

# Statistics and the quality of life

Measuring progress – a world beyond GDP







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Edited by Thomas Wollnik



Capacity Building International  
Germany



A new view on  
the quality of life:  
Two Liberian young  
men enjoying  
their evening run  
along the beach.  
Photo: Hoegen

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# 1 | From a vision to well-being: What is progress?

## A Foreword

— People have always developed visions to improve their life, ever since.

To gradually move towards these visions is what normally is considered to be a progress. The idea of mankind being in a continuous state of progress gained special momentum in European history during the period of Enlightenment and the French Revolution.

But how can real progress be defined? What really reflects a “better life”? Is it richness and wealth? Political freedom? Social security? Or a sound environment? Different societies and different cultures throughout different periods of time have always had different ideas about this topic. And even among societies with similar cultural and political approaches it seems to be difficult to achieve a common definition of “progress” – let alone to fully agree on how to measure it properly.

### **Social and environmental indicators become more important**

For decades, the Gross Domestic Product (GDP) has been the most important tool for statisticians worldwide to measure the economic progress of their respective countries. Nevertheless, while it was very tempting to have one single macro-economic indicator that is easy to communicate and seems to say a lot about a nation's status at just one glance, it became clear that it is not sufficient to explain the different dimensions of progress. In the modern, globalized world with its growing complexity, more comprehensive methods to

measure societal progress are needed. Social and environmental indicators have become as important as economic ones.

### **A global initiative for a more comprehensive picture**

To deal with this problem, numerous initiatives and projects have been started to measure progress in a new, more appropriate way. One of the recent and most important initiatives is the OECD Global Project on Measuring Progress which we present in this reader. It is closely linked to the Istanbul Declaration of 2007 which urged statisticians and decision-makers worldwide to develop a set of evidence based information for a more holistic view on the state of society.

But in the process, this does not mean that a globalized, one-size-fits-all concept of progress that has to be adopted by each and everyone – the aim is rather to enhance the discussion and support the development of new statistical tools in accordance with a nation's specific culture and priorities.

Furthermore, in order to properly measure progress, the numerous obstacles on the way have to be taken into account too. Here the concepts of fragility and vulnerability of a nation have been developed, which provide several new and innovative tools of statistical measurement. These are also presented in a chapter of this reader.

### Evaluating the impacts

All these new approaches help to achieve a better measurement of economic, social and environmental outcomes, as of their interrelation and shared data to advocate necessary reforms and evaluate their impact on societal welfare. They thus help to improve the well-being of a nation and its people. At the same time, they make a significant contribution to the improvement of statistics themselves.

### Enabling citizens to formulate demands

For a long time, the InWEnt Centre for Economic, Environmental and Social Statistics has supported such broader and more comprehensive statistical approaches and is dedicated to in-depth training, capacity development and institution building in this field. With special projects, such as the course on “PR and Statistics – Building bridges between users and producers of data”, InWEnt also promotes a better and more effective communication of statistics. Because, what is true of all data collection and production, is also true for new approaches to measuring progress and the well-being of a society: All the indicators chosen and the data collected are only useful if they are well understood and can be used by citizens – enabling them to inform



Dr. Luiz Ramalho,  
Director of Department  
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Development

themselves, to formulate new demands and to hold their politicians accountable for their decisions and programmes.

### Improving communication culture

To achieve this aim, statistics have to be communicated in a better, more effective and user-friendly way – thus, in many cases, urging National Statistical Offices to improve their communication culture. We are proud to present some best practice examples from Uganda and Ghana in this reader as well – to a great extent the result of InWEnt’s efforts to provide training on PR and Statistics and to help to enhance the dialogue between producer and user.

### Happy birthday Paris21

PARIS21 – The Partnership in Statistics for the 21st. Century – initiative is a very important player in the field of statistical development around the globe. In this reader we congratulate to its first ten years of work and provide an outlook to the future.



Thomas Wollnik,  
Head of Division of the  
InWEnt Centre for Economic,  
Environmental and Social Statistics

The 4th volume of its kind, this reader continues the successful InWEnt publication series on “Statistics and Development”, which has gained a high reputation amongst German and international institutions alike. To further continue this work, we welcome comments, suggestions and contributions from our readers and we would be glad to hear about your experience. So do not hesitate to contact us with comments, recommendations, ideas or contributions that could be of great relevance for this reader in the future.

### Leading to a better life

By keeping up the discussion on new statistical approaches and the challenges to data collection and production in a changing and more and more complex world, we all contribute to the development of better statistics, i.e. statistics that not only measure but also help to increase societal progress by facilitating evidence-based, sound and democratic decision-making – leading to a better life for people around the globe.

# 2 | Statistics to be felt

## Measuring progress: Is life getting better?

Is life getting better? This is one of the questions mankind has posed itself throughout history. Maybe it was relatively easy to find an answer in the recent past – for the greater part of the twentieth century at least, countries relied on only a few figures to measure their development and well-being: Economic indicators such as the gross domestic product (GDP), income per capita or the economic growth rate dominated the debate.

Developed in the 1930s, GDP became a standard benchmark used by policy-makers throughout the world, is widely used in public debates and has become a synonym for economic statistics. No doubt, it does have its advantages: GDP aggregates the value of all economic activities in a country. It is based on a clear methodology that allows comparisons to be made over time and between countries and regions.

Yet, with the world as a whole and societies in particular becoming more and more complex, this rather simplified method of determining a nations' status has been increasingly questioned. GDP does not tell us anything about the distribution of wealth or

the income gap between rich and poor in a certain country. It does not reflect social progress and well-being and quite often it differs greatly from what people might feel is true for their daily life. Macro-economic growth rates in developing countries, for instance, are often not in accordance with individual experience, if the poor remain as poor as they always have been.

### The weakness of an exclusively material approach

One of the first to strongly criticize the overemphasis on economic indicators was Robert F. Kennedy. In his famous campaigning speech in March 1968, Kennedy clearly pointed out







Just looking at the economic growth can be misleading: for several years the formerly promising Ivory Coast and its capital Abidjan suffered from conflict and political unrest. Photo: Hoegen

the weaknesses of the GDP with its exclusively material approach (see box on p.9).

### Measuring GDP, health and education

In recent years a growing consensus has emerged that countries and governments need to develop a more comprehensive view of progress, rather than focusing mainly on economic indicators. The need to improve data and indicators to complement GDP has been increasingly recognised. And there is a growing public interest in the interrelationships between economic, social and environmental aspects of life.

This has led to several initiatives and adjustments. The UNDP, for example, has developed a Human Development Index (HDI) to benchmark countries based on combined measurement of GDP/capita, health and education. The World Bank with its calculation of genuine savings has pioneered the inclusion of social and environmental aspects when assessing the wealth of nations. And several countries have also taken national initiatives to measure their development and progress in a new, more comprehensive way. One of the pioneers in this regard is Australia. In 2002, ABS (Australian Bureau of Statistics), the official statistical agency, released its first report on “Measuring Australia’s Progress (MAP)”, a publication built around a set of headline indicators that spanned economic, social and environmental concerns.



"GDP  
measures  
everything,  
except  
that which  
makes life  
worthwhile."

Robert F. Kennedy

What does GDP tell us about the distribution of wealth in developing as well as in other countries? Photo: Akuzia

The start of the project was not easy, as Jon Hall who was responsible for the ABS initiative at the time, recalls.\* Firstly, a choice had to be made between different primary concepts: What exactly should be measured: progress, quality of life, well-being, welfare or sustainability? The MAP team finally decided to rely on progress, because as Jon Hall points out: “Measuring progress meant considering whether things were moving in the right direction, but it did not require us to announce whether a certain level or pattern of activity is sustainable. The ABS 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. (...)” On the other hand: “A focus on progress allowed us to give more prominence to the health of the economy and environment than would usually be possible in a project focused on wellbeing or quality of life.” \*\*

Choosing the right approach was the second step. Should the measurement be based on

- a suite of indicators,
- a one-number approach as in the case of the GDP, or
- the use of “subjective” indicators such as satisfaction and happiness?

## Challenging the Gross Domestic Product

— “Too much and too long, we seem to have surrendered community excellence and community values in the mere accumulation of material things. Our Gross National Product, now, is over eight hundred billion dollars a year, but that GNP – if we should judge America by that - counts air pollution and cigarette advertising and ambulances to clear our highways of carnage. It counts special locks for our doors and the jails for those who break them. It counts the destruction of our redwoods and the loss of our natural wonder in chaotic sprawl. It counts napalm and the cost of a nuclear warhead, and armored cars for police who fight riots in our streets. It counts Whitman’s rifle and Speck’s knife, and the television programs which glorify violence in order to sell toys to our children.

Yet the Gross National Product does not allow for the health of our children, the quality of their education, or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials. 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. And it can tell us everything about America except why we are proud that we are Americans.”

**Senator Robert F. Kennedy, March 18, 1968, University of Kansas**

Source: [www.alternet.org/story/79474/](http://www.alternet.org/story/79474/) and [www.youtube.com](https://www.youtube.com)

\* For this and the following, compare Jon Hall: “Measuring Progress – An Australian Travelogue”, *Journal of Official Statistics*, Vol. 21, No. 4, 2005, pp. 727-746, available at: [www.jos.nu/Articles/abstract.asp?article=214727](http://www.jos.nu/Articles/abstract.asp?article=214727)  
\*\* *Ibid.*, p. 729.

## Measuring Australia's Progress: Dimensions and Indicators of progress

Headline dimensions	Headline indicators	Supplementary indicators
Health	Life expectancy at birth	Proportions of people surviving to ages 50 and 70; Infant mortality rate; Burden of disease
Education and training	People aged 25–64 years with a vocational or higher education qualification	Education participation rate for those aged 15–19; Year 7/8 to Year 12 apparent retention rate
Work	Unemployment rate	Extended labour force underutilisation rate; Long-term unemployment rate; Retrenchment rate; Casual employees; People in part-time jobs; People in jobs with longer hours (50 hours a week or more); Average hours per week, full-time workers
Biodiversity	Extinct, endangered and vulnerable birds and mammals	
Land clearance	Annual area of land cleared	
Land degradation	Salinity, assets at risk in areas affected, or with a high potential to develop, salinity	
Inland waters	Water management areas, proportion where use exceeded 70% of sustainable yield	Water diversions: Murray–Darling Basin; River condition (biota) index; Net water use; River environment index
Air quality	Fine particle concentrations, days health standards exceeded, selected capital cities	Highest one hour averages of SO <sub>2</sub> , selected regional centres; Days when ozone concentrations exceeded guidelines, selected capital cities; Consumption of ozone depleting substances
Greenhouse gases	Net greenhouse gas emissions	Total greenhouse gas emissions (including land clearance); CO <sub>2</sub> -e emissions, net, per capita and per \$ GDP
National wealth	Real national net worth per capita	Real national assets and liabilities per capita; Real net capital stock per capita; Economically demonstrated resources (minerals and energy) per capita; Real net foreign debt
National income	Real net national disposable income per capita	Real Gross Domestic Product per capita ; Proportion of the population in work; Terms of trade
Economic disadvantage and inequality	Real equivalised average weekly disposable income of households in the second and third deciles of the income distribution	Real equivalised average weekly disposable income of groups of higher income households; Children without an employed parent; Real equivalised weekly disposable income of households at selected income percentiles; Ratios of income of households at selected income percentiles; Share of total income received by households in low and high income groups; Gini coefficient; Proportion of households with income below both the half mean and half median income of all households
Housing	<i>No headline indicator</i>	Households with housing affordability problems; Households with insufficient or spare bedrooms
Crime	Unlawful entry with intent and assault (victimisation rates)	Homicide rate; Imprisonment rates
Social attachment	<i>No headline indicator</i>	Attendance at live performances; Participation in organised sports; Voluntary work; Marriage and divorce rates; Persons living alone; Waking-time spent alone; Homelessness; Suicide and drug-related death rates (indicators in the <i>Work</i> dimension are also relevant)

Source: Measuring Australia's Progress; MAP 2002

The one-number approach, at first glance, seemed appealing. Why not to come out with some kind of “Super-GDP” to measure progress? But, as it was finally recognized, such a single figure would have too many disadvantages: Any change in direction would be extremely difficult to interpret: Which component, which indicator is behind this movement? And, as Jon Hall writes: “Any composite indicator is based on some judgement regarding the relative weights to be applied to the components. Is a one-year increase in average life expectancy to be weighted more heavily than, less heavily than or equally with a 5 per cent decrease in greenhouse gas

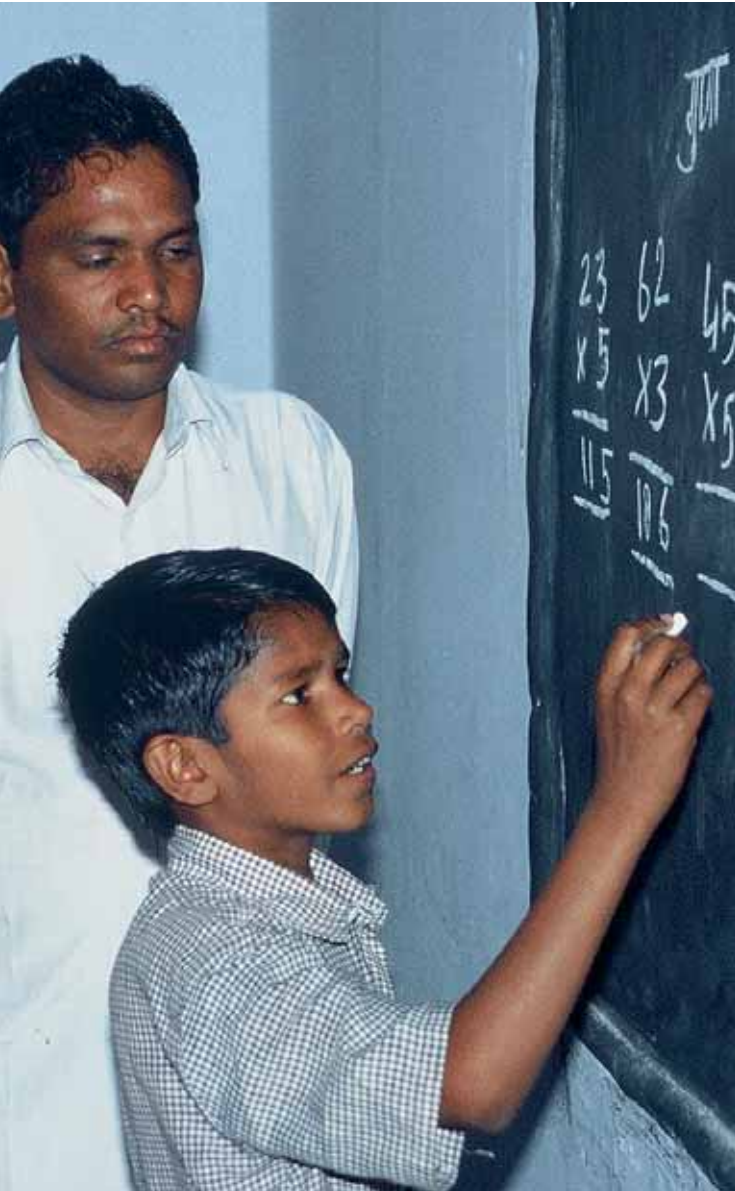
emission? There is, therefore, a danger that a composite index will oversimplify a complex system and give potentially misleading signals,”\* writes Jon Hall. With regards to all these difficulties, the suite of indicators approach was chosen, which seemed to be the most appropriate.

### Different degrees of happiness

Using subjective indicators such as happiness seemed to be too vague and inadequate for several reasons (though Jon Hall recognises that there have been considerable advancements in



Happiness is very important for people's well-being – but for statisticians it is extremely difficult to measure.  
Photo: Akuzia



Social indicators like primary education and school enrolment rates are helpful to measure the real progress and development of a country. Photos: Hoegen

this over recent years). From a statistician's point of view, it is particularly difficult to measure change over time in these areas: improvements in living standards (i.e. income) might bring increased happiness for a short time. But once life with a higher income becomes the norm, a subjective statistical indicator might suggest that the degree of happiness is the same as before. But that is not to say that on falling back to the lower, original income the individual concerned wouldn't feel less happy.

Then the next question was: What dimensions of progress

should be measured? The MAP team knew very well that, whatever choice they would make, it would still be put into question. So a strategy of consultancy was pursued: Before developing MAP, the statisticians listened to the views of many stakeholders – politicians, academics, representatives of non-governmental organisations and civil society.

### Three domains of progress

Finally, three broad domains of progress were defined: social,



## “As close as statisticians can get to the meaning of life”: The public reaction to MAP

It was the headline in one of the big Australian newspapers that made Jon Hall happy: “As close as statisticians can get to the meaning of life” one journalist wrote about the first issue of “Measuring Australia’s Progress” in 2002 – thereby ending a somewhat not easy debate about this new and potentially politically sensitive project and reflecting the overwhelmingly positive public reaction that MAP finally got. Widespread media coverage, a new momentum for the political debate – today MAP can be regarded as a success.

Nevertheless, during its development, MAP attracted some severe criticism, as Jon Hall writes, “claiming that the ABS had fallen unwitting victim to a broadly green and left wing agenda and was not balanced. One critic was particularly concerned that ‘environment’ was treated as a domain of the same status as ‘economic’ and ‘social’ when opinion polling showed the public regarded the environment as far less important than social and economic issues. The critic also cited as proof the imbalance between numbers of environmental and economic indicators and what he saw as lack of balance in our advisory Group. He went on to claim that the ABS had no right to measure progress because it was inherently subjective, and therefore, not suitable territory for a national statistical agency. This allegation was of more concern. On balance, and after discussing the publication with a variety of key stakeholders, we still believe that the ABS is better placed than any organisation in Australia to produce a publication assessing progress.”\*

MAP finally won the Society category in the “Smart 100 Awards”. An annual prize given to the smartest projects of the year in Australia. It was been seen by the judges as a very important initiative to inform debate in Australia.

\* Measures of Australia’s Progress – A Case Study of a National Report Based on Key Economic, Social and Environment Indicators, Authors: Dennis Trewin, National Statistician, Australian Bureau of Statistics and Jon Hall, Australian Bureau of Statistics, in: Statistics, Knowledge and Policy, Key Indicators to inform Decision Making, OECD 2005, pp. 99-100.

economic and environmental. Secondly, a list of potential dimensions of progress within each of these three domains was compiled. And thirdly, a subset of these most important dimensions was chosen for which indicators had to be found.

As Jon Hall points out, it was important that indicators focus on the outcome, rather than the inputs or other influences that generated the outcome. For example, an outcome indicator in the health dimension should if possible reflect people’s actual health status and not their dietary or smoking habits, nor public and

private expenditure on health treatment and education.

### Measuring progress is a much more democratic process than measuring the GDP

Measuring progress in such a way is therefore a much more democratic process than the previous measurement of only macro-economic indicators has ever been, as Jon Hall points out: “No society ever agreed democratically upon GDP.”

## 2.1 The OECD Global Project



Visions for better measurements:  
OECD Global Project.  
Photo: Hoegen

“We are encouraged that initiatives to measure societal progress through statistical indicators have been launched in several countries and on all continents. Although these initiatives are based on different methodologies, cultural and intellectual paradigms, and degrees of involvement of key stakeholders, they reveal an emerging consensus on the need to undertake the measurement of societal progress in every country, going beyond conventional economic measures such as GDP per capita.”

### Istanbul Declaration

— In recent years there have been more and more initiatives around the world to go beyond GDP and to measure progress with additional key statistical indicators.\* This is in accordance with popular demand: A 2008 Eurobarometer poll, published by the European Commission, showed that more than two thirds of EU citizens feel that social, environmental and economic indicators should be used equally to evaluate progress. Bearing this in mind, the European Commission repeatedly demanded an extension of the system of National Accounts to environmental and social issues. One important conference in this regard already took place in 2004 in

Palermo/Italy: “Statistics, Knowledge and Policy”, the first OECD (Organisation for Economic Cooperation and Development) World Forum on Key Indicators, sponsored by the Italian Government and other primary public and private institutions. The Forum gave statisticians, policy makers, journalists, academics and representatives from business and civil society the opportunity to discuss the development of institutional frameworks and research projects in order to identify key indicators to assess the economic, social and environmental progress or state of a political entity. The Forum attracted 540 experts from forty-three countries.

\* See also: [www.beyond-gdp.eu](http://www.beyond-gdp.eu)



“Our aim is not to impose a concept of progress on somebody else but to stimulate the debate”, Jon Hall and his colleague Katherine Scrivens in their OECD office. Photo: Hoegen

In 2005 the OECD started what later on became the “Global Project on Measuring the Progress of Societies”, which gathered additional momentum at the second World Forum on Measuring and Fostering the Progress of Societies in Istanbul, 2007. The conference led to the Istanbul Declaration, signed by the European Commission, the Organisation of the Islamic Countries, the OECD, the United Nations, the United Nations Development Programme, UNICEF, UNESCO, the United Nations Fund for Partnership, the World Bank, and several other organisations. It calls for action to identify what “progress” means in the 21st century and to stimulate international debate, based on solid statistical data and indicators, on both global issues of societal progress and how societies compare. The World Forum participants were agreed that the world needs leadership in this area.\*

The OECD Global Project is now led by Jon Hall, who brings in his experience of the Measuring Progress project in Australia. The project is a collaborative initiative, with its main partners being the OECD, the World Bank, the United Nations Development Programme, UNICEF, the Inter-American Development Bank, the African Development Bank, the UN Commission for West Asia, the International Association of Auditor Generals and the European Commission. Several research institutions, non-governmental organisations, statistical offices are associated to the Global Project. The InWent Centre for Statistics is also an associated partner of the GP.



The Global Project seeks to become the worldwide reference point for those who wish to understand and measure the progress of their societies and – very important – it considers itself to be “open to all sectors of society”. The project contains different research activities on several levels.

The debate on what to measure is enhanced by:

- the establishment of the Global Project website and development of other communication tools (newsletter, blogs, etc.),
- the establishment of regional working groups in Africa, the Arab region, Asia and the Pacific, Latin America, OECD, Russia,
- the organisation of regional and thematic conferences with experts, policy makers, civil society representatives, etc.,
- guidelines on how to build progress initiatives at national and local levels so that societies have the tools to discuss for themselves what progress means.

\* See also: Istanbul Declaration, Annex, p. 72.

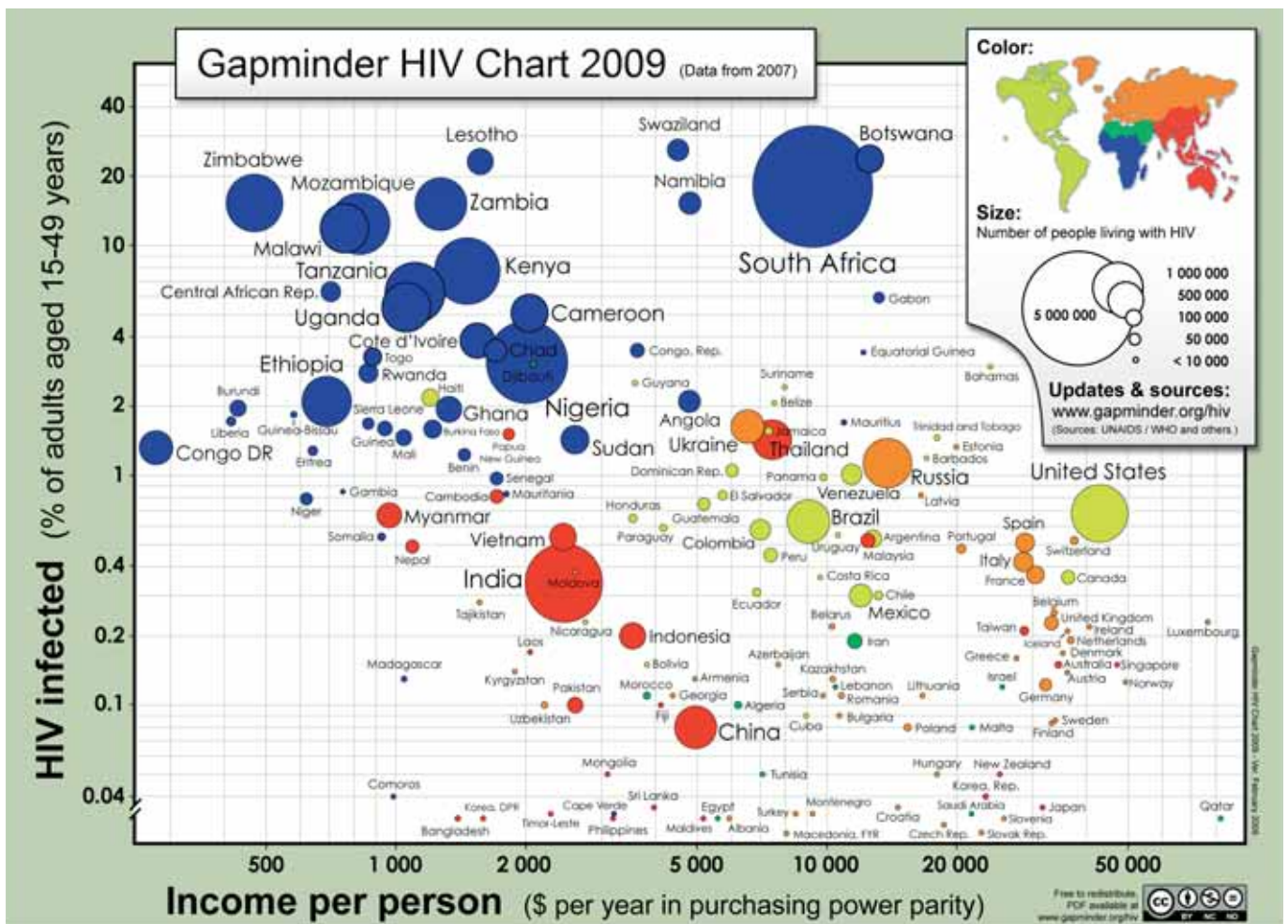
Measuring methods are developed by the following activities and publications:

- taxonomy of societal progress dimensions linked to existing proposals for their measurement,
- a handbook on “Measuring Progress”,
- guidelines on how to measure particular dimensions of progress,
- the “Journal of the Progress of Societies”,
- a knowledge base on the worldwide initiatives for measuring progress and developing relevant key indicators.

Finally, the Global Project wants to ensure that all these new approaches, methods and statistical results are really used for the development of societies and for policy-making. Therefore, new

technical tools are being promoted to “help transform information into knowledge”. These tools are supposed to present statistical information to different audiences in an understandable, appealing and user-friendly way – e.g. by using technologies like XML plug-in, JAVA or Flash.

Such tools were discussed at the Conference on “Dynamic Graphics for Presenting Statistical Indicators”, March 2007 in Rome. One prominent example is “Gapminder” a system that produces videos, flash presentations and PDF charts showing major global development trends with animated statistics and colourful graphics. Gapminder’s mission is to “unveil the beauty of statistics for a fact based world view.” \*



Source: [www.gapminder.org/downloads/gapminder-hiv-chart-2009/](http://www.gapminder.org/downloads/gapminder-hiv-chart-2009/)

\* Gapminder was founded in Stockholm by Ola Rosling, Anna Rosling Rönnlund and Hans Rosling on February 25, 2005. It is a non-profit venture promoting sustainable global development and achievement of the United Nations Millennium Development Goals by increased use and understanding of statistics and other information about social, economic and environmental development at local, national and global levels. See: [www.gapminder.org](http://www.gapminder.org)



Making results on progress transparent: OECD headquarters in Paris. Photo: Hoegen

Nevertheless, in all these activities, the Global Project does not aim to develop a common set of progress measures for the entire world or to impose a definition of progress on others, as Jon Hall points out. Rather, it acknowledges that different countries, cultures and societies have their specific concept, notion and definition of progress.

According to Jon Hall, this does not have to be an obstacle for the Global Project: “The main focus is not for countries to compare their progress with those of other nations, but to look at their progress from the inside, i.e. from their own national perspective.” The project’s goal is to enhance the international

debate on measuring progress and to provide a framework for possible approaches and methods. Also, the Global Project is not purely about measuring happiness. Jon Hall: “Societal well-being and change are highly complex phenomena which will never fully be captured by any number or set of numbers, however sophisticated.”

## Interdependence of all things: The Gross National Happiness Index

Whereas most statisticians are very sceptical about the idea of “Measuring Happiness”, the Kingdom of Bhutan is the only country so far, which has come up with the single number “Gross National Happiness” Index, GNH, to replace the concept of Gross Domestic Product. GDP is seen as being “heavily biased towards increased production and consumption, regardless of the necessity or desirability of such outputs, at the expense of other more holistic criterion. It is biased against conservation since it does not register conservation or stocks.”\*

By contrast, the Bhutan GNH combines objective and subjective indicators, based on the assumption that the distinction between subjective and objective is no more than an abstraction from reality because from a Buddhist point of view they do not exist. Rather, there is an interdependence between all things.

Whenever an objective condition is measured, such as educational or medical facilities, the psychological and subjective experience that accompanies this condition has to be measured as well. Thus, to qualify as a valid indicator of GNH, an indicator with respect to any variable has to have either a positive or a negative influence on well-being and happiness. The direction of causality on happiness and well-being must be clear. For example, less crime, illness, and air pollution have a more positive influence on happiness than more crime, illness, and pollution.

Another example: Peoples perceptions of their own safety and security are as important in determining happiness as objective crime statistics. That balance allows good representation of information between the objective and the subjective. As the King of Bhutan puts it: “GNH society means the creation of an enlightened society in which happiness and well-being of all people and sentient beings is the ultimate purpose of governance.”

Nevertheless, critics allege that because the idea of GNH depends on subjective judgements about well-being, governments may be able to define GNH in a way that suits their interests.

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\* See: [www.grossnationalhappiness.com/gnhIndex/introductionGNH.aspx](http://www.grossnationalhappiness.com/gnhIndex/introductionGNH.aspx)

## 2.2 On the road to 2015:

### Measuring progress of the Millennium Development Goals

— The Millennium Development Goals, which were adopted by 190 nations in 2000, represent a framework which very much includes social and environmental indicators to measure progress. Its main aim is to halve poverty worldwide by the year 2015 and to enhance living conditions for all peoples around the globe, especially in the developing countries. It was clear from the beginning that the eight goals can only be monitored if comprehensive data is at hand and more is necessary than macro-economic indicators. Thus, to measure achievements with regard to the Millennium Development Goals, indicators like the school enrolment rate, girls education, women's participation in public decision-making or the density of hospitals in a certain region are highly important and part of the MDGs concept.\*

"Sound data represent a key weapon in the battle against poverty."

Tadao Chino, former President, Asian Development Bank



Indicators like girls education are highly important to measure achievements with regards to the Millennium Development Goals.  
Photo: Akuzia

\* For the debate on MDG and Statistics see also: Better figures for a better Life. Statistics and their contribution to development, InWEnt Reader, Bonn 2006.



Measuring the progress of the Millennium Development Goals: Ghana advertises its achievement in primary school education. Photo: Akuzia

The goals, targets and indicators as developed in 2002 were used until 2007 to measure progress towards the MDGs. In 2007, the MDGs monitoring framework was revised to include four new targets agreed upon by member states at the 2005 World Summit. In 2007, the General Assembly took note of the Secretary-General's

report in which he presented the new framework, including the indicators to monitor progress towards the new targets, as recommended by the Inter-Agency and Expert Group on the MDGs Indicators (IAEG). The current official MDGs framework supersedes the previous version, which had been effective since 2003.\*

## Evidence for all: DFID\*\* statistics strategy

As part of their strategy to improve aid effectiveness, statisticians at the UK's Department for International Development (DFID) will ensure the effective use of statistics and evidence by:

- Encouraging everyone in DFID to monitor progress (at all levels such as project, programme and policy) as part of routine management behaviour – and to use that information in decision-making.
- Improving DFID data collection systems and quality control.
- Improving dissemination and communication of evidence and results.

Source: Counting down poverty. The role of statistics in world development, issued by PARIS21 and OECD, p. 7.

\* See the official United Nations Site for the MDG Indicators: <http://mdgs.un.org/unsd/mdg/>

\*\* DFID is the Department For International Development (DFID), a United Kingdom government department, the goal of which is "to promote sustainable development and eliminate world poverty". See: [www.dfid.gov.uk](http://www.dfid.gov.uk)

## Millennium Development Goals

- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health
- Goal 6: Combat HIV/Aids, malaria and other diseases
- Goal 7: Ensure environmental sustainability
- Goal 8: Develop a global partnership for development

It is likely that the debate on improving the MDG indicators will again play an important role at the high-level meeting in September 2010 to review progress on the MDGs and other international development goals.

New debates on “Measuring Progress” like the OECD Global Project can be helpful in this regard and further stimulate the MDG process towards 2015. As Jon Hall, responsible for the Global Project, puts it: “We do not aim to replace the statistical work that is carried out with regard to the MDGs. But we want to help to enhance the discussions on what progress looks like and how to measure it: these discussions can complement existing statistical projects.”



More commerce = more progress for all?  
The MDG as well as the OECD Global Project promote a broader statistical approach. Photo: Akuzia

Social and environmental indicators are crucial for measuring achievement in terms of the Millennium Development Goals. Photo: Akuzia

## 2.3 A special challenge: The informal sector

— Measuring what is difficult to measure, namely the informal economic activities within a particular country, has always been a challenge to statisticians. This is true of attempts to determine the economic status of a country whether using the traditional GDP concept with further macro-economic indicators or following the new approach of Measuring Progress, promoted by the OECD Global Project and others.

### A diverse and important sector

Yet, the so-called informal sector is a very important perspective to add to any discussion about progress, as it represents a diverse and significant sector of society. This is especially true of many developing countries, where a significant proportion of people are employed in the informal sector. While it is often assumed that poverty, for instance, is more prevalent among this group or that women are disproportionately represented in the informal sector, little objective and internationally-comparable information is available about their living and working conditions, income, social protection or contribution to the economy.\*

Furthermore, the informal sector represents a fundamental component of the economic structure of many developing countries. Informal sector enterprises are a key form of organisation of production and an important provider of employment and income opportunities in both rural and urban areas. Studies have shown that, in many developing countries, the informal sector accounts for more than 50 per cent of non-agricultural employment and nearly



30 per cent of non-agricultural GDP. Even in many countries with an economy in transition, the size of the informal sector is estimated to be around 10 per cent (in the case of Kyrgyzstan, as high as 25 per cent).

Standard establishment and labour force surveys usually identify only a small fraction of those whose livelihood relies on working in the informal sector or in unprotected jobs. In many developing

\* For this and the following compare: [www.unescap.org/stat/isie/index.asp](http://www.unescap.org/stat/isie/index.asp), the website of the Interregional Cooperation on the Measurement of Informal Sector and Informal Employment, a project of United Nations ESCAP (Economic and Social Commission for Asia and the Pacific).



countries and countries with an economy in transition, the informal sector is yet to be integrated into the system of national accounts and little information is available on the contribution of the informal sector to economic growth. Even in cases where some data is available, it is often not comparable at international level and is mostly collected on an ad hoc basis, hampering the construction of harmonized time series and comparative analysis across countries.

Two examples of informal activities will illustrate this point: Whilst crucial to determining a country's economic status and progress, they remain very difficult to measure and require new approaches.

## Counting the uncountable: International efforts towards the informal sector

Despite the difficulties in measuring informal economic activities, there have been various attempts at international level to improve statistics in this sector. The 15th International Conference of Labour Statistics (15th ICLS) in 1993 established international criteria for defining the informal sector, allowing countries considerable flexibility in defining and measuring the informal sector. The 17th ICLS in 2003 introduced the concept of informal employment to complement the concept of the informal sector.

Already in 1997, the Delhi Group on Informal Sector Statistics was formed as part of the United Nations Statistics Division and as an international forum to exchange experience in the measurement of the informal sector, to document the data-collection practices, including definitions and survey methodologies followed by member countries, and to recommend measures for improving the quality and comparability of informal sector statistics.

\*For more info, see: <http://unstats.un.org/unsd/methods/citygroup/delhi.htm>



Street hawkers make up a great portion of informal trade in developing countries. Photo: Gautier Willaume/iStockphoto

## 2.3.1 Keeping an Eye on the Border: Informal Trade Transactions

### The example of Uganda

By Dr. Chris Mukiza, John Mayende and Aliziki Lubega\*

— Since 2003, the Uganda Bureau of Statistics (UBOS) in collaboration with the Bank of Uganda (BOU) and Uganda Revenue Authority has been conducting the Informal Cross Border Trade (ICBT) Survey. It captures goods transacted across Ugandan borders that are not recorded by Customs authorities, and as such generates information on informal trade transactions. This statistical information is used to bridge the missing data gaps in the country's international merchandise trade statistics thereby improving on the coverage and completeness of external trade statistics. The findings of the annual surveys reveal that a substantial amount of external trade, which forms an important component of Balance of Payments and National Accounts Statistics, is not recorded by Customs. Countries in the sub-Saharan Africa and others with similar geographical, cultural and demographic characteristics would improve their external trade statistics if they also conducted such surveys.

External Trade Statistics are macro-economic statistics generated from normal administrative processes of customs authorities and other agencies. Its compilation dates far back to the establishment of the National Statistical Offices and Customs Offices in East Africa. Trade information is crucial in the monitoring of the flow of resources across international boundaries and is used for the compilation of Balance of Payments and National Accounts statistics worldwide. Above all, there is need for comprehensive, reliable, consistent and complete trade statistics which are useful for monitoring the performance of the trade sector and formulating sound trade policies necessary for settling trade disputes, monitoring trade agreements and for the computation of import and export indexes.



Map used by permission of the University of Texas Libraries, The University of Texas at Austin.

Under the United Nations (UN) general framework of compiling international merchandise trade statistics, all goods entering or leaving a country are recorded in external trade statistics, except transit goods. In Uganda, the Customs Department of the Uganda Revenue Authority (URA) collects data for formal trade transactions using the Simplified Administrative Document (SAD) submitted by clearing agents on behalf of exporters and importers. However, most transactions involving the inflow or outflow of goods under informal trade arrangements are largely unrecorded.

\* The three authors are representatives of the Ugandan Bureau of Statistics, UBOS.

The main objective of the ICBT survey is to establish the magnitude of unrecorded trade between Uganda and her neighbours. The specific objectives are to:

- Determine the composition of commodities transacted under ICBT
- Direction of trade (Country of destination or origin)
- Estimate flows in terms of values and quantities
- Compute revenue loss due to ICBT Activities
- Provide a comparative analysis of recorded and unrecorded trade including net trade balances
- Generate Monthly and Annual estimates for Balance of Payments and National Accounts compilation
- Establish Uganda's position in terms of comparative and competitive advantage under ICBT arrangement

There are a number of challenges faced when undertaking the ICBT survey. Notable ones are:

- **Limited resource:** Uganda has not been able to monitor Informal trade on a full month basis due to limited resources. Monitoring is done for two weeks of every month after which up rating is done to cover the other two weeks not monitored every month. This is a serious problem in that seasonality trends may not be followed since monitoring is done whenever money is available.
- **Estimation problem:** This is because items are transported in packages that are not transparent although the observation technique is used for data collection. Therefore, sophisticated secret deals involving importers, exporters, customs and other public officials make it extremely difficult for a casual observer to get a realistic estimate of volume.

## Different to smuggling

Unrecorded Trade is broadly defined as all trade activities that should be included in the national income conventions but are not captured by official national statistics. This makes external trade statistics in most African countries incomplete. A clear distinction exists between Informal Cross Border Trade (ICBT) and smuggling. Informal cross-border trade refers to recognized trade transactions that involve residents and non-residents across the economic boundaries of neighbouring countries which are not recorded by customs.

- **Problems related to assignment of values, quantities and units of measure:** Some commodities are difficult to assign accurate measures to owing to the nature of goods traded at given border stations.
- **Harmonization of Items:** There is a diversity of languages spoken along the borders of Uganda with her neighbours of Kenya, Tanzania, Sudan, Rwanda and D R Congo. Various items have different local names at the various borders. This makes it hard for a harmonization of items to be integrated into formal trade figures, hence taking some time before a comprehensive dataset can be produced.
- **Porous borders:** The nature of Ugandan borders makes it difficult to capture all the items that go through small local routes, necessitating increased manpower against limited resources.

### Sample of Results: Formal and Informal trade flows (US\$ '000) from 2005 to 2008

Trade Flow	Year			
	2005	2006	2007	2008
Informal Exports	200,307	231,741	776,509	1,348,855
Formal/Official Exports	812,857	962,193	1,336,668	1,724,300
Total Exports	1,013,164	1,193,934	2,113,177	3,073,155
Informal Imports	65,872	80,633	57,239	78,114
Formal/Official Imports	2,054,137	2,557,308	3,495,391	4,525,859
Total Imports	2,120,009	2,637,941	3,552,630	4,603,973
<b>Overall Trade balance</b>	<b>-1,106,845</b>	<b>-1,444,007</b>	<b>-1,439,453</b>	<b>-1,530,818</b>

From the table above, the proportion of informal exports to total merchandise trade from the two trading arrangements stood at 19.8 per cent in 2005, 19.4 per cent in 2006, 36.7 in 2007 and 43.9 per cent in 2008. On the other hand, the proportion of informal imports to formal imports was marginal at 3 per cent in 2005 and 2006, reduced to 1.7 per cent in both 2007 and 2008. This underscores the significance of informal export trade to overall merchandise trade given that its share has continued to increase during the years under review.

## 2.3.2 Leisure and Informality: The Unknown Tourist

### The example of Zanzibar

By Amour H. Bakari\*

— In recent years, the tourism industry has emerged as a potential sector in Zanzibar's economy in terms of foreign exchange earnings and employment creation. It stimulates the development of other economic sectors. The tourism industry was recognized as a potential source of revenue due to the fact that Zanzibar is richly endowed with both natural and man-made tourism attractions which are the basis of a successful tourism industry. Some of these attractions are:

- Historical nature of these islands
- Beautiful and virgin beaches
- Natural forests endowed with rare species of animals such as the Colobus Monkey "Kima Punju"
- Old stone buildings with ancient architectural features that are excellently carved
- Handcraft work specific to Zanzibar Doors
- Richness in various spices and availability of local fruits all year round
- Culture of friendliness and hospitality
- Basic infrastructure, facilitating investment and development in the tourism industry
- Natural aquatic drinking water, marine and sea

Zanzibar aims at developing a tourism industry which is culturally and socially responsible, ecologically friendly and economically viable. Nevertheless, at present the benefit of tourism activities to the country's economy is difficult to measure because it is implicitly included in various industries of the economy and/or is mainly

Map used by permission of the University of Texas Libraries, The University of Texas at Austin.



undertaken as partially informal. But, unless the value of informal tourism is recognized, its contribution to the country's economy and economic progress will be seriously underestimated. This can also be an obstacle to sustainable development. Thus, there is a need to provide stakeholders with a powerful economic tool for decision-making based on the economic value of non-observable tourism

activities to understand how much we really depend on tourism activities.

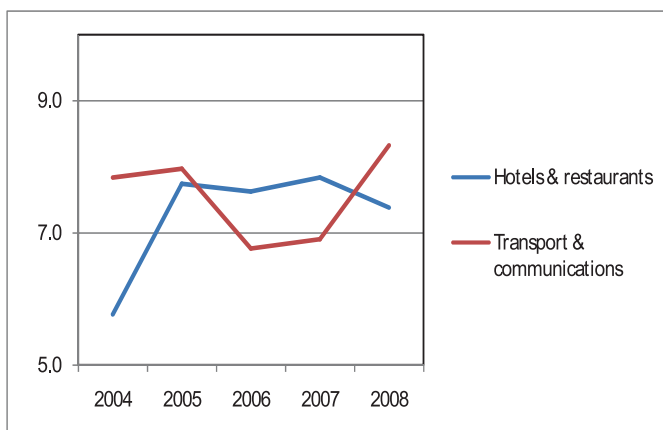
Designing such a tool is not an easy task. It is difficult to determine exactly how many tourists are visiting Zanzibar each year, for instance, because of the way in which visitor statistics are compiled. There are two ports of entry, the seaport and the airport. All foreigners arriving at

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the seaport are required to register with immigration officials. While there are bound to be some discrepancies, one procedure is in place to count everyone. Visitors arriving by air face a different situation: those arriving directly from another country are required to obtain a visa and register with the immigration authority, but those arriving on flights from mainland Tanzania, where they have already obtained a visa, are not required to register. Consequently, official statistics underestimate the true number of visitors because they do not include those arriving from mainland Tanzania. Many tourists travel on a multi-destination tour of Tanzania (or East Africa) that ends with a few days in Zanzibar, so this omission is significant.

There are established methods to measure the economic value of tourism for national accounts – provided by the World Tourism Organisation, UNWTO in 2000. But, so far no research has been established on the more informal aspects of tourism. How much money do tourists spend at their destination, how long do they stay, what is their purpose of visit? The informal tourism activities are undertaken in hotels and restaurants, with local dive or tour operators and others. Tourists in Zanzibar are almost entirely

#### Total share of informal tourism activities to Zanzibar's GDP from 2004 – 2008



Source: Office of Chief Government Statistics Zanzibar, Tanzania



Informal activities in tourism are typical – not only of tropical paradises. How much do these activities really contribute to a country's economy and economic progress? Photo: Akuzia

independent travellers, who stay in low-cost hotels and restaurants run by local business people that hire most of their staff within local communities.

Other popular tourism activities in Zanzibar include day excursions to a wide variety of historical sites, spice tours, snorkelling, diving, water sports, sailing trips on traditional 'dhow' boats, fishing, dolphin spotting or just relaxing and enjoying the wonderful Zanzibar cuisine with an unsurpassed variety of fresh fish and seafood. Most of these activities are never counted and covered by any statistics.

The 2006 Integrated Labour Force Survey revealed that about 10 per cent of people (at the age of 15 or older) enrolled in the informal sector were engaged in hotels and restaurants – as well as in transport, storage and communication – all economic activities with a direct link to tourism. According to estimates, the share of these economic activities to the GDP is small and ranges only from six to eight per cent. But, this does not portray the reality on the ground where the contribution of this informal tourism has to be considered much higher. Yet it remains almost completely unobserved by official statistics.

One methodology to improve that situation could be a so called Tourism Satellite Account (TSA). It is an attempt to provide a clearer picture of the relative importance of tourism as an economic activity and to trace its interrelationship with traditional industry sectors in national accounts. In a later stage, it could be used to develop a number of proposals for policy modelling. It can also be a basis for relevant international comparisons.

# 3 | Statistics to alert us

## Measuring obstacles for progress and development

— Whenever we want to measure the progress of a certain state or society, we also have to take a look at the other side of the coin: At all the obstacles that hamper such progress and development. Amongst them are poverty, violence, war and conflict, the lack of law and order – to name just a few. In order to capture these phenomena, social and political scientists operate with two major terms: The fragility and vulnerability of states and societies. Whereas the term “fragility” usually refers to the political and socio-economic weaknesses of a state, “vulnerability” mostly refers to the risks that states and societies face from natural disasters. There is, nevertheless, an increasing awareness of the close link between these two conditions: A more fragile state will be also more vulnerable, because it lacks the capacity for appropriate disaster and emergency response. On the other hand, a state vulnerable to natural hazards and disasters might become increasingly weak and fragile because of the destruction of its infrastructure. There is therefore a need for more integrated, scientific and statistical approach whenever we want to measure fragility and vulnerability, a process that has just started.



### 3.1 Fragility of states and societies

— Why should we measure fragility at all? The attacks in the United States on September 11, 2001, shocked the whole world and drew more attention than ever before to the issue of terrorism worldwide. Many saw terrorism and violence as not only the result of fanaticism but also of political failure, underdevelopment and fragility of states. Fragile states, indeed, pose a big security threat to other states and to the stability of the international order.

On the other hand, a result-orientated development policy and aid effectiveness, which is very high on the international agenda, can hardly be achieved within a state suffering from fragility to a great extent. Thus, with regard to global security and for development cooperation and the distribution of aid, measuring fragility can play an important role.



Lack of infrastructure and insufficient public services are characteristic for fragile states, here Afghanistan in 2006.  
Photo: ECHO/Laurent Saillard.

Nevertheless, how to measure fragility is a question difficult to answer. To start with, there is no common, undisputed definition. Some are based on a broader conception, i.e. measuring the fragility of the society as a whole. Other definitions refer exclusively to the state and its authority. Some definitions and measuring methods take categories like the environment into account, others don't. There is even some confusion with regard to the wording:

While some definitions use the term "fragile states", others talk of "failed" states – leaving unclear whether they refer to a state that has already completely failed or is still in the process of failing and has therefore reached a certain degree of fragility.

**"A state that is failing has several attributes. One of the most common is the loss of physical control of its territory or a monopoly on the legitimate use of force. Other attributes of state failure include the erosion of legitimate authority to make collective decisions, an inability to provide reasonable public services, and the inability to interact with other states as a full member of the international community."**

Foreign Policy Website, The Failed States Index 2009, FAQ & Methodology



— In this discussion “it is crucial to remember that fragility is not tackled in binary terms (“all or nothing”) but rather as a continuum, that is, a quality that can be present to a greater or lesser degree (i.e. from high resilience to extreme failure).

In this regard, nationally led state-building processes of moving towards resilience are the core of the current international agenda, which emphasizes that the state-society relations are the centre of gravity of a resilient state. Furthermore, as we will see, fragility is composed of several dimensions, some of which may





Bad road conditions and a lack of traffic management might also be indicators of state weakness. Photo: Akuzia

be more critical than others. In this sense, fragility is not an exclusive property of developing countries but can also be found in many forms and degrees in developed countries. The recognition of this gradation allows for the creation of indices of fragility, assigning comparable scores to several countries.”\*

Despite their differences, most of the definitions of fragility include one or more central attributes of the state such as: effectiveness, authority and legitimacy. There is also a growing recognition of the links between governance and fragility.

Finally, with the marked increase in the attention being paid to fragility, its cause and impact, the production of various fragility indices is also growing.

But measuring methods and background concepts sometimes differ so much, that they are difficult to compare. So before these indices can be used, a profound knowledge of the metadata and methods they are based on is indispensable.

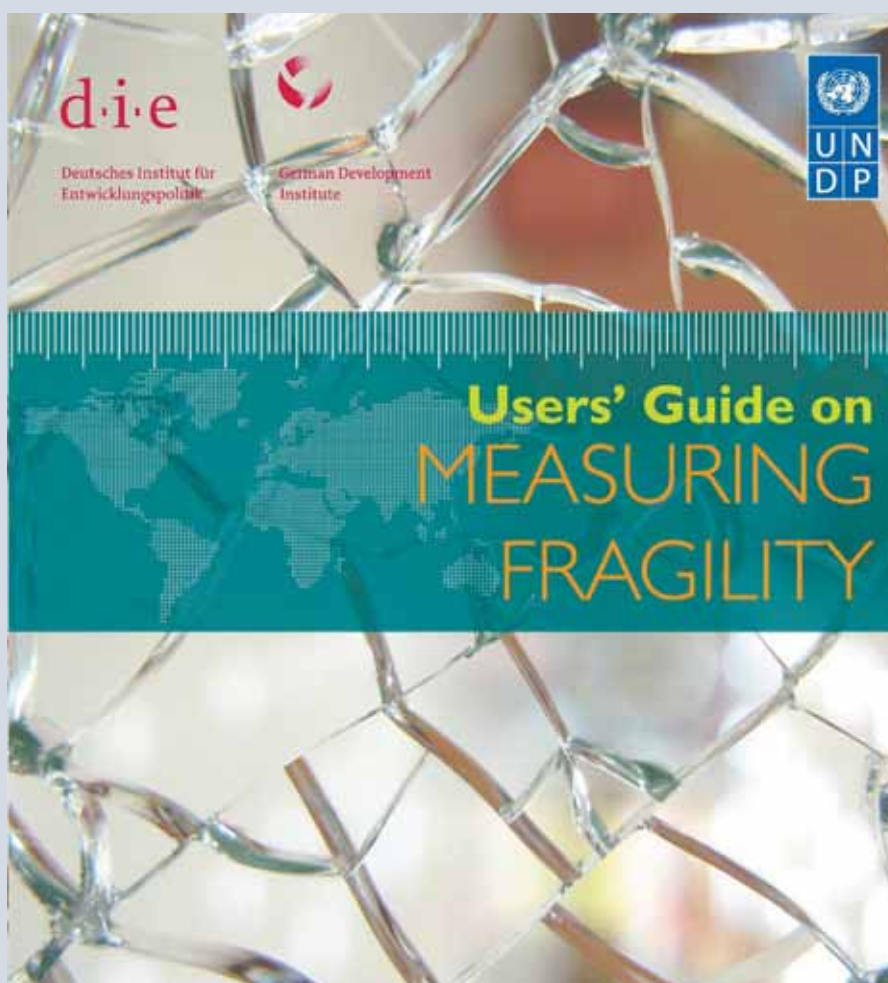
\* See: Users' Guide on Measuring Fragility, published by German Development Institute (DIE) and United Nation Development Programme (UNDP). Authors: Javier Fabra Mata, UNDP, Sebastian Ziaja, DIE. Editors: Jörg Faust, DIE, Joachim Nahem, UNDP, Bonn 2009, p. 5.

## Clearing the jungle of indices: An overview

— A new publication, published by the German Development Institute (Deutsches Institut für Entwicklungspolitik, DIE) and the United Nations Development Programme (UNDP), helps to clear the ever-growing jungle of fragility and state weakness indices. The publication, part of the UNDP/Oslo Governance Centre (OGC) series “Users Guide on ...”, is a comparative analysis of eleven, widely quoted and used cross-country fragility indices – the first systematic analysis of such indices so far. It aims at unpacking the concepts and methods that lie behind the fragility ranks in order to make them transparent to users.

The eleven indices are:

- Bertelsmann Transformation Index/ State Weakness Index (BTI-SWI)
- Country Indicators for Foreign Policy Fragility Index (Carleton University) (CIFP-FI)
- Country Policy and Institutional Assessment (CPIA)/International Development Association (IDA) Resource Allocation Index (The World Bank) (IRAI)
- Failed States Index (Fund for Peace) (FSI)
- Global Peace Index (Institute for Economics and Peace) (GPI)
- Harvard Kennedy School Index of African Governance (Harvard University) (IAG)
- Index of State Weakness in the Developing World (Brookings Institution) (ISW)
- Peace and Conflict Instability Ledger (University of Maryland) (PCIL)
- Political Instability Index (The Economist Group) (PII)
- State Fragility Index (George Mason University) (SFI)
- World Governance Indicators, Political Stability and Absence of Violence (The World Bank) (WGI-PV)



The Users' Guide identifies 41 categories of indicators used by these eleven Fragility Indices in a very different way. Armed conflict, Communications, Energy, Life Expectancy, Political

Violence, Social Unrest.... the specific selection of indicators can be seen as a reflection of the definition and concept of fragility behind a certain index.

## Type of Indicators Used by Fragility Indices

	BTI-SWI	CIFP-FI	CPIA / IRAI	FSI	GPI	IAG	ISW	PCIL	PII	SFI	WGI-PV
Armed conflict		x		x	x	x	x	x			x
Business		x	x		x	x	x				
Civil and Political Rights and Freedoms		x		x	x	x	x			x	x
Communications		x				x					
Corruption and Abuse of Office		x	x		x	x	x				
Coup d'état							x			x	x
Crime					x						
Democracy					x	x					
Detainees and Prisoners					x	x					
Development		x								x	
Economy and Finance		x	x	x	x	x	x		x	x	
Education		x			x	x	x				
Energy		x									
Environment		x	x			x					
Exclusion and Discrimination									x	x	x
Foreign Aid		x									
Gender		x	x		x	x					
Government Capability		x	x	x	x		x				x
Health		x				x	x				
Infrastructure		x				x					
Internationalisation		x				x					x
Life Expectancy		x			x	x	x				
Migration		x		x	x						
Militarisation		x			x			x			
Mortality		x			x	x	x	x	x	x	
Physical Integrity		x				x			x		x
Political Culture		x		x	x					x	x
Political Violence				x			x				x
Population		x		x	x						
Poverty			x			x					
Property Rights			x			x					
Refugees and IDPs		x				x					
Regime	x	x						x	x	x	x
Regionalisation					x			x			x
Rule of Law		x	x			x	x				
Social Cleavages		x							x	x	x
Social Unrest – Riots									x		x
Terrorism		x									x
Trade		x	x		x			x		x	
Unemployment		x			x				x		
Water		x				x	x				

Source: Users' Guide on Measuring Fragility, p. 82.

— The second part of the guide contains a catalogue, presenting the eleven indices with regard to their background and systemized concepts, selection and measurement of indicators, calculation of index scores, presentation of results, their applications, comments and examples of results. This makes the guide extremely user-friendly because the indices can be compared with each other at a glance. Their methods – and sometimes even political interests – become obvious. The systematic analysis also reveals the weaknesses of several indices.

The Failed States Index published by the Fund for Peace, for instance, has become very popular in recent years. But its method, though very interesting, is questioned by experts: The Fund for Peace uses a so called Conflict Assessment System Tool (CAST). For this, more than 90,000 open-source articles are indexed and scanned, such as publicly available print, radio, television and internet sources from all over the world, including international and local media reports, essays, interviews, polling and survey data, government documents, independent studies from think tanks, NGOs and universities, and even corporate financial filings.

The software looks for key phrases and descriptions relevant for the 12 FSI indicators: Demographic Pressures, Refugees/IDPs, Group Grievance, Human Flight, Uneven Development, Economic Decline, Delegitimization of the State, Public Services, Human Rights, Security Apparatus, Factionalized Elites, and External Intervention.

### An indicator of perceived fragility

It calculates the number of “hits“ as a proportion of the sample for a given time period. Quantitative data is also included. Subject-matter experts then review each score for every country and indicator, as well as consulting the original documents if necessary, to ensure accuracy.\* So the FSI is based mainly on media examination – being more of an indicator of perceived fragility than a fragility index. A problem might occur, when, for instance, the media continues to portray a certain country as weak or fragile – even once the situation has already improved. Other indices are not based on specifically collected data but rely on expert polls and survey done within another statistical context, as for example the



Can a failed state rise again? Liberia under its President, Ellen Johnson-Sirleaf, is trying hard to regain international reputation. Photo: Akuzia

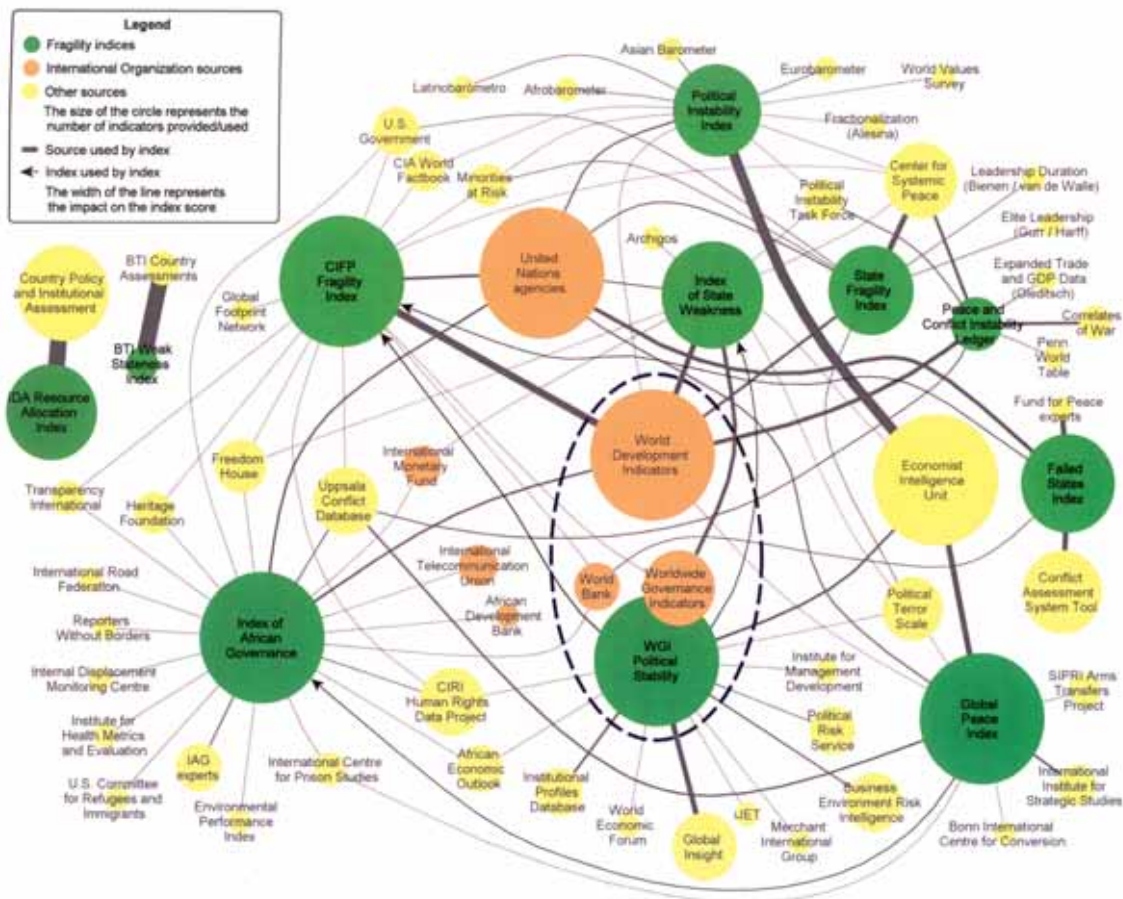
\* See: [www.foreignpolicy.com/articles/2009/06/22/2009\\_failed\\_states\\_index\\_faq\\_methodology](http://www.foreignpolicy.com/articles/2009/06/22/2009_failed_states_index_faq_methodology)

World Governance Indicator, published by the World Bank. Apart from the Failed States Index, only the Bertelsmann Transformation Index/State Weakness Index and the Country Policy and Institutional Assessment (CPIA) are mainly based on data especially collected for the production of these indices.

According to Sebastian Ziaja, co-author of the Users' Guide, many indices are based on the same data and sources – often governmental sources or sources from United Nations and World Bank. More diverse sources could make indices more reliable and impartial. Nevertheless, their results can differ substantially – given the differences in underlying background concepts and definitions as well as purposes of a certain index.



A fragile or failed state cannot provide basic services for its population any more: Nyala – the warehouse stocks of the World Food Programme, WFP and funded food aid of the European ECHO in Sudan 2007. Photo: EC/ECHO/Malini Morzaria



Source: Users' Guide on Measuring Fragility, p. 27.

### It is important to make uncertainty transparent

The visualization of results poses another problem – the problem of accuracy. The authors of the Users' Guide conclude: "Most fragility indices transform the scores resulting from their aggregations processes into rankings. (...) Many indices agree in ranking Somalia as the most fragile country. Iraq is another example that appears in most top ten rankings. However, rankings decrease the information conveyed by indices by levelling out the variance between ranks."<sup>\*</sup>

According to the guide's authors, the presentation form, including colour-coded categories and maps can therefore lead to misinterpretation. They prefer the visualization form chosen by the Peace and Conflict Instability Ledger, for example, that openly shows the variances and measurement errors. "Statistics and indices always include a certain degree of uncertainty", says Sebastian Ziaja, "it is important to make that transparent."

Furthermore, many indices, especially those based on a broader and complex definition of fragility, are highly unspecific. They may show correlations between various indicators of fragility but are unable to reveal causalities. "If decision-makers want to use indices on fragility as a political instrument, we have to further develop and mature these indices and design them in a sharper way", says Sebastian Ziaja.

As for the time being, the authors of the Users' Guide send out a clear warning to the different users of all these indices – whether governments, donors, private sector, academic and research community or civil society: The indices have to be used with caution!



<sup>\*</sup> Users' Guide on Measuring Fragility, p. 31.



War and violence are causes for as well as results of fragility, like here in Lebanon and many other conflict-driven countries.  
Photo: EC/ECHO/Daniela Cavini

**Table 4: How similar are index results? Bivariate correlations**

	BTI-SW*	CIFP 2007	CPIA*	FSI	GPI	IAG 2006*	ISW*	PCIL	PII 2009	SFI	WGI-PV 2007*
BTI-SW*	<b>1.00</b>										
CIFP 2007	<b>0.81</b>	<b>1.00</b>									
CPIA*	0.61	0.56	<b>1.00</b>								
FSI	<b>0.82</b>	0.93	0.59	<b>1.00</b>							
GPI	0.79	0.78	0.66	<b>0.82</b>	<b>1.00</b>						
IAG 2006*	<b>0.84</b>	<b>0.89</b>	0.62	<b>0.84</b>	<b>0.83</b>	<b>1.00</b>					
ISW*	<b>0.82</b>	<b>0.92</b>	0.69	<b>0.85</b>	0.75	<b>0.94</b>	<b>1.00</b>				
PCIL	0.58	0.63	0.10	0.55	0.57	0.22	0.57	<b>1.00</b>			
PII 2009	0.64	0.72	0.48	0.74	0.70	0.69	0.52	0.49	<b>1.00</b>		
SFI	<b>0.81</b>	<b>0.92</b>	0.57	<b>0.86</b>	0.76	<b>0.81</b>	<b>0.89</b>	0.66	0.66	<b>1.00</b>	
WGI-PV 2007*	<b>0.82</b>	0.79	0.43	<b>0.80</b>	<b>0.89</b>	<b>0.85</b>	0.72	0.52	0.72	0.78	<b>1.00</b>

Pearson's R; pairwise deletion, n between 37 and 192; >0.8 in bold type, <0.6 in italics; all correlations significant at 0.01 level; data from 2008 if not noted otherwise; \*) scores inverted to 'best (low values) to worst (high values)'

BTI-SW: Bertelsmann Transformation Index – State Weakness Index; CIFP-FI: Country Indicators for Foreign Policy – Fragility Index; CPIA: Country Policy and Institutional Assessment / IRAI; FSI: Failed States Index; GPI: Global Peace Index; IAG: Index of African Governance; ISW: Index of State Weakness in the Developing World; PCIL: Peace and Conflict Instability Ledger; PII: Political Instability Index; SFI: State Fragility Index; WGI-PV: World Governance Indicators – Political Stability and Absence of Violence

Source: Users' Guide on Measuring Fragility, p. 29.

## Selecting fragility indices: What are their relative strengths?

— How may users select the appropriate indices for a certain application? As mentioned above, any application requires detailed awareness about an index's capability. (...) No index is perfect, but most perform well in some aspects. The Index of State Weakness in the Developing World, for example, fares well in providing a transparent and accessible documentation of their methodology, which is an explicit goal of its approach. Its use is, however, limited by covering only developing countries and thus not allowing comparisons with richer countries. CIFP Fragility Index and WGI Political Stability provide the most extensive coverage, but they do not provide full access to replication data. The BTI State Weakness Index and the Index of African Governance are the only indices providing immediate access to their datasets. The former suffers, however, from a very narrow data base, an assessment by a very limited number of experts, causing doubt about its reliability. Regarding validity, the BTI State Weakness Index fares best as it measures a narrow concept of state fragility. Most other indices apply very broad concepts and are not capable of measuring any concept more specific than a general situation of fragility in a country.

Source: Users' Guide on Measuring Fragility, p. 36.

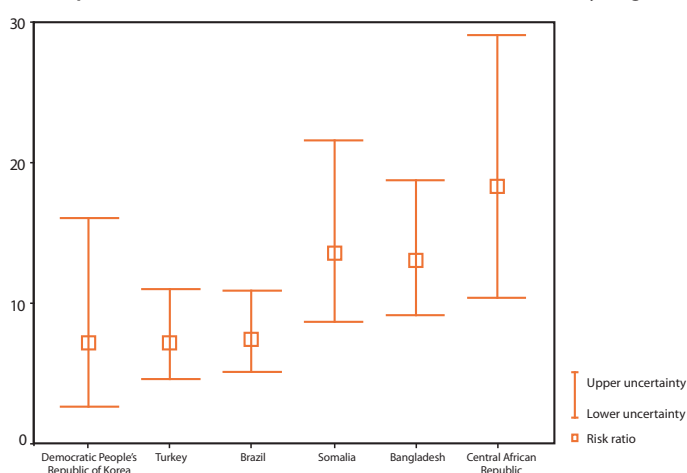


# “Quantitative analysis is a great tool and we have to use it”



— Sebastian Ziaja, 27, co-author of the Users’ Guide on Measuring Fragility has got a rather rare kind of passion – the passion for figures. During his academic studies, focusing on the region of Latin America, he already showed a great interest for statistics. “A lot of people don’t like maths” says Ziaja, “but from my point of view, quantitative analysis is a great tool – one that we should not neglect.” With regards to development cooperation, it is important to know the reasons and causes behind certain developments in certain societies or states, Ziaja adds. “To investigate them we cannot only rely on case studies, but we need data and statistics as well.” Therefore, donors should give greater financial support to the improvement of statistical systems in developing countries. Since 2008 Ziaja has worked as scientific assistant at the German Development Institute (Deutsches Institut für Entwicklungspolitik, DIE) with the Users’ Guide being his main project for over 10 months. For his diploma thesis Ziaja spent some time in Haiti. There he investigated, how illegal transactions along the border with the Dominican Republic – i.e. drug smuggling – and political threats from the Dominicans influenced the weak political system in Haiti and contributed to its fragility.

**Box 3: Implications of measurement error: the Peace and Conflict Instability Ledger**



Uncertainty is inherent in all measurements. Only when quantified, however, can the measurement error be visualized. The Peace and Conflict Instability Ledger (PCIL), for example, indicates the measurement error of its scores. As the graph shows, lower and upper uncertainty boundaries stretch quite far. The scores produced by PCIL are ‘risk ratios’, indicating the probability of state failure compared to the OECD average. Considering this degree of measurement error one cannot say for sure whether Brazil is less conflict-prone than Somalia, Bangladesh or Central African Republic. The large measurement error of the Democratic People’s Republic of Korea illustrates the difficulty in assessing closed countries; its risk ratio ranges from a quite stable 2.6 up to a highly fragile 16.0.

Source: Users’ Guide on Measuring Fragility, p. 13.

## 3.2 Vulnerability of states and societies

— Whereas the term “fragility” usually refers to the political and socio-economic weaknesses of a state, “vulnerability” is mostly used with regard to the risks that states and societies face by natural disasters. These risks are currently increasing:

Every year, more than 200 million people are affected by droughts, floods, landslides, cyclones, earthquakes, tsunamis, wild land fires and other hazards. Increased population densities, growing megacities, environmental degradation and the negative effects of global warming on poverty, make the impact of natural hazards worse.

### A growing number of catastrophes in all parts of the world

In the last few years, we witnessed a growing number of catastrophes in all parts of the world: tsunamis in the Indian Ocean, earthquakes in Iran and South Asia, hurricanes in the US, in the Caribbean and Pacific.\* One of the worst hazards of this kind was surely the tsunami on 26th December 2004, affecting the Indian Ocean, South Asia and parts of East Africa - with approximately 230,000 people being killed and an unprecedented dimension of destruction.

In September and October 2009 several tsunamis, floods and earthquakes once again afflicted the southern Pacific Region, the Indonesian Island Sumatra, India, Vietnam and the Philippines.



\* Compare the Working Draft: “Integrating Disaster Risk Reduction in European Humanitarian Assistance”, Report commissioned by the Federal Foreign Office/ German Committee for Disaster Reduction, 30 March 2007.



The number of natural hazards has dramatically increased throughout the world – due to growing populations and urban settlements, environmental degradation and climate change. Photo: CARE Germany

As a consequence of these and other hazards, thousands of people lost and loose their lives and livelihoods; the whole economic and social infrastructure as well as the environment of a country suffer; the damage to the state and the economic loss is tremendous. In 2007 alone, natural hazards caused 78 billion US-Dollar in economic losses.\* Since 1992, the international community has contributed approximately 2.7 billion US-Dollars worldwide to mediate the effects of hurricanes, floods and droughts.\*\*

Disaster Prevention and Disaster Risk Management are therefore vital – from a humanitarian as well as from an economic and ecological point of view.

### Socio-economic aspects of disaster

Some initiatives have already been made by the international community: At the beginning of the year 1990, the United Nations declared the International Decade for Natural Disaster Reduction; in 1994, the Conference on Natural Disaster Reduction took place in Yokohama/Japan – for the first time not only technical but also socio-economic aspects of disaster prevention were emphasized.

One of the most important documents in this regard is the Hyogo Framework for Action 2005-2015, an international master plan for disaster risk reduction which was approved at the UN World Conference on Disaster Reduction in Kobe/Japan in January 2005. It is based on the conviction that not every earthquake, hurricane or tsunami automatically has to lead to a human catastrophe – or, as some experts put it: “Natural hazards will always exist, but hazards need not always result in disasters.”

## Hyogo's demands for data and statistics

### – (...) National and local risk assessments

(a) Develop, update periodically and widely disseminate risk maps and related information to decision-makers, the general public and communities at risk in an appropriate format.

(b) Develop systems of indicators of disaster risk and vulnerability at national and sub-national scales that will enable decision-makers to assess the impact of disasters on social, economic and environmental conditions and disseminate the results to decision makers, the public and populations at risk.

(c) Record, analyse, summarize and disseminate statistical information on disaster occurrence, impacts and losses, on a regular bases through international, regional, national and local mechanisms.

### (ii) Early warning

(d) Develop early warning systems that are people centred, in particular systems whose warnings are timely and understandable to those at risk, which take into account the demographic, gender, cultural and livelihood characteristics of the target audiences, including guidance on how to act upon warnings, and that support effective operations by disaster managers and other decision makers. (...)

j) Support the development and improvement of relevant databases and the promotion of full and open exchange and dissemination of data for assessment, monitoring and early warning purposes, as appropriate, at international, regional, national and local levels. (...)

(l) Establish and strengthen the capacity to record, analyze, summarize, disseminate, and exchange statistical information and data on hazards mapping, disaster risks, impacts, and losses; support the development of common methodologies for risk assessment and monitoring.

### (iv) Regional and emerging risks

(m) Compile and standardize, as appropriate, statistical information and data on regional disaster risks, impacts and losses. (...)

Source: Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters. Extract from the final report of the World Conference on Disaster Reduction, p. 7 and 8. See: [www.unisdr.org](http://www.unisdr.org)

\* Source: “Private Sector Activities in Disaster Risk Reduction. Good practices and lessons learned”, United Nations International Strategy for Disaster Reduction Secretariat (UNISDR), 2008.

\*\* Source: “Addressing the Challenge: Recommendations and Quality Criteria for Linking Disaster Risk Reduction and Adaptation to Climate Change”, German Committee for Disaster Reduction, 2009.

### 3.2.1 Disaster risk management and data collection: The need for an integrated approach

— Besides better techniques, solid buildings, awareness raising and early warning mechanisms, knowledge deriving from improved information systems is indispensable to any effective Disaster Risk Reduction Strategy. Therefore, improved data bases and statistics are needed.

#### Qualitative and quantitative goals

The Hyogo Framework for Action acknowledges these requirements and demands better information and data systems – but does not go into very much detail. Rather it stresses qualitative and not quantitative goals which need to be achieved before Disaster Prevention and Risk Reduction can be improved in countries worldwide. Part of the framework is a so-called Mid-Term Review which reflects how a country has improved its disaster management.



Earth Quake in Pakistan 2005: Destruction in Baddal town, Mansehra district, Photo: EC/ECHO/Nick Bridger

**"The starting point for reducing disaster risk and for promoting a culture of disaster resilience lies in the knowledge of the hazards and the physical, social, economic and environmental vulnerabilities to disasters that most societies face, and of the ways in which hazards and vulnerabilities are changing in the short and long term, followed by action taken on the basis of that knowledge."**

Hyogo Framework for Action

In Germany, the German Committee for Disaster Reduction is responsible for this review. It is not however based on data collection but on some kind of self-rating, done by public authorities and institutions involved in disaster management and disaster prevention. To many experts, this mechanism seems an insufficient tool to estimate and measure the real progress made in national disaster risk management.

### Many private Institutions provide more and better data

Another problem is the lack of central databases on disaster risk in most countries worldwide – including developed countries too. The Central Statistical Offices do not normally provide such a “one-stop-shop-database”.

Rather, the broad variety of indicators and figures relevant to measuring the vulnerability and disaster risk of a country has to be collected from different sources. Cross-section data are rare. Quite often, private institutions or companies – especially insurance companies – provide more and better data on disaster risk and vulnerability than state authorities.

### Natural disasters 1980 - 2008

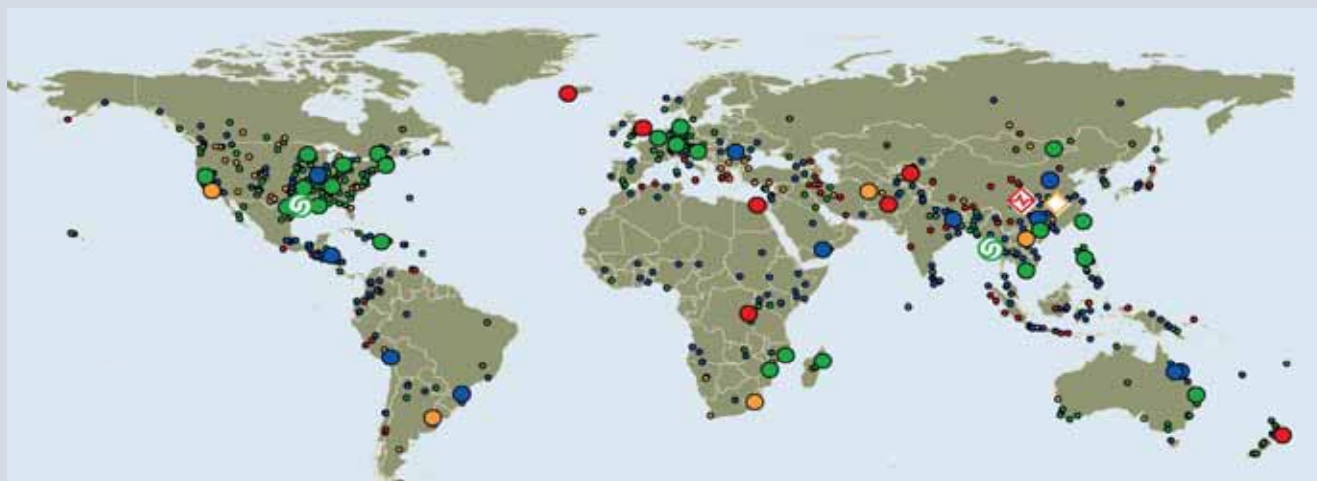
10 costliest earthquakes ordered by overall losses

Date	Loss event	Region	Overall losses* (US\$m)	Insured losses* (US\$m)	Fatalities
17.1.1995	Earthquake	Japan: Kobe	100,000	3,000	6,430
12.5.2008	Earthquake	China: Sichuan	85,000		70,000
17.1.1994	Earthquake	USA: Northridge	44,000	15,300	61
23.10.2004	Earthquake	Japan: Niigata	28,000	760	46
7.12.1988	Earthquake	Armenia: Spitak	14,000		25,000
21.9.1999	Earthquake	Taiwan: Nantou	14,000	750	2,370
16.7.2007	Earthquake	Japan	12,500	335	11,000
17.8.1999	Earthquake	Turkey: Izmit	12,000	600	17,000
23.11.1980	Earthquake	Italy: Irpinia	11,800	40	2,914
17.10.1989	Earthquake	USA: Loma Prieta	10,000	960	68

Source: Munich Re, Geo Risk Research, NatCatSERVICE

One of the world’s leading databases in this regard is NatCatSERVICE, run by the German Munich Reinsurance Company (Munich Re). It provides annual statistics as well as long-term statistics (e.g. great natural disasters since 1950 and significant disasters, e.g. the costliest earthquakes) and contains more than 25,000 entries. Every year between 800 and 1000 loss events are recorded and analysed.

## World map of natural catastrophes



© 2009 Münchener Rückversicherungs-Gesellschaft, Geo Risk Research, NatCatSERVICE

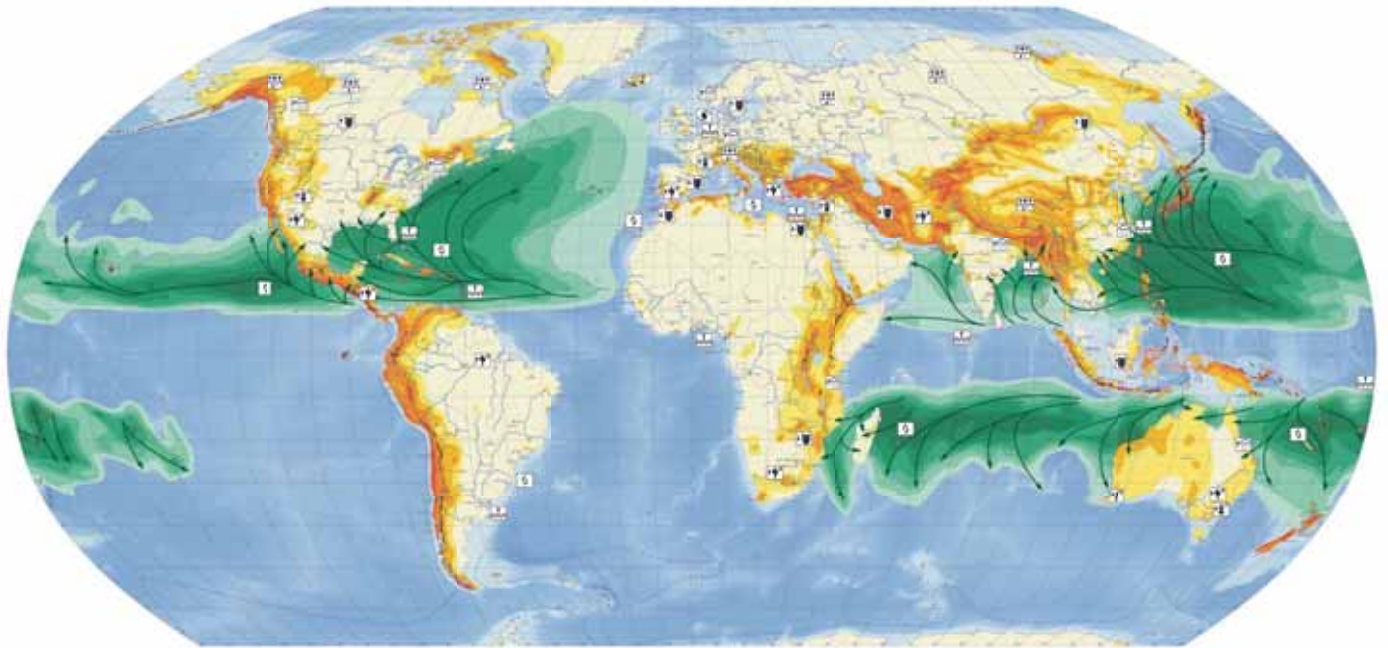
As at January 2009

### 2008: 750 natural catastrophes

- Significant loss events (selection)
- Great natural catastrophes:**
  - Hurricane Ike (Sep 6-14, 2008) Caribbean, USA
  - Cyclone Nargis (May 2-5, 2008) Myanmar
  - Earthquake (May 12, 2008) China
  - Winter damage (Jan 10 – Feb 13, 2008) China
- Geophysical events (Earthquake, tsunami, volcanic activity)
- Meteorological events (Storm)
- Hydrological events (Flood, mass movement)
- Climatological events (Extreme temperature, drought, wildfire)

Source: Munich Re, Geo Risk Research, NatCatSERVICE

# World map of natural hazards



<p><b>Erdbeben</b></p> <ul style="list-style-type: none"> <li>Zone 0: MM V und darunter</li> <li>Zone 1: MM VI</li> <li>Zone 2: MM VII</li> <li>Zone 3: MM VIII</li> <li>Zone 4: MM IX und darüber</li> </ul> <p>Wahrscheinliche Maximalintensität (MM, modifizierte Mercalli-Skala) mit einer Überschreitungswahrscheinlichkeit von 10% in 50 Jahren (entspricht einer „Wiederkehrperiode“ von 475 Jahren bei mittleren Untergrundbedingungen)</p> <p>Größtstadt mit „Mexico-City-Effekt“</p>	<p><b>Tropische Wirbelstürme</b> Spitzenwindgeschwindigkeiten*</p> <ul style="list-style-type: none"> <li>Zone 0: 76–141 km/h</li> <li>Zone 1: 142–184 km/h</li> <li>Zone 2: 185–212 km/h</li> <li>Zone 3: 213–251 km/h</li> <li>Zone 4: 252–299 km/h</li> <li>Zone 5: ≥ 300 km/h</li> </ul> <p>* Wahrscheinliche Maximalintensität mit einer mittleren Überschreitungswahrscheinlichkeit von 10% in 15 Jahren (entspricht einer „Wiederkehrperiode“ von 100 Jahren)</p> <p>Typische Zugrichtungen</p>	<p><b>Vulkane</b></p> <ul style="list-style-type: none"> <li>○ Letzte Eruption vor 1800 n. Chr.</li> <li>● Letzte Eruption nach 1800 n. Chr.</li> <li>▲ Besonders gefährliche Vulkane</li> </ul> <p><b>Tsunamis und Sturmfluten</b></p> <ul style="list-style-type: none"> <li>— Tsunamigefahr (seismische Flutwelle)</li> <li>— Sturmflutgefahr</li> <li>— Tsunami- und Sturmflutgefahr</li> </ul> <p><b>Eisbergvorstöße</b></p> <ul style="list-style-type: none"> <li>△ △ △ Grenze beobachteter</li> </ul>	<p><b>Klimaauswirkungen</b></p> <p>Wesentliche beobachtete und/oder für die Zukunft verstärkt erwartete Auswirkungen des Klimawandels</p> <ul style="list-style-type: none"> <li>5 Veränderte Aktivitätsmuster von Tropenstürmen</li> <li>6 Intensivierung von außertropischen Stürmen</li> <li>7 Zunahme von Starkniederschlägen</li> <li>8 Zunahme von Hitzeextremen</li> <li>9 Zunahme von Dürren</li> </ul>	<p><b>Beträchtlicher Meeresspiegelanstieg</b></p> <p>Auftauen von Permafrostböden</p> <p>Günstigere Bedingungen für die Landwirtschaft</p> <p>Ungünstigere Bedingungen für die Landwirtschaft</p> <p><b>Politische Grenzen</b></p> <ul style="list-style-type: none"> <li>— Staatsgrenze</li> <li>— Staatsgrenze, umstritten (politische Grenzen nicht verbindlich)</li> </ul>	<p><b>Städte</b></p> <ul style="list-style-type: none"> <li>□ Störmer ≥ 1 Mio. Einwohner</li> <li>■ Störmer 100.000 bis 1 Mio. Einwohner</li> <li>● Störmer &lt; 100.000 Einwohner</li> <li>●●● Berlin Hauptstadt</li> <li>□ München Münchener-Rück-Außenstelle</li> </ul> <p>Städtegrößenlegende</p> <p><small>Bathymetrie: Amante, C. and B. W. Sakin, ETOP Minute Global Relief Model, Procedures, Data &amp; Analysis, National Geophysical Data Center, NES U.S. Department of Commerce, Boulder, CO, Aug. 2000          Außertropische Wirbelstürme: NOAA, Global Tropical Cyclone Intensity, NOAA/NASA/USFOTD Science To MSPG/CHC, Temperatur/Wiederkehrzeit 1979–20          Research Unit, University of East Anglia, Norwich</small></p>
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## The globe of natural hazards on DVD

— Since 1978 Munich Re has published the “World Map of Natural Hazards”, a benchmark in the field of geo risks research\*. Now a new “Globe of Natural Hazards” is available on DVD – a tool for the identification and evaluation of complex risks from natural hazards worldwide. The global natural hazard maps are presented against the background of a satellite image globe.

New features include the representation of the hazard complexes of hailstorms, tornadoes, winter storms, and coastal hazards. Flood risk has been visualised for the first time in selected countries. For easier orientation, the user can zoom in on any point in the world or search in a comprehensive database with more than 800,000 locations and cities.

\* See: [www.munichre.com/de/ts/geo\\_risks/risk\\_management\\_of\\_natural\\_hazards/globe\\_of\\_natural\\_hazards/globe\\_of\\_natural\\_hazards\\_02.aspx](http://www.munichre.com/de/ts/geo_risks/risk_management_of_natural_hazards/globe_of_natural_hazards/globe_of_natural_hazards_02.aspx)

## CRED: Essential core data on mass disasters in the world

— Another important data provider is CRED, the Centre for Research on the Epidemiology of Disasters, a non-profit organisation situated in Brussels. It operates the Emergency Events Database EM-DAT, which was created in 1988 with initial support from the WHO and the Belgian Government. EM-DAT contains essential core data on the occurrence and effects of over 16,000 mass disasters in the world from 1900 to present.

The database is compiled from various sources, including UN agencies, non-governmental organisations, insurance companies, research institutes and press agencies. EM-DAT includes country profiles, for example: In order for a disaster to be entered into the database at least one of the following criteria has to be fulfilled:

- 10 or more people reported killed
- 100 people reported affected
- a call for international assistance
- declaration of a state of emergency.

### CRED country profile Afghanistan

Disaster	Date	No Killed
Earthquake (seismic activity)	30.05.1998	4700
Epidemic	10.04.2002	2500
Earthquake (seismic activity)	04.02.1998	2323
Earthquake (seismic activity)	10.06.1954	2000
Storm	05.01.2008	1317
Earthquake (seismic activity)	25.03.2002	1000
Flood	28.05.1991	728
Epidemic	Jan 00	507
Earthquake (seismic activity)	16.12.1982	500
Flood	31/09/1992	450

Created on: Oct-6-2009. - Data version: v12.07

Source: EM-DAT: The OFDA/CRED International Disaster Database  
[www.em-dat.net](http://www.em-dat.net) – Université Catholique de Louvain, Brussels, Belgium

### Health Status of Populations

Another CRED product is CE-DAT, the Complex Emergency Database. Created in 2003, it monitors and evaluates the health status of populations affected by complex emergencies in order to encourage rational, evidence-driven humanitarian decision-making. CE-DAT is a database of mortality and malnutrition rates - the most commonly used public health indicators of the severity of a humanitarian crisis.

Field agencies use mortality and nutrition indicators to identify and measure the severity of needs in order to prioritize human and financial resources. These indicators have also proved useful in monitoring the extent to which the relief system meets the needs of vulnerable populations and thus reflecting the overall impact and effectiveness of the relief system.

Although databases like NatCat and those operated by CRED are important for international research, experts claim that they do not provide enough information on the man-made and more socio-economic pre-conditions and causes of a disaster, i.e. on the question whether the natural hazards have increased or the terms of settlement in a certain region have changed – turning the hazard into a disaster.

### Identification of Risk Prone Areas

This kind of information would be necessary for a better identification of risk prone areas and an improved disaster risk management. So many experts demand a more integrated approach to data collection for disaster risk management – making much more use of socio-economic and cultural databases and linking them to other, more technical tools relevant to measuring disasters and disaster risk. This new combination of data would lead to a broader and more effective concept of measuring and determining vulnerability.



# "We have to make better use of socio-economic data"

Karl-Otto Zentel is the Chief Executive Officer of the German Committee for Disaster Reduction, the national German platform for Disaster Reduction. Zentel is a strong advocator of more and better data on Disaster Risk Management, especially of a more integrated data approach. In November 2009 the German Committee organised a special congress on "Catastrophes – Data background and Information".



## Mr Zentel, what is the situation to-date on data for Disaster Risk Management?

**Karl-Otto Zentel:** In the past, this aspect was not highlighted very much within the international discussion. The Hyogo Framework for Action refers to the need for better databases and statistics, but in a quite general way. The Central Statistical Offices have not been involved in this discussion so far.

## What were the reasons for this lack of interest?

**Zentel:** In some of the developed countries, the issue of disaster risk and vulnerability is not much acknowledged by politicians. Due to the absence of frequent, great natural hazards, people may feel a bit too secure. In countries like Germany, more effort is put on catastrophe response than on disaster prevention and risk management. In many developing countries the problem lies in the weakness of the statistical systems.

Meteorological data as well as data on climate change are not available. Long-term planning and risk prevention is hampered by the daily struggle against poverty. In addition, a lot of informal settlements and shanty towns in poor countries are not captured by statistics. This makes it difficult to identify and portray risk prone areas.

## What is necessary to improve that situation?

**Zentel:** We need more and better data on disaster risk. And we need a more integrated approach, combining technical with socio-economic and cultural data. What is the social development in a particular region? How, for instance, have settlement and agriculture changed? How does this increase the risk of hazards turning into disasters? This is what we really need to know. If we have general data on forests, this is not sufficient.

We need to know what kind of forest we are going to find in a particular region. In other words: Figures on victims and destruction are not sufficient for measuring vulnerability and for Disaster Risk Management. We need data which helps us to better investigate the causes. Take, for instance, the forest fires in Spain and Greece, which occur each summer. Several factors are involved, but one reason for this growing disaster is the change in settlement and agriculture.

— continued on following page

Integrated statistical approaches can help to better identify earthquake prone areas, for example.  
Photo: CARE Germany



**Looking at the existing databases – how can experts, researchers and decision-makers get access to statistics relevant to Disaster Risk Management?**

**Zentel:** This is another big problem. We do not have a central database. It is often difficult to get information from national sources, like the Central Statistical Offices. In our work we also rely very often on international sources or statistics produced by private institutions and companies. The German Federal Ministry of the Interior is presently working on risk mapping, but it is difficult to get the relevant information. Also the European Union is working on a number of similar projects, such as TIMIS flood.\*

**Knowledge transfer is another important aspect in the discussion about Disaster Risk Management. Can the experience of indigenous peoples for instance be used to improve information systems on disaster risk?**

**Zentel:** Such knowledge is only valid in very small regions – maybe one or two villages. It is very difficult to transfer or extrapolate it to other regions or countries. This is a problem faced by social scientists: How can local and global data be combined?

**Despite all these difficulties, can you perhaps give us a positive example of a country where more effort is put into advanced databases?**

**Zentel:** In Japan, for instance, the disaster risk from earthquakes is captured to a great extent, earthquake prone areas are identified. As a result, many houses have been made earthquake resistant: The municipality of Tokyo, for example, has been put on rubber bumps in order to absorb the energy of shock-waves. But at the same time the problem remains: We not only need better statistics for Disaster Risk Management but also an enhanced political will to focus on this issue and to make better use of existing data. Otherwise, the production of more and more databases will remain futile.

\* TIMIS flood, the Transnational Internet Map Information System on Flooding is a project run by seven partners Luxembourg, France and Germany. The information system will take into account about one hundred rivers and streams. It will compile flood hazard maps, improve on flood forecasts for the Mosel basin, develop a flood early warning system for small river catchment areas, build up a flood GIS and make flood information available on the internet. See: [www.timisflood.net/countries](http://www.timisflood.net/countries).

## With high-tech against catastrophes

— With disaster risk increasing, due to environmental degradation and climate change, more and better use has to be made of High-Tech monitoring and measuring techniques such as risk mapping and Geo Information Systems (GIS), based on remote sensing and satellite pictures as well as space-based technology.

One important initiative is GMES (Global Monitoring for Environment and Security) run by the European Commission. It provides Earth observation data, collected from space (satellites), air (airborne instruments, balloons to record stratosphere data, etc.), water (floats, shipboard instruments, etc.) or land (measuring stations, seismographs, etc.). GMES was started to become more independent from similar US-systems and provide Europe with a sustained and reliable Earth observation system of its own. Existing earth-observation-based services are dispersed at national or regional level and cannot rely on a sustainable observation capacity. With the exception of meteorological services, long-term availability and reliability of information is not guaranteed. GMES, in contrast, aims at providing decision-makers with such reliable data on climate and environmental change to facilitate policies for global safety and citizen's security ([www.gmes.info](http://www.gmes.info)).

The problem with sophisticated technologies and according international databases such as GIS for environmental planning and disaster risk management is that they are often not used. This is due to a lack of awareness about the potential of these technologies and the lack of institutional capacities to implement them. This year, InWEnt has started a blended-learning training on “Geodata for Measuring Environmental Change in Sub-Sahara Africa”. It focuses on the use of Open source GIS technologies and Open source data, such as information gained from remote sensing, to measure environmental change including the identification of risk prone areas.

The UN Spider programme (United Nations Platform for Space-based Information for Disaster Management and Emergency Response) was launched in 2006 as a one-stop-shop to bridge the gap between disaster management and space communities. It uses Earth observation satellites, communication satellites, meteorological satellites and global navigation satellite systems (GNSS) and plays an important role in risk reduction and disaster management. A number of recommendations in the areas of capacity development and knowledge-building are made. Other working areas are data access, data availability and information extraction, enhancing awareness and national, regional and global coordination. UN Spider enforces capacity-building and institutional strengthening, in particular for developing countries.

“In July 2009, UN-SPIDER conducted a technical advisory mission to Togo upon the official request of the Togolese Government to assess the existing use of space-based technology and information for disaster management and emergency response in the country. Following Burkina Faso, Ghana and Namibia this was the fourth UN-SPIDER advisory mission to Africa. The mission was successful in connecting various organisations involved in disaster management within the country and also within the region (...) to undertake collective efforts towards the incorporation of space-based information to support disaster management activities. It also pointed out the need to update national disaster management plans with emphasis on space-based technology and information and boosted efforts to establish a National Spatial Data Infrastructure (NSDI) in Togo.”

Source: [www.oosa.unvienna.org/oosa/unspider/index.html](http://www.oosa.unvienna.org/oosa/unspider/index.html)

## 3.2.2 A new area for environment statistics: The Indian experience

By Dr. Swaraj Kumar Nath\*



— The statistical system of a country is never built up in a day. The building blocks of the modern statistical system are dependent on both the socio-economic needs of a country and international data demands and data comparability in terms of

concept and definition. Further emphasis is drawn from the fundamental principle of official statistics as formulated by the United Nations. Thus, the process of mainstreaming environment statistics within the national statistical system is quite complex in view of the fact that environment statistics have not taken the front seat in the history of national statistical systems in any country but remained within the domain of multiple agencies and in the hand of non-statisticians.

India is no exception.



\* The author is a former Director-General of the Central Statistical Office (CSO), the nodal statistical agency in India . He was instrumental in strengthening capacity development of Environment Statistics and conceptualized Disaster Management Statistics (DMS) within CSO. Contact: eskaynath@hotmail.com



Many tropical paradises are highly risk prone areas and can easily turn into a disaster zone, hit by tsunami, typhoon or flood. Photo: Akuzia

## Genesis of the process

— The Directive Principles of State Policy, an integral and significant element of the Constitution of India as adopted in 1950, contain provisions which reflect the commitment of the state to environmental protection with regard to forests and wildlife. They impose a special responsibility upon the citizens of India to protect and improve their environment.

In order to meet their own requirement for environmental information prior to planning analysis and policy advocacy, concerned government ministries and departments have collected data of relevance to their fields of activity and of direct or indirect relevance to environmental planning. A coordinated effort for the development of a system of environment statistics was, however, absent until the early 1990s.

## Initiation of Process

The foundation of the present day institutional framework or environmental programmes in India goes back to the 1970s with the establishment of the National Committee of Environmental Planning and Coordination immediately after the historic

Stockholm Conference on Environment of June 1972. This conference recommended the collection of data on specific environmental conditions and trends, as a part of the broader, so-called Earthwatch programme.\* The Committee in India was gradually upgraded into a Department of Environment in 1980 and five years later to a full-fledged Ministry of Environment and Forests (MOEF) of the Government of India (GOI). The broad objectives of the Ministry are:

- Conservation and survey of flora, fauna, forests and wildlife,
- Prevention and control of pollution,
- Reforestation and regeneration of degraded areas,
- Protection of the environment,
- Ensuring the welfare of animals.

In order to provide environmental information for decision-making, MOEF established an Environmental Information System (ENVIS) in December 1982. For this purpose, a network of various institutions and organisations was developed in the country actively engaged in work relating to different subject areas of the environment – with a large number of nodes, known as ENVIS Centres.\*\*



The Environmental Information System ENVIS in India helps to protect the country's beautiful nature, here: the region of Darjeeling. Photo: Hoegen

\* The United Nations System-wide Earthwatch mechanism is a broad UN initiative to coordinate, harmonize and catalyze environmental observation activities among all UN agencies for integrated assessment purposes. Through Earthwatch, UN agencies work together on global environmental issues, by exchanging and sharing environmental data and information. UNEP provides the Earthwatch secretariat. Earthwatch was established at the 1972 UN Conference on the Human Environment in Stockholm and reinforced by the 1992 UN Conference on Environment and Development in Rio de Janeiro and its Agenda-21 chapter on Information for Decision Making. See: <http://earthwatch.unep.net/index.php>

\*\* ENVIS has been designed as the National Focal Point (NFP) for INFOTERRA, a global environmental information network of the United Nations Environment Programme (UNEP). In order to strengthen the information activities of the NFP, ENVIS was designated as the Regional Service Centre (RSC) of INFOTERRA of UNEP in 1985 for the South Asia Sub-Region countries.

ENVIS introduced an Environment Management Capacity Building Technical Assistance Project (EMCBTAP) in January, 2002, to extend its reach through the involvement of institutions and organisations in state governments as well as academia, and the corporate and civil-society sector.

### Environment statistics: Initiatives of the Asian Development Bank

The Asian Development Bank, on the other hand, introduced a Regional Technical Assistance (RETA 5555) programme in 1995 for “Institutional Strengthening and Collection of Environment Statistics” to assist eleven selected Developing Member Countries (DMCs) including India, for developing their institutional capabilities to collect, compile and disseminate environment statistics. One of the aims of RETA is to integrate environment statistics with socio-economic and demographic statistics. Another important decision of RETA was that environment statistics might be better appreciated by contrasting them with state-of-environment reports (SOERs) since they are explicitly meant to assess the environmental conditions and to determine the causes and possible cures.

### Institutional Development

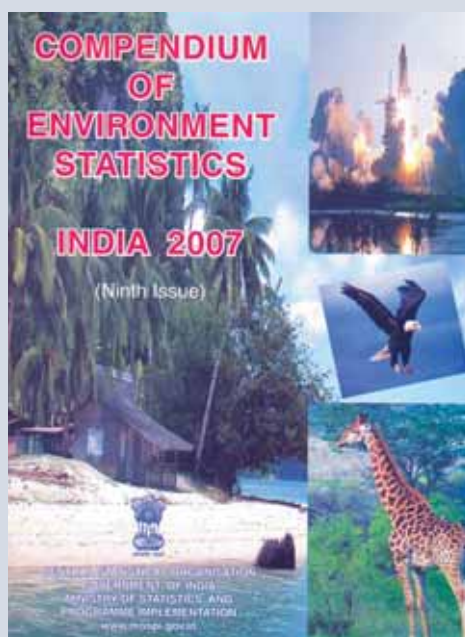
Nevertheless, the development of a statistical system for Environmental Statistics was not an easy task. With regard to the multiple organisations involved, the selection of indicators was a complex issue. In some cases, non-availability of statistical methodology made the task more difficult. Identifying a large number of data source organisations and coordinating activities among them became necessary. India carried out this work very efficiently. Within a few years, India developed a list of indicators. Finally, in 1997 a first issue of the “Compendium of Environment Statistics” was published – a landmark achievement for the Central Statistical Office (CSO) in India. To date it has published eight issues.

It is needless to mention that the present coverage of information in the



Improved information systems and data bases are indispensable for Disaster Risk Management and Early Warning Strategies. Photo: Akuzia

compendium is not very exhaustive with respect to the entire domain of the environment, but it does however provide a glimpse of the present scenario of environmental degradation, its causes and reasons for concern. It also provides the necessary base to bring out the magnitude of the problem. It has become the single-window-publication on Environment Statistics in the country and found to be extremely useful for policy analysts and environment experts working in India. Natural Environmental Resource Accounting (NRA) has also gained significant importance in recent years – particularly in the context of sustainable development.



The “Compendium of Environment Statistics” in India is very useful for policy analysis. It consists of seven chapters: The first two give a general introduction to the environment, its degradation and the impact on human health. The remaining five chapters are on biodiversity, atmosphere, land/soil, water and human settlements. Statistical tables depicting environment data, suitable graphs and charts have also been added to make the publication more user-friendly.

## A new area: Disaster Management Statistics

With disasters and natural catastrophes likely to increase in the future due to climate change and other environmental problems, data on such disasters and their impact become a new challenge for Environmental Statistics – in India as much as elsewhere. Disaster Management Statistics are more and more in demand.

The Indian subcontinent is highly vulnerable to drought, floods, cyclones and earthquakes. The occurrence of disasters in India is quite common and has become a regular feature in terms of certain natural disasters, which take heavy toll on the economy. India has 8041 kilometres of coast-line which is exposed to tropical cyclones. The loss in terms of private, community and public assets through disasters has been astronomical.

With its population representing one-sixth of the world's population, India has to take the necessary steps towards the prevention of danger, as the mitigation or reduction of any risk. India is a vast country and some of its states are even bigger than many countries of Europe – it is not possible for one single ministry to tackle such problems. The Government of India has, therefore, identified a nodal national institution for each kind of disaster as given below:

### Disaster risk in India

- 60 per cent of land area in India is earthquake prone
- 12 per cent is flood prone
- 8 per cent of total area is cyclone prone
- 2 per cent is landslide prone
- 68 per cent of total area is susceptible to drought.
- 40 million hectare of land area prone to floods
- Average annual loss of human life is 3600 (approx.)
- 30 million people are affected by disasters every year
- Average crop area affected annually 1.42 million hectare
- Average annual number of houses damaged 2.36 million
- Out of 35 States and UTs\* in India, 25 are disaster prone.

\* Union Territories: In India, there are 33 States, 28 federal and 5 under central government control.

Source: Publications/reports of Ministry of Home Affairs, Government of India

#### Disasters

- 1 Natural Disasters
- 2 Air Accidents
- 3 Civil Strife
- 4 Railway Accidents
- 5 Chemical Disasters
- 6 Biological Disasters
- 7 Nuclear Accident

#### Nodal Ministries

- Agriculture
- Civil Aviation
- Home Affairs
- Railways
- Environment
- Health & Family Welfare
- Atomic Energy

The National Disaster Management Authority under the Ministry of Home Affairs has taken various proactive measures for Capacity Development. For this purpose, they use various data as and when needed in the absence of any centralized database. At present no training programme has been designed on the use of statistical data along with statistical tools and techniques for efficient management of various Disaster Mitigation and Reduction Programmes.

### The Tsunami Experience

The need for the development of a Disaster Management Statistical System (DMSS) was obvious when I visited the Tsunami affected areas of Andaman and Nicobar islands of India, collecting data for the Economic Census programme. I found the complete demolition of establishments in many islands, due to waves of the Tsunami, which travelled up to a depth of 3 kilometres from the coast and killed more than 10,000 people - both on the islands and mainland of India. Hundreds of houses and establishments were affected - leaving behind a huge trail of destruction. In the absence of any DMS system, it was not possible to make either a quality estimate of loss in the Gross Domestic Product (GDP) or any crude estimate of establishments for an adjustment of economic census results. However, very soon a Disaster Management Statistics (DMS) cell was set up within CSO with the following objectives:

- Policy analysis and policy advocacy on preventative measures to reduce and control the loss due to disasters.
- DMS database should assist in developmental planning for disaster infested / prone areas of the country.
- Development of Disaster Loss Measurement (DLM) system and software. By using satellite imagery, it should be possible to estimate detailed physical and monetary loss and its impact for statistical indicators.





This figure essentially illustrates the four factors hazards, location, exposure and vulnerability which contribute to risk.

- Hazards (physical effects generated in the naturally occurring event),
- Location of the hazards relative to the community at risk,
- Exposure (the value and importance of the various types of structures and lifeline systems such as water supply, communication network, transportation network etc. in the community serving the population, and
- Vulnerability of the exposed structures and systems to the hazards expected to affect them during their useful life.

Source: "Hazards, Disasters and your Community. A primer for parliamentarians", issued by the Government of India, Ministry of Home Affairs, National Disaster Management Division, p.7.

In order to fortify this new area of statistics, CSO went for a collaborative effort with the National Disaster Management Institute (NDMI) of India in the Ministry of Home Affairs. They worked together to identify a list of indicators and to bring out a statistical report. First a brainstorming workshop was held on 27th April, 2007 at New Delhi with the objective of developing a 'National Disaster Statistics System' for India. It should

- provide a quality database system for disaster management,
- provide the measurement of existing hazards,
- develop a disaster risk indexing system,
- develop a policy advocacy tool.

#### Integration of DMS into the Capacity Development Programme of DRM

The Capacity Development Programmes initiated by the Government of India are found to be extremely useful for the respective target audiences directly or indirectly involved in the Disaster Risk Mitigation programme. For the development of a proper planning model for Disaster Management programme and sensitization, correct analysis of statistical data can not be over-emphasized. Such a database in the DMS system will facilitate the estimation of losses on a more objective basis, through impact assessment and GIS.

A DMS helps to make the necessary adjustments to the GDP of a country which has suffered from disaster and losses. Similarly, with DMS and survey tools, it will be possible to assess the impact of post-disaster relief operations. All this requires capacity building on Statistics for Disaster Risk Management (DRM). In this regard, the InWEnt programme entitled "Environmental Planning and Environmental Risk Management in India" – a concept for the inclusion of statistical environmental data into Capacity Building (CB) on Disaster Risk Management (DRM), is both timely and important.

#### Coordination is needed for an effective data flow

India has a huge reservoir of statistical data which could form the database under DMS. At the same time, it will be a great challenge for the CSO to ensure strong coordination among various offices, institutions and organisations, being data sources and data producers. Coordination is needed to ensure an effective and sustainable data flow for the development of DMS and for integrating it into the capacity development programme run by the National Disaster Management Authority. It may be noted that under DMS, both data and meta-data are equally important, together with research outputs on the subject.

# 4 | Statistics to talk about

## Towards an improved producer–user dialogue

### 4.1 Happy birthday P21: 10 years of PARIS21

— In the last ten years, PARIS 21 has pursued its mission of unveiling the importance and beauty of statistics, of making them understandable to a wide audience of stakeholders, and of building statistical capacity among users and producers of statistics in developing countries. PARIS21 stands for Partnership in Statistics for Development in the 21st century. It is an international partnership of policymakers, analysts and statisticians established in November 1999 by the United Nations, the European Commission, the Organisation for Economic Co-operation and Development (OECD), the International Monetary Fund and the World Bank, in response to the UN Economic and Social Council Resolution on the goals of the UN Conference on Development. PARIS21 is served by a Secretariat hosted by the Development Co-operation Directorate (DCD) in the OECD in Paris, France.



Campaigning for better aid:  
Civil society activists at the  
High Level Forum on Aid  
Effectiveness, September 08  
in Accra/Ghana.  
Photo: Hoegen



— Advocacy, Capacity Building, Coordination and Facilitation: PARIS21 assists low-income countries in the design, implementation and resource mobilisation for National Strategies for the Development of Statistics, NSDS – something which, according to PARIS21 Manager Berrou, is not meant to be just another collection of documents but a dynamic process to better coordinate statistical work in a country and strongly enhance the

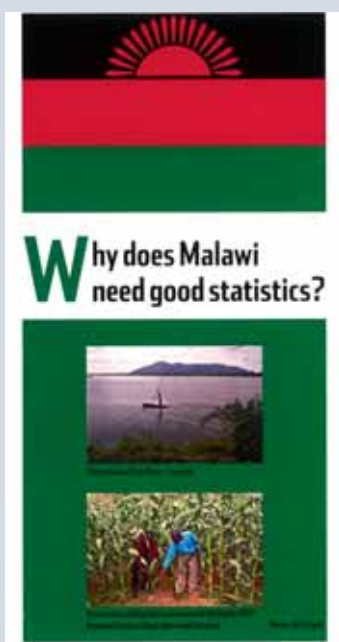
producer-user dialogue (see interview, p. 59). NSDS provides a vision of where the National Statistical Systems, NSS, should be in five to ten years. PARIS21 also aims at strengthening the dialogue between countries and donors to increase statistical support. NSDS in this regard has to be linked with development and poverty reduction plans. In some countries, a better dialogue on national needs for statistics has already started, like in Mali.

## Exchange of Experience

PARIS21 is also encouraging the creation of a National Statistical Council in those countries, where one does not yet exist. Such a council is, for example, planned in Bolivia. Here the exchange of experience between different countries is very important. A new tool, an online platform, was recently developed by PARIS21 and the OECD, where NSO Directors from Central America can directly communicate with each other, share documents, experiences and ideas.

Nevertheless, advocacy work for statistics is not always easy. Within the past ten years PARIS21 has had to deal with political changes and national turmoil (such as recently in Honduras) as well as staff changes in NSOs and other obstacles affecting the development of coordinated and user-orientated National Statistical Systems.

Two examples of good communication: Brochures on statistical issues from Honduras and Guinea.



## Why does Malawi need good statistics?

Use of good statistics leads to

- effective policies and development which benefits the people;
- enhances transparency and accountability at all levels of decision making, which is critical to good governance
- improves resource mobilization and allocation
- is essential for downstream processes such as monitoring and evaluation of development policies and interventions
- enables people to judge the success of government policies and development activities

Source: *Why does Malawi need good statistics?* Booklet of the National Statistical Office, Malawi, prepared in collaboration with PARIS21.

## 4.1.1 National strategies for the development of statistics: Communication takes momentum

One major challenge that PARIS21 is facing after ten years of existence is the communication of statistics to a broader audience. New communication strategies and skills have to be developed by statisticians to transmit their message to the media and the broader public. In many cases, this requires a profound change

and improvement in the communication culture of National Statistical Offices. But, as project manager Anna Sarotte puts it: “Mentality changes are never easy. But they are possible, if you respect ownership. This was always a principle of PARIS21, in the past ten years as well as nowadays.”

# “Statistics have to face new global challenges”

Mohamed-El-Heyba Lemrabott (Abadila) Berrou is the new manager of the Secretariat of the Partnership in Statistics for Development in the 21st Century (PARIS21). In this interview he looks back at the past ten years and talks about new initiatives and major issues that have become important for the Partnership. According to Berrou, communication plays a major role for the new NSDS Guidelines.



### Mr Berrou, how do you evaluate the work of PARIS21 over the past ten years?

**Berrou:** I think that PARIS21 has so far done a lot of very important work with respect to advocacy and the national strategies for the development of statistics, particularly in Africa. However, there is always room for improvement. In my opinion, we need to better coordinate the work of our partners by exchanging more information and thereby making use of the synergies resulting from their work.

### What were the major changes within these 10 years?

**Berrou:** There are two major changes: One: Today we give more support to individual countries, which started only four years ago. Before, we were organizing regional workshops. Our actions nowa-

days are more country-driven. We respond to national requests. Number two: Another new initiative is PRESS, the Partner Report on Support to Statistics.\*

It is a completely new idea and gives countries the power to put more pressure on donors to focus on support for statistics. Unfortunately, the process is not very much used by developing countries, as yet. It would be good to have “CRESS” as well: a Country Report on the Support of Statistics. Up to now, we also see too many coordination groups between different donors. What we would need, is coordination groups with representatives of donors and national governments sitting around the table.

\* See also Chap. 4.1.2

# "We have to look at user needs"

Mohamed-El-Heyba Lemrabott (Abadila) Berrou, PARIS21



A new communication culture has to take the media and the broader public on board – as partners in the development of coordinated and useful National Statistical Systems. Photo: InWent

**PARIS21 supports countries in developing National Strategies for the Development of Statistics, NSDS. Where have your efforts been fruitful so far?**

**Berrou:** We have to keep in mind that NSDS is supposed to be a dynamic process, integrated into Poverty Reduction Strategies. But in some cases, NSDS turned more into a product, i.e. documents, rather than being such a process. We have to come back to that, look at users needs and enhance the producer-user dialogue on statistics. Therefore, new NSDS guidelines will be issued next year as an update of the current situation. The new guidelines also take into consideration new changes and challenges the world is facing, such as the food and financial crises, the need for gender equity and gender statistics, as well as environmental problems and climate change.

**Can you give a concrete example for these changes in the new guidelines?**

**Berrou:** So far, we have few indicators for the agricultural sector. We recommend in our new guidelines to include more stakeholders into the NSDS process, e.g. people dealing with questions of food safety and food security.

**Which role does communication play in the new guidelines?**

**Berrou:** A major one. We want to include a complete new chapter on communication and communication strategies. In previous NSDS documents, not enough emphasis was put on this very important issue. We need for instance to better communicate with ministers and parliamentarians. They take budget decisions and they are therefore key players for the improvement of statistics and statistical support. We also want to increase the promotion on the user side, i.e. to promote the use of statistics.

**Where do you see PARIS21 in ten years from now?**

**Berrou:** I hope that we can concentrate more on coordination and communication as our major tasks in the future. And I hope that, in ten years time, we do not have to talk about NSDS anymore – since they will have become self-evident in every country.

## 4.1.2 The new PRESS: Enhancing donor support

— Statistics are often praised in official speeches as being of paramount importance to policy- and decision-making, especially with regard to the design of poverty reduction plans and development strategies. Yet these avowals are not always matched by reality. Donor support for statistical development in poorer countries still remains quite low. To combat this situation, PARIS21 came up with a new project: PRESS – Partner Report on Support to Statistics. It aims at giving a clearer picture of ongoing statistical support by answering the questions: Who gives what to whom and how much?

### Collecting data on current and planned statistics

For this purpose, a questionnaire was developed which for instance asks about the main objectives of a statistical project as supported by a donor country: What are the statistical areas, what is the approach, how is the financing mechanism, etc. So in this manner, basic data on current and planned statistical activities in specific countries, regions and institutions can be collected. In addition to this, the OECD's Creditor Reporting System for bilateral members is used.



Better aid wanted: Campaigners at Accra/Ghana.  
Photo: Civil Society Network "Better Aid"

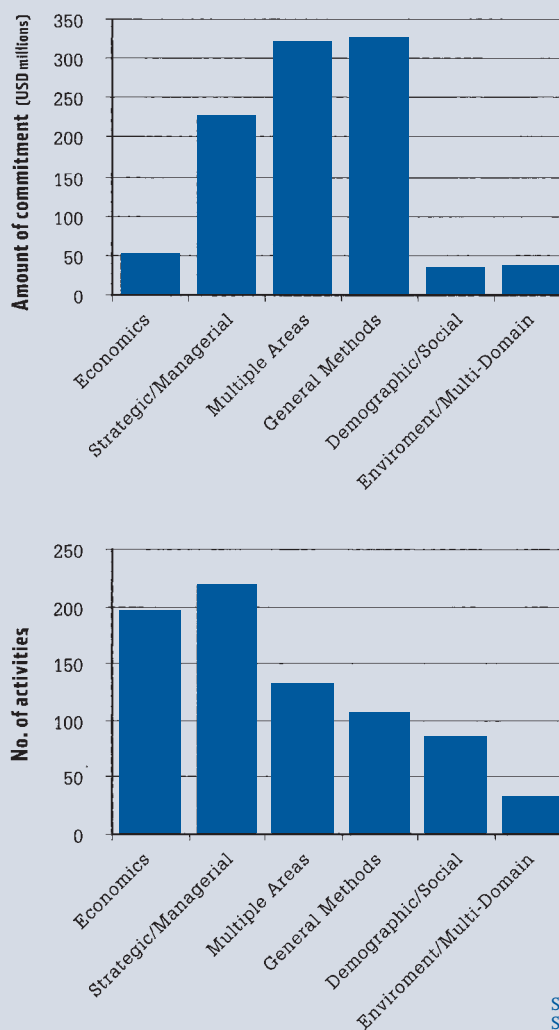
### Less than one per cent of global aid for statistics

The key findings show that financial support to statistics is relatively small – less than one per cent of global aid. Furthermore, statistical support is concentrated in a few countries. Other results are: “Sector statistics and formal statistical training seem to be two key areas not receiving much partner financial support.” And: “The focus of much of the statistical support seems to be toward institutional development and support to large activities (population censuses and household surveys). This could be partly explained by underreporting of statistical components in larger projects or in projects where the decision is taken at the country level and never reported to the partner’s headquarters.” \*

### In line with Marrakech Action Plan

By collecting and publishing these data and results and making them available to financial and technical partners, PRESS aims at getting more efficient statistical systems as well as to enhance and to better coordinate donor support in this domain. PRESS, therefore, is very much in line with the Marrakech Action Plan for Statistics, 2004, and the Paris Declaration on Aid Effectiveness, 2005, which regards donor collaboration as a key prerequisite for “Better Aid”. This was once again confirmed and specified at the High Level Forum on Aid Effectiveness in Accra/Ghana, in September 2008.

## PRESS: How statistical aid is targeted



Source: Partner Report on Support to Statistics – PRESS, published by PARIS21.

### Emphasis on donor collaboration and coordination

According to Jean-Marc Landais, PARIS21 consultant, the PRESS initiative places great emphasis on such an improvement of donor collaboration and coordination in the field of statistics. Landais: “Even

if the financial support is still relatively small, we would not say it is our only aim to increase the money given to that domain. It is not only about big numbers, it is about more effective support for statistics.” The direct impact of PRESS so far is difficult to measure, Landais says. “But it already gave a lot of input for discussion.”

\* Partner Report on Support to Statistics (PRESS), Volume 1, 2008 Round, OECD/PARIS”, p. 4-5. Key Findings of PRESS 2009 became available after finalizing this reader. They indicate a significant increase of financial disbursements to statistical development. For more information contact the PARIS21 Secretariat at [contact@paris21.org](mailto:contact@paris21.org)



# "It's not about big numbers – it's about effective support"

Jean-Marc Landais, PARIS21

## A compliment to recipient countries' own funding

The PRESS report itself also states that, "it is clear, however, that partner financial support to statistical development is a complement to recipient countries' own funding efforts to support their national or regional statistical development. PRESS will be of use to national planners to formulate action plans for statistical development activities in the international context. Thus, the intended audience of PRESS encompasses both national and international stakeholders, including the international donor community, NSDS design teams, and other national policymakers and planners."\*

\* PRESS Report, Volume 1, 2008, p. 15.

## Share of commitments to statistics to ODA bilateral grants, by key partner

Donor	ODA Bilateral Grants	Committments to Statistics	% Stats to Total
Australia	1,773	0.9	0.05
Belgium	1,365	0.2	0.01
Canada	2,573	1.4	0.05
Denmark	1,525	0.2	0.01
France	8,422	3.1	0.4
Italy	2,147	0.3	0.01
Japan	7,660	2.5	0.03
Luxembourg	205	1.4	0.66
Netherlands	4,415	--	--
New Zealand	203	0.7	0.35
Norway	2,119	1.5	0.07
Portugal	198	0.1	0.07
Spain	2,012	0.7	0.03
Sweden	2,838	--	--
UK	8,809	32.8	0.37
US	22,005	0.2	0.00

Source: World Bank, World Development Indicators, 2008, PRESS 2008 results; PRESS report, Vol. 1, p. 35

### 4.1.3 Dissemination does not hurt: The ADP programme

— “Data which is not used, is of no use” \*  
– what seems to be obvious is nevertheless quite often neglected in many Central Statistical Offices. A lot of emphasis is put on data collection and production, but when it comes to dissemination and publication there are a lot of deficits, such as:

- Existing data is under exploited, partly due to inadequate metadata
- Survey methods and concepts are not harmonized,
- Timeliness and frequency of surveys are not optimal.

This is especially true of surveys. In many developing countries, survey programs rarely provide the necessary flow of reliable, timely, comparable and accessible data. The timing of national surveys is rarely optimal, data collection programs lack methodological consistency, and existing data often remain largely unexploited.

#### A better, wider use of survey data

The World Bank and PARIS21 have therefore developed ADP, the Accelerated Data Programme, to address these problems and help countries achieve a better, wider use of survey data. It complements the activities of the International Household Survey Network (IHSN), established to improve the coordination and effectiveness of international survey programmes. ADP is mostly funded by the World Bank and is implemented as a partnership open to other interested agencies.

Even the less developed countries have made great progress on the use of microdata that tell more about everyday's life: Tea pickers in Sri Lanka. Photo: Fotolia



\* Compare InWEnt-Reader Vol. 3, “Encountering what counts”, Statistics between progress and new challenges, Bonn 2008, Chap. 5, Statistics go public, esp. p. 62.



ADP wants to assist countries that do not have a coherent long-term survey programme in strategizing their data collection activities; to build up national capacity in micro-data preservation, analysis, anonymization, and dissemination and to work with national data producers and secondary users on the production of updated estimates of key indicators, by further exploiting existing datasets and collecting new data. The ADP is focused on sample household surveys because they provide estimates of many key outcome indicators, as well as data needed for research and impact evaluation.

### Tools to support the process

One main aim is to develop national data archives in accordance with international metadata standards and good practice. A range of tools and guidelines are available to support the process:

- The Microdata Management Toolkit, a specialized software application for the documentation and dissemination of microdata in compliance with the Data Documentation Initiative (DDI) XML standard.\*
- The National Data Archive (NADA) application, a web-based cataloguing system where users can access micro data – depending on the agency’s policy – and related documentation, with advanced search tools.
- Guidelines on the formulation of microdata dissemination policies.
- Microdata anonymization tools.

\* For more information see [www.ihsn.org/adp](http://www.ihsn.org/adp) and also: [www.ddialliance.org/sp](http://www.ddialliance.org/sp), p. 62.

### Satisfying users' needs

According to François Fonteneau, Programme Officer for ADP and IHSN at PARIS21, adequate microdata management is key in satisfying users’ needs. A great impact can be done in supporting countries efforts in documenting, archiving, and disseminating their resources, including survey microdata. While some resistance still exist, countries like Cameroon, Ethiopia, Nigeria, Philippines, Sri Lanka, have made great progress and are strong advocates in their regions for more transparency. In every case, the key to guaranteeing the good use of statistics is opening up to the public, Fonteneau says. To ensure this, a new communication culture is needed among statisticians: “We have to convince them that dissemination does not hurt.”

## Existing national data archives from African NSOs

Country	Country Data Archive Web Site
Cameroon	<a href="http://www.statistics-cameroon.org/nada">www.statistics-cameroon.org/nada</a>
Ethiopia	<a href="http://www.csa.gov.et/nada/">www.csa.gov.et/nada/</a>
Gambia (The)	<a href="http://www.gbos.gm/nada">www.gbos.gm/nada</a>
Ghana	<a href="http://www.statsghana.gov.gh/nada/">www.statsghana.gov.gh/nada/</a>
Lesotho	<a href="http://www.bos.gov.ls/nada/">www.bos.gov.ls/nada/</a>
Liberia	<a href="http://www.lisgis.org/nada/">www.lisgis.org/nada/</a>
Niger	<a href="http://www.ins.ne/nada/">www.ins.ne/nada/</a>
Nigeria	<a href="http://www.nigerianstat.gov.ng/nada">www.nigerianstat.gov.ng/nada</a>
Senegal	<a href="http://ns.ansd.sn/nada">ns.ansd.sn/nada</a>
Uganda	<a href="http://www.ubos.org/nada">www.ubos.org/nada</a>

## 4.2 Changing communication culture in statistical offices: The examples of Uganda and Ghana

— Statistical information can be a powerful tool. On the one hand, it can be used by politicians for decision-making and evidence-based policy formulation. On the other hand, with access to the right data, citizens can hold their politicians responsible for their actions, thus ensuring democratic participation and good governance.

But all this is only possible, if statistics, data and figures are communicated in a clear, understandable, user-friendly, transparent and appealing way. Professional PR skills and appropriate communication skills are needed by statisticians to complement their dissemination policies. The InWEnt Centre for Economic, Environmental and Social Statistics recognises this and has already held the training course: “PR and Statistics: Building bridges between users and producers”, for three years.

The course has been very successful so far – with some National Statistical Offices already changing and improving their communication culture as an outcome of this training course and the new skills which participants came home with. Thus, “PR and Statistics: Building bridges...” makes a substantial contribution to institution building – an important aim to which InWEnt is very much dedicated.

Talking to each other is important in a globalised world – many NSO offices are developing a new communication culture.

Photo: Akuzia



## 4.2.1 Poems, trainings, a writing contest and a new division: The example of Uganda

By Rosemary Kisakye\*

— A division of Communication and Public Relations was created at the Uganda Bureau of Statistics as part of the entire restructuring of the Bureau. This was shortly after my training in PR and Statistics in Bonn. The division is headed by a Manager, who is a statistician and has two Senior Officers and two Information Officers.

The reason the division was created was the realization of the need by UBOS management to boost its statistical awareness. UBOS is also in its preparatory activities for the 2012 Population and Housing Census, which requires intensified publicity at all levels.

### An interface with the stakeholders

One of the major activities of the Communication and PR division is to handle all public relations activities at the Bureau. This includes an interface with the stakeholders. In addition to organizing publicity activities, we also carry out community mobilization of the public in the various parts of the country.

This we do through meetings with community leaders and opinion leaders. Through community mobilization the Bureau lobbies the support of these leaders to inform the people on the importance of data to national development.



“The training in PR and Statistics was instrumental for shaping my ideas and sharing ideas”, Rosemary Kisakye from UBOS at the end of the InWEnt course in Stellenbosch with InWEnt Senior Project Manager Dr. Uwe Singer. Photo: InWEnt

As a Senior Communications Officer I have been able to organise very successful media workshops for both the rural and urban media which have increased statistical awareness of the population. Drawing from the training in PR and Statistics I have been able to train journalists on how best to communicate statistics, i.e. relating the figures to their subject.

We asked journalists to let their articles and programs be informed by statistical findings or their interpretation. Newspapers, radios and televisions are vital platforms for the public to monitor and evaluate the impact of development programs using the findings of the different surveys conducted by UBOS.

\* Rosemary Kisakye is Senior Communications Officer at the Ugandan Bureau of Statistics, UBOS. She took part in the first InWEnt course on “PR and Statistics”, which took place in 2007/08 in Bonn/Germany and Stellenbosch/South Africa. See also: “Encountering what counts”, *Statistics between progress and new challenges*, InWEnt Reader Vol. 3., Bonn 2008, Chap. 5, pp. 54.

**“The training in PR and statistics was instrumental for shaping my ideas and sharing them with colleagues – ideas which have borne fruit in the UBOS case.”**

Rosemary Kisakye



Media can reach a wider audience within a short period of time (here a view into the studio of Radio Liberia). Statisticians can make good use of that. Photo: Akuzia

### **Going to the countryside: The first Africa Statistics Day in a rural district**

In 2008 and for the first time, the division organised Africa Statistics Day celebrations in a rural district in central Uganda. One of the highlights of the activities was giving meritorious awards to journalists who have used statistics persistently in their reports. In addition, a writing competition on statistical issues for high school students on statistics was conducted. What was interesting was a poem about the importance of statistics written by a teacher in one of the schools where the celebrations were held. The Bureau also organised a blood donation

campaign where blood was given to the regional referral hospital in the area.

The climax was the donation of two delivery beds to this hospital. And the hospital management revealed that they had not purchased a delivery bed in 22 years. The reason we got into a health drive we wanted to show concern of the people's problems who are our respondents, especially mothers who form the bulk of the agricultural labor force.

The speaker of parliament was the chief guest. This was targeted as a way of reaching out to the policymakers. I found the idea of involving the speaker

of parliament by borrowing from the presentation of the lady from the German statistics office. She told us during the training in Bonn that the statistics office had targeted policy makers and that they also have an office at the German parliament. The training in PR and Statistics was instrumental for shaping my ideas and sharing them with colleagues – ideas which have borne fruit in the UBOS case.

## 4.2.2 "The role of the press is paramount": The example of Ghana

By Peter Takyi Peprah\*

— In the first of its kind the Ghana Statistical Service organised a comprehensive training course on census enumeration nationwide for media personnel as a prelude to the impending 2010 Population and Housing Census of Ghana.

### The basis for all effective planning

Population censuses as we know are an indispensable part of a country's statistical programme, providing the basis for measuring the size and characteristics of a country's population, at all geographical levels, for effective planning and decision making. As Ghana prepares to conduct the next Population and Housing Census in 2010, it was realized that a comprehensive public education and advocacy is the key to ensuring informed participation of the people and accurate reporting in our communities, both paramount in all aspects to achieve complete coverage of the census.

### Powerful tools for public education

Therefore with the current proliferation of all forms of media for information transmission including print, radio, television and other electronic forms like the internet, the Ghanaian media was identified as a powerful tool for public education on the census. Once the media understands the definitions of terms in the questionnaire of the 2010 Population and Housing Census,

the NSO will be able to reach diverse audiences on what the census entails – what it is and what is not; who are to be counted and who are not to be covered; how the counting is done and over what period; what types of information are required and how the relevant terms are defined for the census, making the media a key and much needed partner in the conduct of a successful census.

### Promoter of success and promoters of failure

It is clear that when we talk of getting the message about any programme to the public, the role of the press is paramount. They are the promoters of success as well as promoters of failure. A successful outcome of a national exercise is to have a journalist as a team player and that is exactly the strategy adopted by the Ghana Statistical Service to enhance national development. In the light of this, the Census Coordinating Team of Ghana embraced the idea to work closely with the media right from the preparatory stages of the census through until the census results and any information about the exercise are released or disseminated.

The training workshop was structured to be very interactive. The resource persons were staff of the NSO who were directly involved in the preparatory activities of the 2010 Census. Media personnel as



"The benefits from the Census Media Workshops were enormous", Peter Takyi Peprah in his office in Accra. Photo: Hoegen

\* Peter Takyi Peprah, Ghana Statistical Service (GSS), participated in the second InWEnt course on "PR and Statistics", in December 2008 in Bonn.

The participants of the 2nd InWEnt training course on “PR and Statistics”. December 2008 in Bonn.  
Photo: InWEnt



trainees were asked to discuss the following questions:

- Which problems does the media envisage during census enumeration?
- For a successful 2010 Population and Housing Census, what is the role of the media?

Five InWEnt alumni, all participants of the 2008 and 2009 courses on “PR and Statistics” – Sylvester Gyamfi, Nkansah Marfo Yentumi, Angela Otchi, Anthony Amuzu-Pharin and Peter Takyi Peprah – played an influential role in the organisation of this important training course largely as a result of the Public Relations and Statistics training conducted by the InWEnt Centre for Economic, Environment and Social Statistics. They specifically benefited from several press writing, radio and media training exercises, which they had gone through during the course – these all aimed at developing user-friendly messages, information and PR material

**“A mere collaboration and networking with the media will not yield the fullest and a fruitful result unless media practitioners are well trained on census taking. Once the media have a better appreciation of the census it will be able to educate the public on the relevance of the census and the need for all stakeholders and the general public to support the process.”**

Remark by one Government Statistician at one of the Regional Census Media Workshops in Ghana



## "Five InWEnt alumni, all participants of the 2008 and 2009 courses on PR and statistics, played an influential role in the organisation of this important training."

Peter Takyi Pephrah

while also ensuring a minimal use of technical terms. This experience, acquired during the InWEnt training, was brought to bear on the programme together with the input of the Census Coordinating team.

### People of all walks of life

The NSO and for that matter the government of Ghana have derived an enormous benefit from these Census Media workshops. Information was transmitted to the public through all channels of communication in the country such as print, radio, television and the internet. The media were made to understand that the Population and Housing Census is a laborious exercise which requires the co-operation of all segments of the population including individuals and households. We must reach people of all walks of life including men and women, school children, young and old, those living in the cities, towns, villages, the scattered settlements as well as those living in forest reserves.

### Media is the most important group

Prospective respondents in census operations whether individuals or households need to be aware of the content of the questionnaires so as to adequately prepare to meet the interviewers. As a result, the scaling-up of public education and publicity programs to sensitize the public on the counting exercise is vital. The media is thought to be the most important group to reach out to wider audiences within a limited period of time.

Dialogue is key: Workshops between statisticians and media people help to get a better understanding of each others work.  
Photo: InWEnt



Nevertheless running this workshop for press personnel does not mean that the occasional hustle and bustle between journalists and NSOs will not arise. Heads will be knocking against each other occasionally, but it can be managed professionally and I am sure its sustainability is also assured. The promotion of the NSO-media relationship in Ghana is like bringing back wide smiles of reunited families, or bringing long kisses of lovers who meet again with watchful looks of those who are still seeking their dear ones as described by the French-Ivorian comic writer Marguerite Aboutet.

One may ask: Where do we go from here? It is going to be strengthened I believe. Evidence may be linked to where we started and where we are now with the media. An achievable score is the effective collaborative structure the NSO-Ghana has put in place to collaborate effectively with the media in releasing the Consumer Price

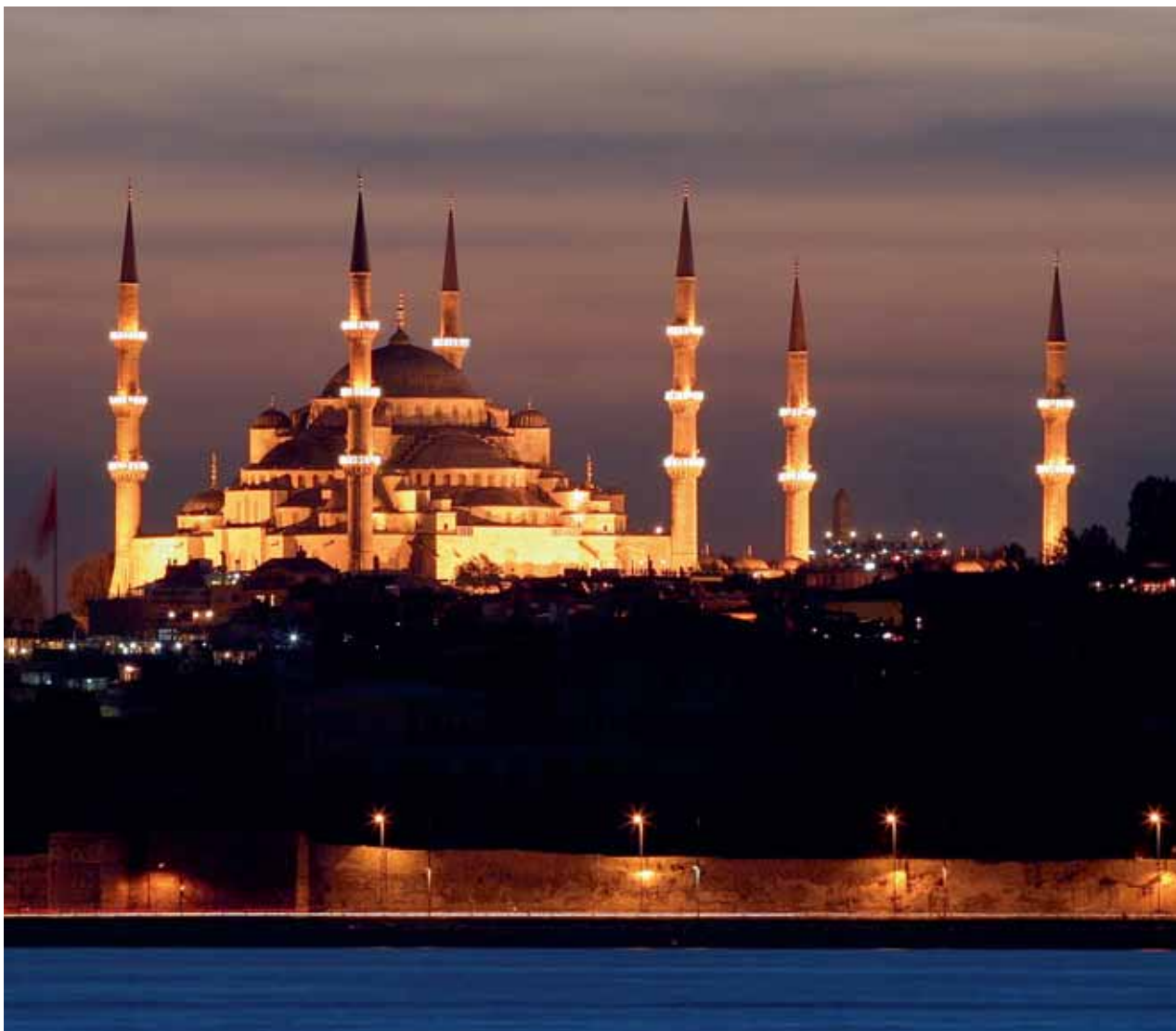
Index (CPI) and Inflation on a monthly and timely basis. This is one good example of the NSO-media relationship. The question is, if this relationship is already established, why cannot it be deepened to cover other important exercises the NSO is committed to, like the Census.

### Media relationship will look brighter

As the 2010 Population and Housing Census of Ghana draws nearer every day, the slogan: 2010 Census Our Business, Your Business, Everyone's Business becomes the talk of the day. I am confident that the future of the NSO and the media relationship in Ghana will look brighter in the years to come once it has been identified as a powerful network to reach a wider audience – where the dissemination of information to the general public is required in order to provide a basic knowledge about the benefits of statistics.

# Annex

The Istanbul Declaration  
30th of June 2007





## ISTANBUL DECLARATION

**We, the representatives of the European Commission, the Organisation for Economic Cooperation and Development, the Organisation of the Islamic Conference, the United Nations, the United Nations Development Programme and the World Bank,**

**R**ecognise that while our societies have become more complex, they are more closely linked than ever. Yet they retain differences in history, culture, and in economic and social development.

**W**e are encouraged that initiatives to measure societal progress through statistical indicators have been launched in several countries and on all continents. Although these initiatives are based on different methodologies, cultural and intellectual paradigms, and degrees of involvement of key stakeholders, they reveal an emerging consensus on the need to undertake the measurement of societal progress in every country, going beyond conventional economic measures such as GDP per capita. Indeed, the United Nation's system of indicators to measure progress towards the Millennium Development Goals (MDGs) is a step in that direction.

**A** culture of evidence-based decision making has to be promoted at all levels, to increase the welfare of societies. And in the "information age," welfare depends in part on transparent and accountable public policy making. The availability of statistical indicators of economic, social, and environmental outcomes and their dissemination to citizens can contribute to promoting good governance and the improvement of democratic processes. It can strengthen citizens' capacity to influence the goals of the societies they live in through debate and consensus building, and increase the accountability of public policies.

**W**e affirm our commitment to measuring and fostering the progress of societies in all their dimensions and to supporting initiatives at the country level. We urge statistical offices, public and private organisations, and academic experts to work alongside representatives of their communities to produce high-quality, facts-based information that can be used by all of society to form a shared view of societal well-being and its evolution over time.

Official statistics are a key “public good” that foster the progress of societies. The development of indicators of societal progress offers an opportunity to reinforce the role of national statistical authorities as key providers of relevant, reliable, timely and comparable data and the indicators required for national and international reporting. We encourage governments to invest resources to develop reliable data and indicators according to the “Fundamental Principles of Official Statistics” adopted by the United Nations in 1994.

To take this work forward we need to:

- encourage communities to consider for themselves what “progress” means in the 21<sup>st</sup> century;
- share best practices on the measurement of societal progress and increase the awareness of the need to do so using sound and reliable methodologies;
- stimulate international debate, based on solid statistical data and indicators, on both global issues of societal progress and comparisons of such progress;
- produce a broader, shared, public understanding of changing conditions, while highlighting areas of significant change or inadequate knowledge;
- advocate appropriate investment in building statistical capacity, especially in developing countries, to improve the availability of data and indicators needed to guide development programs and report on progress toward international goals, such as the Millennium Development Goals.

Much work remains to be done, and the commitment of all partners is essential if we are to meet the demand that is emerging from our societies. We recognise that efforts will be commensurate with the capacity of countries at different levels of development. We invite both public and private organisations to contribute to this ambitious effort to foster the world’s progress and we welcome initiatives at the local, regional, national and international levels.

We would like to thank the Government of Turkey for hosting this second OECD World Forum on “Statistics, Knowledge and Policy”. We also wish to thank all those from around the world who have contributed to, or attended, this World Forum, or followed the discussions over the Internet.

Istanbul, 30 June 2007

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Signed during the II OECD World Forum on “Statistics, Knowledge and Policy”

## Links

- [www.abs.gov.au](http://www.abs.gov.au)
- [www.beyond-gdp.eu](http://www.beyond-gdp.eu)
- [www.die-gdi.de](http://www.die-gdi.de)
- [www.dkkv.org](http://www.dkkv.org)
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## Imprint

### Published by:

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Internationale Weiterbildung und Entwicklung gGmbH  
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November 2009

### Text/Editor:

Monika Hoegen, Cologne  
[www.monika-hoegen.de](http://www.monika-hoegen.de)

### Design:

RDN Agentur für Public Relations  
[www.rdn-online.de](http://www.rdn-online.de)

### Printed by:

Silberdruck oHG  
Am Waldstrauch 1, 34266 Niestetal

# InWEnt – Qualified to Shape the Future

InWEnt – Capacity Building International, Germany, is a non-profit organisation with worldwide operations dedicated to human resource development, advanced training, and dialogue. Our capacity building programmes are directed at experts and executives from politics, administration, the business community, and civil society.

Our Programmes – 60 per cent of all our programmes are implemented at the request of the Federal Ministry for Economic Cooperation and Development (BMZ). In addition, we conduct programmes for other German federal ministries and international organisations. We are also working in cooperation with the German business sector in public private partnership projects that can be designed to incorporate economic, social, and environmental goals.

The programmes for people from developing, transition and industrialised countries are tailored to meet the specific needs of our partners. We offer practice-oriented advanced education and training, dialogue sessions, and e-Learning courses. After the training programmes, our participants continue their dialogue with each other and with InWEnt via active alumni networks.

By offering exchange programmes and arranging scholarship programmes, InWEnt also provides young people from Germany with the opportunity to gain professional experience abroad.

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InWEnt gGmbH is headquartered in Bonn. In addition, InWEnt maintains fourteen Regional Centres throughout the German Länder, providing convenient points of contact for all regions. Our foreign operations in Beijing, Cairo, Hanoi, Kiev, Lima, Managua, Manila, Moscow, New Delhi, Pretoria, São Paulo, and Dar es Salaam are usually affiliated with other organisations of German Development Cooperation.

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