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**Strategies for Promoting and Optimizing the Use of Social Statistics for  
Policy Planning in West Africa \***

by

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# **Strategies for promoting and optimizing the use of social statistics for policy planning in West Africa**

Gabriel Pictet, PhD<sup>1</sup> and Robert Pond, MD<sup>2</sup>

This paper first discusses the issue policy planning and its use of statistics from the point of view of a social scientist working in a National research institute in Burkina Faso. One of this institution's mandates is to inform policy with relevant statistics and social analyses. The paper then suggests strategies for improving the production and use of social statistics for policy planning in West Africa. Opinions expressed here are those of the authors and do not necessarily reflect the position of their Institutions.

## ***How are social statistics currently used in policy planning?***

### **Social statistics for policy planning: who needs them?**

Common wisdom suggests that:

- local governments need social statistics to identify and estimate current and future demand for social services, to prioritize, to negotiate state subsidies and donor support, and assess the local population's well being;
- national governments need social statistics to identify social needs, to allocate budgetary resources equitably (i.e. to the provinces or districts that need them most), to prioritize, and assess the impact of policy on poverty alleviation.
- ministries need social statistics to negotiate increases in their budget and to maximize donor support;
- donors need social statistics to justify the appropriateness of their aid decisions;
- parliament needs social statistics to hold the Government accountable to its handling of social policy.
- civil society (trade unions, civil rights movements, political parties, NGOs, lobbies, think tanks, academics, etc.) need social statistics to advocate policy and pressure the Government into delivering whatever it promised before and during the latest elections.

The use of social statistics in policy planning and evaluation is therefore crucial to coordinate local and national government action and measure the overall impact on the population. Social statistics are also necessary to secure foreign aid. It is also important in a democracy where citizens and their representatives are empowered to improve society.

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Contrarily to project planning (see appendix 1), policy planning is a political process in which stakeholders debate what is best for society. A policy is the expression of the common will to improve society, as mediated by representatives of the people (parliament, government, civil society, trade unions, traditional leaders). What is the role of statistics in the process of policy planning in a West African country where democracy is in its early stages and “modern” civil society still in its infancy? It is only when we understand how policy is currently made in the West African context that we can discuss the strategies for meaningful use of social statistics in policy planning.

### **Policy planning as a political process, statistics as a political tool**

If the formulation of policy is the result of a political process to improve society then (1) policy documents should refer to a vision of society that the people aspire to and (2) social statistics used in these documents can capture progress towards that vision. If the process is truly democratic then one would expect the vision to be supported by local values. Are Burkinabe social policies based on Burkinabe values? The Education policy refers to the right for all children to have a primary education (see appendix 2 for details). Individual rights thus expressed do not refer to local values<sup>3</sup> but to “universal” rights. Social statistics, even when aggregated, are based on the individual (e.g. number of individuals exposed to a social service/total number of targeted individuals). Social statistics use the individual as the unit of analysis. The individual (rather than the family or any other social group) is the target of all social policies. The Burkinabe education policy will be evaluated positively if the proportion of children going to primary schools increases from 40.9 % in 2000 to 70% in 2009. It will be said to be more equitable or pro-poor if the disparities decline in enrollment rates among the individuals of the poorest households compared to the individuals of the richest households. It will be more equitable in terms of gender if the proportion of girls enrolled in primary schools increases by a greater amount than that of boys. The individualistic and equalitarian vision of social progress, supposedly imposed by westernization and said to be at odds with African values is perpetually criticized by the local elite. Yet the same elite does not question in the least the ideological and cultural biases of the social statistics that riddle policy documents.

Can the social statistics used in policy planning capture progress based on local values? While this technical challenge is beyond the scope of this paper, we would like to point

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<sup>3</sup> Social statistics are implicitly based on the notions of individuals’ rights and do not take into account group solidarities and peoples’ collective survival / coping strategies. Policy planning is centered exclusively on the needs of individuals and on individual-state relations – e.g. women’s access to contraceptives, children’s enrollment in the public or state-regulated school system. No existing social statistics can capture how families and other social groups access resources as a group and then reallocate the benefits among their members. For example isn’t it more rational for a poor family to invest in one child’s education ; selecting the one that has the most potential to get a university degree and a high paying job rather than sending all children to primary school after which they might all end up jobless ? A low enrollment rate does not necessarily reflect low educational investment or low demand for schooling. In the same way, comparisons between sub-populations is misleading. The urban/rural comparison, for instance, does not take into account the intensive exchanges between the two settings.

out its importance to the Africans who seek an alternative to the West's individualistic vision of social progress.

Policy planning is the expression of national sovereignty and of democracy. The process of policy formulation is an indication of the level of national sovereignty and of citizens' empowerment. A strategy to improve the use of social statistics in policy planning should above all aim **to give local citizens, civil society groups, academics and parliament free access to meaningful, independently produced and audited statistics**. It should build capacity among these groups to critically analyze the meaning of the social statistics that are most widely used and the understanding of the cultural values on which they are based. Modern history has demonstrated how statistics can become the instruments of arbitrary power if they are not independently audited, conceptually challenged by academics, universally accessible and understood by a critical mass of citizens (indeed, more than statistics, policy planners and citizens need meaningful and empirical social analyses). It is our impression that social statistics are sometimes used in West Africa to mystify citizens and donors rather than to enlighten rational policy decisions. The impression disappears when the process of production and circulation of statistics is transparent and clearly documented.

### **The production and use of statistics in West Africa is donor driven and opaque.**

An attentive reading of Burkina policy documents suggests that policy planning in Burkina Faso and its use of social statistics is donor driven<sup>4</sup>. As stated above, policy objectives are based on specific cultural norms – individual rights, an implicit social contract between individuals and the State, social justice, the idea of social progress ; empowerment, democratic ideals and community participation, etc. Intent on securing donor money, decision makers avoid questioning these ideals openly. Whether these statistics make any sense is irrelevant.

**The production of statistics is also donor driven.** National and Local governments bear the burden of “proof” to access international resources, and bilateral and multilateral agencies need to justify their aid decisions. The social statistics must above all meet the donor community's need for empirical proof of the success of its own aid agenda. West African statistics bureaus and research institutes have become the implementing subcontractors of international institutions rather than the research and planning arms of the local and national governments. Indeed, social statistics and knowledge on West Africa in general is still being produced, validated and freely circulated by foreigners, most often outside of West Africa<sup>5</sup> (see figure 1).

**Most datasets are not accessible.** Datasets are hoarded by national statistics bureaus or these same bureaus generate income by selling at premium prices partial datasets, aggregate census data or sampling frames for household surveys. The same statistics

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<sup>4</sup> The World Bank is also considered a donor even if technically it is a credit institution.

<sup>5</sup> Or by African nationals that have been hired by International or foreign institutions. The West African brain drain is in part due to the lack of capacity in West Africa to attract and maintain teams of competent social scientists. With the brain drain from the sub-region, West African institutions find it exceedingly difficult to attract and maintain teams of social scientists and public health researchers with the full range of skills required.

bureaus often lack the capacity and/or the motivation to analyze or disseminate the full range of data they are hoarding. An example of this is described in Appendix 3<sup>6</sup>. This is unethical as the production of the datasets is largely funded on donor (taxpayer) money. Moreover, this makes it extremely difficult to independently audit the quality of the statistics used in policy planning and monitoring. The hoarding of census and household survey data disempowers citizens and prevents local and international research institutes from providing the country with meaningful social analysis and evidence-based policy recommendations.

**While there are very competent social scientists in West Africa, few local and regional Institutions have the capacity to analyze datasets and to provide meaningful statistics.** This expertise is insufficiently tapped by ministries when they are elaborating sectoral policies

### *A strategy for improving the use of social statistics for policy planning in West Africa?*

A strategy to improve the use of social statistics in policy planning obviously aims to improve policy planning and evaluation by encouraging the proper use of valid statistical tools. The outcome of such a strategy would be that

1. the actors involved in policy planning are “statistic-literate” and understand the concepts behind the numbers;
2. valid statistics and the datasets they are derived from are readily available for public scrutiny;
3. more meaningful statistics are designed and produced; i.e. that they are culturally relevant and that they can measure progress towards policy goals defined by West Africans.

Table 1 summarizes a series of actions that can be taken at local; regional and international level. These actions would aim to:

- Continue to encourage research on appropriate and culturally relevant social indicators for policy planning in West Africa (regional or sub-regional level). Social research should not be restricted to providing statistics but should inform policymakers on the relevant social dynamics that they need to take into account in policy. This in turn implies that social scientists should be better trained to provide meaningful, concise and practical information and evidence-based policy recommendations rather than lengthy, theoretical academic papers and reports. Recommendations should be based on social indicators that go beyond national rates and means, and provide, for example, indicators of social equity, of social vulnerability, of family-level coping strategies<sup>7</sup>.

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<sup>6</sup> The same appendix points to the DHS analysis of anthropometric data as an example of how data can be made public domain and widely used. Appendix 3 also notes from the DHS example that unless investment is made in local capacity, the statistics bureau and even the ministry of health may still not be capable of analyzing the data.

<sup>7</sup> For example : indicators of child fostering, intra-household resource allocation and inter household transfers, school enrollment strategies, etc.

- Enhance analytical capacity at the national level. This will empower national stakeholders in Policy planning to mobilize social research findings to design policies according to local context and values, rather than submitting to the donors' priorities.
- Produce better datasets to improve the quality of social statistics by optimizing data collection and analysis. This includes strengthening longitudinal social research platforms such as INDEPTH population observatories and efforts to improve the use of census data (ACAP). Longitudinal survey sites based on demographic surveillance are fundamental as they allow in-depth analysis of specific phenomena at family and community levels. While INDEPTH sites are not representative of national populations, the quality and explanatory power of DSS and DSS-linked longitudinal panel datasets are such that their use by policymakers will certainly develop in the years to come<sup>8</sup>. More researchers and policymakers should therefore be trained to use longitudinal datasets and statistics. Donors should be encouraged to invest more in operations that provide quality data and longitudinal datasets than in supporting multiple redundant and often poor quality cross-sectional surveys.
- Donors should continue to finance data collection and analysis, although they should channel a larger percentage of their funding through those ministries (e.g. Health, Education, etc...) which have the mandate and should have the competence to analyze sectoral data and formulate sectoral policy.
- Donors should insist that the datasets they have funded are placed in the public domain and become widely accessible to researchers after a minimum delay (e.g. two years after the datasets are declared valid -- cf. DHS).
- Specifically, ensure access to and facilitate use of existing census (or census samples) data to improve and validate demographic projections at national and local levels. This is vital in West African countries where censuses are conducted every ten years or more. Without rigorously estimated population age structures, most social statistics are misleading.

To conclude, the United Nations can play a central role in coordinating international and regional efforts to improve the use of social statistics in policy planning. This effort would involve bilateral and multilateral agencies that usually fund the production of statistical data; and national or regional research institutes that produce and use these data. It should also aim to develop analytical skills among policy planners so that they may question the meaning of existing statistics, and build research capacity at regional research centers so that they can design social indicators that are culturally relevant. Finally, donors that have financed the collection of data should ensure access to the datasets and aggregate statistics so that they can be open to public scrutiny.

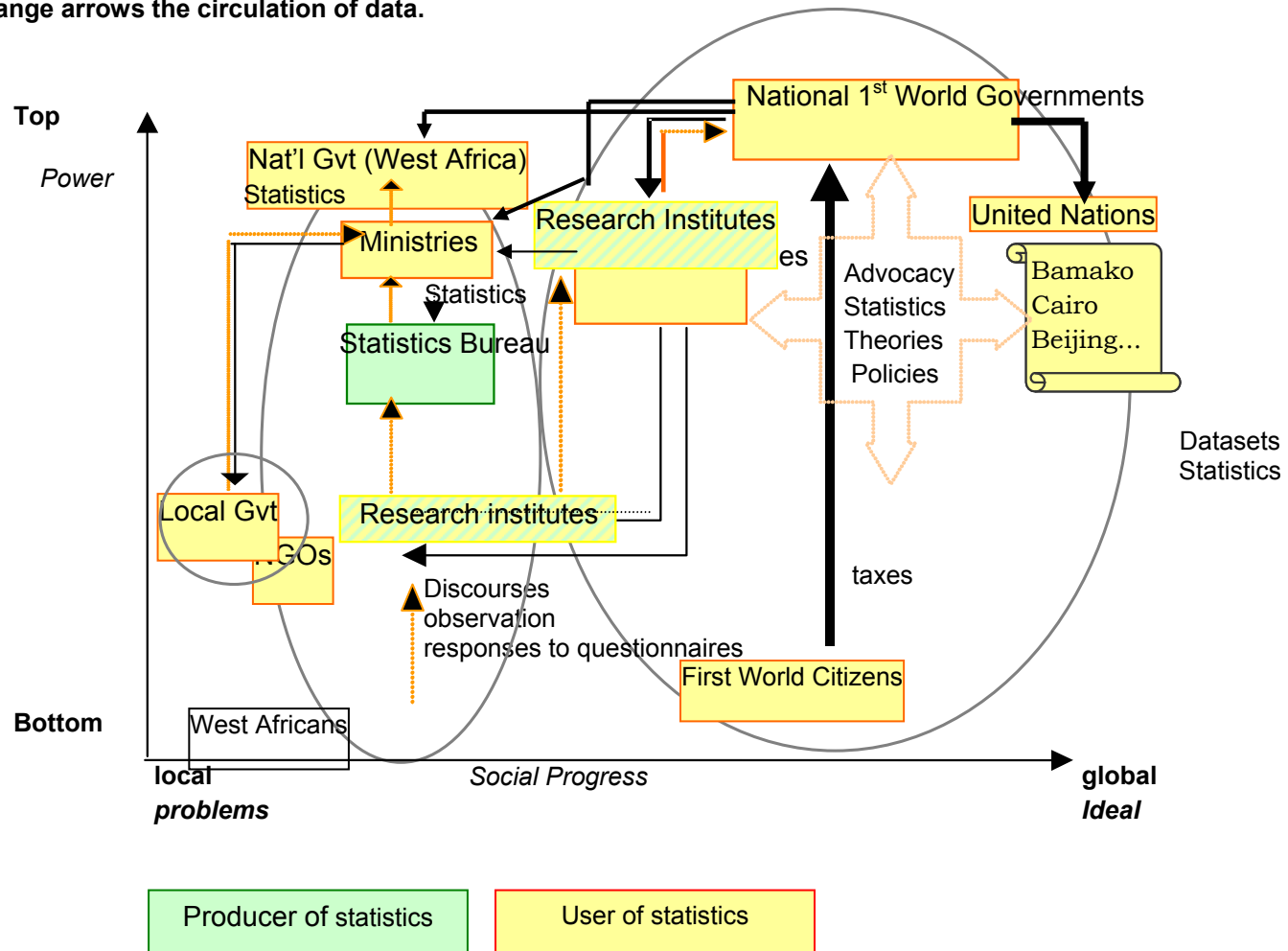
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<sup>8</sup> INDEPTH Network, Population and Health in developing countries. Vol 1. Population, health and survival at INDEPTH sites, IDRC Ottawa, 2002.





Figure 1: Position of Stakeholders in policy planning according to their relative power (vertical axis) and position on the global scale (horizontal axis). The figure shows how donors and foreign governments can influence policy, first by funding the collection of data and the production of social statistics, then by funding the policies that are informed by these same statistics. Black arrows represent the transfers of funds, orange arrows the circulation of data.



**Table 1: Strategy for improving the use of social statistics for policy planning.**

	Local/National Institutions	Regional Institutions	International (UN)
Policy planning	<p>Govt : formulate national policy goals according to people’s aspirations and values as expressed through democratic process.</p> <p>RI : Theoretical and empirical validation of concepts and methods used in policy plan</p>	<p>RI : Regional comparisons, sharing of experience and best practice</p>	<p>Provide on Internet:</p> <ul style="list-style-type: none"> <li>- List of validated social indicators</li> <li>- Guidelines and principals on use of social statistics in monitoring impact of social national policy</li> <li>-Documentation of best practice in policy planning (detailed case studies).</li> </ul>
Social Research : design culturally relevant indicators based on empirical research findings	<p>Ministries: selection of statistical indicators to monitor policy impact</p> <p>SB : encourage use of existing datasets by making them accessible to RI</p> <p>RI: conduct meaningful empirical research on local social dynamics</p>	<p>RI :</p> <p>design statistics based on concepts of regional relevance – social groups, empowerment, analyze using merged national datasets</p> <p>Identify and document biases in statistics, methods and knowledge</p>	<p>Donors:</p> <ul style="list-style-type: none"> <li>- encourage and even finance use of census and existing survey datasets.</li> <li>- put the datasets they have funded in the public domain (cf. DHS)</li> <li>- organize internet access to census and survey datasets.</li> </ul>

	Local/National Institutions	Regional Institutions	International (UN)
Production of social statistics	<p>SB+RI : Validation of field instruments,</p> <p>SB or RI: data collection</p> <p>RI or SB: Cross-evaluation of data quality</p>	<p>RI : Standardization of instruments to improve quality and comparability</p>	<p>Continued finance of data collection and management with an increased percentage financed through the ministries (e.g. Health, Education) which should have the competence and the mandate to analyze sectoral data and formulate sectoral policy</p> <p>Donors: control quality of data collection</p> <p>Coordination of donors to</p> <ul style="list-style-type: none"> <li>- optimize data collection and avoid redundancies</li> <li>- build capacity at local and sub-regional level (gvt, SB, RI)</li> </ul> <p>ensure accessibility of datasets.</p>
Policy monitoring and evaluation	<p>SB : Compilation and analysis of National and Regional statistics</p> <p>RI : independent evaluation of policy impact (e.g. : in terms of equity, gender, ethics)</p>	<p>RI : Regional comparisons, sharing of experience and practice. Lessons learnt. Policy recommendations</p>	<p>Coordination of RI on specific policy evaluations : measurement of poverty, equity, etc. Guidelines ; case studies, best practice, resources, training, capacity building at regional level</p>

	Local/National Institutions	Regional Institutions	International (UN)
Advocacy	<p>RI: provide meaningful evidence-based information to CS groups</p> <p>CS groups: Accountability of local and national gov'ts</p>		<p>CS alliances and NGOs: Build capacity for local CS groups to hold Accountability of local and national gov'ts (e.g. GEGA in health)</p>
Policy research platforms	<p>RI: Longitudinal social and demographic observatories (e.g. UERD's Ouagadougou Population Observatory)</p>	<p>RI : Regional comparisons, sharing of experience and practice. Lessons learnt. Policy recommendations (e.g. INDEPTH and GEGA)</p>	

SB : statistics bureau (national) ; RI: research institution (national or regional) ; CS: Civil Society (local, national or international)

## *Appendix 1*

### *From projects to policy*

West Africa has a long history of social management through *projects*. For example; the health and the education sectors are the domain of project negotiations between international development agencies, bilateral and multilateral partners (usually referred to as donors in meetings) and the relevant ministries. The usual project negotiation process mobilizes generally accepted knowledge on social dynamics. Social statistics are used to identify the specific needs that the project can address, to assess the relative importance of these needs and to provide measurable targets to evaluate the project's performance in terms of impact. Thus, at least in theory, needs assessment and performance evaluation are systematically based on social statistics (e.g. infant mortality rate, school enrollment rates, etc). The mobilization of statistics have become a crucial part of the project ritual. Statistics legitimize the project and their relevance cannot be questioned without undermining the project itself. The appropriateness of a statistical indicator is rarely questioned; but its accuracy often is. Hence, projects often require ad hoc baseline surveys to collect more reliable data and thus more reliable statistical indicators. Project driven surveys are tailored to the planning and evaluation needs of the project. Their samples need not be representative of the population of a region or a country but of the population to be covered by the project. As a result, West Africa has been the site of countless surveys from which a large quantity of statistics have been produced.

It has become more clear in the development field that most isolated projects fail to go beyond the pilot stage, and have little impact on poverty alleviation on a larger scale. The sector wide approach is an answer to the need to coordinate, rationalize and scale-up activities to improve health, education and other basic needs at the national level. In some West African countries (e.g. Senegal, Burkina Faso) the sector-wide approach is implemented in the context of decentralization (devolution of power from the central ministries to regional and local governments), and community participation (i.e. cost sharing). The implementation of a national policy is therefore under the centralizing effect of the sector wide approach and the centrifugal effects of devolution of social responsibilities to the local government and communities. The latter has created a demand for local level social statistics, while the former requires national level statistics that can be aggregated at regional or district levels.

## *Appendix 2*

### *The use of statistics in the Burkinabe primary education policy plan.*

#### **Does Burkina Faso have an education policy?**

Parliament has voted a law on education in 1996<sup>9</sup> that states that education is a national priority, a right, and that formal schooling is compulsory for ages 6-16 and that no child can be excluded from the educational system “wherever infrastructures, equipment, human resources and regulations allow it.” The policy of “education for all” is therefore contingent on the supply of educational services. The Burkina Faso Government adopted in June 1999 a ten year plan (PDDEB)<sup>10</sup> to develop the supply of basic<sup>11</sup> education (i.e. build schools) in the ten provinces that had the lowest school enrollment rates. The very first paragraph of the Plan’s introduction is the list of the institutions that participated in this policy document: “The Ministry of Education, in collaboration with the main technical, financial and social partners of the sector and with the support of national and international consultants have elaborated this plan that will serve as a reference for all the actors of the educational system for the next ten years”. The third paragraph states that “the decennial approach is in conformity with the Organization of African Unity and the special initiative of the United Nations for Africa and the conclusions and recommendations of the General Conference on Education and the Global Strategic Plan for the Development of Education adopted in 1997”.

If one supposes that the above law and ten-year plan are the country’s educational *policy*, then the plan’s introduction suggests that international agencies and consultants played a leading role in the formulation of the country’s educational Policy plan, and that citizens, parents and educators themselves had little say<sup>12</sup>.

#### **How were social statistics used to formulate the ten-year education plan?**

While the 1996 Education Orientation Law does not mention a single statistic, the ten-year plan is riddled with figures, from the very first sentence to the last page. While it would be tedious to list them all, here are the figures, in order of first appearance, that are used in the Situation Analysis sections (pp 6-8), the Constraints and Limits section (pp 9-12), and the Plan’s Strategic Choices chapter (pp 13-22). What is notable in these lists of numbers is the scarcity of population based social statistics (in italics), compared to national accounting and administrative management figures. What is more troublesome is

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<sup>9</sup> Loi 013/96/ADP portant loi d’orientation de l’éducation adoptée par l’Assemblée des Députés du Peuple le 9 mai 1996.

<sup>10</sup> Plan decennal de developpement de l’éducation de base 2000-2009, Ministère de l’Enseignement de Base et de l’Alphabétisation, 1999.

<sup>11</sup> « Education de base » consists of primary level education and alphabetization. For the sake of simplicity, we will use the term primary education (PE).

<sup>12</sup> Teachers and school directors complain that they were not consulted in the ten year planning process (Pilon et al, Rapport de l’Atelier sur l’étude exploratoire sur l’offre d’éducation à Ouagadougou, UERD 2002)

that the document never mentions the source of the data and statistics that it quotes. The statistical indicators that are used are never defined; the computational methods are never explained (numerator? denominator?). There are no words of caution in respect to the interpretation of the statistics and their possible biases or limitations, let alone their conceptual flaws.

**Table 1: Figures presented in the Situation Analysis sections.**

Indicator	Value	Year
<b>Current situation</b>		
Primary Education spending /total Budget	4.89%	1987
	12.38%	1997
<i>School enrollment rate (taux de scolarisation)</i>	40.90%	1997
	16%	1983
Students enrolled in private schools	42192	1991/92
	85238	1997/98
<i>Increase in enrollment of girls</i>	9%	1990 to 1997
<i>Gross enrollment rate of girls</i>	33.40%	1997/98
Average yearly increase of female students	7%	1994 to 1997
Average yearly increase of male students	5.6%	1994 to 1997
Proportion of students that are girls in public schools	31%	1994
	38%	1997
Proportion of students that are girls in all schools	40.21%	1997/98
Mean number of teachers hired per year	1300	not mentioned
Proportion of qualified teachers	18.57%	1990/91
	65.68%	1997/98
Student to teacher ratio	57	1990/91
	47	1997/98
Student to class ratio	89	1990/91
	52	1997/98
Number of textbooks made available to students	4.5 million	1994 to 1998
Number of Teachers Guide books		1994 to 1998
Proportion of primary school students who repeat a grade	17.71%	1990/91
	16.3%	1995/96
Proportion of students graduating from primary school	24%	1990/91
	57%	1995/96
Proportion of students graduating from primary school without repeating a grade (i.e. in 6 years)	17%	not specified
<b>Constraints and Limits of the System</b>		
Number of 7 year olds entering primary school	151043	1997
<i>Proportion of 7 year olds entering primary school</i>	34%	1997
Enrollment rates per geographic zone		1997/98
- Hauts Bassins	59.2%	
- Centre	76.1%	
- Est	18.6%	
- Sahel	15.1%	
Male and female enrollment rates		1997/98
- in urban areas	76% and 66%	
- in rural areas	33% and 21%	
Number and	105695	1995/96
Proportion of primary school students who repeat a grade	16.3%	
Number of PS graduates in a cohort of 1000	383	

Indicator	Value	Year
<i>Proportion of adults who never went to school or to an adult literacy center (rural areas)</i>	90%	<i>not specified</i>
<i>National literacy rate</i>	26%	
<i>Population of primary school age (7-12 years)</i>	2.12 million	2001
<i>As a percentage of total population</i>	18%	
<i>Growth rate of 7-12 age group</i>	2.64%	
Additional teachers	20670	
Additional classes	20130	
Additional funds (billion of CFA)	235	
Needed to meet goal of 70% enrollment by 2009		
<i>Population living below poverty line</i>	44.5%	<i>not specified</i>

**Table 2: Figures presented in the ten-year plan, Strategic Choices chapter.**

Indicator	Value	Year
<b>1<sup>st</sup> strategic choice: strengthen public resources allocated to PE</b>		
PE spending /GDP		
- in Burkina	3.26%	"six preceding years"
- African average	3.96%	
- Anglophone Africa	5%	
PE Budget, including foreign aid/GDP	1.88%	1991
	2.61%	1994
	1.87%	1997
Average "National" PE Budget/GDP	9.7%	1987-1997
	12.38%	1997
	13%	1999*
	20%	2009*
Budget for informal sector/total PE Ministry Budget	0.1%	1997
Foreign Aid for Education/Total foreign Aide	4%	"currently"
Foreign Aid for PE/Total foreign aid <sup>a</sup>	2%	"currently"
<b>2<sup>nd</sup> strategic choice: Seek greater relevance in the orientations and intervention modalities of foreign aid</b>	(no figures)	
<b>3<sup>rd</sup> strategic choice: Improve decision making at sector level</b>	(no figures)	
<b>4<sup>th</sup> strategic choice: Improve the quality and efficiency of the PE system</b>		
Proportion of children that start school but fail to graduate from primary school	26%	"currently"
Average number of years to graduate from primary school	12.3 years	"currently"
Proportion of primary school students who repeat a grade	16.3%	1995
	17%	1997
	10%*	date not specified*
Number of hours of teaching per year		
- Burkina	660	"currently"
- West Africa	864	"currently"
- Objective (minimum)	800*	date not specified*
<b>5<sup>th</sup> strategic choice: optimization of existing infrastructure</b>		
Number of double flow classes <sup>b</sup>	22	1996/97
	884	1992



Indicator	Value	Year
Number of combined classes (2 grades in one class)	1990 115	1996/97 1992/93
<b>6<sup>th</sup> strategic choice: seek greater efficiency in teaching staff management</b>		
Number of teachers to recruit	20671*	2000-2009
Minimum number of years it takes for a teacher recruited with a middle school diploma (BEPC) to become an inspector	24 years	"currently"
<b>7<sup>th</sup> Strive to reduce building and equipment costs</b>	(no figures)	
<b>8<sup>th</sup> strategic choice: introduce significant changes at school level to implement true opportunities for self-teaching<sup>c</sup></b>	(no figures)	
<b>9<sup>th</sup> strategic choice: Master the opportunities of local government funding created by the development of civil society and current devolution actions</b>	(no figures)	

\*Objective

<sup>a</sup> While the plan states that the share of foreign aid allocated to PE should increase, no quantitative objective is stated, whereas there is a quantitative objective for the increase of the domestic share of the budget to be allocated to PE (20% of GDP in 2009).

<sup>b</sup> Two classes share the same classroom, one in the morning, the other in the afternoon

<sup>c</sup> E.g., organizing the school calendar, introduction of vernacular in the classroom, standardization of the curriculum, etc.

### ***Appendix 3: Analysis of Childhood Anthropometric Data Collected As Part of Large National Surveys in Burkina Faso: The EP II versus the DHS II***

#### **Anthropometry provides a robust indicator of the health status of young children**

Authoritative meta-analyses<sup>13,14</sup> of multi-country datasets have shown that the prevalence of low-weight for age among children less than five years of age constitutes the single most important risk factor for global death and disability. Growth faltering is the end result of a range of factors including infection, sub-optimal feeding practices and food insecurity. It is thus an important proxy measurement not only of nutritional challenges but of overall socio-economic circumstances and indeed of the risk of under-five mortality.<sup>15</sup>

#### **Anthropometric data have often been collected as part of nationwide surveys in Burkina Faso**

Given the value of anthropometric indicators, it is fitting that major nationwide surveys in Burkina Faso such as the Enquêtes Prioritaires (EP I of 1994 and EP II of 1998) and the Demographic Health Surveys (DHS I & II) have included measurements of height and weight of children of various ages between 0 and 59 months. The Enquêtes Prioritaires have been designed according to the format of the Living Standards Surveys paid for by the World Bank, UNDP and other donors in multiple countries. The Enquêtes Prioritaires are especially valuable in that they are among the very few surveys collecting nationally and regionally representative data on **household expenditures** from large numbers of households. The DHS (1993 and 1998-1999) has followed the approach developed by MACRO International and has been paid for by USAID. For both genres of survey the donors have awarded contracts to the national statistics bureau which in turn fielded and supervised the data collection teams.

#### **Anthropometric data of the DHS was analyzed by MACRO International; the dataset can be downloaded from their website**

MACRO analysts have extensive experience analyzing anthropometric data. The result is a report<sup>16</sup> with a standard format that includes several tables of key cross-tabulations of anthropometric status by geographic region, mother's educational status, etc... The standardized analytic methods and reporting format permit easy and reliable cross-country and longitudinal comparisons. Since the datasets can be downloaded from the

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<sup>13</sup> Ezzati M, Lopez Ad, Rodgers A, Vander Horn S, Murray CJL. Selected major risk factors and global and regional burden of disease. *Lancet* 2002; 360: 1347-60.

<sup>14</sup> Murray CJL, Lopez AD. Global mortality, disability, and the contribution of risk factors: global burden of disease study. *Lancet* 1997; 349: 1436-42.

<sup>15</sup> Mosley WH, Chen LC. An Analytic Framework for the Study of Child Survival in Developing Countries. In: Mosley WH, Chen LC, eds. *Child Survival: Strategies for Research*. Population and Development Review 1984; 10 Suppl.: S25-45

<sup>16</sup> INSD and MACRO International. Enquête Démographique et de Santé – Burkina Faso 1998-1999. Mai 2000. pp 126- 131

website, independent researchers have easy access to them for assessment of data quality and for further primary analysis. The great disadvantage of the DHS approach is that standardized analysis by MACRO (albeit in collaboration with national statistics bureaus) may do relatively little to build up in-country capacity for independent analysis. This is illustrated by the example of the Enquête Prioritaire.

**Anthropometric data of the Enquête Prioritaire was analyzed by the national statistics bureau itself; 5 years after the survey, it remains quite difficult for other researchers to obtain access to the data.**

The report on the Enquête Prioritaires II<sup>17</sup> devotes 6 pages to the findings from the anthropometric analysis. The pertinent section begins with two pages of tables of mean and median weight and height data such as those shown below:

**Table 4: First section of Table 27 of the report of Enquête Prioritaire II showing the mean weight (kg) by age, sex and urban/rural residence of children under five years of age in Burkina Faso.**

Age months	Burkina Faso			Urban			Rural		
	Boy	Girl	Both	Boy	Girl	Both	Boy	Girl	Both
6-11	6.4	6.6	6.5	6.5	6.0	6.4	6.4	6.7	6.6
12-23	7.7	7.7	7.8	8.3	8.1	8.2	7.8	7.6	7.7
24-35	10.0	9.6	9.8	10.7	10.0	10.3	9.9	9.5	9.8
36-47	12.1	11.5	11.8	12.7	12.0	12.3	12.0	11.5	11.7
48-59	13.4	13.3	13.4	13.9	14.1	14.0	13.3	13.1	13.2
Total	10.7	10.4	10.5	11.1	11.0	11.1	10.6	10.3	10.4

It is hard to discern how such information is to be used by policy makers or other readers. The content of these initial tables is summarized by a single self-evident statement that “There is a regularity to the growth of children.” No other interpretation is offered for the data in these tables. Why were these tables included in the report?

The remainder of the section is similarly confusing. Two different rates of malnutrition are provided relative to two different norms. The report does not identify these norms nor does it suggest which norm should be preferred by policy makers. Several of the statistics cited appear to be implausible (according to “norm 2”, 29% of children less than 5 years of age were found to be acutely malnourished/wasted) or to be the result of missing data or data entry errors (according to “norm 3”, 0% of rural children 6 to 11 months of age were chronically malnourished/stunted; according to “norm 2”, 16% of the same children were stunted).

The section concludes with a quite unconventional and incoherent interpretation of these data.<sup>18</sup> Several questions come to mind. How much experience do the authors have with analysis and presentation of anthropometric data? Do the authors recognize what

<sup>17</sup> INSD. Analyse des Résultats de l’Enquête Prioritaire sur les Conditions de Vie des Ménages en 1998. pp 46-50

<sup>18</sup> For example, special attention is drawn to children who were simultaneously stunted and wasted and the report finds it notable that the percentage of urban boys with this “abnormal” nutritional status (4.4%) was more than 5 times as high as the percentage of girls with this nutritional status (0.8%).

information is most important? Did the authors collaborate with MACRO on analysis of the DHS data?

What is most disappointing is that the report of the Enquête Prioritaire II provides no analysis of how rates of malnutrition vary with household expenditures. An ideal opportunity was missed to document the association between household wealth status and childhood health status. This shortcoming could easily be addressed if only the dataset of the Enquête Prioritaires would be released to other willing and qualified researchers. Five years after the collection of the data, however, access to this dataset remains very difficult. The donors defer to the national statistics bureau on this issue.