MONITORING AFRICAN FOOD AND AGRICULTURAL POLICIES (MAFAP)

REPORT OF A SCOPING PROJECT[1]

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1. The title of the scoping project was "Agricultural Policy Database and Indicators (APDI) for Africa2. In the course of the scoping project, it has been decided to propose a new title for the main project.

1. OUTCOME OF SCOPING PROJECT

This scoping project, sponsored by the Bill and Melinda Gates Foundation, proposes a system for **Monitoring African Food and Agricultural Policies (MAFAP)**. The scoping project, originally entitled "Agricultural Policy Database and Indicators for Africa", was led by the OECD, working in close co-operation with the FAO and with coordination by Professor Hartwig de Haen. The core elements of the project were: an assessment of policymakers' information needs, drawing on consultations with African governments and their development partners; the development of a methodology that responds to those information needs; an assessment of the requirements for successfully implementing the proposed approach; and the formulation of a six-year project that would establish a sustainable system for effective policy monitoring in African countries:

Discussions were held with management and staff of the two Organisations, with other competent international Organisations, in particular IFPRI and IFAD, with the chair of the Donors' Platform for Rural development as well as with senior researchers, including Professor Kym Anderson, head of a recent World Bank project on Distortions to Agricultural Incentives. Members of the scoping project team visited three African countries – Tanzania, Ethiopia and Burkina Faso – and had in-depth discussions with representatives of the governments of these countries, as well as with the representatives of the African Union, the Economic Commission for Africa, the Union Economique et Monétaire Ouest Africaine and the Comité inter Etats de Lutte contre la Secheresse dans les Pays du Sahel (CILLS). In addition, in order to ascertain the interest of a wider group of African governments, written communications were sent to 17 countries in sub-Sahara Africa. The conclusions from these consultations were:

1. African governments and their international development partners (donors, NGOs) all concur on the need to re-invigorate food, rural and agricultural sectors in Africa. Agriculture is the backbone of these economies and faster yet sustainable rural development is a key to lifting one third of the continent's population out of hunger and poverty. All interlocutors confirmed that the recent crisis of the world food economy, with soaring prices and dramatically rising import bills, has made such a re-invigoration even more urgent, and will require enhanced investments in rural development and policy reforms.

2. African governments currently have neither adequate information, nor the necessary tools, to analyse the performance of policies affecting the food and agricultural sectors. They recognize the need to develop such information on a regular basis in order to make rational evidence-based policies, and that the development of appropriate indicators is an important pre-requisite for many forms of policy analysis. The governments consulted have expressed a clear interest in participating in a project which would help them build the necessary capacity.

3. There also seems to be full support for the creation of a forum through which all participating countries would be able to engage in a peer review of national policy indicators and related analyses, and benefit from the related policy dialogue.

4. While there is interest in establishing systems for the measurement of explicit food and agricultural policies, such as taxes, subsidies and various border measures, there is a simultaneous recognition that in African countries market incentives and disincentives are determined not just by policies, but by high transaction costs and the capture of rents along value chains. Accordingly, we have suggested a methodological approach for measuring these costs and rents – which we have referred to as a "development gap" – in a manner that is consistent (and comparable) with the measurement of formal policies.

5. An examination of data availability suggests that the proposed methodology can be implemented successfully. However, it may be necessary to undertake one or two cost of production and marketing surveys in some countries, in order to have the data necessary to make a clear distinction between the effects of formal policies and of "development gaps" on market incentives. Beyond some limited surveys, the final project would not involve the collection of primary data. Nevertheless, the depth of analysis possible for each country will depend on the availability and quality of data. Accordingly, the project will make recommendations for where data availability needs to be improved.

6. [paragraph we would like to have support for] Contacts with development partners of Africa, including the Secretariat of the Development Assistance Committee, the African Partnership Forum Support Unit, the Club du Sahel and Paris21, all based in OECD, and with the Donors' Platform on Rural Development, confirmed a further source of interest in the proposed project. These bodies seek additional information on the extent, structure and performance of government policies in Africa and are interested in their correspondence with external assistance.

7. Governments in Africa are aware that the supply of and access to complete and reliable food and agricultural statistics is a necessary precondition for the adoption of effective evidence-based policies. The suggestion was therefore widely welcomed to initiate a project on policy measurement and analysis in the 17 countries which are currently participating in the CountryStat project funded by the Gates Foundation.

8. The three governments visited during the scoping phase have each recently undertaken institutional reforms aiming at a more holistic approach to sector-wide food and agricultural policies, including the monitoring of policies based on development indicators. They underlined their wish that the policy indicators and analysis proposed in this project be integrated in existing structures and dialogue processes.

9. Various African countries are already participating in an inter-agency network, called The Regional Strategic Analysis and Knowledge Support System (ReSAKSS). ReSAKSS supports the implementation of the Comprehensive African Agricultural Development Program (CAADP) of the African Union/New Partnership for African Development (NEPAD). It works with various Regional Organizations and the technical support of IFPRI in developing monitoring and evaluation systems. A close cooperation with IFPRI in the development of methodologies and in capacity building in the proposed project is therefore foreseen.

Drawing on these conclusions, a system for Monitoring African Food and Agricultural Policies (MAFAP) is proposed.

2. OUTLINE OF PROPOSED MAFAP PROJECT

The fundamental aim of the MAFAP initiative is to help policymakers and other stakeholders ensure that policies and financial investments are fully supportive of agricultural development, the sustainable use of natural resources and enhanced food security. The information generated through the project should assist African governments in not just fulfilling their commitments to increase the share of national resources devoted to agriculture and rural development, but in allocating their resources wisely. It should also be useful to donors who have pledged to reverse the relative decline in funding to the sector. The project is being proposed with the expectation that national governments and stakeholders have the political will to create a policy environment which is conducive to development and to allocate resources efficiently to areas with the highest returns.

The MAFAP project will develop a suite of food and agricultural policy and development indicators of value to all stakeholders, including national governments and development partners. These indicators will provide quantitative information on agricultural policies, including both market interventions and budgetary expenditures, and will measure the scale of development challenges faced by the agricultural sector. The proposed indicators will provide the underlying basis for addressing two overarching questions about policy choices and investment decisions. First, are current agricultural policies the most appropriate for addressing the country's policy objectives with respect to development, food security, poverty reduction and natural resource use? If not, what reforms would help? Second, are expenditures being effectively targeted to areas where the need is greatest and potential returns are the highest?

It is envisaged that the project will result in a number of quantitative indicators, measuring the extent of agricultural and food policy interventions, and providing other information helpful to policymakers.

The point of departure will be the OECD's methodology for measuring government support to farmers, and the agricultural sector more generally, although the approach will be modified to account for different measurement priorities in African countries. Three main types of indicator will be constructed:

(i) **Measures of explicit policy incentives and disincentives**.

This group of indicators will measure the extent of price interventions in food and agricultural markets, as well as other determinants of the prices received by producers and paid by consumers. These measures will be based on price gaps in major commodity chains, as well as in factor and input markets,

(ii) **Measures of market underdevelopment (the "development gap")**.

The measurement of price gaps in output and input markets will seek to distinguish direct policy interventions from excessive costs or rents (a "development gap") that could be reduced through appropriate investments or institutional reforms.

(ii) **Measures of budgetary transfers**. The project will also keep a disaggregated record of national budgetary transfers, with suitable distinctions across areas that affect food, agricultural and rural development. The nature of the disaggregation will correspond to the differing economic impacts of alternative types of expenditure. A detailed correspondence will be established between national expenditures and aid inflows, which will indicate how and where the allocations of donors to food and agriculture pass through to sectoral expenditures. This exercise will establish how donor categories are reflected in national classifications, and shed light on governance issues.

In addition, appropriate and internationally comparable **development indicators** will provide context for policy analysis and decision-making. As much as possible, these will include indicators of development

outcomes already in use in the countries concerned. Such development indicators will help to record progress in addressing the goals of food and agricultural policies as they relate to issues such as reducing poverty and food insecurity and broadening access to safe and nutritious food; reducing income inequality within rural areas and between urban and rural areas; improving access to (and the productivity of) employment, land and scarce water; sustainable use of natural resources; and human development. As success in food and agricultural also depends on political stability and good governance, and as relevant information and policy analysis will themselves facilitate good governance through transparency and dialogue, governance indicators will be included.

In the longer term, it is envisaged that all African countries may wish to participate in the MAFAP network. However, it is anticipated that the six year project will initially be limited to the 17 countries currently included in the FAO 'CountrySTAT for SSA' Project, which aims to establish and harmonize relevant agricultural statistics data bases and is also funded by the Gates Foundation. For this group of 17 countries, a core set of indicators will be generated within the first year, and there will be a preliminary analysis of agricultural policies. A deeper set of indicators, building on new methodologies, will be developed for a smaller group of countries (about four in the first year), and subject to peer review and quality checking. It is envisaged that this deeper treatment be extended to an additional 4-5 countries per year, so that all 17 countries are covered within the project implementation period. Progress on developing deeper sets of indicators through the mechanism of country reviews will be reflected in the bi-annual monitoring reports (see Section 4, Outputs).

The MAFAP proposal is a joint OECD/FAO initiative. It builds on OECD's longstanding experience in measuring agricultural policies, and in using policy indicators as the basis for analysis and dialogue among a wide range of countries. Equally, it draws on FAO's development expertise and networks in African countries. The proposal seeks to exploit the strengths of both organisations in order to ensure that: (i) the proposed indicators correspond to the specific information needs of African policymakers; (ii) domestic capacity will be generated in order to ensure the sustainability of the exercise; and (iii) the project will provide support to existing national, regional and pan-African fora.

The institutional structure and responsibilities of the proposed MAFAP project foresee an inter-agency steering committee to supervise the project and guide the secretariat, a MAFAP secretariat based in FAO, a technical team based in OECD, national teams with a core group located in the institution in charge of sector-wide food and agricultural policy, and a technical network serving as a forum for exchanges among the experts in the Project Secretariat and the national teams. The project will work closely with regional and pan-African institutions and with the International Food Policy Research Institute.

Participating countries will have active input in project development and implementation. The indicators will be compiled by teams working in national governments, in conjunction with national and international experts. The indicators will underpin country specific reports and a regular monitoring of policy developments across all participating countries. This will require a major capacity building effort. The aim is that regular policy monitoring should provide a common frame of reference for policy dialogue at the national, regional and pan-African level.

African countries have set ambitious objectives for agricultural development, and – in conjunction with donors – committed themselves to allocating the resources necessary to achieving their objectives. The African Union/NEPAD Comprehensive Africa Agriculture Development Programme (CAADP) framework calls for agricultural growth rates to be raised to 6% by 2015, and affirms the commitment African leaders made under the 2003 Maputo Declaration to commit 10% of public expenditure to agriculture and rural development. These commitments are seen as necessary to achieve progress on the Millennium Development Goals (MDGs), in particular the first Millennium Development Goal of reducing by half, between 1990 and 2015, the proportion of people living on less than a dollar a day and of those suffering from hunger.

The basic aim of the MAFAP project is to help African policymakers choose the right instruments for attaining these objectives. This means understanding how the policy environment can be improved,

identifying where the main development challenges are, and suggesting ways in which scarce resources can be allocated to address those challenges as effectively as possible.

To summarise, the MAFAP project would provide three main benefits to participating countries. It would

1. Provide a framework for national policy analysis and design, via the rigorous and regular compilation of agricultural policy and development indicators.

2. Ensure the sustainability of that framework by building domestic capacity and integrating regular policy analysis into the functions of government.

3. Provide the basis for meaningful policy dialogue among national and international stakeholders.

These benefits should improve the basis of knowledge on which agricultural policies are designed, evaluated and improved. They should also help aid donors prioritise their assistance, and be of general use to regional and international organizations, national stakeholders and policy researchers.

3. POLICY INFORMATION NEEDS IN AFRICA

3.1. Why improved information on African food and agricultural policies is needed

There is a deep need for improved information on African food and agricultural policies. This need is driven fundamentally by the poor performance of the food and agriculture sector relative to its potential, and – as noted in the World Bank's *World Development Report 2008* – the sector's scope for making a much greater contribution to economic growth, poverty reduction and food security. Current policies in many African nations inhibit pro-poor growth and, in order to implement successful reforms, governments require greater information on the nature of policies that are in place, and the scope to track the performance of those policies via meaningful development indicators. They also need information on performance issues that are not directly related to current policies, but which may reflect developmental deficiencies, such as weak infrastructure and poorly functioning markets, and would need to be addressed by suitably targeted investments or by regulation. Such measures can form the basis for much-needed dialogue on which policies work and which do not. Development institutions and agencies have similar needs in order to offer relevant policy advice and make suitable recommendations for investments and aid allocations.

3.2. Current situation of food and agriculture

In the past decade, economic growth in Africa has been relatively strong on aggregate, with per capita incomes per person growing on average by almost 5% per year. Yet the agricultural sector itself has not fared as well. Africa has been a large net food importing region and net imports continue to grow. Between 1995 and 2007, net imports of cereals grew by over 50% from 30 million tonnes to 46 million tonnes, and the FAO projects that, unless there are fundamental changes in policies and resources are used more effectively, cereal imports will grow to over 60 million tonnes in the next decade. Hunger and poverty in sub-Saharan Africa are persistent and widespread. According to FAO's latest assessment (FAO CFS: 2008/2), there has been a reduction in the prevalence of undernourishment from 34 to 30 percent between 1990–92 and 2003–05. However, the absolute number of undernourished people increased from 169 million to 212 million. Efforts to reduce hunger in the region have been hampered by natural and human-induced disasters, including conflicts occurring during the 1990s, and the spread of HIV/AIDS. The key problems are low farm productivity and weak productivity growth. However, the continent boasts ample land assets and unrealised production potential.

The disappointing supply response of African agriculture to the recent boom in commodity prices can be attributed to several factors. Costs and margins are often high along the marketing chain, and can lead to depressed producer prices within countries, particularly those which are landlocked, with some markets effectively isolated from external markets and unresponsive to international price changes (Conforti, 2004). This lack of market integration implies that internal markets may be more volatile and exhibit limited growth potential. Other sectoral deficiencies include poorly functioning market for credits and inputs, uncertain property rights, and weak human capital. The latter reflects deficiencies in skills and training, which in turn reflects deeper shortcomings in terms of education and health, as well as the scourge of HIV/Aids. Performance in many African countries has also been circumscribed by inappropriate policies (both macro and sectoral), weak governance and conflicts in a number of countries.

Not all the constraints to the development of food and agricultural markets can be addressed by sectoral policies. However, sector-specific policies do have a role to play, and there is a recognised need for increased investment in the food and agricultural sector. For those elements to be put in place, there is a clear need to assess regularly the extent of, and reasons for, the sector's underdevelopment, and identify the role that policies and investments can play. This project seeks to fulfil that information need.

3.3. Existing efforts to measure food and agricultural policies

For developing countries, the history of agricultural policy measurement goes back 35 years. Indeed, the first systematic attempt to monitor developed country farm policies was undertaken by the FAO in the context of a study on international agricultural adjustment (FAO, 1973, 1975). This project was motivated by the realization that protectionist policies were having a profound impact on world markets for agricultural goods. The 1973 paper lays out the rationale for monitoring farm policies, which partly relates to the issue of trade liberalization in the GATT. Two main indicators were developed: the Producer Subsidy Equivalent (PSE), and the Consumer Tax Equivalent (CTE). Subsequently, these measures were revised and extended by the OECD and are currently published for OECD members and several (mostly larger) emerging economies in two regular reports: *Agricultural Policies in OECD Countries* and *Agricultural Policies in Emerging Economies*.[2] This constitutes the only sustained programme of agricultural policy monitoring and related analysis. The World Trade Organization also collects and produces several policy measures specific to the current Agreement on Agriculture, in form of Aggregate Measure of Support (AMS), and these along with other data on tariff notifications, also provide indicators of policy activity.

The measurement of trade protection in developing countries has been undertaken intermittently since the 1970s. In the past ten years, other institutions have followed up on this work, and attempted to measure support to agriculture more widely, including IFPRI, FAO and the European Union. The FAO study on the Roles of Agriculture (ROA) included a component on agricultural support measures in a total of 11 countries in Asia, Sub-Saharan Africa, North Africa and Latin America.

The most comprehensive study in this area was a large cross-country analysis of the political economy of agricultural pricing policy (Krueger, Schiff and Valdés, 1988, and Krueger, Schiff and Valdés, 1992). The study covered 18 developing countries during the period 1960-1985, including four African countries. A recent major study, entitled *Distortions to Agricultural Incentives*, undertaken by the World Bank under the leadership of Professor Kym Anderson, updates and builds upon the Krueger, Schiff and Valdés work, providing measures of policy distortions for 41developing countries, 21 of which are in Africa.

To date, all of the policy measurement studies undertaken have been undertaken on a one-off basis, and have not sought to regularise the monitoring of policy performance. In the context of Africa, they have not quantified the extent of high costs and rents within value chains, which may be at least as important as policy distortions. Nor have they sought to build mechanisms for compiling and using estimates within country, or establish associated mechanisms for peer review and policy dialogue. All of these elements are part of the ambition of the proposed MAFAP project.

Currently IFPRI is developing a Regional Strategic Analysis and Knowledge Support System (ReSAKSS) for Africa in support of the monitoring and evaluation of the Comprehensive Africa Agriculture Development Programme (CAAPD) of the African Union. This monitoring and support programme is currently under development, and will include using data and indicators to enable greater policy dialogue in Africa. This has potential complementarities with the proposed project.

3.4. How MAFAP indicators will bridge the information gap

Good policy decisions require good information and analysis. They also require effective systems for undertaking and disseminating that analysis, and open policy dialogue among stakeholders at both the national and international level.

In the context of African agriculture, there are numerous efforts underway to strengthen data systems and domestic capacities for policy analysis, and to facilitate dialogue within and among countries. As yet, however, there is no systematic and sustained monitoring of agricultural policies across sub-Saharan

2. PSEs and related indicators are available for the 30 OECD member countries and the following non-OECD countries: Brazil, Chile, China, Russia, South Africa and Ukraine. In addition, estimates for the European Union include data from five non-OECD countries: Bulgaria, Estonia, Latvia, Lithuania, Romania.

Africa, or mechanism which would enable stakeholders to engage in effective dialogue on the basis of a consistent set of regularly compiled information. The MAFAP project proposes to fill that need.

The MAFAP project will develop a suite of food and agricultural policy and development indicators of value to all stakeholders, including national governments and development partners. These indicators will provide quantitative information on agricultural policies, including both market interventions and budgetary expenditures, and will measure the scale of development challenges faced by the agricultural sector. The proposed indicators will provide the underlying basis for addressing two overarching questions about policy choices and investment decisions. First, are current agricultural policies the most appropriate for addressing the country's policy objectives with respect to development, food security, poverty reduction and natural resource use? If not, what reforms would help? Second, are expenditures being effectively targeted to areas where the need is greatest and potential returns are the highest?

As part of the scoping project, an inventory of relevant existing data bases has been established (see separate Annex). An examination of these data suggests that the proposed methodology can be implemented successfully. However, it may be necessary to fill remaining data gaps and undertake a selected number of additional surveys, for example on producer prices, cost of production and marketing surveys in some countries. Beyond some limited surveys, the final project would not involve the collection of primary data. Nevertheless, the depth of analysis possible for each country will depend on the availability and quality of data. Accordingly, the project will make recommendations for where data availability needs to be improved.

4. PROJECT DESIGN

The project will respond to the needs of African national governments and their partners in the policymaking process by providing new types of policy indicators and accompanying analysis, as well as an Africa-wide forum for peer review and policy dialogue. Every effort will be made to ensure that the project complements ongoing initiatives to monitor and evaluate agricultural policies, that it builds on existing structures in order to strengthen capacities in data management and analysis, and that the associated policy dialogue is conducted through established mechanisms. Attaining these objectives will require effective collaboration with a number of regional and international political, development and research institutions.

4.1. Integration of the MAFAP project in FAO

The MAFAP project will be consistent with FAO's strategic framework and will be designed according to the current FAO's strategic approach to policy assistance.

FAO recognizes that in order to meet the MDGs, in particular the objective of halving hunger by 2015, coherent policy frameworks need to be in place at national, regional and international levels. FAO's mandate includes a wide array of policy work from data collection/synthesis, policy analysis, to policy advice and capacity building which seeks to enable member countries develop and strengthen their policies for agriculture and rural development. Recently, a FAO policy assistance working group established in FAO in the wake of the Independent and External Evaluation (FAO, Policy Assistance Paper, unpublished draft, March 2008) confirmed that there was a strong demand by the Membership for FAO's policy assistance and that FAO needed to address its weaknesses and build on its strengths to adequately serve member countries. In this context the need for FAO to take action to gather a critical mass of highly qualified policy oriented staff in FAO to carry out sound policy analysis and policy advice work was highlighted.

Through the MAFAP project and the combined mobilization of its own resources and those provided by the Bill and Melinda Gates Foundation, FAO will address several of the points that were raised by the policy assistance working group and contribute to the achievement of its strategic objectives, as set out in its recently developed new Strategic Framework.

Three strategic FAO objectives most relevant to the project are:

- **Strategic Objective G**: **Enabling environment for market to improve livelihoods**.
  - The focus of the MAFAP project is on identifying how well policies in place allow farmers exploit market incentives and particularly trade opportunities. It will assist countries in identifying more conducive policy frameworks that would need to be put in place to help farmers improve access to market opportunities, by conducting market and value chain analysis (Organizational Result – OR - G1). Since access to food is also a major concern for FAO, the project will fully analyse and integrate the market distortions affecting consumers.
  - By identifying relevant policy indicators the project will facilitate the process of identifying the required change in policy and help countries or groups of countries adapt their commodity strategies (OR G3).
  - The MAFAP project will also directly contribute to the analysis of agricultural markets and trade policies affecting development, provide advice on enhanced access to input and output markets; and provide training support in market information and analysis (RO G4 and G5).

- **Strategic Objective L**: **Increased and more effective public and private investment in agriculture and rural development.**
  - In those countries where it will be active, MAFAP will contribute to setting the basis for identifying more effective investment in agriculture by analysing agricultural policy and development indicators that point to possible development gaps (OR L1).
  - MAFAP will also contribute to the introduction by governments of mechanisms to facilitate investment in agriculture and rural development: (i) the provision of policy analysis leading to policy dialogue and advice; (ii) technical support on information systems including capacity strengthening to harmonize and publish the required data and statistics; and (iii) the publication of agricultural policy and development indicators along with an analysis of public expenditures that would translate into identifying suitable priority areas for investment (OR L4).

- **Strategic objective X: Effective collaboration with member states and stakeholders.**
  - The MAFAP project will build key partnerships and alliances not only with participating countries but also particularly with OECD and IFPRI for steering the project, and with regional economic organizations for streamlining the desired policy dialogue in existing institutions, in particular, the African Union (OR X5). Moreover, a pan African event under the auspices of the African Union is expected to become a forum for discussion based on the biennial monitoring reports (for example the FAO Regional Conference for Africa).
  - In line with OR X2, the MAFAP project is conceived as a result based programme for which financial and human resources in particular are mobilized in support of planned results. The strategic and operational plans take into account global, regional, sub-regional and country dimensions. Moreover, building on the experience of other outcome oriented programmes, MAFAP will incorporate a strong lessons learned component.

It is expected that the Secretariat established in FAO to coordinate and support MAFAP activities will be funded in part from FAO's Regular Programme during the 6-year life of the project (including the two phases), and that FAO Regular Programme resources will continue to support policy monitoring activities after the end of the project itself.

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4.2. MAFAP and OECD cooperation with Africa

The OECD has a growing engagement with African countries, reflecting the view that the organisation can accelerate progress towards attainment of the Millennium Development Goals, via a sharing of working methods and knowledge, and as a result of OECD members' specific role as aid donors. The principle behind this engagement is one of shared responsibility and common interest.

There is a wide range of cooperation and partnerships with African countries and organisations. For example, the Trade and Agriculture Directorate has an item in its current Programme of Work addressing the issue of which agricultural policy instruments are most suitable in developing countries, and how the optimal policy mix is likely to differ from that suggested for high-income OECD countries. It also undertook recently a specific project examining how agricultural policies can be strengthened in three African countries, namely Cameroon, Ghana and Mali. The Trade and Agriculture Directorate would contribute much of the required technical expertise for MAFAP.

Elsewhere, MAFAP can complement the activities of bodies with and affiliated to OECD. For example, the *Development Cooperation Directorate* has a wide range of interactions with African countries on development issues, and monitors aid flows (an important information requirement for MAFAP); the *African Partnership Forum* is the OECD's main vehicle for deepening dialogues between Africa and its development partners; the *NEPAD-OECD Investment Initiative* seeks to ensure that investments are allocated efficiently; *Paris21* is working to establish national statistical strategies in African countries; while the *Club du Sahel* fosters regional dialogues on a number of issues, including agriculture. The organisation's *Development Centre* also engages in specific studies of African policy issues.

4.3. Project implementation sequencing – a phased approach

In line with the strategic elements highlighted above the project will be implemented in two main phases of three years each. This means that countries will be invited to participate as the project itself unfolds and progressively covers all the 17 targeted countries already covered by the countrySTAT project.

The project design foresees that groups of 3 to 5 countries be integrated each year[3]. The 17 targeted countries would be covered after 6 years. After the conclusion of the initial 6-year project, and depending on the results of the evaluation of the MAFAP project, additional extra budgetary resources would be sought from interested donors to fund country level activities beyond the 17 countries that should be covered at the end of the second phase.

The project design described hereafter focuses on the first phase of project only. Seven countries would be covered at the end of the 3 years. While the first year would be mainly dedicated to producing a base set of indicators for all the 17 countries, the second and third year would focus on producing the initial country studies for the first group of seven countries, eventually aiming to ensure autonomy and sustainability in producing indicators and country monitoring reports for these countries during the second phase of the project.

In terms of country selection for the first phase, one of the criteria will be the availability and quality of information to actually build the indicators. In the meantime, an assessment of the information of other countries will be performed to get clear indication on the needs for the subsequent phase two of the project.

At the pan African level (*i.e.* including all countries participating in the project), various activities and outputs are foreseen. For example, during the first year, the project will build on the World Bank Distortions to Agricultural Incentives (DAI) study in 11 countries and develop a common methodology in the remaining 6 countries in order to provide a common base set of indicators, as serve as the basis for an initial monitoring report on the full set of countries at the end of the first year/beginning of second year of the project. As the project develops and more countries are covered by intensive data analysis and increasingly more country monitoring reports are produced, the policy dialogue at national, regional and pan African levels will be enhanced and gain in depth and substance. To facilitate the exchange of experiences between African policy decision makers and Africa's development partners, the proposed project will organize two high level dialogues on emerging issues in Africa's food and agricultural policies and the related development cooperation.

At country level, work in each country would be undertaken in four stages. The **first, refered to as the preparatory stage** will focus on helping countries fully mobilize the required resources. This stage will consist of progressively setting the ground for enhanced policy analysis and dialogue by mobilizing the required resources and information including:

- a launching event,
- the full information of national partners,

3. To ensure broader mobilization of support for the MAFAP project, the initial three countries should be selected from different geographical sub-regions in Sub-Sahara Africa. One suggestion would be to select the three countries visited during the scoping project, i. e. Tanzania, Ethiopia and Burkina Faso.

- the identification of national counterparts and the set up of the national project team,
- the identification of policy network at technical level and policy forum at management level,
- the identification of data requirements, its mobilisation and quality assessment,
- establishment of statistical data base using CountrySTAT,
- the first activities on methodology on indicators and policy analysis.

The second stage, referred to as the **intensive stage** will, over a period of approximately one year, provide the country with specialized technical assistance to produce its first country report. This stage will include:

- assignment of tasks to the country teams,
- capacity building workshops on data treatment, validation of indicators, and policy analysis,
- in depth analysis of selected commodity chains and validation of data,
- provision of technical assistance by international experts in support to country teams including measures of market incentives and disincentives (caused by policies or excessive costs) and measures of budgetary transfers,
- drafting of country report,
- discussion of draft report by the national policy roundtable or forum,
- editing and publishing of country report.

The third stage, referred to as the **follow up stage,** will consist of supervision of the work of national teams and require fewer project resources. This task will include technical backstopping and assistance upon request. This stage will include the following key aspects of assistance:

- updating indicators,
- identification of new issues,
- update of the country report.

The fourth stage, referred to as the **autonomy stage,** will only include backstopping missions upon request to address difficult or sensitive issues requiring technical assistance from the secretariat, as well as continued preparation of the FAO/OECD biennial monitoring report.

As already stated above, the first year of the project will be mainly focused on producing a base set of indicators for the seventeen countries targeted by the project and the preparation stage for Group 1 countries. For the countries not covered by the World Bank DAI studies, a specific approach is foreseen that will borrow the methodology used by Kim Anderson in order to produce a comparable set of indicators. However, new elements will be added, including measuring the development gap where possible, and budget transfer indicators. For the countries already covered by the World Bank DAI, the MAFAP project will contribute by adding the missing elements. This work will be performed by team composed by international and national consultants guided and supervised by one staff from the secretariat responsible for a given country. It is likely that commodity chain analysis will be needed to get the required information to build the different set of indicators when the information available is not sufficient in quantity or quality.

Moreover, the project also foresees the following roles during the implementation phase for the secretariat at country level:

- One staff (economist and policy analyst) would be assigned to each country as a focal point. Ideally each staff should be responsible for following-up on three to four countries during the whole project implementation period.
- Creating or mobilising existing expert networks for methodology and diagnosis of MAFAP indicators (*e.g.* in the framework of ASARECA, Africa Forum or others).
- Advising participating countries in institutionalisation at country level in relevant Ministerial structures, building on existing mechanisms as appropriate (*e.g.* using secretariats for sector-wide coordination of policies, including development partners, academia, private sector, CSO).

- Working with Regional Economic Organisations in creating an appropriate regional forum for dialogue, policy coordination and training.
- Supporting the African Union in creating an appropriate forum for regular dialogue, peer review and publication of monitoring reports.

4.4. MAFAP Expected Outputs

In addition to this phased implementation, the project will produced the following key outputs:

1. **Launching conference with African policymakers (spring 2009).**

An important priority is to give visibility to the MAFAP project and its expected outcomes. To this end, it is essential that decision makers and other stakeholders be fully informed. It is equally important that the project team assembles all existing information that feed into the MAFAP analysis. This conference will include a presentation of the method for MAFAP development, an assessment of information that is currently available and can be readily assimilated – including both data and indicators, a discussion of the work and analysis that needs to be done, and an assignment of tasks and responsibilities.

2. **Set of agricultural and expenditure indicators in place**

A core set of indicators will be measured, updated and harmonized across 17 countries. These food policy agricultural policy and gap development indicators will be the key information that will be analysed to produce the monitoring reports.

3. **MAFAP methodology defined**

In order to define the details of the methodology an international expert workshop will be organized as soon as the project is approved. The workshop will gather internationally recognized experts whose role would be to fine tune the methodology and validate it. It is foreseen that the workshop venue be decided according to already scheduled international meetings of experts.

4. **National counterparts trained on MAFAP methodology**

To make sure that a common methodology will be used in all countries, one methodology workshops will be organized in each country at the beginning of the period of intervention. It is essential that the identified national counterparts receive information on the proposed methodology and be given an opportunity to discuss it with the project team. For a number of indicators, the method for measurement is already clear. However, a significant value added comes from the proposal to identify the size of the "development gap" in particular markets. The aim of the workshop will be to discuss different approaches to measuring this development gap, examine data requirements and data availability, and establish a phased plan for deepening the information content of existing indicators so as to incorporate this element.

5. **Annual country reports released**

The 7 countries included in the first phase of the project are expected to produce their country reports without further funding from the project at the end of the follow-up stage which is tentatively expected after 3 years of intervention. At the end of the intensive stage, there will be an in depth country study published under the joint responsibility of the country team, the FAO and the OECD. It is proposed that the full range of indicators be developed for each country through the preparation of the country studies. These would be developed for four countries per year. Following the release of the country studies, there will be regular monitoring updates produced by the countries themselves called "country monitoring reports". Information from both the country study and the regular country monitoring reports would feed chapters of the bi annual "Monitoring African Food and Agriculture Policies" report .

6. Monitoring African Food and Agriculture Policies reports issued biennially

These reports will constitute the flagship publication of the project and will be used for policy dialogue at national, regional and pan-African levels. They will be produced under the joint responsibility of the FAO and OECD. It is proposed that these reports be presented and discussed at the biennial FAO regional conference for Africa in partnership with the AU. The monitoring reports will provide the basis for policy dialogue on agricultural policy development, which will consider changes in agricultural markets and the policy responses of national governments, and discuss priorities for policy action.

The monitoring report will be produced in years 1 and 3 of the first phase of the project. The first edition will report on the base set of indicators for all 17 countries, which will include the DAI estimates produced by the World Bank, collate existing data on government expenditures, and report harmonised development gap information. The information on each country will be strengthened as country studies are completed. These reports will provide updated indicators, an evaluation of policy developments in each country, and an assessment of overall progress on agricultural development. The report in year 3 will include country chapters based on background documents provided by the in-country contributors to MAFAP. The depth of information presented for each country will increase following the completion of country studies.

7. National teams of policy analysts in place

At the end of the first phase of the project, the 7 countries will benefit from national units of specialists in policy monitoring and analysis.

8. Fora for policy dialogue established

Fora will be established at national, regional and pan African levels including regional meetings organized in cooperation with Regional Economic Communities. It is envisaged that regional meetings would alternate with pan-African meetings, with two regional meetings to be held in year 2 of the first phase (and tentatively in year 4 and 6 of the second phase) of the project. These meetings would be used to discuss regional policy issues, and to see if wider lessons can be drawn from the individual country studies. In addition, two high-level dialogue meetings are foreseen aiming to exchange views and experiences on current and emerging issues in food and agricultural policies for Africa between African government representatives and their international development partners. These dialogue events will focus in particular on external assistance to domestic policies and investments. Project results will inform these dialogues as far as possible.

9. Teams of national staff trained and training manual published

The project will include a significant amount of capacity building activities aiming at strengthening analytical capacities at country level. Moreover, a training manual including all the training modules will be developed and published. The basic modules are as follows:

- Training module I: data treatment, validation of indicators, preliminary analysis
- Training module II: measurement of market incentives and disincentives
- Training module III: commodity chain analysis, development gap estimates
- Training module IV: classification and computation of budgetary transfers for food, agriculture and rural development
- Training module V: policy analysis (linking policies with development indicators)

5. PROPOSED METHODOLOGY

This section discusses the types of indicators that will be constructed for the Monitoring African Food and Agricultural Policies (MAFAP) project, explains their potential use, and considers some of the measurement issues that will need to be confronted.

The precise scope for implementing some of the proposed elements will depend on data availability, and some of the methodological details would need to be elaborated during the implementation of the main project. In particular, the calculation of a "development gap" is a methodological innovation that would need to be discussed and explored among a group of expert analysts who are familiar with the measurement issues.

5.1. What types of indicators will be developed?

The project seeks to develop a suite of measures of value to policymakers in African countries. The proposed indicators are to be compiled for a range of African countries on a consistent and comparable basis, and to be computed on a regular basis for purposes of policy monitoring and analysis.

Three core types of policy indicator are foreseen:

(i) **Measures of explicit policy incentives and disincentives**. To the extent possible, price gaps between comparable markets will be calculated for major markets affecting food and agriculture, including commodity markets, factor markets (land, labour, credit, purchased inputs), and foreign exchange markets. Analyses of these price gaps will be used to estimate the incidence of policy interventions, which induce differences between observed prices and prices which would prevail in the absence of government policies such as taxes, tariffs and subsidies;

(ii) **Measures of market underdevelopment (the "development gap")**.

A further source of price gaps in output and input markets is costs or rents in the system, some of which can often be reduced through appropriate investments or institutional reforms. The excess of such costs and rents over efficient levels can be interpreted as a development gap that needs to be bridged by suitable policies and investments.

(ii) **Measures of budgetary expenditures**. These measures will track budgetary transfers, with suitable distinctions across areas that affect agricultural development (including payments to agriculture directly and to non-agricultural areas, such as infrastructure and education, which may have an important impact on agricultural development). They will also measure relevant aid flows to African countries, which will be mapped onto national expenditures. National budget expenditures will be broken down so as to reflect the differing economic impact of alternative types of expenditure (for example, making a distinction between spending on private versus public goods).

In addition, available development indicators will be used to provide internationally comparable context for policy analysis and decision-making. These will relate to food balances (production, consumption, trade and stocks); market structures; incomes; poverty and inequality; food security; productivity; and state of natural resources. Where possible, these indicators would draw from existing sources (*e.g.* Countrystat).

5.2. The use of policy indicators

The development of the policy indicators will provide African governments, aid donors, international organisations and researchers with hitherto missing information that is vital to effective policy decisions, aid allocations and research into policy effectiveness.

The proposed indicators will provide the underlying basis for addressing two overarching questions about policy choices and investment decisions. First, are current agricultural policies the most appropriate for addressing the country's policy objectives with respect to development, food security, poverty reduction and natural resource use? If not, what reforms would help? Second, are expenditures being effectively targeted to where the need is greatest and potential returns are the highest?

Box 1. How would the adopted indicators inform policy analysis?

The different types of MAFAP are complementary:

1. Measures of explicit incentives and disincentives, and of development gaps, indicate potential areas for policy action. In the case of explicit policy interventions, there may be a need for assessing their effectiveness in reaching given objectives and a possible case for reforms, while in the case of market failures or high transactions costs, there may be reasons for reform through institutional or regulatory changes (*e.g.* a curbing of monopoly powers), or for new investments in public goods to reduce costs and bridge the development gap.

2. The measures of disincentives can be associated with a range of development indicators such as the condition of rural infrastructure, the share of farm operations receiving credit, and measures of the functioning of land markets or water allocation. Changes in these measures would provide information on progress in reducing disincentives (a list of potential indicators is included at the end of Section 4).

3. The disaggregated measurement of government expenditures would make it possible to contrast the actual allocation of money, including external assistance, with areas of need. Thus there would be a link between the development gap and efforts to bridge that gap.

How would this work in practice? Taking the output market as an example, domestic prices may be high / low relative to landed border prices due to either formal price policies or high transport and other transaction costs. Policies affecting prices include import tariffs, export taxes and procurement regimes. Transport costs may be excessive due to inadequate roads and other infrastructure deficiencies, while other transaction costs may be excessive for reasons such as SPS regulations, a lack of competition or limited access to price discovery mechanisms. A reduction in distortions to price incentives may be achieved through the reform of price policies, or by reforms and investments that reduce excessive transaction costs (development gaps). Development indicators can help identify priorities for such action.

By measuring (dis)incentives across multiple domains, it should be possible for policymakers to identify where the distortions in the system are greatest and where the most important priority areas are, be they in the area of commodity policies, macro policies, structural policies or regulatory reforms. It should also facilitate comparative analysis, so that countries can share experiences on the basis of a common analytical framework.

5.3. Measuring policy incentives

5.3.1. Price incentives and disincentives

The following sections set out possible indicators to be computed. Two key references are the OECD's manual for calculating its Producer Support Estimate (PSE) and related indicators (OECD, 2008) and the methodological exposition of the World Bank's Distortions to Agricultural Incentives (DAI) project (Anderson *et al.*, 2008). These and other relevant documents are available at www.oecd.org/tad/apdi. The discussion is conceptual and makes some suggestions for how measurement may be tailored to the specific needs of African policymakers. There is evidence to suggest that the main elements of the proposed approach are feasible, although a number of practical issues of implementation would need to be resolved during the early stages of implementation of the main project.

Output market distortions

The calculations of output market interventions would be made in a manner that is consistent with the OECD's calculations of market price support (MPS), a component of the PSE. These estimates are available for OECD countries and a number of non-OECD countries.[4] This consistency would provide an important basis for comparing policies and their impacts in developed and developing countries.

The degree of market price support is typically revealed through price comparisons. Prices received by domestic producers are compared with international (traded) prices received by foreign producers. These prices are adjusted for quality differences and for transport and other costs, in order to bring them to the "point of competition" – *i.e.* to capture the opportunity cost of domestic provision.

The practicalities of calculating MPS include (i) deciding which commodities to select; (ii) finding comparable domestic and international prices; (iii) choosing appropriate reference prices; (iv) making adjustments for transport costs, marketing margins and transport costs; and (v) making further specific adjustments for livestock products (feed adjustment, comparing domestic milk prices with trade prices in dairy products). OECD practice would be followed as far as possible.

However, there are two areas in which the MAFAP methodology will need to go beyond that adopted by the OECD. In the first place, there is a need to provide a full account of price determination along the supply chain, from the farmgate to the wholesale and the retail level. This is important because the domain of policy concern extends to the effects of food price changes on consumers as well as producers. At the same time, policy interventions in Africa often take place at the consumer as well as the producer level. In principle, the DAI study provided information on price distortions along the supply chain, although in practice finding reliable data proved difficult, and the information is stronger on the producer side.

A second need is to recognise that gaps between domestic and international prices, and between prices at different points along the supply chain, can result not just from policies and the inevitable costs of taking products from one market to the next (either spatially or vertically along the supply chain), but from excessive costs and rents. For example, in the case of imported commodities, domestic wholesale prices may be relatively high not just because of import barriers and inevitable transport costs, but because transport costs are much higher than they would be with better infrastructure, such as paved roads. Similarly, domestic prices for exportables may be depressed by the high costs of getting products to markets. Along the supply chain, producers may receive low prices because of monopsony power at the buyer / wholesale level, while consumers could pay higher prices because of monopoly power among retailers.

Is the proposed methodology appropriate and can it be implemented? Evidence from African countries covered in the World Bank project on *Distortions to Agricultural* Incentives, presented in Annex A, suggests that policy distortions in Africa, while lower than in previous decades are still significant, and that excess costs and rents in the system are at least as important in as explicit policies in affecting incentives. Hence there is a need to measure jointly two sources of price gaps: formal policy distortions and development gaps. Key technical issues surrounding the methodology proposed for distinguishing these two sources of price gaps are discussed in Annex B, while the scope for implementing the proposed methodology, and potential insights, are explored via a case study for Ghana in Annex C.

5.3.2. Exchange rate distortions

Historically a number of African countries have operated multi-tier exchange rates, or attempted to fix the exchange rate above its equilibrium value. For a discussion of the distortions associated with these interventions, see Anderson *et al.* (2008). The simplest method for calculating the equilibrium rate is to assume that the elasticity of supply of foreign currency is equal to the elasticity of demand. In this case the

4. PSEs and related indicators are available for the following non-OECD countries: Brazil, Chile, China, Russia, South Africa and Ukraine. In addition, estimates for the European Union include data from five non-OECD countries: Bulgaria, Estonia, Latvia, Lithuania, Romania.

equilibrium exchange rate is halfway between the official and the parallel market rates (data on both is available from the World Bank). Other more sophisticated approaches are possible, but this may be the most practical, especially since explicit exchange rate distortions have now been removed in most African countries. Nominal and effective rates of protection can be calculated at both the official exchange rate and the estimated equilibrium rate. The difference gives the amount of protection that is attributable to exchange rate policy.

5.3.3. Policy interventions downstream from the farmgate and in related sectors

One aim of the proposed indicators is to capture the effects of policy interventions on farmers' incentives. If an intervention takes place directly at the farm level, then the incidence of the policy can be captured directly via a price wedge. If it occurs at a downstream market (*e.g.* subsidised bread prices), or in a related agricultural market, then some estimation needs to be made of the effect of such intervention on the price at farm level. This is typically a modelling issue, not just a measurement one, and would need to be addressed on an ad hoc basis. In the case of downstream price policies, nominal and effective rates of protection could be adjusted.

5.3.4. Intersectoral incentives

The focus here is on how government policies discriminate in favour of or against agriculture compared with other sectors. Naturally it will not be possible to apply the same degree of rigour to measuring non-agricultural incentives, but data on non-agricultural tariffs can be employed to produce a relative rate of protection, both for each agricultural sub-sector and for the sector as a whole. For calculating these relative incentives, the methodology employed in the DAI project would be employed (Anderson *et al.*, 2007), and calculations from that project would be harnessed to the extent possible. These annual measures could be benchmarked against cross-section measures that account for all sectors and (in principle) tax/subsidy policies across economic sectors. For this, an Input-Output Table, a Social Accounting Matrix and a corresponding Computable General Equilibrium model would all be helpful.

5.3.5 .Input and factor market incentives

The basic aim here would be the same as for the commodity market module, *i.e.* to identify the agents at whom those policies are directed (*e.g.* producers, or input suppliers), measure an input price gap that can be attributed to (i) formal policies and (ii) excessive costs due to market failure or a "development gap". [Similarly, there would be an effort to find indicators of the extent of excessive cost in the input market and of policy effort to reduce those costs.]

As with output markets, there would be a need for some within-country disaggregation in the data collected. For example, some farmers may have access to credit at commercial rates (possibly from overseas) while others may be charged much higher interest rates or, more likely, have no access at all. It is the spread of prices within each country that can provide a good gauge of the extent to which costs can potentially come down with improved policies. Although it may be too difficult to fully account for the sources of price gaps in input markets, some measures of the underperformance of these markets should be sought.

In principle, measures of explicit distortions across output and input markets should lead to nominal and effective rates of protection at the commodity level and for the sector as a whole. Measures of excessive costs could be similarly aggregated to produce commodity-specific development gaps, an agricultural market development gap (summing across sub-sectors), and a sectoral development gap (adding in the cost of underdevelopment to input markets).

Effective rates of protection

In calculating effective rates of protection, it is necessary to distinguish between traded intermediate factors (such as fertiliser, chemicals and fuel), non-traded intermediate inputs (such as insurance and water), and primary factors (land, labour and fixed capital).

The effective rate of protection is ideally calculated as ratio of value added on primary factors at domestic prices compared with border prices. This requires calculating the use of primary factors in the final product, in producing traded intermediate factors, and non-traded intermediate factors. It is difficult to account for all these elements properly, and a number of simplifying methods has been proposed (see Sadoulet and de Janvry, 1995). In any event, the ERP does not account for policy interventions or the malfunctioning of the markets for primary factors. These would need to be examined separately.

5.4. Measuring government expenditures

Whereas the previous section sketched out a methodology for comparing price gaps, this section is concerned with monetary transfers.[5] The main task is to break down national budgetary expenditures by relevant various categories and sub-sectors. Another task is to map incoming aid flows onto national receipts and expenditures. As with the measurement of incentives, some conceptual elements and possible criteria for disaggregating data are proposed. However, the practicalities of choosing an appropriate breakdown cannot be fully addressed in the scoping project, and would have to be resolved definitively in the course of implementation of the main project.

Many of the expenditures of greatest relevance to agricultural development, in terms of their ability to shift the supply curve, may not be specific to agriculture, but could fall into other categories (such as investments in rural infrastructure, or in banking and financial services). The following breakdown is therefore proposed:

1. Between agriculture-specific, agriculture-supportive, and non-agricultural expenditures;

2. Within agriculture-specific, a distinction should be made between payments to farmers and payments not to farmers but to the sector more generally (following OECD practice). A further aim would be, as far as possible, to distinguish between private and public goods (which would pick up the welfare reducing case of farm subsidies portrayed in Figure 7 and the welfare increasing case of public investments in research and extension as shown in Figure 8).

At the donor level, aid recorded by Creditor Reporting System (CRS) is identified by sector. The agriculture-specific categories are listed in Table 1, while the broader categories are presented in Table 2 (with some breakdown). It is important to note here that, for the purposes of agricultural policy analysis, the CRS breakdown may not be the most useful, in particular because agricultural expenditures are not disaggregated in a way that corresponds to the differing economic impacts: for example the support categories for agricultural development and for land and water resources are likely to range of subsidies and expenditures, some of which may be considered as public goods, but other of which will be clearly private and have very different economic effects. Among payments to farmers, a useful distinction might also be made between income support and measures that have the potential to affect long-term productivity, such as the provision of irrigation and extension services.

At the national level, it may not be possible to track all the relevant sub-categories that are identified at the donor level. Yet it will be important to keep track of the correspondence between donor information on commitments and disbursements on the one hand, and national receipts and expenditures on the other. Increasingly it is also important to recognise that a significant share of aid may come from countries that are not covered by the CRS (notably China).

Within the OECD's General Services Support Estimate, the following categories of support are included: research and development, agricultural schools, inspection services, infrastructure, marketing and promotion, and public stockholding. These categories might be added to the direct payments to farmers.

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5. In the case of the OECD's measurement of support, the two categories are aggregated. The PSE (support to farmers) is calculated by multiplying the per unit price support provided to producers by the amount of production and then adding other transfers that producers receive. The TSE (support to the sector as a whole) is computed by adding support provided to the sector as a whole, but not directly to farmers, to the PSE.

In terms of payments to farmers, there is no need to follow the OECD's detailed disaggregation, which has evolved to reflect the complexity of programmes in the OECD area, and the importance that is attached to gauging degrees of decoupling. However, a useful distinction might be made between transfers such as income support and measures that have the potential to improve the farmer's productivity, such as extension services.

In addition, given the importance of large scale projects, there may be a need to distinguish recurrent from one-off expenditures, and apportion investment expenditures over a suitable period of time.

Table 1. CRS Agriculture-Specific Categories

	AGRICULTURE	
31110	Agricultural policy and administrative management	Agricultural sector policy, planning and programmes; aid to agricultural
31120	Agricultural development	Integrated projects; farm development.
31130	Agricultural land resources	Including soil degradation control; soil improvement; drainage of water logged areas; soil desalination; agricultural land
31140	Agricultural water resources	Irrigation, reservoirs, hydraulic
31150	Agricultural inputs	Supply of seeds, fertilizers, agricultural
31161	Food crop production	Including grains (wheat, rice, barley, maize, rye, oats, millet, sorghum); horticulture; vegetables; fruit and
31162	Industrial crops/export crops	Including sugar; coffee, cocoa, tea; oil seeds, nuts, kernels; fibre crops;
31163	Livestock	Animal husbandry; animal feed aid.
31164	Agrarian reform	Including agricultural sector adjustment.
31165	Agricultural alternative development	Projects to reduce illicit drug cultivation through other agricultural marketing and
31166	Agricultural extension	Non-formal training in agriculture.
31181	Agricultural education/training	
31182	Agricultural research	Plant breeding, physiology, genetic resources, ecology, taxonomy, disease control, agricultural bio-technology;
31191	Agricultural services	Marketing policies & organisation; storage and transportation, creation of
31192	Plant and post-harvest protection and pest control	Including integrated plant protection, biological plant protection activities, supply and management of
31193	Agricultural financial services	Financial intermediaries for the agricultural sector including credit
31194	Agricultural co-operatives	Including farmersÕ organisations.
31195	Livestock/veterinary services	Animal health and management,

Table 2. Broad CRS Categories

110		**EDUCATION**
120		**HEALTH**
130		**POPULATION POLICIES/PROGRAMMES AND REPRODUCTIVE**
140		**WATER SUPPLY AND SANITATION**
150		**GOVERNMENT AND CIVIL SOCIETY**
160		**OTHER SOCIAL INFRASTRUCTURE AND SERVICES**
210		**TRANSPORT AND STORAGE**
230		**ENERGY GENERATION AND SUPPLY**
240		**BANKING AND FINANCIAL SERVICES**
250		**BUSINESS AND OTHER SERVICES**
311		**AGRICULTURE**
312		**FORESTRY**
313		**FISHING**
321		**INDUSTRY**
322		**MINERAL RESOURCES AND MINING**
323		**CONSTRUCTION**
331		**TRADE POLICY AND REGULATIONS AND TRADE-RELATED**
332		**TOURISM**
400		**MULTISECTOR/CROSS-CUTTING**
410		**General environmental protection**
430		**Other multisector**
	43010	Multisector aid
	43030	Urban development and management
	43040	Rural development
	43050	Non-agricultural alternative development
	43081	Multisector education/training
	43082	Research/scientific institutions
500		**COMMODITY AID AND GENERAL PROGRAMME ASSISTANCE**
510		**General budget support**
	51010	General budget support
520		**Developmental food aid/Food security assistance**
	52010	Food aid/Food security programmes
530		**Other commodity assistance**
	53030	Import support (capital goods)
	53040	Import support (commodities)
600		**ACTION RELATING TO DEBT**
700		**HUMANITARIAN AID**
910		**ADMINISTRATIVE COSTS OF DONORS**
920		**SUPPORT TO NON- GOVERNMENTAL ORGANISATIONS (NGOs)**
930		**REFUGEES IN DONOR COUNTRIES**
998		**UNALLOCATED/ UNSPECIFIED**

5.5. Complementary Development indicators

Contextual information of value to policymakers would be harnessed primarily from secondary sources, and coordinated with the CountrySTAT initiative to the extent possible. As far as possible, indicators already in use in the monitoring systems of participating countries, including the M&E system of the Comprehensive Africa Agriculture Development Programme (CAADP) would be used. The following four areas are examples:

Sectoral performance

- Production, consumption, trade and changes in stocks. These figures will in any event need to be collected in order to compute policy distortions. In general, data are much easier to obtain for crops than for livestock products, which is a serious deficiency in many African economies.

- Crop yields, and value added as a share of livestock production (Nationally owned and maintained CountrySTAT core);

- Productivity/efficiency of water use

- Agriculture as a share of rural and overall economic activity.

Poverty, inequality and food security

- The rural poor as a % of total poor;

- Rural relative to urban per capita incomes;

- Gini coefficient and rural gini coefficient;

- Share of urban households which are food insecure; share of rural / farm households that are food insecure;

Costs in output markets

- Share of rural roads that is paved;

- Extent of rural electrification;

- Share of farm households with mobile phones;

- Development of storage infrastructure

Costs in input markets

- Irrigated land as a share of cropland (Nationally owned and maintained CountrySTAT core);

- Share of farms with access to credit;

- Share of land for which there is legally recognised land tenure (Nationally owned and maintained CountrySTAT core).

Environment and natural resources

Health and human development

Market structures

- Production, consumption, trade and changes in stocks. These figures will in any event need to be collected in order to compute policy distortions. In general, data are much easier to obtain for crops than for livestock products, which is a serious deficiency in many African economies.

- Crop yields, and value added as a share of livestock production ((Nationally owned and maintained, CountrySTAT core);

6. PROPOSALS FOR INSTITUTIONAL STRUCTURE AND RESPONSIBILITIES

The following is a schematic outline of the proposed institutional structure of the project. It is foreseen that the project be led by FAO, working in close cooperation with OECD. While FAO would host the Project Secretariat, OECD would also create a technical team which would interact with the Secretariat on the basis of a Memorandum of Understanding. It is further suggested that an inter-agency Steering Committee will supervise and direct the overall work of the project. A technical network of all analysts working in FAO and OECD, plus project partners and their international advisors, would also be created. Within participating countries, statistical and analytical work would be undertaken by a core team associated with the institution in charge of sector-wide policy and strategy in food and agriculture, typically the Ministry of Agriculture or a relevant inter-ministerial coordination unit. The national team would also include experts from the national institutions in charge of agricultural statistics, a competent national research institution, as well as an external expert.

6.1. Steering Committee

- Membership: OECD (1); FAO (1); IFAD (1); IFPRI (1); African Union (1); African Regional Economic Communities (3); Donors Platform for Rural Development (1); Two invited experts (2).

- Function: supervise the overall project, guide the work of the project secretariat and propose new initiatives.

- Frequency: twice yearly meetings in the first year, annual thereafter, with additional as needed, organized by project manager.

6.2. Technical Network

- Membership: Experts from Steering committee (2), MAFAP Secretariat, CountrySTAT, IFPRI, National researchers and their advisors and others as invited, chaired by the project manager.

- Functions: forum for in-depth technical collaboration and exchanges.

- Frequency: mostly virtual meetings as needed.

6.3. MAFAP Secretariat (based at FAO)

- Membership: Project Manager, 4 full-time professional staff plus 3 full-time equivalent professional inputs and 2 full-time administrative support staff. Of these, 2 full-time professional staff would be FAO Regular Programme staff who would also continue to maintain basic MAFAP support beyond the 5-year project horizon.

- Overall mandate:

    - To operate the project under the direction of the Project Manager and the overall supervision of the ADG-ES.[6]

6. Project Manager to be selected by FAO after consultation with OECD. In view of the scope and complexity of the project and the political visibility expected in Africa, it is proposed that the Project Manager post be established at the D1 level for the duration of the project (recognizing that the ongoing FAO reform process envisions long-term reductions in the number of D-level posts).

- To work closely through a Memorandum of Understanding with OECD on specific tasks as described below.
- To submit yearly progress reports to the Gates Foundation.

- Specific Functions
  - Development of detailed methodology
  - Identification of African national counterparts
  - Capacity building (Training of local policy analysts, institution building)
  - Production of "secondary" indicators (*i.e.* those that do not require primary data collection in the country
  - Validation of MAFAP estimates
  - Production of a biennial report "Monitoring agricultural policies and development in Africa")
  - Ensuring liaison with donors; African partners; regional organizations; research institutions (IFPRI), IFAD and other interested parties.
  - Coordination with CountrySTAT
  - Facilitate close cooperation between MAFAP Secretariat and other relevant units in FAO

6.4. OECD Technical Team

- Membership: 2 professional staff plus management and administrative support.
- Overall mandate: to work closely through a Memorandum of Understanding with the project secretariat on specific tasks as described below, under the overall guidance of the Director for Trade and Agriculture (OECD).
- Specific Functions
  - Work with FAO to develop detailed methodology
  - Work with FAO on the assembly and analysis of budgetary data – in particular, collaborating with FAO to maintain a correspondence between data on aid to agriculture and data on national expenditure
  - Work with FAO to co-validate MAFAP estimates
  - Offer some outlets for related policy dialogue (with both the Trade and Agriculture community and with donors);
  - Be a partner with FAO in the production of the biennial joint FAO/OECD Monitoring report on African food and agricultural policy.

6.5. National Teams

- Core team (located in the institution in charge of sector-wide food and agricultural policy), consisting of 2-3 experts contributed by the National Government.
- Statistics expertise (1-2 experts from the agency in charge of agricultural statistics) to collect, process and provide relevant agricultural statistical data as inputs to indicator calculation
- 1 economist from a national research institution to support policy analysis and data processing
- (to be clarified are the contributions respectively from the government and the MAFAP project on all 3 above)
- national team to be supported by 1 international expert on a part-time basis
- Specific functions
    - Interacting closely with MAFAP Secretariat
    - Serving as a focal point for capacity building provided under the MAFAP project
    - Ensuring collection of relevant data
    - Computing provisional indicators
    - Undertaking policy analysis for the government
    - Preparing background reports for country studies and biennial report

The structure described above will operate within a wider system of collaborative arrangements. In addition to ad-hoc arrangements depending on needs (*e.g.* for training and capacity building), collaboration will be institutionalized in a more systematic way with regional and pan-African institutions and with the International Food Policy Research Institute.

6.6. Regional and pan-African institutions

- African Union and relevant regional economic organizations
- Specific functions
    - Take part in the MAFAP Steering Committee
    - Help organize capacity building for national teams (supported by the project)
    - Facilitate cooperation with relevant organizations and individuals within Africa, such as producer associations, research associations, donors, NGOs
    - Review of policy reports
    - Provide a forum for peer discussion of country and pan-African policy monitoring reports (supported by the project)

6.7. Collaboration with IFPRI

In view of IFPRI's being a center of excellence in policy analysis and its ongoing relevant work in various African countries, the MAFAP project would benefit from collaboration with IFPRI at various levels through contracts supported by the project. The following are specifically suggested:

- membership in the project steering committee
- contribution to development of the detailed methodology and production of a related compendium
- At country level, where it has presence, IFPRI could support the national team in adapting and applying the methodology to the country needs and in mobilising data/information.
- In particular, IFPRI could help establish close collaboration between MAFAP and ReSAKSS in those countries where ReSAKSS nodes are already operational and have started collecting data.
- IFPRI could also provide a link between MAFAP and IFPRI's ongoing monitoring and evaluation support to CAADP.

7. BUDGET

7.1. Budget

The tentative budget of the project is built upon the assumption that the donor would adhere to the result based approach for a six year programme in two phases of 3 years. The budget presented below applies only for the first three years. As previously indicated the project would progressively unfold at pan-African level and would include several stages at country level (preparation, intensive implementation, follow-up, autonomy).

A modular approach has been adopted. A **country module** includes most of the required interventions to achieve the expected outputs and outcomes at country level, and for the seven countries these total **USD 9,464,434** as detailed below.

There are also project-wide related costs that relate to **global activities and outputs**. . More specifically it is calculated that these project-wide costs, including international conferences, global policy dialogue, overall management, overall coordination in the secretariat, technical support services, project servicing costs, and evaluation amount to **USD 5,021,545**.

7.2. Budget for a Country Module

It is assumed that each stage would last one year.

It is assumed that each stage would last one year.

Preparatory Stage 1: The preparation for full implementation includes several budget components:
The total cost amounts to **US$ 307,066** including

ACTIVITIES	
Participation to the pan African launching conference	17,400
Launching event at national level	8,000
Implementation of several workshop including	
Indicators methodology workshop	40,000
Methodology for policy analysis workshop	24,000
TRAVELS	
Several mission for the secretariat staff and international consultant to provide technical support including	
Initial information and identification of main counterparts	7,750
Setting of the national team, national policy forum & technical network	20,625
Data quality analysis and evaluation	6,875
First visit of the international consultant (15 days)	8,625
STAFF & CONSULTANTS	
National team made of one consultant and one team leader	90,000
Support from the secretariat	110,000
Support from international consultant	21,000
EQUIPMENT	7,100

Intentensive Stage 2: Full implementation of project that includes several budget components:
The total cost amounts to **US$ 682,291** including

ACTIVITIES

Implementation of commodity chain analysis (CCA) workshop	24,000
Implementation of four CCA in average	182,500
Publication national reports	8,000

TRAVELS

Several mission for the secretariat staff and international consultant to provide technical support including

Inception mission on data treatment	7,750
Back stropping mission on value chain analysis	6,875
Drafting of country study and national reports	7,750
Second visit of the international consultant	8,625
End of phase mission	7,750

STAFF & CONSULTANTS

National team made of one consultant and one team leader	72,000
Support from the secretariat	321,513
Support from international consultant	21,000

EQUIPMENT 3,500

Follow-up Stage 3: The total cost amounts to **US$ 251,898** including

TRAVELS

Two missions to support technical work	15,500

STAFF & CONSULTANTS

National team made of one consultant and one team leader	57,600
Support from the secretariat	182,744

EQUIPMENT 3,500

Stage 4: The autonomy phase includes limited support. The total cost amounts to **US$ 15,500** for two backstopping missions. The staff time has not been allocated as it is assumed that it will included in the project-wide costs and in particular the technical support to countries.

The total of the four stages corresponds to the implementation of one country module which amounts to **US$ 1,352,062** including US$ 155,547 overhead. The implementation of the same module in **7 countries** for the implementation of the first phase of the project would require **US$ 9,464,434.**

7.3. Overall budget for the project

5011 INTERNATIONAL PROFESSIONAL STAFF US$ **3,094,932**

All staff will work on the Project for a period of three years. However their costs will be partially covered by FAO as they are expected to contribute to Regular Programme activities and to the implementation of the FAO and OECD strategic frameworks as mentioned in chapter 3.
The team will be made of one project manager, 2 senior economists and country analysts, 4 economists and country analysts of which 2 will be located in the OECD, one part time senior economist in the OECD.

5500 GENERAL SERVICE STAFF US$ **837,411**

Given the complexity of the Programme, and the need to have sufficient administrative support for the various operational tasks, the Programme will recruit two full time administrative and operational assistants to provide support mainly in the preparation of personnel action requests, ATLAS travel authorization requests, preparation of TECs, contracts and agreements.

5570 CONSULTANTS US$ **3,456,380**

National consultants will be recruited to carry out analytical activities at country level and perform various other aspects of project activities. National consultant will constitute part of the national country teams in addition to the national team leader to be appointed by the government after consultation of the MAFAP secretariat. Areas foreseen for technical assistance by consultants include:

- carrying out commodity chain analysis and case studies
- analyze and assess policy indicators
- carrying out analytical studies focused on information based policy making

International consultants will be recruited to provide technical support to national team particularly with respect to the validation, analysis of policy indicators and their use in the drafting of the national monitoring report. It is foreseen to recruit one international consultant from the academia to provide credibility and confidence the work performed to national team over the first two years of country level activities.

International consultants will also be recruited to update the World Bank DAI study in case the country had been covered or adapt the methodology and perform the

5650 CONTRACTS US$ **927,200**

Contracts will be made for specific expertise and support required as inputs. Such inputs are expected to relate to:

- Agreements with country based partners partners such as NGOs, Research Centres, consulting companies, for country implementation of specific activities
- Letters of Agreements with local providers of facilities (venue) for implementation of capacity building workshops, regional and national conferences
- Translation, and edition of Publications

Other areas for contracts will be identified during the course of the project implementation.

5900 TRAVEL US$ **1,027,025**

Duty travels and missions by the project-funded professionals and for consultants will be required for collaborating closely with national country teams and partner agencies in order to facilitate the implementation of project activities. This budget line includes: the cost of travels, daily subsistence (DSA) and hazard allowances for field missions to the currently 17 targeted countries for fixed-term and regular FAO staff, international and locally-recruited consultants.

Provision has been made for the organizing of the high level technical meeting and for the launching conference as well as workshops, trainings and technical consultations organized at global, regional or national level.

5920 TRAINING & WORKSHOPS US$ **896,000**

The project includes a strong capacity building component that requires the implementation of several training sessions for indicators assessment, commodity chain analysis, methodology for policy analysis, etc., at country level.

5900 EQUIPMENT

EXPENDABLE PROCUREMENT US$ **40,000**

Funds are provided for expendable equipment, *i.e.* stationery and other office supplies and materials required for the day-to-day operation and management of the project and as inputs for specific events not only at secretariat level bur also at country level for the national teams, including material for workshops and training sessions.

NON-EXPENDABLE PROCUREMENT US$ **25,200**

Funds are provided for non expendable equipment, *i.e.* office equipment and technological support equipment including the provision of 2 computers with licenses (including statistical software) required for project implementation.

HOSPITALITY US$ **17,000**

A limited amount of resources (US$ 1,000per country per year) are provided for hospitality in particular for the launching of the project at country level.

6150 TECHNICAL SUPPORT SERVICES

SPECIFIC TECHNICAL SERVICES AND OPERATIONAL SUPPORT US$ **1,706,292**

These services will be provided by technical divisions at FAO Headquarter upon request. These services will make use of comparative advantages of FAO staff expertise and are expected to contribute to improved methodologies and techniques - *e.g.* developing and testing innovative approaches policy analysis, capacity building expertise, spatial information management, data modelling and analysis, etc., to workshops and training sessions.

Expenses for mid-term review and an end-of-project evaluation and for the processing of a Terminal Report are also included in the budget line under this category.

MID TERM EVALUATION REPORT US$ **6,500**

EVALUATION (ESTIMATED AT 2%) US$ **283,129**

6300 GENERAL OPERATING EXPENSES US$ 129,000

These will cover costs of communication, operation, use of equipment, the production of reports, office space, and other miscellaneous costs.

6400 GENERAL OVERHEAD EXPENSES

PROJECT SERVICING COSTS (10%) US$ **1,666,529**

PROVISION FOR INFLATION (3%) US$ **373,282**

TOTAL US$ **14,485,980**

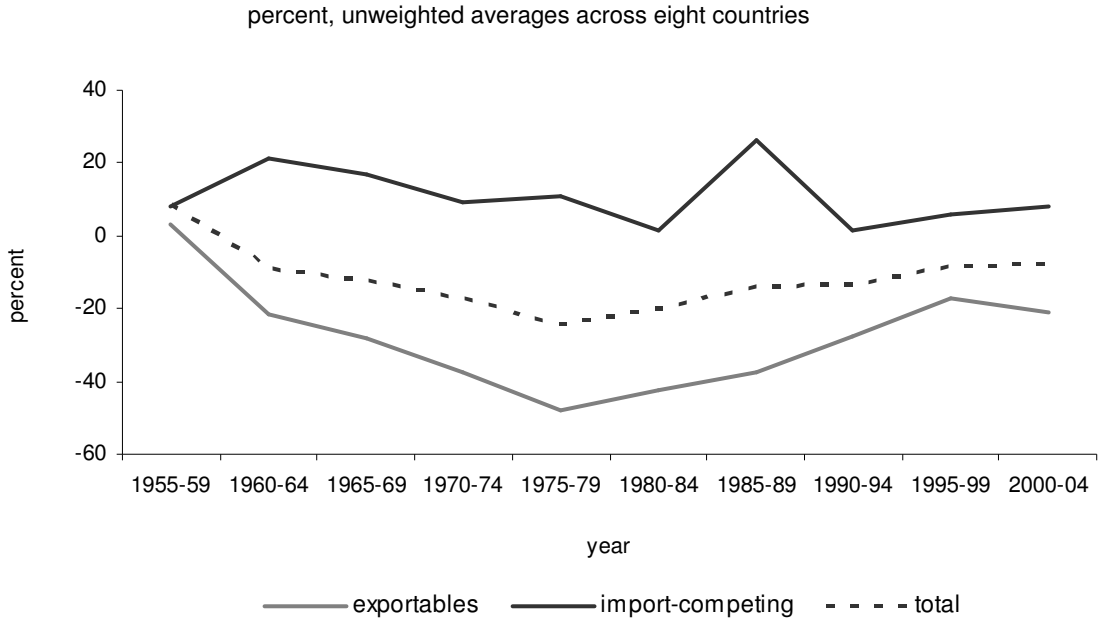
FAO EXPECTED CONTRIBUTION US$ **1,599,768**

GATES FOUNDATION'S EXPECTED CONTRIBUTION US$ **12,886,212**

ANNEX A. DISTORTIONS TO AGRICULTURAL INCENTIVES IN AFRICA

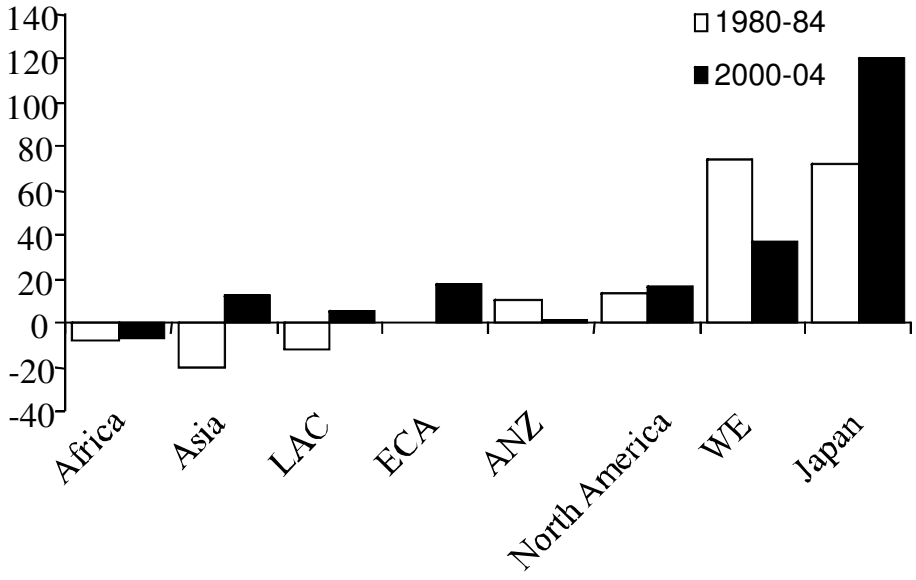
The World Bank DAI study indicates that while the anti-agriculture bias of policies in Africa has declined in comparison with the 1970s and 1980s, there is still an overall tendency to tax the sector (Figure A.1). The sectoral average masks a tendency to provide some protection to import competing products (a nominal rate of assistance greater than zero), which is more than offset by a net taxation of exportables (a negative nominal rate of assistance). This pattern contrasts with other regions dominated by developing countries, where the net tendency to tax agriculture has been reversed in the past ten years (Figure A.2).

Figure A.1: Nominal rates of assistance to exportable, import-competing and all[a] agricultural products, African region, 1955 to 2004*



Source: Anderson *et al.* (2008). * The nominal rate of assistance is defined as the percentage by which government policies raise gross returns to farmers above what they would be without government intervention.

Figure A.2. Nominal rates of assistance to agriculture, by region (%), 1980-84 and 2000-04



The DAI calculations reveal that transport and other transaction costs (which need to be netted out as part of the calculations) are often particularly high in African countries, and could be reduced significantly through suitable investments, *e.g.* in physical infrastructure, and through institutional reforms. An important aim of the proposed measures is therefore to calculate the impact that a lowering of these costs would have on producers' incentives and consumer prices. These costs are policy related to the extent that they can be reduced through public investments and other reforms.

Plan to add supporting estimates of crude wholesale price gaps compared with NRAs for different regions.

ANNEX B. PROPOSED METHODOLOGY FOR DECOMPOSING PRICE GAPS IN OUTPUT MARKETS

Both the OECD's measurement of producer support and the World Bank's DAI project focus primarily on measuring the degree of support at the farm level. If intervention occurs at the market (*i.e.* wholesale) level, then this requires assumptions about the nature and degree of price pass-through from the wholesale to the farmgate level. In the case of OECD's estimates, the degree of pass-through depends on how farm-wholesale margins are calculated. For example, if the margin is represented as a percentage mark-up, then a given change in the wholesale price will raise the farmgate price by the same percentage but by a smaller amount in absolute terms. If, however, margins are additive, then a given change in the wholesale price will raise farmgate prices by the same amount in absolute terms, which equates to a larger percentage increase. The approach in the DAI study is essentially to treat all margins, from the farm to wholesale level, and the wholesale to the retail level, as multiplicative. A further standard assumption is that farm-wholesale margins are the same in the domestic market as the market(s) of the trading partner(s) used to identify the reference price.

This project seeks to fully decompose price gaps from the farm to the wholesale level – and distinguish explicit policy protection and dis-protection from excessive cost and rents, the latter to be estimated both vertically along the producer-wholesale supply chain and spatially across domestic wholesale markets.[7] This requires modelling the incidence of policy at the level at which is occurs, and estimating costs and margins at every stage. The treatment of output markets will vary for exportables, importables and non-tradables.

Typically, price arbitrage between domestic and international markets occurs at the wholesale level. Here, the basic calculation for market price support at the wholesale level follows from the (adjusted) law of one price, with prices in domestic and international markets equalised once adjusted for (a) support to the domestic market, and (b) the cost of getting goods to the point of competition. In the case of an export, the identity can be written as:

$$P_d = P_w \times XR + MPD - C - EC$$

while in the case of an import it is:

$$P_d = P_w \times XR + MPD + C + EC$$

where MPD is the market price differential (reflecting support to the market price), and C and EC are, respectively, the efficient and excess costs of getting exports to the point of competition. EC can be interpreted as a "development gap", which can be bridged by suitable investments and policy reforms. Market price support (MPS) is equal to the market price differential times the quantity supplied to the market ($MPS = MPD \times Q_s$).

The objective is to obtain estimates MPD and EC, given data on prices, the exchange rate, and actual costs ($C + EC$). Given data on prices, the exchange rate and costs, MPD can be calculated as a residual, and the remaining challenge is to split up C and EC. At the wholesale level, where the arbitrage condition is essentially a spatial one, the main cost element is transport. The "excess" in transport costs can be calculated by an "engineering" approach (projection of costs in the presence of superior transport systems) or by looking at spatial variations in costs to identify a reasonable minimum.

7. Wholesale-retail margins will also be calculated where possible.

These equilibrium conditions can be represented graphically. In the case of an export, we see how domestic prices are naturally reduced by transaction (principally transport) costs, but can be further depressed by export taxes (reflected in *MPD*) and excessive costs, or a development gap (*EC*). A conservative monetary estimate of the development gap is $EC \times (Q^3_s - Q^3_d)$ – conservative because the exported volume, *i.e.* the difference between supply and demand, is reduced by both policies and excessive costs per unit (Figure B.1). The export case is the mirror image, with domestic prices raised, and imported volumes are reduced, by both import protection (here applied by a tariff of $1 + t$) and excessive costs (Figure B.2).

Figure B.1. Price decomposition for an exported product

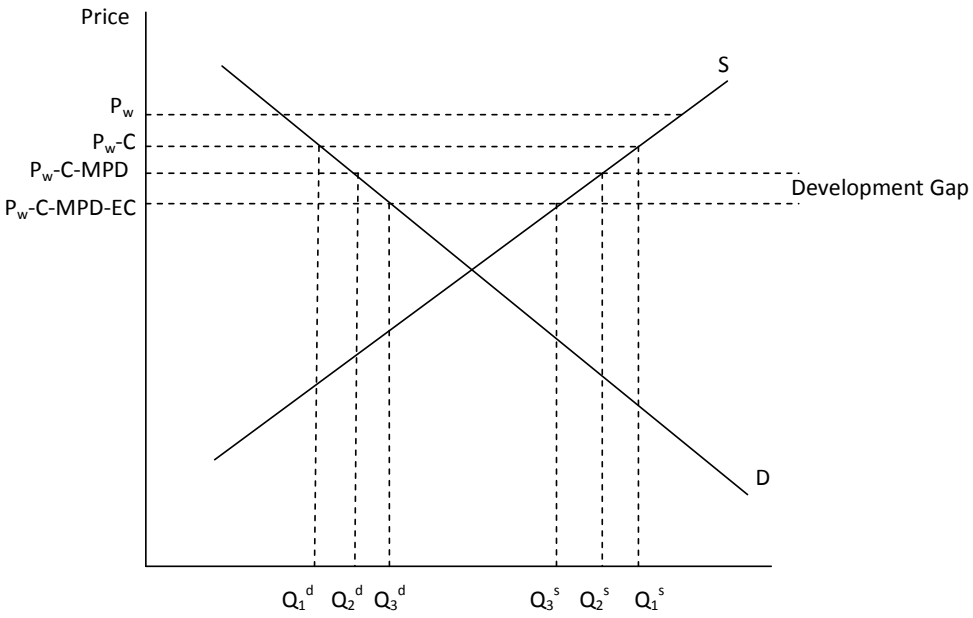
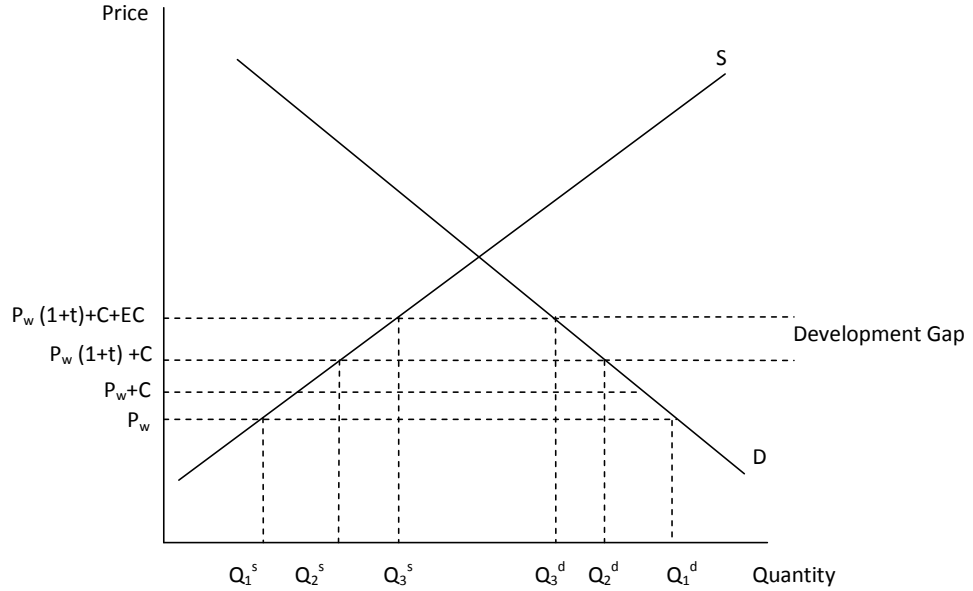


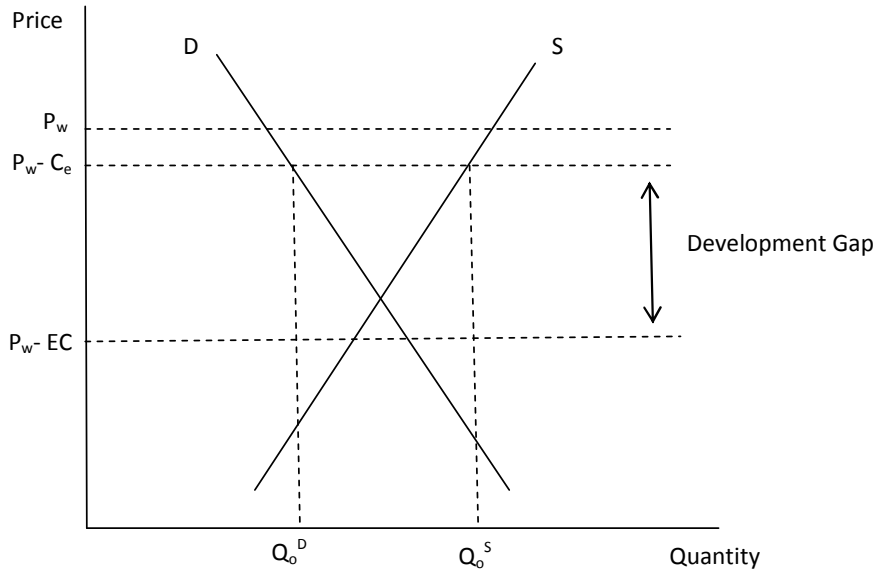
Figure B.2. Price decomposition for an imported product



In a developing country context, however, it is important to recognise that the law of one price may not hold, as described above. This is because the transaction costs between domestic and international markets may exceed the price differences (after policies are imposed). In the case of an export, if inevitable transaction costs reduce the landed price to $P_w - C_e$, then (assuming no export taxes) there will be net exports of $Q^0_s - Q^0_d$, but further costs (represented as *EC*) could be sufficiently high to depress the price

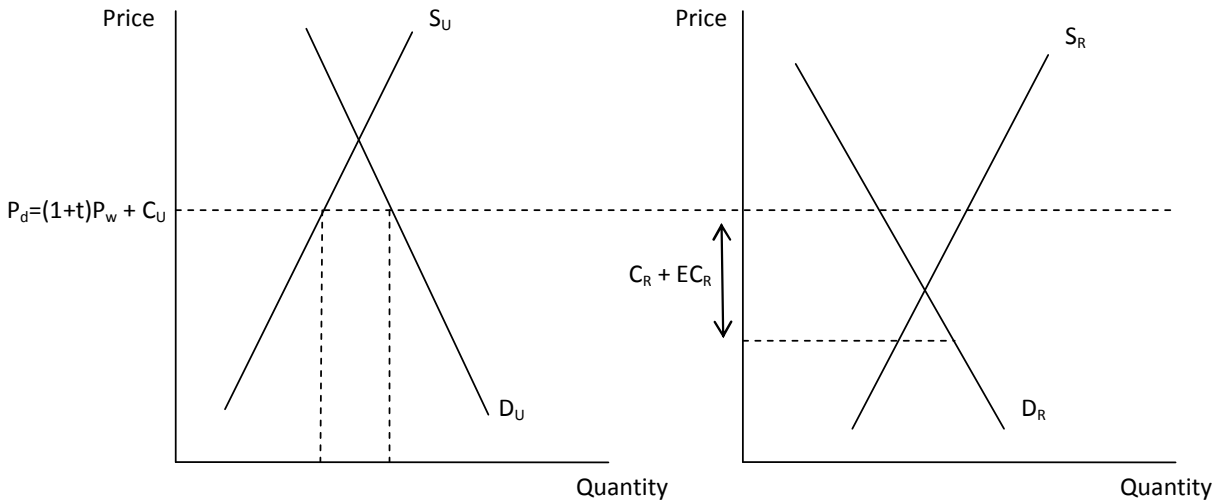
below the autarky price, such that trade will not occur and the economy will remain in autarky (Figure B.3).

Figure B.3. Suppression of a potential export as a result of a "development gap"



It is also possible that, within a country, local market could be cut off. For example, a country could be a net importer of a given product, yet the transaction costs involved in getting that product to an urban market from a potentially competitive rural supplier could be sufficiently high to prevent trade occurring. Figure B.4 shows an importing "urban" market (left panel) facing a domestic price equal to the world price times the relevant tariff plus transaction costs. This market could potentially be supplied by the rural market (right panel), but the rural market remains in autarky because of high transaction costs (EC_r).The calculation of market price distortions and development gaps will need to consider cases in which potential trade is cut off.

Figure B.4. An example of a suppressed rural surplus.



For both export and import markets, the relationship between producer (farmgate), wholesale and retail prices needs to be identified. In an ideal world, all three price series would be available. In practice, this is unlikely. Often, the most readily available (and reliable) data are at the wholesale level. This is typically the level at which domestic production competes with imports. For many African exports, domestic prices for exportable cash crops are recorded at the producer level (often there is no easily defined wholesale market). In these cases, the cost of the relevant degree of processing and handling needs

to be added before these prices are compared with the f.o.b. price. An essential requirement for domestic and international price comparisons (including export unit values and import unit values), and application of the spatial arbitrage identities described above, is that like products at the same level on the vertical chain are compared at the point (location) of competition.

Along the supply chain, there may be periodic marketing surveys that break down margins from the producer to the wholesale level, and from the wholesale to the retail level. The former margins include handling and market fees (covering transport costs), while the latter may include packing, storage, and handling fees. Some amount of processing may also be involved at each stage. In practice, it is unlikely that regular time series of retail prices and producer prices will be available, although periodic survey data may be available. This means that the decomposition of prices over time will probably involve a patchwork of time series and survey information. This will generate a view over time of how protection has evolved, and provide some snapshots of the development gaps along the supply chain at various points in time. The potential to provide information on the relative importance of policies and "development gaps" is examined via an examination of three commodities in Ghana, presented in Annex A.

Ideally, it would be possible to regularise the collection of price data, such that a full decomposition of prices, based on hard data, were available every year. At a minimum, however, there is a need to ensure that there is at least one reliable domestic price series for each important commodity, and there are two value chain (price decomposition) analyses over a six year period.

Finally, it is important to note that subsidies to and taxes on farmers can also shift the supply curve. For example, a production subsidy will cause the supply curve to shift to the right. In this case, a price gap (equal to the per unit subsidy) should be reflected in the difference between the price received by the farmer and the price paid by the buyer, and captured as part of the price gap calculations. ADD FIGURE B.5 HERE.

ANNEX C. POLICY DISTORTIONS AND THE "DEVELOPMENT GAP" IN GHANA

The following examples for Ghana, one of the countries covered by the DAI project, demonstrate the scope for decomposing price gaps along the value chain in order to distinguish between explicit, policy-induced, price incentives and disincentives on the one hand, and excessive costs and rents on the other, which can be considered as a "development gap". The information here draws on the Ghana study in the DAI project, and considers three products: the country's main export (cocoa) and its two main food imports (rice and maize).

In the case of **cocoa**, data exist on the f.o.b. export price, the producer price and on export taxes paid to the Treasury. The difference between the f.o.b. price and the price paid to producers plus the export tax represents money that is retained by the government's marketing board COCOBOD. Historically, the sector was heavily mismanaged, and only a minor share of the export price was returned to the producer (Figure A.1, Panel A). Reforms to COCOBOD gathered momentum after the 1992 civilian elections. Major changes introduced were a reduction in staff levels from over 100,000 in the early 1980s to 10,400 in 1995 and just over 5,100 staff by 2003; an end to input marketing; and the introduction of competition into internal marketing.

There was some reduction in COCOBOD's share of export earnings in the 1990s, but as cocoa prices have strengthened in recent years that share has risen again. Export tax payments made by COCOBOD to the government declined from an average of 40-50% of FOB earnings during the mid 1990s to less than 10% by 2004. As prices have risen, however, COCOBOD has increased its retained share of the export price, with the result that there has been a much milder reduction in the implicit taxation of the Ghanaian producer. (Figure A.1).

It is difficult to measure the "efficient" level of costs that should be absorbed by COCOBOD, although the minimum share taken offers a guide. On a conservative assumption that 25% of the f.o.b. price would be retained by COCOBOD to administer its legitimate marketing and other functions (implicit in Figure C.1), a large amount is still being retained and constitutes an informal tax on the Ghanaian producer – a kind of development gap. A task of MAFAP would be to split out the rent plus cost figure in Figure C.2 in a less arbitrary way.

Figure C.1. Allocation of the f.o.b. export price for cocoa beans, 1955-2004

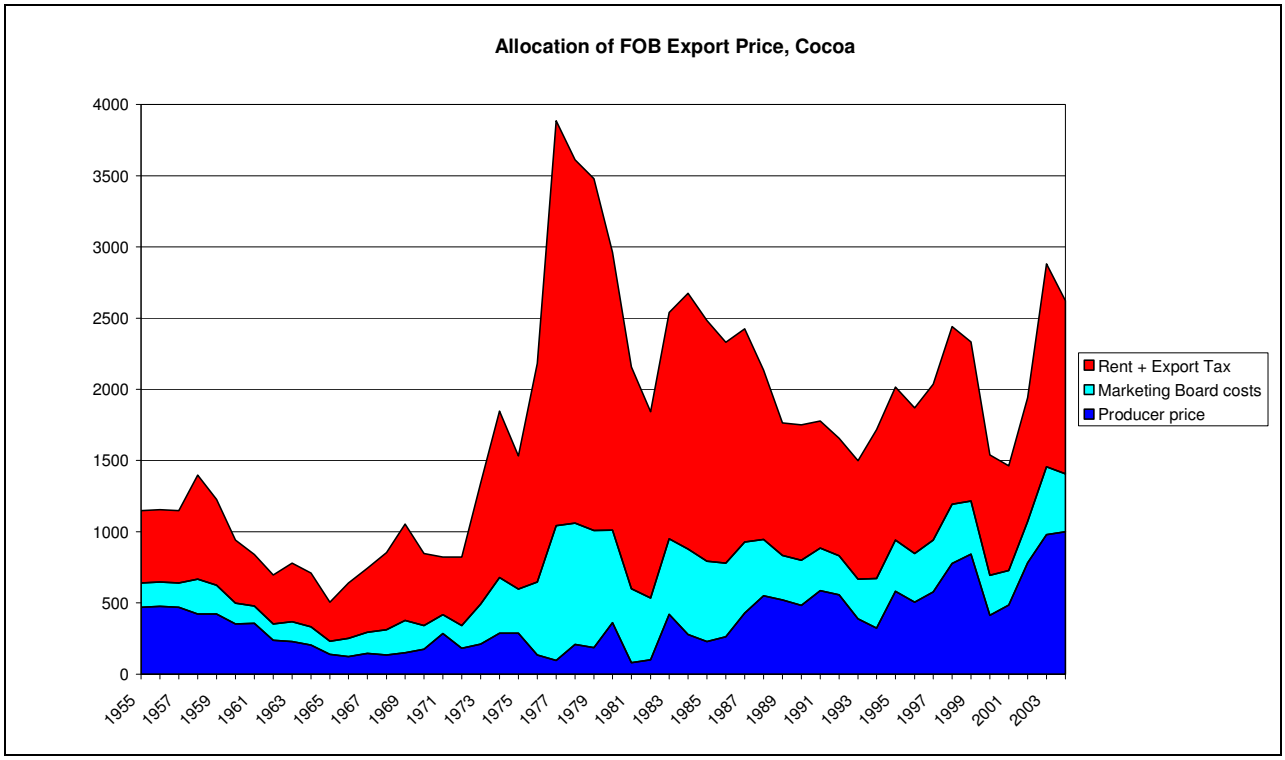
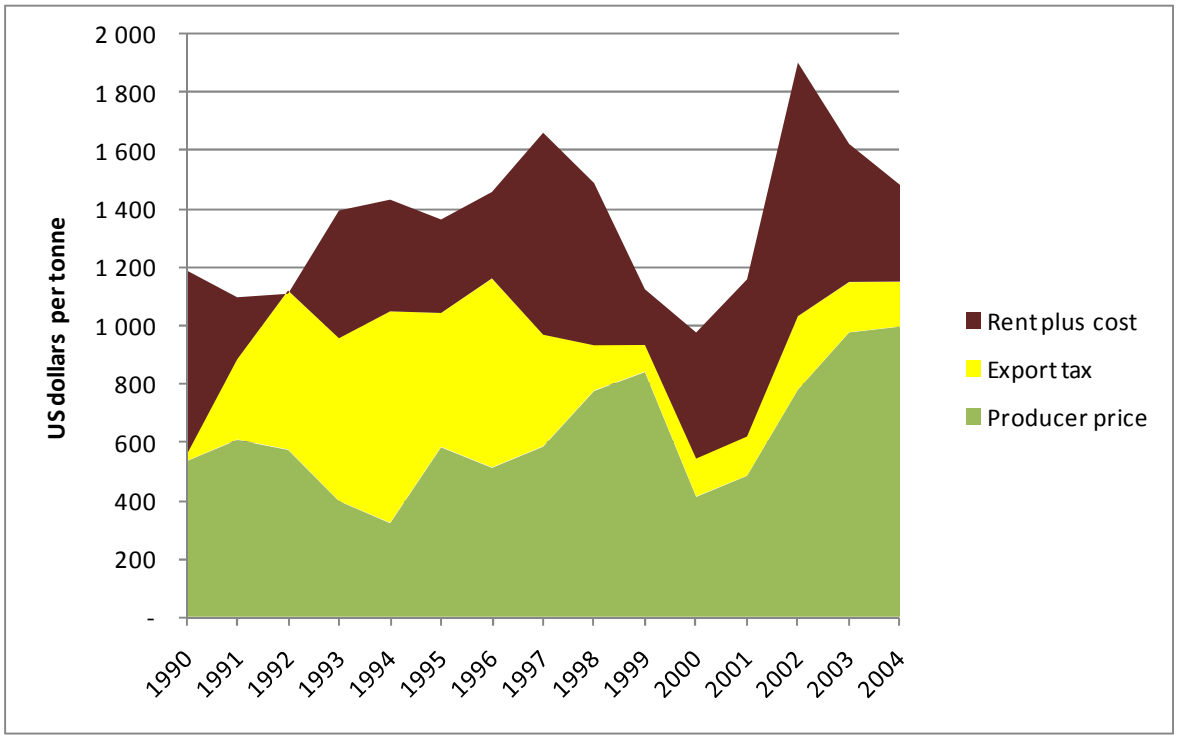


Figure C.2. Allocation of FOB export price, based on data on export tax payments in the 1990s



Source: COCOBOD.

Note that the export tax is calculated by dividing COCOBOD payments by the number of tonnes produced that year. The timing of payments may not correspond to the precise dates for which duties were applicable, so the series may not be perfectly comparable with the two price series.

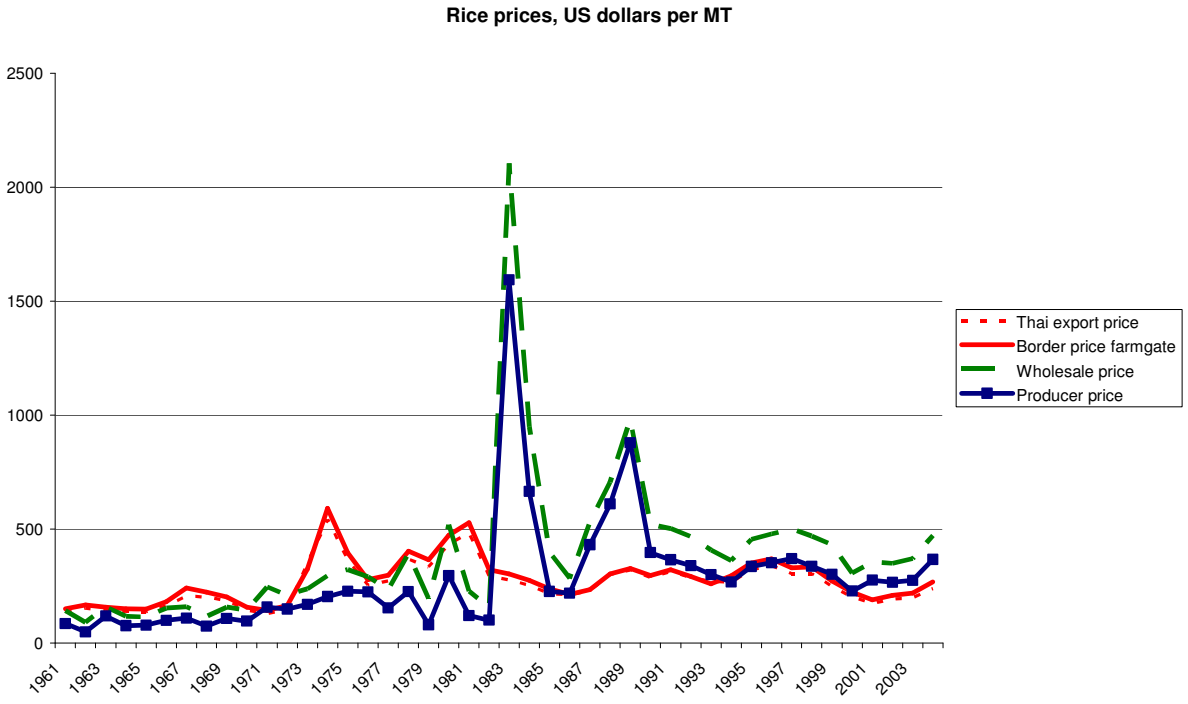
In the case of **rice** and **maize**, domestic prices are available at the wholesale level. These prices are compared with landed c.i.f. values, which are adjusted for port charges, internal transport costs and quality differences in order to arrive at the NRA. In each case, it is assumed that processing and handling charges are of the same proportion for both domestic and imported products, such that the NRA at the wholesale level is equal to the NRA at the farmgate level. The aim of ADPI would be to relax these assumptions.

Prior to the mid-1980s, rice producers received less than the imported price (reported at the farm-gate) suggesting implicit taxation, while maize producer prices were at a similar level to imported prices (again compared at the farm-gate) (Figure C.3, Panel A; Figure C.4, Panel A). In both cases, domestic prices increased sharply in the mid-1980s, but the degree of price protection to producers has since diminished to levels somewhat higher than the statutory import tariff of 20 percent (Figure C.3, Panel B; Figure C.4, Panel B). This implies that the residual of the price gap, once known costs are accounted for, is higher than the tariff. Here this is attributed to additional protection, although there could also be unobserved "behind-the-border" costs.

Survey data exist on the costs of production and marketing for each commodity, although a time series was not available. These data were used to estimate NRAs at the wholesale level, with the simplifying assumption that pass-through to the farmer is 100%. The level of cost used to make the wholesale price adjustment is the *actual* cost of getting the product from the biggest wholesale market to the border. The survey data contain enough information to calculate (a) different levels of cost for shipping from different locations, and potentially the excess cost to Ghanaian producers as compared with the minimum cost per unit distance; and (b) variations in farm-wholesale margins. If one assumes that the lowest margin is "efficient", this would provide a crude estimate of the excess farm-wholesale margin faced by Ghanaian producers.

To summarise, instead of estimating one NRA for each commodity, and assuming that the NRA at the wholesale level is equal to the NRA at the farmgate level, it should be possible to extract four numbers: NRAs at the farm and wholesale level, and excess costs (the "development gap") at each level.

Figure A.3. Rice prices



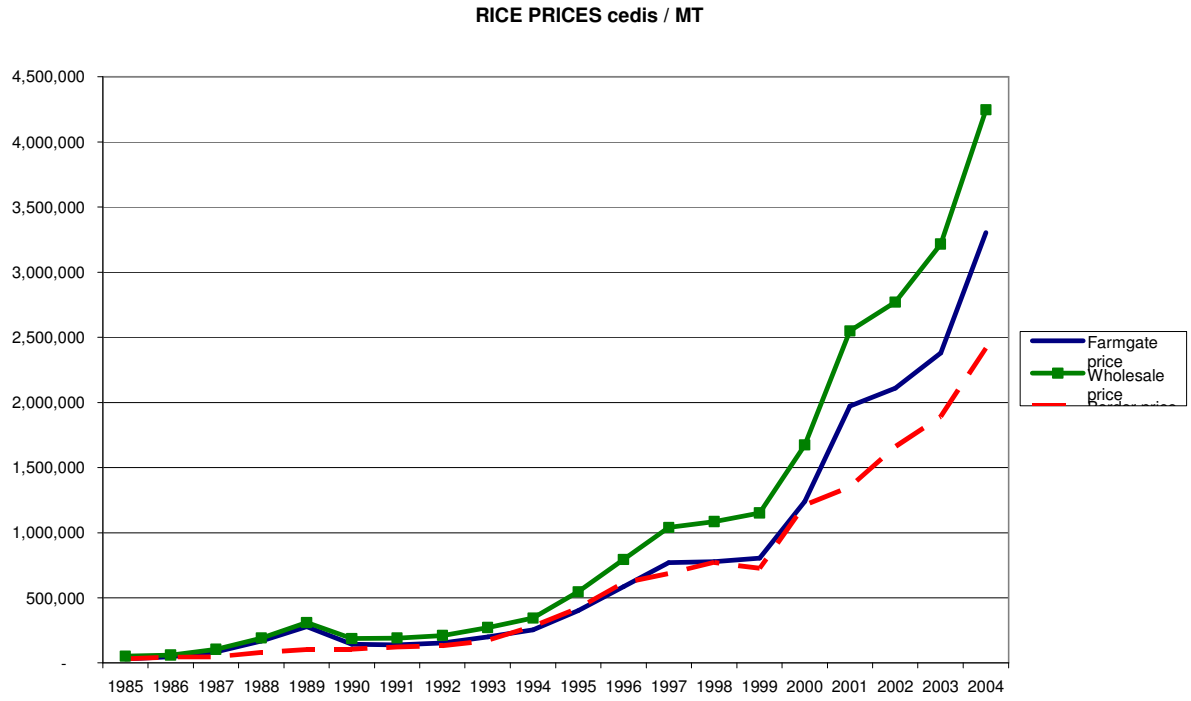


Figure A.4. Maize prices