

## **SUMMARY REPORT**

### **ASTI SUBREGIONAL TECHNICAL REVIEW WORKSHOPS**

#### **Maintaining, Disseminating, and Analyzing Agricultural R&D Data in Sub-Saharan Africa**

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## Executive Summary

The objective of ASTI's recent subregional technical review workshops was to elicit feedback from national collaborators in Sub-Saharan Africa on their experiences in implementing ASTI's national survey rounds and to explore ideas and suggestions as to how ASTI's activities in the region can be improved and strengthened. The discussion during the workshops focused on all aspects of the process—specifically, collecting, synthesizing, analyzing, disseminating, and using ASTI data.

Overall, the national collaborators considered ASTI's survey approach to be sound and well structured. Nevertheless, various suggestions were made as to how ASTI's methodology could be improved. Moreover, additional indicators were suggested for inclusion in the survey. A more fundamental discussion focused on whether ASTI should continue to perform ad hoc surveys over time (currently involving time lapses of six to eight years) or attempt to institute a more permanent arrangement under which national agencies assume responsibility for implementing the survey, synthesizing and analyzing the data, and disseminating and ensuring the use of the outputs at the national level. Participants strongly supported the idea of a phased transition, and suggestions were made on how this transition should be implemented.

A more proactive dissemination and use strategy has already been implemented with the current survey, including media events, national workshops, a redesign of ASTI's website, and promoting the use of ASTI's results in presentations and papers by NARS leaders and opinion makers. It is too early to evaluate the effectiveness of this updated strategy (the survey results are only just being released), but some of the participants offered feedback on their experiences with the dissemination and use of ASTI's 2001–03 survey results at the national level.

During the workshop consensus emerged in support of closer collaboration between ASTI and Africa's numerous national and subregional organizations to promote participation in, commitment to, and the relevance of the ASTI survey (i.e. generating primary data on an important policy issue) and to incorporate policy analysis and monitoring and evaluation activities related to key regional agricultural policy initiatives: the Comprehensive Africa Agriculture Development Programme (CAADP) and the Framework for African Agricultural Productivity (FAAP).

## Acronyms

AGRODEP	African Growth and Development Policy Modeling Consortium
AMCOST	African Ministerial Conference on Science and Technology
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ASTI	Agricultural Science and Technology Indicators
ASTII	African Science, Technology, and Innovation Indicators
CAADP	Comprehensive African Agricultural Development Programme
CCARDESA	Centre for Coordination of Agricultural Research and Development in Southern Africa
CGIAR	Consultative Group on International Agricultural Research
CORAF/WECARD	Conseil Ouest et Centre Africain pour la Recherche et le Developpement Agricoles / West and Central African Council for Agricultural Research and Development
FAAP	Framework for African Agricultural Productivity
FANR	Food, Agriculture, and Natural Resources
FAO	Food and Agriculture Organization on the United Nations
FARA	Forum for Agricultural Research in Africa
FTE(s)	full-time equivalent(s)
IFPRI	International Food Policy Research Institute
KARI	Kenyan Agricultural Research Institute
NARS	National Agricultural Research System
NEPAD	New Partnership for Africa's Development
NPCA	NEPAD Planning & Coordinating Agency
OECD	Organisation of Economic Co-operation and Development
R&D	research and development
ReSAKSS	Regional Strategic Analysis and Knowledge Support System
SADC	Southern African Development Community
SRO	Sub Regional Organization
S&T	science and technology
STI	science, technology, and innovation

## INTRODUCTION

The Agricultural Science and Technology Indicators (ASTI) initiative fulfils the unique role of collecting primary data and synthesizing, analyzing, and disseminating internationally comparable statistics on investments in national agricultural research systems in developing countries. In doing so, the initiative provides key information on one of the more important policy variables regarding agricultural development and productivity growth. Over the past two years, ASTI has updated data for Sub-Saharan Africa in close collaboration with national partners in more than 30 countries across the region. A variety of publications and other outputs drawing on the data have been, or shortly will be, released, including national and regional overviews and online datasets that can be accessed at the ASTI website.

With a view to learning from its activities in the region, ASTI recently organized two technical review workshops—one for West Africa, held in Dakar, and one for East and southern Africa, held in Addis Ababa. For the first time in ASTI's history, national collaborators had the opportunity of sharing their experiences and offering recommendations as to how ASTI can maintain and improve its activities into the future. In addition, representatives from the Forum for Agricultural Research in Africa (FARA), the three sub regional organizations (SROs)— Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), West and Central African Council for Agricultural Research and Development (CORAF/WECARD), and Food, Agriculture, and Natural Resources of Southern African Development Community (SADC),<sup>1</sup> and other stakeholders were invited to participate in the discussions to contribute their insights.

This report summarizes the major findings, conclusions, and recommendations generated through the two workshops, the objectives of which were

- to elicit feedback from national partners on their experience with and involvement in ASTI's national survey rounds,
- to explore strategies on how ASTI's outputs can be disseminated and used to better advantage for advocacy purposes, and
- to identify ways of enhancing ASTI's analytical activities relating to agricultural R&D systems at national and (sub)regional levels.

Given that the structure of both workshops was effectively the same (see Appendix A), the findings of both workshops have been consolidated in this report except where marked differences arose, in which case such differences are highlighted.

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<sup>1</sup> SADC is in the process of establishing the Centre for Coordination of Agricultural Research and Development in Southern Africa (CCARDESA), which will have a similar status as ASARECA and CORAF/WECARD and will become operational in early 2011.

## POLICY CONTEXT

The Comprehensive African Agricultural Development Programme (CAADP), which has been initiated by the New Partnership for Africa's Development (NEPAD) (now the NEPAD Planning & Coordinating Agency (NPCA)), plays a leading role in strengthening national agricultural policies and investment plans across Africa with the ultimate goal of ending hunger and poverty.<sup>2</sup> To achieve this overall goal, CAADP has set an agricultural growth target of 6 percent per year, which requires that governments spend at least 10 percent of their budgets on agriculture.

The International Food Policy Research Institute (IFPRI) plays an important role in CAADP's implementation by supporting the agricultural policymaking process at regional and national levels with sound policy analysis. Hence, in addition to ASTI, IFPRI operates the following initiatives.

- **The Regional Strategic Analysis and Knowledge Support System (ReSAKSS).** As part of the CAADP processes, ReSAKSS aims to provide analytical support to facilitate dialogue and evidence-based decision making regarding agricultural development options and policies in Africa. The system operates from three regional nodes—Ibadan in West Africa, Nairobi in eastern and central Africa, and Pretoria in southern Africa—and is in the process of establishing a network of national SAKSS nodes. The role of the nodes is data aggregation, analysis, and reporting; other actors, such as statistical offices, research organizations, pillar institutions, and so on, will assume responsibility for data collection, validation, and management.
- **The African Growth and Development Policy (AGRODEP) Modeling Consortium.** AGRODEP aims to study strategic development questions facing African countries as a group, and to support the broader agricultural growth and policy debate in African countries with scientific analysis based on economic modeling tools. AGRODEP is a collaborative effort between IFPRI and Africa's SROs. The consortium aims to mobilize and strengthen local capacity for economic policy analysis through networking and collaborative activities.

Both of these initiatives very much depend on the availability of reliable statistics, such as the primary datasets compiled by ASTI, which is a major bottleneck in most African countries. This constrains not only the quality of the policy analysis, but also the quality of monitoring and evaluation.

CAADP is based on four pillars: (1) land and water management; (2) rural infrastructure and market access; (3) increasing food supply and reducing hunger; and (4) agricultural research, technology dissemination, and adoption. FARA is responsible for implementing Pillar 4; to that end it has developed a Framework for African Agricultural Productivity (FAAP),<sup>3</sup> which proposes an institutional reform agenda putting farmers at the centre of agricultural innovation and requiring a substantial increase in investments in agricultural research, extension, education, and training. It is intended that FAAP will provide sound guidance on the overall direction of agricultural productivity interventions to increase agricultural growth and complement CAADP's other three pillars. FAAP is implemented in close collaboration with the SROs; national governments; international organizations, such as the Consultative Group on International Agricultural Research (CGIAR) and the Food and Agriculture Organization of the United Nations (FAO); institutes associated with CAADP's other pillars; and donors.

FAAP has its own monitoring and evaluation component focusing on the uptake of FAAP interventions and their results and outcomes. FARA and the SROs are working together to build the necessary monitoring and evaluation capacity at the national level in conjunction with FAAP's implementation at the country level. This is in addition to monitoring and evaluation reports to be produced by the SAKSS nodes regarding CAADP's implementation at the national, subregional, and regional levels. In order to maintain consistency among the different reports, close collaboration and coordination will be needed across the different agencies involved.

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<sup>2</sup> NEPAD (2003). This document was complemented in 2006 by an additional document integrating livestock, forestry and fisheries more firmly into the CAADP mandate (NEPAD 2006a).

<sup>3</sup> FARA (2006).

Consensus at both ASTI workshops confirmed a clear need for (closer) collaboration between ASTI and the various agencies involved in implementing and supporting CAADP and FAAP. Further, it was considered that such collaboration should cover both policy analysis and monitoring and evaluation.

Another NEPAD–initiated activity is that of the African Science, Technology, and Innovation Indicators (ASTII) initiative, which aims to (i) develop and cause the adoption of internationally compatible science, technology, and innovation (STI) indicators; (ii) to build human and institutional capacities for STI indicators and related surveys; (iii) to enable African countries to participate in international programmes for STI indicators; and (iv) to inform African countries on the state of STI in Africa. Being part of the second set of programs described for improving policy conditions and building innovation mechanisms in the Africa’s Science and Technology Consolidated Plan of Action,<sup>4</sup> the ASTII initiative has organized the first phase of country surveys on STI activities in 19 African Union member states, using the international standard for such statistics as developed by the Organisation for Economic Co-operation and Development (OECD) and described in the Frascati and Oslo manuals.<sup>5</sup> While ASTI only covers S&T activities related to the agricultural sector, ASTII aims to cover science, technology, and innovation activities across all sectors.

The workshops noted the considerable overlap between ASTII and ASTI and hence recommended that coordination was needed to avoid duplication of effort in the process of gathering statistics in the agriculture sector. Moreover, exchange of experiences could be particularly fruitful to the process of institutionalizing the collection of science, technology, and innovation indicators.

#### **ASTI’s Response to the call for closer collaboration**

ASTI is keen to deepen its collaboration with FARA and the SROs, as well as with AGRODEP and ReSAKSS, in order to contribute to the successful implementation of CAADP and FAAP across Africa. ASTI can provide relevant information and analysis for these policy processes and is also keen to collaborate with ASTII, given that the two initiatives have much in common and could complement and reinforce each other’s mandates.

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<sup>4</sup> NEPAD (2006b) is the African Agenda for science, technology and innovation endorsed by the heads of state and governments as well as by the African Ministerial Conference on Science and Technology (AMCOST).

<sup>5</sup> The Frascati manual (OECD 2002) deals with S&T indicators, while the Oslo manual (OECD 2005) deals with innovation indicators.

## COUNTRY EXPERIENCES

The technical review workshops offered a unique opportunity to bring country collaborators together and provide a platform for them to share their experiences and provide recommendations on how ASTI's survey implementation can be strengthened and improved. The discussion focused on the three important phases of ASTI's work: data collection; data synthesis and analysis; and dissemination and use of ASTI's products.

### Data Collection

Overall, the national collaborators considered ASTI's protocol for implementing its survey to be sound, and the questionnaire instrument to be adequate. Nevertheless, various constraints and difficulties with the data collection were reported, as follows:

- **Not all short-listed agencies actually conduct research.** This is in particular a problem for agencies for which research is not their primary objective, such as companies and rural development organizations. The non-response among these agencies is often quite high, which may have to do with the fact that their involvement in research is ad hoc rather than permanent and hence the difficulty of identifying the resources going into it.
- **Lack of or slow response by agencies surveyed.** Agencies often do not see the usefulness of the survey and hence are reluctant to devote time and resources to its completion. Most respondents are unfamiliar with IFPRI and ASTI, and suspicion about the purpose of the survey can discourage participation. Questionnaire fatigue was also cited as a factor in the lack of response. Government agencies are usually more responsive when requests come through official channels with appropriate documentation. The private sector, however, tends to be more suspicious and less responsive, often refusing to provide information for fear of competition or due to government distrust. Moreover, most private companies in Africa are small and lack a dedicated R&D unit, so identifying resources devoted to R&D activities tends to be problematic even if a company is willing to do so.
- **Infrastructural issues.** The geographic dispersion of agricultural research agencies in combination with weak transport and communication infrastructure has quite seriously constrained the implementation of the ASTI survey in some countries (particularly post-conflict countries); as a result, in-person visits are often necessary in efforts to obtain the requested data.
- **Information management issues.** Weak management information systems and poor archiving of historical data often make it next to impossible for the agencies to compile time-series data; requests for data over multiple years tends to be a major disincentive to participation, and this is further exacerbated by a weak institutional memory due to high staff turnover.
- **Difficulties interpreting and applying ASTI's standards and definitions.** ASTI's standardized definitions are not always compatible with national terminology and classifications. In particular the concept of full-time equivalent(s), or FTEs, often causes confusion and misinterpretation, especially at the universities; in addition, trying to separate agricultural from nonagricultural research can be highly problematic.
- **Difficulties in constructing a comprehensive financial overview due to the multiplicity of funding sources.** In some countries, for example, government agencies have no insight into salary expenditures as these are centrally managed. It requires a specific request to the Ministry of Finance to obtain such information. In another example, because some donors have begun to channel their contribution through government budgets, it is very difficult (if not impossible) for the receiving agency to distinguish such donor contribution from the government contribution. Moreover, the ASTI questionnaire lumps donor loans and grants together under donor contributions. It would be better to treat donor loans and grants as two different categories.

- **Poor quality data.** The actual completion of the questionnaire is often delegated to junior staff members who know little about the data requested. Further, the questionnaire is often returned without being checked by senior staff, so results can be incomplete, inconsistent, or simply inaccurate.

It was agreed that all the indicators currently collected by ASTI are relevant; however, national collaborators suggested that information on the following subjects be included in the survey: projected and budgeted expenditures; (2) research infrastructure; (3) research output and outcome indicators; and (4) agricultural extension. In addition, it was suggested that more qualitative data should be collected to provide background to the quantitative data and facilitate its accurate interpretation. Recommendations for improving the data collection include:

- institutionalizing the ASTI data collection process, transitioning from an ad hoc, external activity toward a more permanent, nationally based endeavor;
- adopting a substantially higher frequency of survey rounds to maintain the dataset and avoid requests for historical data (Dakar participants suggested a survey round every two to three years, whereas Addis Ababa participants recommended yearly data collection);
- organizing training sessions for the national counterparts leading the implementation of the ASTI survey to familiarize them with ASTI's data methodologies and collection procedures;
- organizing a national workshop at the beginning of each survey to familiarize participating agencies with the survey and ASTI's methodologies and procedures;
- considering the use of financial or other incentives to promote survey participation where necessary;
- providing surveyed agencies with synthesis and analysis results to give them the opportunity to comment or correct information (note that this is existing ASTI practice, but opportunities to strengthen the process of obtaining feedback exist);
- introducing a more rigid data-verification process; and
- revisiting ways of obtaining survey responses from the business sector (including collaboration with business associations and overcoming confidentiality issues).

## Synthesis and Analysis

To date, synthesis and analysis of the ASTI survey results have been highly centralized. The ASTI team takes the lead in producing a country note following a standard template. The role of the national collaborators during this phase has usually been somewhat passive, that is, reviewing early country note drafts and responding to queries. This limited participation diminishes national ownership of the survey results. In several countries, stakeholder consultations were organized to validate ASTI's findings and conclusions—an important quality control mechanism that was strongly recommended by national collaborators. The national collaborators also commended the format of the ASTI country note for being highly concise and to the point but noted that it remains descriptive, so most findings still require translation into concrete policy recommendations and actions. This is where national actors need to step in to complete the ASTI impact pathway from fact-based analysis to policy action. Moreover, the country note tends to analyze aggregated data, so a lot of detailed information gets overlooked. For countries with large and complex national agricultural research systems, more detailed national datasets are being presented via ASTI's *Data in Focus* series.

## Dissemination and Use

In the past, the dissemination of the ASTI country notes and other ASTI materials has been relatively passive. Publications were released, distributed, and made available electronically via ASTI's website. During the current survey round, however, a more proactive dissemination strategy has been adopted (although with differing intensity due to resource limitations), comprising the following elements:

- a national seminar at which the findings of the ASTI survey are presented to key stakeholders;
- a national press release to which journalists from newspapers, radio, television, and other media are invited (IFPRI's in-house expertise with such events has been very helpful, but such events are costly given that an ASTI staff member has to be flown in and the attendance of journalists has to be paid for. It is difficult to assess whether the generated media attention is effective in influencing policy making positively.);
- piggy backing the presentation of the ASTI results onto other meetings (such as conferences, workshops) that bring together the various national stakeholders; and
- disseminating and tailoring ASTI findings for use in presentations and papers by NARS leaders and opinion makers (in Kenya, for example, the director general of KARI quite frequently uses ASTI materials in his presentations).

At the time of the workshops, most countries were just completing their ASTI country notes so they had little experience with dissemination activities regarding the current survey round. Ghana was the only country to report on the implementation of a media strategy, which had been quite successful in generating attention. Since the workshop, media events have also been organized in Burkina Faso, Senegal, and Tanzania.

At the supranational level, the redesigned ASTI website—which is now highly interactive—is the primary vehicle for the dissemination of ASTI materials, allowing users to download various indicators and make cross-country comparisons. The ASTI team is also in the process of producing a regional overview report, and a media event will be organized to formally launch that publication. The regional material will also feed into other publications, including subregional overviews. During the workshops it was recommended that (if not already taking place) ASTI materials and overviews and a link to the ASTI website are posted on the websites of relevant African initiatives such as FARA, the SROs, and CAADP.

Given the timing of technical review workshops, only a few West African countries reported on the use of the new ASTI data in planning processes and budget negotiations. But many countries (most notably Ethiopia, Kenya, Nigeria, the Republic of Congo, and Tanzania) did report on the use of ASTI's 2001–03 survey results for the purposes of planning, policymaking, budget negotiations, monitoring and evaluation, and benchmarking (see Box 1). ASTI data and analysis can bring awareness of problems like declining budgets, low investment levels, aging research staff, and so on, but to date ASTI has not provided concrete recommendations or strategies relating to resolving these issues. The interpretation of findings and subsequent recommendations for action must come from leaders and decisionmakers from within the NARS.

One serious constraint, which was addressed at the Dakar workshop, is that even with the current dissemination strategy, ASTI findings still may not be reaching policymakers. Collaborators from Ghana proposed the preparation of a one-to-two page policy communiqué specifically targeting policymakers.

### **Box 1. The Use of ASTI Outputs for Planning and Policymaking**

#### **Republic of Congo**

Given that the Republic of Congo was emerging from conflict at the time of the survey, ASTI's 2004 country brief contributed to the restructuring and planning of the Congolese NARS, as well as with lobbying for resources.

#### **Kenya**

ASTI's 2003 country brief has been used

- as a source of information to develop the 12-year Kenya Agricultural Productivity Programme supported by the World Bank;
- as a source of information on capacities available in different R&D institutions, especially when thinking of multi-institutional competitive grant schemes;
- as a source of information when developing the East African Agricultural Productivity Programme and the Agricultural Sector Development Strategy;
- as a source of information for developing national agricultural research system policy, including conducting a cost–benefit analysis of the policy;
- as a source of information for the development of the agricultural R&D component of the National STI policy; and
- to lobby for increased funding to agricultural R&D under the Medium Term Expenditure Framework process which allocates national budgets to different institutions.

Experience with the ASTI survey also helped with completing questionnaires for the National STI survey as part of Phase I of the NEPAD ASTII initiative.

#### **Nigeria**

The Agricultural Research Council of Nigeria, established in 2006, reported that it extensively used the 2004 ASTI country brief in identifying the key constraints in the Nigerian NARS and in developing a medium-term strategy and road map for the ARCN to address these constraints.

### **ASTI's Response to national feedback on the current survey round**

ASTI is cautious about the idea of expanding the types of data it collects. A crucial consideration in this regard is whether comparable—and hence usable—data can be collected across countries. Furthermore, additional indicators would necessitate additional resources (not only in terms of collection, but also in terms of processing and analysis), and they could exacerbate the issue survey fatigue. Expanding the collection of financial data to include projected and budgeted expenditures has been rejected being too cumbersome to implement, while it yields relatively little additional information. Nevertheless, such data will be collected on a country case study basis for incorporation into in-depth studies planned for 2011.

While a good inventory of agricultural research infrastructure at the national and regional levels could be very useful, one should be careful not to overload the current ASTI survey instrument with the collection of large amounts of more descriptive information. It makes more sense to organize such an inventory separately from the standard ASTI survey. ASTI aims at including a research infrastructure inventory survey in a few, in-depth country case studies planned for 2011 in order to find out whether such an inventory survey is feasible and yields useful results.

ASTI's 2009 Consultation Workshop (ASTI 2009) also recommended the inclusion of output indicators in the ASTI survey, but rejected outcome indicators. The construction of the latter requires detailed analysis which is beyond the scope of the ASTI survey. However, also the construction of output indicators that are comparable across institutes and countries is not without problems. Hence ASTI aims at first experimenting with output indicators in some selected countries before including such indicators in the standard ASTI survey.

While ASTI recognizes the importance of collecting data on agricultural extension, ASTI's limited capacity and budget does not allow such an expansion at the moment.

ASTI is in the process of finalizing its Tool Kit, which will be shared with workshop participants to elicit feedback prior to publishing. The Tool Kit will also provide the basis for future capacity building activities at leading national agencies and for incorporating new agencies into national survey rounds. ASTI will be working with IFPRI's media team to ensure a press release for each country will be prepared as part of the media outreach for the aforementioned regional synthesis report (planned for late-February 2011). In addition, ASTI and FARA are organizing a conference to be held in December 2011. The aforementioned in-depth papers will serve as background for the conference. In line with recommendations from the workshops, ASTI will develop a series of one-to-two page policy notes targeting policymakers in a few countries. If this strategy is deemed successful, policy notes will be prepared for the remaining ASTI countries.

## INSTITUTIONALIZATION OF ASTI

Participants at both workshops strongly endorsed the idea of moving from ad hoc ASTI surveys, which are largely externally initiated and financed, to a more permanent system whereby the leading national agency accepts responsibility for updating datasets, preparing national syntheses and analyses, and disseminating the results. Under such a system, ASTI's role would evolve to focus on coordination, quality control, training, and support; maintaining the international database; and producing regional and international syntheses and analyses.

Workshop discussions primarily focused on how to institutionalize the ASTI survey. The following recommendations and suggestions were made:

- **Appointment of a lead agency.** The first priority would be to identify a lead agency in each country to adopt overall responsibility for implementing the survey, and the answer would depend on the institutional structure of the national agricultural research system. Whereas an overall coordinating body (if one exists) would be the logical candidate for this role, it would be vital that the chosen agency has the necessary implementation capacity. The selection of the lead agency should be made in close consultation with the relevant national ministries to secure political and financial support.
- **Identification of collaborating unit.** ASTI's activities should be embedded in the work plan and budget of the chosen lead agency, and one or more staff members should be assigned the responsibility of implementation. Within the lead agency, the most logical place for ASTI activities would be the monitoring and evaluation unit (assuming such unit exists), while links to socioeconomic analytical capacity would be useful to strengthen and deepen the analysis based on ASTI survey data.
- **Building a network of contacts.** The lead agency would have to develop a network of contacts in the agencies to be surveyed and train them in how to complete the ASTI questionnaire.
- **Continued financial support.** For most countries in Africa it would be essential for ASTI to continue to provide financial support during the institutionalization process. Countries are unlikely to be able or willing to accept full financial responsibility at the outset of this process. Countries have first to be convinced about the benefits of maintaining a national ASTI dataset. Once this has been accomplished, resources will have to be found within the national budget or solicited from other donors.
- **Data collection frequency.** Increase the frequency of data collection (particularly on human and financial resources) to once a year or every two years in order to create a certain routine in the data collection process. Eventually this may also lead to information systems adapting themselves to the type of data requested. Universities, for example, could begin to record information on the time spent on research by university staff and the focus of their activities. More detailed, descriptive information could be collected at a lower frequency.
- **Reporting frequency.** A national synthesis and analysis report would be produced every three to four years. Annual changes are usually too marginal to warrant a country note every year.
- **Capacity strengthening.** In order to assume full responsibility for the implementation of the ASTI survey over time, the national lead agencies may require the necessary capacity strengthening in data collection as well as synthesis and analysis. It was recommended that the content of such capacity strengthening activities should be determined through a needs assessment.
- **Tool kits.** As another means of transferring relevant skills and knowledge, tool kits should be developed to address specific activities (that is, data collection, synthesis and analysis, and data dissemination and use).
- **Adaptation to national needs.** It would also be important for the ASTI survey instrument to be adapted to specific national or regional needs for information and analysis. This should be done without compromising the baseline survey. Additional data collection should be demand-driven

(i.e., addressing a particular national or regional policy issue) and can be both permanent as well as ad hoc.

**ASTI's Response to the institutionalization of the system**

ASTI is eager to pursue the institutionalization of the ASTI survey in participating countries and to establish a network of national focal points to take the lead. This would require the necessary capacity strengthening efforts and decentralization of responsibilities. A detailed plan will be developed under ASTI's next phase, due for submission to donors by the middle of 2011. The suggestions made by the workshop participants make an excellent starting point for future progress in this direction.

## PROMOTING THE DISSEMINATION AND USE OF ASTI DATA

During the two workshops the national collaborators shared their experiences with the dissemination and use of the ASTI dataset and related synthesis and analysis. General consensus emerged that a more proactive dissemination strategy is needed to enhance the use of ASTI data in agricultural research planning, policy analysis and formulation, benchmarking, lobbying, monitoring and evaluation, and so on. Concrete recommendations made during the workshops to improve the dissemination and use of ASTI results include the following:

- **Closer collaboration with national collaborators.** The need exists for greater involvement of the national collaborators in the synthesis and analysis of the ASTI survey data, which will require the necessary capacity strengthening. This should enhance national ownership of the survey and interweave results into national policy discussions. Moreover, such collaboration should trigger more in-depth analysis of the available data than currently is occurring. The goal should be to appoint an agency in each country to adopt responsibility for the survey, including the dissemination of the results. The lead agency should function as the national repository for national ASTI outputs, including publications, summary tables and graphs, detailed survey data, and so on, which could be of interest to analysts focusing on a single institute or subset of the ASTI data. In addition, national SAKSS nodes could be used as a distribution channel to reach a wider audience of policy analysts.
- **Closer subregional collaboration.** Collaboration with FARA and the SROs would promote their involvement in the survey and their use of ASTI data for policymaking, planning, monitoring, and evaluation purposes at the (sub)regional level.
- **Develop a ‘dissemination and use’ toolkit.** The purpose of developing a ‘dissemination and use’ toolkit would be to provide suggestions and examples of how best to disseminate and use ASTI data for planning, policymaking, benchmarking, advocacy, and so on.
- **Involve policymakers.** The country notes describe and analyse the status and development of the national agricultural research systems, identifying problems. They do not, however, provide concrete recommendations for changes or improvements, which depend on further input by national agricultural research leaders and policymakers.
- **Develop closer links with policymaking and opinion-making entities.** It was suggested that involving relevant agricultural (research) policymaking entities at early stages would be beneficial, for example, to determine specific data needs. These links will also ensure that ASTI data and outputs are actively included in papers and presentations
- **Pursue active participation by agricultural research agencies in national agricultural policy formulation.** The goal here is to: (a) ensure that agricultural innovation is being included in agricultural policies (including the CAADP compact discussions), and (b) feed such policy discussions with relevant scientific insights.
- **Focus on analysis.** It was suggested that more time should be devoted to analysis and the dissemination of such analysis through books, journal articles, and so on. The country note should not be the only output derived from the data. Suggested topics for more in-depth analysis included the impact of agricultural research on agricultural productivity and capacity development in new technology areas.
- **Increase use of benchmarking.** Benchmarking is often an effective tool for highlighting specific weaknesses in national agricultural research systems.<sup>6</sup> The suggestion was also made to construct a performance index that would rank national agricultural research systems.

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<sup>6</sup> While the idea of benchmarking was widely supported, concerns were also expressed that cross-country comparisons can be misleading without a full understanding of the underlying details. The Agricultural Research Council in South Africa was cited as an example in that it leases a lot of its capital goods (offices, computers, cars, and equipment). As a result, official reporting of capital investments are misleadingly low.

The following recommendations and suggestions were made that specifically addressed the dissemination of ASTI results:

- **Increase media attention.** Press releases and interviews to the media can ensure that a wider audience can be reached.
- **Monitoring the impact of the national dissemination strategies.** The goal here would be to determine what does and does not work. This is an area needing further development.
- **Targeting publications.** In order to increase impact, publications and presentations should be targeted to specific audiences.
- **Actively present findings.** Pursue opportunities to present ASTI findings at scientific conferences and other meetings.

#### **ASTI Response to promoting the dissemination and use of data and other outputs**

ASTI realizes that, in order to move from outputs to outcomes, it is important to make sure that ASTI's outputs are widely disseminated and used at both national and regional levels. While some progress has been made in disseminating outputs in recent years, this aspect definitely needs strengthening and intensification. Experience is needed to determine which formats and approaches work best.

The institutionalization of the ASTI survey will also allow national ASTI collaborators to play a more active role in synthesizing and analyzing the data, as well as in disseminating and using it. Such progress would greatly enhance the national impact pathway. These goals will have to be phased in over time, however. At the regional level, FARA and the SROs should become more actively involved in analyzing ASTI data. It will also be important to ensure the ongoing quality and comparability of the resulting datasets and country notes.

## CONCLUSIONS

Evidence-based planning is one of the key principles of CAADP as it underpins the strengthening of national agricultural policies and the design of quality investment plans across Africa. ASTI aims to collaborate closely with CAADP (and in particular with CAADP Pillar 4, which deals with agricultural innovation) and related agencies and initiatives in order to contribute to improved policies and investment plans. During ASTI's recent technical review workshops, participants provided excellent feedback on their experiences with the ASTI survey, resulting in numerous concrete suggestions for improving the survey's implementation. Importantly, collaborators strongly supported the idea of institutionalizing the survey. Implementing this goal would present a major challenge in the coming years, requiring strengthening national-level capacity, securing sound political and financial support, and ensuring broad commitment by key stakeholders. Understandably, this process would require a transition over time tailored to individual country circumstances.

Transferring responsibility for the synthesis and analysis of the ASTI survey data to the national collaborators should open the door for more in-depth and specific analysis in response to the needs of national policymakers. In order to ensure that ASTI's data and outputs are actively used in agricultural research planning and policymaking, ASTI has begun to devote greater attention and resources to the dissemination and use of the data. National collaborators will play a major role in promoting the distribution and use of ASTI data and outputs at the national level. At the current time, more experience is needed to determine which formats and approaches work best.

The recommendations elicited through the workshops will be incorporated into ASTI's five year strategic plan for 2011–15 and the project proposal for ASTI's next funding cycle for its activities in Sub-Saharan Africa.

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## **APPENDIX A: AGENDA FOR DAKAR WORKSHOP**

### **MONDAY, 18 OCTOBER 2010**

09:30–10:00 Welcome and introductions (Han Roseboom, Technical Facilitator)

#### **SESSION 1            SETTING THE STAGE**

10:00–10:15 IFPRI's activities in West and Central Africa: CAADP/AGRODEP (Ousmane Badiane, IFPRI)

10:15–10:30 Presentation on CAADP (Simon Kisira, NPCA)

10:30–10:45 Presentation on ReSAKSS (Maurice Taondyande, ReSAKSS-WA)

10:45–11:00 Monitoring and evaluation of agricultural R&D investments in Africa: The case of CAADP Pillar IV (Leonard Oruko, FARA)

11:00–11:15 CORAF's activities related to monitoring and evaluation and information dissemination in West and Central Africa (Anatole Kone, CORAF)

11:15–11:40 Coffee/tea break

11:45–12:00 Introduction to the ASTI initiative (Nienke Beintema, ASTI)

12:00–12:30 Developments in African agricultural R&D: Factual evidence across countries focusing on West Africa (Gert-Jan Stads, ASTI)

12:30–13:00 Short group discussion

13:00–14:30 Lunch break

#### **SESSION II            REVIEW OF COUNTRY EXPERIENCES WITH ASTI DATA COLLECTION**

14:30–14:45 Introduction (Han Roseboom, Technical Facilitator and Nienke Beintema, ASTI)

14:45–15:00 Country example: Senegal (Louis Sène, ISRA)

15:00–15:15 Country example: Republic of Congo (Grégoire Bani, DGRST)

15:15–15:30 Discussion opener (Han Roseboom, Technical Facilitator)

15:30–16:00 Coffee/tea break

16:00–17:30 Breakout session (two or three groups)

### **TUESDAY, 19 OCTOBER 2010**

9:00–9:30 Presentation groups and general discussion

#### **SESSION III            THE WAY FORWARD: ENHANCING THE USE OF ASTI OUTPUTS FOR ADVOCACY AND FURTHER ANALYSIS AT NATIONAL AND REGIONAL LEVELS**

09:30–10:00 Overview of ASTI's short- and long-term communication and analytical strategies (Nienke Beintema and Gert-Jan Stads, ASTI)

10:00–10:15 Country perspective: Ghana (George Essegbey, STEPRI)

10:15–10:30 Country perspective: Burkina Faso (Séraphine Sawadogo Kaboré, INERA)

10:30–10:45 Discussion opener (Han Roseboom, Technical Facilitator)

10:45–11:15	Coffee/tea break
11:15–12:45	Breakout session (two or three groups)
12:45–14:00	Lunch
14:00–14:30	Presentation of group discussions
<b>SESSION IV</b>	<b>THE WAY FORWARD: HOW TO MAINTAIN, IMPROVE, AND INSTITUTIONALIZE DATASETS AT NATIONAL AND REGIONAL LEVELS</b>
14:30–15:15	ASTI methodology and data collection standards: ASTI’s Toolkit (Nienke Beintema and Gert-Jan Stads, ASTI)
15:15–15:30	Country perspective: Guinea (Sékou Béavogui, IRAG)
15:30–15:45	Discussion opener (Han Roseboom, Technical Facilitator)
15:45–16:15	Coffee/tea break
16:15–17:45	Breakout session (two or three groups)

**WEDNESDAY, 20 OCTOBER 2010**

09:00–9:30	Presentation of group discussions
<b>SESSION V</b>	<b>CONCLUSION</b>
9:30–10:00	Summary of discussion outcomes and way forward (Han Roseboom, Technical Facilitator)
10:00–11:00	Commentaries on FARA, IFPRI, CORAF, CAADP/NPCA, ReSAKSS, and ASTI
11:00–11:30	Coffee/tea break
11:30–12:10	Group discussion
12:10–12:30	Closure
12:30–14:00	Lunch

## APPENDIX B: AGENDA FOR ADDIS ABABA WORKSHOP

### MONDAY, 1 NOVEMBER 2010

8:30–9:00 Welcome and introductions (Han Roseboom, Technical Facilitator)

#### SESSION 1 SETTING THE STAGE

09:00–09:15 IFPRI’s activities in East and Southern Africa (Kwadwo Asenso-Okyere, IFPRI)

09:15–09:30 Building capacity to develop science, technology, and innovation indicators in Africa (Lukovi Seke, ASTII/NPCA)

09:30–09:45 Presentation on ReSAKSS (Stella Massawe, ReSAKSS-East Africa)

09:45–10:00 ASARECA’s activities related to monitoring and evaluation in East and Central Africa (Enock Warinda, ASARECA)

10:00–10:30 Group discussion

10:30–11:00 Coffee/tea break

11:00–11:15 Monitoring and evaluation of agricultural R&D investments in Africa: Case of CAADP Pillar IV (Leonard Oruko, FARA)

11:15–11:30 Introduction to the ASTI initiative (Nienke Beintema, ASTI)

11:30–12:00 Developments in African agricultural R&D: Factual evidence across countries focusing on East and Southern Africa (Gert-Jan Stads and Kathleen Flaherty, ASTI)

12:00–12:30 Group discussion

12:30–14:00 Lunch break

#### SESSION II REVIEW OF COUNTRY EXPERIENCES WITH ASTI DATA COLLECTION

14:00–14:15 Introduction (Han Roseboom, Technical Facilitator and Nienke Beintema, ASTI)

14:15–14:30 Country example: Zambia (Mick Mwala, University of Zambia)

14:30–14:45 Country example: Zimbabwe (Percy Chipunza)

14:45–15:00 Discussion opener (Han Roseboom, Technical Facilitator)

15:00–15:30 Coffee/tea break

15:30–17:00 Breakout session (two or three groups)

### TUESDAY 2 NOVEMBER 2010

09:00–09:30 Presentation of group discussions

#### SESSION III THE WAY FORWARD: HOW TO MAINTAIN, IMPROVE, AND INSTITUTIONALIZE DATASETS AT THE NATIONAL AND REGIONAL LEVELS

09:30–10:00 ASTI methodology and data collection standards: The ASTI Toolkit (Nienke Beintema and Gert-Jan Stads, ASTI)

10:00–10:15 Country perspective: South Africa (Frikkie Liebenberg, ARC)  
10:15–10:30 Discussion opener (Han Roseboom, Technical Facilitator)

10:30–11:00 Coffee/tea break

11:00–12:30 Breakout session (two or three groups)

12:30–14:00 Lunch

**SESSION IV THE WAY FORWARD: ENHANCING THE USE OF ASTI OUTPUTS FOR ADVOCACY AND FURTHER ANALYSIS AT THE NATIONAL AND REGIONAL LEVELS**

14:00–14:30 Presentation of group discussions

14:30–15:00 Overview of ASTI's communication and analytical strategies in short- and long-term (Nienke Beintema and Gert-Jan Stads, ASTI)

15:00–15:15 Country perspective: Nigeria (Gbolagade Ayoola, FIF and Aliyu Abdullahi, ARCN)

15:15–15:30 Country perspective: Kenya (Festus Murithi and Esther Njuguna, KARI)

15:15–15:45 Coffee/tea break

15:45–16:00 Discussion opener (Han Roseboom, Technical Facilitator)

16:00–17:30 Breakout session (two or three groups)

**WEDNESDAY, 3 NOVEMBER 2010**

09:00–09:30 Presentation of group discussions

**SESSION V CONCLUSION**

09:30–10:00 Summary of discussion outcomes and way forward (Han Roseboom, Technical Facilitator)

10:00–11:00 Commentaries on IFPRI, ASARECA, ASTII/NPCA, ReSAKSS, FARA, and ASTI

11:00–11:30 Coffee/tea break

11:30–12:10 Group discussion

12:10–12:30 Closure

12:30–14:00 Lunch

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