisure, command over goods and services, physical environment, social environment, and personal safety (OECD, 1982). The United Nations did work in this area too, publishing the report *Towards a System of Social and Demographic Statistics* in 1975 by one of the fathers of the System of National Accounts in the United Kingdom, Richard Stone (UN, 1975).

50. For around a decade, from the early 1970s to the early 1980s, there was a lot of optimism surrounding the social indicators movement. Those working in the area felt there was a great deal of potential to impact government priorities and to bring the policy focus more strongly onto quality of life issues. However, by the mid-1980s, work on social indicators had effectively stopped, or had been significantly reduced, in both the United States and in European countries. The OECD social indicators programme was phased out at the end of the 1970s, and the UN system of social and demographic statistics was never implemented (Matthews, 2006).

51. Why was this? Several factors were suggested by Cobb and Rixford (1998):

- Social issues being overshadowed by economic concerns as the global economic situation worsened;
- An ideological shift towards conservatism and reduced government involvement in social issues, particularly after elections of US President Ronald Reagan and UK Prime Minister Margaret Thatcher;
- The limited usefulness of social indicators to policymakers;
- The lack of a unifying theoretical framework comparable to economic theory;
- The lack of an agreed-upon method of making normative judgements (about whether trends are good or bad);
- The lack of a common metric for aggregation, comparable to the money in economics;
- A weakening of faith in the power of indicators to guide policy.

52. Because of the political and economic climate, and the complexity of quantifying social issues into policy-relevant indicators, the social indicators movement did not live up to its initial promise.

*Measuring quality of life, wellbeing and happiness: subjective indicators*

53. The social indicators movement represented a significant break with previous attempts to measure societal progress. A move away from the purely economic view of national progress opened the way for a wave of attempts to find new ways to measure people's quality of life and wellbeing. One of the most influential has been the development of subjective indicators. Subjective approaches to measuring quality of life assess how well someone is living from that individual's own perspective or experience. In the 1970s, a range of studies in psychology showed a discrepancy between objective measures of quality of life and people's own assessments (see, for example, Andrews and Withey, 1976). These studies suggested that objective indicators at the society-level (such as educational attainment, national income and health care provision) only explained a small proportion of individuals' subjectively reported quality of life and wellbeing (Scottish Executive, 2005). Around the same time, economists were also questioning the relationship between income and life satisfaction. Richard Easterlin showed that although income per capita rose steadily in the United States between 1946 and 1970, average reported happiness showed no long-term trend, and even declined between 1960 and 1970 (Easterlin 1974).

54. This encouraged the development of different subjective indicators such as people's sense of community, job satisfaction, family relationships, safety and happiness. Today there is a growing consensus that both subjective and objective indicators are needed to measure quality of life (Stiglitz et al., 2009). However the use of subjective indicators is not universally accepted and some methods remain controversial. Important debates remain around the best approach to take. Perhaps one of the main reasons for this is that defining quality of life is not easy – according to one source there are over 100 definitions in the research literature (Schalock, 2000). Furthermore, the terms 'quality of life', 'wellbeing' and 'happiness' are used interchangeably in some contexts and are treated as separate concepts in others. Those who make a distinction tend to see well-being as a multidimensional concept pertaining to an individual's own perception of his or her life, with happiness just one dimension. Quality of life, on the other hand, makes objective comparisons of welfare between individuals using a range of indicators (Scottish Executive, 2005).

55. On the other hand, others argue that individual well-being can be reduced to one dimension: happiness. If we are happy, or satisfied, with our lives then that is all that matters for our wellbeing. This school of thought can be traced back to the work of the 18<sup>th</sup> century political philosopher Jeremy Bentham who stated that "it is the role of governments and economic systems to ensure the greatest happiness for the greatest number" (Bentham, 1781). The current calls for direct measurement of life satisfaction or happiness have been led by academics such as Richard Layard (Layard, 2006). In the Kingdom of Bhutan, the pursuit of happiness is the central guiding principle of the nation, with a planning process based on the philosophy of Gross National Happiness (GNH).<sup>19</sup> However, other scholars argue that just being happy is not enough to guarantee well-being. For example, Amartya Sen asserts the need to take positive freedoms, or "capabilities" into account when assessing well-being. Clifford Cobb summarises this perspective as:

*"A society that enables its citizens to aspire to greatness, to develop virtues and loyalties, to become skilled and artistic, and to attain wisdom is far better than a society that merely provides the means to satisfy desires" (2000, p. 10).*

56. The current challenge for those measuring quality of life, well-being and happiness is to find ways of relating these measures to policy. For example, in the United Kingdom, the 2000 Local Government Act included an article granting local authorities the power to do whatever they consider necessary to promote or improve the economic, social or environmental well-being of their area; this has necessitated the development of robust measures of wellbeing at the local level (Steuer and Marks, 2008).

<sup>19</sup> See <http://grossnationalhappiness.com/>.

*Environmental indicators*

57. Just as the social indicators movement recognised the importance of assessing quality of life as well as economic growth, the environmental indicators movement underlined the need to measure the quality of our natural environment. Rachel Carson's book *Silent Spring* in 1962, highlighting the damaging impact of pesticides on nature, is often cited as the birth of the environmental movement. Indeed, until that time, environmental issues had received very little public or policy attention. During the 1960s, however, signs of growing public awareness of the importance and fragility of the ecosystem were in place. In the United States, pressure for action on environmental issues grew due to awareness campaigns led by grassroots organisations and high-profile environmental catastrophes such as the 1969 oil spill in Santa Barbara on the Californian coast. (Dunlap, 1992). In 1969, the National Environmental Policy Act (NEPA) was brought into effect, committing all U.S. federal government agencies to prepare reports on the environmental impact of their activities. In the next few years, this practice spread to other countries such as Canada, Australia, West Germany and France, with Europe-wide legislation established in 1985 (Glasson et al., 2005).<sup>20</sup>

58. With recognition of the importance of monitoring the state of the environment came the need for environmental indicators. In 1972, the United Nations Conference on the Human Environment urged the international community to prepare periodic international, regional, and sub-regional reports on "the state of, and outlook for, the environment" (UNEP, 1972). During the 1970s, various efforts were made towards developing a system or framework for environment statistics. International research institutes began to compile publications monitoring environmental trends, such as the Worldwatch Institute's *State of the World* reports and the World Resources Institute's *World Resources* reports (Gahin and Paterson, 2001). The OECD started developing environmental indicators in the late 1970s. Beginning in 1992, these indicators formed the basis of country environmental performance reviews providing OECD member governments with feedback on the environmental impact of their policies and actions (Linster, 2004). National efforts were also being undertaken.

59. By the mid-80s, there were a variety of environmental statistics projects under way around the world. The majority of this work can be categorised as taking one of three approaches: the 'media' approach, the stress-response approach, and the natural resource accounting approach (UN, 1984).<sup>21</sup>

60. The media approach organised environmental indicators into the major environmental components (or 'media') of air, water, land/soil and the man-made environment. Many of the earliest efforts took this approach, with the primary purpose of raising awareness about different environmental issues. This approach had the benefit of relating to popular understanding of the environment and, in theory, was readily understood by non-experts. However, there were drawbacks. First, by attempting to produce a comprehensive record of the state of the ecosystem the reports were long, dense and not very user-friendly. Second, as data was only just beginning to be gathered on many issues, it was difficult to highlight trends, and many of the measures used were qualitative and anecdotal. Third, by listing the indicators in separate media categories, it was not possible to understand the links between them, or between human activity and environmental change (UNEP, 2006).

61. The 'stress-response' approach was developed to address the weaknesses of the media approach, and specifically, to find a way to understand the links and interactions between different components of the human and natural environment. Statistics Canada pioneered this method by developing a framework

<sup>20</sup> By 2005 over 120 countries had some form of environmental impact assessment system (Glasson et al., 2005).

<sup>21</sup> These categories refer to projects aiming to give a comprehensive overview of environmental issues. There were also many other projects looking at specific aspects of ecological issues, such as population diversity and resilience of ecosystems (UN, 1984).

which focused on impacts of human interventions on the environment (stress) and the environment's subsequent transformation (environmental response). This work was further developed by the OECD in the late 1980s, leading to the establishment of the 'pressure-state-response' (PSR) framework. In this framework, 'pressure' indicators measure the demands that human activity puts on the environment, for example through extraction of natural resources; 'state' indicators describe the condition, changes and trends of the natural environment; and 'response' indicators measure political and societal decisions and policies taken to counteract the impact of human activity. These responses may themselves become stresses. The PSR framework has become widely used for state of the environment reporting (Dalal-Clayton and Bass, 2002).

62. Finally, the aim of natural resource accounting was to expand the existing national accounting framework to include environmental issues. As early as 1981, Norway developed an accounting framework which included energy, minerals, fish, forests and land (UN, 1984). In 1991, Statistics Netherland developed the National Accounting Matrix including Environmental Accounts (NAMEA), which has since also been applied in Norway. Germany has also established an environmental accounting framework along these lines (European Parliament, 2007). In 1993, in its *Handbook of National Accounting*, the UN recommended that countries set up 'satellite accounts' for environmental accounting to supplement the core collection of economic data (European Parliament, 2007). Ten years later, as part of the revision of the System of National Accounts (SNA), a model for such a satellite account was proposed in a handbook jointly published by the UN, OECD, IMF, EC and the World Bank (UN et al., 2003). The System of Integrated Environment and Economic Accounting (SEEA) outlined in the 2003 Handbook has been used as the basis for environmental accounting in many countries. It presents four types of accounts: flow accounts for pollution, energy and materials; accounts for environmental protection and resource management expenditure; accounts for natural resources and assets; and accounts for constructing environmentally adjusted aggregates.

63. The environmental accounting approach (now often know as 'green accounting') is attractive as it allows for the possibility of cost-benefit analysis when making economic decisions which impact the environment. However, this approach has also been criticised for giving monetary value to our natural environment, which cannot be adequately assessed in monetary terms (Bartelmus, 2008).

#### *Sustainable development indicators*

64. In 1983, the UN General Assembly created the UN World Commission on Environment and Development (WCED), chaired by Gro Harlem Brundtland, former Prime Minister of Norway. Four years later, in 1987, the final report of the commission brought the concept of sustainable development to international attention. The report argued that a drastic rethink of prevalent models of economic growth was necessary to minimise irreversible damage to the environment and the depletion of natural resources. It was not the first time that economic and environmental issues had been linked, and the WCED did not invent the concept of 'sustainability', but the report and subsequent international meetings such as the Rio Earth Summit in 1992, were instrumental in bringing sustainable development to the policy agenda.<sup>22</sup> The WCED definition of sustainable development as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (UN, 1987) remains the most widely-used definition.

65. Over the past two decades, there has been a proliferation of work aiming to measure sustainable development. One reputable database of sustainability indicator initiatives counted 669 initiatives worldwide by 2005 (Pintér et al., 2005). However, sustainability remains a complex issue to understand and measure, for several reasons.

<sup>22</sup> Indeed, work on environmentally sustainable economics dates back to the 1970s. See, for example, Stivers (1976).

66. First, the idea of sustainability remains vague. If we take the WCED definition given above, for example, how do we define ‘needs’? What may seem a ‘basic need’ to an affluent resident of a European country may well be more of a convenience, or even luxury, in the developing world. As one scholar puts it: "Is sustainable development supposed to meet the needs for water, food and minimal purchasing power or the needs for air-conditioning and university studies abroad?" (Sachs 1999, p. 160). Further, Agenda 21, the action plan agreed by global leaders at the 1992 Earth Summit, emphasised the importance of considering economic, social and environmental issues together, highlighting the relevance of cross-cutting issues, such as consumer behaviour, poverty reduction, and population growth. Thus although sustainability has its roots in the environmental movement, later applications dealt with the interaction between the human and natural systems. In other words, sustainability encompasses social, economic, and environmental sustainability. Increasingly, institutional factors are also seen to be a key component of sustainability and societal progress (see Box 2).

#### Box 2: Institutional Indicators – Measuring Governance and Culture

Over the past two decades, there has been an increasing interest in developing indicators that measure the institutional context of a country or region. This includes issues such as governance, democracy, human rights, corruption, transparency and even culture and values.

With the end of the cold war came a growing recognition that good governance is an essential element for successful performance (Arndt and Oman, 2006). The work of Douglas North and others in the field of New Institutional Economics (NIE) has been a major influence in this respect. North made a persuasive argument for the need to consider a country’s system of governance, comprising its formal and informal institutions (such as culture and values), when considering the impact of policy on economic growth and human welfare (North, 1990). For North, institutions represent the ‘rules of the game’ governing human interaction, and as such represent the social context within which policies are implemented and reforms take place. Without an understanding of such institutional factors, a huge and essential piece of the picture is missing.

Although the measurement of institutional features is a relatively recent phenomenon, initiatives have proliferated and work in this area is being undertaken around the world. According to one source, there are at least 170 different indicator sets measuring aspects of institutions, governance and democracy around the world.<sup>23</sup> Among the most prominent examples are: the Worldwide Governance Indicators (WGI), produced by the World Bank Institute; the Corruption Perceptions Index (CPI) produced by Transparency International; Freedom House’s *Freedom in the World* reports; and the ‘Metagora’ project, launched by PARIS 21.<sup>24</sup>

Institutions, in the broadest sense, can also encompass informal institutions such as culture and values. While it is difficult to find ways to measure such concepts, some projects do exist with the aim of quantifying culture and values, including: the European Social Survey<sup>25</sup>, the World Values Survey<sup>26</sup> and the International Social Survey Programme (ISSP)<sup>27</sup>.

67. A second feature of sustainable development indicators is that the time and space scales chosen are difficult to define. The WCED definition of sustainable development talks of the needs of ‘future generations: but what exactly is meant by ‘future’? Over how many years should we consider the needs of future generations – twenty, fifty, ten thousand years, or more? Ideally, sustainability indicators need to be both long-term enough to take into account the impact of our current actions, and short-term enough to inform policy. This is quite a tall order. Further, while spatial boundaries are often set by the needs of the agency developing the indicators (e.g. indicators for a National Sustainable Development Strategy will use the country as the geographic unit to be measured), ecosystems are not often bounded by political or

<sup>23</sup> See the World Bank Institute’s Interactive Inventory of Governance Datasets ([www.worldbank.org/wbi/governance/govdatasets/](http://www.worldbank.org/wbi/governance/govdatasets/)).

<sup>24</sup> See [www.metagora.org](http://www.metagora.org).

<sup>25</sup> [www.europeansocialsurvey.org](http://www.europeansocialsurvey.org)

<sup>26</sup> See [www.worldvaluessurvey.org](http://www.worldvaluessurvey.org).

<sup>27</sup> [www.issp.org](http://www.issp.org)

geographic borders: “Even if a boundary can be defined, what lies outside it can be of great importance” (Bell and Morse, 1999, p. 13).

68. Third, work on sustainable development indicators stresses the need to illustrate linkages and interactions between different components of the human system and the ecosystem. The pressure-state-response (PSR) model and the green accounting model for environmental indicators have both been enhanced to take into account the broader scope of sustainable development. The UN Commission on Sustainable Development, for example, modified the PSR model by replacing ‘pressures’ with ‘driving forces’, thereby recognising that human activity in the social, economic and institutional arenas relevant for sustainable development can have both positive and negative impacts. This model has been further developed by the European Environment Agency and others into the Driving force – Pressure – Impact – State – Response (DPSIR) framework, in order to more accurately portray the complexity of human and environmental interactions. Statistics Netherlands has extended its NAMEA model to include socio-economic dimensions and linkages in its System of Economic and Social Accounting Matrices and Extensions (SESAME). In this system, the changes in indicator values are broken down into monetary changes and volume changes to allow linking monetary and non-monetary data. Despite the advances towards developing a unifying framework for the measurement of sustainable development, challenges remain. For example, the PSR model and its later variations are only useful if clear evidence for causal linkages exist. The model has also been criticised for oversimplifying the complexity of the interactions between different components. For these reasons, the DPSIR framework was abandoned in the 2001 UN *Indicators of Sustainable Development* report (UN DESA, 2001; Pintér et al., 2005).

69. Today, the development of sustainable development indicators remains an important priority both at national and local level. Agenda 21 called for national and local sustainable development strategies and indicator development has remained a key priority. Increasingly, indicators are also being developed by non-governmental agencies for raising awareness and lobbying purposes. Many of these indicators take the ‘single-number’ approach, summarising different aspects of sustainability. Examples include the Environmental Sustainability Index and the Ecological Footprint.

### *Human Development*

70. As the world emerged from the 2<sup>nd</sup> World War, many economists began to turn their attention to the problems of the newly independent and newly industrialising countries in Eastern Europe, Asia, Latin America and Africa (Meier and Stiglitz, 2001). As economic methods had helped the Allied countries to maximise production during the war, it was felt that development economics could enable economic growth in the poorest countries. Jean Drèze and Amartya Sen note that from the very beginning the field had “an overarching preoccupation with the growth of real income per capita” (Drèze and Sen, 1995, p. 9, cited in Stanton, 2007). As a result, just as welfare had become inextricably linked with national wealth in the richer countries, ‘development’ for the poorest countries came to be seen as synonymous with economic growth. Two common assumptions were generally made to support this perspective. First, it was argued that economic growth would ‘trickle-down’ throughout society, spreading its benefits to the poor. Second, it was assumed that governments would correct the situation if economic growth failed to trickle down (Stanton, 2007). By the end of the 1970s, it had become clear that neither assumption was reflected in reality. As one source states: “Highly concentrated and unequal growth was observed in some countries for prolonged periods, so that there was no universal tendency for growth to spread. Nor did governments always show signs of correcting gross inequalities.” (Hicks and Streeten, 1979, p.567). Furthermore, many countries during that period experienced no economic growth at all.

71. While the social indicators movement of the 1970s and 1980s focused on the more developed countries of Europe and North America, there were also attempts to provide broader measures of social progress in developing countries. In 1966, the United Nations Research Institute for Social Development

(UNRISD) published a ‘level of living index’ for 20 developing countries which took into account physical needs (nutrition, shelter, health), cultural needs (education, leisure, and security) and higher needs (measured by income above the poverty threshold). In 1972, UNRISD published a second study which took into account nine economic and nine social characteristics (Stanton, 2007). During the 1970s, the OECD, the United Nations Economic and Social Council (UNESCO) and the International Labour Organisation (ILO) also published reports compiling social and economic indicators for developing countries (Stanton, 2007).

### *The UNDP Human Development Index*

72. In 1990, the United Nations Development Programme (UNDP) published its first *Human Development Report* (UNDP 1990) with the aggregate indicator, the Human Development Index (HDI) at its core. The philosophy of the Human Development Reports, from the beginning, has been to bring quality of life and well-being to the forefront of development policy and analysis:

*“People are the real wealth of a nation. The basic objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives. This may appear to be a simple truth. But it is often forgotten in the immediate concern with the accumulation of commodities and financial wealth” (UNDP, 1990, p. 9).*

73. The Human Development Index (HDI), was developed by Mahbub ul Haq, drawing heavily on Amartya Sen’s capability approach to human welfare. The capability approach states that in order to truly assess quality of life, rather than considering just the quantity of resources or commodities available, we should consider ‘capabilities’ of people and societies, or what people are able to achieve with those commodities (Clark, 2005). For example, a disabled person may require extra resources (such as wheelchairs or ramps) to achieve the same outcomes as an able-bodied person. Similarly, a child will have very different nutritional requirements from a manual labourer or a pregnant woman.<sup>28</sup> This idea can be extended to the capabilities of societies, or nations. Sen never prescribed a definitive list of capabilities essential for well-being, arguing that the selection and weighting of capabilities depend on personal value judgments (Clark, 2005). However, he did suggest that the capabilities to ‘live long, escape avoidable morbidity, be well nourished, be able to read, write and communicate, take part in literary and scientific pursuits and so forth’ could be considered as intrinsically valuable (Sen, 1984, p.497, cited in Clark, 2005).

74. To develop the HDI, Haq selected three human capabilities that are widely considered to be essential for well-being: health, education and a decent standard of living. He then constructed an index combining indicators that could stand as proxies for these capabilities, measuring health by life expectancy, education by literacy and school enrollment rates, and standard of living by GDP per capita. The resulting index was used to rank the countries of the world in terms of their level of ‘human development’. The HDI had a large impact on development discourse. First, the simplicity of its single-number approach has been a powerful method to popularise the wider concept of human development. Furthermore, by highlighting the differences between HDI rankings and rankings based on GDP alone, it has provided a supplement to GDP for making comparisons across countries and time (Stanton, 2007). However, the methodology of the HDI has also been heavily criticised by experts. The Indian economist T. N. Srinivasan summarised these:

*“[T]he HDI is conceptually weak and empirically unsound, involving serious problems of non-comparability over time and space, measurement errors, and biases. Meaningful inferences about the process of development and performance as well as policy implications could hardly be drawn from variations in HDI” (Srinivasan, 1994, p. 241).*

<sup>28</sup> Examples given in Clark, 2005.

75. Amartya Sen himself initially criticised the HDI approach as being overly crude and unnecessary in the light of the detailed background data included in the Human Development Reports. Haq was always aware that the HDI was a crude measure; however he argued that the single-number approach was necessary to counter the predominance of GDP, and to get people interested in the underlying data (UNDP 1999). In the Preface to the 1999 Human Development Report (UNDP 1999), Sen wrote:

*“Mahbub got this exactly right, I have to admit, and I am very glad that we did not manage to deflect him from seeking a crude measure....The crude index spoke loud and clear and received intelligent attention and through that vehicle the complex reality contained in the rest of the Report also found an interested audience.”*

#### *The Millennium Development Goal Indicators*

76. In 1996, the OECD Development Assistance Committee (DAC) released the report *Shaping the 21<sup>st</sup> Century: the Contribution of Development Cooperation* (OECD DAC, 1996). The report pioneered the idea of international development goals. In September 2000, at the United Nations Millennium Summit, 189 U.N. Member States adopted the Millennium Declaration committing to a global partnership to make the right to development a reality for everyone. The objective of the Millennium Declaration was to promote "a comprehensive approach and a coordinated strategy, tackling many problems simultaneously across a broad front" (UN, 2001). Associated with the Declaration are the Millennium Development Goals (MDGs): a set of 8 objectives to be achieved by 2015, as measured against their levels in 1990. These are:

- Eradicate extreme poverty and hunger.
- Achieve universal primary education.
- Promote gender equality and empower women.
- Reduce child mortality.
- Improve maternal health.
- Combat HIV/AIDs, malaria and other diseases.
- Ensure environmental sustainability.
- Develop a global partnership for development.

Associated with these 8 overarching goals are 21 more detailed targets and 60 indicators.<sup>29</sup>

77. Each year, the UN Secretary-General presents a report to the General Assembly on progress achieved towards implementing the Declaration, using the selected indicators. However, data availability is still a serious challenge. Since the periodic assessment of progress towards the MDGs started, the international statistical community has been concerned about the lack of adequate and comparable data to compile the required indicators in many parts of the developing world. At the same time, the monitoring requirements themselves have focused attention on this shortcoming and raised awareness of the need to build statistical capacity in developing countries.

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<sup>29</sup> See <http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm>.

78. Despite significant statistical and methodological challenges, the impact of the Millennium Development Goal framework, and associated indicators, on the international development discourse has been considerable. There are several reasons for this success. First, the time-bound nature of the goals (with a deadline of 2015) has been a key factor in mobilising action as a matter of urgency (Manning, 2009). Second, the close linkage between the indicators and specific targets has enabled their use in monitoring performance, and has helped to link them to policy priorities (Pintér et al., 2005). In the words of Kevin Watkins:

*“The targets have provided a moral compass and a set of yardsticks for measuring progress. National governments, multilateral development banks, and bilateral donors have all scaled-up and strengthened the monitoring of progress towards the MDGs. More than that, they have placed poverty reduction at the centre of the international development agenda” (cited in Manning 2009, p. 26).*

79. Thirdly, the MDGs and their indicators have reached a high degree of international legitimacy and are based on concepts that the public can easily understand and relate to. This, aligned with a strong communication strategy, has allowed the MDGs to become powerful tools for advocacy and awareness-raising (Manning, 2009).

80. The MDG indicators and the Human Development Index are probably the most well-known examples of indicators of societal progress at international level. The following section looks at a selection of five case studies representing initiatives to measure societal progress at European, national and local levels: indicators supporting the EU ‘Lisbon Strategy’; UK Sustainable Development Indicators, Measures of Australia’s Progress, Measuring Ireland’s Progress, and the Santa Cruz Community Assessment Project in California.

## 5. Selected case-studies

### 5.1. *The EU ‘Lisbon strategy’*<sup>30</sup>

81. The use of indicators to aid decision-making and policy coordination has a long history in the European Union. Fiscal indicators and targets set out in the Maastricht criteria and the Stability and Growth Pact have played a central role in monitoring economic and monetary integration. GDP per capita is used as the key factor for allocation of structural funds, with funds being allocated to regions where GDP per capita is less than 75% of the EU average. In recent years, there has been an increase in the use of indicators to coordinate policies of the member states towards the achievement of common objectives (Diaz Munoz, 2005). This process began with the preparations leading to Economic and Monetary Union (EMU), where ‘convergence criteria’ and mid-term objectives were set for all countries aiming to pass through the three phases of economic and monetary integration leading to joining the euro. This method of using key indicators, common guidelines and a peer review approach to monitoring progress was then transferred to other European processes such as the European Employment Strategy and the Lisbon Strategy (Goetschy, 2004). It is the latter case, and the role of indicators within that process, which forms the focus of this case study.

82. The Lisbon Strategy was an ambitious 10-year action plan for structural economic and social reform launched at the 2000 Spring meeting of the European Council in the Portuguese capital. Its

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<sup>30</sup> The authors wish to thank Pedro Diaz Muñoz (Statistician, Eurostat); Pascal Wolf (Statistician, Eurostat); Pieter Everaers (Director, Eurostat); Ann Mettler (Director, the Lisbon Council); Jørgen Elmeskov (Director, Economics Department, OECD); Adrien Dierx (DG Economic and Financial Affairs, European Commission); and Jérôme Vignon (Former Director, DG Employment, Social Affairs and Equal Opportunities, European Commission).

objective was to make Europe “the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion, and respect for the environment” by 2010. Over the years, the scope and methods of the Strategy were considerably modified, most notably after 2005, when the Lisbon process was re-launched with a more streamlined focus, under the name of the ‘Growth and Jobs Strategy’.

83. Use of indicators under the Lisbon Strategy has had a similar evolution. When it was first launched, the Lisbon strategy gave a central role to key indicators in informing the policy and monitoring process. The European Council called for the development of a set of “structural indicators” which would be reported on every year in an Annual Progress Report (European Council 2000). Furthermore, the implementation of reforms was to be shaped by a new soft governance approach, the ‘open method of coordination’ (OMC). The OMC depended on peer review and benchmarking indicators to identify and encourage best practices among member states. However, the disappointing record of the Lisbon Strategy to make tangible progress towards its goals led to a comprehensive review and overhaul of this approach (European Commission 2004). This section provides a more in-depth look into the evolution of the Lisbon strategy and accompanying indicators.

84. The Lisbon Strategy was launched at a time of relative economic optimism for the European Union. In March 2000, real GDP growth was at its strongest in a decade and the unemployment rate was falling. However, the region still lagged behind the United States and the leading Asian economies in terms of productivity and innovation. European leaders felt there was a need to boost competitiveness and to adapt to the demands of the IT-driven ‘knowledge economy’, while retaining the emphasis of Europe’s social model based on welfare and social cohesion (EC, 2000). The logic of the Lisbon Strategy rested on the idea that by implementing a coordinated action plan among the Member States, the positive effects of reforms would be self-reinforcing: ‘a jointly created economic tide would be even more powerful in its capacity to lift every European boat’ (European Commission, 2004).

85. From the very beginning, the development of a sound set of indicators to monitor the process was seen as key to its success. The European Council asked the European Commission to present an Annual Progress Report towards the Lisbon objectives at the Spring Council meeting every year. The analysis in this report would be based on the indicators and related to targets as decided by the Commission in consultation with member states. In this way, the ‘structural indicator set’ was intended to play a key role in the monitoring of progress towards the Lisbon strategy.

86. In addition to being used for evaluating progress, the indicators were intended to be a tool to assist the implementation of the Lisbon Strategy under the OMC. The term ‘open method of coordination’ was defined in the Lisbon strategy communication of the European Council in 2000, based on working methods which had been informally developed and refined through various processes of macro-economic and employment policy coordination during the 1990s (Borrás et al., 2004). The key tools of the OMC are common guidelines to be translated into national policy, combined with periodic monitoring, evaluation and peer review organised as mutual learning processes and accompanied by indicators and benchmarks as means of comparing best practice (European Council, 2000).

87. The OMC was intended to be a flexible and ‘soft’ approach to facilitate convergence on the EU’s key goals by enhancing transparency, mutual learning and peer pressure, while leaving decision-making with the member states. In this way, the OMC did not conflict with the principle of subsidiarity which prevails in the European Union.<sup>31</sup> The development of an appropriate indicator set was therefore central to the functioning of the OMC as a tool for the management of the Lisbon process. It was also expected that

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<sup>31</sup> Subsidiarity states that matters should be handled by the smallest, lowest or least centralised competent authority (i.e. by national or sub-national governments rather than supranational EU authority, wherever possible).

the indicator set would be used as a communication tool to encourage awareness and support of the Lisbon objectives among European citizens and social partners (EC, 2004).

*The indicator development process*

88. As a general rule, European statistical co-operation has been driven by political demand and the evolving priorities of the integration process. In the 1950s, after the establishment of the Coal and Steel Community, statistics related to these products and industries were developed. In the 1960s, the introduction of the common agricultural policy and customs duties, led to the extension of statistics to cover external trade and agriculture. The establishment of the common market in the early 1990s and the preparations for the EMU later in the decade further extended the coverage of the European statistical system and necessitated enhanced comparability of the statistics being produced by individual countries. The Lisbon strategy was the first instance where extensive cooperation was required for such a wide variety of issues, covering economic, social and environmental concerns.

89. Eurostat took the lead in coordinating this process with other Directorates-General of the European Commission. The Commission had been asked to produce an initial set of structural indicators by November 2000. This gave a window of only six months to develop the set, but the fact that the request came from the very highest political level of the EU gave impetus to the process. At the outset, a set of criteria for the selection of indicators was agreed between the Economic Policy Committee<sup>32</sup> and the Commission, which stated that the indicator set should be: i) policy relevant; ii) relatively limited in number and yet large enough to be representative of the broad area of coverage; iii) stable over time as far as possible; iv) mutually consistent; v) timely and from reliable data sources; and vi) comparable across Member States and capable of being aggregated at EU level (EPC, 2000).

90. As far as possible existing data were used. However, in some cases, the necessary data were only available from non-official sources. In order to ensure the quality of these data, Eurostat developed a 'quality profile' for each indicator to ensure transparency on the technical issues related to each (Diaz Munoz, 2005). This quality profile methodology allowed for the continued improvement of the quality of the indicators.

91. The establishment of this indicator set required a lot of co-ordination between different departments of the Commission and the Council: an inter-service Working Group was formed; once the initial selection of indicators was made, the indicators were presented to the Council and discussed with the Economic Policy Committee until a final selection was agreed. In September 2000, 27 structural indicators were proposed covering the four policy domains agreed in Lisbon: employment, innovation, economic reform and social cohesion.

92. Subsequent meetings of the European Council led to the enhancement of the objectives of the Lisbon Strategy, and the indicators needed to measure progress. In June 2001, at the Gothenburg council, the European Council identified sustainable development as a priority, highlighting four areas for future policy development in this area: climate change; transport; public health; and natural resources. This was not the first time that sustainable development had been declared a policy goal in the European Union; EU work with sustainable development indicators had begun in the 1990s, following the international commitments made at the 1992 Rio Earth Summit, and the Treaty of Amsterdam in 1997 (EUROSTAT, 1997). However, the Gothenburg European Council gave an added impetus in this area, with the Council Conclusions stating that this "completes the Union's political commitment to economic and social renewal, adds a third, environmental dimension to the Lisbon Strategy and establishes a new approach to policy

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<sup>32</sup> The Economic Policy Committee is an official EU advisory group consisting of senior representatives of Member State governments.

making” (European Council, 2001, p. 4). It also noted that that the European Commission would evaluate the progress of the sustainable development strategy in its annual synthesis report. With this view in mind, in December 2001 the EU Council of Ministers in Laeken agreed a set of seven headline indicators to measure progress in the environmental dimension of sustainable development and an ‘open list’ of a further 33 indicators (CEU, 2001).

93. The Laeken Council was also significant as it led to agreement to a set of indicators covering four dimensions of social exclusion: financial poverty, employment, health and education. Poverty and social exclusion had been identified as policy priorities in December 2000 at the Nice Council, and the Commission and Member States were invited to develop appropriate indicators. As a result, an Indicators Sub-group of the Social Protection Committee was established in February 2001, with representatives from Member States. The Indicator Sub-Group continued to work in this area after the establishment of the Laeken indicators, to improve the quality, relevance and coverage of the indicator set (Atkinson et al., 2002).

94. By the end of 2001 therefore, the Lisbon Strategy encompassed a wide range of economic, social and environmental objectives. As a result, the number of indicators included in the annual synthesis report increased every year between 2000 and 2003 (with 42 by 2003, up from the original 27). As a response, the Commission proposed to structure the set of indicators into two subsets: a short list of headline indicators (for communicating the main policy messages at the Spring European Council); and about 100 other indicators, which would be maintained by Eurostat and presented on its website.<sup>33</sup> In 2003, the European Council adopted a set of 14 indicators that summarised the commitment to economic growth, employment, social, educational, regional and environmental objectives:

1. GDP per capita;
2. Labour productivity;
3. Aggregate employment rate;
4. Employment rate of older workers;
5. Education achievement;
6. Expenditure on research and development;
7. Business investment;
8. Comparative price levels;
9. At-risk-poverty rate;
10. Long-term unemployment;
11. Dispersion of regional employment rates;
12. Greenhouse gas emission;
13. Energy intensity of the economy;

<sup>33</sup> See Summary of Commission Communication of 8 October 2003 on the structural indicators at <http://europa.eu/scadplus/leg/en/lvb/g24225.htm>.

14. Volume of transport.

95. Each of the indicators was linked to a target. Probably the most high-profile of these targets were the goals of achieving a 70% employment rate and of spending 3% of GDP on research and development. All of the targets were to be reached by 2010. The indicators represent a mix of outcome and process (input) indicators (employment rate being an outcome and R&D spending being an input).

*The Mid-Term Review*

96. After its ambitious launch, the early years of the Lisbon Strategy fell short of expectations. Much of this has had to do with an unfavourable economic climate after the burst of the dot com bubble and the effects of the September 11 terrorist attacks in 2001. However, for many commentators, not all the blame could be attributed to the wider circumstances. The strategy itself came under question, and it was widely acknowledged that something would need to change if Europe was to avoid falling even further behind the United States and the leading Asian economies in the pursuit of economic goals.

97. At its Spring 2004 meeting, the European Council invited the Commission to establish a High-Level Group to undertake a thorough review of the Lisbon Strategy and present its findings before the end of the year. The Group was headed by former Dutch Prime Minister, Wim Kok, and the report entitled "Facing the Challenge" was published in November 2004. The report conceded that external events had not assisted the pursuit of the Lisbon objectives. However, it criticised the European Union and its Member States for failing to act with sufficient urgency. It argued that fault lay also in the design of the Strategy, which had led to 'an overloaded agenda, poor coordination, and conflicting priorities' (European Commission, 2004). The report went on to state that the OMC as a process for implementation had fallen short of expectations, and that mutual benchmarking could only work with sufficient motivation on the part of the Member States.

98. The report also criticised the use of indicators in the delivery of the Lisbon Strategy. However, far from recommending a diminished role for the structural indicator set as a management and communication tool, the Kok Report advocated the continued use of indicators for benchmarking and peer pressure in order to strengthen the open method of coordination. The report stated that lack of political will on the part of national governments undermined the effectiveness of peer pressure. Furthermore, the fact that over 100 indicators had been associated with the Lisbon process rendered benchmarking ineffective: when goals are too diffuse, Member States are not challenged to improve their performance.

99. In order to rectify this, the Kok Report recommended a 'radical improvement' of the process. In particular, it recommended that headline indicators be even more widely communicated in order to 'name and shame' poor performers and to heighten the political consequences of non-delivery. The Report recommended that: "The European Commission should deliver to the Spring Economic Council, in the most public manner possible, an annual league table of Member State progress towards achieving the 14 key indicators and targets. Countries that have performed well should be praised, those that have done badly castigated" (European Commission, 2004).

100. In relation to the use of indicators, the Kok Report stated that communication of the goals and purpose of the Lisbon Strategy to a wider public had been insufficient. Again, a more central role for benchmarking indicators and a more concerted effort to communicate them to social partners and European citizens was seen to be the way forward.

101. In addition to the strengthened role of indicators, the Kok Report recommended two other key changes to the Lisbon agenda. First, all Member States were called upon to develop a "national action programme, setting out roadmaps, including milestones, about how it is going to achieve the Lisbon

targets". The idea behind these national plans was to encourage strengthened national ownership of the Lisbon Strategy and to ensure a coherent approach involving different stakeholders. Secondly, it was proposed that higher EU funds be provided to assist the implementation of the Strategy (EC, 2004).

*The revised Lisbon Strategy: Growth and Jobs*

102. The Kok Report was an important influence in the midterm reshaping of the Lisbon Strategy. Its recommendations of simplifying the scope of the Strategy to focus on growth and jobs, and of increasing national ownership of the Strategy through the formulation of National Reform Programmes, were followed. However, the proposal to increase EU funding and to employ 'naming and shaming' tactics was rejected (Pisani-Ferry and Sapir, 2006).

103. Rather than strengthening the open method of coordination, the focus on mutual benchmarking was replaced by a greater emphasis on nationally-specific pathways. Through the development of national action programmes, the focus of the Lisbon strategy shifted from 'co-ordination through multi-lateral discussions' between all Member States and the Commission, towards 'a bilateral in-depth dialogue between the Commission and Member States' (EC, 2005, p. 31).

104. The long list of structural indicators continued to be produced by Eurostat and these indicators were disseminated on the website and in the annex of the Annual Progress Reports. According to those we interviewed, the long list provided a valuable source of information and a general framework for guidance. However, it was up to each Member State to decide the priorities and targets for action most appropriate for them. No 'naming and shaming' league tables were produced by the European Commission as using indicators in such an explicit and visible way to criticize Member States was perceived as too politically sensitive.

105. For many, there was a fear that the focus on "Growth and Jobs" would come at the cost of a lower priority given to sustainable development and social inclusion. Even before the reforms, there was a perception that this was the case. For example, the original statement of the Sustainable Development Strategy (SDS) in the Gothenburg Conclusions came to only 14 paragraphs, which was seen by some to be too brief to be a serious strategy (Steurer and Martinuzzi, 2005). With the relaunch of the Lisbon Strategy, the European Sustainable Development Strategy was also reviewed. A new strategy was launched in 2006, with the aim of providing a "stronger focus, a clearer division of responsibilities, wider ownership and broader support, a stronger integration of the international dimension and more effective implementation and monitoring".<sup>34</sup> The strategy outlined seven priority areas: 1) climate change and clean energy; 2) sustainable transport; 3) sustainable consumption and production; 4) conservation and management of natural resources; 5) public health; 6) social inclusion, demography and migration; 7) global poverty and sustainable development challenges. A first set of indicators had been adopted by the Commission in 2005 and reviewed in 2007 in order to adjust to the new SDS. While the indicators themselves were developed by a group of technical experts, the revised strategy had involved consultation with many non-experts from civil society. The indicators were published by Eurostat in a biennial report.

<sup>34</sup> From Eurostat's website on Sustainable Development: <http://ec.europa.eu/environment/eussd/>. The 2006 strategy document explained the relationship between the new Lisbon Strategy and the Sustainable Development Strategy as two separate, yet closely linked, processes:

*"The EU SDS forms the overall framework within which the Lisbon Strategy, with its renewed focus on growth and jobs, provides the motor of a more dynamic economy. These two strategies recognise that economic, social and environmental objectives can reinforce each other and they should therefore advance together. Both strategies aim at supporting the necessary structural changes which enable the Member States' economies to cope with the challenges of globalisation by creating a level playing field in which dynamism, innovation and creative entrepreneurship can flourish whilst ensuring social equity and a healthy environment."* (European Council 2006).

106. Combating social exclusion had formed one of the three core pillars of the original Lisbon Strategy (along with economic growth and innovation). However, the impact of the social inclusion process had also been perceived to be weak, with an absence of top-down guidelines, common targets, recommendations or sanctions (Daly, 2007). During the mid-term review, the social elements of the Lisbon strategy were singled out for particular reproach, exemplifying the fact that “Lisbon is about everything and thus about nothing” and hindering the development of a clear narrative around the Lisbon goals (European Commission, 2004). Following the revision of the Lisbon Strategy, the social inclusion process became a largely separate process to that involving the core economic objectives. Social inclusion was merged with two other, more recent OMC processes on pensions and healthcare under the heading “social protection and inclusion”. In this parallel, streamlined process, progress towards social objectives was assessed in Joint Social Protection Reports, drawn up by the Commission and the Council, using the “Laeken” portfolio of common European statistical indicators on poverty and social exclusion. While it was argued that this did not undermine the importance of social objectives in Lisbon, with the social OMC process “feeding in” to the Growth and Jobs Strategy (EC, 2005), the fact that only three of the 24 Integrated Guidelines in the Lisbon Strategy had a social component was interpreted by some as a clear relegation of social objectives (Daly, 2007).

#### *Outcomes*

##### 107. Benchmarking for structural reform

108. The open method of coordination was initially intended to be the cornerstone for the implementation of structural reforms within the Lisbon strategy. The structural indicator set was designed with the purpose of assisting this process for monitoring, peer pressure and identification of best practices. The shortlist of 14 indicators, officially agreed by the Council of Ministers in 2003, has continued to be used until 2010. However, the use of these indicators for benchmarking purposes has varied over time, particularly before and after 2005. In 2004, the list was presented in a tabular format to indicate the top three and bottom three performers for each of the 14 indicators. After the mid-term review, the Annual Progress Reports presented the indicator data as EU aggregates only, which reduced the role of indicators as quantitative tools for benchmarking country performance (Ioannou et al., 2008). Further, the use of the indicators as performance targets was reduced significantly over the decade, with only two performance targets being widely used in later years (the goals of 70% employment rate and R&D spending to reach 3% of GDP).

109. What explains this weakened role of the headline indicators for benchmarking? The political sensitivity of ‘naming and shaming’ was one factor. Further, the roots of benchmarking indicators in the private sector mean that they are sometimes inadequate to encourage action and improved practices in the complex world of the public sector, especially in a supranational forum such as the European Union. Moving from a private sector management tool to a government regulatory instrument raises various problems. Arrowsmith et al. (2004) identify some key reasons for this. First, it is very difficult to agree on ‘best practices’ when there are several, potentially conflicting and politically charged policy goals. Second, there are technical challenges when the data being collected are not necessarily comparable. Third, the political nature of the process raises problems. In a private organisation, executive management has the authority to enforce changes where performance indicators show that improvement is necessary; this is not always the case in the European Union. Although peer pressure can encourage member states to fall in line, ultimately the principle of national sovereignty remains. The ‘soft’ nature of the open method of coordination meant that the publication of the indicators did not provide a strong enough incentive for change in many Member States.

110. While official institutions of the European Union have refrained from using the structural indicators to rank countries after 2004, this task has been taken on by other organisations. For example, the

Centre for European Reform (CER) publishes an annual “Lisbon Scorecard” assessing Member State performance in the structural indicators.<sup>35</sup> The Scoreboard attracts considerable media and political interest, and EU President Barroso has made public statements reacting to the CER analysis in recent years.<sup>36</sup> The Lisbon Council, another think tank, and Allianz SE also publishes an annual ranking of Member State performance, called the “European Growth and Jobs Monitor”, which receives coverage in the media.<sup>37</sup>

#### *National ownership of the Lisbon Strategy in the Member States*

111. National ownership of the Lisbon Strategy and accompanying indicators was also weaker than expected. The development of the Lisbon Strategy and the call for a set of structural indicators was a top-down process, with the impetus coming directly from the European Council. In terms of motivating different departments to work together in order to agree on a set of indicators, this top-down approach was beneficial. Eurostat had a short time to develop these indicators, and this would not have been possible if the request had not come from the highest political level. Member State governments were invited to comment on the selection of indicators, and the shortlist of structural indicators enjoyed a certain level of political legitimacy through their official adoption by the Council of Ministers. However, Member States were not prepared for their use as ‘naming and shaming’ tools. Indeed, from the beginning, the Economic Policy Committee had expressed reservations about the ‘mechanical’ use of the indicators:

*“Indicators provide a useful starting point for intelligent debate but they should not be read mechanically. The relation between the numeric values of an indicator and the achievement of policy goals is often not clear-cut and requires further interpretation....When comparing across countries it is important to look at groups of indicators together rather than picking out individual indicators which sometimes give an unrepresentative impression” (EPC, 2000)*

112. A 2007 Eurostat report, reviewing the use of indicators in Member State reports for National Reform Programmes (NRP) and National Sustainable Development Strategies found a large degree of variation in the number and use of indicators between countries (Eurostat, 2007). Until 2006, Luxembourg was the only EU Member State that monitored its NRP with the EU Structural Indicators, and only six other countries included the short list of 14 headline indicators in their progress reports (Steurer and Berger, 2010). This was partially an issue of data availability as some countries with smaller indicator sets could not cover the 130+ indicators in the full set. However, it is also a further illustration of the difficulties of encouraging coherent action and national ownership among the Member States through the OMC: Member States were free to select the indicators they preferred for reporting purposes. In general, there was even less convergence on sustainable development indicators. For example, while six countries (Austria, Denmark, Luxembourg, Malta, the Netherlands and Sweden) included between 40 and 50 per cent of the EU Structural Indicators in their 2007 NRP report, no country reached this rate in the context of sustainable development reporting (Steurer and Berger, 2010). A similar tendency to “package” the indicators “as they wish” is also evident in the Joint Reports on Social Protection and Inclusion (Daly, 2007).

#### *Indicators as an information tool*

113. Early formulations of the Lisbon Strategy aimed to combine economic, social, and environmental sustainability goals and indicators under a common framework. However, in the second half of the decade,

<sup>35</sup> See, for example [http://www.cer.org.uk/pdf/tp\\_882.pdf](http://www.cer.org.uk/pdf/tp_882.pdf)

<sup>36</sup> See CER website for 2009 speech: [http://www.cer.org.uk/articles/speech\\_barroso\\_13march09.html](http://www.cer.org.uk/articles/speech_barroso_13march09.html)

<sup>37</sup> See Allianz website: [https://www.allianz.com/en/press/news/studies/news\\_2009-03-09.html](https://www.allianz.com/en/press/news/studies/news_2009-03-09.html)

these three areas were largely managed and assessed in parallel processes, using separate sets of indicators: Structural Indicators for the Growth and Jobs Strategy; Sustainable Development Indicators for the SDS; and the “Laeken” indicators for the Social Protection and Inclusion process. The indicators have not been as effective as hoped in encouraging progress towards the Lisbon objectives in an integrated way. However, all three indicator sets are widely respected as policy tools according to those interviewed.

114. Senior statisticians at Eurostat have stated that, thanks to the role played by statisticians in the development of the indicator set, the visibility and prestige of statistics across the European Union has increased. So, although the indicators have not been used in the manner that had been expected, they nonetheless contributed to a more ‘evidence-informed’ focus in European Union work.

115. The hope that the indicators would be used to communicate the objectives of the Lisbon Strategy to a broader public has not been realised. Even amongst government representatives at sub-national levels, there has been a “widespread uncertainty... about the overall purpose of the current Lisbon Strategy” (Committee of the Regions, 2009). If political representatives did not understand Lisbon, it is unsurprising that the general public was largely unaware of the existence of the strategy. Further, Lisbon and its target indicators have had little media coverage over the decade, particularly in later years. A Financial Times comment piece in 2009 began with the phrase, “Anyone remember the Lisbon Strategy?”<sup>38</sup> The absence of a specific communication strategy is one reason for this failure to reach a wider audience. Often, when the media did cover the indicators, it was in response to the rankings provided by think tanks such as the Lisbon Council and CER, rather than the more neutral presentation of data from EU institutions. The lack of public engagement and debate has meant that there was no real bottom-up pressure for the achievement of Lisbon goals (Jones, 2005).

### *Conclusion*

116. The results from the Lisbon Strategy have been disappointing. At the end of the decade, no Member state was able to meet all Lisbon goals (Lisbon Council/Allianz, 2009) and the Strategy was declared a failure by the Swedish Prime minister.<sup>39</sup> The economic crisis of 2008/9 was seen to be a major setback for the achievement of the objectives. However, the monitoring and implementation process had also come in for much criticism over the years (for example, Pisani-Ferry and Sapir, 2006). The 2010 deadline was seen as a chance to develop a new, improved strategy for progress in Europe. In particular, there was much hope that the elements of sustainable development and social inclusion would be more fully integrated with the economic goals in the post-2010 process (Steurer and Berger, 2010; Committee of the Regions, 2009).

117. In March 2010, the European Commission released its proposal for the follow-up to the Lisbon Strategy: “Europe 2020”, subtitled “A European Strategy for smart, sustainable and inclusive growth” (European Commission, 2010).<sup>40</sup> The Strategy puts forward five targets to be achieved by 2020, namely:

1. 75% of the population aged 20-64 should be employed;
2. 3% of the EU’s GDP should be invested in R&D;

<sup>38</sup> See The Financial Times’ Brussels Blog: <http://blogs.ft.com/brusselsblog/2009/03/recession-dashes-the-eus-lisbon-strategy-hopes/>

<sup>39</sup> “Sweden admits Lisbon Agenda ‘failure’”: <http://www.euractiv.com/en/priorities/sweden-admits-lisbon-agenda-failure/article-182797>

<sup>40</sup> At time of writing (March 2010), the European has yet to approve the Commission’s proposal, which should happen in June 2010.

3. The “20/20/20” targets should be met (including an increase to 30% of emissions reduction if the conditions are right),<sup>41</sup>
4. The share of early school leavers should be under 10%, and at least 40% of the younger generation should have a tertiary degree;
5. 20 million fewer people should be at risk of poverty.

118. In addition to these targets, the new strategy sets out seven new initiatives to “catalyse progress”, committing the EU and Member States to action in key areas such as youth employment, poverty reduction, and industrial policy. The governance structure of the new process will rely on combining the pursuit of the Europe-wide headline targets and country-specific guidelines and reporting, with the Commission having the responsibility to “monitor progress towards the targets, facilitate policy exchange and make the necessary proposals to steer action” (EC, 2010). Countries that are judged to be providing an “inadequate response” to the strategy will be issued a policy warning, although no details are given to what exactly this warning would entail (EC, 2010). There is no explicit mention of indicators in the Europe 2020 strategy, although the high profile given to the 5 key targets gives importance to the indicators needed to track progress in those areas.

119. The experience of the indicators linked to the Lisbon Strategy shows to what extent the development of comprehensive indicators to measure societal progress is a complex and iterative process. In many ways, the ten years of the Lisbon Strategy have provided a series of experiments on the use of indicators to inform policy and encourage reform on a wide variety of issues. The Lisbon Strategy’s overarching goal of becoming “the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion, and respect for the environment” was ambitious to say the least, as was the intended role of indicators within that process. Since 2000, the scope of the Lisbon Strategy has widened (to include sustainability issues), then narrowed (to focus on Growth and Jobs post-2005). The role of indicators evolved from a benchmarking role, to one of more neutral background information. Overall, it seems that the use of indicators for the Lisbon Strategy has been a learning process, with need for frequent fine-tuning. One lesson from this experience is that focussing on too many indicators is ineffective; and yet narrowing the coverage of the most high-profile indicators to economic issues may have undermined the social inclusion and sustainability processes, by relegating them to parallel processes. The new strategy takes a different approach, with a limited selection of target indicators, covering economic, social and environmental objectives. The next few years will show to what extent this approach is more effective in encouraging policy action.

## 5.2. *UK Sustainable Development indicators*<sup>42</sup>

120. At the UN Conference on Environment and Development in Rio de Janeiro in 1992 – also known as the “Earth Summit” - leaders from around the world came together to discuss the urgent need to rethink economic development and to act to protect the environment. The conference led to the adoption of Agenda 21, a comprehensive action plan for sustainable development, which (among other recommendations) called for the implementation of national sustainable development strategies (NSDS).

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<sup>41</sup> The “20/20/20” target refers to the triple objective of: reducing EU greenhouse gas emissions by at least 20% below 1990 levels; 20% of EU energy consumption to come from renewable resources; and, a 20% reduction in primary energy use compared with projected levels, to be achieved by improving energy efficiency.

<sup>42</sup> With thanks to the following for background interviews: Stephen Hall (Statistician, Department of Environment, Food and Rural Affairs), Jonathan Tillson (Deputy Director of DEFRA and Head of Sustainable Development Unit); Minas Jacob (Watchdog Officer, UK Sustainable Development Commission); Michael Meacher (U.K. Secretary of State for the Environment, 1997-2003).

The aim of such strategies was to encourage cohesive and meaningful national policy approaches “to ensure socially responsible economic development for the benefit of future generations” (UN DESA 1992). According to the UN Department of Economic and Social Affairs (UN DESA 2002), a good strategy should work on five levels:

- Integrating economic, social and environmental objectives, and ensuring balance across sectors, territories and generations;
- Ensuring broad participation and effective partnerships;
- Promoting country ownership and commitment;
- Developing capacity and an enabling environment; and
- Focusing on outcomes and means of implementation.

121. Furthermore, it is widely acknowledged that successful sustainable development strategies should be linked to structured indicator systems, published in national reports, to assist in monitoring progress and to serve as quantitative targets (OECD 2006b).

122. The United Kingdom was one of the first countries to produce a national sustainable development strategy. The first strategy, *Sustainable Development: the UK Strategy*, was published in 1994 and has been revised twice with *A Better Quality of Life* in 1999 and *Securing the Future* in 2005. Since the beginning, the development of a set of sustainable development indicators has been a core element of the UK’s approach to sustainable development. According to the current Secretary of State for Environment, Food and Rural Affairs, the “UK’s public reporting on sustainable development is internationally highly regarded and much emulated.”<sup>43</sup> A review of 19 national sustainable development strategies highlighted the UK as a ‘consistent innovator’ in its use of indicators and reporting (Volkery et al. 2006). As one of the first attempts to enumerate the complex concept of sustainable development, the UK’s indicator set provided the model for subsequent national attempts. According to those we spoke to, the UK is a leader in terms of policy action and research related to sustainable development. This is illustrated for example, with the 2006 release of the influential Stern Review on the economic impact of climate change, and by the passing of the Climate Change Bill, which contains provisions setting a legally binding target for reducing UK carbon dioxide emission by at least 26 per cent by 2020. However, determining the role of the indicators in ensuring these policy outcomes and promoting country ownership is not straightforward.

123. The UK government had recognised sustainable development as one issue of emerging importance early on, paying considerable attention to the publication of the Brundtland Report in 1987 and then the 1992 Rio conference. Policy makers agreed that tools were needed to define the UK’s vision of a sustainable society and to measure progress towards that vision. Constructing a solid set of sustainable development indicators was a crucial part of the process. Finally, in the words of one DEFRA statistician, the UK government ‘likes to be first’<sup>44</sup> and the idea of developing a model for sustainable development assessment, where none existed before, was a further motivation. There were initially high hopes about the impact of the indicators; there were expectations that they would completely change the policy agenda and public perceptions on the issue of sustainable development.

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<sup>43</sup> Speech by Rt Hon Hilary Benn MP to the Sustainable Development UK conference, 6 March 2008, see - <http://www.defra.gov.uk/corporate/ministers/speeches/hilary-benn/hb080306.htm>.

<sup>44</sup> Interview with Stephen Hall.

*The indicator development process**The first indicator set: "Indicators of Sustainable Development for the United Kingdom"*

124. The Conservative government of John Major assigned the Department of the Environment (DoE)<sup>45</sup> the responsibility of coordinating efforts across government departments in order to produce the first sustainable development indicator set. In the early and mid-1990s, the use of indicators and targets to guide policy in the United Kingdom was relatively rare. In addition, no accepted frameworks existed to guide the choice of sustainable development indicators. In terms of methodology, purpose, and content, therefore, the DoE statisticians largely had to learn as they went along by drawing on their own general expertise and experience.

125. An interdepartmental working group was formed to provide a means of collaboration across government departments in the choice of indicators. The only frame of reference available for the development of the indicators was the strategy report itself - *Sustainable Development: the UK Strategy*. However, the strategy was quite vague in the description of its objectives, which made the task of operationalising the main features of the strategy with indicators quite challenging.

126. A first indicators report - *Indicators of Sustainable Development for the United Kingdom* - was published in 1996 with an initial set of 120 indicators, which was then disseminated widely for comments and consultation. The main criticism of the first indicator set, which was also a criticism of the strategy itself, was its overwhelming focus on environmental and economic issues, and to the neglect of social issues. A few months after the release of the 1996 indicators report, the UN Commission on Sustainable Development produced its own list of indicators. The UK agreed to take part in a pilot test of these UN indicators to assess their relevance and practicality.

*The second indicator set: "Quality of Life Counts"*

127. The next year (1997), a new Labour Government came into power, promising an overhaul of the statistical service in order to provide more reliable and independent data. The use of targets and performance indicators became more common under Prime Minister Tony Blair's new administration. Changes in the structure of government departments resulted in the creation of the Department for Environment, Transport and the Regions (DETR). As part of the changes, the new Government decided to review the existing sustainable development strategy and propose revisions as necessary. This time, rather than the indicators being developed after the finalisation of the strategy, the two processes went hand in hand, with the indicators sometimes informing the strategy.<sup>46</sup>

128. Indicators can make abstract concepts more explicit and help to focus strategic discussions on measurable outcomes. Nevertheless, some experts found it difficult to contribute specific indicators without knowing the overall direction of the sustainable development strategy (Hall 2008). Also, the lack of strong policy guidance meant that the list of indicators was longer than it would otherwise have been. When the debate was opened up for stakeholder comment, a commonly-held fear among many people was that if their area of interest was not covered by the set of indicators, it would cease to be visible to policy makers. Hall cites one workshop organised to cut down the list of indicators from around 200 to about 50;

<sup>45</sup> Which became the Department of the Environment, Transport and Regions (DETR) in 1997 and the Department of Environment, Food and Rural Affairs (DEFRA) in 2001.

<sup>46</sup> Stephen Hall, a DEFRA statistician who has been involved in the development process since the beginning, has stated: "One of the strengths of this approach was that the indicators helped to focus people's minds on the issues that should be covered by the strategy. In some cases, indicators led to the inclusion of issues in the strategy that might not otherwise have been included, or at least not in the same way, such as indicators on wild bird populations and air quality." (Hall 2008)

by the end of the discussions, so many people had argued for the inclusion of indicators pertaining to their area of interest that the list had doubled to around 400 indicators.

129. Public consultation was an important part of the process for the second set of indicators. Comments and recommendations were actively sought on two papers outlining the sustainable development strategy and indicator set, *Opportunities for Change* and *Sustainability Counts* (DETR 1999a and 1999b). Responses to the papers underlined the need for indicators to be accessible and to communicate the key information in an easily understood way. As a reaction to this, it was decided that a set of 15 headline indicators would be established. Furthermore, subjective measures were included in the core set of indicators (non-headline) for the first time in response to demands for greater coverage of individual well-being. The revised strategy report, *A Better Quality of Life*, was published in 1999, with the indicator set, *Quality of Life Counts*, released 6 months later.

*The current indicator set and strategy: "Securing the Future"*

130. In 2004 and 2005, the strategy and indicator set was revised once more. This time, through another public consultation exercise, called "Taking It On". 42 questions were asked to a wide range of representatives from different sectors about different aspects of the indicator set. Government offices were consulted, and regional workshops and stakeholder meetings were held. All in all, around 1500 responses on the indicators were received.

131. However, there was limited time available for deliberation of the indicators to be included. Stephen Hall was made responsible for a thorough examination of all indicators in the sustainable development set. This was made difficult by the fact that the indicators were supposed to be linked to policy issues covered by the strategy, while the strategy itself was not completed until the end of the revision process (March 2005). Over the 2004-5 Christmas break, Hall authored a paper proposing a framework which was then circulated to government departments and generally accepted by all the departments. 80% of the indicators in the final set were there because of this paper - the remainder through suggestions from other policy colleagues. To construct the framework, Hall used 'common sense', looking at the previous frameworks and at the results of the public consultations, while also looking for indicators which were missing, such as aviation emissions.<sup>47</sup>

132. As the strategy itself was unavailable during the indicator development process, it was not easy to closely link the indicators and specific policy areas. Indicators were selected to relate to four broad areas of priority: sustainable consumption and production, climate change, natural resource protection and sustainable communities. In a way, this reflected the stronger focus of the new strategy on outcomes in the area of sustainable development rather than on more concrete, but sometimes arbitrary, policy targets.

133. The current set of SD indicators is now in its fourth year and has been designed with the intention of not being revised for 20 years. However those involved in the indicator process accept that this may be unrealistic, as sustainable development challenges change over time.

*Communicating the indicators*

134. Since the establishment of the revised strategy in 1999, the indicators were seen first and foremost as tools for communicating information to ministers and the public. Minister of Parliament, Michael Meacher<sup>48</sup>, hoped that environmental and social indicators would be as widely reported in the media as weather reports or interest rates (New Scientist, 1998). The decision to produce a small list of

<sup>47</sup> Personal interview with Stephen Hall.

<sup>48</sup> who took over from John Gummer as Secretary of State for the Environment in 1997,

headline indicators was explained by then Head of Environmental Statistics at DETR, Hilary Hillier, by the desire to “convey a general message that gives a balanced overall picture, not trying to produce the full story” (New Scientist, 1998).

135. However, there was no communications strategy in place at first. In order to make the indicators more accessible, a 2-page summary of the headline indicators was included in the 2000 Annual Report. As a result, the indicators got a huge amount of media interest with articles and debates on sustainable development in the newspapers and on television. In following years, the leaflet was produced more professionally and thousands were distributed annually. Michael Meacher wanted to control when the indicators came out, and that all indicators were released at the same time, so as to increase the impact of the indicator set. However, for political and administrative reasons, this was never possible.

136. Since 2004, a new format was experimented with the new sets of indicators. The decision to reduce the number of indicators from well over a hundred to 68 was partly driven by communication considerations. In order to communicate a meaningful picture of society, it was felt that 15 indicators were too few but 150 too many. In 2004, tens of thousands of copies of a smaller publication, *Sustainable Development Indicators in your Pocket*, presenting 50 indicators was distributed in schools and colleges. The publication was well received – DEFRA had already used this format for environmental indicators with *Environment in your Pocket*. This convinced DEFRA to aim for a smaller revised set. *Sustainable Development Indicators in your Pocket* now has a circulation of 60, 000 copies; the indicators are presented through ‘traffic lights’ to show whether indicators are heading in the right direction (green), the wrong direction (red) or stayed the same (amber), in an attempt to better communicate the key information in the data set.

### *The outcomes*

#### *Informing policy*

137. It is difficult to provide direct examples of how the indicators have influenced policy. One exception is the indicator on wild bird populations; this showed that while the overall population of birds had remained unchanged, farmland species had fallen drastically since the 1970s. This led to the implementation of a specific policy response to halt the decline and stabilise their numbers. Hall argues that most indicators are too broad to describe concrete policy areas where their decisions may have effects and are therefore inadequate for detailed policy use. This highlights the classic problem of how to link policy-relevant indicators (which are often focused on inputs and outputs that the government can control) with wider societal and environmental outcomes. In many ways, sustainable development indicators should be focused on outcomes, but it is not easy to show whether or how policy impacts upon outcomes.

138. The UK has done a good deal of work on sustainable development policy and research since the introduction of the first sustainable development strategy. For example, the Climate Change Bill already mentioned was the first example of legally binding targets for carbon dioxide emission reduction in the world when it was approved by the UK parliament in 2008. Following Carol Weiss’s enlightenment model of knowledge use in policy (Weiss 1979), it can be argued that the indicator set helped to shape the frames of reference for UK policy makers on the issue of sustainable development, along with other forms of research and policy knowledge. Bronwen Jones, Head of the Sustainable Development unit in DEFRA at the time of the 2005 strategy review argues that sustainable development is firmly part of the “policy landscape” in the UK, thanks to the successive strategies (Jones 2006). However, this is more of an “agenda-setting” change than a change in policy content. Others feel that the rhetoric of sustainable development employed by the government has not been matched by significant changes in UK policy making (Russel 2007).

*Collaboration across government*

139. All government departments signed up to all three sustainable development strategies, however, this did not guarantee their commitment (Russel 2007). Expressing disappointment with the application of indicators to policy, Michael Meacher blamed the lack of willingness of the other departments to take the indicators seriously, and to implement the necessary changes to departmental policies<sup>49</sup>. Although the impetus for the development of the strategy came from the Prime Minister's Office, the responsibility for the selection of indicators and the preparation of the strategy lies with DEFRA. Mr. Meacher felt that DEFRA did not have the necessary support from central government to convince other departments – such as Trade and Industry or the Treasury – to make policy changes which went against their own priorities. An OECD report has shown that this is a common problem amongst countries which have devolved the responsibility for the National Sustainable Development Strategy to environmental or related departments. Indeed the placement of overall responsibility for such strategies may be the most important governance aspect for sustainable development strategies, and that an environmental ministry (or environment, food and rural affairs in the case of DEFRA) commonly lacks the necessary authority for strategic and coordinated action (OECD 2007).

*Informing the public*

140. The indicators have arguably been successful in bringing sustainable development issues to public attention. Targeted communication strategies to schools and the media have resulted in stories in the national press and a widespread dissemination of the compact indicators reports across the country. Whether this has contributed to a deeper understanding of the issues or to changes in public attitudes is more difficult to assess. Michael Meacher's aspiration of sustainable development indicators attaining the same profile as interest rates or weather reports has not come to pass.

*Improving sustainable development measurement methodology*

141. When the UK started to work on the first sustainable development strategy and indicators, there was little available in terms of established frameworks or indicator methodology. The work undertaken by DETR statisticians (and later DEFRA) has provided a model for other countries around the world. DEFRA statisticians also contributed to the development of the European Union's sustainable development indicators. In the UK statistical service, the fact that certain issues have been highlighted as being important for the measurement of sustainable development has led to the development of new indicators, such as indicators of environmental equality, well-being and life satisfaction.

*Conclusion*

142. Where indicators are developed to assist the implementation or monitoring of a wider strategy – as is the case for the UK Sustainable Development indicators, or indeed the EU structural indicators – it is difficult to separate the achievements of the indicator set from the achievements of the strategy as a whole. The work on sustainable development indicators undertaken by UK statisticians provided a model for subsequent efforts. Furthermore, efforts by DEFRA to communicate the information effectively have been innovative. Nevertheless, sustainable development assessment remains a complex and still-developing area. The concept of sustainable development is now a familiar one in the United Kingdom, but developing and implementing an effective strategy is still a challenge. The statistical work and communication efforts have been important, but work towards achieving sustainable development in the UK, as elsewhere, is challenging and ongoing.

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<sup>49</sup> Source: Phone interview with Mr. Meacher.

### 5.3. *Measures of Australia's Progress*<sup>50</sup>

143. The Australian Bureau of Statistics (ABS) is Australia's official statistical agency with a mandate to provide statistical information to inform decision-making in government and the community. The ABS began work on *Measures of Australia's Progress (MAP)* in 2000, with the first full report published in 2002, followed by reports in 2004 and 2006. Since 2005, a 'summary' indicators report has been released annually. Two features of *MAP* distinguish it from other ABS publications: first, it presents economic, social and environmental data together in one publication; and second it adopts "progress" as its central concept (defined by the question "Is life in Australia getting better or worse?"). Since its first publication, *MAP* has garnered much positive acclaim. The then ABS Chief Statistician won a prestigious award<sup>51</sup> for the pioneering work of the first publication, and according to the ABS website, it has been described in the media as 'about as close as any statistician can get to the meaning of life'.<sup>52</sup> The "progress" approach has since been emulated in other countries such as the subject of the next case study, Ireland.

144. In 1993, a Senate Committee<sup>53</sup> established an inquiry into the feasibility of national measures of wellbeing. The inquiry ran for three years, during which the issue was discussed nationwide through state hearings and with intellectual contributions from a wide range of sources (Salvaris 2000). The final report recommended that the Federal Government treat the establishment of a national framework for wellbeing measures as a priority, and that the ABS take a central role in developing indicators (Senate Legal and Constitutional References Committee 1996). In 1998, the ABS co-hosted<sup>54</sup> a national conference on how to define and measure national "progress", bringing together policy makers, researchers and civil society leaders, which led to the publication of a report *Measuring Progress: Is Life Getting Better* (Eckersley 1998).

145. Following the conference, one ABS statistician wrote that the ABS was at 'the launching point of a new direction concerning indicators' (Oakley 1997). There was much discussion about how best to approach the task of developing national progress measures, with early preferences being for an integrated social, environmental and economic accounting approach such as Statistics Netherlands' SESAME<sup>55</sup> (System of Economic and Social Accounting Matrices including Extensions) (Oakley 1997). However it was decided that Australia did not then have the statistical capacity to develop such a system (ABS 2009).

146. In 1999 the United Kingdom government released *Quality of Life Counts* (DETR 1999, see above), a set of indicators for sustainable development, which raised a demand for something similar in Australia<sup>56</sup>. However, the ABS was reluctant to use sustainability as the overarching framework for the new set of indicators as it "did not feel confident about pronouncing on sustainable development when there is little consensus among experts about the term, other than in very general terms (Hall 2005).

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<sup>50</sup> With thanks to the following for background interviews: Jon Hall (OECD and MAP Project Manager at the ABS 2000-2004); Prof. Mike Salvaris (RMIT University, Melbourne and member of the reference expert Group during MAP development); Linda Fardell (Director, Social and Progress Reporting, Social Analysis and Reporting Branch, ABS); Andrew Webster (Assistant Director, Social and Progress Reporting, Social Analysis and Reporting Branch, ABS); Dennis Trewin (Chief Statistician ABS, 2000-2007).

<sup>51</sup> Coming top in the Society category of Australian magazine *The Bulletin's* 'Smart 100' awards in 2003.

<sup>52</sup> See press release for 2004 edition on ABS website [www.abs.gov.au/](http://www.abs.gov.au/)

<sup>53</sup> According to Salvaris (2000) the Committee's involvement in this subject came from its interest in citizenship issues in general and the then possibility that wellbeing standards were to be enshrined in the laws or constitution of Australia.

<sup>54</sup> With the Australian Commonwealth Scientific and Research Organization (CSIRO) and Swinburne University of Technology.

<sup>55</sup> See Keuning 1997 for more on SESAME.

<sup>56</sup> Interview with Jon Hall.

147. According to one statistician involved in the development of the first edition of *MAP*, the notion of “progress” was chosen for two main reasons: first, it allowed for a consideration of whether things were ‘moving in the right direction’ without making a judgement about the sustainability of the activities being measured; and, second, focusing on progress rather than on wellbeing or quality of life, allowed for the inclusion of economic and environmental indicators which may otherwise have been excluded (Hall 2005).<sup>57</sup> While the ABS does not explicitly define its notion of progress, it sees it as closely related to concepts of wellbeing (or welfare), quality of life, and sustainability.

148. According to the introduction of the first edition of *MAP* in 2002 (ABS 2002), the aim of the publication was to “inform and stimulate public debate and encourage all Australians to assess the bigger picture when contemplating progress in all its forms”.

#### *The indicator development process*

149. Once the decision to develop a national set of progress indicators had been made, the ABS quickly realised that it was difficult for a statistical office to define what progress meant and, further, that official statisticians were not the only people in Australia with a view about what progress meant. It was felt that for the publication to gain legitimacy, a wide range of experts, organisations and individuals had to be consulted in order to arrive at a common understanding of the most important dimensions of progress. According to Mike Salvaris, a member of ABS’s expert reference group, the process in the construction of this set of indicators was very important to the initiative’s success, improving both the quality and the legitimacy of the proposed measures<sup>58</sup>.

150. Wide consultation however is costly and complex to manage. To help manage the process, ABS invited a small group of external advisors to sit on an “expert reference group” to provide detailed comments on the project’s evolution at key stages. This group included academics, scientists and the heads of civil society organisations, including the Australian Council of Social Services (ACOSS) and the Australia Institute, an independent public policy research centre. Their diverse backgrounds helped ensure that the ABS approach better reflected the views of (and eventually was better accepted by) a broad cross-section of Australian society. The reference group’s involvement in the process of developing *MAP* helped to ensure that they supported the final publication, which again proved valuable (Hall et al., 2005).

151. ABS recognised that progress means different things to different people. The suite of indicators approach - setting out key aspects of progress side by side and discussing the links between them – was chosen as a way to accommodate different opinions. It was felt that this approach gave each individual reader a chance to apply their own values and preferences to the evidence, and to arrive at their own conclusions.

152. The progress dimensions presented in *MAP* were chosen in three steps. First, the three broad domains of progress (society, economy and environment) were selected. Second, a list of potential dimensions within each of the three domains was compiled. Third, a subset of the most important dimensions was chosen and indicators were developed. The first publication presented 15 dimensions. After a revision in 2006, *MAP* presents 14 headline dimensions of progress, as follows:

Domain	Headline dimensions
Economic	National Income, National Wealth, Housing, Economic Hardship, Productivity

<sup>57</sup> For example, according to Hall (2005), “it is unlikely that a discussion about wellbeing (used in its traditional sense) would cover economic indicators of productivity or competitiveness”.

<sup>58</sup> Source: Phone interview

Living Together	Family, Community and Social Cohesion, Crime, Democracy, Governance and Citizenship
Environmental	The Natural Landscape, The Air and Atmosphere, Oceans and Estuaries
Individuals	Health, Education and Training, Work

### *Outcomes*

#### *Innovative role of National Statistical Office*

153. According to Dennis Trewin, Australian Statistician during the establishment of the *MAP* project, “providing information about whether life is getting better is one of the most important tasks that a national statistical agency can take on” (ABS, 2004). ABS was one of the first NSOs to talk about progress (and *MAP* was one of the first sets of indicators using “progress” as a unifying concept). The work has proved influential around the world: the *MAP* experience demonstrated to other statistical offices that an NSO could measure progress while avoiding risks of becoming politicised or overstretching their mandate. The ABS was also among the first national statistical agencies to include measures of democracy, governance and citizenship in its key dimensions of progress. However, identifying appropriate indicators turned out to be challenging. The ABS’s ownership of the publication helped to ensure that data were perceived as accurate and impartial: both are important for the indicators to be accepted and used.

#### *Encouraging public debate on the meaning of societal progress*

154. Australia’s strong economic performance during the 1990s was widely recognised, but there was much less evidence-based discussion about social and environmental aspects of progress. The report contributed to the national discussion about whether life in Australia was getting better and received considerable media coverage when released. It also helped the ABS to reassess the Statistical Work Programme, strengthening discussion with the users of statistics and the broader community. Although it did not have a measurable influence on policymaking, it is frequently referenced in Parliament and public debate. It raised awareness on the facts behind some issues, such as declines in biodiversity or change in income distribution.

155. When *MAP* was first released, it generally received an enthusiastic reception in most quarters. Some criticisms, in particular from a well-known think tank, argued that the whole task of developing a report on the progress of Australia was inappropriate for the ABS, as it involved political and policy judgments. This criticism was, however, not widely supported. Some government agencies were also critical of the ABS for including extensive interpretation of commentary on the data used; but again, interpretation of statistics is a traditional function of statistical offices.

#### *Linkage to policy*

156. *MAP*’s focus on outcome indicators was a deliberate decision, but it made the publication less relevant to policy makers than might have been the case otherwise. The ABS’s reputation for integrity ensured that the indicators were trusted and used in policy debate but the indicators were not tied explicitly to policy-making, as they might have been had the indicator set been developed by the Treasury or Prime Minister’s office.

### *Conclusion*

157. Unlike the EU Lisbon indicators or the UK Sustainable Development indicators, the impetus for developing *Measures of Australia’s Progress*, was not provided by an explicit policy strategy. The impetus

came rather from the desire of the ABS to provide a statistical picture of key aspects of life in Australia. In this respect, it provides a true “information framework” in that the indicators were “provided to a broad audience” in order they “may use the information or not as they see fit” (Gudmundsson 2003). Given the lack of explicit linkage to policy, the impact of the indicators on public and policy debate is impressive. However, the measurement of concrete outcomes in this case (such as increased public awareness of the broader issues) is very difficult. Using Sumner et al.’s typology (2009) from Chapter 1, it could be argued that not only did the publication contribute to an “agenda-setting” and “framing” change, but also to a “procedural” change in that the ABS took on an innovative role in bringing indicators to a wider audience with *MAP*.

#### 5.4. *Measuring Ireland’s Progress*<sup>59</sup>

158. The Irish Central Statistics Office (CSO) also played a leading role in developing progress measures for Ireland. *Measuring Ireland’s Progress (MIP)* has been released annually since 2003. As in Australia, the statistical office responded to a wide societal expression of interest for a set of national measures of progress for Ireland. The development process was informed by existing linkages with influential policy-focused institutions: the Irish National Economic and Social Council (NESC), the National Statistics Board, and the Irish Social Partnership. This approach ensured strong ‘buy-in’ from key stakeholders in the political system on release of the publication.

159. Different trends came together to provide the impetus for the development of *Measuring Ireland’s Progress*. First, the preceding years had seen a dramatic rise in the demand for statistical indicators at national and international (particularly EU) level; however, the indicators were often specified without the involvement of statisticians. This raised questions about whether there was a fundamental disconnect between statisticians and policy makers (Garvey 2005). Also, according to Donal Garvey, former Director General of the CSO (2000-2007), this led the CSO to consider the need to “put some kind of structure around the expectations that all kinds of indicators could be easily developed and to reduce the risk that some proposals could be less than fully focussed (which could ultimately undermine strategies for linking statistics more actively to evidence-based policy making)” (Garvey 2005).

160. Second, the CSO’s advisory group, the National Statistics Board (NSB)<sup>60</sup> were also worried about the increasing demands on statistical producers. During a series of 2002 meetings, the NSB discussed how to develop a statistical strategy to contribute to better evidence-based policy making. At the beginning of 2003, the NSB published a report entitled *Developing Irish Social and Equality Statistics to meet Policy Needs* (NSB 2003), which made several recommendations including: the need for a collectively agreed national framework for social and equality statistics which delivers a comprehensive picture of Irish society and its diversity; systematic identification of the data required by the public sector and by society in order to track change, identify issues, plan policy, and monitor progress; and, effective use of social statistics to inform policy and assist planning. In the context of these recommendations, Government agreement was obtained to the proposal that the CSO publish a National Progress Indicators report before the end of 2003 (Garvey 2005).

161. Finally, the 2003-2005 Social Partnership agreement, *Sustaining Progress*, made a number of specific recommendations to the CSO, one of which being a request to develop a set of national progress

<sup>59</sup> With thanks to the following for background interviews: Dr. Sean Healy (Director of the CORI Justice Commission); Laurence Bond (Head of Research, Equality Authority); Pat O’Hara (Policy Manager, Western Development Commission, NSB member); Gerry Brady (CSO, Head of Division, Social Statistics Integration); Gillian Roche (CSO); Mark Manto (CSO).

<sup>60</sup> The NSB is an advisory group to the CSO with eight members representing government and other important users and providers of official statistics.

measures. The agreement had been negotiated by 19 organisations (including farming organisations, community and voluntary organisations, trade unions, employer and business organisations) and government, thus representing a broad-based societal support for the idea in addition to official government support. With these issues in mind, the CSO set out to develop a national set of progress measures which could contribute to evidence-based policy making (CSO 2003).

#### *The indicator development process*

162. During the development process of the publication, special attention was paid to ensure that the report, when published, would be recognised as independent and professional. The NSB gave some recommendations on the development of the indicators in its report *Strategy for Statistics 2003-2008* (NSB 2003), noting that they should be consistent with international statistical concepts and facilitate international benchmarking. It was decided, in so far as it was achievable, to present the indicators in both a national and international context.

163. The Irish project used a different approach to select their indicators than the one used in Australia. Rather than engaging in extensive consultation, the producers of *MIP*, felt that detailed consultation risked delaying publication, and that only those indicators giving a positive picture of progress would be supported. For that reason, the set of indicators was chosen independently by the CSO (Garvey, 2005) after an examination of national and international indicator sets. These indicators were presented as a preliminary set and the CSO requested users to discuss their appropriateness and as to whether other better indicators could be included in further reports.

164. The CSO also followed the quality criteria identified by the European Commission (EC 2001), recommending that indicators should be: easy to read and understand; policy relevant; mutually consistent; timely; comparable with other countries as far as possible; and, selected from reliable sources.

165. To maximise the impact of the publication, the CSO wanted a solid release strategy. The publication was launched by the Taoiseach (the Irish Prime Minister) and the Director-General of the CSO during a high-profile social event for the Social Partnership, which was well attended both in terms of numbers, and in terms of people of influence from stakeholder organisations and policy departments. It was accompanied by a CSO press release, stressing that the document was intended as a kind of public consultation and welcoming feedback (Garvey, 2005).

#### *Outcomes*

##### *Public and policy debate*

166. The report generated much media attention, and was used in newspaper articles, referred to in parliamentary debates, and used by participants in the Social Partnership process. *MIP* showed where Ireland was performing well and where further progress was possible. This reinforced the role of the publication as being an objective, professional piece of work geared to support evidence based policymaking at a high level (Garvey, 2005). Feedback given to the CSO stated that the policy debate was facilitated by the report (CSO 2004, Preface).

##### *Linkages between statisticians and policy makers*

167. The CSO has been able to build a bridge to the policy maker, while at the same time reinforcing their reputation and redefining their work to include specific reports that reworked existing data and were aimed directly at the requirements of users and policy-makers. New publications, *Equality in Ireland*, *Ageing in Ireland*, *Regional Quality of Life in Ireland*, and *Men and Women in Ireland*, have been released subsequently to *MIP*.

168. What has been particularly useful for the development of *MIP* is that some NSB members were also involved in the discussion at the NESC and Social Partnership. Particularly important is the role of the Taoiseach's Department in chairing the discussions in both. Among its members are the D-G of the CSO, users and producers of official statistics, and two policy representatives nominated by the Taoiseach. The statistical implications of emerging policy can be raised both formally and informally in the NSB, and as a consequence the CSO is more aware about the issue exercising the interests of key policy makers. The discussion at the NSB is used to tease out the statistical requirements of emerging policy.

### *Conclusion*

169. While there are many similarities between the Australian and Irish experience, there are also differences. Both publications are produced by National Statistical Offices in order to provide a set of national progress indicators. However, the Irish experience put more emphasis on broad policy usages, whereas the key audience for the ABS publication was the public. This was reflected in the development process of the indicators, with broad consultation playing a stronger role in the Australian process and a more expert-driven approach taken in Ireland, including involvement of the Irish Prime Minister. Further, informal linkages to policy makers through bodies such as the NSB was seen as a distinct advantage in Ireland, while the ABS went out of its way to be seen to be independent of policy influence. Anecdotal evidence seems to show that these slightly different approaches were reflected in the outcomes, with more emphasis on the public debate aspect in Australia and more emphasis on the policy aspect in Ireland. However, more research would be needed to measure this more accurately (for example through a comparative content analysis of media coverage or policy documents in both countries).

### **5.5. *The Santa Cruz Community Assessment Project***<sup>61</sup>

170. The county of Santa Cruz, in California, has over 260,000 residents. It is one of the most expensive places to live in the United States, due in part to its proximity to Silicon Valley – one of the nation's major technology centres. The Santa Cruz County Community Assessment Project (CAP) was started in 1994 by a collaborative group of 25 local organisations in order to measure quality of life in the community. This group still exists; as of today, 35 partner agencies currently have a stake in the running of the CAP.

171. The CAP has led to many new policy initiatives in the county, including: reduced substance abuse among young people; a strategic plan to improve elementary school attendance; an innovative methodology surveying and understanding the status and needs of the homeless population; and an initiative to promote nutrition and physical activity to reduce childhood obesity. In 2007, the project was chosen as an example of the best community indicator projects in the United States, winning the first place in the 2007 Community Indicators Consortium Innovation Awards, sponsored by the Brookings Institution in Washington, DC.

172. The history of CAP goes back to the early 1990s, when the State of California passed legislation requiring non-profit hospitals to report on the benefits that they offered to their communities. There were different ways of assessing and demonstrating the positive impact of hospital services, but one commonly used method was to carry out a community needs assessment. *Dominican Hospital*, a non-profit hospital in Santa Cruz County decided to carry out a community assessment project while trying to avoid duplicating efforts of other stakeholders in the community. In 1994, the local division of the community development NGO, United Way, brought together a group of over 25 different agencies with an interest in different

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<sup>61</sup> With thanks to the following for background interviews: Mary Lou Goeke (Director, United Way of Santa Cruz); Susan Brutschy (Applied Survey Research); Deanna Zachary (Applied Survey Research).

aspects of local quality of life covering health, education, human services and civic issues, in order to conduct the first community assessment project.

173. Prior to the formation of CAP, many data had been collected but did not exist in an easy to use format that the community and local organisations could utilise. With the creation of the CAP report, more extensive and meaningful data were collected and compiled in a report that created a picture of quality of life in the county. The Santa Cruz Community Assessment Project uses both primary and secondary data. The main source of primary data is a telephone interview, designed to measure the opinions, attitudes and needs of a representative sample of county residents. Secondary data are collected from national, state and local sources, including: the U.S. Census; federal, state and local government agencies; academic institutions; economic development groups; health care institutions; libraries; schools; local police and fire departments.

174. Dominican Hospital's need to demonstrate the community value of its services was an important impetus for the indicators initiative, and the hospital proved to be a critical partner in the process. However, the principle organisation throughout the existence of the CAP has been United Way of Santa Cruz County. United Way is a national non-profit organisation that works with 1,300 local offices across the United States in order to identify local community issues that need to be addressed. The priorities and methods of each division are decided locally due to the huge diversity of needs encountered.

#### *The indicator development process*

175. One of the guiding principles of the Santa Cruz approach to community indicators, as with many similar efforts, has been the emphasis on collaboration and partnership between diverse stakeholders. The 2007 CAP Steering Committee included representatives from the local university, the local newspaper, the County Farm Bureau, the County Sheriff's office, and the Housing Authority, among others. Of particular importance in developing the assessment methodology for the CAP was a non-profit research and evaluation firm, Applied Survey Research (ASR).

176. United Way contracted ASR to undertake the role of researcher for the community assessment project and to incorporate best practices from successful assessment efforts. The Santa Cruz CAP established a steering committee gathering members from a wide range of community agencies and interest groups. The CAP took inspiration from other established local community indicators initiatives such as Jacksonville, Florida to establish Technical Advisory Committees (TACs), which provide a forum for experts and interested individuals to come together in order to discuss and refine the indicator selection.

177. Sponsorship for the CAP comes from a wide variety of regular sources, which ensures the stability of funding. Currently, the financing for the project comes to about \$75,000 per year, with the top two sponsors – the Human Resources Agency and Dominican Hospital - providing around two-thirds of all funding. Dominican Hospital, the United Way, and Applied Survey Research also make in-kind contributions.

178. The initial selection of indicators in 1994 involved over 550 citizens and 'non-experts' from the wider community, in a process overseen by the steering group and under the leadership of the United Way. The technical advisory committees helped to refine and develop indicators in specific areas, such as issues related to children or ethnic groups, and to ensure the technical quality and sound methodology of the indicator process. The original set included 77 indicators in five areas: economy, education, health, public safety, and social environment. A sixth area - natural environment - was later added. Over the years, a few additional indicators have been added, to a total of 126 in the 2008 report.

179. A telephone survey was chosen as the most efficient method to collect data unavailable from other sources. The survey is carried out every other year, in both English and Spanish, with a randomly selected (and geographically representative) sample of around 700 respondents. The survey consists of closed and open-ended questions on the attitudes, beliefs and needs of Santa Cruz residents. The survey has collected data on gaps in community knowledge, disabilities, child access to healthcare, substance use, public safety, and unmet basic needs.

180. ASR pioneered a methodology for surveying vulnerable populations. For example, in order to understand the status and needs of the homeless population, ASR worked with (and trained) dozens of homeless people in research methods, and teamed with community service providers to count and conduct face-to-face interviews of the homeless population in Santa Cruz. This ‘peer-to-peer’ approach has, according to ASR, proved to be successful in reaching otherwise difficult to reach groups in the community. Secondary data are collected from a wide variety of trusted sources.

181. The CAP report is published in various formats for different audiences. A large, detailed document, which presents all the indicators, is given to elected officials, including the Congressional representatives for the district, the state senator and several city council members. This document is also available for purchase and is posted on the websites of ASR and United Way. In addition, a shorter executive summary is sent to every resident in the county as part of Dominican Hospital’s newsletter.

182. Members of the CAP steering group also established relationships with media agencies and opinion leaders. Since 2003 especially, CAP representatives have worked closely with the local media by providing regular briefings to the printed press, radio and television.

#### *Outcomes*

183. Community social change

184. In the first years of the CAP reports, the data brought to public attention worrying rates of self-reported use of marijuana and alcohol among 15-17 year olds, with rates much higher than the average for the state of California. The *Together for Youth/ Unidos para Nuestros Jovenes* (TFY/UPNJ) is a project led by the United Way that brings together over 100 community groups and individuals to work towards a series of objectives in the area of young people’s well-being. The TFY/UPNJ coalition used the CAP data to mobilise partners to implement a number of concrete actions, including passing legislation (such as the banning of open containers of alcohol on beaches, and the implementation of a “shoulder tap” ordinance, which makes it illegal for minors to ask adults to buy alcohol for them) and improving relevant services for young people (new teen community centres and residential treatment centres have been established, while schools have increased services related to alcohol and drug prevention). Furthermore, the campaigning efforts of TFY have, according to those involved, influenced state policy agendas, making the issue a priority for both policy makers and citizens. In 1998, the county Civil Grand Jury made teen alcohol and drug use a top priority, identifying service gaps and recommending that the “Together for Youth” plan be adopted and supported by all local jurisdictions. Furthermore, a top-level county-wide Policy Panel on Youth Access to Alcohol developed policy recommendations for the community, schools, law enforcement, criminal justice, land use and zoning and merchant practices (DeLapp, undated).

185. Since 1994, the use of alcohol, cigarettes and marijuana has decreased considerably among the target age group. For example, the percentage of Santa Cruz County 11<sup>th</sup> graders (15-17 years of age, approximately) who reported using alcohol in the previous 30 days went from 64% in 1994 to 44% in 2007 (Zachary, 2007). The Santa Cruz rates of teen drinking decreased by more than the California-wide figures.

186. Other issues highlighted by CAP data include insufficient healthcare coverage for local children, and increasing obesity among children and adults. The data have been used in ways similar to the teen drinking example above to campaign for change.

*New research and methodology*

187. CAP data on homelessness revealed higher levels of homelessness than expected by most. As a result, public officials and non-profit organisations demanded more detailed data on the homeless population. In order to conduct a meaningful appraisal of the homeless population, ASR developed a new approach whereby they hired and trained homeless individuals to participate in a census and detailed survey in 2000. This approach provided detailed data which helped to provide new services, for the homeless such as additional shelters, increasing the funding of these services by around \$2million since 2000. The methodology of enlisting members of vulnerable populations to take part in surveys of those same populations has been listed by the United States Department of Housing and Urban Development as a best practice. Since the homeless study, CAP data have highlighted the need for more detailed data of other vulnerable populations such as farm workers, children who witness domestic violence, rape victims and people with disabilities.

*Public information*

188. CAP data are regularly referenced in the local newspapers and on local radio stations. Since 2003, members of ASR and the Santa Cruz CAP steering group have worked closely with the local media, providing briefings to the editorial board of the major local newspaper, the *Santa Cruz Sentinel*, as well as to individual reporters. The *Santa Cruz Sentinel* also sponsors the annual selection of “Community Heroes”, where people who have made outstanding community contributions in the CAP goal areas are nominated by the newspaper’s readers and then honoured at an annual press conference. The publisher of the *Santa Cruz Sentinel* is a member of the steering committee. According to an evaluation of the use of CAP data, conducted through the CAP Stakeholder Survey, several legislators stated that they rely on the data for their work.

*Conclusions*

189. The Santa Cruz CAP is an example of set of indicators that are widely respected and used by policy makers and by community groups to advocate for change. Although one single case study does not allow generalisations, it does underscore the potential of smaller-scale, local community initiatives to achieve concrete social outcomes, compared to larger-scale national efforts. One of the keys to the success of the Santa Cruz initiative was in the capacity to establish and maintain valuable relationships between different groups and actors. In this respect, local initiatives have a clear comparative advantage.

190. Successful outcomes in Santa Cruz depended on the long-term activities of targeted community initiatives. The indicators enabled community leaders to highlight areas requiring attention, but this in itself did not lead to changes in behaviour or in policy. The Santa Cruz experience lends support to Weiss’s political model (Weiss, 1979), where data lends support to the position of certain groups, who then put pressure on legislators for policy actions, rather than directly leading to changes in attitudes in and of themselves.

191. One general lesson emerging from the Santa Cruz experience is that, when an indicator set is developed with the hope of influencing the behaviour of certain groups – be it policy makers, media, community service agencies, or the public – it is important to include as many representatives of these groups in the deliberation process as early as possible. This is important for creating trust, awareness and ownership of the indicators and associated goals. If certain groups, such as policy makers and community

stakeholders, perceive the indicators to be irrelevant then the indicators are likely to be ignored. Conversely, if a wide support base is created, the likelihood of collaborative action is higher. The nature of a local community indicators initiative makes this easier to achieve than in the case of national and international initiatives.

## 6. Indicators of Societal Progress: Final conclusions and lessons

192. This paper has provided a broad overview of indicators of societal progress and their uses, both by surveying the historical evolution of “progress measurement” and by looking at a selection of case studies. The wide range of experiences in this field means that it is difficult to make many generalisations. Nevertheless, some lessons regarding the development of progress indicators can be drawn.

193. The examples reviewed here suggest that for societal progress indicators to be used and applied in decision-making processes, then three conditions need to be met. First, the indicators should be seen as *legitimate* by the intended users. Second, the indicators should be set within a wider *system* that provides ‘fit-for-purpose’ information. Third, appropriate *incentives* must exist for stakeholders to act on that information. If these conditions are not met, then there is a danger that indicators will be ignored, or used without having any real impact on policy and societal outcomes.

### *Legitimacy*

194. The role of competing values or worldviews in the selection and interpretation of indicators has been noted earlier in this paper. Indicators are rarely completely neutral and in the case of societal progress – itself a subjective and contested concept – the choice of indicators is as much a political as a technical issue. When users question the legitimacy of an indicator or set of indicators, then the information communicated by the indicators loses its power to influence decisions.

195. The legitimacy of a set of societal progress indicators comes from a shared recognition of two factors: first, that the issues highlighted by the indicator set are important; and second, that the indicators chosen provide meaningful measures of those issues. Developing a shared understanding around a new issue can take time. For example, the unemployment rate is one of the most important indicators used in policymaking. However in the United States it took over twenty years between the first concerted efforts to define and measure unemployment until the point where the concept and methodology were widely accepted and the indicator firmly established as a core part of US policy in the mid-1940s (Innes, 1990).<sup>62</sup>

196. The projects covered in this paper have taken different routes to establishing this shared recognition. The process through which indicators are selected is often seen to be the stage where “people see their values and worldviews incorporated into the indicators” (Meadows, 1998, p. 25). Amongst the experiences examined here, some selection processes were more inclusive than others. In this respect, the Irish and the Californian examples lie at two extremes of the spectrum. The Santa Cruz CAP selection process involved a very broad range of community groups from government, business, academia and civil society, including hundreds of ordinary members of the public. On the other hand, for *Measuring Ireland’s Progress*, the Ireland Central Statistical Office did not consult widely in the selection of indicators, basing their choice on available research. Do these differences mean that the Irish indicators are less “legitimate” than the Santa Cruz indicators? The answer to that question is linked to the purpose and intended use of the indicators.

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<sup>62</sup> In 1921, President Harding called a conference with business leaders to consider unemployment and to suggest potential measures to better understand the scale of the problem. The Depression intensified the need for unemployment indicators and research and methodological experimentation continued throughout the thirties, only to be deflected by the War. In 1946, with the passing of the Employment Act, the unemployment rate was finally firmly institutionalised as part of the political machinery (Innes, 1990).

197. In Santa Cruz, the indicators were intended to reflect community goals in order to improve quality of life in the area. Further, it was intended that every member of the community could potentially play a role in working towards those objectives. As such, it was important that the selection of indicators, and the vision of ‘quality of life’ guiding that selection, was accepted at both the grassroots level as well as at the level of policymaking. By choosing an inclusive and participative selection process, the leaders of the Santa Cruz project ensured that the legitimacy of the indicators was recognised by as many stakeholders as possible.

198. In Ireland, on the other hand, where the principle intended use of the indicators was to inform policy makers, the involvement of non-experts was less important. In addition, while there was little formal consultation in the selection process, there was nevertheless a significant exchange between statisticians and policy experts through other channels, which enabled the viewpoints of policy stakeholders to be reflected in the indicator selection.<sup>63</sup> The fact that the CSO’s mandate to develop the progress indicators came from official Government and Social Partnership agreements also means that, as far as policy stakeholders were concerned, *Measuring Ireland’s Progress* benefitted from an inherent legitimacy from the start of the process.

199. Innes and Booher (2000) argue that “indicators must be developed with the participation of those who will use and learn from them”. The case studies above and others studied in this paper seem to have followed this principle. For the Lisbon Strategy, Member States were seen as the principle users and were consulted on the initial choice of indicators. The Australian Bureau of Statistics wanted the indicators to inform public debate, and consulted widely with representatives of a broad cross-section of Australian society (whilst keeping a relative distance from policy stakeholders). In the United Kingdom, the Sustainable Development Indicators were hoped to inform policy as well as educate the public, and so feedback was invited from the public as well as government departments.

200. However, a lesson from these latter experiences is that mere consultation may not be enough to establish a shared ownership of the indicators. For example, in the United Kingdom there was a feeling that the indicators developed by DEFRA were not taken seriously by other government departments, despite the consultation exercise. In the case of the Lisbon Strategy, national ownership of the structural indicators amongst EU Member States was also perceived to be weak. This shows that where conflicting priorities exist, it may not be possible to build consensus, or at least not without a great deal of time and effort.

201. A further difficulty is that defining “those who will use and learn from” the indicators can be done in a very narrow or a very broad sense. At national and international level, the primary users of indicators of societal progress are likely to be policy makers, although these indicators are often intended to be of relevance to a wider public too.<sup>64</sup> Being too restrictive in deciding whose feedback to invite may limit the overall impact of the indicators. For example, in the case of the Lisbon Strategy, while Member States were clearly the principal intended users of the indicators, the lack of public consultation may have prevented any bottom-up mobilisation towards Lisbon objectives (Jones, 2005).

202. Indicators chosen to measure progress will inevitably reflect the values and biases of whoever is involved in the selection process. There is always a risk that those excluded from the process will challenge the legitimacy of the selection. However, there are also trade-offs; the more parties are involved in the discussion, the more time and effort will be needed to reach consensus. Further, conducting a very wide, participative process may not always be necessary or appropriate (as the Irish example shows).

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<sup>63</sup> Such as the National Economic and Social Council, the National Statistics Board, and the Irish Social Partnership.

<sup>64</sup> Local community indicators, with the possible exception of government performance indicator projects, often have “community participation” as an implicit or explicit objective and so are more likely to take a broadly inclusive approach.

Those developing indicators will need to decide how best to strike the balance in order to develop the necessary level of legitimacy amongst the intended audience.

*Indicator systems: providing 'fit-for-purpose' information*

203. Indicators indicate, that is to say they highlight areas of concern or opportunity, without necessarily guiding policy solutions. In order to be most effective, indicators cannot exist in a vacuum – they need to be firmly anchored within a wider information system, providing 'fit-for-purpose' data and analysis. One way of understanding this is in terms of an indicator pyramid (see, for example, SCOPE, 1995), with composite indices at the top, indicator sets in the layer below, and data forming the base of the pyramid.

204. The lower down the "pyramid", the greater the amount and complexity of data provided. None of the case studies reviewed here employed composite indicators, while most made use of a short list of headline indicators to communicate key patterns to a wider audience. Headline indicators can be a good way of attracting interest. The Australian, UK and Santa Cruz projects all used a press release detailing developments in the headline indicators as part of their communication strategies. However, there is always a risk that the shortlist distracts from the full set, or from the need for deeper data analysis. For example, in the United Kingdom, DEFRA decided to restructure the full Sustainable Development indicator set from over 100 to 67 indicators, and to stop producing headline indicators because it felt that indicators not included in the short list were simply ignored by the public and policy-makers. At the EU level, the headline structural indicators were given much less prominence after the mid-term-review, partly because Member States felt that they were being ranked on the basis of these indicators alone without in-depth analysis of other aspects of their performance.

205. While headline indicators can certainly be useful for summarising information and communication, care needs to be taken to ensure that they do not give an over simplistic view of the situation, therefore obscuring the need to take into account more detailed data and analysis. Indeed, as even large indicator sets are often unable to provide the level of detail necessary for policy analysis, linking indicators and analysis is crucial. The Santa Cruz case provides a good example of this, where the indicator set was used to identify problem areas where analysis and policy action were needed. The CAP steering committee worked with community groups to conduct more in-depth research and to mobilise for change on issues such as teen substance abuse and child healthcare coverage.

206. In the UK and Australian cases, however, the linkage to policy analysis was more diffuse. It is therefore difficult to pinpoint specific areas where the indicator set was used to guide in-depth investigation and where they led to changes in policies.<sup>65</sup> It can be argued that the impact of these indicator sets was more in shifting the framing and agenda-setting, but it is harder to illustrate this with specific examples. One important point highlighted by these case studies is the difficulty in relating indicators measuring societal outcomes directly to policy, as these 'outcomes' usually depend on much more than government intervention. If societal progress indicators are to be used to measure and assess government performance then a better understanding of the linkages between indicators, policy and societal outcomes is needed.

*Incentive*

207. Finally, even where an issue is recognised as important, and where sufficient information is available to guide action on that issue, policy makers will only act where incentive exists. For example, in

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<sup>65</sup> With the exception of policies to address bird population decline in the United Kingdom, which resulted directly from the indicator on bird populations in the Sustainable Development indicator set.

the case of the Lisbon Strategy, the role of the structural indicators was to guide policy reform as part of the open method of coordination. Member States agreed on the objectives of the Strategy and a wealth of data (Structural indicators, Sustainable Development indicators and the Laeken Social indicators) and country-specific recommendations were developed. However, this approach did not achieve the hoped-for results, mainly because national governments had to balance the European priorities embodied in the Strategy with domestic ones. The 'soft' governance approach of the OMC did not provide enough incentive for countries to impose the necessary reforms in the face of potential domestic opposition. The new Europe 2020 strategy includes a provision for 'policy warnings' to Member States who underperform on key dimensions. However it remains to be seen whether this will be enough to persuade countries to make politically difficult reforms.

208. In the United Kingdom, although the impetus for the Sustainable Development strategy came from the highest level of government, the responsibility for developing the indicators was held by a specific government department (DEFRA). The absence of top-level government authority backing up the indicator set meant that other government departments had little incentives to put sustainable development objectives before their own priorities. Pressure to act can come from outside government as well as from the political power hierarchy. In the United Kingdom, an independent watchdog – the Sustainable Development Commission (SDC) – exists to assess government performance in sustainable development and to increase accountability in this area. However, its methods are relatively soft, working through “advocacy, advice and appraisal”<sup>66</sup> rather than staunch criticism.

209. In Santa Cruz, the CAP project employed different techniques to provide an incentive to policy makers and community members to act on the information in the indicator set. By including policy makers in the selection process, this ensured a certain amount of political 'buy-in' from the start. Further, by mobilising public support around selected issues and working with community groups to lobby for change, this put pressure on policy makers to take action. The 'Community Heroes' prize rewards people from the wider community that made exceptional contributions towards the quality-of-life goals embodied in the indicator set, thus also giving an incentive to the general public to get involved.

210. Not all indicator sets are developed with a specific strategy or set of policy objectives in mind. For example the Australian and Irish indicators were developed with the broader goals of informing public debate and contributing to evidence-based policy making. These correspond to 'information frameworks' in Gudmundsson's typology in that they are “provided to a broad audience which may use the information or not as they see fit.... Accountability mechanisms are not specified other than as an implicit plea to take the information into account.” (Gudmundsson, 2003, p.4). The Australia and Ireland examples generated public debate in the media and were referred to by politicians. Although it is hard to pinpoint specific policy outcomes, these projects may have led to change in a more subtle yet far-reaching way. For example, putting social and environmental indicators on the same footing as economic indicators may bring about a shift in the way these issues are framed, giving non-economic goals greater prominence than previously. While this may not result in immediate policy change, it may change the way people think about and manage national priorities. For example, one outcome of *Measures of Australia's Progress* was that the ABS was able to reassess its work programme on the basis of the new progress framework, to identify and address data gaps in those areas (Hall 2005).

211. These types of diffuse outcomes such as issue-framing, problem definition, and sensitising policymakers to emerging issues, are akin to Carol Weiss's “enlightenment model” – the most common way that social science research impacts policy according to Weiss. In these cases, change will happen naturally without concrete incentives being necessary. As Innes argues (1998), “When information is most influential, it is also most invisible”.

<sup>66</sup> <http://www.sd-commission.org.uk/pages/about-us.html>

212. However, while the enlightenment function may well be an important role of indicators, it is difficult to track a direct path of influence between indicators and policy outcomes. Indeed, there is a danger that even apparent proof of indicator use – such as an indicator report being referenced in a political speech or report – is not actually what it seems. For example, a politician may include statistics in a speech merely as a symbolic gesture rather than because they have been truly influenced by the data.

213. Indicators of societal progress can be powerful tools to better understand the situation of a community – be that at local, national or even international level. However, for this understanding to lead to policy change, policy makers need to be persuaded of the benefits for government and citizens. For a progress indicator set to play a part in that process, it needs to be recognised as legitimate by the intended audience, package information in a user-friendly way (while providing linkages to more in-depth analysis), and be accompanied by sufficient incentive for policy makers and citizen to enact change.

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