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**Ad hoc Expert Group Meeting to Review an Easy Reference Guide for
Mainstreaming Gender in National Accounts and National Budget**

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AN EASY REFERENCE GUIDE

ON

**TOOLS FOR MAINSTREAMING GENDER IN POVERTY REDUCTION
STRATEGIES: *Time Use Studies, National Accounts and National Budget***

(DRAFT)

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Abbreviations and Acronyms

BPA:	Beijing Platform for Action
CGE:	Computable General Equilibrium
ERG:	Easy Reference Guide
ECA:	Economic Commission for Africa
ESCAP:	Economic Commission for Asia and the Pacific
GDP:	Gross Domestic Product
GNP:	Gross National Product
GRB:	Gender Responsive Budgets
GSB:	Gender Sensitive Budget
ICLS:	International Conference of Labour Statisticians
ILO:	International Labour Organization
MDGs:	Millennium Development Goals
MTEF:	Medium-term Expenditure Framework
NANB:	National Accounts and National Budget
NEPAD:	New Partnership for Africa's Development
NGO:	Non-governmental Organization
NSA:	National Satellite Accounts
NMW:	Non-market Work
OECD:	Organization for Economic Co-operation and Development
PRS:	Poverty Reduction Strategies
SAPs:	Structural Adjustment Programmes
SNA:	System of National Accounts
SAM:	Social Accounting Matrix
TUS:	Time-use Studies
UNDP:	United Nations Development Programme
UNSD:	United Nations Statistics Division
VAR:	Vector Autoregressive

What is an Easy Reference Guide (ERG)?

"The Easy Reference Guide (ERG) – an Africa-specific procedural guidebook - is a major output of ECA's programme on Mainstreaming Gender into Poverty Reduction Strategies (PRS) using Time-use studies, National Accounts and National Budget as entry points. ERG offers methodologies, materials and tools to improve the skills of statisticians, national accountants and policy analysts in the collection, analysis and use of gender-disaggregated data and statistics for integrating women's non-market work into these instruments for sound policy making, implementation and evaluation".

- To mainstream women's non-market work (NMW) – "care economy" into poverty reduction strategies, the three tools: *Time-use studies, National Accounts and National Budget* are now considered appropriate planning instruments to use. Non-market work includes childcare, care of the elderly, cooking and voluntary community work, all these activities are regarded as "non-economic".

(i) *Time-use Studies (TUS)*

- Time-use survey, sometimes referred to as "Time Use Studies", "Time Budget Surveys" and "Time Allocation Studies remain the only valid tool for capturing previously hidden activities of NMW. Measures of time-use are measures of "human capital" (human resources). Because 'work' ideally is use of human capital to produce valuable outputs, economic studies of work should cover all market and non-market work, not just paid or market work. And that time-use survey is used to investigate the allocation of time among different tasks (and leisure).
- Time-use data helps in promoting better understanding of the economy and society as follows (Hirway and Ironmonger, 2000):
 - Helps estimate economic production and income for good quality national accounts, which are vital for economic policy-making and research.
 - Helps decision makers recognize and commit resources to NMW. Current labour statistics do not capture all market work and NMW spent in the production of economic goods and services. Thus time-use data can provide a more complete and better measurement of all labour inputs for both market and non-market economies, and thus improved analysis of gender issues and gender-inclusive policies.
 - Helps in policy making and in monitoring the economy and society by providing insights into how social and economic systems operate. They measure and explain the impact of policies on households and people by revealing the day-to-day patterns in life of women and men, and how work is shared.
 - Helps provide the necessary alternative to the mathematical concept of time, which may be foreign to most rural African culture.

(ii) *National Accounts/National Satellite Accounts*

- A second tool or entry point for engendering poverty reduction strategies (PRS) is the national accounts, which are a set of aggregate accounts on the value and breakdown of all income and output of an economy. Thus, national accounts measure Gross Domestic Product (GDP) and contribution of different sectors including NMW to GDP. However, the 1993 System of National Accounts, which is the standard system used by almost all countries, does

not include or poorly account for four areas of work: *domestic work, volunteer work, subsistence production, and the informal sector.*

- Both men and women are involved in all of these sectors, but the methodological issues inherent in their measurement have been most difficult in the first two, which are largely performed by women. Satisfactory means for measuring subsistence agricultural production, which never reaches a market and may be entirely non-monetized, was devised since the 1950s in most countries. But, much of the female component of this type of labour is deemed housework and undercounted. In 1993, when the revised SNA was introduced, production within the household for own consumption is included in GDP. However, the revised SNA continues to exclude own-account production of services – NMW.
- Because women dominate most of the NMW, which is not measured within the central SNA framework, recommendation of standards for measuring those services would promote gender mainstreaming into national accounts and policies. Therefore, their estimation on the basis of an agreed methodology would contribute to increasing the analytical value and the availability of such information for policy makers. In order to achieve better quality, comparability of national accounts data supplemented and supported by *national satellite accounts*, all countries should formulate approaches to be implemented in a uniform manner. Another prerequisite is the availability of solid, reliable data from time use and household budget surveys. These surveys need to reflect the specific characteristics and demands of the regions and countries for which they are implemented.

(iii) *National Budget*

- A third and important tool for engendering PRS is the national budget, which enhances women's contribution to the national economy, making it an important tool for understanding the social content of macroeconomic policies in place. Gender-aware budgets can be regarded as gender-audits of budgets to ensure that:
 - Public expenditure priorities are consistent with development policies that observe equal opportunities policies and allocations within government services.
 - Overall budget framework is pro-poor;
 - Resources are allocated to priority investments that responds to the needs of both women and men including gender targeted allocations (e.g. special programmes targeting women); and
 - impacts of mainstream expenditures cross all sectors and services benefit both on women and men through budget tracking processes.
- National budgets are particularly important in redressing the heavy time burden on women due to existing trade-offs between market and non-market economies. Time burden is a major issue constraining women's economic opportunities including poverty reduction efforts. Gender Responsive budgets (GRBs) as planning instruments can have a significant impact on the heavy time burden of domestic work; allowing women more time to engage in market economy through measures that save time. These measures include improvements in accessibility to energy and water, intermediate transport, labour-saving technologies across the full range of domestic and productive household tasks, which are especially critical for women, and promoting greater gender balance in undertaking domestic work. Reducing this time burden means increasing labour productivity in the household economy and hence reducing poverty. Thus, it is important for poverty analysis to include gender-based time budget analysis, and to give the highest priority to measures that save time.

- Appraisal of GRBs can identify and minimise trade-offs between the market and the household economies and allocate resources to these measures, targeting actors in key sectors—agriculture, energy, the environment and natural resources, transport, and water supply and sanitation. In Tanzania reducing women’s time burdens in a community of smallholder coffee and banana growers increased household cash incomes by 10%, labour productivity by 15%, and capital productivity by 44% (ECA, 2001).
- Econometric modelling based on the results of time-use surveys can identify the interactions between the market economy, the non-market economy and the care economy, and look at the various possible impacts of budgetary measures on the various categories of individuals and households in reference to their time use.
- The underestimation of women’s work within the SNA boundaries of production due to the inadequacy of measurement tools and the neglect of NMW contribute to the invisibility of women’s contribution to GDP. A consequence of this continuing invisibility is the absence of gender-oriented measures in national budgets. To date women’s contribution to the economy is taken as negligible, and thus ignored by policy makers when they elaborate the budget, hence the need to increase visibility and demonstrate the importance of NMW to policy makers. Thus, generating gender disaggregated data and the need for practical guidelines to assess and analyze women’s NMW are considered crucial in addressing development issues in Africa, hence the need for the ERG.

What are the Objectives of the ERG?

- The conceptual framework for the ERG is that of the 1993 UN System of National Accounts (1993 SNA) produced by five international organizations (Commission of European Communities *et al.*, 1993). So the scope of the ERG is economic production as defined by the 1993 SNA. While this provides a firm basis, it restricts a range of “work”, especially NMW, which is not included in the 1993 SNA.
- The development of the ERG drew heavily upon country experiences on time-use studies in and outside Africa, as well as experiences of international institutions that have prepared related documents at regional and global levels. By 2002 in Africa, Benin, Madagascar, Morocco, Nigeria, and South Africa are the countries that have attempted time-use studies. And the institutions include: the United Nations Statistics Division (UNSD), Economic Commission for Asia and the Pacific (ESCAP), Organization for Economic Co-operation and Development (OECD), and the International Labour Organization (ILO). These experiences vary in the extent of the application of time-use data for measuring and imputing economic value of NMW for integration into policy formulation.
- The aim of the ERG is to provide guidance on how Africa-specific best practice for estimating economic value and thus contribution of NMW to GDP, and integrating this information in policy formulation using national accounts and national budget as entry points. The ERG is a Guidebook aimed at sharpening the skills of both producers and users of gender-disaggregated micro- and macroeconomic statistics based on time-use and household surveys. Just as the 1993 SNA provides an international standard for all countries, so it is the intention of the ERG to provide a measurement framework unique to the women-dominated non-market economy in Africa.

- The overall goal of the ERG is to build the capacities of national statisticians, national accountants, policy analysts, and development advocates in the collection, analysis and integration of time-use data and statistics on NMW in NANB.
- As also a training document, the ERG provides the context and justification, as well as the methodologies and tools for generating and utilising time-use gender-disaggregated data and information on NMW. Thus building the capacity of national experts in this regard should become a top priority because knowledge and analytical tools that remain in the hands of a few experts will not be very useful. Likewise, advocacy, without the analytical tools, is likely to be dismissed.
- In particular, the ERG will aim to cover the three tools outlined above: *Time-use Studies*, *National Accounts/National Satellite Accounts* and *National Budget*, which national statisticians, national accountants and policy analysts in Africa will be able to apply in their work on:
 - Guidelines to follow in planning, conducting time-use survey either as an independent study or part of a multi-purpose survey;
 - Guidelines for analysis and integration of gender-disaggregated data on NMW in National Satellite Accounts and National Budget (NANB);
 - Guidelines for identifying policy options, responses and advocacy strategies for NMW
 - Guidelines for analysing the impact of national budget on time use;
 - Guidelines for policy analysts to construct, test and use gender-aware models to evaluate impacts of macroeconomic policies on welfare, growth and poverty reduction in Africa;
 - Country case studies on measurement and valuation of NMW and how such work has provided information for policy formulation and advocacy.
- It must be clarified that the ERG does not claim to present totally new material, or to provide the best solutions in guiding the users. Rather, it is a compendium of existing good practices, with guidance on how they might best be used in an Africa-specific situation. The ERG also does not aim to include all NMW in national accounts, but aims at ensuring that such productive activities are measured and valued to the extent possible.

Why an Africa-specific Guidebook?

- The need for building a standard ERG is urgent to address Africa's unique problems relating to collecting and analyzing data on non-market economy. The following compelling reasons justify the need for an Africa-specific ERG:
 - National accounts data are generally collected, which are not gender disaggregated. An inventory ECA conducted in 2002 in African countries shows that national reports have marginal data analysis with gender distinction. Gender disaggregated data are mostly information on labour market employment, and are not collected in any systematic manner because of lack of prioritization in such analysis.
 - The scope and methods for time-use studies in Africa are currently limited to few African countries largely due to difficulties in measuring time in a rural population not used to "clock time" nor experienced with filling questionnaire.
 - The available concept and methodologies employed in time-use surveys are mostly based on those of developed countries and as such are not tailored to address the unique objectives for time-use studies in Africa. Thus, the ERG acknowledges the

differences including illiteracy that African countries have with most developed countries.

- The procedures for conducting the different surveys including that for the recent time-use studies in Africa are not standardized as to allow inter country and intra country comparisons. For example, in Benin and Morocco time-use studies data were collected only for women and not both sexes. The need for standardizing data is particularly crucial given that regional integration efforts and emerging development policies and strategies such as the poverty reduction strategies and the New Partnership for Africa's Development (NEPAD), are shaping Africa's development paths, the need for a common approach, tools and methodologies in the development paradigm has never been greater.
 - Today, should governments require to build a particular framework in which time use data is to be used for macroeconomic analysis, it would be very difficult to standardize the data for African countries if these are collected as is done currently with different approaches and base lines. For example, if one country collects data through the diary and another through the interview method, the two data sets could be inconsistent.
 - Until now, many African countries, present their statistics in various official publications, like the Economic Report, the Annual Financial Statement, the Government Budget Estimates, Agricultural Statistical Bulletins, the External Trade Statistics Reports and the Household Surveys. Unfortunately, there are many gender-related inconsistencies and deficiencies in these publications. In some cases, different publications from the same institution give different values for the same variable.
 - Countries visited during the inventory expressed keen interest to carry out time-use surveys based on a standard guidebook for conducting time-use survey for all African countries, which will address the region's specific concerns.
 - The ECA inventory study also showed that most countries expressed an urgent need for capacity building in time-use studies, analysis and integration of gender-inclusive data into NANB.
 - The study further shows that no African country currently has developed or uses gender-aware model for evaluating impacts of policies on the productivity of NMW and poverty reduction. Given the increasing need for governments in Africa to evaluate impacts of their policies on growth and poverty reduction, the need for such a tool and guidelines to use it has never been greater.
- The above points lead to the conclusion that there is a very definite need to have an Africa specific handbook for carrying out time use surveys and analysis of NMW.

Who will be the Users of the Easy Reference Guide?

- The ERG will target both producers and users of micro- and macroeconomic statistics. The main users will include:
 - National statistical offices involved in the collection of micro- and macroeconomic statistics and the preparation of the national accounts. Statisticians will find the ERG particularly useful in terms of the new methodologies and tools that will be introduced for collection and analysis of gender-disaggregated data in time use surveys. The ERG will also show that sound data collection is crucial to policy formulation and to public action.

- Policy analysts will find the ERG a powerful tool to generate a sound database for policy formulation, analysis of policy impacts on women, growth and poverty reduction and hence for informed decisions. They will find the ERG useful for analytical work for further development of knowledge, analytical and policy tools related to compilation of national accounts and national budgetary process and their translation into forms easily accessible by ordinary citizens and work on policy formulation, advocacy and social mobilization.
- National accountants who prepare and are concerned with good-quality national accounts, which try to cover all levels of economic production including NMW
- The ERG will be designed to enable these target groups to use or adopt the materials for use by them or for a national training team.

What are the Strategies for Measuring Non-market Work?

- The Guidebook strategy for measuring and valuing NMW draws on and combines a broad range of current ideas and practical experiences, for example as described by the ESCAP, OECD, UNSD, ILO etc. The use of the ERG is guided by the following principles:
 - A national statistical system should have a gender-disaggregated data on NMW.
 - The major data users should also be informed and involved. Given that exhaustive coverage is an important aspect of quality, analytical work on NMW should be mainstreamed into other quality management initiatives in national accounts/NSA.
 - There should be systematic analysis of NMW problems and potential solutions. This analysis should be based on a comprehensive conceptual and analytical framework that helps categorize NMW activities or the methods appropriate for their measurement.
 - Assess the basic data being supplied to the national accounts and NSA and the compilation methods, identifying the extent of non-observed and non-measured activities and establishing priorities for dealing with them, both in the immediate future and the longer term.
 - Identify potential improvements in the national accounts and NSA compilation process that will review NMW activities through model based adjustments and using the results of supplementary surveys. Such indirect measurement methods can be introduced relatively quickly and cheaply in comparison with changes to the basic data collection programme that may require substantial additional resources. These methods can provide short-term solutions to data problems that should ultimately be remedied by improvements in data collection. They may also be long-term solutions to chronic under-coverage and under-reporting problems that can never be solved at the data collection stage.
 - Identify potential improvements in the infrastructure and content of the basic data collection programme that will reduce the incidence of NMW activities and bringing the programme into line with international standards and best practices.
 - Develop an implementation plan and consult users, prioritizing the potential improvements, ensuring good communication between survey statisticians and national accountants, and dealing with revisions to national accounts resulting from the changes.

How is the ERG Organized?

- The ERG is organized in six modules and different types of users may wish to focus their attention on different modules. Thus the modules are designed to allow them to be read separately. Survey statisticians may find interesting material in all modules - some modules providing guidance on good data collection and practices, others describing how the data are used to compile the national accounts. Still other modules provide analytical procedures for engendering national accounts and national budget, identification of policy options and advocacy strategies as well as evaluation of impacts of policies.

Introduction: gives an overview of what the ERG is about, its objectives and its users.

Module 1: summarises "What is Non-market Work?" It outlines concepts and status in National System of Accounts, as forming the foundation for the rest of the modules

Module 2: outlines the Concepts and Guide on practices in "Time-use Studies" as an important tool for capturing NMW.

Module 3: provides "Guide to Methods for Monetary Valuation of Non Market Work and Constructing Satellite Accounts of Household Production".

Module 4: details a "Guide to Analytical Tools for integrating Non-market Work into National Budgets".

Module 5: gives a "Guide to Policy Options, Responses and Advocacy on Non-market Work".

Module 6: presents "Guide to Monitor and Evaluate Impacts of Policies on Welfare and Poverty Reduction"

Module 1

What is Non-market Work? Concepts and Status

1.1 Overview

- The United Nations, through the Beijing Platform for Action (1995) has identified non-market work (NMW) as a key area of policy intervention for improving the situation of those in the non-market sector, especially that of women. This international commitment and a more recent one of the Millennium Development Goals (MDGs) now need to be translated into national policies for implementation. Policies are a mechanism that will allow the State to introduce change by first integrating the statistically invisible unremunerated non-market work (NMW) into the System of National Accounts (SNA) and the national budget.
- Macroeconomic policy omits women's work from its scope of inquiry. This is not an omission simply due to complexities of measurement, but reflects assumptions built into the macroeconomic model. Work by Elson (1996) observes that ignoring NMW may affect macroeconomic policy through, for example, constraining labour mobility and supply responses. Thus without NMW, macroeconomic policies may not be as effective and efficient when drafting national economic strategies through such tools as the *national satellite accounts and the national budget*.
- The UN Statistical Commission recommended that national statistics offices prepare accounts for NMW - economic activities that are outside the current production boundary (Ironmonger, 1996:38) based on time-use surveys. Although time-use surveys are now carried out on a regular basis in many developed countries, they have recently been tested with the support of the United Nations Development Programme (UNDP) in a number of developing countries. In Africa the countries involved include, Benin and Morocco in 1998, Nigeria, India in 1999, South Africa in 2000 and Madagascar in 2002. It is expected that more countries in Africa will soon be embarking on time-use studies to obtain better measures of women's unpaid work, and help implementation of the 1993 SNA. However, the imperative is to interpret time-use data and derive the policy implications.

1.2 Aims of the Module

- Introduce concepts in Non-Market Work (NMW)
- Understand reasons for excluding NMW and opportunities for including it through national satellite accounts and national budget
- Understand the status and trend in measuring and valuation of NMW
- Understand the rationale for measuring, valuation and integrating NMW into national planning instruments

1.3 What is Non-market Work?

- Non-market work is “unpaid” work or the “care economy” that includes domestic work, care of children, the sick and elderly, voluntary community work, participating in a family business, building a family house, or maintenance work. Work is often classified as productive or reproductive. Productive work includes activities that produce goods and services for market exchange. These activities may be carried out in the work place, at home and in the formal or informal sectors. Reproductive work refers to childbearing activities and other activities carried out in caring for household members and the community.
- One of the key concepts in the national accounts is that of production. In the context of NMW, the most relevant elements of the 1993 SNA concern the exhaustive measurement of GDP. The rules that have been developed to determine what is to be included as production and what is to be excluded in the estimation of GDP is the *production boundary*. First of all, the production boundary determines what is to be included in the accounts as output. Secondly, because the 1993 SNA recognizes only uses of produced goods and services, the boundary also determines the scope of intermediate consumption – goods and services consumed as inputs in the process of production excluding fixed assets, and thus it also determines *value added*. *Value added* is the value of output less the value of intermediate consumption – it is a measure of the contribution to GDP by an individual producer, industry or sector.
- Until now NMW is not included in the 1993 SNA because the System does not consider imputed values as equivalent to monetary values for analytic and policy purposes (see also 1.5). The relevance of such imputed values to the understanding of major economic factors such as inflation, deflation or unemployment still remains to be elucidated as outlined in this Guidebook.
- However, the limitations due to the definition of the production boundary of the SNA do not preclude making estimates on the values of NMW. It could be best approached in a satellite framework. The SNA recognizes flexibility, and can be used and adopted at different degrees of detail and its accounting framework can be supported by satellite accounts. The SNA 1993 has recommended compilation of *satellite accounts* with the SNA as the central framework for concepts and various types of analysis that are additional to or differ from those in the central framework. A *satellite account* provides a framework linked to the central accounts, and it enables focused attention on an aspect of economic or social life (e.g. unpaid work) in the context of the national accounts.

1.4 Work and Economic Activity as Defined in the 1993 System of National Accounts

- The labour force concepts are based on the definition of productive activities in the SNA. The 1982 International Conference of labour Statisticians (13th ICLS) resolution “concerning the economically active population, employment, unemployment and underemployment” unambiguously recalls that “the economically active population comprises all persons who furnish the supply of labour for the production of economic goods and services as defined by the UN SNA”.

- The underestimation of women's work in the labour force statistics and national income has been discussed repeatedly since the 1970s. This underestimation has been categorised as occurring in four general areas of activity: *subsistence production, informal paid work, domestic production and volunteer work - NMW* (Beneria, 1992). While the first two problems can be overcome through designing more comprehensive and accurate methods of data collection (conceptual issues being minor especially for subsistence production), the last two require clarification at the conceptual and definitional level itself.
- The measurement of work hinges on the issue of the definition of work. In the traditional system of national accounts the main distinctions are made by the concept of the production boundary. Three kinds of work are distinguished:
 - paid work or work for the production of goods and services that can be marketed is defined as SNA activity, that is activity included within the production boundary of the system of national accounts;
 - unpaid work or work that is not produced for the market is defined as extended-SNA activity; and
 - activities that are not accounted for within the SNA are defined as non-SNA activities.
- There has been a lot of debate of what constitutes each of these activities and the border-line between many of them are quite fuzzy and often differ in economies with differing degrees of market penetration. These differences have been recognised in the SNA over time as indicated below.
- The 13th ICLS, 1982 recognized three of the problematic categories identified earlier, the contribution of persons engaged in NMW and subsistence production. The Conference recommended that "while the extension of the concept of work for the measurement of the economically active population beyond the present production boundary of the SNA may tend to dilute the concept of the SNA, certain categories of persons not economically active but contributing to output and welfare should be recognized in a system of employment and related statistics and accounted for by separate statistics. Three such categories are *homemakers, persons undertaking community and volunteer services and persons engaged in certain borderline subsistence activities.*" Thus, while the ICLS accepts the notion of the 'production boundary' in determining the concept of 'economic activity' or 'work', it suggests the need to measure specific categories from those 'outside the labour force'.

1.5 Measurement of GDP and the Production Boundary of the 1993 UN SNA

- To achieve exhaustive measurement of GDP, the first step is to delineate what should and should not be included in the accounts as production in economic sense and those, which are not. The second step is to define the boundary around the economic production that needs to be included in the national accounts. Regarding productive activities, the 1993 SNA introduce two fundamental boundaries: the *general production boundary* and the *SNA production boundary*. The *general production boundary* includes any human controlled activity resulting in outputs capable of being exchanged. It is defined as the physical process in which labour and assets are used to transform inputs of goods and services into outputs of other goods and services. Moreover two

conditions are required from goods and services to fall within the definition: 'marketability' and adequacy with the 'third-party' criterion.

- Marketability means that goods and services may or may not be sold in the market, and the third-party criterion implies that the goods and services are "capable of being provided by one unit to another with or without charge". These exclude non-productive activities in an economic sense such as eating, sleeping, studying, etc., but includes NMW. But the SNA definition of the production boundary, for the purpose of measuring the GDP, restricts the scope by excluding the production of domestic and personal services by household members for consumption within the same household.
- The SNA production boundary describes the range of productive economic activities that should be included in GDP estimates and is thus the relevant boundary for this purpose.
- While *production of goods* by households for their own final use, either as consumption or capital formation, is included in national accounts, *own-account production of domestic and personal services* by members of the households for their own final consumption, *is excluded*. The excluded activities include cleaning, preparation of meals, care, training and instruction of children, care of the sick, infirm and elderly people; and transportation of members of the household or their goods, including community voluntary services. This NMW or the *care economy* is not included in the national accounts.

A list of domestic and personal services excluded (unless they are provided by paid employees) from the 1993 SNA (SNA, 1993, §6.20):

- *the cleaning, decoration and maintenance of the dwelling occupied by the household, including small repairs of a kind usually carried out by tenants as well as owners,*
- *the cleaning, servicing and repair of household durables or other goods, including vehicles used for household purposes,*
- *the preparation and serving of meals,*
- *the care, training and instruction of children,*
- *the care of sick, infirm or old people,*
- *the transportation of members of the households or their goods*

- Besides the household production, another issue that may be raised in the measurement of GDP and the definition of work and production is what refers to "volunteer work". Here the households are not the only category to be concerned, but also the non-profit institutions serving households, which are the beneficiaries of this type of volunteer work. Their output and value added are underestimated in the compilation of GDP because volunteer work is not valued while work is performed in the provision of services by these institutions.
- As to the production of goods and services for own gross fixed capital formation, it includes the production of machine tools, dwellings and their extensions, and in rural areas such communal and collective construction activities as small dams, trails, irrigation channels, etc.

Production as Measured by the 1993 SNA

- *the production of all goods and services destined for the market whether for sale or barter,*
- *the production of all goods and services provided free to individual households or collectively to the community by government units or non profit institutions serving households,*
- *the own-account production of all goods that are retained by their producers for their own final consumption or gross capital formation.*
- *the own-account production of housing services by owner-occupiers and personal services produced by households employing paid domestic staff.*

Tentative List of Types of Production of Goods for Own Consumption (SNA, 1993, §6.24)

- *"the production of agricultural products and their subsequent storage; the gathering of berries or other uncultivated crops; forestry; wood-cutting and the collection of firewood; hunting and fishing;*
- *the production of other primary products such as mining salt, cutting peat, the supply of water, etc.;*
- *the processing of agricultural products; the production of grain by threshing; the production of flour by milling; the curing of skins and the production of leather; the production and preservation of meat and fish products; the preservation of fruit by drying, bottling, etc.; the production of dairy products such as butter or cheese; the production of beer, wine, or spirits; the production of baskets and mats; etc.;*
- *other kinds of processing such as weaving cloth; dress making and tailoring; the production of footwear; the production of pottery, utensils and durables; making furniture or furnishings; etc."*

1.6 Why is Non Market Work excluded from the 1993 UN SNA?

- The 1993 UN Manual on National Satellite Accounts (SNA) justifies the exclusion of most household production as follows:
 - According to the SNA, NMW has limited repercussions on the rest of the economy. The decision to produce a service in the household implies a simultaneous decision for its consumption. And that the inclusion of too large non-monetary flows of this kind would obscure what is happening on markets and would reduce the analytical usefulness of the SNA framework (SNA, 1993, §6.19-6.22).
 - It is difficult to estimate monetary values through imputing prices to the services of NMW, given that there may be not suitable market prices for such outputs, incomes and expenditures. It is also difficult to decide on the imputed values of the income generated through the production of these services, and for the consumption of the output.
 - The imputed values have different economic significance as compared to monetary values for analytic and policy purposes and their relevance is small with regard to the understanding of major economic disequilibria such as inflation, deflation or unemployment.
 - The imputed incomes generated from the value-imputed production are difficult to tax in practice. And they cannot result into other expenditures other than the services, which generated it, contrary to goods produced for own consumption, that can be stored and eventually sold later so that they can be switched between

market and non-market use. Moreover, such a process would show values which are not equivalent to the monetary values for analytical and policy-making purposes. An imputed income cannot be taxed.

- If NMW were to be included in an extended SNA production, then "all persons engaged in these activities would become self-employed, making unemployment virtually impossible by definition" (SNA, 1993, § 1.22).
- Thus the SNA tries to limit the use of imputed values, which have a different economic significance from monetary values and requires one to exercise caution in interpreting the resulting data or drawing analytical conclusions.
- According to the SNA the definition of the production boundary is a deliberate compromise for the needs of most users and it suggests (§ 21.18) that this issue can be tackled through satellite accounts.

1.7 Arguments for and against Exclusion of NMW from the SNA?

- First of all, the absence of suitable market prices for these services is not true for developed countries where both prices for the corresponding services and wages for the qualified workers do exist at local level, urban and rural. However, this is true for developing countries, especially in rural areas where most of these services are rendered. There is no price for these services because there is no market for them, but wages for agricultural workers can be used, provided that time use is known.
- Secondly, in most cases the value of output, income and expenditure (and also value added) will be the same for these domestic and personal services - the income is equal to the output and to the value added, and all of it is final consumption. Because it would involve large values, the SNA editors fear that the flows used for the analysis of market behaviour and disequilibria would be distorted by such large flows of non-monetary values and therefore must be addressed seriously. Would the inclusion improve the framework of national accounts or would it make it less efficient? If the objective of the exercise were to measure the invisible production, would it be more appropriate to use satellite accounts?
- Here two issues can be addressed. The first one refers to this stage of development when domestic activities come more and more to the market, because women enter the labour market but cannot perform these activities as much as they used to do. The potential market that these domestic activities represent and the associated increasing market work could have been better followed up if NMW were included as non-monetary activities in the production boundary. In this regard, "measured growth rates are considered biased upwards as more and more women move into the labour market while decreasing their input in household production". Ironmonger (1989) also argued that market disequilibria have their counterparts in household production: the market sector draws resources from the non-market sector in period of expansion and releases them in periods of decline.
- The third issue is a gender one. All NMW is not considered as having monetary value. But for most women entering the labour market means having a twofold work-time budget, which usually exceeds men's by more than one third and the implications

on productivity, health and poverty are many. Finally the "swamping" issue could be solved by the compilation of two series of national accounts and later on by the retropolation of the new series. A satellite account conceived in order to stick as much as possible to the central framework is a step towards this objective and a few developed countries have already attempted to build it.

- Finally the argument addressing the issue of labour force statistics is perhaps the easiest to counter. If the actual definition of SNA production was strictly applied in labour force surveys (including for instance firewood and water fetching and the processing of agricultural products), very few persons of active age would fall outside in rural areas of developing countries. This is because, virtually the whole adult population would be treated as economically active and the concept of unemployment would become meaningless.
- According to the United Nations Statistics Division (UNSD), the Inter-secretariat Working Group on National Accounts is currently undertaking the updating of the SNA, a process to be completed by 2008. While a number of issues are under review, a revision and expansion of the production boundary is not intended. Thus, the issue of NMW could be best approached in a satellite framework. An example of application of satellite accounts is presented in the *Handbook on non-profit institutions* that successfully elaborated recommendations in consistency with the SNA framework in the form of proposing a satellite account.
- The traditional view has thus been restrictive in defining work, but has recognised the need for an extended concept of work. It further records the problems related to measuring work with the extended concept and even suggests some alternatives for accounting for such work. The traditional view has, however, centred around the notion of the market and attempted to quantify the contribution of work in terms of time and output. For the concepts to be more inclusive of women's work the contribution of each activity to welfare would need to be considered. It has been argued that "the welfare criteria are likely to become more acceptable if economic change and activities are evaluated through their contribution to social development rather than through strictly economic indicators" (Beneria, 1992).

1.8 The Concept of Non-market Work (Care Economy)

- Feminist economists have called attention to the serious neglect of the non-market sector of the economy. They point to the fact that the dominant economic theory views labour as a non-produced input and thus disregards the role of unpaid labour in social reproduction, and in household and community work (Çagatay, 1995). Further the neglect of the care economy was reflected in the dominance of the male breadwinner model, which has shaped much of social policy in industrialized and developing countries.
- From what precedes, it is possible to draw the following diagram that makes clearer the dividing line between SNA and non-SNA production.

Diagram 1: SNA and non-SNA production in the System of National Accounts.

Production	Goods	Market	All goods, including fetching water and firewood
		Non market	
	Services	Market	All marketed services
		Non market	Government services
			Non-profit institutions services
			Paid domestic services
			Imputed rents
			Own final use
Volunteer work			

Note: SNA production is in grey, and the two bottom lines represent NMW

- The 1993 SNA made it clear that all production of goods was to be put in the production and it left the cut-off line dividing SNA and non-SNA activities in the services sector where the division principle is the devolution of the service to own final use (and not: to the market or not to the market, because government and non-profit institutions services are exceptions).
- It is important to recognise that these reflections are not new: Alfred Marshall, as early as 1879, stressed the 'third party' criterion for defining the extended notion of work: "all other services which one person may be hired to perform for another" in his "Economics of Industry" (1879) and Pigou, later on (1920) emphasised the paradox of the gentleman who lowers the national welfare when he marries his maid. But it was up to Margaret Reid's in her "Economics of Household Production (1934) to throw the 'third party' criterion into the discussion between economists. Following these orientations, some of the economists who founded the national accounts, addressed the issue of housework valuation (Kuznets, 1941; Clark, 1958), but it was up to Gary Becker's (1965) theoretical works to root them into the framework of economic theory.
- For Becker, households are not only consumers but also producers: according to the traditional consumer's theory of choice, households seek to maximise utility through the consumption of goods and services, but, following Becker, these goods and services are not ready to be consumed, they have to be transformed into commodities, which are produced by combining time (labour) and goods. Such a definition of household production provided the bases for further recommendations on estimating the significance of unpaid work in household production by the UN Report on the Decade for Women (1985), the World Summit for Social Development (Copenhagen, 1995) and the 4th World Conference on Women (Beijing, 1995) which paved the way for more elaborated research and wide data collection by appropriate means. Time-use survey is one tool for this.

1.9 Market and Non-market Output

- The 1993 SNA identifies institutional units that are market producers and non-market producers. Market producers are financial and non-financial corporations, quasi corporations, and unincorporated household enterprises that are economically significant. Non-market producers also produce goods and services but the products are not valued at prices that are economically significant, that is, prices with little or no influence on the quantities demanded. Non-market producers are generally government, private non-profit institutions and household subsistence producers.
- The value of output of market goods consists of the cost of the value of goods and services used for production and value added of the different factors of production. These include:
 - The cost of goods and services used in the process of production (*intermediate input*);
 - Cost of labour (*compensation*);
 - Consumption of fixed capital (*use of fixed assets*);
 - Taxes net of subsidies on production; and
 - Operating surplus (*returns to natural and financial assets used in production*) or mixed income for household-operated activities (*returns to natural and financial assets used for production and imputed compensation of operator and unpaid household worker*).
- Non-market output is valued at prices that are not economically significant and excludes operating surplus. However, in the case of goods produced by subsistence production, the value might still include some elements of operating surplus especially if output is measured by multiplying the volume of harvest by farm gate prices.

1.10 Why Measure Non-market Work?

- The rationale for integrating NMW work in these national planning instruments is considered in relation to potential feedbacks that might occur between unpaid work and the macroeconomy based on empirical research that is indirectly related to this problem. What follows are six specific macroeconomic concerns and an outline of how a more exhaustive measurement of economic activity in national accounts and national budget might serve to improve macroeconomic policy.
- *Exhaustive estimates of GDP are the most relevant elements of the 1993 SNA.* Exclusion of Non-Market Work in the SNA perpetuates the incomplete and inaccurate picture of national income, especially, in Africa where NMW contributes significantly to the economy. It causes levels of GDP and other data to be downward-biased, thus giving an inaccurate impression of the economy and impeding international or regional comparability. This is important where, for example, monetary contributions made or received by a country depend on its GDP, or when poverty is measured by GDP per head. Also, productivity gains may lead to increased output or leisure, but GDP measures the first, thereby masking women's longer work hours. Both omissions have implications for women who enter the paid workforce without a corresponding decline in their hours of unpaid work. A more exhaustive GDP would incorporate inputs from the formal sector (production activity, market transactions);

the informal sector (volunteer activity, the underground economy); the household sector (household production, caring, leisure) and reproductive activity (conception and birth, education and values imprinting).

- *Non-market work affects and is affected by macroeconomic policies.* Data series on the unpaid economy would allow us to measure the existing links between unpaid and paid economy. The exclusion of women's work in the SNA assumes that it has little or no effect on most micro and macroeconomic activity. But this is not so. For example, during periods of economic recession and crisis, declining incomes and rising unemployment, increases in the NMW intensify gender inequalities, restricting women's access to economic opportunities and the benefits of development, relative to men. These are hidden episodes in stabilization and structural adjustment.
- Recent research showed that cutbacks in national budget through cutbacks in social services might increase time spent on care work. Reductions in subsidies for foodstuffs may result in women (who usually provide food) spending more time looking for cheaper substitutes. Research in developing countries under structural adjustment programmes also showed that cuts in health, family planning and other social services increases the burden of unpaid home care and services on women. Thus, what may be seen as an increase in productivity or efficiency in the market economy is actually a shift of costs from the paid to the non-market sector. These include the cost to those who provide the unpaid work, in terms of loss of education, health and well-being.
- Non-market work may compete with paid work: meeting greater demands for unpaid work may jeopardize ability to supply more paid work. This may be one explanation for poor supply response to some adjustment programmes. Unpaid labour may assist in absorbing the shocks of adjustment. For example, unpaid labour may be substituted for paid labour in the production of food and clothing produced in the home instead of purchased from the market. Voluntary labour may be mobilized in community self-help schemes when public expenditures are cut.
- Discrepancy exists between women's economic contribution and their control over economic resources. Women's work has remained invisible, but when valued, it can reflect more realistic estimates of total economic production by taking into account all household activities. This would enhance women's economic status in a positive direction and would contribute to long-term endogenous growth strategies by opening up capacity/capabilities in areas such as health and education. Emerging research shows that NMW underpins the economy with a significant contribution to income generation, long-term growth and poverty reduction by supplying human and social capital labour to the private sector and the public service sector economy. Women's domestic chores and child-care prepare children to become future workers as part of building human capital. However, women still have less access to income and assets, less wealth and less control over the economic processes to which they contribute; hence, the need to measure unpaid work.
- *Programmes and services for non-market work are good investments.* New evidence suggests that distribution of human capital influences growth (e.g. the case for East Asian 'miracle' economies). Income and wealth inequalities are linked to lower growth because they reflect the inability to invest in, or to borrow to finance

education. If structural investments (education, health, infrastructure, market access) are weak, economies will grow more slowly leading to greater political instability, which also acts as a drag on growth. Feminist economists contend that Africa is losing out on the hidden growth reserves in its people, especially women, who now provide more than 50 per cent of the region's labour, but lack equal access to education and factors of production. Public policy has a key role to play in promoting gender-inclusive growth and poverty reduction through Africa's enormous, undervalued human resources – the women. While the SNA will reflect the value of the unpaid work as investment in nurturing human capital and social capital, the national budgetary process will target equitable allocation of resources to the NMW. Thus, counting NMW is crucial.

- *Non-market work affects women "employment" and income, social benefits and well being* Women's employment is generally low because unpaid work tends to constrain women's participation in the formal, paid labour market. However, poverty and the financial crisis compel women to engage in economic activities and earn income in the informal economy. Thus, women perform subsistence and livelihood activities or engage in micro-enterprises and generate income for the household. But their informal activities do not reduce their unpaid work; in fact, they continue to perform both the non-market and market work. Time-use data can help policy makers to identify the location of surplus labour per class, area, gender, age group, etc. and, together with measurement of returns on these activities, enable measurement of the average productivity of NMW. This will facilitate appropriate policy formulation on unemployment and poverty.

1.11 The Status and Trend in Data Collection on NMW

- There are two main reasons for the underestimation of women's work in their participation to the labour force and in their contribution to production:
 - Firstly, is the inadequacy of traditional concepts and surveys for the measurement of a labour force which is mainly comprised of self-employed persons rather than wage employees, of casual, seasonal and part-time workers;
 - Secondly, NMW still remains out of the SNA production boundary.
- Women often encounter several of these various situations at the same time and this is a reason for their higher level of invisibility in the participation to the labour force and in the contribution to production. In many societies women's rights to own a land are not recognized by law or by customs; as a consequence, they are captured as unpaid family workers in labour force surveys and we have already stressed that the definition of family workers has for long been restrictive. More often than men, they are involved in secondary activities for the processing of agricultural and food products and in many cases, these secondary activities remain non-market and furthermore home-based. All these characteristics lead to the invisibility of women in agricultural and related activities: they don't own the land; they work as unpaid family workers, their secondary activities are home-based and non-market.
- In the informal sector, women's invisibility is greater than men's although the share of women workers involved is relatively higher: the reason is that they are more often

home-based and own-account. In many cases, women develop their informal economic activities from home and from household production: processing of agricultural and food products at home leads them to sell these products in the streets or in precarious locations. And this is another cause of their invisibility: they are often captured as participants in trade activities whereas they have contributed more to the value added (through growing the products and processing them) (Charmes J., 2000a).

- Labour force statistics have regularly attempted to adapt concepts and methods to the difficulties encountered in data collection: the International Conferences of Labour Statisticians (ICLS), every 5 years, adopt resolutions and recommendations to this aim.
- For a long time, the international concepts have continued to ignore the unpaid family workers who were not considered as part of the labour force until the 8th ICLS (1954). It was then agreed to include them as far as they have worked at least one-third of the normal working time during the reference period (ILO, 1976). It is only with the 1982 revision of the concepts (13th ICLS) that all unpaid family workers are included, whatever the duration of their working time (ILO, 1998). But some countries are still continuing to collect data with the previous definition.
- The informal sector, and more recently informal employment, have been discussed in several occasions since 1987 (14th ICLS): the informal sector was defined by the 15th ICLS in 1993 and incorporated in the SNA the same year, as a sub-sector of the household sector, and informal employment – a broader concept including informal sector and home workers – will be tentatively defined by the 17th ICLS in November 2003, after a preliminary discussion by the International Labour Conference in 2002. We will have the opportunity to come back to the definitions and methods of measurement of these concepts in the chapter on engendering national accounts.
- As to plural-activity or multiple jobs, the issue has also repeatedly addressed in relation with informal sector and informal employment and labour force surveys are many to attempt to capture these activities even if the results remain somewhat underestimated. But all these efforts are vain if the basic questions used for classifying the household members in the economically active population remain inefficient due to cultural or social reasons.

Module 2

Time-use Studies: *Concepts and Practices*

2.1 Overview

- Time-use data have been collected through household surveys since 1920s. The Institute of Social and Economic Research (ISER) of the University of Essex has enumerated hundreds of them worldwide since the 1930s.
- Over the years, collection of time-use data has been motivated by “an interest in conditions of human progress and curiosity about social change” (Bittman, M. 1999). But the earlier surveys were limited to very small samples in villages and focussed on allocation of time to work – especially agricultural work - rather than the time budget of the entire day. As such, the small sample size and the small population surveyed were not representative enough.
- It is recently that nation-wide surveys (TUS) on time-use have become more common, especially following the recommendations of the UN Statistical Commission that national statistics offices prepare accounts to get better measures of women’s NMW and help implement the 1993 SNA (Ironmonger, 1996:38).
- Thus, since 1995, time-use studies were tested in at least 24 developing countries worldwide including: Benin and Morocco in 1998, Nigeria, India, Nepal and the Philippines in 1999, South Africa in 2000 and Madagascar (2001). At least one official time-use studies have been conducted in Australia, Canada, Japan and New Zealand and in almost all European countries. Although geographically, economically and culturally diverse, these countries have realized that national time-use studies as important statistical tool for valuation of market and NMW.
- Current concern with time-use in developed countries is generally motivated by two objectives: the *GDP-orientated approach* and the *welfare approach*. The GDP approach aims to arrive at a better estimate of the value of goods and services to construct more complete national accounts. The welfare approach aims to develop a better picture of the quality of life. A 1995 OECD report (OECD, 1995) lists eight member countries that have produced estimates of household production through satellite accounts based on time-use data.
- As for developing countries, time-use surveys are an invaluable tool to help us understand more about how NMW can contribute to poverty reduction strategies using national planning instruments as entry points. The other aim is to assess the underestimation of female participation in the labour force and to give an estimate of their contribution to the industrial sectors where they are often engaged in secondary activities which are not recorded by regular labour force surveys (especially in the processing of agricultural and food products, and also in textiles-clothing activities).

2.2 Aims of the Module

- Understand the concepts and practices in time-use studies
- Understand objectives of time-use studies
- Provide an Africa-specific guide to methodologies and approaches for collecting time-use data in independent surveys or as part of other survey

2.3 What are Time-use Statistics?

- Time-use statistics are quantitative summaries of how women and men “spend” or allocate their time over a day, a week, and across seasons over a year. The basic building blocks for time-use data are: (i) *activity* and (ii) *time*. What women and men do over the course of a day can systematically be described using a *classification of activities* such as the trial UN International Classification of Activities for Time-Use Statistics (Table...).
- In this classification a list of 80 activities are grouped into 10 major groups. The classification is comprehensive enough to cover all human activities that could possibly occur in a 24-hour day from the time we wake up to the time we go to sleep.
- Time-use data are usually generated from time-use surveys by recording the activities and measuring the time spent on them by individuals. Time spent on an activity is measured in terms of number of minutes or hours in a specified period, ideally a 24-hour day but may also cover all seven days of the week. Time-use data gives a quantitative picture in the reference population of who does what (and what else simultaneously) during the day, for how long, how often, at what time, in what order, where, with whom, and for whom.
- Time-use statistics pertain to a reference population (e.g. persons 10 years old and over; persons 15 years old to 65 years old) and are usually disaggregated by sex, age groups, rural/urban, and by other subgroups of interest to those analyzing the statistics.
- Eating, traveling (walking, driving or riding a motor vehicle and others), unpaid child care (e.g. supervising, feeding), working in formal sector job (whether as employee or employer, in public or private sector), doing unpaid economic work (e.g. fetching water, collecting firewood), driving a vehicle, waiting for a ride, smoking, and “doing, nothing” are examples of activities on which a person may spend time during the course of a day.

Examples of time-use statistics

- Average number of hours in a day spent fetching water for home use.
- Total number of hours in a week spent working in paid employment.
- Total number of hours in a weekday working in unpaid domestic work
- Average number of hours in a weekend spent on watching television.
- Total number of hours in a day spent on childcare.

- Basic statistics on time-use are in the form of estimates of time spent on activities in an “average day” or an “average week”. To arrive at that average or representative day or week, time-use data need to be comprehensive. These should cover not only the whole range of possible activities but also account for differences between weekends and weekdays, effects of special holidays, and variations in activities across seasons in a year and across areas or regions in a country.

Time-use concepts

What individuals do or activities engaged in

- Single, main or primary activity over a interval of time
 - Secondary or simultaneous or engaging in One or more activities
- Example: A woman preparing meals while supervising her child’s homework.

How much time is spent in an activity:

- Episode refers to two occurrence of an activity
 - Number of episodes or the frequency of occurrence of an activity
- Examples:
 Number of episodes of cooking during a day
 Average duration per episode of cooking
 Average number of episodes of cooking in a week per woman
- Duration refers to length of time of two episode of an activity measured in terms of minutes or hours.

Context in which the activity takes place

Contextual information typically obtained about an activity include:

- Where the activity occurred or location of an activity
- Other people present when the activity occurred (“with whom”)
- Person(s) for whom the activity was done (“for whom”)
- Any remuneration received for doing the activity, paid or unpaid
- Purpose of the activity
- Temporal location-time of day, week, month, or year an activity is undertaken
- Activity sequence or relationship of an activity to the activity that precedes and follows

Source: ESCAP (2002)

2.4 What are the Development Objectives of Time-use Studies?

- Time-use surveys are invaluable in helping us to understand more about NMW. Measures of time-use are measures of “human capital” (human resources). Because ‘work’ ideally is use of human capital to produce valuable outputs, economic studies of work should cover all market and non-market work, not just paid or market work.
- In developed countries, time-use surveys are conducted mainly for a better knowledge of daily or weekly time-use and rhythms. The articulation or combination of economic activities with domestic activities and the time devoted to leisure (and to television watching in particular) are also among the main objectives, as well as the interactions between professional and family time-use and between husbands and wives. The sharing of domestic activities between women and men, the extension of time devoted to leisure and the shortening of work-time (because of aggravated unemployment) are among typical concerns that time-use surveys attempts to inform.
- However, the imperative is to interpret time-use data and derive the policy implications.

- Lastly, since the 1993 revision of the SNA, the results of time-use surveys have been widely used by researchers, but also by national accountants, in order to build satellite accounts of household production. The main concerns are the identification of gender gaps and inequities.
- In developing countries including Africa, the main concern in TUS is the invisibility of women's economic activity itself. However the focus put on water or fuel wood fetching has shown that the measurement of domestic activities should also be emphasised in the context of economic development, especially so that they are intricately related to social activities and social capital as a major means by which social protection benefit individuals and households.
- In Africa, earlier TUS focussed on the measurement of time spent in the various seasonal agricultural works, which showed the extent of women's activity in this sector. Some of the surveys carried out at national level such as for Senegal in the 1960s were not analysed. And most of them such as for Guinea were often undertaken at local or village level: they were typically research-oriented those days when human and financial resources were not constraining as they are today. However recently, the objectives of time-use surveys have become very practical and policy-oriented.
- In the African context where poverty reduction strategies and regional integration are on the agenda of policy makers and international agencies, the main objectives of statistical data collection are oriented toward:
 - Poverty assessments: living standards surveys, measurement of the poverty line and characterization of poverty profiles.
 - The improvement of the measurement of GDP and of its main aggregates: income and expenditures surveys, informal sector surveys.
- Until recently, few economists were convinced that time-use surveys are the best and most economic way to achieve these goals. Thus, the objectives of time-use surveys need to be accurately defined. Time-use studies have been used to investigate:
 - the links between work patterns and environmental degradation and change;
 - the amount of leisure which individuals and societies enjoy as a measure of welfare at both micro and macro levels;
 - a more accurate picture of activity in rural areas where NMW is prevalent;
 - the extent of involvement in unpaid labour by gender and age.
- Hirway and Ironmonger (2000) identified the following three contributions of time-use data in promoting better understanding of the economy and society:
 - *Estimation of economic production and income:* Time-use data collection and analysis help improve estimation of economic production and income. Good-quality national accounts are vital for economic policy making and research. An important aspect of their quality is the extent to which they cover all measurable economic activities including NMW, and hence better implementation of the SNA. Time-use data can compliment other economic and social indicators by providing a complete account of the uses of time by all sections of the community by gender and age. For example, the dimensions and social impacts of market work and

NMW and leisure are made visible through time-use data. And changes in time-use patterns, including intensity and length of work, reveal national and regional changes in the quality of life of members of the society by gender and age. Specific, simple and light time-use sections of multipurpose surveys' questionnaires essentially pursued this precise objective, in the recent period in Algeria 1988, Mali 1994-95 and in Chad 1996.

- *Recognition of NMW*: Time-use data can help decision makers recognize and commit resources to NMW. Current labour statistics do not capture all market work and NMW that is spent in the production of economic goods and services. Time-use data can provide a more complete and better measurement of all labour inputs for both market and non-market economies, and thus offers a key source of data to improve analysis of gender issues and gender-inclusive policies. Moreover, a more comprehensive capture or understanding of the various segments and aspects of the labour force is, for the least developed countries, a first step toward a better estimate of GDP.
- *Provision of Inputs for Policy Intervention*: Time-use can help in both policy making and in monitoring the economy and society by providing insights into how social and economic systems operate. They measure and explain the impact of policies on households and people by revealing the day-to-day patterns in life of women and men, and how work is shared. For example, shifts in employment patterns, have a significant impact on both the supply of non-market services and/or total work time spent by women. Thus by helping present a bigger and more complete picture of the economy, and how households operate and are maintained, time-use data become invaluable inputs for policy, programme and service interventions for improving the situation of women and men, including children.
- Other objectives of TUS include:
 - *Measurement of impacts of policies*: Gender-disaggregated data from time-use studies can be used to monitor the time budgets of a country's citizens as well as the financial budget of the country. It will then become possible, for example, to analyze whether or not there is deficit in women's time budget between the demands of NMW, and the time left available for it, sustainable or if the human resources of women or girls are being depleted. Econometric modeling based on the results of time-use surveys can identify the interactions between the market economy and the non-market economy, and look at the various possible impacts of budgetary measures on the various categories of individuals and households in reference to their time use. For example, gender-aware models such computable general equilibrium model (CGEM) can be used to evaluate impacts of policies on welfare and poverty reduction.
 - *Identification of some specific categories of employment*: for instance a better account of outwork, or home-based work, undertaken as sub-contracting with large firms or middlemen is certainly an important outcome of time-use surveys (especially in emerging economies), which is shared with developed countries. Even if this phenomenon is not so important in Africa, data collection on child labour is likely to be more effective through this kind of survey than in ad hoc

surveys, the focus of which is very sensitive. These kinds of activities are unlikely to be well reported by the enterprises, and they are likely to be declared as self-employment by the home-based workers: information on time spent at work, the organization of work, the mobilization of family workers and children, the distribution of these jobs between the formal and the informal sectors, are needed to improve labour statistics, as well as national accounts.

- *Measurement of second or multiple jobs*, especially regarding wage employees. Labour force surveys fail to capture the extension of this phenomenon with a sufficient reliability, because the persons engaged in these activities are reluctant to declare them in a survey. The way to tackle this question may be quite different through time diary of TUS.
- *Social capital*: On the expenditures side, social capital has for a long time been considered as a cost - even if this cost, in non wage economies, was recognized to play the role of social security for relatives and natives from the village or the region: community or inter-households transfers revealed however to be a major factor of equilibrium between incomes and expenditures according to various surveys in West and Central Africa. It is important to cross-check these new empirical evidences with data on time spent in socializing at individual and household levels (receiving or visiting parents, relatives, friends, villagers...) as well as at community levels (participating in ceremonies such as funerals, weddings, etc...) which are the means by which a society asserts itself, and by which networks can be mobilized for other aims than societal: social or economic for instance. For policy makers, this changing perspective, moving from the cost side to the social and productive side, can be helpful for the understanding of the functioning of the private sector in developing countries. Recently research programs have been launched to understand how informal sector and social capital have helped households to cope with the social consequences of the financial and economic crises.
- *Measurement of the impact of development projects* is an important use of the results: a new well in a village, or the dissemination of new sources of energy or of improved stoves can have important consequences on women's time budget, because the time that they will save in water fetching or in wood fetching is a time on which the development project may want to use for achieving specific goals that it is pursuing: increase agricultural productivity for example, or women empowerment, or improve child health: the prior knowledge of the full time budget of the villagers (according to sex, age, status, etc.) can help to anticipate the changes that are the most likely to occur in the target population. The knowledge of the time budget before and after the project are essential to understand what has been the real impact of the project, and the lessons drawn from these observations can be used for a better design of the projects, even before their implementation.
- *Measurement of the impact of the media* is also an interesting objective in countries where the population is illiterate for its majority: the knowledge of time spent and time of the day to listen the radio, are important factors for improving the impact of the messages and training that are designed to help the populations in remote areas.

2.5 What are the Components of Time-use Survey?

- Data on time-use are collected on a national scale through a household survey and their design involve the following components:
 - Type of survey instrument – how activities are to be recorded, generally using a time diary or a stylized analogue
 - Mode of data collection – whether by interview, self-reporting or observation; and
 - Type of household survey – whether as an independent or “stand-alone” survey or as a component or module of a multi-purpose survey.
- Different combinations of these component options translate into a wide variety of methods. Table 2.1 summarizes the approaches adopted and methodologies employed by 19 African and other countries in collecting time-use data during 1997-2000.
- Arriving at an appropriate design for producing statistics on time-use requires a balance of objectives and resources. This task could be a complex process. Money, people and their time, and infrastructure comprise resources. In practice, most survey designs are fitted within known cost constraints, that is, the amount of money allocated for the survey is fixed and all activities related to the survey must cost less than or equal to this fixed amount. More often than not, setting the ceiling for the survey is not based on survey design options and issues. The budget is often set on other priorities, with funding and political concerns as the main considerations.
- While some political backing has been given to time-use surveys in response to the Beijing Platform for Action, it has generally been in the form of funding for a single ad hoc survey. In some developing countries, an integrating time-use surveys into the regular programme of household surveys of a country (e.g. in Benin and Nigeria) is an efficient approach to develop a framework for a sound, continuing database and time series for time-use data. Since start-up costs are usually large, partly due to the need for engaging consultancy services for new types of surveys, unrelated ad hoc surveys tend to be costly. Irregular operations make it difficult to accumulate and absorb the knowledge and experience necessary to achieve efficient and reliable survey results. They also limit the opportunity to develop an adequate technical and field staff well trained in time-use methods.

2.6 Methods of Data Collection

- There are three general methods for collecting time-use data. Decision as to which method to apply usually depends on data quality concerns related to the literacy level of respondents or their willingness to spend time in providing the survey information.
 - Participant observation
 - Recall interview (retrospective diary)
 - Self-completed diary
- All these modules have their advantages and disadvantages relative to the reliability of data obtained, effect on response rate and cost and these need to be assessed and evaluated relative to the objectives and resources of the survey. To maximize

response rate and increase reliability, they have been used in combination in a survey such as in Nigeria (Ref...).

2.6.1 *Participant observation*

- In this method the time-use of the respondent is observed and recorded by the survey enumerator. Observation can be on a continuous basis or on a random spot basis. For continuous observation, the enumerator observes the respondent throughout the recording period; in observation on a random spot basis, the enumerator observes the respondent only at randomly chosen points in time during the recording period.
- This method is known to provide accurate data for specific situations provided the bias introduced by the presence of an observer is smoothed out. Classical examples are where there is a limited sense of time, where activities are done simultaneously such as childcare time, and it is important to know the intensity with which an activity is undertaken (as in analysis of productivity and underemployment) and where literacy rate is low.
- However, this method is not feasible for nationally representative samples in terms of cost, coverage of multiple persons per household, and coverage of all activities of a person.

2.6.2 *Recall interview (Retrospective diary)*

- Respondents may report their own time-use by recording activities done on a time diary designed or through stylized questions included within a household survey questionnaire. One way of doing this is by asking the respondent to record the activity as or just after it occurs; this is referred to as the "tomorrow" or "current" or "left-behind" diary approach.
- Another way is by asking the respondent to recall and record activities performed over a specified recall period – usually the previous day or over the past week; this is referred to as the "yesterday" or retrospective diary approach. In Africa face-face recall interview has been used in *Benin, Morocco, and South Africa*.
- Although not as common, a third approach is the "experience sampling method" (ESM) or "beeper" studies approach in which respondents are prompted by a beeper to record specified objective information, and possible subjective information as well, on what they were doing at the time the beeper sounded. Beeper signals are sent at random times during the recording period, a day or a week.
- The personal or face-to-face interview is most commonly used. The computer-aided telephone interview is an option that is increasingly being used in household surveys on a variety of topics but so far has been applied to the collection of time-use data only in Canada. The interview method may be used with both retrospective time diaries or their stylized analogues.
- Data are relatively cheaper to collect by these methods and can be used in surveys designed for national-level estimation. However, respondents asked to estimate time spent on a list of activities tend to over report. On the other hand, recollection of

yesterday in sequence through a 24-hour diary may not assure reporting of activities, such as supervising children, which are secondary to the respondent and yet critical to analysis insofar as they restrict a parent's general range of activities.

2.6.3 *Self-completed diary*

- In this method, respondents record in succession all activities undertaken as they happen during the day and generally provide higher quality data. However, the method would not be applicable to most African countries where the rural population is illiterate and for cultures where time measurement may be different from that based on clocks. It has also been reported that respondent burden leads to higher rate of refusals for such diaries compared to interviews.
- The Nigeria pilot survey was designed such that self-completed diaries were left to literate correspondents while the recall interview was utilized to complete diaries for illiterate respondents. And recall interview was resorted to when respondents failed to fill self-completed diaries due to lack of time.

2.7 Types of Survey Instruments

- Types of survey instruments used to obtain data on activities and their duration over a specified period of time may be classified into two general groups: 24-hour *time diaries* and *stylized analogues* of these diaries.

2.7.1 *Time diary*

- The basic objective of a time diary is to enable respondents to report all activities undertaken over a prescribed period of time including the beginning and ending time for each activity, a description of the activity and the contextual information required for analysis. A diary may be a full time diary and a "light" or simplified time diary.

(i) Full time diary

- The respondent reports each activity undertaken successively from the time of waking including the time the activity began and ended through the 24 hours of the day. The interval of time within which an activity is reported may be fixed; that is, the 24 hours in a day are subdivided into intervals of 10- or 15-30- or 60- minute intervals. Alternatively the interval of time is left open and the respondent reports beginning and ending times of each activity.
- Out of 13 countries which used full time diaries as reported in Table 2.1. Australia, Canada, Mexico and Morocco used open time intervals.

(ii) "Light" time diary

- Respondents report the time at which each activity in an exhaustive list occurs, i.e. the 24 hours of the day is accounted for in terms of a pre-identified comprehensive list of activity categories.
- The exhaustive list of activity categories may consist of a small number of broadly described activity groups such as paid employment, education, personal needs, domestic work, maintenance and leisure.

- The exhaustive list may contain a longer list of more detailed activity tasks such as meal preparation, cooking, washing dishes; laundry, ironing, cleaning, sewing; shopping; paid work including travel.
 - In the country surveys reported in Table 2.1, Benin used simplified time diaries. While most of these activity lists had 21-23 categories, Benin used a list of 62 activities.
- In designing the time diary, decisions must be made on specific inter-related elements including:
 - Whether the diary will use an open-interval or a fixed interval of time within which to report activities;
 - Whether data on single or multiple activities per time interval will be collected and, if multiple whether only two columns or one column will be used and whether simultaneously-done activities will be prioritized as primary and secondary;
 - Which context variables will be included in the description of the activity and how the diary format will reflect these; and,
 - Mode of data collection.
 - Examples of time diaries are shown in Annex 1.2. The diaries used in the surveys of India, South Africa and Mongolia are full time diaries while the Oman diary is a light time diary.

2.7.2 *Stylized analogues of time diaries*

- In the stylized version of diaries, respondents are asked to recall the amount of time they allocate, or have allocated, to specified activities over a specified period such as a day, week or year, it is different from a diary because the respondent does not report the specific time of the day the activity is performed rather, the respondent reports the total time spent on the activity.
- Stylised questions are typically of the form:

*“Yesterday (or last week), how much time did you spend on activity X?” or
“How many hours per day (or per week) do you spend usually on activity X?”*
- In using questions such as these, the stylized analogue of a diary:
 - Collects information on the frequency and duration of time spent on a prespecified set of activities;
 - Asks respondents whether or not they participated in each activity in the previous day or on the day before that or the past week;
 - Follows up respondents who said “yes” to above query on how many hours they have spent on that activity during that day or the past week; and
 - Activities listed may be exhaustive or selective.

2.8 Types of Survey

- Most of the household surveys designed to collect data on time-use may be classified into two basic types. Independent or “stand-alone” time-use surveys and multi-purpose or multi-subject household survey with a time-use component or module.

2.8.1 *Independent time-use survey*

- This is a household survey concerned with the single subject of time-use. In this type, the survey scope and coverage, questionnaires, sample design and selection, training plans, field operational procedures, and data processing systems are configured for this two purpose. Being able to plan for, design and implement a single subject survey is important for a subject as complex as time use. Thus, countries conducting a time-use survey for the first time have usually opted for an independent survey.
- Of the African countries listed in Table 2.1, only South Africa implemented independent surveys.

2.8.2 *Multi purpose survey*

- Two approaches to collect data on time-use through a component in a multi-purpose household survey are a modular approach where the time-use component is a separate module and an integrated approach where the time-use component is included along with all other components in a single module. The common form of the modular approach involving a time-use component is one where:
 - There is a core module such as a labour force survey or an income and expenditure survey and two or more additional or “rider” modules; a time-use module is included as a rider module.
 - The core module primarily guides the requirements including population coverage, sample design and selection of households and major aspects of survey operations such as operational schedules, listing procedures, and enumerator workload.
 - Usually, the enumerator first completes the data collection on the core topic before introducing the time-use or other modules.
 - The time-use module would utilize a separate set of survey instruments, in the form of a time diary or a stylized analogue plus a background questionnaire.
 - The time-use component is fielded at the same time as the core survey and employs the same set of interviewers.
- Some degree of flexibility in terms of selection of respondents for the time-use module and scheduling of callbacks is possible and to the extent that it does, the modular approach can almost be considered an independent survey. The TUS of Benin, Guatemala, used the modular approach.

2.8.3 *In the integrated approach*

- A single questionnaire is used to cover all topics and specific items on time-use are incorporated in the questionnaire.
- Typically, the questions are in the form of stylized questions on time use.

2.9 Classification of Activities for Time-use Statistics

- In a TUS, the activity is a basic unit of analysis. Thus, the nomenclature and classification of activities form an important part of the planning, collection and analysis of time-use data. A statistical classification provides *“a set of discrete values which can be assigned to specific variable which are to be measured in a statistical survey, ... which will be used as basis for the production of statistics”*.
- The UN International Classification of Activities for Time-use Statistics (ICATUS) developed by the United Nations is different from others in that it emphasizes productive activities, not only those in the formal economy but also those that occur in the household and the informal economies. These distinctions are essential in understanding and recording the full range of work in developing countries and are specifically useful in defining “unpaid work” for survey measurement purposes.
- Specifically, the ICATUS differentiates activities on the basis of whether an activity is within the SNA production boundary, within the general production boundary but outside the SNA boundary, or non productive. The first three of the ten major groups in the classification are assigned to SNA economic activities – employment for establishments, primary production activities not for establishments, and services for income and other production of goods not for establishments. Activities, which fall predominantly within the general production boundary but outside the SNA boundary, using the third person criterion, are classified in groups 4 to 6; and major groups 7 to 9 and 0 cover non-production activities.
- Thus, following the definition of unpaid work in section IIA, major groups 1 to 3 include unpaid work activities in the first category and major groups 4 to 6 are the activities corresponding to unpaid work in the second category.
- One of recent surveys in Nigeria implemented the ICATUS in its current form. South Africa is adapting the ICATUS with little difficulty for the non-SNA productive and non-productive activities. For the SNA economic activities, South Africa expanded the classification to 3-digit level to take care of country specific activities. This process pointed to the need for a clear definition of “establishments” as well as definitions of the first three major groups. In addition, because the survey objective requires the analysis of work-related activities by status of employment the ICATUS approach, which does not consider status of employment, became a limitation. This limitation as well as the need to incorporate industry and occupation characteristics in describing production activities led India to construct their own activity classification.
- Classification systems attempt to reflect meaningful distinctions between specific activities for the purpose of tabulation and also try to prioritize these distinctions to provide a conceptual basis for the analytical framework (Horrihan, 1999).
- Time-use data are about people’s activities. A detailed, comprehensive and systematic listing of activities needs to be available as a basis for assessing completeness of coverage of activities. This listing is used as a guide in the design of survey instruments and selection of methods. It is also the interviewer’s guide for eliciting

from the respondent the level of detail required by the survey objectives. It serves as the basis for developing coding rules and indexes.

- Existing activity classifications are hierarchical in nature. Their structures are determined by the number of detailed description of activities and the number of broad groups and subgroups into which activities are categorized and the bases for categorizing these activities. Codes usually numerical are assigned at a 1 – digit level to major groups, 2-digit level to the first level of subgroups within a major group. The most detailed description of activities has the highest-digit level codes. The 1- or 2-digit levels are typically used as analytical and tabulation categories in surveys that use the full time diary.
- In a simplified time diaries, pre-listed activities comprise the activity classification for the survey. The pre-listed activities are typically also the analytical and tabulation categories although a smaller set of broader groups of activities can be used for the purpose of tabulation and analysis. Consistent with the prevailing analytical themes of time-use studies at the time these were constructed (e.g. leisure, domestic work), the activity classifications focused on detailed lists of unpaid work and leisure activities – housework, care-giving, socialization, recreation, learning, mass media. The activity classification developed in 1965 by the Multinational Comparative Time-Budget Research Project with its full 99-activity code or summary 37- activity code set the initial standard for most of the national classifications of developed countries.
- In recent years, new activity classifications in both developed and developing countries have addressed the expanded use of time-use data to assess national labour inputs into production of all goods and all types of services, and in the compilation of household satellite accounts consistent with the system of national accounts. Listings of activities have included greater detail for SNA economic activities. These have also considered means for differentiating activities relative to the production boundary of the SNA such as non-market work from other non-market activities, providing care for others and self-care, and intra-household transfers from inter-household transfers.
- In addition, analyses that measure changes in time-use and provide cross-national comparisons require an activity classification that is closely linked with the activity classifications used in the TUS within a country, among similar groups of countries and globally. The Eurostat harmonized time-use project developed a time-use classification that is intended to serve as a standard for the region. A United Nations International Classification of activities for Time-Use Statistics is being developed as a standard classification at the global level. A unique component of this classification detailed in **Annex ...** and discussed later in this document, is a comprehensive categorization of activities associated with household production of goods for own final use and informal sector activities. As such, the classification provides analysis with a means that classifying activities into productive and non-productive and within productive activities classifying activities as paid or unpaid.

Table 2.1 Design Components of Recent Time-use Surveys of Selected Countries

Country	Survey	Type of Survey	Survey Instrument	Mode of data collection
Australia	1997 Time Use Survey	Independent	Full diary; open interval	Self-reporting; 2 diary
Benin	1998 Time Use Survey	Module of survey on labour, income & social indicators	Simplified diary, 62 activities; 15-minute intervals	Face-to-face recall interview, 1 diary day
Canada	1998 General Social Survey Cycle 12-Time Use Survey	Independent	Full diary; open	Computer-assisted telephone recall interview, 1 diary day.
Dominican Republic	1995 National Time-Use Survey	Independent	Full diary, 15-minute intervals	Face-to-face recall interview and observation, 1 diary day
Finland	1999/2000 Time Use Survey	Independent	Full diary, 10-minute intervals	Computer-assisted face-to-face recall interview; 2 diary days
Guatemala	Guatemala 2000 National Survey of Living Conditions	Module of survey of living conditions	Simplified diary; 22 activities	Face-to-face recall interview; 1 diary day
India	1998 Time Use Survey	Independent	Full diary; 60 minute intervals	Face-to-face recall interview; 3 diary days
Lao PDR	1998 Expenditure and Consumption Survey; Time Use Module	Module of expenditure and Consumption Survey	Simplified diary, 21 activities; 30-minute time intervals	Face-to-face recall interview; 1 diary day
Mexico	1998 Survey on Time Use	Independent	Full diary; open interval	Face-to-face recall interview; 1 diary day
Mongolia	Time Use Survey 2000	Independent	Full diary, 10 minute intervals	Self-reporting and face-to-face recall interview; 2-3 diary days
Morocco	1997/98 National Survey on Women's Time Budget	Independent	Full diary; open interval	Face-to-face recall interview; 1 diary day
Nepal	1998/99 Labour Force Survey	Module of labour force survey	Stylized questions for selected activities within labour force questionnaire	Face-to-face recall interview; total hours spend on activities in last 7 days
New Zealand	1998/99 Time Use Survey	Independent	Full diary; 5 minute intervals	Self-reporting; 2 diary days
Nicaragua	1998 Living Standards Measurements Study Survey	Module of LSMS	Simplified diary; 22 activities	Face-to-face recall interview; 2 diary day
Nigeria	2000 Pilot Time Use Survey	Module of General Household Survey (GHS)	Simplified Time diary, open interval	Self-reporting, total hours spent on activities in last 7 days
Oman	Overall Monitoring of Annual National Indicators Survey 1999	Module of house-hold expenditure & income survey	Simplified diary 23 activities; 15- minute intervals	Face-to face recall interview and self-reporting; 1 diary day
Palestine	Time Use Survey 1999-2000	Independent	Full diary; 30 minute intervals	Self-reporting; 1 diary day
Republic of Korea	1999 Time Use Survey in the Republic of Korea	Independent	Full diary; 10-minute intervals	Self-reporting; 2 diary days
South Africa	Time Use Survey 2000	Independent	Full diary; 30 minute intervals	Face-to-face recall interview; 1 diary day
Sweden	Swedish Time Use 2000	Independent	Full diary; 10 minute intervals	Self-reporting; 2 diary days

2.10 What are the Basic Specifications for Measuring Time Spent on NMW?

2.10.1 *Reference population*

- Given the objective of improving measurement of paid and unpaid work, what population should the survey study and how are respondents to be selected? Some countries considered urban/rural representation important: India and South Africa further defined area strata that would account for work pattern differences such as in tribal areas. In terms of minimum age cut-offs, other country surveys used 6 years old, four used 10 years old and two used 15 years old. Five of the surveys selected are all eligible members of the sample households. Of the surveys that sampled from eligible household members, two selected two male and two female at random while the other did not use sex as a basis for sampling.
- One can argue that data should be collected on all household members so that analysis of both individual and intra-household aspects of time-use is possible. Also, for analysis of women's economic activities, children in particular cannot be overlooked since much household production is shared between women and children¹³. This approach is also cost efficient in enabling more data to be collected and provides a mechanism for a quality control check on reporting. However, accurate reporting on time-use requires a knowledgeable respondent and it would be best for each individual to report on his or her own time use. These may present difficulties where younger children are involved as illustrated in the Nigeria pilot where adult members of the household had to provide assistance to complete their time diaries¹⁴. Benin had a maximum age cut-off at 65, corresponding to labour force and income data requirements. Two limitations that arise are that the productive activities of older persons will be excluded.

2.10.2 *Activity Classifications and Definition of NMW*

- This involves describing how individuals spend time – activity classifications. Existing classification systems attempt to reflect meaningful distinctions between specific activities for the purposes of tabulation and also try to prioritise these distinctions to provide a conceptual basis for the analytical framework¹⁵. A detailed and comprehensive classification is a requirement for analysis as well as international comparability (Ref...).

2.10.3 *Recording of activities*

- The time-use surveys featured in the time-use site record activities and their characteristics (time spent and contextual information) in three basic ways.
 - Simple time diary
 - Full time diary
 - Time-use questions within a household survey questionnaire
- The design of a diary for collecting time-use data generally deals with choice on the type, length of time interval for recording activities, how to record simultaneous activities, and inclusion of context variable.

- Simple time diaries can be of two forms. One type is illustrated in Annex.... (referred to as a stylized activity list) and was used in the 1996 Mexico Time-Use Survey. A second type consists of pre-listed activities as rows and a time-line defining the columns as used in the surveys of Benin. Annex shows a typical format for this type, referred to as a stylized activity log.
- The use of the simplified time diary in multi-purpose surveys decreases both respondent and enumerator burden; however, diaries in this format include a pre-specified list of activities and this results in a classification of activities based on the respondent's subjective perceptions or interpretations rather than by an objective criteria.¹⁷
- Time-use diaries have been found difficult to implement when there is a low arte literacy and lack of access to watches or clocks. However, small-scale experiments in 1998 by Agular¹⁸ on pre-coded activity matrix-type diaries with the use of pictorial and symbolic devices representing activities and the use of digital watches to measure time show promising result. On the other hand, a similar study involving a diary design using a combination of pictograms and interviews developed by Statistics Norway¹⁹, which was implemented as part of pilot activities of the 1999 Palestine Time-Use Survey, was not adopted in the full survey.
- A typical format of a full time diary is shown in Annex ... In addition to describing activities, contextual information are also recorded.

2.10.4 Measurement of Time

- Measurement of time in TUS need to consider:
 - Reference periods and sampling issues
 - Time intervals (open, fixed interval, interval length)
- As in labour force and income and expenditure surveys, a TUS needs to account for seasonal factors. In addition, a time-use survey needs to produce data on use of time during a day and on different days of a week. How to deal with ceremonial cycles or holiday effects may also be an issue. Accounting for temporal, variation is particularly important where work hours are irregular even within a week or month which is often the important where work hours are irregular even within a week or month which is often the case with women's economic activity. Seasonal changes in work occur in agricultural and rural households and in the urban informal sector in African countries.
- For sampling days of the week most of the survey designs assigned a single designated day per respondent but distributed designated days across respondents so that all days of the week are covered. South Africa and Nigeria pilots sampled more than one day (all seven days for Nigeria, two randomly selected days for South Africa) but it was concluded that this led to non-completion of diaries due to respondent burden.
- In general, decisions on whether days of the week are to be uniformly represented vary. South Africa places more weight on weekdays because of the focus on economic activities, weekends are associated with leisure. The design of the India

TUS called for first classifying days in the household as a typical normal day, a weekly variant day or an abnormal day. Recording of activities was targeted for a typical or weekly variant day. Abnormal days associated with deaths, weddings and other ceremonies, were excluded in the time sample.

- Nigeria used an open interval diary with beginning and ending times; the enumerator recorded beginning and ending times and total time spent on an activity. Time intervals for the fixed-interval diaries ranged from 15 minutes to 1 hour. The survey, which utilized simplified time diaries used 15 minutes intervals.
- The TUS for South Africa account for seasonal variations by distributing reporting dates on a periodic basis (monthly, quarterly, semestral or trimester).

2.10.5 *Simultaneous activities.*

- A person may be engaged in two or more activities simultaneously two of which are usually a work-related activity; housework and child-care, child-care and home-based contractual work and housework and socialization are instances of such simultaneous activities. The design of a TUS with the objective of improving measurement of paid and unpaid work and capturing gender differences would need to be able to distinguish among these activities. Recording of simultaneous activities requires decisions that include the following:
 - what questions in the survey instruments or context variables, would best capture them,
 - how many activities done together are to be recorded, and
 - Whether to prioritise or rank activities as primary, secondary, etc.
- It may be difficult to record simultaneous activities in a simplified time-use diary. Benin devised a procedure for doing so but survey results indicate that parallel activities were underreported.²⁰ Some surveys that capture simultaneous activities do not prioritise the activities into primary, secondary, etc. These have implications in the processing and tabulation of the diary data as discussed later in these notes.
- Recording and analysis of simultaneous activities is currently a major area of controversy and discussion in the time-use field.

2.11 **How to Summarise Data from Individual Diaries in Statistical Tables**

- Time-use data is unusually unwieldy to analyze. It includes in addition to all the conventional household characteristics, time data for individuals and households which can be addressed in terms of type of activities, frequency, duration, complementarities with other activities, sharing with other persons, location, intensity, sequence, etc., and which can be aggregated by activity, households, individuals by sex or age, etc.²¹ Perhaps because of this complexity, although data collection is usually completed within the time schedule of a survey operation data analysis becomes a bottleneck in generating the survey results. The path from thousands of individual diaries to useful summaries and statistical tables needs to be carefully mapped out. Major aspects that need to be considered are described below.

2.11.1 Basic edits.

- There is a consensus among time-use experts that primary activities must add up to 1,440 minutes per day (and the consistent arithmetic for week and year should follow). This increases the accuracy and completeness of reporting very significantly, because it provides a check as to whether the estimates of the duration of each activity were accurate or whether some activities were omitted.

2.11.2 Coding activities

- Coding rules are especially needed when processing the information on time-used activities in diaries to deal with: -
 - Over-riding activities: Descriptions of activities by respondents may actually be several activities at once. Australia defines certain activities as over-riding or natural main activities because they create the environment in which other things happen. Examples of such activities are travelling, socializing or entertainment that involve going to a venue, visiting or receiving visitors for more than a few hours.
 - Pervasive activities: Certain activities, particularly passive care of children or adults requiring monitoring may not be consistently reported.
 - Omitted activities: Examples of such activities are constant background activities such as passive childcare, travel, eating, sleeping. Sometimes no activity appears for intervals of time.
 - Simultaneous activities: When simultaneous activities are recorded it may be necessary to prioritise these as main, secondary, etc.
- The Eurostat has developed a coding list of activities, which defines coding rules and serves as a basis for a coding index. The document can be downloaded from the classifications page of the time-use website.

2.11.3 Basic Tabulations

- Annex ... provides an illustration of basic tabulations for time-use data.

2.11.4 Estimation procedures

- How can data from time-use diaries of only a sample of days from only a sample of the reference population be made to represent the whole population? If the sample of households and individuals and diary days are statistically (scientifically) selected, this can be done by multiplying each piece of data in a diary by an appropriate numerical "weight". Each weight (w) is equal to or greater than two and is mainly derived from the probabilities of selection defined in the sample design. The idea is that when a diary day or an individual or a household is selected it represents w , other days, individuals or households similar to it but who are not in the sample. For example, in a simple random sample of 2 percent of a population, each person in the sample

represents 50 persons in the population. The resulting weighted or "blown-up" data thus represent the responses of these other days, individuals or households which then accounts for the entire population.

- An *estimation procedure* defines how this weighting is to be done and how the statistics (totals, means, proportions) are to be generated from the weighted data. In addition, the procedure would also further adjust the data by applying weights in order to make population estimates consistent with projected population counts and weights to account for cases of non-response. For diary data, different sets of weights are applied for diaries, persons and households and all these are combined into two "formula".
- *Annex*shows the estimation procedure used in the 1992 Australian Time Use Survey as described in the User's Guide. A more detailed explanation of how weights are applied is found in the User's Guide for the 1998 Canada Time-use survey and can be downloaded from the time-use website.

2.12 Reference Period and Measurement of Variations during the Year.

- Time-use must be appropriately assessed through at least 3 reference periods: *the day, the week and the year.*
 - The day is undoubtedly the most appropriate reference period for capturing the variety of the activities – productive or not – which a human being can perform: it is long enough to capture the majority of the most common of these activities. But it is too short in that some activities are not performed every day.
 - The activities performed during the weekend are different from those performed during the week and this is true for the economically active persons as well as for the inactive. Even the homemakers have different tasks during the weekend.
 - And in economies where agriculture is still predominant, the seasonal variations across the year may induce important variations in time-use, not only in rural areas but also in urban areas. And even where agriculture is not so important, climate and weather have an impact on time-use.
- There are several survey methods to deal with these issues, provided that the chore of all time-use surveys is a diary. These methods are complementary rather than alternatives:
 - One method can consist in collecting detailed data on time-use for one single day and to distribute the sampled household members evenly for each day of the week, in order that in the sample, the various days of the week be equally represented; there will be as many "Sunday" as "Tuesday" or any other day of the week. The problem to be tackled is then to impute economic activities (SNA or non-SNA) to the persons who have not been active during the day surveyed.
 - A second method is to interview the household members for a "working" day and for a "non working" day, and to ask them how many working and non-working days there is in a week.

- A third method is to have a rotating sample, that is a national representative sample distributed on each month of the year (a method often used for income-expenditures surveys). In this case, the seasonal variations are automatically captured. Another method is to repeat the survey twice, three or four times a year (with the difficulty of retrieving the same households).
- As to the method of data recording, it can be the interviewer who records the time devoted to each activity by staying the whole day with the person: it requires that the person is volunteer. Although some budget-consumption surveys require the presence of the interviewer for a long period in the day, this method is difficult to apply with large samples randomly selected. Consequently it is generally the interviewer that fills the questionnaire by asking questions to the interviewee regarding past day (with the possibility of leaving the form to be filled by literate interviewees).

2.13 Types of Questionnaire Used

- Time-use questionnaires are very diverse but all of them are built round a core diary, which collect detailed information for a complete day.
- Besides the diary, time-use questionnaires collect data on the household and the household members, as it is usual in household surveys. Then time-use surveys usually focus on contextual variables which are of primary importance in developed countries where the goals of the surveys are different from the goals pursued in developing countries: commuting, leisure, care of children or handicapped are topics that may require some detailed information on transportation means, practice of sports, use of nurseries, hiring of specialised personnel or purchase of special services for the handicapped or the elderly, etc.
- In Africa the preference should be for the inclusion of the diary in a labour force survey and/or an income-expenditures survey or more generally a living standards survey, in order to facilitate the necessary checks with employment and income statistics. Several experiences can be referred to here.
- The first one – already mentioned – is the LSMS questionnaire: in this rather lengthy and overloaded questionnaire, a section on time-use collect information on the number of hours (during the past week) allocated to water fetching, firewood fetching and other housekeeping activities. For instance, in the last round (4th) of the Ghana Living Standard Survey (GSS, 2000), part J of section 4 on employment and time-use, entitled 'housekeeping', is comprised of 24 questions. The questions are labeled as follows: have you, during the past 7 days, spent some time doing ... for the household? If yes, how many hours did you spend doing this activity (including travel time) during the past 7 days?

<ul style="list-style-type: none"> - water fetching, - wood fetching, - ironing clothes, - taking care of children, - washing motor vehicles, - sweeping,

<ul style="list-style-type: none"> - disposing of garbage, - cooking, - marketing or shopping, - running errands, - washing dishes, - other housekeeping activities.
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- In the previous rounds of GLSS as well as in the standard LSMS as it is presented in Ainsworth and Van der Gaag (1987), Delaine and al. (1992), and Grosh and Glewwe eds, (2000), the set of questions is limited to 3: wood, water and other housekeeping.
- Progressively, this type of questionnaire is thus evolving towards a pre-edited list of activities, which can be long enough: but as soon as the list extends, the reference period shortens from the week to the day. For instance a 24-hour diary with a list of 23 activities was included in the income-expenditures household survey of Oman (1998). A second category of survey is built around a diary with a long list of activities as in Benin (1998) or Madagascar (2001).
- The following list of daily activities has been used in Benin and was extended to 77 and adapted to Madagascar by adding some traditional common activities:

- | | |
|--|--|
| 1. Sleeping | 35. Mating |
| 2. Resting, doing nothing | 36. Basket-making |
| 3. Toilet, dressing | 37. Crushing |
| 4. Having meal (breakfast, lunch, dinner) | 38. Going to mill |
| 5. Having meal outside home | 39. Processing food agricultural products |
| 6. Washing up | 40. Other processing for self-consumption (specify...) |
| 7. Cleaning the house | 41. Studying at school |
| 8. Ironing | 42. Studying at home |
| 9. Washing clothes | 43. Reading, writing at home |
| 10. Other upkeeping | 44. Treating illness |
| 11. House or utensils repairing | 45. Receiving parents, friends, neighbours |
| 12. Drying subsistence products | 46. Other errands or shopping |
| 13. Fetching water | 47. Talking, chattering |
| 14. Preparing meals for the household | 48. Paying visit to parents, friends, neighbours |
| 15. Collecting firewood | 49. Celebrating (specify...) |
| 16. Running errands at the market | 50. Participating in ceremonies: weddings, funerals, Baptism, etc. (specify...) |
| 17. Commuting | 51. Preparing food for ceremonies |
| 18. Undertaking administrative procedures | 52. Other processing activities for ceremonies |
| 19. Taking care of children | 53. Attending meetings with various associations (political parties, unions, NGO, local associations,...) (specify...) |
| 20. Taking care of adults, invalids, elderly | 54. Going to church, mosque, vodun, ... |
| 21. Main economic activity (specify...) | 55. Alphabetisation |
| 22. Secondary economic activity (specify...) | 56. Watching TV |
| 23. Tertiary economic activity (specify...) | 57. Watching movie |
| 24. Seeking work | 58. Playing |
| 25. Agriculture | 59. Dancing |
| 26. Breeding cattle | 60. Having a drink |
| 27. Breeding chicken | 61. Playing sport |
| 28. Vegetable gardening | 62. Other (specify...) |
| 29. Forestry | |
| 30. Hunting | |
| 31. Fishing | |
| 32. Gathering | |
| 33. Spinning | |
| 34. Weaving | |

- Each of these 62 activities is pre-coded in a classification of 9 categories:

1. market economic activity (SNA), 2. non-market economic activity (SNA), 3. domestic activities, carework (extended SNA), 1. socialising through associations 2. (volunteer work) (extended SNA),
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3. socialising with family and 4. relatives (visits, ceremonies), commuting, 7. leisure, 8. studying at school or at home, 9. personal care (sleeping, resting, eating).
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- A third category of surveys includes a diary that the interviewer has to fill with the activities declared by the interviewee (in developed countries with high literacy rates, the form is filled by the interviewee himself). In such a case, data entry is necessarily using a classification of activities: for time-use, progress in harmonisation has been late. There is no widely agreed classification, which could be considered as international. Industrialised countries and Eurostat have developed their own classifications, which mainly focus on non-economic aspects of people's life and on leisure. In 1997, the UN statistics division proposed a "trial international classification for time-use activities" and the ILO an "alternative classification of time-use activities" that provide a usual framework for national adaptations: the basic principle is to distinguish SNA activities (market and non-market) and extended SNA activities in order to facilitate the elaboration of a satellite account of household production.
- The three methods have provided interesting and consistent results: the first one is probably not detailed enough for the purpose of building a satellite account, but as mentioned, it has had a tendency to expand the list of activities. The second and the third have their own advantages: the second is easier to handle and the third is more precise and detailed. However in many African countries' statistical offices, one must not underestimate the difficulties and the risks lying in the use of classification, which is new and unusual in the current practice of the personnel.
- The diary itself unfolds the 24 hours of the day by slots, which may vary from 10-15 to 30 minutes intervals. In Benin and Madagascar, simultaneous activities were recorded, but not in a systematic way as in South Africa where each slot of half an hour was divided into 3 lines for recording three simultaneous activities (if necessary).

2.14 Issues in Measurement of Time Among Illiterate Populations

- Sometimes the diary is self-completed by literate respondents and completed by the interviewers for illiterate respondents. The main question is there: is it realistic that, among illiterate populations, a time slot of 15 minutes (or even 30 minutes) can be correctly reminded or even measured. The issue is the same as for other measurement units (areas, weights, etc.): in the methodology of the survey, interviewers must be sensitized with the ways of understanding and capturing the rhythms of rural and village life. From sunrise to sunset, the daily repetition of activities leaves little room to important variations from household to household. The test of the questionnaire is a good opportunity for observation and identification of measurement units in various contexts: the bell of the church or the muezzin of the mosque, time to go to school or to return from school, position of the sun at midday are landmarks among others.

2.15 Data Compilation and Analysis

- The compilation of the collected data is not difficult: time slots are added up in the diary so that time spent by the person in a given activity is known for the day of the survey. The macro-compilation of the data for the whole year is more complex: it requires ad-hoc tabulations of the results.

2.15.1 Tabulation programs

- The basic tables are presented according to the classification of activities with sub-totals for SNA market activities, SNA non market, SNA extended, non SNA and by sex. Useful complementary similar tabulations can be prepared by age groups (school age, working age, old age), activity status (attending school/not attending; active/inactive), employment status (employees/self-employed), industrial sector (agriculture/non agriculture), place of living (rural/urban), marital status (married/not married/etc.), status in the household (head/spouse/son/etc.).

2.15.2 Macro-compilation and Extrapolation

- The main objective of a time-use survey for the purpose of building a satellite account of household production is to estimate time spent in a given activity in the year.
- Unless data collection has been made for both a working day and a non-working day, tables should be split into these two categories so that for each category of persons (for instance a female employee in urban areas, or a rural boy attending school) time-use be known for a working day and for a non-working day: by imputing time-use of a working day to those members of a given category who have been surveyed on a non-working day (and reciprocally) it is then possible to reconstitute the time spent in a given activity for the whole week and for the whole sample of individuals .
- The extrapolation to the year is automatic in the case of a rotating sample or in the case of a repeated survey: the results of each round are simply added up. It is preferable that this be done before macro-compilation, so that the average working day (and the average non-working day) is calculated on a year basis. A difficulty may occur concerning the number of working days which varies according to the individuals: the results of informal sector surveys can then be used.
- Total extrapolation should be based on the various groups of individuals defined by their sex and status. Usually, the results of population census (or the projections of population based on the census) will be used: that means that the age groups and place of living (and sex of course) will be privileged.

2.15.3 Analyses

- Besides analyses at macro-level, the analyses of the survey results must be made according to status groups. Variations in time-use according to the status are generally the most highlighting: they will help to identify those categories of the population that contribute the more to work (extended SNA) although the less to SNA production, i.e. those categories whose contribution to the well-being is the greater and the visibility and recognition the smaller.

2.16 Case studies of Time-use Studies

- Tables 1 and 2 hereafter presents the results of time-use surveys in 5 countries: France, South Africa, Benin, Madagascar and Morocco. In this set of countries, Morocco is a sort of counter-example because it did not use a gender approach: time-use was collected only for women, not for men and the design of the questionnaire was such that it is not the time slots which have been recorded but the time when the activity began and the time when it ended.
- Data are not strictly comparable: Benin and Madagascar have published separate results for urban and rural areas (however, it would be possible to calculate national figures by weighting rural and urban populations); moreover the population aged 6 to 15 is included for those two countries. Morocco did not collect data for men. Time budgets are calculated for the whole population surveyed, including the inactive. Table 2 synthesises the results and presents the women to men gap.
- Results show that in urban areas, SNA production mobilises only 16 to 55 percent of the time devoted to work by women, and from 57 to 82 percent of men's time at work. Except in Benin, women's involvement into SNA production activities is around 60 percent of men's. But women work from 2 to 4 times more than men in domestic activities. And when looking at work as a whole (general production boundary), women work from 10 percent (in France) to 45 percent more than men. Such results have led to revise the participation rates of women and their share in the labour force: in Benin, the share of women in the total labour force is increased from 42.6 percent in the 1992 population census up to 53.3 percent, a share similar to their share in total population; women's participation rates also become similar to men's in urban areas. In Morocco, it is for rural areas that women's participation rates become similar to men's, while they are largely increased in urban areas.

Table 2.2: Time devoted to economic activity and to work, by gender in various countries.

	In hours and minutes													
	France 1999			South Africa 2000			Benin 1998			Madagascar 2001			Morocco 1998	
	Women	Men	Women / Men	Women	Men	Women / Men	Women	Men	Women / Men	Women	Men	Women / Men	Women	Men
SNA production	1h 53mn	3h 14mn	58.2	1h 55mn	3h 10mn	60.5	3h 55mn	3h 55mn	100.0	2h 55mn	4h 50mn	60.5	55mn	55mn
Domestic activities	4h 23mn	2h 24mn	182.6	3h 35mn	1h 25mn	252.9	3h 15mn	1h	175.0	3h 45mn	55mn	409.1	4h 50mn	4h 50mn
Work	6h 13mn	5h 38mn	110.4	5h 30mn	4h 35mn	120.0	7h 10mn	4h 55mn	145.8	6h 40mn	5h 45mn	115.8	5h 45mn	5h 45mn
% SNA in work	30.3	57.4	52.8	34.8	69.1	50.4	54.7	79.7	68.6	43.7	82.0	53.3	15.9	15.9

Sources : *ibid.*

Note : Urban areas for Benin and Madagascar.

- Fetching water takes 1 hour in the 24-hour day of rural women in Benin and 30 minutes in Madagascar (against respectively 15 and 10 minutes for men) and fetching firewood takes 25 minutes of men's day in Madagascar, and of women's day in Benin. This is of course far from being negligible at a year scale: it is equivalent to 9 full days of work for each rural woman aged 6 years or more. This raises the issue of valuation.
- Tables 3 and 4 below present the results of the Ghana Living Standards Survey (GLSS 3 and 4). Among the striking results, the relative comparability of time-uses obtained by this method and by the method of the detailed diary can be noted. In average, Ghanaian women spend 3 hours and 5 minutes per day in housekeeping activities, compared with 3 hours and 15 minutes in Benin and 3 hours and 30-45 minutes in Madagascar.

Table 2.3: Average and estimated total time spent on various housekeeping activities, by sex (population aged 7 and more). Ghana 1991-1992.

Activity	Sex	Proportion doing this activity	Average time spent		Estimated total time spent per day by all aged 7+
			By those doing this activity	By all those aged 7+	
		%	Hours and minutes per day		Million hours
Fetching wood	Males	24	38	9	0.8
	Females	43	52	22	2.2
	Both sexes	34	47	16	3.1
Fetching water	Males	45	48	21	2.0
	Female	68	1h	40	4.0
	Both sexes	57	55	31	6.0
Other housekeeping	Males	61	1h15	45	4.2
	Females	90	2h15	2h02	12.2
	Both sexes	76	1h52	1h25	16.3
All housekeeping activities	Males	70	1h48	1h16	7.0
	Females	93	3h11	3h05	18.4
	Both sexes	82	2h42	2h13	25.4

Source: Ghana Statistical Service (1995), GLSS 3, table 4.16 p.40.

- In 1998 when the list of activities was increased, the total number of hours spent in housekeeping activities was not calculated. But if we assume that the two rounds of the survey are comparable, it is clear that the most time-consuming housekeeping activity is the care of children. However, Ghanaian women devoted in 1998 as much time to this activity as to total housekeeping activities in 1991-1992. This point raises an important issue to be dealt with in time-use surveys: simultaneous activities.
- As mentioned earlier, simultaneous activities were recorded in the time-use surveys in Benin, South Africa and Madagascar. Care of children is a typical simultaneous activity: mothers can declare that they care for their children while cooking or while receiving neighbours, etc. This is why one can conclude that care of children was not recorded in the 1991-92 round of the GLSS and that other housekeeping activities are partly hidden behind or merged into child care in 1998. This problem must be kept in mind when the issue of valuation will be discussed.

Table 2.4: Average time spent on various housekeeping activities, by sex and locality (population aged 7 and more). Ghana 1998.

Activity	Sex	Proportion doing this activity	Average time spent (hours and minutes per day)		
			Urban	Rural	Ghana
Collecting wood	Males	16.0	51	28	30
	Females	34.6	44	37	37
	All	25.6	47	34	35
Fetching water	Males	37.7	31	34	33
	Females	60.2	33	44	41
	All	49.1	32	40	38
Child care	Males	12.5	2h08	1h42	1h48
	Females	41.3	3h20	3h25	3h24
	All	27.6	3h05	3h02	3h03
Sweeping	Males	24.9	14	14	14
	Females	71.0	19	21	20
	All	48.9	17	19	19
Garbage disposal	Males	18.4	13	11	11
	Females	47.6	12	11	11
	All	33.6	12	11	11
Cooking	Males	12.3	46	59	55
	Female	64.7	1h27	1h58	1h47
	All	39.7	1h21	1h49	1h39

Source: Ghana Statistical Service (2000), GLSS 4, table 4.14 p.38.

- These various examples of the type of data currently available provide useful information for further steps towards the elaboration of a satellite account of household production.

2.17 A Guide to Designing and Implementing a Time-use Survey

1. Identify the on-going or planned household surveys that could validly include a diary, preferably a labour force survey or an income-expenditures survey or a living standards household survey.
2. If the time-use survey is an ad-hoc survey, it is important to design preliminary sections on labour force and on income-wages.
3. Design the diary by
 - determining the time slots (intervals),
 - listing the activities if it is decided to use prelisted activities (adapt the list to country specifics).
 - if the list of activities is left open, identify and adapt the international classification to be used for data entry.
 - deciding whether data will be recorded for a working day and for a non-working day.
4. Draw a representative sample of households:
 - design a rotating sample over the year
 - or design a repeated survey with the same selected households
5. Decide of the cut-off minimum age for members of the households to be interviewed with the diary (preferably 6 or 7 years old, in order to capture child work).
6. Prepare a tabulation program with basic tables cross-classifying detailed and aggregated activities (SNA market, SNA non market, extended SNA, others) by sex, status and characteristics of members. The basic variables to be included in the tables are: number of persons concerned by the activity, time per day per concerned persons, time per day per individuals in the sample (or sub-sample depending on status).
7. Special tabulation for the economically active persons (declared as such the labour force section) on the one hand, and for the inactive on the other hand.
8. Identify among the inactive those who have performed a SNA activity, at least one hour and prepare a special tabulation for this category.
9. Prepare a special tabulation for active, inactive-active (preceding category) and inactive who have performed extended SNA activities.
10. Extrapolate to the entire year by imputing values of working days for the active (and inactive) who have been surveyed on a non-working day and reciprocally.
11. Compute the total number of hours worked in the various detailed and aggregated activities.

Module 3

Guide to Methods on Monetary Valuation of Non Market Work and Construction of National Satellite Accounts of Household Production

3.1 Overview

- Time-use studies show that people use significant amounts of time in producing goods and services in households. Estimates of the value of household work as a proportion of Gross Domestic Product (GDP) has varied between 35-55% in developing countries (Pandey, R.N. 2002).
- However, this significant area of economic activity is not covered by official statistics. Yet, complete coverage of economic production is a vital aspect of the quality of the national accounts. And good quality of national accounts is vital for economic policy making and research. Therefore, achieving of the extent possible the exhaustiveness of GDP within this framework is the major goal of national accountants.
- The GDP level and rate of change in GDP are often used to compare the economic performance of different countries. Thus, it is important that all countries, especially, in Africa to calculate their GDP in the same way.
- Calculations of the value of household production have been made in several countries worldwide and recently attempts have been made in Benin, Madagascar and South Africa. However, there are still no generally accepted guidelines on how to construct national satellite accounts (NSA) for household production or what is the best operational method to value household production.
- The aim of the NSA is to provide an overall picture of the productive activities undertaken by households and to give an estimate of the value of household production. Small part of this production is covered by SNA, but most of it including NMW is not, hence the need for this guidebook.

3.2 Aims of the Module

- Understand what NSA is and how it is linked to national accounts
- Understand the economic and social importance of integrating NMW into satellite accounts
- Provide methods for valuing NMW and estimating the contribution of NMW to GDP
- Provide guidelines for constructing NSA

3.3 Concepts and Terminology

- The ERG draws on the 1993 SNA for the terms used in the definition of NMW, including:
 - *Household production for own final use*: productive activities that result in goods or services consumed or capitalized by the households including NMW that produced them.
 - *Household satellite accounts*: is a set of accounts developed as an expanded version of the Household Sector of the 1993 SNA. It follows the general structure of the SNA but includes other transactions that are outside the coverage of the SNA but still connected with the household economic activities. The SNA generally recognizes that household production is a part of economic activity.
 - *Gross domestic product (GDP)*: is as a measure of total national output, income and expenditure in the economy.
 - *Value added*: is the difference between production (or output + stocks variations) and intermediate consumption (raw materials, other expenditures comprising services, outsourcing or sub-contracted works).
 - *Gross income*: (operating surplus or mixed income) is the difference between value added and compensation of employees (wages and salaries + social contributions) and taxes related to production.
 - *Gross or net wage*: includes income tax and employer's social security contributions. The choice of either gross or net wage for the purpose of determining the value of household production has significant implications. Taxes and social security contributions may amount to up to half of the wages depending on the country and the welfare system.
 - *Mixed income*: is the surplus or deficit accruing from production by unincorporated enterprises owned by households. It contains an element of remuneration for work done by the owner, or other members of the household, that cannot be separately identified from the return to the owner as entrepreneur but it excludes operating surplus coming from owner-occupied dwellings.
 - *Intermediate consumption*: consists of the value of goods and services consumed as inputs by a process of production, excluding fixed assets whose consumption is recorded as consumption of fixed capital; the goods or services may be either transformed or used up by the production process.

3.4 What are National Accounts?

- National accounts are the set of aggregate accounts on the value and breakdown of all income and all output of an economy. One of the key concepts in the national accounts is that of production. The rules of the 1993 (*the production boundary*) that determine what is to be included as production and what has to be excluded determine the scope of most current and capital transactions in the national accounts.
- The production boundary plays the following roles in the national accounts:
 - Determines what is to be included in the accounts as output;
 - Because the 1993 SNA recognizes only uses of produced goods and services, the boundary also determines the scope of intermediate consumption, and thus, value added;

- For the same reason as above, the production boundary also determines what is to be included as household consumption and other final uses;
 - Because the 1993 SNA recognizes only income generated through the production process, the production boundary also determines what should be included as income; and
 - It determines what is saving (which is the difference between disposable income and final consumption) and net lending and borrowing (which is the final balance of the current and capital accounts).
- Comparability of national economic performances is also vital for assessing progress and obstacles and for designing adequate policy measures. At international level, the System of National Accounts (SNA, 1993) provide the statistical agencies with the definitions, concepts, methods and the framework to compile comparable GDPs with data from various sources.
 - Module1 has already covered production, economic activity and work. For national accountants, the treatment of the question in a satellite account is an elegant and sufficient solution to the questions raised by feminist economists and micro economists. It is our belief that more numerous satellite accounts will be seriously elaborated, the more sound the arguments towards a revision of the SNA in this direction.
 - In the SNA, the national economy is divided into 5 institutional sectors, which assemble the various productive units according to their function and their resources. The 5 institutional sectors are: *the non-financial corporations, the financial corporations, the general government, the non-profit institutions serving the households, and the households (including the unincorporated enterprises)*.
 - For the purpose of the present work, the households and the non-profit institutions serving households are the two main sectors concerned by the extended boundaries of production. However the more general concern of engendering national accounts will require an investigation into all sectors.
 - The System of National Accounts is an integrated framework based on a set of precise and consistent concepts and rules and pursuing certain objectives.
 - Until now NMW is not included in the 1993 SNA because imputed values have a different economic significance from monetary values. The Inter-secretariat Working Group on National Accounts is currently undertaking the updating of the SNA, a process to be completed by 2008. While a number of issues are under review, a revision and expansion of the production boundary is not intended. However, the limitations due to the definition of the production boundary of the SNA do not preclude making estimates for measuring non-market work (of women). It could be best approached in a satellite framework. The SNA recognizes flexibility, it can be used and adopted at different degrees of detail and its accounting framework can be supported by satellite accounts. The 1993 SNA suggests how satellite accounts can be used to present concepts that are additional to or differ from those in the central framework. For example, the *Handbook on non-profit institutions* that successfully elaborated recommendations in consistency with the SNA framework in the form of proposing a satellite account.

- If for any purpose – research or policy – these objectives or these rules and concepts were to be changed or made more flexible, it has to be done in a satellite account: identifying education or health in the SNA, or the cost and the impact of economic activities on the environment for example, are typical issues to be treated within a parallel system of satellite accounts. The measurement of household production is also a case susceptible of such a treatment. In addition, a satellite account of household production can use the central framework without any change except the use of the extended concept of work, which is already debated in the SNA 1993 (see chapter 1, supra).
- One of the major – although not explicit - argument is probably the limitation of imputations in the central system: if more than a half of the total GDP was to be the result of imputation – because the household production cannot be directly measured through transactions on markets – the analytical power of the system would be weakened. But at the same time, the founders of the SNA were conscious of the importance and the role of household production in the whole economy and for the economic welfare: this is why they went so far, within the SNA, towards the foundation and initialization of such an account. As a matter of fact, a satellite account of household production can be and must be, by nature and by construction, ready for inclusion in the central framework if it was decided to extend the production boundaries.

3.5 What are National Satellite Accounts?

- Satellite accounts or systems are methods by which the central framework of the SNA is expanded to increase the analytical capacity of the system without overburdening or disrupting it. These accounts allows for:
 - The provision of additional data on particular concerns such as NMW;
 - The use of alternative or complementary concepts, classification and accounting framework;
 - Extended coverage of costs and benefits of human activities;
 - Further analysis of data by means of relevant indicators and aggregates; and
 - Linkage of physical and monetary data.

3.6 Why National Satellite Accounts Now?

- The current UN 1993 SNA excludes majority of productive activities including NMW undertaken in the household for various reasons. Firstly, that the services provided have limited repercussions for the rest of the economy. Secondly, the services produced have no typical market prices for valuing them. Thirdly, the imputed values are not equivalent to the monetary values for analytical and policy-making purposes.
- Because of these justifications, the SNA recommends the use of NSA for recording domestic activities. While it is relevant to consider these arguments in the context of conceptual and methodological problems, the first argument could be contested for its validity since NMW interacts in many ways with the market. Further still, the simultaneous decision to produce and consume an output can also be applied to

market activities. Nevertheless, the major challenge remains is which framework of household production activities including NMW would best reflect the scope and the value of unpaid household work?

- As the current SNA is based on marketable goods and services, it does not include most of the NMW. Work such as domestic services, child-care and care of the sick and elderly, as well as community services remain excluded. Such services are not only critically vital for the economy as a whole, but need to be taken seriously in development planning given the growing dynamics of their interface with the market economy. In developing countries, especially in Africa, the line between marketable and non-marketable services is an arbitrary one.
- However, as discussed earlier, the major problem that needs to be resolved is that of accounting for NMW and its measurement and valuation. The question is, how regionally compatible and comparable methods to measure and value NMW can be developed for Africa? In Africa especially where women do most of the NMW, ECA's programme on NMW is indeed timely for measuring outputs, imputing values and calculating the total value of household production, and providing estimates on women's and men's share in it and to the GDP. The work of ECA and its partners shows that there are tools to design a common framework of NMW for use in developing NSA on household production. As discussed in Module 1, ECA's initiative to develop an Africa-specific Guidebook (the ERG) is a step forward in developing regionally comparable NSA.
- The ECA has paid particular attention to Africa by adapting tools for accounting for NMW to suit the conditions in the continent. For example, the lack of resources in African countries hinders regular time-use studies. Also the large proportion of the population that is illiterate make it difficult to import wholesome concepts and application techniques developed in industrialized countries. Thus, an Africa-specific Guidebook is expected to solve some of region-specific problems.
- In addition to the rationale to have an Africa-specific approach to establishing NSA, there are also other reasons for NSA related to poverty reduction strategy that allow for more accurate analysis of:
 - inequality in the distribution of NMW;
 - productivity changes in NMW and shifts in women's work and family welfare;
 - the contribution of women to GDP for sound policy and budget formulation.
 - In many countries, labour force statistics not only underestimate the number of women but also the number, the variety and the importance of their economic activities: female economic participation rates are still very low in various regions (Middle East, North Africa, India, Latin America), when recorded by labour statistics women are relatively more numerous in the informal sector, informal employment, production for own final use, as own-account workers or as contributing family workers. Moreover, they are usually more involved than men in secondary activities and multiple jobs. As a consequence, not only their contribution to production is likely to be underestimated but also their share of income. In other words, a great number of women are invisible on the production side and on the income side as well. This means that in the SNA, the production and the income approach fail to estimate their contribution and a part of the value added is missing on the three sides (a part of their production being used as self-consumption).

- Currently the production of the household sector comprises both market and non-market production - all production for own final use - of all individual entrepreneurs as well as imputed rents and paid domestic services. These components of household production are included in the central framework of the SNA and a satellite account of household production has to deal with the unpaid domestic services of the care economy to which it can be limited. But an extended satellite account can also include the part already measured and identified in the SNA.
- It must therefore be decided whether the satellite account will be only comprised of the 'unpaid work' or if it will also include 'paid work' that is to say both the non market production of households (which is called 'paid work' because shadow wages are imputed to the contributing family workers and income for work are imputed to the own-account workers as part of their 'mixed income'). It seems appropriate to leave apart the household market production as individual entrepreneurs. In the current practice of national accounts across Africa, many non-market SNA activities (included in 'paid work') are not actually measured by the GDP (fetching water and firewood for instance are not even mentioned in some countries while they are included in some other countries such as Burkina Faso).
- Because a satellite accounts of household production results from the simple extension of the production boundaries, the set of accounts remains the same as in the central framework: production account, generation of income account, according to the following sequence where the components in bold are obtained by balance:

Table 3.1: Components of the Production Account and of the Generation of Income Account

Uses	Resources
Production account	
Intermediate consumption	Output
<i>Gross Value Added</i>	
Consumption of fixed capital	
<i>Net Value Added</i>	
Generation of income account	
Compensation of employees (labour)	Value added
Taxes on production	
<i>Mixed income</i>	

- At this stage, it is preferable to elaborate these two accounts and not the complete set.
- The availability of time-use data suggests that the various components of the two accounts above be calculated from the compensation of labour: a number of hours per year are known for each activity and they are evaluated by imputing wages (an issue which is treated in the next paragraph). Some countries have based their estimates on this single figure: compensation of labour is taken as a proxy of value added and the resulting value added is taken as a proxy for production; similarly the same figure will be taken as a proxy for disposable income. The exercise then consists in adding up the same estimate on both sides (uses and resources) of the three accounts (including the use of income account), falling under the criticism of the SNA, which takes argument of artificial character of such a method to invalidate it.

- Building a real satellite account for household production requires estimation of intermediate consumption, consumption of fixed capital and taxes falling into the process of household production, a much more difficult exercise. In the SNA, all household consumption (except for individual entrepreneurs) is final consumption and the only fixed capital in the household is housing (purchase or self-construction). As soon as provision of nutrition, of clothing, of care and education and of housing are defined as 'household production', then a part of final consumption becomes intermediate consumption and another part becomes purchase of fixed capital subject to consumption of fixed capital and depreciation. Consequently, all household final consumption must be disaggregated into three parts: final, intermediate and fixed capital, following the classification of products and of activities, with specific difficulties to solve: for instance some food products do not require any processing before being eaten (fruit for example): should they be classified into final or intermediate consumption?
- Some products can be used either for household production or for final consumption (soap for instance): how to decide which share goes to production and which to consumption? The same difficulty exists for durable goods which become assets: cars, refrigerators for example have to be classified into two categories (or even three) as well (a car can be used for leisure, for household production and for the individual enterprise of the household); moreover a number of years of use must be fixed in order to impute a depreciation rate.
- To this aim, the availability of data is not a real issue as far as budget-consumption (or income-expenditures) surveys have been carried out and provided detailed results of expenditures and consumption by products, with market prices.

Table 3.2: A Framework for Analysing Unpaid Work

Types of time	Type of activity	Main categories	Examples of activities
Committed time	Non-SNA work	<p>Providing unpaid services for own final use</p> <ul style="list-style-type: none"> • Providing unpaid domestic services for own final use within household • Unpaid care-giving services to household members 	<p>F. Work providing unpaid domestic services for own final use within household</p> <ul style="list-style-type: none"> • <i>Cleaning, decoration maintenance of dwelling occupied by the household;</i> • <i>Preparation and serving of meals;</i> • <i>Transportation of members of the household or their goods.</i> <p>G. Work providing un-paid care-giving services to household members</p> <ul style="list-style-type: none"> • <i>Care, training and instruction of children;</i> • <i>Care of sick, infirm or old</i>
	Non-SNA work	<p>Providing unpaid domestic services, care giving services and volunteer services to other households, community, non-profit institutions serving households (NPISH).</p>	<p>H. Work providing community services and help to other households</p> <ul style="list-style-type: none"> • <i>Informal help to neighbours and relatives;</i> • <i>"Informal/unorganized" volunteer and community work through neighbourhood and informal community associations;</i> • <i>"Formal/organized" volunteer and community work through the Red Cross, welfare organizations, professional organizations, churches, clubs and others (NPISH).</i>

3.7 Methods of Valuation of Non-market Work

- Three methods can be used to value NMW in household production for constructing satellite accounts:
 - the output-based method,
 - the input-based method using the opportunity costs,
 - the input-based method using the market replacement cost.

3.7.1 *Output-based Method*

- In this method, production is valued on the basis of the output and from the output are derived the value added and the other significant components of the national accounts. This **output-based method** is preferred in national accounts and one needs:
 - Household output measured in physical units;
 - Intermediate consumption, measured in either physical or monetary terms; and
 - Market prices for physically measured items in either of the above two methods to be able to convert them into monetary measure.
- The number of prepared meals can be calculated using the value of similar meals in a restaurant, but the number of shirts washed or ironed is more difficult to calculate and the computation of each detailed unpaid service may lead to resort on too many assumptions and complications: the number of square meters of floor to be cleaned for instance. The argument is even stronger for developing countries where the equivalent goods and services may not at all exist on the market. Then estimates of intermediate consumption and consumption of fixed capital have to be calculated in order to generate an estimate of value added. It must be noted however that the other methods do not exempt to proceed the other way round to get the same estimates, because national accounts cannot be limited to the unique estimation of value added.
- The output-based method of satellite accounts can be summarized as being consisting of the following elements:

Value of outputs (quantity * price) – Intermediate Consumption
= Gross value added – Consumption of capital – Taxes on production + Subsidies on production
= Mixed income (residual, including compensation of labour and capital).

3.7.2 Input-based Methods

- The input-based method of satellite accounts can be summarized as being consisting of the following elements:

Value of labour (time unit from time-use studies valued at suitable wages/time) + Taxes on production
– Subsidies on production + Consumption of capital = Gross value added + Intermediate consumption
= Total output

- The **input-based methods**, which most time-use studies in the recent period used, involve application of the costs of inputs to value household production. The method is also used as one method in conventional national accounts as an alternative to output-based methods. The input-based method for valuing household production is similar to that for the valuation of non-market government services or non-profit institutions services, i.e. by summing up costs of labour inputs, net taxes on

production and intermediate consumption. In all these, value added is equal to the costs of labour inputs. Such valuation is based on time spent in the various activities multiplied by the corresponding salaries. Time and salaries are supposed to be easier to obtain than volumes and prices. But the issue of wages is more complicated because it raises several questions.

- To value non-SNA activities based on wages, the common approaches are:
 - *opportunity cost*,
 - *replacement cost (specialist)*, and
 - *replacement cost (generalist)*.

(i) Opportunity cost:

- The cost of wages forgone as a result of opting to offer services in the market. The valuation will change depending upon who is engaged in the unpaid work. The approach values the time spent for the NMW based on the forgone income of the unpaid household member had this member opted to provide labour services in the market. For example, if a mother with a post-graduate degree, opted to stay at home to take care of her children and manage the household, her unpaid work would be priced according to her compensation in paid employment. This method requires data on the occupation of the worker that will match with the occupation in the market and the compensation rate. Moreover, the method also implies that there are always opportunities in the labour market for the person. In countries where there is excess supply of labour, this method would tend to overestimate the price for unpaid labour.
- The main argument against the opportunity cost method is that very different values can be imputed to a same activity depending on who performs it, within the same household or in different households: painting a house will be valued more if done by an engineer than if done by a house painter. Moreover the reservation wage can be higher than the “offered” wage to explain why the house-worker prefers to stay at home: a disputable issue, actually.

Opportunity Cost Approach (OCA)

OCA computes the wage lost from performing NMW. In order to measure the value of NMW:

$$EV = HUP_{ijk} \times HW_{ijk} \times P_{ijk} \quad (1)$$

EV: Economic value of NMW
 HUP: Total hours of NMW
 P: Number of housekeepers
 HW: Hourly wage rate
 Letters *ijk* refer to sex, age and educational level respectively

- In the opportunity cost method the value of housework time equals the market wage rate of that person; it is his or her opportunity cost of time. Average wages have also been used for valuing the opportunity cost. The most apparent problem with this method is that it yields different values for similar products depending on who performed the task. Therefore, the method has been widely rejected by researchers.

(ii) Replacement cost (specialist)

- This approach uses the wage paid to a person who produces similar services in the market (i.e. $\text{wage} = \text{wage rate} * \text{time spent}$). It is applied to specific household own-account services. For example, cooking would be valued at wage rate of employed cooks, laundry of paid laundry workers, caring of children to paid nanny, etc. This method assumes that the quality of the same services would be the same and these occupations are found in the market.
- The replacement cost method provides three options:
 - The first option is to use the wages of specialized workers in market enterprises. Specialized workers in certain occupations perform similar activities as are done in households, e.g. a cook in a restaurant. The problem is that working conditions differ between households and market enterprises: capital investment is higher and production is organized differently (e.g. specialization of tasks and skills). These circumstances have an impact on productivity. In housework, several tasks are performed simultaneously, whereas in enterprises the work may resemble line production. On the other hand, housework may be combined with leisure activities, resulting in less intensive working.
 - The second possibility is to use the wages of specialised workers at home. One can buy services of a specialised worker, e.g. a cleaner or a nurse, who comes to work in a household. These workers may use tools and materials of their own or those available in the household. These specialised workers focus on one task at a time. These kinds of specialized workers are generally available only for a limited number of activities performed by households.
 - The third alternative is to use the wages of generalist workers (polyvalent substitutes). One can hire a person to work in the household doing all the tasks that the normal running of the household requires. In some countries there are institutionalized household substitutes who do most of the tasks required to manage a household. Most often they are responsible for visiting elderly people or helping when the mother is ill. However, domestic employees do not usually undertake all household tasks, particularly those related to management, as well as volunteer and community work.

(iii) Replacement cost (generalist)

- This method values the unpaid work by the equivalent wages of paid domestic help (i.e. $\text{wage} = \text{wage rate} * \text{time spent}$). The wage depends mostly on the labour market situation in the countries. In some countries, where wages of domestic help is legislated, the price would be available; in others pricing would require additional statistics from labour and employment or household income and expenditure surveys.

- The replacement cost method is generally preferred. Three options are possible:
 - use the wage of specialists in market enterprises, for instance a cook in a restaurant, or a nurse at a day care centre, but the conditions of work are very different from home and have an impact on productivity,
 - use the wage of specialized workers in the home: a nurse, a window cleaner, a gardener, etc.
 - use the wage of a generalist worker: a domestic employee, but then some of the domestic activities cannot be performed by such a worker, for instance car repair.
- The market replacement cost method with a specialized worker is quite complicated because several wages and wage levels have to be examined in order to find an appropriate combination of wages for different tasks. There are some activities for which no specialized market substitute can be found.
- The market replacement cost method with a generalist's wage seems to be the most appropriate basis for valuing household labour. The advantages of this method are as follows:
 - The working conditions are similar to those of household work, including the simultaneity of activities, the quality of capital goods, the amount of intermediate consumption, etc.; this means that productivity is similar to that of housework in general.
 - The contents of the work are rather similar to the contents of housework.
 - The method of valuation is simple and straightforward.
- Two basic assumptions lie behind the choice of gross or net wages. If households were to buy the service from the market, they would have to pay the gross wage. On the other hand, if it were thought that households earn the money by producing the services themselves, then the net wage would obviously be more appropriate because the household do not have to pay taxes or social security contributions for themselves.
- The recommendation is to use gross wages for valuation purposes for the following main reasons:
 - The solution is consistent with the method used for non-market services of general government and non-profit institutions serving households.
 - If households sold their services on the market, or if the services had to be purchased on the market, the price would cover all costs of production, including social security costs.
 - Wage statistics are based on gross wages. Comparable figures for net wages are not generally available.
- Table 3.4 summarizes the alternative methods for valuation of NMW. The number of possible estimates may be great and with a large scale of variations. Goldschmidt-Clermont (1982) is a good starting point for an extensive review prior to the recent reflections, and Sousa-Poza et al. (1999) for the latest literature in this area.

- For satellite account purposes, this third option is to be preferred (Varjonen, 1999). It can be noted that values obtained through the opportunity cost method are generally twice as high as the values obtained by the replacement cost method using the wage of generalist workers.

Table 3.4 : Methods of Valuation of Non-market Work

Output-based	Quantities x prices			
Input-based	Labour costs: Time x wages			
	Replacement cost	Generalist		Net wage
				Gross wage
				Compensation
		Specialist	Market	Net wage
				Gross wage
				Compensation
	In the home	Net wage		
		Gross wage		
		Compensation		
	Opportunity cost	Net wage		
Gross wage				
Compensation				

- As to the question of net or gross wages, it is critical as taxes and social contribution can represent more than half of the total wage bill. It is generally recognized that statistics on net wages (after payment of income tax and social contribution) are not available while those on gross wages (including or not social contribution of employers) are available: compensation of employees is the overall total corresponding to the actual cost of labour and should be preferred for this reason.
- The recommendations made by Varjonen (1999) in the perspective of the implementation of systematic and complete satellite account for the household production are clearly for the replacement cost method using the generalist workers' gross wage. Moreover, Sousa-Poza et al. (1999) distinguish between paid working hours and actual hours worked, which lead to other variations in the estimates (see table ...). And is it necessary to recall that whatever the wage rate finally chosen, it will re-introduce within the household production the gender gap which exists in the market economy.
- When replaced in the context of developing countries, these debates usually disappear in view of the weaknesses of available statistics but also because of market limitations. In rural areas, it is clear that the only generalist or specialized worker's wage is the agricultural worker's wage, which is usually very low. And in urban areas, the domestic worker is very often low paid, if even paid; many receive their payment in kind (food and shelter).

3.8 Size and Contribution of Non-market Work to GDP

- Depending on the methods used for the valuation, it is generally agreed that the care economy, including the production of goods (i.e. including activities which are, or should be, already in the GDP) would represent between 35 to 55 percent of the GDP in various countries. Higher estimates do exist as shown on table 8 below, but they must be taken as academic exercises rather than operational and reliable figures.
- For 12 OECD countries where time-use surveys have been carried out, the average number of hours and minutes of unpaid labour per week is 16 hours and 4 minutes for men and 31 hours and 52 minutes for women (1,98 times more). These time-budgets resulted into the following estimation of the unpaid labour contributing to GDP based on the general production boundary.
- It should be noted that an estimate at 50 percent (or 30 percent) for instance, means that the current official GDP would have to be multiplied by a factor 1.5 (or 1.3) if the general production boundary was to be adopted.

Table 3.5: Size of Unpaid labour compared to GDP in various countries.

Countries	Years	Value as a percent of GDP obtained						Output-based method
		Input-based methods						
		Opportunity cost method				Market replacement cost method		
		Average wage net	Average wage gross	Offered wage	Reservation wage	Generalist method	Specialist method	
Australia	1992	52	69			54	58	
Austria	1992		138					
Canada	1992	31	46					
Finland	1990		59			45		
France	1975	44				44		57
Germany	1991	46	100			68	72	
Netherlands	1990		108			82		
New Zealand	1990		68			43	52	
Norway	1992		39			38	37	
Switzerland (1)	1997		58.3	63.3	54.0	48.4	62.5	
Switzerland (2)	1997	38.2		37.6	34.3	35.4	41.9	
United Kingdom (3)	1999					50	104 (86)	
United Kingdom (4)	1999					44	90 (74)	

Source: Based on Sousa-Poza et al. (1999), and Fouquet and Chadeau (1981) for France, and Short S. (2001) for UK.

Notes: Figures between brackets for UK are obtained by differentiating wages by gender.

- (1) Using gross actual salaries.
- (2) Using net paid salaries.
- (3) Compensation of employees.
- (4) Wages and salaries.

3.9 Guide to Building a National Satellite Accounts of Household Production: A case for Benin, Madagascar, South Africa and Ghana.

- In Africa, only three countries have carried out national surveys on time-use: Benin, South Africa and Madagascar. And the GLSS in Ghana can also provide results that may be sufficient for the elaboration of a NSA (the Nigerian survey was a pilot survey on a small sample).
 1. In each of these 4 countries, the detailed list of extended SNA activities, and more widely, the detailed list of non market activities, with the number of hours spent per day, by sex, and where possible by urban/rural areas, extrapolated to the year is available (the least detailed is for Ghana, and the most detailed is for South Africa).
 2. A detailed statistics of average wage rates by detailed occupation in the formal and in the informal sector by sex must be prepared, based on household survey results or/and enterprise surveys or administrative records.
 3. A detailed list of agricultural, food and manufactured products as well as services must be prepared on the basis of the most recent budget-consumption or income-expenditures survey, with the annual value consumed or spent per person for each of these products.
 4. Based on the levels of details for each of these three lists, some groupings of the activities must be operated in order that the list of activities become more consistent with the list of occupations for which a wage rate is available and with the list of products (where groupings must also be operated).
 5. Then has to be decided which wage rate will be applied and imputed to which activity on order to obtain the amount of compensation for labour per person. By applying the result to the number of corresponding persons having performed the activity in the time-use survey, total compensation for labour is calculated by sex.
 6. Total consumption (or expenditure) per year and per person for each product is then calculated for the entire population and distributed between final consumption, intermediate consumption and assets in each activity. This is a step which requires many assumptions. It is quite a complex procedure: for instance cereals purchased or self-consumed by a household will constitute (for 100 percent) the intermediate consumption of the activity of crushing. Once evaluated the crushed cereals will in turn constitute the intermediate consumption of the activity of cooking or preparing meals. In fact, the entire process of national accounting must be redone for household production.
 7. For the share of these products which has been imputed to assets, other assumptions must be made for the number of years of their depreciation: the amount imputed to consumption of fixed capital is equal to the amount of this share divided by the number of years for depreciation.
 8. Taxes on housing, on cars, all taxes on production (except VAT) must also be distributed between extended SNA activities and other activities such as leisure: in principle a part of these taxes has already been imputed to the activity of individual entrepreneurs in the households.
 9. For all the preceding steps, imputation by sex is made on the basis of time-use.
 10. The sequence of production and generation of income accounts for household production can then be reconstituted and compared with total GDP.

- Analysis and use of gender-disaggregated data and statistics in, for example, measuring women's contribution to GDP is quite an unusual task for national accountants. The system is based on economic units (enterprises, households), which are not disaggregated by sex. However, since the 4th revision of the 1993 SNA this has not been a challenge since national accountants now classify output and value added by sector of industries and by institutional sector, distinguishing the informal sector within the household sector. In this way, national accountants try to disaggregate the data by region to provide information for the decentralisation process, which is being encouraged in more and more countries (Charmes, J. 2000). Thus, it is expected that development of NSA should not be a problem now.

Table 3.6: Size And Contribution of Informal Sector and of Women in the Informal Sector in African Countries

	Informal sector as a share of		Females in the informal sector as a share of	
	total employment	total GDP	total informal sector employment	total GDP
BENIN 1992				
Industries	97.0	61.9	42.8	26.5
Trade	99.1	69.8	92.2	64.3
Services	70.7	9.5	20.5	1.8
Total non agricultural	92.8	42.7	59.7	21.8
Total	41.0	27.3		14.0
MALI 1989				
Industries	91.7	35.5	73.2	26.0
Trade	98.1	56.7	81.3	46.1
Services	66.1	25.5	48.5	16.9
Total non agricultural	78.6	41.7	71.9	26.1
Total	13.3	23.0		14.8
CHAD 1993				
Industries	72.6	33.4	24.5	16.3
Trade	99.2	66.7	61.8	41.2
Services	49.7	34.0	47.1	16.0
Total non agricultural	74.2	44.7	53.4	27.8
Total	11.5	31.0		13.9
BURKINA FASO 1992				
Industries	86.0	71.3	88.5	63.1
Trade	94.7	45.7	65.9	30.1
Services	56.5	57.5*	10.7	6.2
Total non agricultural	77.0	36.2	41.9	28.6
Total	8.6	24.5		19.3
KENYA 1998				
Industries	55.7	11.8	19.0	2.2
Trade	84.9	61.5	50.2	27.3
Services	70.9	15.4	73.3	2.5
Total non agricultural	71.6	25.0	60.3	10.7
Total	28.8	18.4		7.9
TUNISIA 1994-96				
Industries	58.0	21.4	23.4	5.0
Trade	87.6	55.6	7.9	4.4
Services	31.1	13.7	17.3	2.4
Total non agricultural	48.7	22.9	18.1	3.6
Total	37.8	20.3		3.2

Source: Charmes, Jacques (2002), Self-employment, informal employment, and informal sector employment: Trends and characteristics. A tentative assessment of their statistical knowledge, contribution to the ILO/WIEGO report on Informal Employment for the International Labour Conference 2002, 67p.

Module 4

Guide to Analytical Tools for Integrating Non-market Work in National Budgets

4.1 Overview

- Most governments expressed commitment to gender equality objectives and to gender mainstreaming, but often there is a gap between policy statements and the ways in which governments raise and spend money (Elson, 2001). Most governments have also expressed commitments to greater governance (transparency and accountability), but there is often a gap between participation and consultation in the formulation of new policies and legislation and in the allocation of resources.
- Gender responsive budget initiatives can help close these gaps, ensuring that public money is raised and spent more effectively. They can help to ensure realization of gender equality goals and improved compliance with the recommendations of the Beijing Platform for Action (BPA), 1995, and the Convention on the Elimination of Discrimination Against Women. As a key feature of good governance, they can help promote greater accountability for public resources to the people of a country, especially to women, who are generally more marginalized than men in decision-making about public money.
- A gender responsive budget (GRB) does not aim to produce a separate budget for women. Rather, it aims to analyse any form of public expenditure, or method of raising public money, from a gender perspective, identifying the implications and impacts for women and girls as compared to men and boys. The key questions are what impact does this fiscal policy have on gender inequality or poverty reduction? Does it reduce gender inequality; increase it; or leave it unchanged?

4.2 Aims of the Module

- Introduce the budget process, and related aspects of public expenditure management
- Understand the economic and social values of integrating gender into national budget
- Introduce pro-poor analytical tools for integrating gender into national budget
- Provide good practices from country case studies on GRB initiatives

4.3 What is National Budget?

- The national budget is a document that, once approved by the legislature, authorises the government to raise revenues, incur debts and effect expenditures in order to achieve certain goals. Since the budget determines the origin and application of public financial resources, it plays a central role in the process of government, fulfilling economic, political, social, legal and administrative functions.
- Effective and strategic use of public resources is a critical ingredient of a country's development strategy. Yet public expenditure management in many African countries has suffered from over-programming, inadequate prioritisation, weak expenditure management, and inadequate monitoring and evaluation. These fiscal problems have resulted into poor macro-economic performance: high inflation, poor economic growth and insignificant reduction of poverty in many African countries.
- Of the three types of macroeconomic policy (i.e. exchange rate policy, monetary policy and fiscal policy), fiscal policy (taxation and expenditure) is considered the most promising entry point for integrating gender. Fiscal policy, comprising revenue instruments (e.g. taxes and user charges), and expenditure instruments (e.g. transfers, subsidies, and services) are all put together in a national budget, which is prepared annually. The budget reflects financial aggregates – totals and sub-totals of expenditure and revenue, and the resulting surplus and deficit. It comprises the system and the policy. The system deals with how resources are allocated, recorded, monitored and accounted for. The policy describes the values and objectives by which such decisions are made and the desired effects, or budgetary outcomes. The budget system including the formal and informal rules and processes that govern the production of a budget is fundamental to the fair and equitable allocation of resources, in line with our values and expectations.
- Thus, national budgets are key instruments of economic policy, directly affecting individuals through taxation and public expenditure policies, and affect their economic environment through impacts on the levels of national output, employment and prices. Because men and women play different economic roles and have different economic responsibilities, the same budgetary policies have different implications for men and women. Gender differences and inequalities can also restrict the ability of budgets to achieve national economic goals (e.g. expansion of outputs and jobs). It often has projections of its outcomes and macroeconomic performance for future years, in a medium term expenditure framework (MTEF).
- The MTEF provides an appropriate entry point for mainstreaming gender into fiscal policy, as it is the basis for a clear and systematic national planning process and demands that issues that exist at the micro level can be prioritised and met by the projected funds. In addition to the medium term planning of allocations, ministries can make medium term strategic plans. This in itself means that they have to plan activities (e.g. gender mainstreaming) around the problems they need to address, link those activities to allocations and outputs and design indicators to measure their performance.

4.4 What is a Gender-Responsive Budget?

- “Gender Responsive Budgets” (GRBs) which are now in existence in about 8 African countries are not separate budgets for women or men, but are mostly analyses of actual budgets through a “gender lens”. They can be regarded as gender-audits of budgets to ensure that:
 - Public expenditure priorities are consistent with development policies that observe equal opportunities policies and allocations within government services.
 - Overall budget framework is pro-poor;
 - Resources are allocated to priority investments that responds to the needs of both women and men including gender targeted allocations (e.g. special programmes targeting women); and
 - impacts of mainstream expenditures cross all sectors and services benefit both on women and men through budget tracking processes.

- Generally, GRB analysis is a mechanism to address three key objectives:
 - To raise awareness within governments about the impact of budgets (and the policies and programmes which they support) on both men and women.
 - To inform policy debate about the gender implications of government expenditures and revenues on welfare and poverty reduction.
 - To increase the effectiveness of government resource allocations for promoting gender equality and human development. They also give special attention to the needs of disenfranchised groups including poor women through prioritisation of public expenditures and the collection of revenues in socially equitable ways.

4.5 Why Gender Responsive Budgets?

- A gender responsive budget is an important mechanism for ensuring greater consistency between economic goals and social commitments. Guy Hewitt (in Budlender 2002) identified some of the more compelling justifications are presented below and include:
 - Economic Efficiency
 - Good Governance
 - Right to Information
 - Global Development Commitments and ECA Mandate
 - Gender Mainstreaming

4.5.1 Economic Efficiency

- The most widely used argument for undertaking GRB initiatives is that they lead to a more efficient use of resources. Gender analyses of government budgets are crucial for improved targeting, thereby avoiding 'false economies', that is, where attempts to reduce or contain financial costs in one sector may transfer or perpetuate actual costs in terms of time use for individuals and groups, and lower their overall productivity (Elson, 2000). In such cases, actual savings do not result for individuals and groups, particularly women. Similarly, growth has to be accompanied by the reduction of inequalities in order for sustained prosperity and human development to occur. The complementarity of efficiency with equity, referred to as 'new growth

theory' (or endogenous growth theory), advocates for state investment in broad infrastructure (financial, physical, technological, educational, environmental and social) that supports and 'crowds-in' private sector responses to achieve this (Palmer, 1995). The framework for GRB analysis involves the examination of inputs, activities, outputs and impacts of government interventions and provides comprehensive feedback on the effectiveness and efficiency of public expenditure. This results in a more optimal use of limited public resources and improved budgetary performance.

Financial cutbacks in medical services in hospitals may reduce provisions for post-operative recovery; resulting in patients being discharged early from hospitals and into 'community-care'. This transfer of the burden of convalescent care to the community and, in turn, to the women in the home, can have a knock-on effect as it places additional burdens on women, often forcing them to be absent from paid employment and lowering their productivity.

Source: Elson, 2000

- Research on human development and the reduction of poverty has established beyond doubt that, while distinctions have to be made between rich and poor households, there is a need for assessment of individual well-being within each unit. This is because there are differential impacts of public expenditure on individual members within households, with the more vulnerable having less access to available resources. Crucially, GRB initiatives provide an opportunity to evaluate not simply the nature and extent of the paid economy but also to evaluate NMW, in particular the provision of care, which individuals undertake, both in the community and in households. The recognition of this interaction enables policy-makers to avoid 'false economies' and the loss of output.

The new gender-aware approaches to macroeconomic analyses have three basic underpinnings:

- *The recognition that economic institutions may not be intrinsically gender neutral, but instead may bear and transmit gender biases through their assumptions and practices.*
- *The recognition that the cost of reproducing and maintaining the labour force in a society includes the critical contribution from the unpaid economy and that, to make the value of unremunerated work visible, macroeconomics has to be reoriented and redefined.*
- *An understanding that gender relations are primary social determinants in the division of labour; and thus that the distribution of employment, income, wealth and productive inputs have important macroeconomic implications.*

Source: Elson and Cagatay, 1999

4.5.2 Good Governance

- While 'good governance' is defined in different ways, it is primarily considered to be a process of improving opportunities for the delivery of goods and services to the people in a fair, just, effective and responsible way. Gender responsiveness is essential to the key features of good governance: transparency, accountability and participation. The analysis of gender issues, the participation of women as well as men in decision-making processes at all levels and the recognition by institutions of women's rights and needs are all central to good governance and are strong features in GRB initiatives.
- Growth and equity need not be contradictory goals. While dominant economic growth models do not emphasise the link between economic growth and human development, evidence suggests that investments in improving skills and meeting basic social needs can contribute to sustained economic growth (Klasen, 1999). However, while there have been examples of countries managing to improve human development in situations of economic hardship, it is usually not possible to sustain human development without economic growth. It is only in instances where the linkages between the two have been reinforced with policies and procedures for good governance that economic growth has effectively improved human development. In this respect, GRB initiatives can be an important instrument of such governance.
- Clearly good governance is a prerequisite for, and an essential component of, sustainable human development. By promoting accountability and transparency, it has also had a direct as well as an indirect impact upon the reduction of opportunities and incentives for corruption. Fostering these important aspects and values of good governance in the public domain requires a more participatory approach in the design, implementation and evaluation of projects and programmes. This strengthens the mechanisms for inputs of and reactions by communities and associations of local beneficiaries and users, particularly women in the case of GRB work (Dollar *et al.*, 1999a). GRB initiatives within governments have contributed to these processes.
- Gender responsive governance depends upon dynamic and active partnerships in the social and political forums that elaborate and redefine public policy. If these strategic partnerships are to jointly uphold the right of citizens to participation, information and accountability, they need to include civil society, especially women's networks at grassroot, local, national and global levels. This requires building alliances and includes:
 - Strengthened role of women's groups in negotiation processes at different levels.
 - Identification of new allies and partners especially supportive men.
 - Enhanced donor and developmental agencies support.
 - Improved access to public information through the mass media and new information and communication technologies.
 - Increased national capacities, (national mechanisms) to promote gender equality and the empowerment of women to participate in policy analysis and dialogue.
 - Enhanced accountability and participation at the local level, by giving greater importance to decentralisation processes and decentralised development cooperation.
 - Strengthened capacity for gender analysis and governance.

4.5.3 *The Right to Information*

- The demands for transparency and accountability have also been articulated in debates regarding the right to information as a global public good. The key idea posed is that knowledge is a critical component in economic production, and the degree of access to it represents one of the main divides between rich and poor. Increasingly too, information and the tools for manipulating and communicating it are 'controlled' or owned by individuals or corporations rather than being public goods available to everyone. It is crucial to recognise that without a strong and sustained demand for public sector information, accountability initiatives and anti-corruption strategies are likely to fail.

The quantity and quality of available information is changing dramatically every day in every country in the world. Citizens are gaining greater and greater access to information, too. And perhaps, most importantly, the spread of information is making accountability and transparency facts of life for any free government. The consent of the governed - the conditions of any free society - must be an informed, enlightened consent.

General Kofi Annan UN Secretary, Global Knowledge

Freedom of information - and, more specifically the right to seek, receive and impart information - is a fundamental human right; indeed a prerequisite for many others.

UNESCO, Many Voices, One World,

- GRB initiatives require the availability of accurate records and of gender-disaggregated data, which can help support other measures designed to improve public expenditure accountability. They are therefore, pioneering experiments for encouraging open government and maintaining an informed civil society. At the same time, they provide a monitoring tool and framework for objective comparison of the developmental achievements of : governments gained through public expenditure.

4.5.4 *Global Commitments and ECA Mandates*

- There has been growing recognition that the processes of globalisation are having varied impacts upon different groups and communities. Following a decade when stabilisation and macroeconomic adjustment were the dominant priorities, poverty reduction has reappeared on the international agenda and leading multilateral and bilateral agencies have adopted poverty reduction as their overarching objective and the benchmark for measuring performance. The Washington consensus, which influenced much of the thinking in the Bretton-Woods Institutions in the 1990s and the structural adjustment programmes thereafter, was generally unable to restore growth, despite relative success in instilling fiscal discipline. The emerging view is that macroeconomic policies need to be accompanied by a set of social policies that target social and gender equality, poverty reduction, environmental regeneration and basic labour standards, amongst other areas.
- However, there has been a tendency for commitments to gender to flounder for lack of resources. Many governments desire to do more but are restricted by limited resources. GRB initiatives, by supporting the targeting and effective use of those resources that are already available, provide a practical strategy to build upon the global consensus on the priority of gender equality. Gender responsive budgets allow for increasing outcomes within the confines of available resources. They could also

provide an initial step in the monitoring of the implementation and impacts of programmes at the local, national, regional and global levels and the nature of participatory decision-making, thereby strengthening accountability and responsibility for upholding the commitments made to goals of poverty reduction and gender equality.

4.5.5 Gender Mainstreaming

- GRB initiatives were designed as an application of gender mainstreaming, the current international approach to promoting equality between women and men. The efforts of various institutions including the Commonwealth's unique and innovative contribution, *Gender Management Systems* (GMS), ECA and UNIFEM are some of the examples of gender mainstreaming.⁶ Along these lines, the Organisation for Economic Cooperation and Development (OECD) held a ministerial conference on gender mainstreaming in November 2000 to illustrate how it promotes strong economies, competitiveness and growth.
- As budgets involve all government ministries and departments, GRB initiatives provide a practical opportunity for government officials across ministries to develop skills to apply gender tools to their work programmes. In addition, the focus on engaging Ministries of Finance given their pre-eminent role in budget management, introduces gender issues into the core of both government operations and finance management.

4.6 Country Experiences in Gender-responsive Budgeting

- Attempts to apply a gender analysis to government budgets began in Australia in 1984. The exercise was undertaken by the government and coordinated by the Office of the Status of Women. At its height, it was integrated into the budgetary preparations of the federal and all state and territorial budgets. Canada followed in 1993, with a one-off non-governmental organisation (NGO) exercise, which focused on the reallocation of defence spending to social services. The South African initiative began in 1994. In 1995 the Commonwealth Secretariat sought to build on the successes of these pioneering initiatives and began a five-country pilot project.
- GRB initiatives have now been implemented in forty countries at national, provincial or local levels. These countries include Australia, Barbados, Botswana, Canada, Fiji Islands, Kenya, Malawi, Mauritius, Mozambique, Namibia, South Africa, Sri Lanka, St Kitts and Nevis, Tanzania, Uganda, UK, Zambia and Zimbabwe.
- Despite the little impact regional and global initiatives appear to have on the budgetary process and poverty reduction goals at large, several budgetary initiatives that emerged – some over the past 15 years offer numerous insights into how macroeconomic policies can be designed with a focus on reducing gender inequality and poverty. They illustrate that a transformatory approach to economic policies in general, and macroeconomic policies in particular, are possible in countries with diverse social, economic and political conditions.

- Participatory approaches to national and local level budgeting are the primary vehicles of this transformation, which involves both changing the content of policies towards people-centred development and democratising the process of economic policy-making.
- There have been a number of different entry points into GRBs. Others, as in the case of Australia (Box 3.1), have started within governments as a result of feminists' efforts within the state bureaucracy to make the state responsive and accountable to women at the macroeconomic level. As in the case of South Africa (Box 3), some have taken place in the context of general social transformation towards a more equitable social order. On a global perspective, the Indian example started out as public audits by ordinary citizens focusing on accountability and transparency. Others have engaged finance ministers and prime ministers, others local public officials. Some are relatively new and have been formulated in order to fulfil commitments made at United Nations Conferences (e.g. the Philippines experience with gender-sensitive budgeting). Some focus on fiscal policy through the lens of poverty or gender and yet others, such as in Canadian, focus on monetary and fiscal policy, linking the concerns of gender equality and social equity with poverty and environmental sustainability in a holistic way.

Box 3.1: Australia's Gender-Sensitive Budget Initiative

Australia's pioneering work on gender sensitive budgets has recently become a focus of international attention. Australia can claim to be the first country to pursue gender equality through a comprehensive women's budget exercise. The federal Labour government for twelve years between 1984-96 undertook an assessment of the budget for its impact on women and girls. During the 1980s and the 1990s different political parties in each of the six Australian states and two territories also implemented these assessments for various periods of time. Although at the national level and in five states formal women's budgets have now been eliminated, governments in the state of Tasmania and in the Northern Territory still continue to undertake women's budget exercises.

These Australian experiences of developing gender sensitive analyses of government budgets have been seen as role models by other governments. The Australian initiative directly inspired a women's budget project in South Africa following a visit to Australia in 1995 by a delegation of gender specialists and human rights commissioners. The Australian experience has also been fed into the Commonwealth Secretariat pilot project on integrating gender into national budgets, which emerged from the Commonwealth Ministers Responsible for Women's Affairs meeting in Trinidad in 1996. Countries, which have so far either completed or expressed interest in developing a policy initiative under the Commonwealth pilot scheme, include Barbados, Sri Lanka, St Kitts, Fiji and South Africa.

There are now signs of renewed interest within Australia concerning how to forge links between government resource allocations, policy and gendered impacts. Women's policy units, community groups and researchers are beginning to search for new ways of making government budgets gender sensitive in the very different economic and social climate of the late 1990s. They are also looking to integrate the lessons from past experience with new international research emerging on the principles and practice of these exercises.

Source: Rhonda Sharp and Ray Broohill, 1999: UNDP Workshop on Pro-Poor, Gender and Environment Sensitive Budgets

- The entry points to appraise budgets may be from the point of view of distributive justice and equity, transparency, accountability, efficiency or sustainability. In recent years, a large number of budget initiatives have been undertaken in a wide range of countries. In the area of gender alone, GRB initiatives are taking place in a growing number of countries. For the sake of summing up the experiences in these countries, the ERG uses a broad definition of a GRB initiative. It includes all policies or actions that contain an explicit focus on national or local level public expenditures or revenues from poverty or gender perspectives to constitute a budget exercise. What is

covered, who participates and how the results are reported vary in different countries. A few such initiatives cover only expenditures directed specifically at women, although most cover untargeted spending categories. Some initiatives are local, others national. Some are located within government; others are launched by groups outside of the official government machinery. Elected representatives can play roles in both. In addition, the Commonwealth has developed a gender budget initiative in partnership with ministries responsible for women's affairs and ministries of finance in a number of member countries.

- In general terms, the on-going gender responsive budgets initiatives promote a particular vision of socially equitable development and seek to answer the following questions with respect to a concrete national or sub-national budget:
 - Are particular expenditures or methods of raising revenues pro-poor, i.e., in relative terms are they likely to benefit or hurt poor people more than people who are not poor?
 - Are particular expenditures or methods of raising revenues gender-sensitive, i.e.,
 - how do the benefits and the burdens differentially affect men and women, boys
 - and girls?

- The ultimate goal of these various budget initiatives is to come up with reprioritisation of both expenditures and revenue-raising methods in order to promote social justice. While most budget exercises focus on the expenditure side, some focus on both the expenditure and the revenue side. Even though most of the budget initiatives presented in boxes below focus primarily on one theme such as gender, many go beyond a singular concern either explicitly or implicitly. For example, the GRB exercise in South Africa pays special attention to poor women, starting from the understanding that women are not a monolithic group. It is also concerned with racial inequality. Likewise, the 20/20 initiative, which seeks universal access to basic social services, would also help reduce gender inequality since illiteracy among women is higher compared to men.

Box 3.2: Examples of Gender Responsive Budget Initiatives in Africa

(i) Designing a Gender-Sensitive Budget for Mozambique: 1999

Available data shows that more than two thirds of the Mozambican population live in rural areas where women form the majority. Poverty is higher in rural areas, i.e., from the total absolute poor population, 83.1% live in rural areas and only 16.9% live in urban areas. Subsistence agriculture constitutes the main occupation of the population, particularly women and it is in this sector where poverty is widespread (96.1% of peasants are poor). Only 11.0% of the population completed primary education, and women are literate only 5.1%, against men, 18.1%.

Budget planning and allocation have a role in overcoming these very related issues of poverty, gender and environment, and, unlike other countries, the initiative to apply this to concerns started at the Ministry of Planning and Finance (MPF). The general aim is to start directing the public financial resources into actions addressed at reducing gender bias against women. Therefore the MPF initiated the analysis on how sector programmes are addressing these concerns, giving special to the education, agriculture, labour and health sectors. The general finding is that, whatever the level of political commitment, budgets were formulated in such a way as to be too general to allow a sufficient focus on the gender specific needs implied by the political commitment.

Given these findings, the MPF started a programme of budgeting change with the aim of making sure that the priority of financing women related activities is consistently addressed as a line programme and respective budget. The task included the adaptation of the budget format to include gender-related expenditures and income. This was applied to the budgeting handbook, the classification of public expenditures and the sectors and Province Economic and Social plans.

The positive aspects we can draw from the short experience from Mozambique is that it is possible to move further, specially because there is political commitment (poverty and gender issues are addressed in the Five Year Government Programme and in the Post Beijing Action Plan), and the sectors enthusiasm to undertake the changes.

(ii) The South African Women's Budget Initiative

The South African Women's Budget Initiative (WBI) has now been in existence for close on five years. It has two legs – one inside government and one outside. The first activities were a joint venture between some of the "new" parliamentarians and non-governmental organisations (NGOs). Since being established this leg has produced analyses of all 27 sectoral budgets of the national government, as well as some preliminary analysis of provincial budgets, taxation, public sector employment, donor funding to government and the budget process itself. It has also produced five case studies from among the more than 840 local government budgets.

Within less than a year of publication of the first research, the government had embarked on a parallel initiative of gender analysis of budget. This project, which constitutes the second leg, is led by the national Department of Finance. It serves as one of the pilot studies for the Commonwealth's endeavour to engender macro-economic policy.

The two aspects of the WBI's activities, which between them represent more or less opposite ends of the continuum of engagement. Firstly, the (limited) intervention in respect of the Medium Term Expenditure Framework is largely based within the state. Its intended audience is government players who are responsible for designing the policies and related budgets of the state. Secondly, the Initiative is currently producing workshop materials for use with civil society groupings. This latter intervention exemplifies the Initiative's attempts to strengthen economic literacy as well as to lay a basis for strengthened intervention by ordinary people in policy and budget issues.

(iii) A Gender Analysis of the Zimbabwe Government Budget Allocation Process

The budget is an important instrument of national and economic planning and it represents the interplay of economic, social, and political factors. It is a short-term instrument of economic management and a mechanism to allocate the scarce resources of a nation so that they are managed efficiently and prudently to improve the people's standard of living.

In Zimbabwe the budget is largely non-transformational, hence issues of access to land and other forms of economic wealth, equity, gender inequality, poverty alleviation, and environmental conservation have not been seriously considered in the budget process. The budget does not seem to be the solution to the problems of gender disparities and issues of poverty, especially in the health, education, and employment sectors. So far Zimbabwe has had gender sensitive and pro-poor budget initiatives from UNIFEM, the Poverty Reduction Forum and World University Services (WUS). The aim of all these initiatives is to ensure that the budget is participatory, pro-poor, and gender sensitive.

Capacity Building for Advocacy on Budgets

Many of the organisations involved in budget advocacy work provide capacity building support to constituencies ranging from civil society organisations involved in or embarking on budget initiatives to members of parliament, parliamentary committees and ministries. Capacity building involves the development of technical and advocacy materials, organisation of conferences, training workshops and knowledge networks. For example, IDASA (South Africa) produces a range of budget related training and advocacy materials. It runs budget training workshops and electronic networks. In Canada, the Canadian Centre for Policy and Choices organise budget schools to make the budget process more transparent, to impart technical information, secure popular input and to disseminate the Alternative Federal Budget. Over 20 budget schools were held across Canada in 1999. In Brazil, the Brazilian Institute of Social and Economic Analyses.

(IBASE) provides training for the delegates and other bodies associated with the institutions of the participatory municipal budgets as well as to members of civil society. They are also called upon to evaluate and provide suggestions for improvements of the participatory budgets of the 100 cities with such processes in place.

The Commonwealth Gender Budget Initiative assists with gender analysis and planning skills training to enable government officials to bring a gender perspective to their portfolios. A recent workshop on rights-based policy advocacy and programming around budgets held in Ghana brought together a number of activists from mainly Africa-based organisations. The workshop was organised by ISODEC (Ghana), Actionaid (Kenya) and IDASA and partially supported by UNDP. The workshop aimed at empowering participants with the framework and tools necessary to map interests involved in budget making, analyse budgets, enhance budget transparency and contest budgetary priorities. The participants also discussed the implications of the HIPC and PRSP for people-centred budgeting. Sources: Hewitt and Raju 1999; Sucupira and Mello 1999.

Source: UNDP, 2000.

4.7 Analytical Tools for Assessing the Macroeconomy-Gender Nexus

- Diane Elson in Budlender et al (2002) identified two tools that are useful for examining feedbacks between macroeconomic variables and gender relations are:
 - gender-disaggregated analysis of the impact of the budget on time use; and
 - gender-aware medium-term economic policy frameworks.

4.7.1 Gender-disaggregated analysis of the impact of the budget on time use:

- A GRB strategy can be promoted by monitoring the time budgets of a country's citizens as well as the financial budget of the country. This information may be available from regular household surveys. If not, then time use questions, disaggregated by gender and age, will need to be added. In the short run, useful data may be gathered by women's organisations using rapid appraisal techniques at selected sites. Such techniques include holding focus group discussions or asking members to keep a diary of what they did the day before.
- With time budgets in place, it is possible to analyze the question of the sustainability of deficit in the national budget. This is: 'Is the deficit in women's time budget between the demands of unpaid work, and the time left available for it, sustainable or are the human resources of women or girls being depleted?' If the time deficit becomes too high, there will be negative feedback effects to the market economy which reduce productivity and increase costs, very often leading to the need to increase public expenditure to repair damage to the social framework. This could include, for instance, expenditure on insurance, policing, social workers or repairs to public property. Ultimately this undermines the sustainability of the budget strategy.
- Thus, if the budget deficit has been reduced by expenditure cutbacks that place great reliance on women's reproductive and voluntary work to substitute for public

services, while at the same time making men surplus to requirements, then there is a danger that its sustainability will prove illusory in the long run. Certainly, budget policy will not be providing a good foundation for the longer run achievement of growth combined with human development, because it is depleting human and social resources. The same interactions might also occur if budget policy leads to high and accelerating inflation, which can also put too much strain on the time budget of the care economy, using up large amounts of time in reorganising household management in the face of corrosive uncertainties about prices.

- The critical point is that a gender responsive approach to the overall budget strategy suggests that the maintenance of the social framework should not be taken for granted in judging the sustainability of budgets. Collecting time budget data is one way of making the connection. If time budgets look unsustainable, then this points to some reconsideration of the size of the national budget deficit, the tax-expenditure mix and the composition of expenditure.

4.7.2 *Gender-aware Medium-term Economic policy Frameworks*

- Depending on the nature of the model used to simulate budget outcomes, some of the parameters may well be sensitive to the gendered nature of control over resources or the distribution of resources between women and men. For instance, the evidence on gender equality as an efficiency issue suggests that the productivity of investment could be raised by changing the gender: distribution of resources in favour of women. Moreover, if women have a greater propensity to save than men, redistributing income towards women would raise the aggregate savings rate. Exploring this possibility requires some technical knowledge of modelling and cooperation with the economists in the Ministry of Finance who work with the models in use in a particular country.
- The ECA programme on integrating gender into national accounts and national budget has initiated work on developing a new range of gender-aware macroeconomic models aimed at evaluating impacts of macroeconomic policies on women's and men's welfare and poverty reduction. The focus of the work is initially on fiscal policy.
- A complementary strategy would be to examine the gender responsiveness of the institutional orientation or social system in which the overall budget strategy is embedded. If women have more voice in the social bargaining that, implicitly or explicitly, impacts on macroeconomic policy-making then more cooperative, less inflationary responses to any given deficit may result. For instance, owing to differences in their roles, women may have a different view than men of the trade-off between wage increases and maintenance or improvement of public sector services that support their caring roles. Women may be more prepared than men to accept limited wage increases in return for maintenance of public expenditure. A greater consideration of women's point of view should, other things being equal, lessen the risk of an inflationary spiral. This is not something that can be brought about quickly, but it should be possible to create opportunities for women to express their priorities through instruments such as attitude surveys, focus groups, public meetings and the media. This needs to be matched by an increase in the representation of women in parliament and in the executive, political and civil service, especially those

determining budget policy. The outcome could be a number of different budget scenarios, depending on the gender distribution of resources and the level of empowerment of women.

- The relevance of this last point is that the possibility of budget policy that is 'sound', promoting a human-centred pattern of growth, depends not only on seemingly mechanical economic factors, but also on social and political factors. Successful budget policy does require certain technical skills, and is constrained by available resources, but it is also an exercise in political economy, social bargaining and coalition building and in creating informed consent ('social contracts' or 'social compacts') around a shared vision of development. An alternative GRB and medium-term economic policy framework may be a i(powerful focus for such a vision.

4.7.3 How is public Action mobilized?

- Decisions *on* budget policy are usually taken by a small group of Ministers and officials in the Head of Government's Office, Ministry of Finance and/or Central Bank. Ministers and officials in Ministries Responsible for Women's Affairs, who are outside this group, need to engage in policy dialogue with the budget officials to promote the use of the tools identified here to bring about changes in budget policy so as to reduce gender inequality. Policy dialogue needs to be broadened through a multi-pronged strategy to incorporate the perspectives of different actors and interest groups. which could include:
 - ministries/departments which are responsible for major expenditure, such as health, education and agriculture;
 - parliamentarians, lawmakers and women's political caucuses;
 - women's organisations, NGOs and development agencies;
 - researchers, academics and policy analysts; and
 - the general public;
 - The aim would be to stimulate demand for integrating a gender analysis into fiscal policy and the budget cycle. Ministers Responsible for Women's Affairs have a crucial role in increasing the understanding of 'why' and 'how' budgets can be made gender responsive.

4.8 Gender Responsive Budget Analytical Tools

- Diane Elson (in Budlender, 2000) outlined with examples of country application the following six tools, which she developed for carrying out GRB analysis. However, these tools are yet to be adapted for regular use in African countries. These tools are indeed a step forward towards engendering fiscal policy and can be refined to different country needs.

4.8.1 Tool 1: Gender-A ware Policy Appraisal

- This is the analysis from a gender perspective of the policies and programmes funded through the budget, which asks 'in what ways are the policies and their associated resource allocations likely to reduce or increase gender inequality?

Example: The South African government's land reform programme is proceeding at an increasing pace, with corresponding increases in expenditure for everything from owner compensation to micro-finance programmes. However; women's access to land as well as to the financial resources necessary for its development is impeded by legal restrictions on women's land ownership and rights to conclude contracts. Women who do have access to land tend to have access to smaller plots with poor irrigation, and women-headed households typically have no wage or salary earners. As a result, women are far less able to benefit from the reform process and related expenditures. The Department of Land Affairs has started to integrate gender concerns into its monitoring and evaluation system and has begun providing gender training for staff.

4.8.2 Tool 2: Beneficiary Assessment

- Beneficiary assessment is a means by which the voice of the citizen can be heard. In these exercises, the actual or potential beneficiaries of public services are asked to assess how far public spending is meeting their needs, as they perceive them. This can be done through opinion polls, attitude surveys, group discussion or interviews. Questions focus on overall priorities for public spending or on the details of the operation of public services.

Example: In the United States, alarm over a national debt 'crisis' reached a peak in the mid-1990s, creating pressure to cut government expenditures in order to reduce the deficit. In 1996, the Women's International League for Peace and Freedom initiated a Women's Budget Project, asking women to answer a series of questions about the choices they would make in allocating national budget resources. Pointing out that few women benefit from military spending programmes because they are severely under-represented both in the armed forces and in military contractor jobs, the project calculated the costs of various defence-related programmes and compared them to potential social welfare expenditures. It then asked: Which would you choose? Fund the F-22 fighter plane programme for the current year (\$2.1 billion) or pay for the annual health care expenses for 1.3 million American women? Fund 'Sea wolf' attack submarines for the current year (\$1.7 billion) or provide low-income home energy assistance for 5.6 million households? The project estimated the savings from proposed cuts in military spending and outlined the ways in which such savings could be invested to benefit women, including employment and training programmes, campaigns against gender-based violence and services for the elderly, the majority of whom are women.

4.8.3 Tool 3: Gender-disaggregated Public Expenditure Incidence Analysis

- The tool aims to estimate the distribution of budget resources (or changes in resources) among males and females by measuring the unit costs of providing a given service and multiplying that cost by the number of units used by each group. Incidence analysis of public expenditure is a useful tool for helping to assess the gender distribution of public spending. It can give a sense of how gender-inclusive such expenditures actually are by comparing the distribution of the benefits of public spending among women and men, girls and boys. Similarly it can suggest the gender impact of supposedly gender-neutral budget cuts.

Example: Changes to Sri Lanka's food ration and subsidy programme in the 1980s revealed that, despite rapid economic growth, the real value of food stamps eroded in the first half of the decade and there was a decline in the real incomes of the poor: A gender-disaggregated analysis concluded that within poor households, girls and women took the brunt of the increasing food deficit, citing higher levels of malnutrition among pre-school and school-aged girls and declining birth weights of babies born to low income mothers.

4.8.4 Tool 4: Gender-Disaggregated Analysis of the impact of the Budget on Time Use

- This is a calculation based on household time use surveys of the link between budget allocations and their effect on how household members spend their time. Changes in government resource allocation have impacts on the way in which time is spent in households. In particular, cuts in some forms of public expenditure are likely to increase the amount of time that women have to spend in unpaid care work for their families and communities in order to make up for lost public services. Thus whenever cuts are proposed, the question should be asked: Is this likely to increase the time that men and women spend on unpaid care provision?

Example: Between 1983 and 1985, real per-capita expenditure on health fell by 16 per cent in Zambia. People had to travel greater distances and wait for longer period of time to get treatment and drugs. Interviewed Zambian women reported having to spend more time caring for sick family members, including time spent with them in hospital providing meals and helping to nurse them.

4.8.5 Tool 5: Gender-Aware Medium-Term Economic Policy Framework

- The tool is used to assess the impact of economic policies on women, focusing on aggregate fiscal, monetary and economic policies designed to promote globalisation and reduce poverty. The ultimate aim of gender analyses of government budgets is to incorporate gender variables into the models on which medium-term public expenditure planning are based. This can be done by disaggregating by sex, variables that refer to people (e.g. labour supply) or including new variables to represent NMW.

Example:1 The ECA has embarked on developing gender-aware macroeconomic models to evaluate impacts of economic policies on welfare and poverty reduction in

initially 6 African countries. This initiative was prompted by the general lack of evaluation tools and increasing need for African governments to evaluate impacts of their policies on different groups of their citizens.

Example 2: In South Africa the government invited members of the Women's Budget Initiative to address a workshop on the development of the 1996 Medium Term Expenditure Framework (MTEF). The idea was to plan expenditure on a three-year rolling basis rather than on the present year-by-year rolling basis. It is noteworthy that while this did not mean that the MTEF would necessarily be gender-sensitive, it did signal a willingness by the Ministry of Finance to engage with gender-equality issues. In fact, the National Expenditure Survey produced by the Ministry of Finance in 1999 did incorporate more gender analysis. In Tanzania, the Ministry of Finance is seeking to integrate gender concerns into the new MTEF and performance budgeting system.

4.8.6 Tool 6: Gender Responsive Budget Statement

- This is a government report that reviews the budget using some of the above tools, and summarises its implications for gender equality with different indicators, such as the share of expenditure targeted to gender equality, the gender balance in government jobs, contracts or training, or the share of public service expenditure used mainly by women. Any government can issue a GRB statement utilising one or more of the above tools to analyse its programmes and budgets and summarise their implications with a number of key indicators. It requires a high degree of coordination throughout the public sector and is essentially an accountability report by government regarding its commitment to gender equity and hence good governance.

Module 5

Guide to Policy Options, Responses and Advocacy on Non-market Work

5.1 Overview

- A major challenge facing the whole human development process is how to make Women's unpaid work including NMW count in a world dominated by financial calculus. Because of this and other challenges, women's NMW has been identified as a key area for policy intervention by the United Nations through its Beijing Platform for Action (1995). Some countries such as Canada and international agencies have initiated studies to identify and measure the linkages between economic and social policies (e.g. subsidies and transfers) and NMW.
- In Africa, the United Nations Economic Commission for Africa (ECA) and other agencies have initiated work to promote policy options, responses and advocacy towards recognizing NMW. This initiative is timely because on-going work on gender has largely concentrated on methodology of gender mainstreaming in development, while focus on the analysis of policy implications of time-use statistics has received little attention. Thus, there is certainly a wide scope for further development of interpretation of time-use data for policy making.
- The development of policy analysis needs to include guidelines on policy options, responses and advocacy strategies and how to sharpen skills of national statisticians, national accountants and policy analysts in communicating policy recommendations to decision-makers and other stakeholders.
- In the emerging studies on valuation of market and NMW, the task ahead is how to ensure appreciation of time-use statistics – the implications to policy makers, and the kind of policy recommendations to be made. Although this initiative is relatively new, collection of time-use data remains the only valid method of capturing previously invisible women's activities: effective policy-making depends on accurate data and statistical indicators.

5.2 Aims of the Module

- Understand the implications of integrating NMW into national policies
- Demonstrate the application of statistics on NMW in national accounts systems
- Identify policy options, responses and advocacy channels to promote equal opportunities by integrating NMW in development process
- Improve skills of statisticians, national accountants and policy analysts in communicating policy recommendations to decision-makers

5.3 Integration of Non-market Work in National Policies: Why Now?

- The integration of market and NMW in national policies can be done through mainstreaming in:
 - National statistics system
 - Labour market and employment policies
 - Policies of social welfare and social protection
 - Macroeconomic policies.
- Until now women's contribution to the economy through NMW and subsistence agriculture is generally ignored or poorly estimated in official statistics in African countries. Today most of these countries formulate their policies based on only paid work, which represents only part of the economy. Thus, discrepancy exists between women's economic contribution and their control over economic resources.
- Women's work has remained invisible, but when valued and presented in the form of NSA, it can reflect more realistic estimates of total economic production by taking into account all household activities. This would enhance women's economic status in a positive direction and would contribute to long-term endogenous growth strategies by opening up capacity/capabilities in areas such as agriculture, health and education.
- Emerging research shows that NMW underpins the economy with a significant contribution to income generation, long-term growth and poverty reduction by supplying human and social capital labour to the private sector and the public service sector economy. Women's domestic chores and child-care prepare children to become future workers as part of building human capital. However, women still have less access to income and assets, less wealth and less control over the economic processes to which they contribute; hence, the need to measure unpaid work.
- This NMW or the *care economy* is not included in the national accounts. However, the SNA 1993 recommended compilation of *national satellite accounts (NSA)* to provide a framework linked to the central accounts, and it enables focused attention on an aspect of economic or social life (e.g. unpaid work) in the context of the national accounts. Since 1993, there is increasing understanding of the contribution of NMW to the economy. These studies in developed countries as well as pilot studies in Africa are now helping to show the need for policy intervention to increase the visibility of NMW and to boost the contribution of women to both market and non-market economies.
- But a major challenge still remains and that is the need for more data and statistics that will ensure that the concerns of both paid and unpaid work are considered in policy formulation for all groups of the society. Hence, the need to focus on policy implications of measurement, valuation and integration of NMW into national planning instruments through time-use studies, NSA and national budgets.

5.3.1 Linkage of Non-Market Work to Macroeconomic Policy

- The exclusion of unpaid women's work assumes that these have little or no effect on most micro- and macro-economic activity. But the consequences are immense. For example, in Nepal, the World Bank has estimated that 8 million tones of dung are burned as fuel each year. The use of dung as fuel (instead of a fertilizer) is a major instance of import substitution, and represents a national saving in terms of debt that would be incurred through the importation of commercial fuels if resourceful women had not processed the alternative.
- During periods of economic recession and crisis, declining real incomes and rising unemployment and underemployment, the increases in the unpaid work performed by women intensifies gender inequalities, restricting women's access to economic opportunities and the benefits of development relative to men.
- Research undertaken in several economies, including Australia and Canada, has attempted to assess the implications of measures in national budgets for household time budgets. Cutbacks in social services, for example, may have the effect of increasing time spent on care work; reductions in subsidies for food stuffs may result in women, who are usually responsible for provision of food, spending more time looking for cheaper substitutes.
- Research in Kenya, Bangladesh, Ecuador, Philippines, Canada and Australia have shown that macroeconomic policies tend to assume that women's labour supply is elastic and that increases in NMW performed in households and communities performed largely by women will counter the effects of cuts in employment, income or services in the market and public sectors. Under structural adjustment policies in developing countries, cuts in health, family planning and other social services increases the burden of unpaid home care and services on women. In some OECD countries, the attempt to make hospitals more efficient through the earlier discharge of patients, with convalescence taking place at home, transfers the burden of care to unpaid female household members. Thus, what may be regarded as an increase in productivity or efficiency for the market economy is actually a shift of costs from the paid work sector to the unpaid work sector.
- Unpaid labour is a resource that can be depleted, with potentially negative impacts on the macro- economy. These include the cost to those who provide the unpaid work, in terms of loss of education, health and well-being. Second, unpaid work may compete with paid work: meeting greater demands for unpaid work may jeopardize ability to supply more paid work. This may be one explanation for poor supply response to some adjustment programs. Economist Diane Elson argues that a hidden factor in many episodes of stabilization and structural adjustment is the intensification and extension of unpaid labour. Unpaid labour may assist in absorbing the shocks of adjustment: for example, unpaid labour may be substituted for paid labour in the production of food and clothing, which are produced in the home instead of purchased from the market. Voluntary labour may be mobilized in community self-help schemes when public expenditures are cut.

Example 1: In countries, which have adopted international labor migration as a measure to promote employment, the impact on women differs according to the culture of the sending and receiving countries. In the conservative male-dominated cultures of South Asia, international migration has been almost exclusively male, much of it from rural areas. This has had a marked impact on female labor force participation in

agriculture, both directly through the need to replace out-migrant male farmers, and indirectly through the need to replace out-migrant male farmers, and indirectly through the need to replace other farmers drawn into off-farm employment by increasing non-agricultural employment opportunities in rural areas for male non-migrants. In Pakistan, for example, labor force participation rates for females engaged in agricultural work on own farm increased from 39 percent in 1972 to 54 percent in 1980.

In countries of predominantly male out-migration, cultural pressures largely restrict the increased female labor force to unpaid work on the family farm, typically under the control of other men. Unlike paid work, which usually requires a minimum level of education, this largely unrewarded economic activity does little to raise the status of women and provides almost no incentive for families to educate daughters. Where women themselves comprise a substantial proportion of international out migrants, most migrate to work as domestic servants in countries where the status of women is low, and in situations where economic and personal exploitation is rife. Although the incomes they earn may increase their status within the family, the women often experience great personal hardship and the social costs for their families and their communities may be higher.

Example 2: In the 1960s, the export-oriented policies of Asian countries like Hongkong, Taiwan and South Korea have created many new employment opportunities for young women. A number of heavily-indebted Asian nations were pressured to adopt export-oriented strategies by international development lending agencies as part of the stabilization and structural adjustment measures, while others did so voluntarily in the face of mounting external imbalances.

Although, overall, export-led development have been generally associated with expanding employment opportunities for women, these are not always in the formal wage sector. In a 10 number of countries, the expansion of female employment has occurred in manufacturing in the informal rather than the formal sector. In Pakistan, women's representation among regular industrial employees is very low and measured urban female labour force participation rate has shown only a negligible increase. However, micro-studies of urban areas point to an increasing influx of women workers in the urban informal sector, where they are employed as temporary, casual or contract labour. Many are also in home-based piece rate employment, particularly in countries such as Pakistan and Bangladesh where cultural systems restrict women's mobility.

Source: Comer, Lorraine. "Women, Men and Economics. The Gender-Differentiated Impact of Macroeconomics. UNIFEMAsia-Pacific Regional Office, New York, USA, 1996, pp. 57 - 59.

5.4 What are the Perspectives in Analysing Policy Implications of Non-market Work?

- In analyzing time use data, Luza, L.S. (2000) identified three perspectives, which appear to be particularly useful relating to NMW:
 - promoting gender equality;
 - employment, income; social benefits and well-being and
 - linkages to macro-economic policies.
- These are not mutually exclusive policy domains and each has a bearing on one another.

5.4.1 Promoting Gender Equality

- In the global movement for women's equality, there is a general feeling that women have been left out in the societal allocation of benefits from development and this is believed to arise from the unfounded "consensus" that women's contribution to development has been marginal. The flaws of such an argument has been shown by the findings of time use surveys as will be discussed further.
- A closer look at household economies, especially in developing countries, has revealed that this is a myth. Women do contribute to the economy just like men but their

contribution have either been ignored, uncounted or underestimated. Time use data has shown that women's unpaid work has been consistently higher than that of the men. Reproductive activities have been classified as non-economic, non-productive and therefore it is "unvalued or unmonetised."

- *Gender equity* is the process of being fair to women and men. To ensure fairness, measures must often be available to compensate for historical and social disadvantages that prevent women and men from otherwise operating on a level playing field. Equity leads to equality.
- *Gender equality* means that women and men enjoy the same status. Gender equality means that women and men have equal conditions for realizing their full human rights and potential to contribute to national, political, economic, social and cultural development and to benefit from the results. It acknowledges that different treatment of women and men may sometimes be required to achieve the sameness of results, because of different life conditions or compensate for past discrimination.
- Gender equality is therefore the equal valuing by society of both the similarities and differences between women and men and the varying roles they play. Time use survey data can help reveal the presence or absence of gender discrimination, which may not be obvious without such data. Such data can be generated from:
 - Measuring women's contribution to total work in the economy; and
 - Measuring the time spent on SNA and extended SNA activities by men and women.

5.4.2 Measuring women's contribution to total work in the economy in terms of the time spent to understand:

- women's contribution to the total marketed work (conventional definition of work) and
- women's contribution to "work" as per the 1993 SNA Production Boundary.
- Such emerging studies on NMW will help in:
 - improving labor force/workforce data under the conventional definition as well as under the 1993 SNA based definition of work and workers and
 - shed light on diversification of economic activities of men and women as well as their paid and unpaid work time.
- Exclusion of unpaid work in the national accounts perpetuates the incomplete and inaccurate picture of national income, especially in developing countries. For example, the gross domestic product (GDP) does not include non-monetary production, it records shifts in productive activity from the household and non-market sectors to the market economy as economic growth, even though total production may remain unchanged.
- Paid child-care, hired domestic help and restaurant food preparation all add to the GDP, while the economic values of parenting, unpaid housework, home food preparation and all forms of volunteer work remain invisible in economic accounts. Productivity gains may result in greater output or increased leisure, but the GDP only measures the first, thereby masking longer working hours. Both omissions have implications for the changing role of women in the economy, who have entered the paid workforce without a corresponding decline in their hours of unpaid work.

- A more comprehensive description of the economy would incorporate inputs from the formal sector (production activity, market transactions); the informal sector (volunteer activity, the underground economy); the household sector (household production, caring, leisure) and reproductive activity (conception and birth education and value imprinting).

Example 1: South Africa

South Africa like most African countries underestimate household production in the their national accounts. Its time-use survey of 2000 was the first of its kind at a national level for the country. Women spend more time in NMW than men. According to the TUS (Table 5.1):

- household production increases conventional GDP by 55%;
- women in employment spend less time than men on NMW;
- women spend on the average more time than men on all the three categories of employment

Table 5.1: Mean minutes per day spent on productive and non-productive activities, by employment status and sex.

Activity	Employed		Unemployed		Not Economically Active	
	Male	Female	Male	Female	Male	Female
SNA production	328	260	121	46	42	28
Non-SNA production	82	210	119	349	78	203
Non-productive	1029	969	12000	1045	1320	1208
Total	1439	1438	1440	1440	1439	1439

Example 2: Bangladesh

Women spend more time in unpaid work than men. Non-market production, which includes both subsistence production and housework, is a major sector in the Bangladesh economy. In fact it contributes 23 % to the revised GDP being second only to the agriculture sector, which contributes 33 %.

General

- Nonmarket work increases conventional GDP estimates by 29 %
- Under the 1993 UN SNA production boundary definitions, 95 % of non-market production of Bangladesh is excluded.
- Opportunity cost is 64 % of formal wage rate; informal wage rate is 80 % of formal wage rate. This indicates self-exploitation of the rural labour force and perceived non-value of NMW.

Gender-related

Production

- Conventional GDP estimates capture 98% of men's production but only 47% of women's production.
- Women's contribution to national income using conventional estimates is 25% and men's contribution is 75 %.
- Including NMW in national income estimates, increases women's contribution from 25 % - 41 %.

- Women's contribution to market work is 25 % to 97 % to non market work. Under the proposed recommendations of the revised SNA, 38 % of men's NMW and only 4 % of women's NMW will be accounted for in GDP estimates.

Time allocation

- Of the total time spent on work in rural areas, women contribute 53 %.
- Of the total time spent on market work, women contribute 25 %.
- Of the total time spent on nonmarket work, women contribute 89 %.
- Men have 12 % more leisure time than women.

Wage rates

- Female: male wage ratio is 0.50 in the informal sector, 0.60 in the non-agriculture sector, and 0.66 in the agriculture sector, indicating under-valuation of women's skills in all sectors of the economy.
 - There is only marginal difference between wage rates of women and that of children, indicating that women's skills are valued at par with that of children. **Source: Sharmin Hamid**
- In both examples from South Africa and Bangladesh, time-use data sheds light on the relative contribution of men and women in the national economy because it takes into account all activities within the household and attaches appropriate value to women's reproductive roles. This lays the ground for policy makers to review these contributions against the benefits from development that actually accrue to women in their respective societies.
 - Work performed in households such as domestic chores and child care prepare children for school and to become future workers and citizens. This is in fact part of the process of building human capital or human resources development. In this sense, the unpaid work of caring for human resources underpins the functioning of the market economy.
 - If women's reproductive tasks are considered important, like for example caring and tutoring their children, what kind of "social compensation" do women get for performing this task? Do women get social services and resources to facilitate the performance of these roles? Are they given assistance to reduce time for their routine tasks so that they have more time to perform these roles? Are women given the time to develop and educate themselves? Do husbands share in the domestic chores? Does society encourage or give incentives for men to share in the housework? Or does the culture sanction men's sharing of household chores?
 - The "care functions" of women in the household helps ensure the health and education of the members of society. "These are necessary inputs into the production of output, but they are also valuable in their own right. In fact, they are the most important output of our economies. Prioritizing the production of human capabilities implies prioritizing the production of goods and services that contribute to health, education and welfare." In almost all African societies, care labor is in the hands of the women. Yet they get much less social benefits than men.

- The policy responses of these may lie in the area of educating men and women in society and measures to reduce negative values to men's sharing in domestic activities and allowing their spouses to build their human capital.
- The policy impact of time use data in this case is the provision of better information to policy makers which is hoped to lead to better understanding and appreciation of women's contribution to the economy. Accordingly, there will be adequate grounds for policy makers to initiate and advocate policies that will give women a better share of the gains from development. And this is where the equity issue can be addressed.

5.4.3 *Measuring the time spent on SNA and extended SNA activities by men and women*

This intervention aims to analyze:

- their respective shares in both these activities and
- the time burden that women carry while entering the labor market.
- Comparisons of time spent on SNA and extended SNA activities can shed light on inequities in work sharing of total work by men and women in our society. This should be analyzed in terms of time spent as well as:
 - drudgery of work;
 - productivity and remuneration of work;
 - decision making powers and hierarchy of work and
 - prospects of upward mobility in work and prospects of accessing development opportunities in life.
- Current labor statistics provide a distorted image of how countries utilize labour resources to achieve their standard of living only because they only record those labor inputs involved in the production of goods and services covered by the 1993 SNA. However, time use studies in both industrialized and developing countries have shown that labour inputs into non-SNA (or non- market) activities are of a similar, if not greater, order of magnitude. Much of these labour inputs are unpaid work.
- The amount of labour spent in market and non-market activities can only be obtained by means of time use data. Measurements in units of time are valuable in the economic assessment of non-SNA activities. Time use surveys provide data on the participation of women and men in the activities (such as work, child care, domestic chore, leisure, travel, personal care, and sleep) defined for the particular survey.
- Time use data can shed light on the following questions: Do women get less rest than men? Do women have less time than men for education and self-improvement? less time on relaxation and socio-cultural activities? If women spend more time on extended SNA activities, are these activities paid or not?

5.5 Non-market Work in Labour Market and Employment Policies

- Women's "employment" is generally low because employment is construed to mean work in the formal sector. The reproductive functions of women hold them back from joining the labor market as it is often culturally expected that she would perform this role more than the men. Thus, NMW tends to constrain women's participation in paid work, particularly in the formal, paid labor market.

- However, poverty and the financial crisis compel women to engage in economic activities and earn income outside the formal sector, now popularly known as the informal economy. Thus women may perform subsistence and livelihood activities or engage in micro-enterprises and generate income for the household. But there are two issues:
 - her informal activities do not reduce her unpaid work; in fact, she continues to perform unpaid work along with her informal economic activities and
 - this does not enter the national accounts and is not reflected in the GDP. This implies that women's employment is in fact high but this necessitates broadening the notion of "employment"; the more appropriate concept is "work."
- Time use survey data can help detect the extent women's involvement in the informal sector which can either paid or unpaid. Where these activities are done as part of a family enterprise, then the work could be done as an unpaid family worker. In cases where the activities are done as an own account worker, the person may earn from her informal activities.
- Since the informal sector is also invisible in national accounts, there is little support and institutional assistance to the sector to facilitate its growth from subsistence undertakings to viable and sustainable economic undertakings. Labor machineries are often designed to cater for the wage employees or the formal sector. Hence, the informal sector which consist of mostly women and children, fall outside the mainstream economy and are not able to enjoy social protection. In developing economies institutionalized safety nets are scarce and in times of economic crisis, this renders the informal sector very vulnerable.
- The informal sector is therefore invisible, vulnerable, and unprotected. During the financial crisis in developing countries including Africa, there are evidences that the informal sector has become the "catch basin" for those who fallout of the mainstream or formal economy. Retrenched workers due to downsizing of enterprises seek alternative employment and income from the informal sector.
- Time-use data can help policy makers to identify the location of surplus labour per class, area, gender, age group, etc. and, together with measurement of returns on these activities, enable the measurement of the average productivity of subsistence agriculture and drive the price of Nepalese labour. This will facilitate appropriate policy formulation on unemployment and poverty."

Example: Bangladesh

In Bangladesh, the 1984 population census reported that 90 % of the active age rural female labour force were housewives (a category which was excluded from the survey's definition of economic activity), although a questionnaire conducted the previous year found that the vast majority of rural "housewives" were involved in food processing and other agricultural duties. The 1992 Bangladesh labour force survey continued to exclude housework from its revised definition, although it did include unpaid agricultural work. What is clear is that when women were not counted, there would have been no recognition at all.

The extent of women's participation in SNA and extended SNA activities can show her economic involvement in both paid and unpaid work. If her involvement is shown to be high, one wonders what she gets out of it in terms of benefits in cash or in kind. Parallel analysis is therefore needed to determine the wages, conditions of work and social protection benefits that women derive from their paid and unpaid work. This would provide the full picture as to what women contribute and what they gain from their economic contribution to society.

5.6 Policy Options and Responses for Non-market Work

5.6.1 Policy Strategies for the Reform of Statistical Systems

- Official recognition of unpaid work and making visible women's contribution to the national economy implies the institutionalization of reforms in the national statistical system to ensure the enumeration and valuation of unpaid work. "As a policy, governments should introduce time use studies as part of their normal official data collection efforts such as the census operations or price statistics... Reworking the official statistical systems is needed to arrive at an alternate measure of domestic product which can be logically compared across nations, regardless of the extent of market orientation".

Among such reforms are:

- the standardization of concepts and definitions;
 - the adoption of the revised UN trial activity classification;
 - the adoption of national satellite accounts (NSA);
 - continuous or periodic conduct of time use surveys and
 - adoption of a standard methodology for valuation labor force surveys and time use surveys would probably have to be harmonized to ensure data complementarity and miningfulness of interpretation.
- Information collected through time use surveys provide a "better" picture of the economy than for example, labor force surveys which omit significant portions of the population. Time use data makes apparent men and women's participation in extended SNA production and with time use data for those below 15 years of age, the work of children and the existence of child labor can be readily established. These data can supplement standard gross national product estimates.

- Time use data provides empirical evidence of women's actual contribution to the economy. When appropriately valued (in money terms), the magnitude and the economic significance of unpaid work of both men and women can be established.
- Time use data is useful for revealing linkages between government's budget and household time budgets. A gendered analysis of the government budget can reveal the effect of expenditure and revenue policies on women and men, girls and boys. The process tends to reveal the gender bias in national budgets. For example, cutbacks in social services may increase the need for unpaid work, the bulk of which is carried out by women.
- As a prerequisite to the reform of the statistical system is the need to sensitize policy makers and economists on the importance of time use surveys and to build the capacity of statisticians in the conduct of time use surveys as well as in the use of time use data in policy making.
- Capacity building among statisticians, economists, enumerators, planners on the concepts, methods and uses of time use data, data on unpaid and underpaid work is strongly recommended. On-going work by ECA is an example of capacity building. Equally important is the understanding about the critical linkages and interdependencies between market and NMW. This should not only be at the national level but also international.
- Sensitizing policy makers and decision takers regarding gender differences in costs, burdens and benefits of work, disseminating data on time use can enable them to come up with practical policy options with budget support, legislation. Interdisciplinary workshops is one way to make a beginning."

5.6.2 Policy Strategies for the Enhancement of Women's Employment and Income

- Time use data has shown the disproportionate involvement of women in unpaid work (especially in care labor and volunteer work), and in underpaid work in the informal sector as well as in low skills, lowly paid wage jobs. Reproductive work deprives women of opportunities to build their human capital but this is often not factored into policy making. For instance, childbearing and - rearing, and, caring for the sick and the elderly constraints or obstructs women's employment or participation in paid work. These workers become ineligible for workplace-based training.
- Reversing this trend over the long term necessitates policy measures that would upgrade the labor market options of women. This means the need for skills upgrading of women and facilitating access to information, markets, credit sources, technology and other productive inputs needed in self-employment and own account work.
- Long-term measures should be taken to move women out of the unpaid work as far as possible without jeopardizing the household welfare.
- Programs on capacity building must be accessible through both formal and non-formal delivery mechanisms and should aim at facilitating women's access to

information and communication technology, participation in internet education and if possible, involvement in home-based e-based business.

- Community-based mechanisms to facilitate women's access to information on job opportunities can be established. Local government units can be encouraged to set up labor market information services with accompanying outreach to the women. In addition, local governments can systematically address the barriers to women's entry into the labor market and formulate remedies for it.
- Home-based economic undertakings through linkages with market outlets and market information as well as to technology and credit can be facilitated through the establishment of community-based services.
- There is a need for policies to recognize the importance of the informal and unpaid sector. Policies are needed to provide for training of women in the informal sector and the self-employed in entrepreneurial skills, management skills and training in appropriate technologies in industries considered to be the growth sectors in the respective economies. This could include the expansion of capacity building programs to provide on-site services in skills development; link skills training to existing job opportunities; promote growth-oriented micro-enterprises.
- Partnerships between the private sector and community-based groups of women engaged in micro and small enterprises can be brokered or mediated by NGOs to help the women gain greater access to information and technology. This should be used as a tool for fostering "big sister, little sister" relationships to help the women incubate their micro and SMEs into sustainable undertakings. In this regard, government can consider giving tax incentives for participating private firms in such a scheme.
- A related policy measure involves the establishment of institutional windows for the informal sector to ensure women's access to information and productive inputs. This implies the need to reform labor administration machineries at national level.

5.6.3 Policy Strategies for the Enhancement of Women's Well-being and Quality of Life

- Time use such as the length of paid and unpaid work and the intensity of work, convey important information on the quality of life that existing measurements of living standards overlook.
- People can be poor in terms of time as well as money and definitions of poverty need to take this into account. For example, time use surveys in the US, Australia and Bangladesh have revealed the unholy pattern of paid work followed by unpaid domestic work, particularly for women. In other words, women have overlapping activities and a consequent high work intensity.
- The combination of market work and domestic activities(cleaning, cooking and child care) have been shown to be prevalent in Bangladesh, Mexico, United States, India, Germany and Spain. 1 What this implies is that policy reform must look into the work

burden that women bear as well as the health risks that are borne by high intensity work.

- Official recognition by governments of the value of unpaid work could enhance women's economic security in several ways:
 - Tax credits for individuals who care for a disabled person in the home and child tax credits for stay-at-home parents to look after children are one form of recognition
 - The introduction of reimbursable tax credits to recognize the work of unpaid caregivers could be a mechanism that would enable them to contribute to pension plans and access other government programs, including job training and social security benefits.
 - Governments could encourage the banking sector to recognize unpaid work as collateral for loans, thereby providing an important bridge for unpaid workers to move into micro- and small-business.
- Measures that would reduce women's time burden should be introduced. Women's workload may include both paid and unpaid work. Care activities could be aided by the establishment of community-based child-care centers or elderly centers. This could free some of the women's unpaid time so she could spend more of her time in paid activities or be able to have rest and leisure to recharge herself.

5.6.4 Policy Strategies to Reduce the Gender Bias in Macro-economic Policies

- As a result of government cutbacks in education, health and social services as part of economic restructuring and adjustment, unpaid work of care providers, specially of female household members, could intensify. But this may have the long-term effect of reducing the capacity of individuals to work in the market and thus to pay taxes, and by increasing demand for remaining social services. In some cases, serious long-term costs may be incurred in terms of the negative impact on the quality of human resource of both care providers and children deprived of education and health care.
- Responses could include support measures such as child care and elder care that would see household or caring responsibilities shared by the individual and the public sector. Other policies address the gendered nature of the division of labour in households, seeking ways to redistribute household work more equally between men and women.
- Public sector policy can enhance the value to households of women's participation in the paid labor market through measures to ensure that women's paid work is valued equally to that of men's. These measures included provision of equal social security benefits (pensions, for example) and employment equity legislation. Family-friendly employment practices, provisions for parental leave, and social security benefits for part-time workers are other examples of possible measures. Some analysts suggest that such innovations may be "too expensive," however, a cost-benefit calculation that includes the loss to the economy of women's non-participation would likely produce a different result.

- Schemes for the extension of social protection to workers in the informal sector can be developed. This can include the collection of good practices such as the savings mobilization schemes and other rotating savings and credit schemes.
- In many APEC economies, women, through their unpaid and informal activities, and the agriculture sector, provide social safety nets for families. Specific measures are needed in recovery plans to address the needs of vulnerable groups, including women, migrant workers, the elderly.
- The following are some of the macroeconomic issues, which need policy intervention for recognizing exhaustive counting of economic activities including NMW in the system of national accounts:
 - Macroeconomic stability, cycle and household labour and gender differences in unemployment rates
 - Stabilization, Adjustment and Restructuring Programme
 - Interaction of the market economy with the household economy
 - Buffer effects – intensification of NMW to adjust to economic crisis, time input effects of budget cuts, privatization of social services
 - Growth, inequity, human development
 - Savings and investment
 - Trade Strategies
 - Governance (transparency and accountability)

5.6.5 Policy Strategies to Monitor Impacts of Policies and Programs on Non-market Work

- Any assessment of economic policy reform requires a more comprehensive evaluation not only of output or levels of (money) incomes, but also of resulting changes in the work burden and intensity of work. The removal of food price subsidies or, for example, is usually analyzed in terms of shifts in money income and consumption levels, which serve as indicators of the impact on living standards. However, changes in household income and consumption do not adequately convey the other important changes that may also have resulted from such policy. Household longer hours, reducing sleep or combining work activities. The invisibility of such increased unpaid work and overlapping tasks and their impact on health is likely to give a false impression of the effectiveness of the policy reform. Existing welfare indicators do not take into account the serious consequences of prolonged periods of work intensity and long working hours, particularly for women who maintain their families and for those who are likely to be both *time-poor* and *cash-poor*.
- Governments and institutions need to develop mechanisms that will monitor the impact of policies and programs on unpaid work. African Ministers of Finance, Planning and Economic Development in 2002 endorsed ECA's initiative to develop a common framework for African countries to conduct time-use studies to generate data for evaluating impacts of macroeconomic policies on welfare and poverty reduction.

Module 6

Guide to Monitor and Evaluate Impacts of Policies on Welfare and Poverty Reduction

6.1 Overview

- Over the last thirty years developing countries, especially, in Sub-Saharan Africa faced major macroeconomic shocks associated with among others, fluctuations in the world price of raw materials and agricultural exports or economic policy reforms such as structural adjustment programmes (SAPs) and the liberalization of commercial trade. These shocks have had significant repercussions on the economies of these countries in particular, in terms of income distribution and poverty levels.
- About the same time, there has been a growing recognition of the importance of macroeconomic policy in influencing women's welfare and their prospects for economic empowerment. It can worsen or improve the living standards of women and contribute to narrowing or widening gender gaps in incomes, health, education, nutrition etc. There has also been increasing concern on how gender inequality can constrain the outcomes of macroeconomic policy. For example, recent work (Haddad et al, 1995, Çagatay, Elson and Grown (eds), 1995; World Bank, 1995; Palmer, 1995) shows that economic reforms with decreased incentives can reduce women's output or restricted access to education, can hinder women's ability to develop their human resources.
- Although these gender-related development issues have prompted serious debate, the absence of appropriate gender-aware macroeconomic analytical tools has penalised quantitative analyses. More generally, it must be recognised that operationalizable tools are lacking, especially in Africa, to relate macroeconomic policy and microeconomic behaviour, and to evaluate the implications of gender and macroeconomic variables of different policy scenarios. A related constraint is the inadequate data and statistical indicators for effective policy-making a, monitoring and evaluation. Yet there is increasing need for African governments to assess impacts of their economic policies on welfare and the macroeconomy to ensure transparency and accountability.
- Also, on-going research on engendering macroeconomics points to the need to increase our understanding of the ways in which macroeconomic policies impact on or interact with non-market economy (women's unpaid work and time budget). In his paper entitled: "Towards a More Comprehensive Knowledge of all Forms of Work", Duncan Ironmonger (1998) identified three areas that should receive a thorough understanding for the development and monitoring of the progress of social and economic policies:
 - how social and economic systems operate
 - the past, current and future evolution of systems under present and proposed policies
 - the impacts of policies on households and people (women, men and children).

6.2 Aims of the Module

- Introduce prerequisites for effective evaluation of impacts of economic policy reforms on non-market work and poverty reduction.
- Introduce qualitative and quantitative tools for evaluating impacts of policies on non-market work and poverty reduction
- Provide guidelines for selecting, constructing and applying a gender-aware macroeconomic model for evaluating impacts of policies on non-market work and poverty reduction.

6.3 What are the Constraints to Effective Evaluation of Policy Impacts?

- Recent attempts to increase the visibility of women's NMW in national statistics have encountered several problems, not only for policy formulation but also for monitoring and evaluating policies in this area:
 - Engendering macroeconomics is a new area whose credibility is yet to be carefully established;
 - Inadequate financial resources to support national statistical work on NMW;
 - Lack of gender-disaggregated data (from time-use studies) to measure NMW;
 - Little understanding of the contribution of men and women to market and non-market economy;
 - Lack of tools to evaluate impacts of policies;
 - Low national capacity design, monitor and evaluate policies on NMW.
- Effective policy-making, monitoring and evaluation depends on accurate data and statistical indicators. Such data must reveal what type of activities are carried out and why, but most importantly what type of outputs they produce and what is their contribution to the national economy. It is only then that adequate policies can be designed, monitored and evaluated.
- According to Ironmonger (1998), the presently available statistics that are used to help understand, evaluate and monitor systems, policies and people are inadequate. This is because the main economic statistics used in research and policy-making - the national accounts and the official statistics of work are vastly incomplete. Gross National Product (GNP) covers at best about 60 per cent of all valuable production and labour market employment statistics cover less than 50 per cent of all work performed each week. On a gender basis, the regularly published labour statistics cover perhaps 75 per cent of men's work and 33 per cent of women's work.
- Ironmonger further noted that the diagram inside the cover of the UN 1995 *Human Development Report* dramatically shows the undermeasurement of women's work. But it also shows the **undermeasurement of men's work!** For him, the main point is not the gender inequity in the measurement of work (though this is important). The main point is that the employment statistics cover less than half of all valuable work done in the total economic system. Much of subsistence work and production and all of household work and production escape regular statistical measurement. Consequently, our understanding of the working of the total economic system is gravely limited by this deficiency of data availability.

- To understand the economy properly, knowledge is needed of activities that take place beyond the current, arbitrary, boundaries of the SNA and of market work. All forms of work and production need regular measurement. But not all forms of work are the same; the various forms need **separate measurement** so that the interaction between the various systems of production can be studied and understood. This was clearly recognised in the 1993 revision of the SNA. This suggested that the measurement of economic production outside the present boundary of the SNA should be done in a set of "satellite" accounts, which are separate from, but consistent with, the main core national accounts (see also Module 3).
- There are in reality two major parts to the economic system - the market part and the non-market part. It makes sense to measure them both separately and to study both parts of the system. For African countries with relatively large "subsistence and informal enterprise" sectors it would make sense to consider the economy as comprising three parts:
 - the formal market economy,
 - the subsistence and informal economy and
 - non-market economy (household economy).
- On this basis, the production and employment in each sector are then measured separately. Only then will the trends and interactions between the sectors be understood properly.
- In all countries, developed or developing, the delivery of final goods and services for consumption by people requires the operation of a productive household which adds value to the commodities provided by the market or by "subsistence" activities. In other words, the unpaid work of women and men adds value to the commodities purchased from the market or obtained from subsistence agriculture, fishing or hunting. In most countries **this household work and this household value added is of the same order of magnitude as the work and value included within the production boundary of the SNA**. In developing countries it is often assumed that the omitted work (and value) is relatively more important than it is in developed countries. Research has yet to show whether this is true or not. To date, most of the nation-wide time use surveys and all of the satellite accounts of household production relate to a handful of developed countries.
- So the first priority is to move to a wider screen; to enlarge the scope of our vision to include all work and all valuable production, not just that covered at present by the production boundaries of the main national accounts. National accounts of household production are needed; national time accounts are also needed to provide a better, more comprehensive, picture of how time is used. In passing it is well to note that measures of "time use" are really measures of the use of human capital. "Work" is really use of human capital to produce valuable outputs. Thus economic statistics of work should cover all paid work and all unpaid work including NMW (See also Module 1).

6.4 Alternative Approaches for Gender-aware Macroeconomic Policy Analysis

- Policy makers make use of three traditional instruments to pursue macroeconomic objectives: *fiscal policy*, *monetary policy* and *exchange rate policy*. Of the macroeconomic

policies, engendering *fiscal policy*, and especially, national budget is considered to be the most promising entry point for the following reasons:

- Gender concerns are more visible in fiscal policy than in monetary policy;
 - As budgets have an annual cycle, it allows the processes of analysis, including monitoring and evaluation of impacts to be completed within a relatively short time;
 - Gender analysis of budgets can be implemented at the country level with a relatively small amount of resources;
 - National budgets are key instruments of economic policy, directly affecting individuals through taxation and public expenditure policies, and affecting their economic environment through impacts on the levels of national output, employment and prices.
 - Because men and women play different economic roles and have different economic responsibilities, the same budgetary policies have different implications for them;
 - Gender differences and inequalities can also restrict the ability of budgets to achieve national economic goals (e.g. expansion of outputs and jobs).
 - A budget often has projections of its outcomes and macroeconomic performance for future years, in a medium term expenditure framework (MTEF). This makes MTEF also an appropriate entry point for mainstreaming gender into fiscal policy, as it is the basis for a clear and systematic national planning process and demands that issues that exist at the micro level (e.g. gender concerns) can be prioritized and met by the projected funds.
- The rationale for engendering fiscal policies, especially national budget is also a poverty reduction strategy that allows:
 - Better public expenditure management consistent with development policies;
 - Overall budget is pro-poor, especially, pro-women;
 - Resource allocation is prioritized to the needs of both men and women; and
 - Impacts across all sectors benefit both men and women through budget tracking and realistic sustainability testing of a budget deficit.
 - Given that engendering of macroeconomics is a relatively new concept, national statisticians, policy analysts and national accountants need to be guided on the collection, analysis and integration of women's NMW in these instruments. This is crucial because an appropriate handbook does not exist, which is responsive to the unique opportunities, needs, constraints and capabilities of the people of Africa. To fill this gap, ECA is in the process of developing the following tools to engender poverty reduction strategies:
 - "an Africa-specific" an Easy Reference Guide (ERG) that would help African governments in collection, analysis and integration of women's NMW in national accounts and national budget. The ERG will also cover guidelines and methodologies for:
 - analyzing impacts of national budget on time use;
 - imputing value to women's NMW to estimate their contribution to GDP.
 - A gender-aware model to evaluate impacts of fiscal policies on growth and poverty reduction.
 - A very critical policy instrument that the government can use is fiscal policy mechanism. It is important to examine econometric techniques that are essentially suitable and also used more extensively to analyze questions that address issues of development and poverty. Through use of such policies the government changes the

structure of an economy and generate revenues and undertakes expenditure. The impact of fiscal policy changes on women and poverty reduction needs to be examined to make suggestions about how such policies should be designed, modified if necessary and implemented. Impact analysis can be carried out through many approaches and most of these can be classified as qualitative and quantitative.

6.4.1 *Qualitative approach*

- Studies and surveys can be undertaken to collect and analyze information about the nature of reforms, the exact way such reforms are implemented and the resultant impact on different groups of people within the area surveyed. The studies attempt to build reasonable linkage between the reform and the changes in the welfare of different groups such as women labourers and non-market workers. With such an approach a very detailed understanding of the focus of the reforms, the exact implementation procedures and the changes experienced by the group in which the researchers are interested can be obtained.
- Several studies have analyzed impacts of policy changes in developing countries on poverty and inequality. Squire (1991) and Van der Hoeven (1996) have conducted reviews of the linkage between adjustment and poverty during the 80s. The findings of qualitative analysis between the relationship between reforms and poverty are presented in a short review by Killick (1995), and White (1997) provides a more recent review on this. Such work describes methodically the reforms undertaken in a country and the changes in a variety of welfare indicators among different household and socio-economic groups. Studies have been also reported in a series of Background Papers on "Globalisation with Human Face" prepared for the Human Development Report 1999 (UNDP, 1999). Similarly Cornia (1999), Handa and King (1997), McCulloch, Baulch and Charel-Robson (2000) provide similar analyses for different African countries.
- This approach however cannot identify the exact linkage between for example, trade or fiscal reforms and the welfare changes, as these cannot be tested. The result seen after a policy change could be due to other reasons or mixed outcomes and no direct linkage can be traced without any quantitative connection. Moreover in case there is no impact observed after a policy change this could be really due to some countering factors, even though policy changes have had a direct impact on the stated objective. And, conclusions through analyses using qualitative study cannot be taken as general and should be limited only to the specific group interviewed. Such studies in spite of being very valuable for in-depth understanding have strong limitations. The inability of descriptive studies to provide a robust causality between impact and result has made research in quantitative approaches more demanding, hence the initiative of ECA to embark on gender-aware modeling to policy evaluation in African countries.

6.4.2 *Quantitative approach*

- Policy makers are interested in studying the impact of particular policy measures, like change in income tax, on welfare of people below poverty lines and other socio-economic categories of households. It is possible to study impact of policies that are targeted and are not likely to have major indirect impact on other variables of an economy. However, economy wide analysis is essential when indirect impact of policy changes are wide and other groups and other markets are affected as a result of a trade or financial policy.
- Over the past 20 years vector autoregressive (VAR) analysis has become a standard tool in empirical research. For the questions we seek to answer the VAR approach is attractive for several reasons:
 - It is a flexible way of modeling since it allows all past variables to effect any present variable. Thus it does not force a certain theoretical structure upon the data (as far as past values are concerned).
 - It is a systems approach that takes into account the interaction of variables. In particular the impulse responses calculated from the VAR trace an innovation to one variable through the entire system.
 - It has desirable time series properties. In a seminal paper Sims, Stock and Watson (1990) have shown that "... the common practice of attempting to transform models to stationary form by difference or cointegration operators whenever it appears likely that the data are integrated is in many cases unnecessary."
- Any coefficient that can be written as a coefficient on an I (0) variable, and in a VAR model these are all estimated coefficients other than those on the constant and the trend, are consistent and have standard distributions (see also Watson 1994, Hamilton 1994). Thus VAR analysis is a convenient tool, when one has doubts about the order of integration of the variables, as is often the case with macro economic data.
- Time series techniques have been applied extensively to economic data analysis. Useful applications using frequency domain techniques can be found in Granger and Eagle (1981). The most obvious, and oldest, application is to model a single series to provide what are termed "naive" forecasts against which the forecasts from full-scale econometric model can be compared. More recently, the economic models have performed relatively better, although a more stringent criterion was suggested by Granger and Newbold (1977). It will be interesting to continue to compare forecasts from the two types of model. More natural comparisons are between econometric models and multi-variate time series, although the best way to specify the latter is still uncertain. No complete comparison of relative forecasting abilities is available at this time. Multivariate time series techniques can also be used to measure the importance, in terms of improved forecasting ability, by adding further variables to the model.
- The ARCH model has been used in a number of applications. Engle (1980, 1982) has shown that there are significant ARCH effects in U.S. and U.K. inflation data, and Engle and Kraft (1981) derive conditional multi-period forecast variances from an autoregressive model where the disturbance follows an ARCH process. Robbins (1981) estimates a model in which the conditional variance of excess returns for short

rates affects the liquidity premium for long rates. Engle, Granger And Kraft (1981) use a multivariate ARCH model to compute optimal time varying weights for forecasts of inflation from two competing models.

- The obvious applications of univariate spectral analysis are to investigate the presence or not of cycles of data. A related application is to compare the estimated spectral shape with that suggested by some theory. Estimated spectra of a wide range of economic series give no evidence of strict cycle except for the seasonal component.
- Howrey (1972) calculated the spectra of major variables implied by the Wharton model and compared them to the typical spectral shape and generally found the econometric model did produce the correct spectral shape. The power spectrum is obviously useful both to find out if series contains a seasonal component to measure its strength and also to investigate the effect of seasonal adjustment. The spectral technique has been used also by Sargent and Sims (1977), the Guweke (1975, 1977) and Singleton (1980) to examine unobserved variables in a group of series. The way econometric has developed in the recent year the difference between time series method and the rest of econometrics has become fuzzy. The textbooks on econometrics such as that by Maddala (1977) confirm this view.

6.4.3 *Approaches to Gender-aware Macroeconomic Models*

- Modelling approach has been used for economic analysis for a long time. A model is a simplified representation of the real economy. Econometric models are generally algebraic models that are stochastic in including random variables (as adopted to deterministic models, which do not include random variables). The random variables are generally included as additive stochastic tends to account for human measurement error of data and omissions of variables, etc. Such models can be either linear or non-linear.
- The Economic Commission for Africa is developing a gender-aware macroeconomic model, which could provide a formal framework for gender-aware evaluation of fiscal policies in African economies. It aims to demonstrate to policy makers with numerical precision, how gender inequalities in national accounts and fiscal policy might have differentiated impacts on women and men in terms of, for example, employment, income, leisure time, education etc. The model is also expected to generate insights into how these gender differences in economic behaviour impact on various macroeconomic outcomes (e.g. growth and poverty reduction).
- In 1994 a series of workshops were held at the University of Utah to discuss ways in which macroeconomic models could incorporate gender. In 1995 the papers that resulted from these workshops were published in a special issue on "Gender, Adjustment and Macroeconomics" of the journal *World Development* Vol 23, No 11.
- In their introduction to these papers, the editors, Nilufer Cagatay, Diane Elson and Caren Grown, suggest there are four approaches to gender-aware macroeconomic modelling.

- The first approach is the “gender disaggregation” method that involves disaggregating existing variables of the macroeconomic models. This method does not involve incorporating unpaid household labour into the analysis. It does however involve distinguishing the separate employment and income streams of men and women. Thus, to the extent that men and women have different investment, consumption and saving behaviour, different inter-gender income distribution patterns would be associated with different macroeconomic outcomes.
- There is evidence to suggest that women have a higher marginal propensity than men to spend on goods and services that benefit children and enhance their capacities. Hence, in models that take investment in human resources as a crucial determinant of long-run growth, greater income distribution toward women would increase the long-run growth rate of the economy.
- As the gender disaggregation approach does not explicitly incorporate the household as a production sector of the economy into the macroeconomic model, it cannot show the interactions between market production and household production. Cagatay, Elson and Grown also observe that the gender disaggregation approach may be more applicable to economies where there are large informal production sectors dominated by women.
- A second approach is the “gendered macroeconomic variable” method that captures the structure of gender relations by incorporating variables such as the degree of gender inequality in the labour and credit markets. In this approach it is suggested that such parameters of the macro economic models as capital-output ratios, savings ratios, and import ratios are partly determined by the degree of gender inequality in the economy.
- The third approach is the “two sector or two system” method, which ECA is adapting. This entails a binary or twin economic system that conceptualises the total economy of a country as consisting of two interacting systems, similar to the binary or double stars of the astronomical universe. One system comprises the traditional variables of the market economy and the other, twin system, comprises the variables of the unpaid household non-market economy. This method analysis focuses on tracing the feedbacks between the variables in these two systems. To construct a working model of the twin system economy we shall need the full data from a set of household national satellite accounts. (Ironmonger, 1995; 1996)
- The fourth approach outlined by Cagatay, Elson and Grown involves a combination of the other methods.
- The ECA has adapted the third approach of a gender-aware model based on Social Accounting Matrices (SAMs) using data from time-use and household surveys and integrating it into a computable general equilibrium model (CGEM). Such models have been used by several governments in Africa and are now being used also by OECD countries for evaluating policy impacts on poverty reduction, but without considering gender component.
- Such a model would provide a useful vehicle for generating initial null hypothesis on the impacts of policy changes where none previously existed such as in most African

countries, or challenge the prevailing view. They also provide for assessments of the impacts of policies, which may challenge the new perspectives gained as a result of using the model to guide policy making (e.g. Box 6.1). The model will make it easier to demonstrate to policy makers the rationale to adjust their macroeconomic policies. Besides, the models will help us identify new research areas that will be needed to improve engendering macroeconomic policies. And a similar approach can be used to identify linkages with other crosscutting issues such as the environment and natural resources, all of which pertinent to poverty reduction efforts.

- However, models are not without problems. They all pose challenges for users of existing models and builders of new models including the choice of the model, but done in an intelligent and focused way and in the context of contemporary debates on policy issues such as gender inequality, the rewards can be large. In particular, a good understanding of the underlying structure of each model and the degree of simulation results is specifically needed if we are to assess how well a specific model captures the underlying economy.

6.5 Expected Outcomes of Modelling Work

- Like formal models used by governments including central banks in Africa, the proposed model is expected to fulfill several useful functions:
 - It can help an institution organise its body of knowledge and state its arguments with theoretical precision isolate key gender-related variables, specifying in an unambiguous way the nature of interaction between these and thereby improve its policy analytical and advocacy work.
 - It can ease the difficulty of communication with those economists who have little knowledge of how gender matters in the way the macroeconomic functions. For example, it can reveal how gender inequalities in national accounts and fiscal policy might have differentiated impacts on women and men in terms of, for example, employment, income, leisure time, education etc.
 - The model is also expected to generate insights into how these gender differences in economic behaviour impact on various macroeconomic outcomes (e.g. growth, poverty reduction etc.).
 - Given that the proposed model is expected to be quite effective in demonstrating the potential effectiveness of gender aware policies to policy makers, it will be a powerful tool for facilitating policy choices and investment priorities.
 - The models will also help us identify new research areas that will be needed to improve engendering of macroeconomic policies including budgetary policy.

6.6 Basic Steps for Constructing a Gender-aware Computable General Equilibrium Model (CGE)

- Various institutions including the University of Laval in Canada, UK's Department for International Development (DFID) and the National Council for Applied Economic Research (NCAER), India have initiated work using standard *Computable General Equilibrium (CGE)* models. The "two sector or two system", which is being adapted by ECA follows neoclassical structuralist modelling tradition presented in Marzia Fontana (2000) and Anushree Sinha (2001). The model's accounting framework will be extended by (a) treating men and women as separate factors of production, and (b) by treating non-market work and leisure activities as sectors, in addition to the usual market-economy sectors. The first of these modifications is obviously necessary, but the second merits some explanation. The *care economy* (non-market work) in particular contributes to the welfare of individuals receiving care, and contributes to the activities of both the private commodity economy and the public service economy by supplying human resources (human capital) and maintaining the social framework (social capital). Moreover, these services are supplied mainly by women, and occupy much of women's time. To make such services (which we shall call the "NMW" sector) visible is thus important in itself as an ingredient of a gendered model. Also, it allows consideration of more constraints and interactions than with the standard model, (e.g. interactions between the non-market economy and the market economy, which are crucial to understanding issues such as the response of female labour force to reform of economic policies).
- On this basis a more simplistic step-by-step instructions are presented below to guide policy analysts who are normally responsible for developing and applying macroeconomic models. However, detailed illustrative exercise will be available from modelers who will introduce the gender-aware CGE model.
- The CGE model to be selected should be:
 - simple and user-friendly to the national experts who will use the model;
 - cost-effective in terms of financial resources, human resources and time requirements for developing it; and
 - capable of handling indicators of different policy changes e.g. price changes on different groups of the society.

6.6.1 How to build a gender-aware CGE model: A Case for ECA

- In its simplest form, the application of CGE simulation techniques is identical to the procedures followed in disaggregating household categories in a standard CGE model. The steps outlined below are basic in that the step-by-step instructions using computer software such as "Exterplus" are omitted. These will be provided by the modeler introducing the gender-aware CGE model in the country.

Step 1: Develop base data set for constructing the gender-aware CGEM in the form of a social accounting matrix (SAM) based on data from time-use survey and living standard household surveys of a country. A social accounting matrix is a linked set of statistical tables which provides a schematic portrayal of the circular flow of income in the economy at a single point in time, including activities and commodities, factors of production, and certain institutions. It makes possible the determination of balances for all commodities and budget constraints for all agents. A SAM could be used to assemble

the data for a computable general equilibrium model of an economy, for example, in the gender and international trade modelling work. Standard SAMs do not offer much gender-disaggregated data. At this stage, raw data is analyzed and cleaned up for building the SAM.

Step 2: Develop a specification for the Social Accounting Matrix (SAM) that incorporates non-market activities (work and leisure) and is gender-aware.

Step 3: Construct a SAM, containing information about its economic and social structure. An example of such a SAM containing only three factors of production (female labour, male labour, and capital) is presented in Table 6.1. This is not a detailed customary SAM but simplified to illustrate the principle of a gender-aware model.

Step 4: Specify a list of stylized macroeconomic policies and exogenous shock scenarios that are relevant to African economies and from which simulations with the model will be selected.

Step 5: Construct a gender-aware model that endogenises men's and women's time between market and non-market activities.

Step 6: Carry out a series of policy simulations that illustrate the nature of the insights that such a model can provide under different scenarios.

Step 7: Drawing on the results from the scenario analyses, produce a draft report that demonstrates how a gender-aware modeling exercise can be used to quantify the impacts of macroeconomic policy shocks upon men's and women's time allocation, welfare and poverty in Africa.

Step 8: Present the draft report on the results of gender-aware model tests for a review and validation to an expert group meeting to be attended by African countries, as well as modelers and statisticians from private institutions and universities world-wide.

Box 6.1 IMPACT ANALYSIS THROUGH A CGE MODEL

Through the use of the CGE model it is possible to study the impact of policy changes on the industrial output resultant income distribution and hence on poverty. Most the impact analysis works through the formation of prices in the model as the first shock. For example, tariffs are a part of the import price so that domestic sales price is import price $(1+\text{tariff}) \times (1+\text{sales tax}) \times \text{Exchange rate}$. The production price again depends on excise tax so that it is value added price $(1+\text{excise})$. The term price of value added is generally only used by CGE modellers. This could be defined as value of gross output in production prices minus the value of intermediate cost. Now we see that many variables have entered the price equations. The policy variables are the exogenous variables that can be changed in the model. The prices are an outcome and are endogenously determined.

In the above equations the policy variables are:

Tariff

Excise tax

Sales Tax

Exchange Rate

If any of the above are changed then the relevant prices will change. If tariff rate was 40% and this is then reduced by 10 percentage points to 30%, then naturally the domestic price which depends on import price would get affected and get reduced. The lower prices would generate an increase in demand for the commodity and production would increase to match this demand. This is so because in CGE all markets clear and demand equals supply in all markets. (*Rigidities can be built in as wedges and then markets will clear again taking after accounting for these wedges*). Now an increase in production would necessitate an increase in employment according to the structure of employment in the sector/sectors. There will be an increase in demand for labour by types. Then wages would clear the labour market. If there is an increase in demand for women workers then the wages of such workers would rise. Accordingly the households who have such workers as members would have an increase/decrease in income. So it would be possible to see what types of households and what types of market workers gain due to a change in tariff rate.

Same is true for sales tax. The impact would trickle down to the households in the same manner. However the choice whether government tackles the sales tax or tariff depends on the resource management of the government. Moreover, in case customs are not reduced then consumers would not be exposed to better qualities of products. Also domestic players would keep their profit margin up without any competition and generally demand for goods would not rise as much. There will be generally a slack economy which would not be able to generate higher production and people would not be able to improve their standard of living. At the same time tariffs cannot be reduced very much at one go because then the domestic producers would collapse creating chaos. So the policy choice lies with the strategy of the government. However, it wants to examine how the different policy choices would impact the economy and the different types of income earners. Hence a economic model as the CGE is useful to examine these choices.

Source: Anushree Sinha, 2003

REFERENCES

Module 1: What is Non-market Work?"

SNA (1993), **System of National Accounts**, Commission of the European Communities, IMF, OECD, UN, WB, 711p.

Beneria, L., 1992, 'Accounting for Women's Work: The Progress of Two Decades', **World Development**, 20(11): 1547-60.

Varjonen J. et al. (1999), **Proposal for a Satellite Account of Household Production**, Eurostat working papers 9/1999/A4/11, Luxemburg, 92p.

Cagatay, N., Elson, D. and Grown, C. (1995) "Introduction" *World Development* 23 (11) 1827-1836.

Himmelweit, S, 1995, 'The Discovery of "Unpaid Work": The Social Consequences of the Expansion of "Work"', **Feminist Economics**, 1(2):1-19.

ILO (1993a), **Statistics of employment in the informal sector**, Report for the XVth International Conference of Labour Statisticians - Geneva 19-28 January 1993, 91 p.

ILO (1993 b), **Report of the Conference**, Report of the XVth International Conference of Labour Statisticians - Geneva 19-28 January 1993, 113 p.

ILO (2000b), **Current international recommendations on labour statistics**, Geneva, 89p.

ILO (2002b), **Decent Work and the Informal Economy**, report VI, 90th session of the International Labour Conference, Geneva, 129p.

ILO (2002c), **Women and men in the informal economy. A statistical picture**, Employment sector, Geneva, 64p.

Reid M. (1934), **Economics of Household Production**, New York, John Wiley.

United Nations (1995), **The World's Women 1995. Trends and Statistics**. New York, 188p.

Waring M. (1988), **Counting for Nothing: What Men and What Women are Worth**, University of Toronto Press,

Module 2: Time-use Studies: Concepts and Practice

Ainsworth M. and Van der Gaag J. (1987), **Guidelines for Adapting the LSMS Living Standards Questionnaires to Local Conditions**, Washington, The World Bank, LSMS Working Paper n°34, 175p.

Delaine G. and al. (1992), **The Social Dimensions of Adjustment Integrated Survey. A Survey to Measure Poverty and Understand the Effects of Policy Change on Households**, The World Bank, SDA Working Papers Series, WP n°14, 207p.

Direction de la Statistique (1999), **Enquête Nationale sur le Budget Temps des Femmes 1997-98**, rapport de synthèse, vol.2, Rabat, 198p.

Ghana Statistical Service (1995), **Ghana Living Standards Survey, Report of the 3rd Round (GLSS 3)**, September 1991-September 1992, Accra.

Ghana Statistical Service (2000), **Ghana Living Standards Survey, Report of the 4th Round (GLSS 4)**, Accra, 192p.

Ironmonger, D. (1996) "Counting outputs, capital inputs and caring labor: Estimating Gross Household Product" *Feminist Economics* 2 (3) 37-64.

Grosh M. and Glewwe P. (eds) (2000), **Designing Household Survey Questionnaires for Developing Countries, Lessons from 15 years of the Living Standards Measurement Study**, Washington, The World Bank, 3 volumes, 338p. + 389p. + 500p.

INSAE/PNUD (1998), **Enquête emploi du temps au Bénin, Méthodologie et résultats**, Cotonou, 32p. + 156 p. annexes.

INSEE (2000), **Enquête budget-temps 1999**, Paris, INSEE Résultats, 324p.

INSTAT (2002), **EPM 2001. Module Emploi du Temps**, Antananarivo, INSTAT-DSM/PNUD-MAG/97/007

Statistics South Africa (2001), **A Survey of time-Use. How South African Women and Men spend their time**, Pretoria, 118p.

United Nations Statistics Division (1999), **Towards international guidelines in time-use surveys: Objectives and methods of national time-use surveys in developing countries**, Economic and Social Commission for Asia and the Pacific, Seminar on Time Use Surveys, 7-10 December 1999, Ahmedabad, 7p.+ annexes

United Nations Statistics Division (2000), **Improving Measurement of Paid and Unpaid Work**, Expert Group Meeting on Methods for Conducting Time-use Surveys, New York, 23-27 October 2000. (<www.unstats.un.org/unsd/methods/timeuse>).

Module 3: Guide to Methods for Monetary Valuation of Non Market Work and Constructing Satellite Accounts of Household Production

Charmes, Jacques (1998), **Contribution of Women Working in the Informal Sector in Africa: a Case Study**, paper prepared for the United Nations statistics division, "Umbrella Gender Statistics Programme" and presented at the Delhi Group Meeting on Informal sector Statistics, Ankara 28-30 April 1998.

Charmes, Jacques (2001), **Procedures for Compiling Data on Informal Sector Employment and Informal Employment from Various Sources in Developing**

Countries, Santiago de Chile, ILO/WIEGO Latin American workshop on informal sector statistics, 16-18 October 2001.

Charmes, Jacques (2002), **Self-employment, informal employment, informal sector employment: Trends and characteristics. A tentative assessment of their statistical knowledge**, contribution to the ILO/WIEGO report on Informal Employment for the International Labour Conference 2002, 67p.

ECA. 2002: A Conceptual and Analytical Framework for Gender Mainstreaming in National Accounts and National Budget

Sousa-Poza A., Widmer R. and Schmid H. (1999), **Assigning Monetary Values to Unpaid Labour Using Input-Based Approaches: The Swiss Case**, Forschungsinstitut für Arbeit und Arbeitsrecht, Universität St. Gallen, Diskussionspapiere n° 59, 26p.

ILO (2002), **Women and men in the informal economy. A statistical picture**, Employment sector, Geneva, 64p.

OECD (2002), **Measuring the Non-Observable Economy: A Handbook**, Paris, OECD, IMF, ILO, CIS Stat, 249p.

SNA (1993), **System of National Accounts**

Module 4 : Guide to Analytical Tools for integrating Non-market Work into National Budgets

Budlender, D., Elson, D., Hewitt, G., Mukhopadyay, T. (2002). **Gender Budgets Make Cents**

ECA. (2001): A Background Paper on engendering Budgetary Policy and Processes

Elson, Diane (2001). **Gender Responsive Budget Initiatives : Some Key Dimensions and Practical Examples**. UNIFEM-OECD-NORDIC Council Conference on Gender Responsive Budgeting. 16-17th 2001.

Fouquet A. et Chadeau A. (1981), **Le travail domestique. Essai de quantification**, INSEE, Archives et Documents n°32, Paris, 91p.

Goldschmidt-Clermont L. (1982), **Unpaid work in the household. A review of economic evaluation methods**, ILO, Geneva, 137p.

Goldschmidt-Clermont L. and Pagnossin-Aligisakis E. (1995), **Measures of unrecorded Economic Activities in Fourteen Countries**, Background Paper n°20, Human Development Report 1995, UNDP, HDRO, New York.

Short S. (2001), **Time Use Data in the Household Satellite Account-October 2000**, ONS, London, 9p.

Module 5: "Guide to Policy Options, Responses and Advocacy on Non-market Work"

Budlender, Debbie and Rhonda Sharp, (1998), **How to do a gender-sensitive budget analysis: Contemporary research and practice**, Canberra and London: USAID and the Commonwealth Secretariat.

Elson, Diane (1997a), **'Integrating Gender Issues into National Budgetary Policies and Procedures within the Context of Economic Reform: Some Policy Options'**, Preparatory Country Mission to Integrate Gender into National Budgetary Policies and Procedures, London, Commonwealth Secretariat.

Elson, Diane (1997b), **'The Development of Policy Options for Governments to Integrate Gender into National Budgetary Policies and Procedures'**

Tool 1: Gender-Disaggregated Beneficiary Assessment of Public Service Delivery and Budget Priorities

Tool 2: Gender-Disaggregated Public Expenditure Incidence Analysis

Tool 3: Gender-Aware Policy Evaluation of Public Expenditure by Sector'

Preparatory Country Mission to Integrate Gender into National Budgetary Policies and Procedures, London, Commonwealth Secretariat.

Module 6: Guide to Monitor and Evaluate Impacts of Policies on Welfare and Poverty Reduction

Cagatay, N. D. Elson and C. Grown, (1995), 'Introduction' in Gender, Adjustment and Macroeconomics', World Development, Vol.23, No. 11.

Decaluwe, B., Dumont, JC, and Savard, L. (1999): **Measuring Poverty and Inequality in a Computable General Equilibrium Model**, University of Laval, Quebec, Canada.

Elson, Diane and Cagatay, Nilufer (1999): **Engendering Macroeconomic Policy and Budgets for Sustainable Development: First Global Forum on Human Development**, 23-31 July, UN Headquarters, New York.

Fontana, Marzia and Wood, Adrian (2000). **Modeling the Effects of Trade on Women**, World Development Vol. 28, No.7, pp. 1173-1190

Fofana, I., Decaluwe, B., and Cockburn, J (2003): **Modeling Male and Female Work in a Computable General Equilibrium Model Applied to Nepal**, University of Laval.

Ironmonger, Duncan (1998): **Towards a more comprehensive Knowledge of All forms of Work: Statistics for the development and Monitoring of Social and Economic Policies.**

Killick T. (1995), **Structural Adjustment and Poverty Alleviation: An Interpretative Survey**', Development and Change 26 pp. 305-31

Lazo, S. Lucita, (2000) **Analyzing the Policy Implications of Time Use**. Paper prepared for the ESCAP Workshop for High Level Policy Makers on Counting Policy Implications of Time Use Survey Data, 11-15 September 2000, Bangkok, Thailand.

McCulloch, N., R.J. Baulch and M. Cherel-Robson (2000), 'Poverty Inequality and Growth in Zambia during the 1990s', Institute of Development Studies Working Paper 114.

Sinha, Anushree and N. Sangeeta (2000), 'Gender in a Macro Economic Framework: A CGE Model Analysis' presented in the Second Annual Meeting of the Gender Planning Network, in Kathmandu, Nepal during November 22-24

Sinha, Anushree (2002), 'Does Welfare of Women Improve by Globalisation: A CGE Model Analysis of India' presented at the 14th International Conference on Input-Output Techniques at the *Universite du Quebec a Montreal*, Canada during October 10-15.

Sinha, Anushree (2003): Impact Analysis through a CGE Analysis. Working Paper at the Economic Commission for Africa.