



USDA INTERAGENCY COMMODITY ESTIMATES COMMITTEES STUDY

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USDA INTERAGENCY COMMODITY ESTIMATES COMMITTEES STUDY

SECTION 1 - EXECUTIVE SUMMARY

“When government agencies organize around outcomes and give staff the tools, authority, and responsibility for achieving certain outcomes, it provides an ingredient critical to any organization – focus.”

Russell M. Linden, Author

*“Seamless Government,
A practical Guide to Re-engineering the Public Sector”*

1.1 INTRODUCTION

The U.S. Department of Agriculture (USDA) finds itself at an historic crossroads. It stands at the forefront of many forces for change, some brought about by demands for more efficient government, some by the change from a program-driven to a market driven farm policy, and some created by the Department’s size, diversity, and history of being slow to change. One of the Department’s long-standing roles has been the collection and public dissemination of information related to the outlook for the supply, demand and price of critical farm commodities. Under the direction of the World Agricultural Outlook Board (WAOB), the Interagency Commodity Estimates Committees (ICEC) ensure consistency, objectivity and reliability of these commodity projections. The ICEC also serve to ensure the quality of those estimates by acting as the Department’s focal point for coordination of market-related world outlook and situation reports.

Datatrak Information Services, Inc. and its teaming partner, PricewaterhouseCoopers LLP (the Datatrak/PwC Team) were contracted to conduct an independent assessment and make recommendations for improving the process for developing, producing, and disseminating the World Agricultural Supply and Demand Estimate (WASDE) report. The key objectives of this study are to: (1) Assess the level of resource requirement of the existing process, (2) Compile information on end users and stakeholders in the process, (3) Identify practical opportunities for economizing on Departmental resources, and (4) Define a mechanism for adaptive change in the process.

The general goal is to improve the efficiency and effectiveness of the interagency collaboration among four separate USDA agencies that support the interagency committees in producing the WASDE (the WASDE/ICEC process). The principal driver for instituting this study is the degradation in the ability of USDA agencies to continue to provide the level of support required by the WASDE/ICEC process in the face of dramatic cuts in agency resources, changing agency



priorities, and overall budget reductions.

The study was conducted in two phases with two separate deliverables. The first deliverable under that contract was submitted in final form on March 19, 1999. It documents a comprehensive baseline of the existing WASDE/ICEC process and establishes survey instruments for evaluating agency workload and competencies of essential personnel. This report is the second deliverable under the contract that uses the fact-finding analysis from the first phase of the study to derive recommendations for improvements in efficiency and effectiveness of the overall process and organizational environment. Referring to the contract Statement of Work, Deliverable 2 is defined as follows:

Recommendations for gaining efficiency and facing the future: Deliverable 2 will describe the options identified that improve the efficiency of resource use in the ICEC process and also propose a mechanism for ensuring the ICEC capacity to continually assess the implications of internal budget and management imperatives and external commodity and information events for its operation.

The requirements of the First Deliverable also applicable to this report are reiterated below:

Assessment of Resources and Information Available: Present the findings of work performed under the first two objectives (“Current Resource Requirements” and “End Users of WASDE Reports”), reporting on the current resource requirements of the ICEC, as well as what has been learned about WASDE end user criteria for satisfaction. It will include an inventory of time used and tasks performed by analysts in the ICEC process, as well as a characterization of the analysts’ expertise and experience. A delineation of the range of WASDE end users and identification of criteria for success (what satisfies a WASDE end user?) will be included.

The goal of the first study phase was to perform an end-to-end assessment of ICEC operations, to analyze resource utilization and to conduct an assessment of the staff competencies required to produce the WASDE. In other words, this first deliverable provided the factual basis for the findings and recommendations in this second deliverable. Again, the key objective of this deliverable is to provide recommendations for the Department to improve the efficiency and effectiveness of the WASDE/ICEC process and provide a roadmap for facing the future.

1.2 BACKGROUND

The purpose of the ICEC process is to improve the consistency, objectivity, and reliability of USDA forecasts of year-end supply, demand and price for specific farm commodities. Although current farm policy has become increasingly market-oriented, the Department has not diminished its role in coordinating and publishing market intelligence data in the form of the WASDE report. The WASDE is both a short-range forecast and an official, Department-wide consensus on year-end supply, demand, and price for selected commodities. The WASDE/ICEC process provides the infrastructure for building that consensus that allows the Department to “speak with one voice” on policy and program issues related to key farm commodities. Thereby, it sets a common



standard for all USDA spokespersons to address the market and price potential of certain commodities that are critical to U.S. agriculture. This mandate of "speaking with one voice" requires that some form of interagency process must be employed to reach "consensus" and publish a common baseline for the Department's commodity outlook forecasts.

The WASDE report provides its users a snapshot of projected year-end commodity supply, use and price, based on the best available economic data from around the world. Commodity projections in the WASDE report also serve as a "benchmark" forecast for the commodity industry. That is, they serve as a guide for the commodity markets without imposing unwarranted impacts on the markets. Therefore, the WASDE estimates tend to be conservative projections and reflect only known market conditions or approved program decisions without regard to speculation on future, undocumented events, weather conditions or policy outcomes.

By regulation, information about the futures of certain agricultural commodities has both policy and political implications. The WASDE report contains market sensitive information on the world agricultural situation including the implications of approved USDA policy actions. In the context that it represents agricultural economic "intelligence," each new WASDE report is sensitive to public release. Therefore, the WASDE/ICEC process is based on a comprehensive, interagency review and consensus building procedure that, in its final stages, is highly secure. In addition, the WASDE report provides commodity outlook information for commodities that are grown and traded on a "world market." Each WASDE report also represents a benchmark within the market that serves as a guide for future commodity-related market activity. Specifically, it presents a body of estimates that reflect a "world-view" of strategic farm commodities.

The base commodities contained in the WASDE report are defined by regulation as those that were originally identified in the Agricultural Adjustment Act of 1933. Accordingly, each commodity has its own unique history and special "personality" that influences the process of estimating future U.S. and foreign production, use, and price. Under the direction of the Chief Economist, the WAOB manages the ICEC commodity estimating and forecasting process and publishes the monthly WASDE report. However, successful completion of the WASDE/ICEC process is highly dependent on the "voluntary" support of commodity analysts from four separate USDA agencies. The Economic Research Service (ERS), Farm Services Agency (FSA), Foreign Agricultural Service (FAS), and Agricultural Marketing Service (AMS) all provide direct staff support to the WAOB in accomplishing the WASDE/ICEC mission. Senior commodity analysts on the WAOB chair the nine commodity estimates committees that are attended by designated members of these agencies

The National Agricultural Statistical Service (NASS) plays a special, although parallel, role in the process through publication of U.S. crop production data collected by their State Statistical Offices. Foreign production data, provided by FAS, adds a global perspective to the U.S. commodity data supplied by NASS. The scope of this study does not include NASS in any of the process or competency assessments.

The availability of global economic intelligence has changed dramatically in recent years. U.S



farm policy has also changed over time, particularly since the 1996 legislation that re-directed the focus of farm programs from payments for acreage controls to a fully market-driven approach to farm payments. In keeping with this market perspective, many USDA agencies have been required to conduct broader market analysis initiatives with an ever declining staff. As a result, there is a continuous demand for scarce analyst resources to support both the ICEC process and competing agency requirements.

The existing WASDE/ICEC process is sound, provides adequate security safeguards, and produces a WASDE report that is regarded as reliable, accurate, and consistent by both internal and external stakeholders and users. However, this process is heavily dependent on support from USDA agency commodity analysts, without whom the process will not continue to function. Anecdotal evidence indicates that the career development and reward systems for these employees are not consistent with the value of the WASDE to the Department. It can be readily concluded from the first phase report that the Department can ill afford to run any significant risk of producing a single WASDE report that does not live up to the reputation expected by users and stakeholders. Therefore, the Datatrac/PwC Team's approach for the second phase of the study was to assess and make specific recommendations on those factors that tend to create or exacerbate such risk.

1.3 DISCUSSION OF KEY ISSUES

WASDE/ICEC Process: The findings of this study indicate that the current ICEC process for generating the monthly WASDE report are both efficient and effective in its current form. Although the "AS-IS" WASDE/ICEC process does provide management information to support internal and external stakeholders, findings of this study show that the Department's ability to continue this long standing record may be at risk. This risk stems more from environmental factors and infrastructure issues than from direct threats to the process itself. Although this study does not recommend major revisions to the existing process in an operational context, it does find that the "matrix" approach to managing the process with commodity analysts from four supporting USDA agencies has become an issue that must be dealt with in terms of risk avoidance.

Knowledge Management: One important environmental factor assessed by the study was the issue of managing the intellectual capital available to the WAOB from the support agencies. This "knowledge management" issue is seen as critical to continued success of the WASDE/ICEC process. Although improved technology can be brought to bear on the problem of data acquisition and control, managing the "human database" poses special problems. This is particularly true in the matrix-type organizational structure that exists between the ICEC and supporting agencies. The knowledge management issue arises from the fact that the Department has no "centers of excellence" that can serve to concentrate limited commodity analyst resources to support the analysis of a given commodity. Because of their differing missions, each of the supporting agencies may, in fact, have varying levels of commitment to any one commodity. The result is a "patchwork quilt" of commodity analyst support for the WASDE/ICEC process.



Mission of the World Board and ICEC: This study has found that the mission of the WAOB and the resultant and inherent objectives of the WASDE/ICEC process can be explicitly defined; namely, (1) To provide commodity outlook management information to support policy decisions of the Secretary and senior Department managers, and (2) To serve as the single voice of the Department on agricultural commodity forecasts. Although the mission of the WAOB is asserted in the latest code of federal regulations, internal USDA regulations on that topic date back to the late 70s and early 80s. As might be expected, guidance contained in a twenty year old directive does not carry much weight in a resource constrained environment.

There is a need to both reaffirm the existing mission of the WAOB and of the WASDE. In addition, there is a need to reassert the critical role of the supporting USDA agencies and document their responsibilities for commodity outlook and forecasting. This goal congruence becomes even more important as commodity analyst resources throughout the Department become more and more constrained. The mandate to produce a monthly WASDE will continue to cause resource conflicts with competing agency objectives and priorities. The current matrix management infrastructure leaves the success of the WASDE/ICEC process in the hands of the agency managers who control the analyst resources.

The existing mission of the WAOB, as stated on their home page, is introspective and gives no recognition to their customers, whether they be the Secretary, the supporting agencies or external stakeholders and WASDE users. An updated departmental regulation could provide a vehicle to achieve alignment of agency and Department goals with regard to the WASDE. That regulation should include a mission for the WAOB that is updated to focus on delivering a quality product to its customers.

The Department's "due diligence" responsibility: The impact of the WASDE has on world commodity markets is considerable. The resources available to the Department and its unique access to world-wide agricultural and commodity information puts the Department in an unassailable position in the market place. However, as a federal agency, the Department must be extremely mindful of its "due diligence" commitment in producing the WASDE. Sufficient resources must be made available to support the delivery of the mission; failure to do so impacts the consistency, objectivity, and reliability of information. The impact of WASDE on external users and stakeholders must also be appreciated. Interviews with external stakeholders in the first study phase strongly supported the efficacy of the WASDE as a primary source of commodity outlook and forecast information. Therefore, the WAOB has a due diligence responsibility to maintain the confidence and perspective of these external stakeholders. This role would be greatly enhanced by a well-designed Departmental regulation that reaffirms the mission of the WAOB and the importance of the WASDE, particularly as a source of management information for the Secretary.

Organizational structure: The purpose of organizational structure in business operations is to create an environment that supports the efficient execution of the mission and the core business processes. It was found that the mission and goals of the ICEC core business processes are not aligned with supporting agency objectives. Therefore, it is to be expected that the organizational structure of the supporting agencies is also ineffective. This may be due to the current



environment where responsibility is distributed across a matrix structure comprised of the support agencies and the cross-cutting authority for producing the WASDE resides with the WAOB/ICEC. The current organizational and reporting structures do not convey adequate authority, accountability and responsibility for the WAOB to meet its "due diligence" requirement for producing the WASDE.

According to the Code of Federal Regulations, the responsibility for WASDE estimates resides with the WAOB, and the authority to produce WASDE estimates resides with the WAOB Chairperson. A significant misalignment occurs, however, with regard to the management of resources required to produce the WASDE estimates. In that case, authority and responsibility (per the CFR) reside with the WAOB Chairperson. The CFR, however, is silent with regard to the assignment of accountability for those supporting resources. Accordingly, the accountability for resources participating in ICEC has been assumed by the agency supervisors.

Staff Recruitment and Retention: In an environment of declining resources, the organizational misalignment causes unnecessary risk to the WASDE mission. Conflicts between the authority of the WAOB Chair for analyst participation and the accountability of the agency supervisors for those same resources requires that the WAOB can no longer conduct "business as usual" using "volunteer" support. This forces the Committee Chairs to rely upon the enthusiasm and dedication of certain individuals for the production of WASDE estimates. At times, this results in Committee Chairs utilizing the skills of individuals who do not greatly add to the process and resulting WASDE report. In order to allow committee chairs to create effective committees, the WAOB Chair must effectively communicate to the agencies the needs of each committee with respect to analytic resources.

Currently, many analysts are uncertain how valuable their contributions are to the ICEC process. The development of a performance assessment that would be completed by committee chairs and factored into the overall agency evaluation would improve the accuracy of the assessment by reflecting the work performed both in the agency and on the ICEC committee. This tool would help committee chairs effectively communicate expectations and areas for improvement.

In addition, development of an incentive system should build prestige of the ICEC analyst and, hence, strengthen the quality of resources contributed to it. The combination of the evaluation system with a rewards system would align performance and incentives in an effort to communicate expectations, improve performance, and strengthen skills, loyalty, and job prestige, and bring renewed enthusiasm to analysts that are currently being pulled in multiple directions. Once the competency assessment results are tallied, gaps in skill level can be identified. These will present opportunities for developmental training.

Agency Workload Assessment: Total resources in some agencies have declined while priorities have shifted in others. For example, the overall staff reduction across the Department since the reorganization of 1994 has been about 15%. Whereas, the staff reductions in agencies supporting the WASDE have ranged from 2.5% in FAS to 32.4% in ERS. During times of changing priorities and fewer resources, the accountability and reporting mechanisms for resources become



more closely scrutinized. In the current environment, agency supervisors are being asked to “do more with less.” At the same time, however, the workload survey shows that some committees have only a single commodity representative from key agencies. The misalignment in the organization and reporting structures has exacerbated relationships among ICEC stakeholders in this “either-or” situation.

As the availability of commodity analyst resources becomes even more constrained, the mission of the WAOB will be in direct conflict with the mission of those very agencies upon whom success of the process depends. Although agency managers may not view their allowing agency resources to participate in the WASDE process as contributing to the mission of the agency, in fact, by making the information held in the WASDE publicly available, each supporting agency contributes directly to the mission of the Department.

Surveys conducted through this study have revealed that the level of workload, as well as the number of commodity analysts involved in the WASDE/ICEC process varies widely from agency to agency. As a rule of thumb, the average commodity analyst supporting the WASDE/ICEC process contributes one week (40 hours) to the WASDE each month that could be used for agency-related initiatives. The workload survey data (see section 4.6 and Appendix 4) for an average month when the WASDE workload is heavy can be summarized in Table 1 below.

Table 1 – Summary of Workload Survey Data

AGENCY:	No. WASDE Participants	Agency-Related Workload			WASDE-Related Workload		
		Avg. Monthly Hours	Agency Total	% of Total Hrs.	Avg. Monthly Hours	Agency Total	% of Total Hrs.
ERS	18	x100	= 1800	28%	x60	= 1060	25%
FAS	38	x79	= 3002	47%	x81	= 3078	72%
AMS	2	x138.5	= 277	4%	x21.5	= 43	1%
FSA	9	x149	= 1341	21%	x11	= 99	2%
Total Hours			6420			4280	
% of Total			60%			40%	

It is evident from Table 1 that there is a wide disparity in level of effort provided to WASDE-related processes by the four support agencies. For example, the number of commodity analysts who participate in the WASDE/ICEC process varies (on average) from a low of two for AMS to a high of 38 for FAS. Overall, analysts from the four agencies divide their time about 60/40. That is, 60% of the time they are working for their home agencies and about 40% of the time they are working directly for the WASDE/ICEC process.

As was reported in the First Deliverable, the average monthly workload for the average agency



commodity analyst supporting the WASDE/ICEC process is approximately 40 hours per month. Table 1 shows that ERS analysts account for about 25% of the total hours expended on the WASDE compared with 72% for FAS. Comparable estimates for the other agencies are not statistically significant, but they are significant in terms of the reduced level of effort provided to the process. The team was unable to find any guidelines or metrics with which to extrapolate the findings in Table 1 and determine whether each of the supporting agencies is contributing enough resources to the WASDE/ICEC process for the process to remain viable. The chartering documents for the WAOB and the ICEC must be updated to provide a Departmental mandate for the WAOB and the ICEC that reaffirms the validity of the WASDE as the principal source of information supporting management and policy decisions. A guideline must also be issued, in conjunction with the updated regulation, that provides each of the support agencies a minimum operating requirement for supporting the WASDE/ICEC process.

For example, although the workload data shows that FAS contributes much more heavily to the process than other agencies, the team had no yardstick to determine whether any of the other agencies were not contributing enough analyst resources to the process. This study found no evidence to correlate the missions of the supporting agencies to their current level of support for the WASDE/ICEC process. The principal motivators for agency involvement in the process appear to be a history of interest in commodity-related issues.

One way to help resolve this issue is to establish commodity “centers of excellence” (COE) around those individual(s) (regardless of agency) who are recognized to possess the highest levels of experience and core competencies relevant to a given commodity. These COE need not be part of the physical or organizational infrastructure. Rather they may be “virtual” centers where commodity analysts from all agencies with common interests can share data and information and prepare data for the WASDE/ICEC process. A rough "model" of such a virtual center might be an Internet chat-room where commodity analysts could interact with their peers across the Department. ERS already made an effort in this direction that could serve as a model for other agencies by identifying on their Web Page all of their commodity points of contact. By becoming the focus of the support agencies for knowledge management on a given commodity, the COE could more efficiently produce integrated outlook data that directly supports the WASDE/ICEC process



1.4 GENERAL RECOMMENDATIONS

The principal recommendations of this second phase study and assessment of the WASDE/ICEC process are as follows:

What the Department Must Do:

1. It is imperative that the existing departmental memos and regulation covering the mission and function of the WAOB and ICEC, dating back almost twenty years, be updated to reflect today's realities. A regulation that contains substantially the criteria laid out in the example in Appendix 6 should be prepared by the Office of Chief Economist and approved by the Secretary and Under Secretaries of each of the affected agencies. In conformance to the Government Performance and Results Act, the new regulation should define the mission of the WAOB and ICEC in terms that are both customer-oriented and outcome-oriented. The regulation should also define the role of each support agency with regard to both the commodity outlook function and individual support for the WASDE/ICEC function. The new regulation should also empower the WAOB Chair to become an active resource manager of agency commodity analysts, on whom the success of the WASDE/ICEC process depends.
2. The Department should periodically review and reaffirm the fundamental mission of both the WAOB and the WASDE as providers of management information to support policy and program decisions for the Secretary and senior managers.
3. The Department should favorably consider agency requests for personnel staffing increases for commodity analysts that meet the core competency requirements established through this study.

What the Chief Economist Must Do:

1. Provide the WAOB Chair the appropriate delegations to achieve the mandates of the new regulation.
2. Support consensus building between the WAOB and support agencies and mediate resource issues to ensure continued success of the World Board's functions.
3. Authorize a staff position to support the WAOB Chair in the areas of knowledge management and supporting agency resources management
4. Establish resource guidelines for the supporting agencies in terms of their level of responsibility in the WASDE/ICEC process.



What the WAOB Must Do:

It is essential that the WAOB proactively manage the human capital that makes the WASDE/ICEC process possible. To that end the WAOB Chair must:

1. Take action to implement the mission defined in the proposed regulation.
2. Establish a staff position supporting the ICEC with responsibility for three critical missions: (1) Resource management and coordination of the assignment and assessment of agency resources, (2) Leadership in establishing new opportunities for sharing commodity data by commodity among support agencies and the WAOB, and (3) Leadership in knowledge management methods, procedures and technologies.
3. Form a project team to develop a tailored knowledge management strategy that can be adopted by the WAOB and supporting agencies to manage the WASDE/ICEC process.
4. Assist support agencies to optimize the level of support required on a month-to-month basis.
5. Work with supporting agencies to foster acquisition of highly qualified commodity analysts that best meet the competency requirements of the ICEC as identified by this study.
6. Serve as a focal point for knowledge management and data sharing among ICEC support agencies and the WAOB including download, preparation, processing, and sharing of commodity data throughout the Department.
7. Contribute to the performance appraisal of commodity analysts from supporting agencies.
8. Lead interagency forums for periodic re-evaluation of the ICEC process.

What the Support Agencies Must Do:

1. Affirm their commitment to the WASDE/ICEC process and provide a career path with incentives and rewards for the commodity analyst function.
2. Formally assign primary and alternate commodity analysts to each ICEC committee based on the core competency requirements of this study.
3. With coordination of the WAOB, ERS and FAS should establish a joint project to create commodity centers of excellence to collect, process, evaluate and share commodity related data. These centers of excellence should also serve as a forum for periodic assessment of the resources needed to support the WASDE.



4. Work cooperatively with WAOB committee chairs and staff to periodically re-evaluate the capabilities of commodity analysts assigned to the ICEC.
5. Work cooperatively with WAOB committee chairs and staff to periodically re-evaluate the ICEC processes for improved efficiency and more effective output products.



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SECTION 2 – PROJECT APPROACH

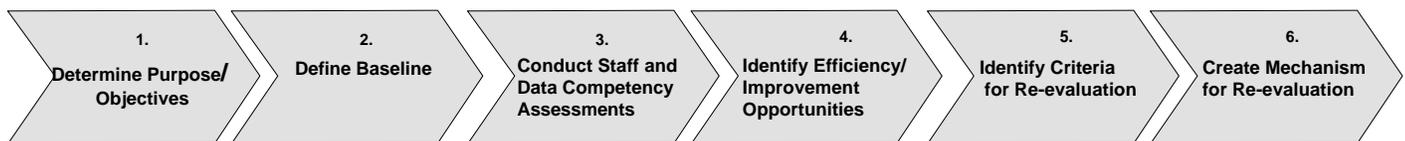
2.0 PROJECT APPROACH

The Datatrac/PwC Team proposed to conduct a study effort of the Interagency Commodity Estimates Committees (ICEC) to determine the feasibility of streamlining the existing business process and maximize operational efficiency. The focus of this study is on those activities of the interagency (ICEC) process that are associated with production of the World Agricultural Supply and Demand Estimates (WASDE) report. This component of the ICEC process will be referred throughout this report as the WASDE/ICEC process. This study effort includes requirements analysis, business process value analysis, and business modeling activities that support possible recommendations for business process improvement and information technology.

The Datatrac/PwC Team review will be used to reduce duplication of effort, eliminate non-value added activities, verify business processes, and to improve accuracy, completeness, availability, timeliness, and usefulness of the WASDE for users, customers, and stakeholders.

2.1 METHODOLOGY

The Datatrac/PwC Team proposed an approach, that involved the adaptation of a process improvement model that has been used successfully in the past. That model was expanded to address the unique requirements of USDA and the ICEC. The general model for the two-phase study is pictured below. This high-level model was used to facilitate understanding of the approach to studying the WASDE/ICEC process. This second deliverable concentrates on the last three steps of this model.



2.1.1 PURPOSE AND SCOPE

The objective of this second phase was to define the opportunities for efficiency and effectiveness improvement in the WASDE/ICEC process that are derived from analyses conducted in the first phase.

In addition to developing assessment models for process analysis and core competency assessment, the Datatrac/PwC Team solicited input from external customers and stakeholders to develop a holistic view of the WASDE/ICEC process. Throughout the study, the Datatrac/PwC



team facilitated a high-level Management Advisory Team (MAT) to review the study products and assessments. (See Table 2 for a listing of MAT members.) This began with agreement on the mission, goals and objectives of the study. The following project purpose and scope were used to govern the two-phase study.

PURPOSE:

The purpose of this study is to improve the efficiency and effectiveness of the interagency collaboration that produces monthly estimates and forecasts of key agricultural commodity market prices, production, stocks, and of their domestic and export use.

SCOPE:

The scope of this study is to:

1. Determine current resource requirements of the ICEC process, with respect to the number of the commodity analysts involved and the time spent by each in participating in meetings and in preparation of the WASDE. Develop a profile of staff competencies required to perform the current ICEC process. Use this profile of analysts' expertise and experience to project current and future staff capabilities within the Department.
2. Assess end users of the WASDE (both internal and external) in terms of the criteria that determine customer satisfaction such as timeliness, objectivity, and ease of use. Evaluate the connection between the WASDE and other USDA reports in terms of ICEC workload.
3. Evaluate the ICEC process flow to identify practical opportunities for economizing on departmental resources required to produce the WASDE while better meeting customer needs. Develop an "AS-IS" process flow that depicts the current ICEC commodity estimating process. Determine process innovations and best practices, including the use of information technology that will promote more efficient and effective use of resources while better serving customer demands. Develop a "TO-BE" model that incorporates innovations for improved efficiency and effectiveness of the ICEC process. Also, project improvements in staff competencies that are required to support the new ICEC process model.
4. Develop a mechanism for adaptive change that assures continual reassessment of the efficiency and effectiveness of the ICEC process. Identify performance criteria and develop a methodology and time cycle for re-evaluation of the proposed ICEC process.



Table 2 – Management Advisory Team Members

Name	Organization/Title
Keith Collins	Chief Economist
Gerald Bange	WAOB
Frank Tarrant	FAS
Larry Walker	FSA
Henry Bahn	CSREES
Susan Offutt	ERS
Kitty Smith	ERS
Barbara Robinson	AMS
Ray Halley	NASS
Lynda Couvillion	OBPA
Scott Steele	OBPA

2.1.2 CONDUCT STAFF AND DATA COMPETENCY ASSESSMENTS COMPETENCY ASSESSMENT

COMPETENCY ASSESSMENT

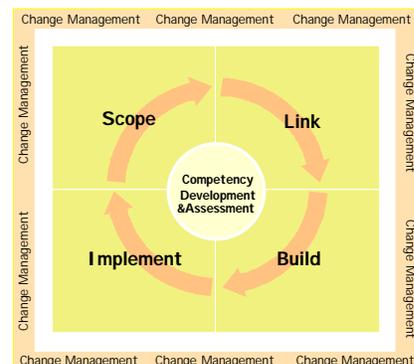
In order to meet the objective to develop a profile of staff competencies required to perform the current ICEC process, this phase of the study required the use of a competency assessment methodology and survey instrument. They were used to evaluate ICEC requirements and to profile the WAOB Chair, WAOB Committee Chairs, and agency commodity analysts' expertise and experience.

Competencies are defined as the collective set of knowledge, skills, abilities, and behaviors needed for effective performance for a particular role or position within an organization. Conducting an organization-wide competency assessment allows senior management to gather information on the collective skill sets possessed by their workforce on the various competencies desired and determines, from an organizational perspective, the skills their organization has in excess or may be lacking. This information can be used to assist Department managers to determine what competencies must be trained into the workforce, permanently hired into the organization, or outsourced through contractors.

OVERVIEW OF THE COMPETENCY ASSESSMENT METHODOLOGY

The Competency Development and Assessment Methodology consists of five primary steps.

- Step 1: Understand Client Intent/Business Need & Define Scope
- Step 2: Establish Link to Strategic Business Objectives
- Step 3: Build Competency Models
- Step 4: Implement the Competency Assessment
- Step 5: Measure and Renew





In the first deliverable, the Datatrac/PwC Team completed the first three steps. This deliverable focuses on Steps 4 and 5.

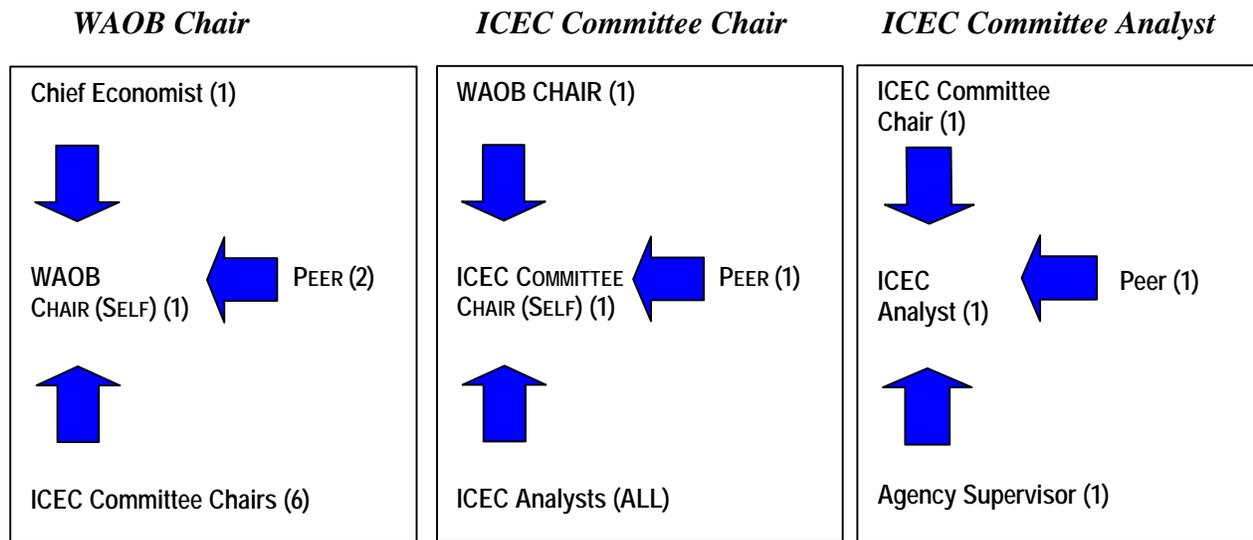
STEP 4: IMPLEMENT THE COMPETENCY ASSESSMENT

In the first deliverable the Datatrac/PwC Team completed development of the WAOB Chair Model, ICEC Committee Chair Model, and ICEC Commodity Analyst Model. These models were presented to the January MAT for review and approval.

Based on the completed competency models, the Datatrac/PwC Team developed a draft multi-rater assessment tool to be disseminated to the ICEC participants. Multi-rater assessments generate a comprehensive summary of an employee’s competence as perceived by self and others. Multi-rater assessments generally consist of a list of descriptive statements to which both an assessee and observer respond, with results presented in numerical or graphical format. Results typically show the assessee’s self-ratings as compared with the observers’ ratings.

In order to develop the assessment, the Team met with Keith Collins, Chief Economist, to reaffirm the assessment objectives and to determine who were the most suitable raters (specifically for the commodity analysts.) The graph in Figure 1 outlines the rating system used for the competency assessment.

Figure 1 – Competency Assessment Rating System





The Team also developed a draft assessment instrument. The components of the assessment instrument included:

- Cover letter - contains the assessment objectives, rater's role, rating instructions, and confidentiality statement;
- Demographic data – asks for current position in ICEC process, committee person sits on, total years person has been dedicated to ICEC activities, agency person is from, length of time person has been with agency/USDA, and grade; and
- Survey – contains the competency cluster with associated indicators.

The Datatrac/PwC Team presented the draft assessment instrument tool to the MAT members for review and approval. The MAT members reviewed the tool and provided suggestions. It was determined that in order to keep all responses to the survey confidential, the results would be aggregated and reported (1) by committee and (2) by agency.

The Team met with the Committee Chairs and some of the MAT members on February 25, 1999 to confirm the number of analysts per committee who would participate in the assessment. The committee chairs provided Datatrac/PwC with a list of all core participants. The MAT members assisted in identifying the supervisors for each of the analysts.

The Team conducted small group sessions with each agency during the first two weeks in March to distribute and explain the steps to complete the survey. The completed surveys were collected and the assessment results were prepared, analyzed and reported to the MAT members.

STEP 5: MEASURE AND RENEW

This step focused on outcomes. Step 5 is aimed at helping the client use their workforce data (e.g., competency assessments) and organizational data (e.g., financials) to establish a picture of where the organization stands vis-à-vis its strategic objectives. In order to do this, the Team used the workforce and organizational baseline data to examine the agency's current performance on each measure. The Team then compared the current picture with the future vision to determine areas for improvement and establish goals. The Team then assisted with establishing a plan for tracking progress in these gaps and revising their action plans.

This step also involved transferring knowledge and skill to enable clients to successfully maintain and renew their model and measures over time.

Once the results were collected and compiled, we compared the results by committee and by agency to identify inconsistencies in operations or areas of staff misalignment. Overall, results showed that in all cases, the participants in the ICEC process were effective in demonstrating the identified competency sets, meaning that human resources are currently properly aligned with operations and core business processes.



2.1.3 IDENTIFY EFFICIENCY/IMPROVEMENT OPPORTUNITIES

During the second phase, the project team worked to accomplish four inter-related tasks:

- Identify Improvement Opportunities for current operations and organizational structures of the ICEC;
- Identify criteria for re-evaluation of the WASDE/ICEC process after the study; and
- Create a mechanism for re-evaluation of the ICEC business process and make recommendations for a performance measurement regime.

As part of the first and second tasks, the project team members conducted a workload analysis and a core competency analysis to provide the necessary information from which to make recommendations. During the first phase, the team conducted extensive research on the purpose of the agencies in order to have a firm understanding of their function and programmatic charge. Background research was conducted to identify the current organizational structure methods of operating, roles, responsibilities, reporting lines and authorities. This analysis supported a meeting with principals from the Management Advisory Team and key commodity analysts in a “Groupware” session. This MAT Meeting employed a facilitated discussion in which computer terminals were used to “brainstorm” significant issues and derive some of the recommendations that are found in this second phase report.

The Team analyzed the data gathered during the interview phase to determine what functions are currently being performed. Based on this information, a series of activity models were developed and refined, that outlined the WASDE/ICEC process and included the participation from the various agencies. These process flow diagrams provided the starting point for a more detailed analysis of the WASDE/ICEC process, as well as an assessment of USDA resources required to support the process.

As a first step toward the resource assessment, all WAOB committee chairs were polled to provide a list of names of all commodity analysts that supported development and publication of the November and January WASDE reports. These surveys provided a rough measure of the total resources required in the WASDE/ICEC process and the names of those analysts involved.

The next step was to develop a model of the core business processes that were performed by a commodity analyst on a monthly basis. This model represents all commodity analysis processes, whether WASDE-related or only required to perform agency-related activities. The Datatrac/PwC Team conducted an independent verification and validation session with committee members and key stakeholders.

In order to gather information on the associated workload distribution and staff time, a workload survey was created. Understanding workload distribution and volume is critical to understanding



how much effort is being expended to achieve results and outputs. The survey was used to collect best estimates of WASDE/ICEC related workload for each of the core business processes contained in the core business process model. This analysis considered the type of activity, the staff resources used, priority of activities and the equity of work distribution between work areas. The survey was reviewed by an independent verification and validation group, as well as by the January MAT Meeting members. The results of this workload survey are contained in this second deliverable.

Based on the market research conducted during the first phase of the project, the Datatrac/PwC team collected and prioritized information on customer uses and preferences for the WASDE. The Team evaluated the preferences of the customers against the business process models that were previously developed. A rigorous analysis of the outputs and processes and matching them against customer preferences assisted in identifying areas that could be sources of increased value or improved operational efficiency.

2.1.4 IDENTIFY CRITERIA AND CREATE A MECHANISM FOR RE-EVALUATION

Overall, the team established and documented a thorough process baseline for the WASDE/ ICEC process including identification of activities, workflow, methods and procedures, and organizational structure. Finally, with business processes defined and workload information gathered, the Datatrac/PwC Team evaluated a scenario for re-evaluation of the WASDE/ICEC process on a periodic basis. This scenario included performance measurements and metrics. This capability will provide the necessary information for comparing workload of the ICEC support agencies now and in the future.



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SECTION 3 – ORGANIZATIONAL IMPROVEMENT

3.1 INTRODUCTION

Total resources in some agencies have declined while priorities have shifted in others. For example, the overall staff reductions across the Department since the reorganization of 1994 has been about 15%. Whereas, the staff reductions in agencies supporting the WASDE have ranged from 2.5% in FAS to 32.4% in ERS. During times of changing priorities and fewer resources, the accountability and reporting mechanisms for resources become more closely scrutinized. In the current environment, agency supervisors are being asked to “do more with less.” At the same time, however, a workload survey shows that some ICEC have only a single commodity representative from key agencies. The misalignment in the organization and reporting structures has exacerbated relationships among ICEC stakeholders who are asked to choose “either-or” between the ICEC process and their agency programs.

3.2 ORGANIZATIONAL RESTRUCTURING OF ICEC

Background and Discussion of Current Structure: The World Agricultural Outlook Board (WAOB) was established on June 3, 1977, by Secretary’s Memorandum 1920, entitled “*World Food and Agricultural Outlook and Situation Board.*” The Board’s main responsibility (as directed by 7 CFR Volume 1, Subpart L) is to coordinate and review all commodity and aggregate agricultural and food data and analyses used to develop outlook and situation material within the Department of Agriculture. The WAOB has four main areas of responsibility:

1. Agriculture outlook and situation;
2. Interagency Commodity Estimates Committees;
3. Weather and climate; and
4. Remote sensing.

The focus of this organizational assessment will be to examine the WAOB with respect to function #2, the creation of the Interagency Commodities Estimates Committees as it relates to the production of the WASDE reports.

All of the responsibilities related to the ICEC are delegated to the World Agricultural Outlook Board Chairman through the Chief Economist of the USDA. Table 3 below clearly delineates the responsibilities of the Chairman of the World Agricultural Outlook Board with respect to the ICEC:



Table 3 – Responsibilities of the WAOB Chair

Chapter 7 Subpart L, Delegations of Authority by the Chief Economist, CFR 2.72

2.72a(3) Related to interagency commodity estimates committees.

- (i) Establish Interagency Commodity Estimates Committees for Commodity Credit Corporation price-supported commodities, for major products thereof and for commodities where a need for such a committee has been identified, in order to bring together estimates and supporting analyses from participating agencies, and to develop official estimates of supply, utilization, and prices for commodities.....;
- (ii) Designate the Chairman, who shall also act as Secretary, for all Interagency Commodity Estimates Committees;
- (iii) Assure that all committee members have the basic assumptions, background data and other relevant data regarding the overall economy and market prospects for specific commodities; and
- (iv) Review for consistency of analytical assumptions and results all proposed decisions made by Commodity Estimates Committees prior to any release outside the Department.

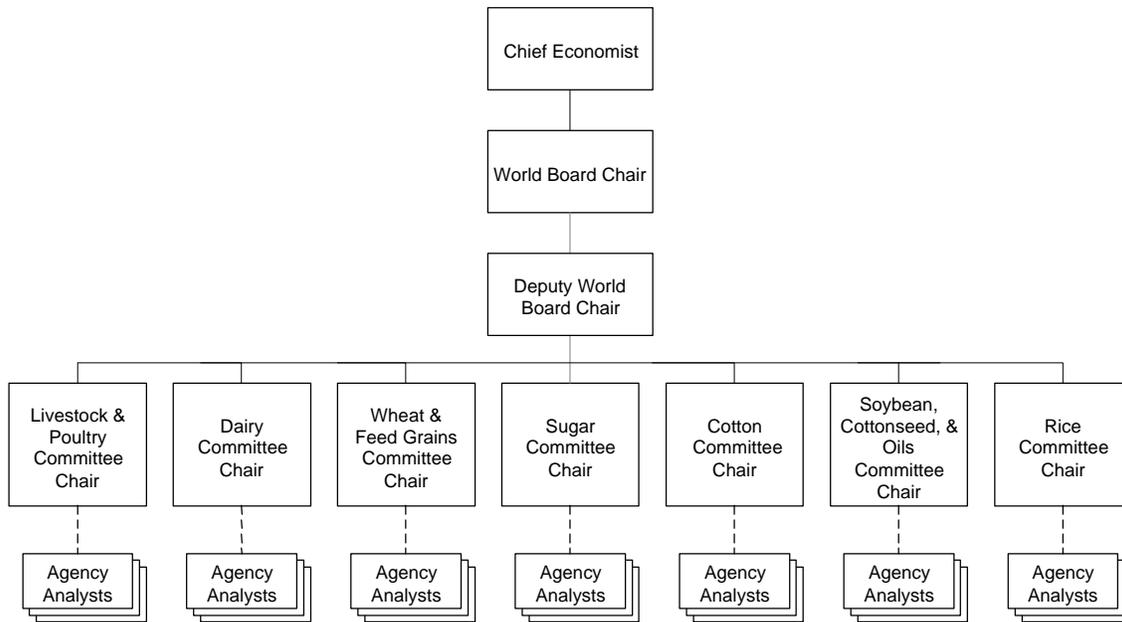
In addition, the WAOB also has the responsibility to do the following:

2.72a(5) Related to long-range commodity and agricultural-sector projections.

Establish committees of the agencies of the Department to coordinate the development of a set of analytical assumptions and long-range agricultural-sector projections (2 years and

These delegations led to the development of the current WAOB/ICEC organizational structure shown in Figure 2:

Figure 2 - ICEC Organizational Structure



The WAOB, headed by the World Board Chairperson (and supported by a Deputy Chairperson), consists of nine Interagency Commodity Estimating Committees. As shown in Figure 2, each committee creates commodity estimates pertaining to a specific commodity: Livestock, Poultry, Dairy, Wheat, Feed Grains, Sugar, Cotton, Soybean, Cottonseed and Oils, and Rice. In two instances, committees have been combined: Livestock & Poultry and Wheat & Feed Grains.

Each committee is headed by a Committee Chairperson. There are currently six Committee Chairs (one Chair heads both the Wheat and Feed Grains committees, and one Chair heads the Livestock and Poultry, and Dairy committees). Each committee is supported by 3 to 25 analysts from each of the four USDA agencies that contribute to the ICEC process: the Economic Research Service, the Foreign Agriculture Service, the Farm Service Agency, and the Agriculture Marketing Service. The analysts bring general economic knowledge and specialty information on both domestic and foreign production and markets to the process for developing the WASDE reports. Within the ICEC organizational structure, only the WAOB Chairperson, Deputy Chairperson, and Committee Chairs are WAOB employees funded by appropriations of the Office of the Chief Economist. All analysts are employed by the agencies mentioned above and dedicate some portion of their time (approximately 25% over and above agency-related tasks) to ICEC activities.

The Current ICEC organizational structure balances Authority and Responsibility, but fails to appropriately handle matters of Accountability: As stated in the First Deliverable, the WASDE production process is sound though threatened by changes in agency priorities and reductions in appropriations. In the past, when more analyst resources were available in each agency, providing



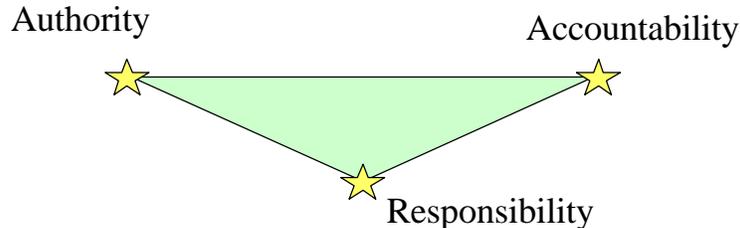
expertise to support the WAOB was less contentious. There was no need for the WAOB Chairperson to assert authority in order to maintain adequate agency resources because agency heads had enough analysts to assign to the ICEC process. The analysts, in turn, had the capability to balance their commitments to their agency as well as to the ICEC process. When an analyst was not able to participate in the ICEC process in a given month, the WAOB Chair tried to maintain a flexible system so that other analysts could substitute for one another.

Today, however, lapses in analyst participation are becoming more frequent due to constrained resources in many of the participating agencies. In attempts to conserve agency resources, some agency heads have reduced their analysts' participation in the ICEC process to a bare minimum. As a result, the WAOB Chair has raised concerns about his ability to maintain a quality product if resources and participation decline further.

3.3 THE ORGANIZATIONAL TRIAD—AUTHORITY, RESPONSIBILITY AND ACCOUNTABILITY

A well-aligned organizational structure has clear linkages between an individual's authority, his or her responsibilities, and that for which he or she is accountable.

Alignment of Organizational Functions



The World Board Authorities and Responsibilities: Within the organization of ICEC resources one main deficiency exists—the misalignment of authority, accountability, and responsibility.

The CFR above clearly delegates the *authority* to establish ICEC committees to the World Board Chair. This delegation of authority also implies that the World Board Chair has the authority to ensure the participation of agency analysts and to ensure that the analysts involved in WASDE production are qualified. (Legal opinions have supported this interpretation of the CFR by commenting that in the absence of the participation of agency analysts, the delegation of authority to the World Board Chair to establish committees does not make sense.)

In addition, according to the CFR, the World Board Chair is *responsible* for ensuring the quality and independence of the WASDE report. The World Board Chair is also responsible for ensuring that the analyst resources participating in the ICEC process have access to relevant data and produce high-quality estimates. Therefore, in the current state, authority and responsibility to



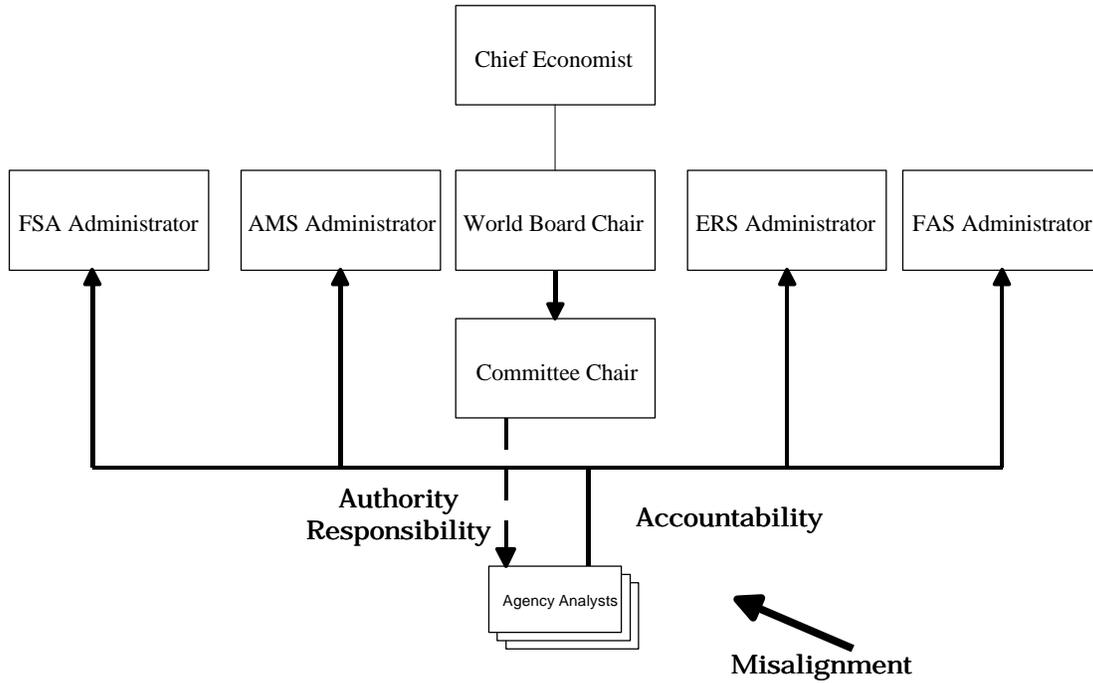
request and to utilize quality resources from different agencies for ICEC related activities reside with the World Board Chair.

The Agencies' Accountability: As mentioned previously, the analysts completing much of the work for WASDE production are detailed from four separate USDA agencies. The CFR is silent on the issue of accountability with regard to ICEC analyst resources. In the absence of direction from the CFR or the World Board, the agencies have assumed *accountability* for the analysts in their responsibilities both to the agencies and to the ICEC function. That is, all reporting mechanisms, performance appraisals, pay determinations, promotions, etc. for the analysts (including as they pertain to ICEC activities) reside and are executed within the agencies. Formally, the World Board has done little to provide agency supervisors with management information regarding WAOB requirements or the analysts' performance while participating in ICEC activities. However, one mitigating factor in this imbalance between the role of the WAOB and that of the support agencies may be the fact that, unlike the other agencies, FAS has a rather close alignment between their mission to expand exports and the goals of the WASDE/ICEC process.

In addition, in the absence of formal direction and information from the World Board, agency supervisors have assumed *responsibility* (appropriately or not) to supply the World Board with qualified resources and to ensure that agency analysts participate in the ICEC process. Although the World Board has the authority and responsibility to ensure the quality of the WASDE report and, as such, to ensure the participation and quality of agency resources involved, the World Board has done little to communicate requirements and priorities to agency supervisors. The World Board does not collect management information that would be useful to agency administrators and supervisors in setting priorities or in directing an appropriate level of participation for ICEC activities. Furthermore, the World Board does not supply agency heads with management information indicating the appropriate competencies and skill levels that ICEC analysts should possess.

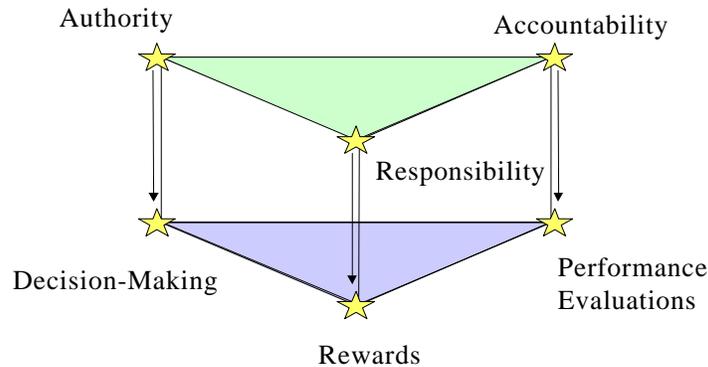
This creates a problem in that agency heads are being held accountable for analysts' performance and, in the absence of demonstrations of World Board responsibility, are assuming responsibility for the quality and participation of ICEC resources. The agency heads have little knowledge with regard to performance, the desired skills and competencies, or the required level of their analysts' participation in ICEC activities. This dynamic creates a management information "knowledge vacuum" between agency heads and the WAOB *that*, in times of declining resources, will ultimately lead to miscommunications, misinterpretations of intentions and, as we have seen in this case, a struggle for resources. This misalignment is shown in Figure 3.

Figure 3 – Organizational Misalignment



The Organizational Components Triad—Performance Evaluation, Decision-making, and Rewards: Related to the organizational triad is a more tangible framework that more clearly addresses activities that are important to organizational effectiveness. The diagram below demonstrates the inter-linkages between the “Organizational Triad” and the Activities Framework. Decision-making is a clear manifestation of authority, performance evaluation of accountability, and rewards for taking responsibility. In order to realign the ICEC function according to the fundamental principles of organizational design, the associated alternatives described in the section 3.5 should be evaluated.

Alignment of Organizational Functions Related to Evaluation and Rewards





3.4 LACK OF APPROPRIATE REWARDS SYSTEM

Related to the lack of reporting structures is the lack of a rewards system for participation in the ICEC process. Currently analysts do not receive rewards or incentives for their participation. The World Board relies solely upon authority of the CFR and on the individual enthusiasm and professionalism of its analysts to complete its mission.

This is not a good human resource management framework. According to the science of organizational design and human resource management, the purpose of organizational structure in business operations is to create an environment that supports the efficient execution of the mission and of the core business processes. The science of organizational behavior deals with important human behavioral considerations in setting up a structure so as to motivate participants to behave in ways that are conducive to effectively fulfilling the mission of the agency.

Without rewards and incentives that communicate priorities and requirements, individual enthusiasm for participating in ICEC activities may decline in an environment of strained resources. While there is no formal incentive to participate in ICEC activities on one hand, the agencies on the other hand are rewarding, through promotions and pay raises, behavior that complies with and contributes to the agencies' mission. Moreover, it would be only natural, "when push comes to shove," that analysts would have more allegiance to their agency because the World Board does not influence performance reviews and rewards.

3.5 ALTERNATIVES FOR ORGANIZATIONAL REDESIGN

In order to solve the current organizational problems within the ICEC structure, the Datatrac/PwC Team identified a set of fundamental criteria that must be met to ensure the quality and robustness of the ICEC process and resulting WASDE reports. The criteria were compiled from information gathered during the interviews with the ICEC leadership and from analysis of the ICEC mission as it relates to WASDE production. The Team determined that the optimal organization structure for the ICEC in producing WASDE reports must meet the criteria in Table 4 below:



Table 4 -Criteria for Evaluating Organizational Alternatives

<i>Consistent Mission</i>	The ICEC process must occur in an organization in which the primary mission emphasizes and supports the determination of short term commodity supply, utilization, and price estimates.
<i>Independent</i>	The ICEC process must occur in an organization that is independent of specific agendas and political biases.
<i>Consensus Building/ Facilitates Buy-In</i>	The ICEC process must occur in an environment that supports an effective consensus building process. The ICEC process must facilitate buy-in from all participants that the process is effective, necessary and important.
<i>Multitude of Viewpoints</i>	WASDE reports must incorporate information and expertise from a number of agencies.
<i>Industry-Specific Knowledge</i>	The ICEC process must leverage knowledge from analysts with industry-specific expertise.
<i>Aligned Organizational Triad</i>	The foundations of the ICEC organizational triad (authority, responsibility, and accountability) must be aligned.
<i>Minimal Restructuring Costs</i>	The ICEC organizational restructuring process should be the most valuable at the least cost.

The Team next generated a series of possible alternative organizational structures. These structures present variations in the alignment of authority, responsibility and accountability for the ICEC within the USDA. In addition, several propose the alignment or creation of a performance evaluation and rewards system. In all, six possible alternatives are presented and detailed in Table 5 below:



Table 5 - Options for Organizational Structure

1	<p><i>Status Quo</i> Continue developing the WASDE reports using the existing ICEC organization and process.</p>
2	<p><i>Move commodity estimating function to another agency, keep interagency interaction, improve reporting mechanisms</i> Move the commodity estimating function to another Agency. Continue using resources from <u>current support</u> agencies in developing consensus and in developing WASDE reports.</p>
3	<p><i>Move commodity estimating function to ERS, keep interagency interaction, improve reporting mechanisms</i> Move the commodities estimating function to ERS. Continue using resources from other agencies in developing consensus and in developing WASDE reports.</p>
4	<p><i>Move commodity estimating function to ERS, use ERS resources to produce the WASDE report, maintain ERS reporting mechanism</i> Rely solely upon ERS analysts to develop WASDE reports. Do not bring in analysts from other agencies.</p>
5	<p><i>Maintain commodity estimating function at WAOB, dedicate agencies' analysts to the World Board to produce WASDE report, improve reporting mechanism</i> Dedicate analysts from the four agencies to the WAOB in order to work solely on ICEC analyses.</p>
6	<p><i>Maintain current structure but improve reporting mechanism.</i> Keep the existing ICEC organizational structure. Improve reporting communications between the WAOB organization and the agencies so that either the committee chairpersons or Board Chair has input into the performance evaluation of analysts from each agency.</p> <ul style="list-style-type: none"> • Develop incentives or rewards to compensate ICEC analysts. • Create process in which World Board Chair is able to choose resources from a pool of resumes provided by each agency. • Ensure that WAOB Chair articulates priorities, skill competencies and expectations with respect to dedication of agency resources. • Implement form of succession planning.

The Team then examined each structure with respect to the performance criteria in Table 4 above. A summary matrix (Table 6 below) displays those structures that met the criteria discussed above. A particular model either did or did not meet each criteria. Each criteria was given equal weight. The total number of criteria met by each model is summed in the last column of Table 6.



Table 6 - Results of Organizational Options Fit to Performance Criteria

	1	2	3	4	5	6
Option/ Criteria	Status Quo	Move function to Other Agency	Move function to ERS and use Agency Analysts	Move function to ERS and use ERS analysts	Dedicate Agency Analysts to WAOB	Change Reporting And Reward Structures within the existing Organization Structure
Consistent Mission	X				X	X
Independent	X		X	X	X	X
Consensus Building/Facilitates Buy-In	X	X	X			X
Multitude of Viewpoints (Interagency)	X	X	X			X
Industry-Specific Knowledge	X	X	X	X	X	X
Aligned Organizational Triad				X	X	X
Minimal Restructuring Costs	X					X
Total (7 possible)	6	4	5	3	4	7

From the table above, it is clear that the option that satisfies all requirements is the option, that maintains the current structure of the ICEC within the WAOB but significantly improves the reporting mechanisms between the WAOB and the agencies. A discussion of each model with respect to the criteria is below. In each case, pros and cons of each model are detailed in the following sections.

1. **Status Quo:** The current model is sound in that the ICEC structure is an independent organization that is consistent with a short term commodity-oriented mission using a consensus building format. In addition, estimates are based upon a multitude of viewpoints and industry-specific knowledge. This process facilitates buy-in from all participants. Problems arise, however, due to the misalignment of authority, responsibility and accountability as addressed in the previous section.
2. **Move ICEC Process to Another Agency:** Moving the ICEC activities to another agency would create a number of new problems within the ICEC process. First, the movement of the ICEC process to another agency may lead to a conflict of mission. The ICEC produces mainly short-term commodity estimates whereas the other agency may have a different focus and different priorities. If the agency begins to advocate missions or priorities that are not



consistent with short term commodity analysis, agency administrators would have to choose which demands require more urgent attention. This might cause certain responsibilities to be neglected. Second, resources would need to be transferred from the WAOB to the other agency or resources within the other agency would need to dedicate themselves to WASDE production. In addition, the Code of Federal Regulations, that delegates authority and responsibility to the WAOB and ICEC, would need to be rewritten and adopted. This process would be more costly and time consuming than some of the other alternatives.

3. ***Move ICEC Process to ERS:*** Moving ICEC to ERS would result in same problems as indicated under the “Move the ICEC to Another Agency.” ERS, however, maintains independence from programs and would thus be free from the appearance of program bias.
4. ***Move ICEC Process and Analyst Function to ERS:*** Moving the ICEC and Analyst Function to ERS is a more radical realignment than the second option in that no interagency views and information would be included in the ICEC process. Instead, ERS employees and analysts would assume all responsibility for estimate creation. This would compromise the requirement for agency buy-in and might harm credibility within the Department as a whole as to the validity and accuracy of the estimates previously based upon program expertise from a multitude of agencies. Again, this would be a costly process, forcing ERS to request new resources in a resource constrained environment. It would also require that the CFR be rewritten so that core principles guiding the ICEC process (such as interagency representation, independence, and multitude of expertise) be modified to support the new structure. On a positive note, however, problems concerning authority, accountability, reporting and rewards could be addressed in the redesign of this new structure.
5. ***Dedicate Independent Analysts from Other Agencies to WAOB:*** Dedicating independent analysts from other agencies to ICEC activities would result in an independent organization with clear authority, accountability, and reporting structures, but would exclude the agency specific expertise cultivated within the separate agencies now participating in the process. The process often relies on other experts within the agencies to synthesize information and to conduct analyses before sending agency representatives to ICEC meetings. These extra resources might be lost under this option. In addition, the exclusion of active agency resources might result in a loss of buy-in from other agencies on the validity of the WASDE results. In addition, the agencies would have to give up already scarce analyst resources to the WAOB, or the WAOB would have to hire extra analysts. Either way, the end result would be a more costly restructuring process with additional difficulties in ensuring the independence and consensus of the reports.
6. ***Add Reporting and Rewards Activities to Current Structure:*** Improving the management reporting functions within the ICEC organization would meet all the criteria listed in Table 4 above. This option would retain the current organizational structure and would thereby require minimal restructuring costs. This current structure allows the ICEC to focus on a single mission, remain an independent organization, use a consensus building model, and incorporate a multitude of viewpoints to facilitate estimate production. In this way, industry-



specific knowledge is leveraged. At the same time, changes in management reporting functions would create an additional advantage: the alignment of the organizational triad (authority, responsibility and accountability).

3.6 ALIGNMENT OF THE ORGANIZATIONAL TRIAD WITHIN THE EXISTING ICEC ORGANIZATION

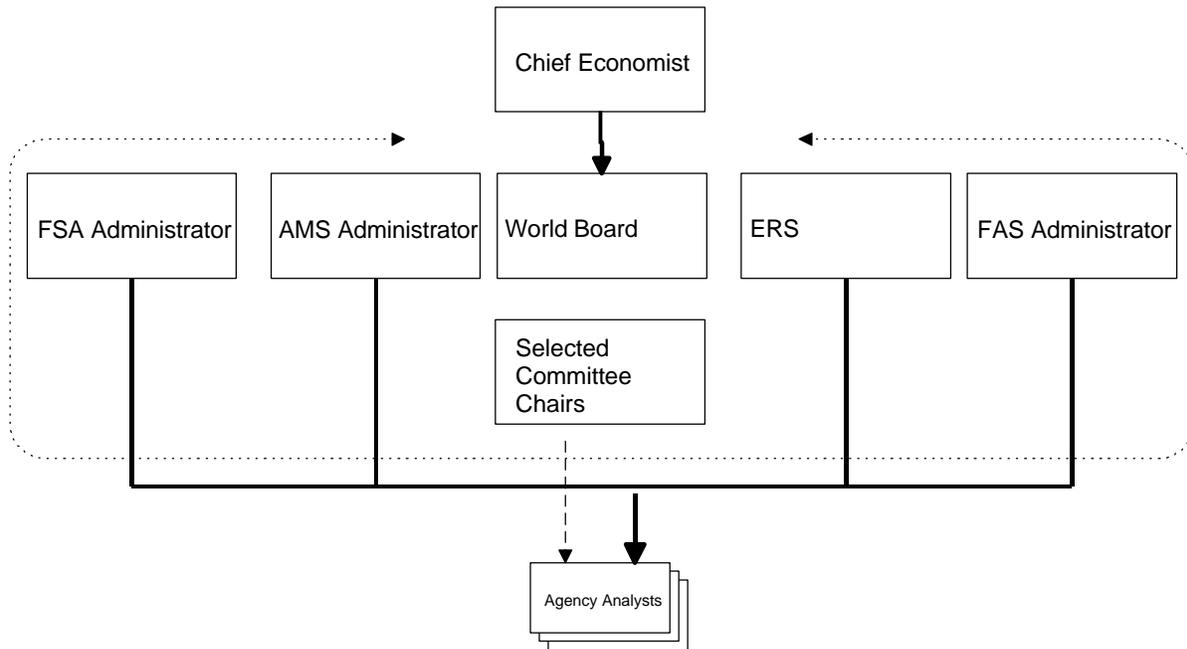
The Datatrac/PwC Team recommends the development of a system for improved communication regarding ICEC authority and responsibility and improved reporting mechanisms to strengthen accountability. Communication between responsible management officials on the following issues is key:

Communication acknowledging WAOB Chair authority: As stated above, recent concerns over agency resource constraints have had their effect on the ICEC process. During these times, the WAOB Chair has asserted his concern for the adequate resources and for the quality of future WASDE reports. The WAOB Chair, however, has met some resistance because of a misunderstanding of the Board Chair’s authority to require the participation of agency analysts with the necessary skills to support the ICEC process. This authority must be reaffirmed by the Department and acknowledged by supporting agencies in order for the WAOB Chair to acquire the proper skill set. In addition, agency heads must recognize the importance of and necessity for certain analysts to dedicate the forty-odd hours each month to the WASDE production process. This is not to say that this recognition eliminates flexibility for the agencies to rotate these experts, but communicates the fact that the WAOB Chair has the authority to utilize expertise from various USDA agencies during the time necessary to complete the ICEC process.

Cooperation Requires Communication: The World Board should improve communications with agency heads during “MAT” meetings: In order to justify the participation of current and future analysts, the WAOB must be able to effectively communicate the level of current analyst participation as well as of additional resource needs to agency heads. Knowledge of resource needs could easily be assimilated during periodic meetings with ICEC Committee Chairs. This information could then be presented to agency representatives in a forum similar to the Management Advisory Team (MAT) meetings currently used to conduct this project. This forum could be held on a monthly or quarterly basis. It would allow both the WAOB Chair and agency heads to present their concerns and needs in order to achieve a compromise. Consistent with the authority of the WAOB Chair, agency heads would be able to contribute with respect to agency resource contributions to the ICEC process. The need for this type of periodic meeting is underscored by the current turnover in senior supervisory positions at all supporting agencies (particularly administrators at AMS, FAS and FSA where administrators are non-career positions). This forum would allow in-coming supervisors to better understand the ICEC process, their responsibilities to contribute to the process, and the current needs of the different committees.

Key participants in the communication forum are show in Figure 4.

Figure 4 -Proposed Management Advisory Team Structure



Communication of expectations: The ICEC committee chairs have expressed concern over the level of participation by certain analysts. The committee chairs acknowledge the tremendous workload faced by those analysts trying to complete both agency and ICEC commitments, but concede that only those analysts that actively participate on a regular basis are the most beneficial to the process. Therefore, the WAOB could benefit from outlining some basic requirements for participation in the ICEC process. Enforcement of professional concepts such as regular participation, preparedness, and related matters could greatly improve the efficiency of the ICEC process. In addition, communication about the specific competencies necessary for a strong performance would aid agencies in identifying appropriate resources. Currently, no such information is provided. If expectations are not met and specific performance problems arise, these issues could be communicated and discussed during the MAT meetings.

Similar direction from committee chairs to their analysts could also improve understanding of specific expectations the chair has for each analyst with respect to producing WASDE estimates. A brief one-on-one orientation session with each new analyst may help to solidify understanding of the ICEC process, individual analysts' roles, and specific tasks expected to be completed by each individual. If an evaluation and rewards system was also created, as suggested below, the specifics of this process should also be communicated during that session.



3.7 THE ALIGNMENT OF THE ORGANIZATIONAL COMPONENTS TRIAD

The following paragraphs describe the actions and procedures recommended to achieve alignment between the Organizational Components Triad and the Organizational Functions Triad.

Develop the analyst selection process: Currently, agency commodity analysts are “volunteered” to participate in the ICEC process. This forces the Committee Chairs to rely upon the enthusiasm and dedication of certain individuals for the production of WASDE estimates. At times, this results in Committee Chairs utilizing the skills of individuals who do not greatly add to the process and resulting WASDE report. In order to allow committee chairs to create effective committees, the WAOB Chair must effectively communicate to the agencies the needs of each committee with respect to analytic resources. Then, the agencies, following this criteria, could send up to three resumes of analysts with appropriate skills from which the Committee Chair or World Board Chair could select. This system would allow agencies the flexibility to offer available resources, yet at the same time, would allow Committee Chairs and the World Board Chair the flexibility to build a more productive committee. In addition, the selection of an individual by the World Board Organization would instill a sense of allegiance to the ICEC organization, thus strengthening the idea of shared authority and responsibility over ICEC resources. However, the WAOB and supporting agencies will need to develop procedures that will ensure all employees have an equitable opportunity for consideration. In addition, FAS has rotated Washington office leadership providing relatively short-term opportunities for foreign service employees before reassignment overseas. This practice has implications for analyst selection and succession planning that are unique to that agency.

Develop a performance evaluation system: Currently, agency supervisors prepare annual assessments for analysts despite the amount of time spent by that analyst on ICEC activities. As indicated by the workload assessment, for the majority of participating analysts, each spends one week per month on ICEC activities. Therefore, one fourth of an analyst’s work year is not spent in the agency, but under the direction of the ICEC committee chairs. Yet, ICEC committee chairs are not able to directly contribute to the evaluation of their analysts. The development of a performance assessment that could be completed by committee chairs and factored into the overall evaluation produced by the agency would improve the accuracy of each assessment since the assessment would reflect work performed both in the agency and on the ICEC committee. This tool would help committee chairs effectively communicate expectations and areas for improvement to each individual. Currently, many analysts stated that they are uncertain of how valuable their contributions are to the ICEC process and that they would find the feedback from the World Board extremely valuable.

Develop a rewards system: Every performance assessment should be accompanied by a complimentary rewards system that gives incentives for employees to perform well in any given position. If a committee chair observes that the work of one analyst is exceptional and this information is factored into the agency performance evaluation, the analysts’ efforts should be reflected in the appropriate reward system of the agency. Similarly, this individual would be



selected to participate in the ICEC process again. The opposite would be true if an analyst proved to be a poor performer. Hopefully, the incentive system should build prestige for the position of ICEC analyst and, hence, strengthen the quality of resources contributed to it. The combination of the evaluation system with a rewards system would align performance and incentives in an effort to communicate expectations, improve performance, and strengthen skills, loyalty, and job prestige, and bring renewed enthusiasm to analysts that are currently being pulled in multiple directions.

Conduct regular competency assessments: In order for the WAOB Chair to effectively communicate resource needs, analyst competency data must be available. To conduct competency assessments, the WAOB Chair must identify the competencies necessary for strong performance on ICEC activities as well as the competencies possessed by each analyst in order to compare the two. This study provides the necessary models (see Appendix 2) to define these competencies. In this way, skill gaps can be identified pertaining to demographic breakdowns (i.e. by committee or agency). Once gaps in skills are identified, the WAOB Chair can either recruit the appropriate resources from participating agencies or target training to develop skills within existing analysts. If done on a consistent basis, this process will indicate how competencies and aggregate skills change over time.

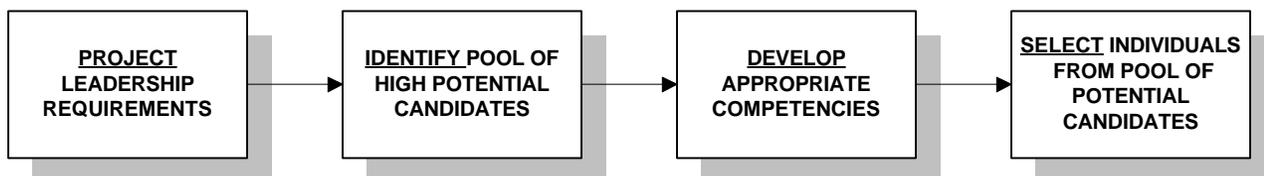
Develop a training program for committee chairs and analysts: Once the competency assessment results are tallied, gaps in skill level will be identified. These will present opportunities for developmental training. Training needs can then be prioritized, and a program of supplemental training can be created to improve performance in those areas of highest priority. Later, additional programs can be developed to aid in the development of the remaining skill areas. Therefore, the appropriate training programs are identified and implemented with respect to greatest need.

3.8 SUCCESSION PLANNING

3.8.1 INTRODUCTION

Managing succession is a way to match an organization’s future resource needs with individuals who are intentionally prepared for assuming such a role.

It is more than fingering a slate of replacements for certain positions. Instead, managing succession is a deliberate and systematic effort to perform the following process:



Project requirements: Within any robust organization requirements change and vary through



time. The USDA's ICEC process and the individuals involved in the process are no exception. Within the ICEC process, succession planning strategies should be developed for all positions. These strategies would vary by position—succession planning for the WAOB Chair and the Committee Chairs would require the development of strong leadership and facilitation requirements, whereas succession planning for the analysts would focus more upon analytical and teamwork abilities. To begin, leadership must identify the requirements necessary for an individual to perform well in a given position.

For the ICEC, projecting requirements means identifying and predicting the ICEC process' future need for strong direction and organization. At this preliminary step, specific individuals are not identified, but rather those qualities the individuals in a given position must exhibit are distinguished. With reference to the ICEC Committee Chairs, these may include objectivity, ability to create consensus, and strength of knowledge in production, trade, and program/policy issues for a specific commodity. This skill set would be different for those individuals targeted for the role of analyst. For analysts, WAOB members and upper-level management from the different agencies should work together to identify the appropriate competencies necessary for analysts to be successful contributors to the ICEC process. This definition will mean careful planning by both the WAOB and the agency heads due to the constrained resource environment in which most agencies are working.

Identify a pool of high potential candidates: Once future requirements are developed for each position, various candidates should be identified who exhibit these traits. For committee chairs, these individuals may include current high-performing analysts or experienced industry professionals. Likewise, the successor candidates to the position of the WAOB Chair should be a high-performing committee chair or equally qualified individual. With reference to the ICEC analysts, these candidates may include graduate students from applicable PhD programs, internal employees currently working within the USDA, or experienced industry professionals. For analysts, those individuals with superior analytical and teamwork abilities should be targeted. The key to this portion of management succession is to formulate a complete, comprehensive, and quality pool of “high potential” candidates.

Develop competencies in those candidates through intentional learning experiences: After a pool of individuals has been identified, the specific competencies that were outlined in the first deliverable become relevant. These competencies relate to various positions involved in the ICEC process, (e.g. analyst, committee chairs, and WAOB Chair), and include competencies specific to Substantive Knowledge, Understanding of Organization Mission/Goals, Teamwork, Product Management, Analytical Thinking, Communication, and Professionalism/Commitment.

The high potential candidates, who either already possess the identified competencies or have the potential to possess such competencies, should experience “intentional learning.” With reference to the ICEC process, this would include leadership development exercises such as team consensus building, and workshops to promote effective means of communication, thinking critically, group analysis, and team meeting facilitation and presentation.



The team recommends that the ICEC process leadership review the potential candidates for the analyst position on a yearly basis (competencies should be reviewed every two years as detailed in the competency assessment section) to ensure that the maximum number of individuals are targeted. Similarly, we recommend that development initiatives for these analysts also be provided on an annual basis due to the high turnover rate in some agencies.

Since the position of Committee Chair and WAOB Chair experience less turnover, we recommend that the potential candidates for these positions be reviewed every three years and that appropriate development activities be pursued on a tri-annual basis. Although turnover may not occur on a tri-annual basis, courses to refresh skills such as consensus building facilitation, team management and objectivity will work to focus energy on improving key skills important to the new roles. This process will ensure that those potential candidates are readied for a new position when it does arise.

Select individuals from among the pool of appropriate candidates: When competency requirements are predicted, candidates identified, and the appropriate competencies developed, the final step includes selecting individuals from the candidate pool. While many candidates will likely exhibit sound, useful, and appropriate competencies, certain individuals will clearly excel. It is this group of “exceptional people,” who should assume key positions that demand solid leadership related competencies.

3.8.2 WHY MANAGEMENT SUCCESSION PLANNING WORKS

There are many companies and organizations that have benefited from and continue to benefit from management succession planning, including the US Army, Motorola Corporation, and General Electric. While each organization differs in its’ makeup, employees, and culture, they each share common approaches to implementing a successful succession management plan.

Each organization relies on three fundamental principles:

- I. ***Invest in succession planning to add value and give the organization a competitive advantage:*** These three organizations each believe that the time, effort and money necessary to produce leadership and resource talent is worthwhile. The dividends of such investment include process innovation, increased quality of goods and services, and a healthy team approach to excellence that emphasizes results.

While the ICEC process has no direct competitor, they do provide a service. They must maintain the production of a sound and respected product. The means to this end is leadership and excellence.

- II. ***Tie development to organizational ends:*** These three organizations each maintain developmental initiatives that contribute directly or indirectly to strategic organizational directions. The values, culture, and competencies necessary to attain the strategic ends



are grounded in the developmental programs.

Executive leadership should act as the force behind organizational development.

Individuals at all levels are responsible for organizational revitalization, transformation, and competitiveness.

Like the US Army, Motorola, and GE, USDA key leaders must keep the organizational ends in sight while pursuing succession strategies.

- III. *Senior leaders drive resource development; line managers complement that involvement:*** The senior leader best knows where the organization is going, the avenues of those goals, the milestones that may mark the way, and the possible hindrances that might prevent progress.

Within the USDA, the Secretary is the senior leader. However, within the ICEC process, a senior leader must be identified and must assume the role specific to this process. It is only then, that this process may experience the success, that so many other public and private organizations have enjoyed.

Executive leadership should act as the force behind organizational development. Leadership at all levels is responsible for organizational revitalization, transformation, and competitiveness. Like the US Army, Motorola, and GE, USDA key leaders must keep the organizational ends in sight while pursuing management succession.

3.8.3 BARRIERS TO RECRUITMENT

Recruiting potentially able resources is not an easy task in both the public and private sector. It is especially difficult for the public sector for the following reasons.

Organizational Culture: A culture simply may not allow the fostering of new leadership and resource development.

Leadership and resource development are difficult to foster because agency resource levels are declining. Without ample staff and active recruiting, means are limited for training and development of potential candidates. Similarly, individual agency missions may also overlook the commodity analysis function. Each support agency must be committed to fostering ICEC resources, or succession management will be a difficult if not impossible task. Therefore, it is essential that senior leadership, reaffirm the ICEC process as a critical mission for all involved.

Low Priority Given by Senior Officials: Senior officials may have little interest in producing an environment conducive to leadership or resource development.

Senior officials are often busy individuals. With significant responsibilities within their organizations, it is often difficult to move their attention to their organization's future needs. Nevertheless, the USDA like any public organization should recognize that for the future to be



successful, one must train and recruit able people to assume positions upon their retirement.

Insufficient Resources: Basic lack of funds or personnel resources to implement training programs or other infrastructure to allow for resource growth.

As stated earlier, public organizations, including the USDA, face downsizing. Reduced staff resources and a limited budget do not allow for training initiatives or a large pool of high potential candidates.

Inadequate Rewards for Initiative/Risk: Promoting leadership development demands rewards for achievement.

The private sector rewards top performers and those who excel within their organizations with rewards, including various bonuses. In the public sector, the ICEC process being no exception, this direct performance and reward system does not exist. Without these incentives, the USDA faces a clear disadvantage in recruiting and retaining high-potential candidates. The reward structure should provide incentives for individuals to develop abilities in those competencies identified as development requirements. This will make the job more appealing to potential candidates as well as improve retention of high-performing analysts since analysts' efforts will now be recognized through tangible rewards.

Lack of Role Models: Future leaders are best fostered in an environment that currently contains able leaders.

Whether in the private or public sector, individuals learn by example. In the USDA, the ICEC process currently has able and solid leadership. However, many of those individuals face retirement in coming years. Once the more experienced resources leave, the organization may have difficulty fostering the growth of new candidates. Instituting a mentoring, or knowledge-transfer, process will be an important step in developing the pipeline of high-quality analysts with valuable skills needed to continue the process. This element is particularly important for the analyst positions where turnover is greatest. A mentoring initiative also could be supported by other analysts or by the committee chairs through a "coaching program" to help new analysts develop appropriate skills.

3.8.4 BENCHMARKING PRINCIPLES

Be it the private or public sector, there are a number of fundamental principles for managing succession and developing leaders and resources. In the paragraphs below, eight benchmark principles for managing a succession/leadership program are outlined. In the discussion following each summary the principle is applied to the ICEC.

Top organizational leaders are personally involved and deeply committed.

In the private sector, the chief executive officer (CEO) and other significant and top leaders are responsible for linking the direction of their organization with the priority to grow new leaders in order to produce future results.

In this case, the public sector needs to be treated like the private sector. Within our study,



these top organizational leaders include the World Board Chair and the Chief Economist. These two individuals must maintain an open line of communication and be committed to the implementing a successful plan for management succession.

Succession management processes are relatively simple and flexible and are integrated with strategic plans to identify and develop individuals who meet evolving organizational needs.

The strategic direction of an organization and the development of a corporate mission, starts with the top leaders. Because senior managers are preoccupied with many other responsibilities and are often already over committed, they need a clear and uncomplicated process by which to facilitate succession management.

As mentioned earlier, top leaders within any organization are busy individuals and often preoccupied with other more pressing issues. The USDA and the individuals involved in the ICEC process are no exception. Succession management does not have to be complicated or very time consuming for these leaders. A succession plan can be quite simple, but it needs to focus on working with supporting agencies to develop achievable strategic objectives. These may include the identification of various employee skills the subsequent integration of those skills into several task areas. In short, it may involve utilizing individuals for a variety of tasks due to decreased numbers of resources.

Succession programs are owned by line managers, supported by HR staff, integrated into HR processes, and consistent with the organization's culture.

While top leadership is critical for developing leadership at all levels, no less important are line managers. In fact, line management must implement policies for recruitment, staffing, appraisal, promotion, pay, reassignment, and development. They, like senior managers, are aligned with the strategic direction of the organization and the human resources (HR) professionals are partners in achieving the plan.

In the ICEC process, the line managers' role would relate to the joint effort of the committee chairs and the Agency heads. Their role should go beyond being managerial. These individuals should be involved in recruitment, staffing, appraisal, promotion, and leadership development initiatives.

A pool of high-potential leaders and thinkers is identified early and developed, rather than relying on a slate of replacements for current positions.

The most successful organizations do not focus on slating replacements for current positions, but instead develop a pool of potential candidates for each position. This pool is viewed as a corporate asset and is not "owned" by individual managers, departments, functions, or organizations. Similarly, shrinking numbers of middle management positions have led to individuals working in teams, work groups, and committees. New leaders benefit from this innovation and do not need to "look like" today's senior managers.

The USDA, like many organizations, must be proactive and identify a pool of high-potential candidates for employment, keeping in mind the competencies these individuals should



possess. This pool may come from key graduate school programs, from the private and public sector, or internally within the USDA (e.g. in another Agency).

Competencies are identified and regularly reviewed/updated; candidates are assessed and developed against those competencies. This review should involve all levels of the organization.

Competencies are the basis of the process because they signify what skills the individual brings and what they can produce for the organization. The core competency list must be updated on a regular basis as the future changes in the USDA mission and in the commodity function evolve. By providing an objective means to assess oneself, the identified competencies also allow for individual personal development. In general, organizations that value competency assessment take the time to identify what success looks like for their organization, and form a measurable means to assess candidates for future leadership positions.

For competency assessment to truly work, senior leaders, including line managers, need to review on a regular basis what competencies are vital to their organization, and which individuals possess or can be trained to possess those competencies.

This review process can take many forms, including 360-feedback, self assessment, and manager's ratings. However, the key is to provide a wide variety of inputs that enable senior managers to continually assess candidate's proficiency as measured against desired competencies. The USDA should review the competencies applicable to the ICEC process every two years. This will ensure that the competencies remain current with the requirements of any agency position.

Resource development uses three complementary means: varied job assignments, education/training, and self development.

The trend in personal development includes an increased emphasis on developmental work assignments for training purposes, and greater reliance on the individual for achieving their own growth. Education and training, specifically with reference to targeted competencies and organizational values remain important. Specifically, in-house training is the trend in many organizations.

In the face of downsizing, the USDA may choose to develop individuals with strong analytical skills that can be applied to a variety of commodity analysis tasks. Further reduction of resources simply will not allow commodity specialization in the future.

Senior leaders identify developmental goals for individuals and managers, expect them to achieve the goals, and hold them accountable.

Performance and accountability for outcomes are central ideas with reference to ensuring a successful management succession plan. However, holding individuals accountable is where



management succession often fails. Paperwork and complicated processes also often contribute to this failure. Nevertheless, identified outcomes and time frames for completion need to be part of the annual review process. Managers and individuals themselves need to be responsible. That responsibility means developing competencies according to a set development plan.

This development plan for the ICEC process may include documented benchmarks for each skill level based upon years of experience. With such benchmarks identified, managers (including Agency heads and committee chairs) will have a basis on which they can develop their plan.



SECTION 4 – EFFICIENCY IMPROVEMENT

"Over the years, man has taught himself to hoard knowledge to achieve power. Today, we have to reverse the tendency. Today, the most powerful individuals will be those who become a source of knowledge by sharing what they have, or what they can get their hands on, with others."

Robert Buckman,
Chairman and CEO of Buckman Laboratories International

4.1 INTRODUCTION

The purpose of this section is to identify and articulate where there may be opportunities to invest in changing ways of working for efficiency improvements in the WASDE/ICEC process.

A detailed assessment of recent process improvement and re-engineering initiatives has not been undertaken, as it was evident that there have not been significant initiatives to change or improve the WASDE/ICEC process, and the existing process has been well established for a number of years.

This section of the study is laid out under the following headings:

- A framework for identifying opportunities for efficiency improvements;
- Efficiency improvements through core business process design;
- Efficiency improvements through technology;
- Efficiency improvements and organizational structures; and
- Conclusions and recommendations.

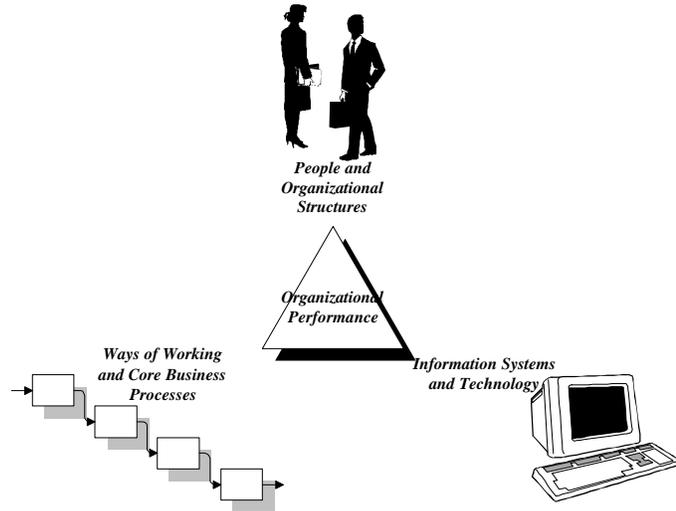
The assessment is based on the study team's knowledge and experience with the WASDE/ICEC process, derived from data and information gathered from staff interviews and independent research.

4.2 A FRAMEWORK FOR IDENTIFYING OPPORTUNITIES FOR EFFICIENCY IMPROVEMENTS

Organizations undergoing significant change are impacted in three important dimensions, depicted in the diagram below. When considering an organizational change and implementing efficiency improvement initiatives, these dimensions should provide targets of opportunity for management intervention.

By focusing the change in all of these dimensions, the organization has a better chance of sustaining operational performance.

Investments in operational performance in any organization must be made to ensure all of these dimensions are being addressed.



The opportunities for investing in efficiency improvement initiatives in the WASDE/ICEC are considered in the sections that follow. Those opportunities depend upon what would be expected in terms of an efficient process and to what extent the WASDE/ICEC process is meeting expectations.

Part of the First Deliverable was the development of three process models of the “AS-IS” WASDE/ICEC (see Appendix 1). These models were used as the basis for developing a Workload Survey Instrument (see Appendix 3). Based on data received from that survey instrument, a workload analysis was completed for sixty-three participants from four supporting agencies and the World Board (see Appendix 4). Interviews with managers and staff have also been conducted in support of the workload survey, developed specifically for this study.

4.3 EFFICIENCY IMPROVEMENTS THROUGH CORE BUSINESS PROCESSES DESIGN

This section identifies and presents potential efficiency improvements for the WASDE/ICEC process through an analysis of the WASDE/ICEC core business processes. This analysis provides a summary of the workload survey data that shows how USDA support agencies spend their time in assisting the WASDE/ICEC process. This section also presents a “TO-BE” (proposed future) core business process model as a way of capturing areas for efficiency improvement.

Our approach to capturing workload data has been centered on understanding and documenting the level of resource that contributing agencies provide to delivering core business processes. A WASDE/ICEC core business process model has been developed to provide a consistent baseline



and a platform for the assessment of workload. This model was first presented in the First Deliverable and is contained in Appendix 1.

The WASDE/ICEC core business process model provides a working framework from which to survey the resource requirements imposed on the analysts and other staff associated with the process. The purpose of the workload survey is to:

- Estimate the minimum level of agency resource required by the WASDE/ICEC process on a monthly basis;
- Estimate the ratio of agency resources expended for WASDE/ICEC-related vs. agency-related activities;
- Estimate the ratio of agency resources required by the WASDE/ICEC process during “heavy” and “light” months; and
- Capture related information such as the level and types of automation employed.

The WASDE/ICEC workload survey is contained in Appendix 3. The survey instrument was composed of a transmittal memorandum, discussion of the core business process model, and a Survey Form. The strategy for conducting the survey was:

- Keep it simple and brief (require less than 30 minutes to complete);
- Conduct the survey in small groups with plenty of opportunity for questions and clarification, and also consistency in the survey;
- Ask for minimum essential information. Workload estimates to be provided as “best estimates” of the percentage of time spent in each core business process each month;
- Provide opportunity for feedback; and
- Ensure privacy of individual responses by making them anonymous (data was aggregated for reporting purposes and no individual responses released).

Workload related data and information from the survey of those touched by the WASDE/ICEC process has then been evaluated and overlaid on the Core Business process Model (Figure 8) to give a graphical representation of workload data. From this analysis, a high level assessment of current workload may be made, and is presented in the following section.



4.3.1 HOW AGENCY COMMODITY ANALYSTS CONTRIBUTE TO THE WASDE/ICEC PROCESS

FTE Analysis: The Workload survey collected responses from 58 commodity analysts in FAS, FSA, ERS, and AMS. The results of the workload survey are contained in Appendix 4. Table 7 below, showing the computation of full time equivalent (FTE) commodity analysts and the percentage of FTE by core business process.

Table 7 – Computation of Full Time Equivalent Commodity Analysts

<i>WASDE/ICEC Core business process</i>	<i>Agency Input</i>	
	<i>FTEs</i>	<i>% of FTEs</i>
Evaluate Agency Data Requirements	6.8	11.8
Conduct Commodity Research & Analysis	21.9	37.8
Conduct Other Agency-Related Activities	7.2	12.4
<i>Sub-total</i>	36.0	62.0
Collect Data for WASDE	6.8	11.6
Prepare Data for WASDE	7.4	12.7
Build Outlook/Forecast Consensus	5.1	8.8
Prepare and Publish the WASDE	1.7	3.0
Measure WASDE Forecast Accuracy	1.1	1.9
<i>Sub-total</i>	22.0	38.0
<i>Total</i>	58.0	100.0

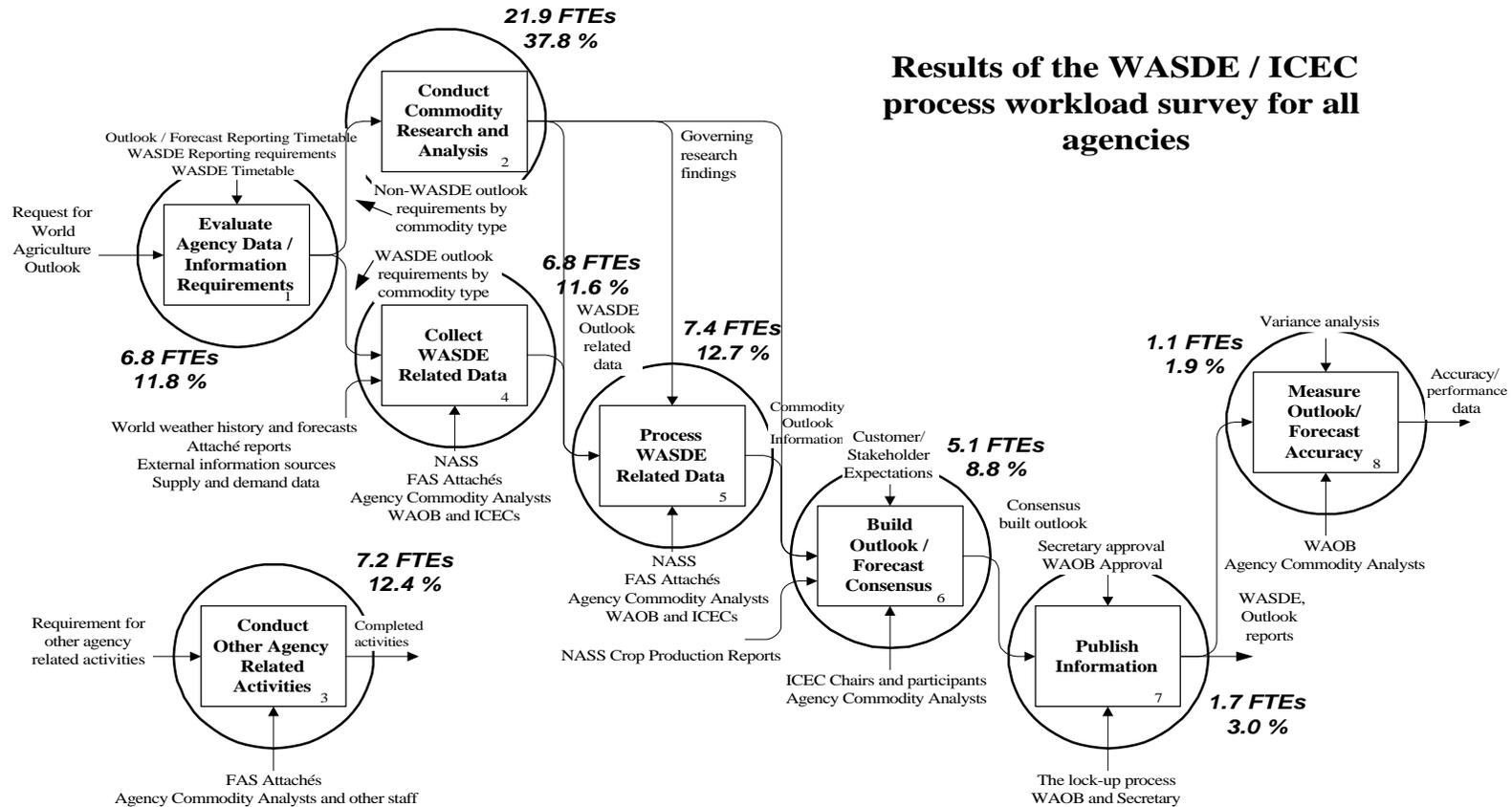
The Core Business Process Model has been overlaid with the results of the workload survey, as shown in Figure 5. A similar analysis is provided by agency, although for the sake of brevity these analyses have been included in Appendix 4. The significance of this analysis is in the order of magnitude of marginal equivalent FTE resources applied to the WASDE/ICEC process. Table 7 shows that the equivalent of 22 staff members from supporting agencies are employed in the process, in addition to the members of the WAOB. The total number of staff touched by the WASDE/ICEC process has been estimated from initial surveys to be between seventy and eighty. Thus, although not all staff participated in the survey, the survey represented a substantial sample for purposes of this study. Therefore, by extrapolating from the survey data, it is estimated that nearly 30 equivalent FTEs are required in the production of the WASDE through the end-to-end WASDE/ICEC process, for the busier months of the year.

The conclusion to be drawn from the analysis is that the level of FTE input is significant enough to consider implementing efficiency improvements to leverage existing process times and resource inputs. The process model in Figure 5 provides a graphical representation of the ICEC/WASDE process, overlaid with the results of the workload survey from Table 7.



Figure 5 -

WASDE/Inter-agency Commodity Estimates Committee Core Processes



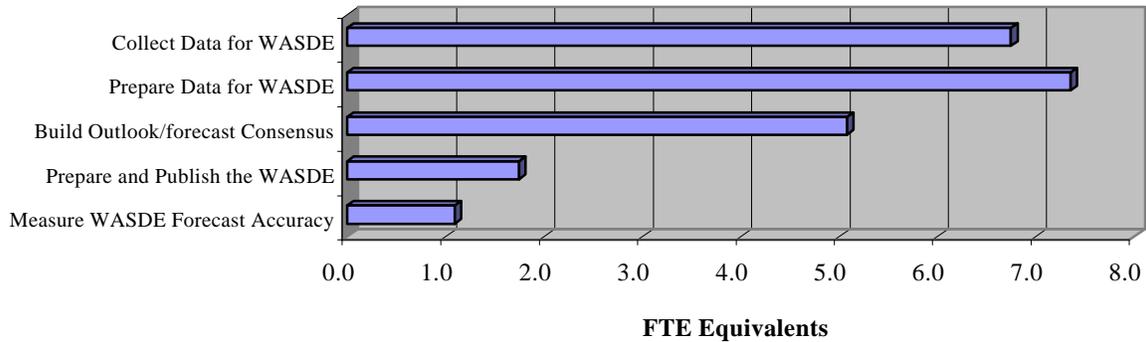


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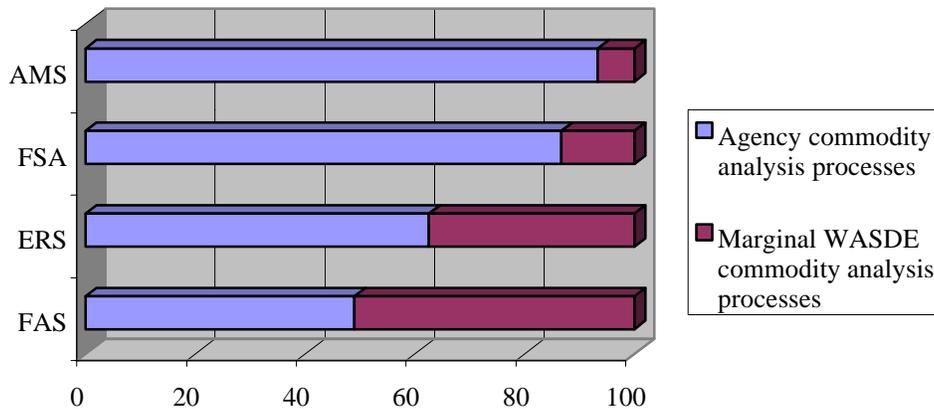
Marginal WASDE/ICEC Workload: The marginal WASDE/ICEC processes are depicted in Figure 6. The graph shows that the involvement of the agencies is heavily geared towards collecting and processing data for the WASDE/ICEC meetings and the time spent in building a consensus for commodity outlook reporting.

Figure 6 - FTE Equivalent Contribution to Marginal WASDE/ICEC Core Business Processes



Analysis of Workload by Agency: The WASDE and the ICEC processes rely on the contributions from participating agencies. The contributions to the WASDE/ICEC process in terms of the associated percentage of workload made by contributing agencies are shown in Figure 7.

Figure 7 - Percentage Workload by Agency for WASDE/ICEC Processes





The results of the workload survey indicated that each of the agencies contribute differing levels of support in terms of time spent delivering WASDE/ICEC core business processes. AMS provides the least amount of time and FTE resource, with ERS and FAS providing the greatest contribution to WASDE/ICEC core business processes.

Total resources in the WASDE/ICEC support agencies have declined dramatically since the reorganization of 1994. The overall staff reductions across the Department, based on 1993 staffing levels, have been about 15%. Whereas, the staff reductions in agencies supporting the WASDE have ranged from 2.5% in FAS to 32.4% in ERS (with AMS and FSA reductions at 12.5% and 23.3% respectively). Comparable data is not available for the World Board, but it appears that they have had a slight increase over that time period. As the availability of commodity analysts becomes even more constrained, the allocation of those resources to the WASDE/ICEC process will conflict with the goals of those very agencies upon whom success of the process depends.

Surveys conducted through this study (see Appendix 3) have revealed that the level of workload, as well as the number of commodity analysts involved in the WASDE/ICEC process, varies widely from agency to agency. As a rule of thumb, the average commodity analyst supporting the WASDE/ICEC process contributes one week (40 hours) to the WASDE each month. This is a significant level of effort that might be used for agency-related initiatives. The workload survey data in Appendix 4 can be summarized in Table 8.

Table 8 – Summary of Workload Survey Data

AGENCY:	No. WASDE Participants	Agency-Related Workload			WASDE-Related Workload		
		Avg. Monthly Hours	Agency Total	% of Total Hrs.	Avg. Monthly Hours	Agency Total	% of Total Hrs.
ERS	18	x100	= 1800	28%	x60	= 1060	25%
FAS	38	x79	= 3002	47%	x81	= 3078	72%
AMS	2	x138.5	= 277	4%	x21.5	= 43	1%
FSA	9	x149	= 1341	21%	x11	= 99	2%
Total Hours			6420			4280	
% of Total			60%			40%	

It is evident from Table 8 that there is a wide disparity in the level of effort provided to WASDE-related processes by the four support agencies. For example, the number of commodity analysts who participate in the WASDE/ICEC process varies (on average) from a low of two for AMS to a high of 38 for FAS. Overall, analysts from the four agencies divide



their time about 60/40: 60% in working for their home agencies (6400+ hours per month) and about 40% in working directly for the WASDE/ICEC process (4200+ hours per month). Table 8 shows that ERS analysts account for about 25% of the total hours expended on the WASDE compared with 72% for FAS. Comparable estimates for the other agencies are not statistically significant, but they are significant in terms of the reduced level of effort provided.

One question the workload survey has attempted to answer is: “Are the supporting agencies contributing enough resources to the WASDE/ICEC process for it to remain viable.” In terms of level of effort, the principal subscribers to the WASDE/ICEC process are ERS and FAS. Although the workload data shows that FAS contributes much more heavily to the process, than other agencies, the team had no yardstick to determine whether any of the other agencies were not contributing enough staff time to the process. This study found no evidence to correlate the missions of the supporting agencies to their current level of support for the WASDE/ICEC process.

Conclusions that can be drawn from the workload survey are that efficiency improvements should be targeted in the following areas:

- The level of effort required to support the marginal core business processes of the WASDE/ICEC process are significant to warrant focusing efficiency improvement efforts to reduce the level of resources required by the process, or to maintain and utilize the existing level of resources more effectively.
- Suggestions for building knowledge communities presented later in this section will identify appropriate resources from the agencies mandated to contribute to the WASDE/ICEC process.
- Alleviate contributing resources at the agency level, through leveraging analytical resources with more general knowledge and experience rather than the more experienced commodity analysts. For example, in ERS the ratio of staff qualified to Ph.D. level analysts to other staff is approximately 2 to 1. This presents an opportunity to assist Ph.D. staff by leveraging cheaper and more flexible resources in support of some core business processes that will free up the senior staff for either agency-related activities or more critical WASDE/ICEC processes, such as consensus building.
- This study found no evidence to correlate the missions of the supporting agencies to their current level of support for the WASDE/ICEC process. The principal motivators for agency involvement in the process appear to be a history of interest in commodity-related issues. There are no metrics available whether the level of support from AMS or FSA is adequate. A guideline is needed that provides either the incentive or the mandate for all four agencies to support commodity outlook forecasting and the WASDE/ICEC process.



4.3.2 THE “TO BE” PROCESS MODEL

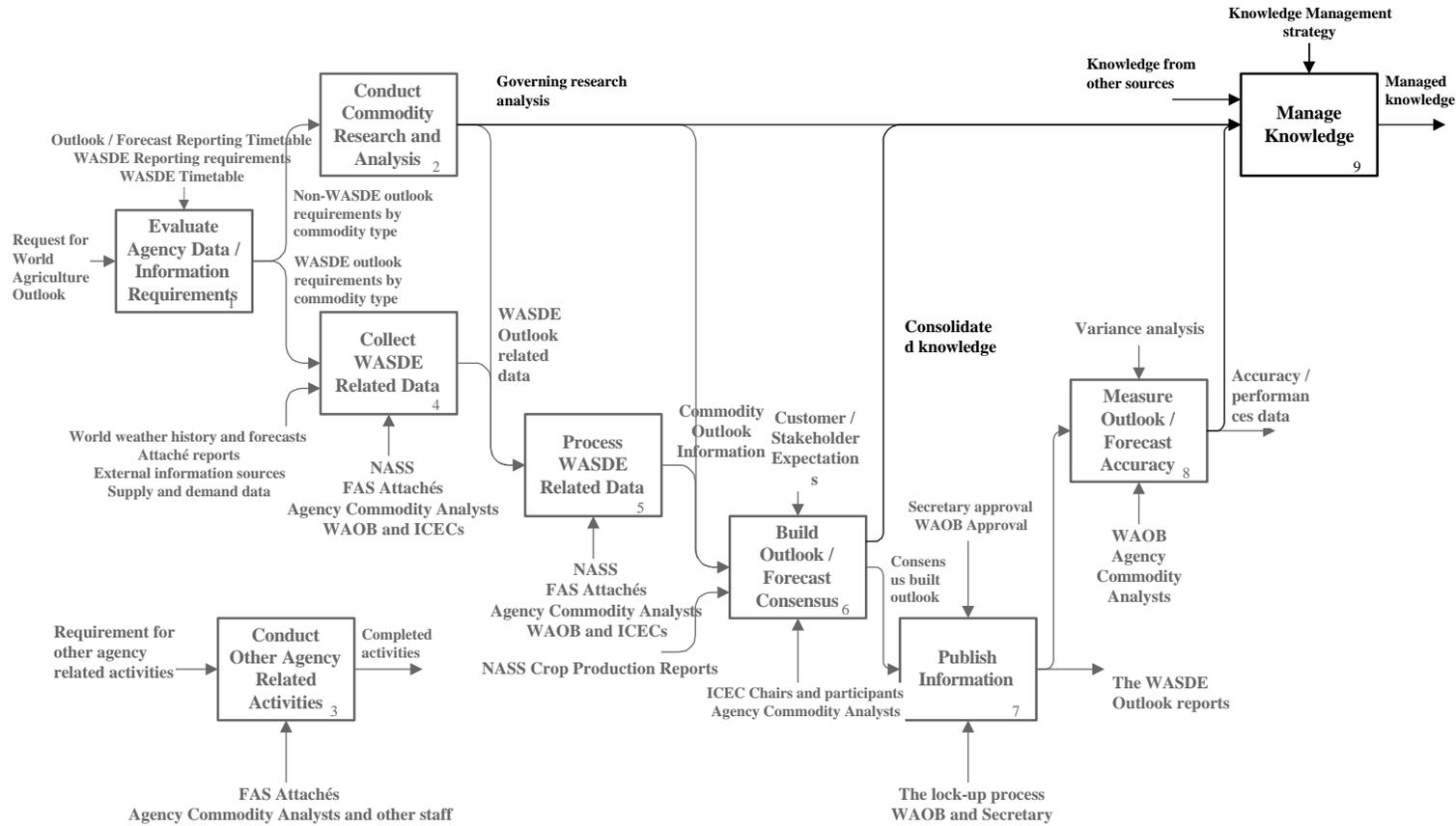
The characteristics and attributes of the WASDE/ICEC core business processes are such that the opportunities for performance improvement initially appear to be limited. The process is resource intensive, allowing for face-to-face interaction, discussion, and debate among agency resources with commodity expertise. These same resources support the delivery of the core business processes in line with what is expected of an organization charged with the mandate of producing management information. Even considering the WASDE/ICEC process at its lowest activity level provides only limited opportunity for efficiency improvements. For example, attempting to reduce the number of ICEC consensus building meetings to reduce the associated travel time would only impact the value of the WASDE in terms of reaching timely and consistent agreement on the final outlook forecast.

However, it is the broader consideration of functional operations where “knowledge management” of economic and commodity resources can draw out the opportunities with the greatest potential for efficiency improvement. There is no Department-wide information system in place to support the information needs of the end-to-end WASDE/ICEC core business process. Nor are there systems, processes, or operating procedures in place to support the capture, management, and dissemination of commodity-related knowledge, along with the underlying organizational design and culture to make it happen. Therefore, it is recommended that the area of knowledge management is where “biggest bang per buck” may be gained, rather than considering minor improvements in business processes and activities.

The “TO-BE” (proposed future) process model is presented as Figure 8 on the following page. The model includes a new process “Manage Knowledge” that will be referenced in discussion of efficiency opportunities presented in the following section.



Figure 8 - WASDE/ICEC "TO-BE" Core Business Processes





4.4 EFFICIENCY IMPROVEMENTS THROUGH TECHNOLOGY AND KNOWLEDGE MANAGEMENT

Knowledge management is an emerging discipline that stresses a formalized, integrated approach to managing an enterprise's tangible and intangible information and intellectual capital. For most enterprises, vast amounts of corporate knowledge lie outside of the realm of managed Information Technology assets (e.g., in documents on personal computer hard drives or in fleeting E-mail exchanges), including knowledge never captured in digital form or even explicitly articulated and documented. Even where information is captured in a managed format (e.g., database or document management system), much of the value to the enterprise comes from the know-how and expertise of the people who created the information or have used it in their work.

Knowledge management is a coordinated attempt to tap the unrealized potential for information sharing. Knowledge management may, therefore, be defined as a discipline that promotes an integrated approach to identifying, managing and sharing all of an enterprise's information assets.

These information assets may include databases, documents, policies and procedures as well as previously unarticulated expertise and experience resident in individual workers. It is important to note that a knowledge management system does not automatically imply a complex and costly information technology solution.

Knowledge management methods include developing, implementing and maintaining the appropriate technical and organizational infrastructures to enable knowledge sharing, and selecting specific contributing technologies and vendors. Organizations that actively manage and leverage customer knowledge and internal knowledge assets are able to respond to changes in the environment and lead their competition, providing excellence in the quality of their products and services.

Knowledge management is particularly important to organizations that are to be predominantly knowledge-based. Given the nature of the WASDE/ICEC process and the role of the WAOB, it is evident that the production of the WASDE draws on deep knowledge, experience, and expertise. The characteristics and attributes of the WASDE/ICEC process and its associated resources provides for the conclusion that the World Board, and those contributing to the ICEC process, are part of a knowledge-based organization.

As a knowledge-based organization, effective knowledge management can help the WAOB and the WASDE/ICEC process by:

- improving process and staff efficiency and performance;
- increasing the rate of innovation and both data and knowledge sharing;
- ensuring that vital knowledge is not lost when individuals leave the Department; and



- facilitating the efficient and expeditious building of consensus.

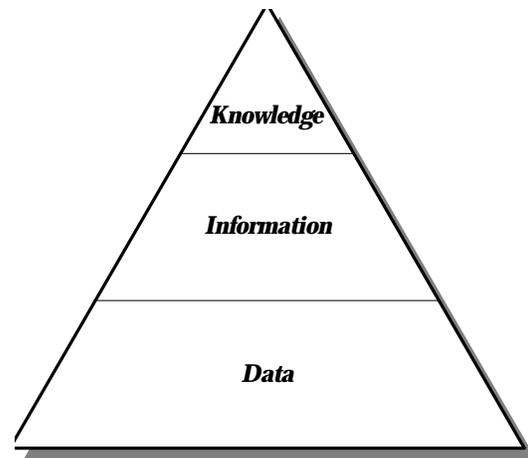
The following sections provide analysis of the potential application of knowledge management practices in the WAOB, supporting agencies, and the WASDE/ICEC process, and makes recommendations for bringing further improvements to the Department.

4.4.1 THE DATA TO KNOWLEDGE PYRAMID

The “Data-to-Knowledge Pyramid” provides a simple framework for assessing and understanding knowledge and where this fits within the hierarchy of a process or organization. This framework may be applied to the WAOB and to those involved in the WASDE/ICEC process.

There are four essential steps in achieving knowledge:

1. At the bottom of the pyramid lies data, the bits and pieces that may threaten to inundate the knowledge user, but form the foundation for the development of knowledge. The first step, therefore, becomes collecting and storing the data elements that are required to support the development of knowledge. Existing technology supports this through integrated and relational databases.



2. “Information is data endowed with relevance and purpose.”¹ Therefore, creating information becomes the second stage.
3. Understanding the relationships between data and their significance through interpretation provides information. The third stage is the development of knowledge, that is, taking information and applying it, and learning from the results.
4. Finally, in the fourth stage, experience and intuition, added to knowledge, provide wisdom. Wisdom is the top of the knowledge pyramid.

It is important to start with a high level appraisal of the WAOB and the WASDE/ICEC process as this will provide an initial indication of where potential operating and performance opportunities may reside. Table 9 provides such an appraisal by looking at best practices that apply from the bottom to the top of the Data-to-Knowledge pyramid. Table 9 assesses the current state of knowledge management as it applies to the WASDE/ICEC process and suggests potential improvement opportunities the Department might implement on each level of the Data-to-Knowledge Pyramid.

¹ “The Coming of the New Organization,” *Peter Drucker, Harvard Business Review*



Table 9 – Knowledge Management

<i>Pyramid development and best practice</i>	<i>Current position</i>	<i>Opportunity for performance improvement</i>
<p>Data: Data forms the foundation for the development of knowledge. Data elements and sets should be accurate, consistent, and reliable. Data should reside in a single database where possible, or more than one database where there are clear “master/slave” relationships for the ownership of the data.</p>	<ul style="list-style-type: none"> • There are no Department-wide systems for the collection and capture of economic and commodity analytical data. Databases are owned and reside in each of the agencies. • There is not a single database for the collection of WASDE/ICEC process related data. Data resides on individual PCs, both within the Board, and within those agencies contributing to the process. FAS provides the primary data source for foreign commodity data. NASS plays that role for U.S. crop data. The WAOB has control over neither data source. 	<ul style="list-style-type: none"> • Develop data sharing agreements among commodity focused agencies as a precursor to participating agency, or Department-wide systems for the capture and storage of WASDE related data.
<p>Information: The interpretation of data provides information, that should be made available to those seeking knowledge. Information is data placed into a context for interpretation and adding value. Commodity data is of little value until put into the context of the WASDE/ICEC consensus process</p>	<ul style="list-style-type: none"> • Similar observations apply as related to data above. • Generally, information is still held and managed at an individual level, with ownership being reinforced at the agency level. • However, information is being made more readily available via web-based technologies – posting information on agency internal and external web sites. 	<ul style="list-style-type: none"> • Create further mechanisms for publishing information, particularly utilizing web-based technologies. • Provide “meta-information,” such as information inventories, route-maps, and search engines to allow potential users to access the full population of information.



<i>Pyramid development and best practice</i>	<i>Current position</i>	<i>Opportunity for performance improvement</i>
<p>Knowledge: Taking information, applying it, and learning from the results. Creating a culture for freely exchanging information, views and opinions, and putting in place an infrastructure to enable this to happen.</p>	<ul style="list-style-type: none"> • Knowledge about commodities and forecasting their futures is highly regarded and held very closely. At some point in its development it becomes economic intelligence that must be safeguarded. At this stage computer based systems are shut off and knowledge is transferred through manual methods. 	<ul style="list-style-type: none"> • The opportunity for knowledge management <u>in this area</u> is considered in the section that follows.

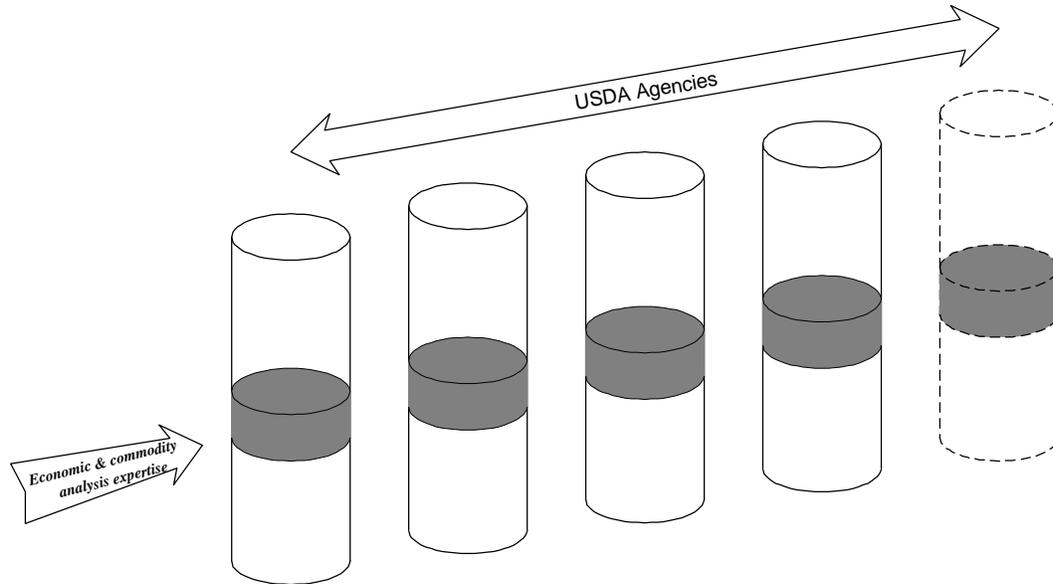
Using this framework provides a high level identification of potential improvements within a knowledge based organization. It is evident that through the complete end-to-end data to knowledge pyramid, there are opportunities for efficiency improvements to be made to the WASDE/ICEC process. These improvements are discussed in the next section.

4.4.2 KNOWLEDGE MANAGEMENT AND THE WASDE/ICEC CORE BUSINESS PROCESS

Using the definition of knowledge management above, it is clear that those involved in and touching the ICEC process and the production of the WASDE are knowledge experts, either by skill set or industry/commodity knowledge. The collection of these knowledge-experts forms the basis for a knowledge-based organization, as previously discussed.

Commodity and economic analysts reside within a number of agencies in the Department. Additionally, there are other individuals with the skills and competencies required to contribute to the WASDE/ICEC process and to the production of the WASDE. Specifically, these skills and competencies are set down under a separate section to this deliverable, following the work undertaken for the competency assessment. The current position of this functional expertise and knowledge management in the Department may be represented in the schematic in Figure 9 below:

Figure 9 – Current Functional Expertise and Knowledge Management in Department



The model in Figure 9 portrays the current situation where the economic and commodity analysis function within separate agencies of the Department are seen as organizational silos, or stovepipes with structural and cultural barriers between commodity analysts (knowledge experts) with similar areas of responsibility. Each of the cultural stovepipes is a repository of commodity data, information, and knowledge. The reasons for this stovepipe culture and management style are outside the scope of this study. However, the study effort has encountered the insular nature of USDA agencies through various forums² conducted as part of the study.

Each agency manages the expertise of commodity and economic analysts, as one of many functions within the agency, represented by the shaded part of the silos in the schematic. Each agency is responsible for the recruitment, training, performance evaluations, and direction of their staff in line with the mission and interests of the agency.

The WAOB draws upon this resource through its authority to do so under the CFR. In times when resources are constrained by reduced funding, the agencies are motivated to protect their resources for the benefit of their own agency objectives. Therefore, there may be some untapped resources with the correct skills and competency profiles that are not being employed in the WASDE/ICEC process. This potentially untapped resource is depicted as the shaded portion of the silo.

This model in Figure 9 has been used to identify potential efficiency improvements, and capture the relevant supporting observations. The paragraphs that follow recommend strategies for knowledge management practices in the Department, namely:

² Reference interviews by the study team.



- Knowledge management strategy;
- Commodity and economic analysis strategy;
- Knowledge management and information systems; and
- Knowledge culture.

Knowledge management strategy: The Department has no formal knowledge management strategy in place for the identification, management and sharing of information and knowledge. This has wide ranging implications for the WASDE/ICEC process, the WAOB, and supporting agencies. Potentially, there are two alternatives, although poles-apart, may serve as a focus for a general knowledge management strategy.

The first approach to a knowledge management strategy is the identification, management and sharing of knowledge by leveraging the use of information technology. The rise of networked computers has made it possible to codify, store, and share certain kinds of knowledge more easily and cheaply than ever before. Therefore, utilizing this strategy relies heavily on the use of structured databases and the development of a central repository for “people-to-document” knowledge objects³.

The advantage of this strategy is the ability to provide high-quality, reliable, and fast knowledge sharing. However, the accompanying disadvantages are that this standardized “cookie-cutter” approach may be seen as a replacement for creativity and brainstorming in reaching solutions to complex problems. For example, putting in place a standard econometric model for the manipulation and interpretation of FAS data would bring advantages in comparability. Further value may be added through the application of individual views and opinions on top of the data.

The second approach to knowledge management strategy is closely tied to the individual, and knowledge shared through direct person-to-person contacts. The use of IT, therefore, is limited to helping people communicate and share knowledge, not for the storage and processing of data for the creation of information. This approach is in line with traditional approaches to human “networking.” The advantage of this strategy is that it engenders a creative environment and strengthens human relationships. But it must be recognized that with this knowledge management strategy, corporate knowledge can disappear with the individual.

The best knowledge management strategy for commodity and economic analysis, within the Department, in support of the WASDE/ICEC process probably lies somewhere between these two poles. The greater the need for the “data” element of the Data-to-Knowledge Pyramid the more the strategy should favor the application of a “technology network.” The nearer the need is to the “knowledge” element of the pyramid, the more the “human network” strategy will benefit

³ Examples could include reports, presentations, spreadsheets and models, scanned press articles, etc.



the process. The important factor in selecting a strategy is to begin with a recognition that a knowledge management strategy is required, and form a project team to develop a tailored strategy that can become an ethos adopted by the WAOB and supporting agencies to manage the WASDE/ICEC process.

Commodity and economic analysis strategy: There is no formal strategy in place across the department to manage data and information by commodity or economic type. Departmental activities related to economic and commodity analysis have not been given a recognized identity a strategy to manage data and information by commodity or economic issue. Instead, agency commodity analysts are given direction and focus by the senior agency management.

Although the Department wishes to provide a single voice for commodity outlook and forecast reports (that is clearly satisfied by the WAOB and the WASDE/ICEC process), there is no clear strategy for the continued production of economic and commodity outlook and situation analysis. The WAOB is the primary business function of the Department in which the economic and commodity analyst contributions are formally recognized. A Department-wide strategy is needed to collectively bring together analysts with common interests from across the Department. For example, the WASDE includes outlook and forecast information for livestock.

However, there is no strategy in place to provide Department-wide direction for the identification of key issues affecting this commodity. The result of this is that there is not a clear understanding of existing knowledge and expertise within the Department and how this knowledge may be captured and dispersed among the community of analysts with shared interests. Additionally, the procurement of these functional resources is not coordinated on a Department-wide basis. Such a strategy would also facilitate the recruitment and accession for resource gaps within the Department, and a collective and collaborative business case to support budgetary funding increases. While this may not entirely be within the organizational reach of the WAOB, there is an opportunity for the WAOB to provide direction to this effort.

Knowledge management and information systems: The level of IT investment for infrastructure appears to be sound. The WAOB has a robust network that links to the USDA backbone. This provides both local-area network (LAN) and wide-area network (WAN) coverage. Additionally, the IT infrastructure provides the option for further development of the WAN through links to other agencies within USDA. However, the LAN at the WAOB is not being fully utilized; local PCs are the repository for analyst's data and information. There is not a WAOB or Department-wide system in place.

The WAOB and those agencies contributing to the WASDE/ICEC process do not utilize integrated knowledge management software tools and products. Very often consensus is built around data and information held on "folders and floppies," with no formal data, information, and knowledge sharing processes taking place.

Although E-mail is used extensively, knowledge and discussion databases designed to capture questions, responses, and ongoing discussions are not a feature of the ICEC process. More



simply stated, there is no “knowledge map,” providing an inventory of existing data and information by agency, and the identity of knowledge experts in terms of “who knows what” and where knowledge repositories reside in the Department.

Statistical and quantitative modeling are often conducted in isolation, with analysts developing unique spreadsheet models from mainframe or mini-computer downloads. This goes against best practice for the consistent treatment of data and information across WASDE commodities, especially as the reported numbers are given equal billing in the WASDE consensus process.

Problems with sharing of information are further compounded by the fact that there is not a Department-wide policy covering the use of uniform application packages. Instances of inability to share data on spreadsheets were identified by the study due to the widespread use of different types or versions of software packages. For example, one agency or analyst may use Lotus software products and be unable to share data with a counterpart using Microsoft products.

Finally, document management systems are not employed by the WAOB/ICEC, thereby limiting the ability to improve access to repositories of digital information.

Knowledge culture: The existing WASDE/ICEC process does not promote a culture for freely sharing and exchanging basic commodity data and processed information on a formal basis between agencies. Additionally, the silo organizational structures do not reward a knowledge sharing culture; rather, commodity analysts typically hoard data in the belief that they are acting in the best interests of their agency. Although the WASDE/ICEC process requires the collection, preparation, and building of consensus, there is still a prevailing sense of *knowledge is power*.⁴ In the present environment, analysts bring their knowledge to the ICEC meetings primarily in “floppies and folders⁵.” Despite this overriding culture that limits knowledge sharing, in some cases analysts have overcome these barriers where personalities and professional interests have allowed. However, this often takes the form of clandestine meetings in hallways to exchange data on floppies instead of formal data sharing among agencies.

This insular environment is reinforced by agency practice of isolating their automated databases, further preventing personnel from other agencies from gaining access to commodity-related data. Surprisingly, this culture exists in parallel with an environment where Internet home pages provide access to some information that has no boundaries. While there may be issues related to data protection and security, much of the risk can be mitigated by security policy and user profiles that allow “read-only” and “read-and-download” access to the data. The WAOB Chair has, in the past, used his authority to make formal requests to agency management for access to agency data and systems. Still, agencies and individuals are protective of the ownership of their data. Although information may be provided through formal publications such as outlook and

⁴ Quotes from the Groupware working session held on 19 March

⁵ *Ibid.*



situation reports, the study team found a general reluctance to allow direct access to the agency-owned data that supports these official forecasts. No doubt, this is due, in part, to the fact that by sharing data the analyst must also assume some responsibility for the accuracy and reliability of the data and the information that may be derived from it. This is an issue that cannot be resolved by technology. It requires a change in the overall knowledge culture of the WAOB/ICEC to one that rewards individual contributions to a commodity database, while mitigating the risks associated with potentially invalid/inaccurate data.

The existing culture relies heavily upon the experience, knowledge, and credibility of the commodity analysts from the supporting agencies who attend the ICEC pre-lockup and lockup sessions. They bring with them not only the current commodity-related data from around the world but the ability to interpret new data and discard any data that is not credible. It has been said “statistics are no substitute for judgement⁶.” The WASDE/ICEC process is a good example of the truth of this expression. However, a knowledge culture that is weighted too heavily toward the rewarding of judgement also runs the risk of starving the corporate information base. It is the corporate information base that fosters the growth of less senior analysts. Should the experience level of the commodity analysts decline, or the level of participation be reduced or eliminated, a “knowledge-for-knowledge-sake” culture will suffer from an inability to make the necessary raw data available for timely judgement and information creation.

The WAOB/ICEC management needs to develop procedures that provide a balance between the existing performance and reward system based on knowledge and judgement, and one that also relies on information derived from a corporate database. In the latter case, rules and procedures must be developed that will encourage data sharing while mitigating the risk of inaccurate or invalid data. It is recommended that the WAOB/ICEC establish a pilot program that supplements the WASDE/ICEC process. The WAOB Web page could be used to establish a commodity database providing commodity data, information, and knowledge *by commodity*, rather than *by agency*. The WAOB/ICEC could follow each WASDE report cycle with an “after-action” seminar for those analysts that need to gain experience in the process. The detailed rationale for commodity decisions that are compiled in the lockup could be reviewed and discussed with junior (and even senior) analysts to establish a learning curve. The data in the commodity database could then be used as a sounding board to determine whether any relevant information may have been overlooked or misinterpreted in the WASDE data analysis.

The pilot commodity database could be started with a commodity such as sugar that does not rely heavily on NASS or foreign attaches as data sources. As the after-action review proves useful as a training and data sharing mechanism, ERS and FAS should sponsor data collection by all supporting agencies for the additional WASDE commodities. In this way the WAOB/ICEC would continue to be the focal point for USDA consensus on *commodity information* while ERS and FAS would become the focal point for distributing and sharing *commodity data*.

⁶ Quotation from Henry Clay.

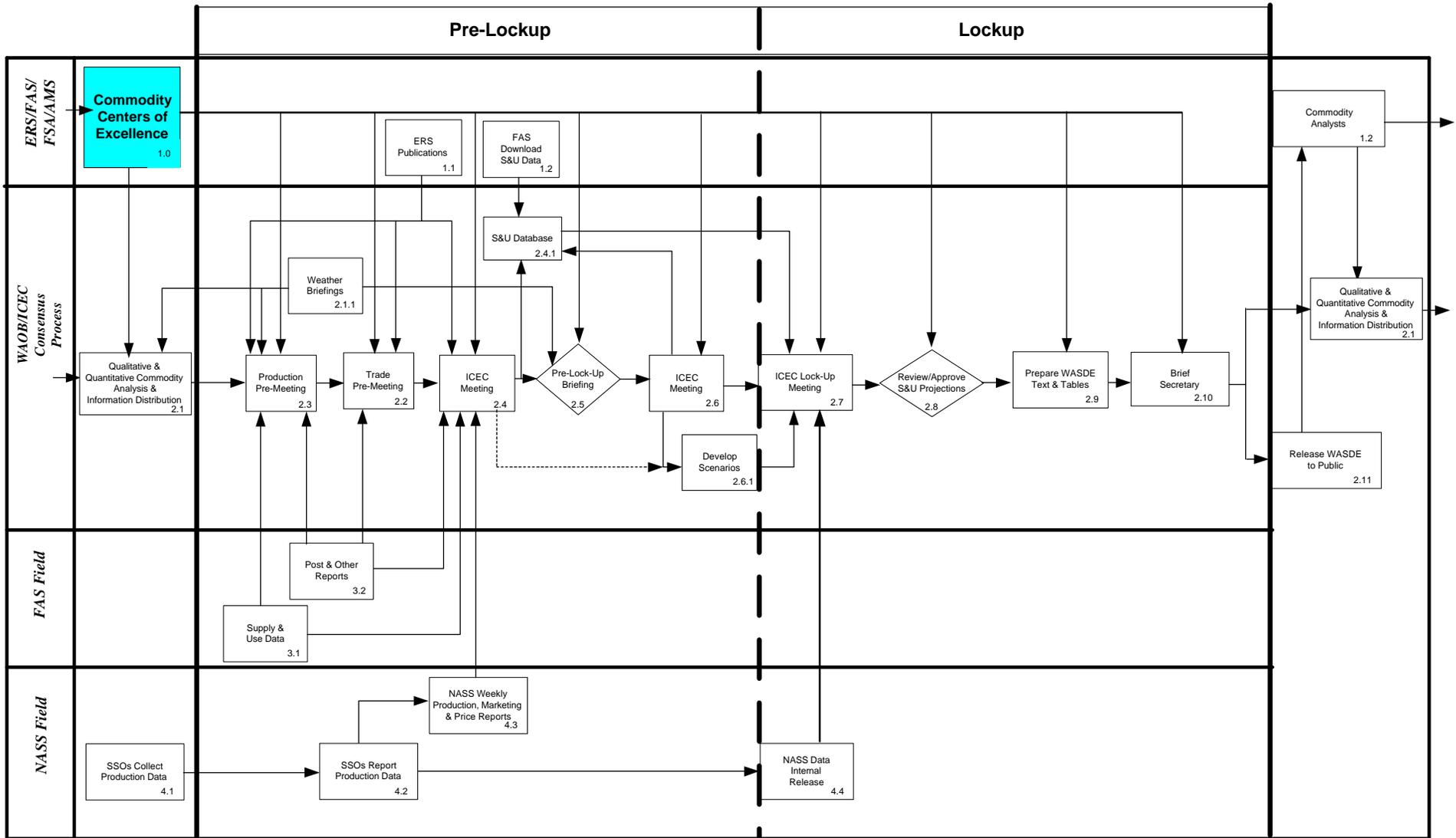


4.4.3 KNOWLEDGE MANAGEMENT IN THE WASDE/ICEC CONSENSUS PROCESS

Figure 10 shows the WASDE/ICEC consensus process model developed in the first phase of the study. It illustrates the heavy influence of the commodity analysts in all activities associated with the pre-lockup and lockup stages of the process. However, Figure 10 also shows how the commodity analyst support for each of those activities could be input from centers of excellence described in the previous section.



Figure 10 – WASDE/ICEC Consensus Process Model





4.4.4 USING KNOWLEDGE MANAGEMENT TO LEVERAGE USDA ECONOMIC AND COMMODITY KNOWLEDGE CAPITAL

It has long been held that there are few leverage opportunities in professional activities; a doctor can only diagnose one patient's illness at a time, a pilot may only fly one plane. Adding resources, at the very least, multiplies cost at the same rate as benefits, although diseconomies of scale are experienced as the bureaucracy supporting these professionals increases faster than the professional base.

Opportunities to leverage more value from knowledge capital have traditionally been addressed in one of two ways. First, by pushing the existing professional workforce through more rigorous and intensive training or work schedules; or second, by increasing the number of "associates" available to support the professional staff. The latter may be an option for ERS, where it is estimated that two-thirds of staff are qualified to the Ph.D. level. Therefore, it must be recognized that new technologies and management approaches are changing the traditional economics of managing professional intellect and capital.

Principles of Knowledge Management: There are four common underlying principles for effective knowledge management:

1. Boost professionals' problem solving abilities through capturing knowledge in systems and software: As integrated knowledge management software tools and products are continually emerging in the market place, there are a number of existing office information system technologies that may be utilized in the support of capturing knowledge. Relevant products are readily available from Microsoft and Lotus, and include:

- Discussion databases; to capture questions, responses and ongoing discussions;
- Workflow analysis and knowledge inventory; to codify an enterprise's internal processes and understand where knowledge repositories are; and
- Document management systems to improve access to repositories of digital information.

Additionally, although it is still difficult to measure knowledge management opportunity and actual costs and returns, it is often laborious to cost-justify and secure budgets for such efforts. However, the Intranet offers new opportunities that may provide an adequate point of entry for a small-scale knowledge management effort that would be required for the WASDE/ICEC process and associated agency inputs. The success an Intranet-based knowledge management solution is contingent upon recognizing the implications of the data-to-knowledge management process and adequate focus on the required cultural and organizational issues.

2. Overcome professionals' reluctance to share information: Information sharing is critical as intellectual assets, unlike physical assets, increase in value with use. Overcoming professionals' natural reluctance to share their most precious asset, knowledge, presents some common and difficult challenges. Competition among professionals often inhibits sharing, and assigning credit



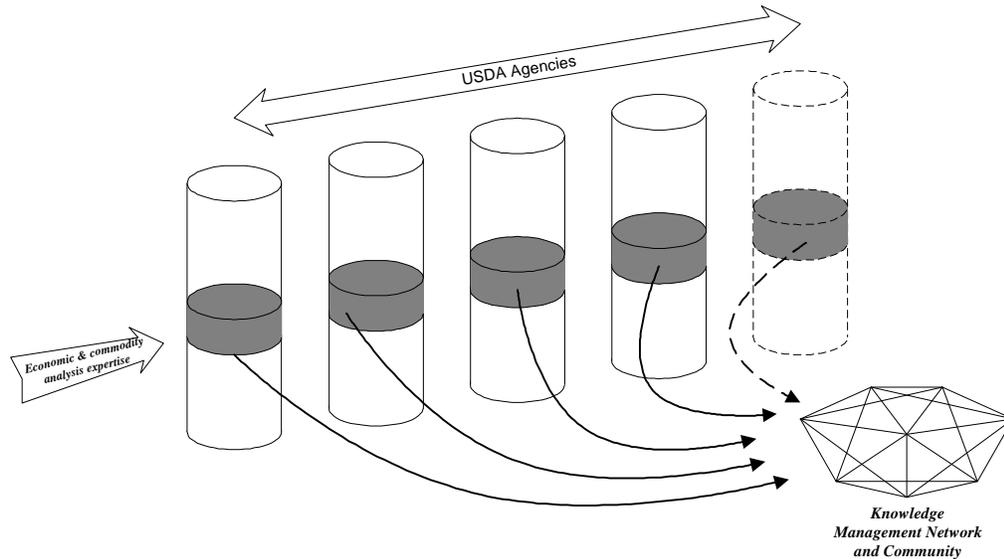
for intellectual contributions is difficult. Because professionals' knowledge is their power base, strong inducements to share are necessary. These inducements become more effective when they form part of a performance assessment program with resulting rewards and incentives.

Although this has been addressed as an opportunity for efficiency improvement, a proportionately greater benefit may be brought to bear if implemented upon a Department-wide basis. Breaking down organizational systems and process barriers can only prove to enhance the economic and commodity analysis knowledge and expertise in the Department. This could further improve the quality and depth of the WASDE and other forecast and outlook reports, and ultimately contribute to strengthening the level of due diligence applied to the publication of market sensitive data.

3. Organize around intellect: The silo organizational boundaries are unlikely to be broken down even in the long-term. Currently the organizational structures are seen as a barrier to effective knowledge management, rather not so much due to their existence, but the degree of power of the agency silo over the functional economic and commodity analysis. This is a traditional problem in considering matrix organizations, and it is always difficult to determine whether the horizontal holds the balance of power and how much power. The solution resides in accepting that conflict does arise, and that conflict is healthy in an knowledge-based organization.

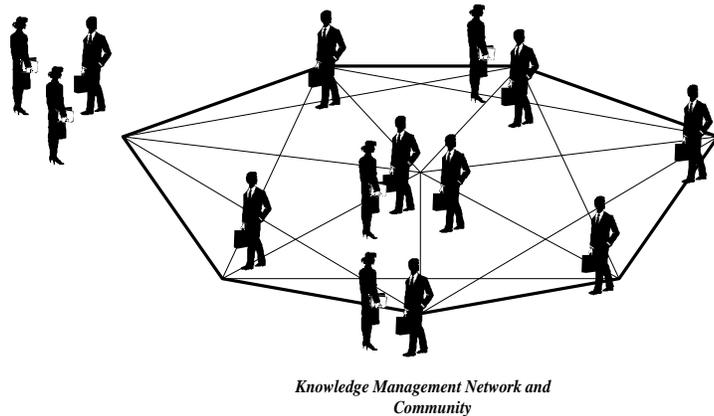
Therefore a proposed solution for organizing around intellect is presented in Figure 11 below:

Figure 11 –Proposed Knowledge Management Approach



Agencies will only identify and contribute to the development of a knowledge management network, or community, when brought together by common interests. This community may then operate as a “Center of Excellence,” providing the leadership and oversight for the development of a strategy for each of the commodity types. To a certain extent this is already being achieved through the ICEC committee process, but more by default than by design, and it is certainly not implemented on a Department-wide basis.

A "center of excellence" is a real or virtual network of professionals with common interests in economic and commodity analysis. This network should be responsible for the development of a strategy for their area of expertise and be responsible for promoting knowledge sharing and management across the agencies.



It may appear that this approach will create additional workload burden for the community of WAOB and agency participants. However, we have seen from the WASDE/ICEC process workload analysis that the marginal effort required from analysts is relatively low, and more importantly, being involved in the process is seen as a requirement.

4. Maintain the Enterprise Knowledge Base: The transitions from information to knowledge to effective action will never be achieved unless the information is up to date. This step requires the



institutionalization of enterprise processes to keep the knowledge resources current. This is where the contribution of collaborative technologies leads to currency - knowledge is captured during the process of its creation and sharing. Collaboration uses knowledge and contributes to it in the process, helping to overcome the cultural resistance to updating knowledge bases as an end in itself.

While there is reason to criticize the WAOB, and indeed the Department, for not having a knowledge management strategy in place and operation, this criticism has been presented with an opportunity in mind. By addressing this issue, the Department will move forward to reap the benefits of efficiency improvements, provide the platform for identifying and securing resources, continue to maintain the due diligence required in publishing market sensitive data, and ultimately improve services to customers and market participants.

4.4.5 ORGANIZATIONAL MEMORY - THE XEROX EXPERIENCE⁷

In 1984 Xerox undertook a significant research effort to understand how they might increase the effectiveness of their training program for some 14,500 service technicians. The service technicians repair and service copying machines, a task both time intensive and costly.

Initial suggestion for efficiency and performance improvements were centered on improving the formal training programs and facilities. A former technician was charged with working with technicians in the field to understand in detail how the technicians did their job, rather than what their managers said they did. The concluding observations were somewhat surprising. It was found that the technicians learn most out in the field by working on real problems and discussing them informally with colleagues, not from the formal training courses. “Indeed, the stories tech-reps tell each other – around the coffee pot, in the lunchroom, or while working together on a particularly difficult problem – are crucial to continuous learning.⁸”

By creating an environment for sharing knowledge and information, the technicians have created an “organizational memory” that is a valuable resource for the company. For the commodity analysts in the Department, there is not a mechanism in place for this “story telling” that is crucial to building the expertise not only of commodity analysts, but the community of economic and commodity analysts across the Department. Additionally, these centers of excellence provide the opportunity to bring in external federal and non-federal experts to provide different perspectives and knowledge of commodities; for example, economic analysts from the Department of Energy, or commodity analysts from Archer Daniels Midlands.

⁷ Based on “*Research That Reinvents the Corporation*,” John Seely Brown, Harvard Business Review, January – February, 1991

⁸ *Ibid.*

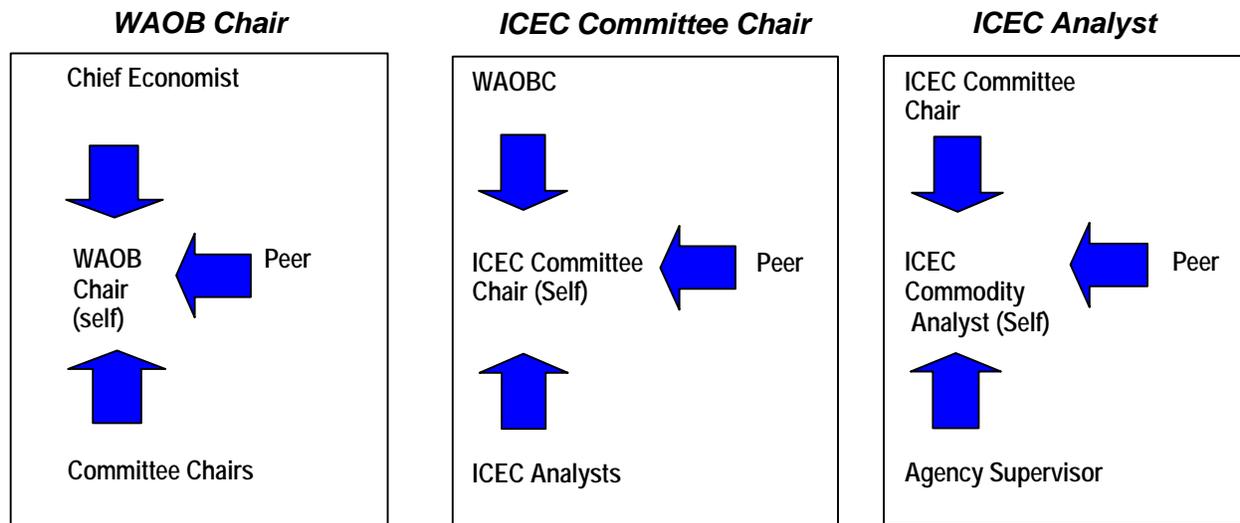
SECTION 5 – RESOURCE USES AND REQUIREMENTS - COMPETENCY ASSESSMENT

5.1 INTRODUCTION

The purpose of this section is to present the results of the competency assessment, that measures the extent to which those individuals involved in the ICEC process are effective in demonstrating the competencies and performance indicators identified as important to the ICEC process and WASDE production. Individuals employed in the following positions were assessed: the WAOB Chair, the ICEC Committee Chairs, and the ICEC Commodity Analysts. In addition to the WAOB Chair and six Committee Chairs, there were a total of 60 participants from the supporting agencies that were assessed (ERS: 17, FSA: 9, FAS: 32, AMS: 2).

5.2 PROFILE OF FINDINGS

In order to capture differences in competency levels of analysts on different committees or in different agencies, analyst responses were profiled by committee and by agency. Results were analyzed for the three positions listed above. This was a multi-rater assessment (360 degree assessment), meaning that a given individual rated himself or herself, but was also rated by his or her immediate supervisor, peer, and, in some cases, by a subordinate. This method is described in the diagram below:



All results are based on group perceptions as to which competencies are important and whether or not a group is effective in performing specific competencies. In addition, the results reflect what these different groups believe to be the current situation. In some cases, we examined responses by position of respondent in order to capture variations, such as how effective a Committee Chair



perceives analysts in an agency to be in demonstrating a competency as opposed to the perception of the analysts themselves. The team also combined self-assessments with supervisor, peer and subordinate assessments to obtain a collective score that helps to equalize perceptions and obtain a more accurate view of effectiveness.

Overall, the results provided a statistically significant response from which to draw meaningful conclusions. However, it is important to note that the conclusions drawn from this analysis only pertain to the group of analysts that were rated, not to the entire agency. Therefore, when analyzing by agency, these results must be interpreted as the competency levels of those individuals currently participating in the ICEC process as opposed to results indicative of the competencies of the entire agency.

It was not possible to aggregate assessment results for all ICEC participants or even committees as a whole due to the fact that each position was rated using a different set of competencies and performance indicators. However, when analyzed individually, ratings for each of the three positions were high, confirming the high caliber of participants in the ICEC process as a whole. In almost all competency categories, the aggregate competency ratings for all respondents were above a 4.5, indicating that the WAOB Chair, the Committee Chairs, and the analysts are effective, to a great extent, in demonstrating those competencies necessary for participating in the development of the WASDE. There was some variation in these perceptions when the data was analyzed by type of respondent (supervisor, peer, or subordinate), but these variations were minor, meaning that ratings by type of respondent were also generally on the high end of the scale. The following sections will detail the specific responses for the following 5 groupings:

- WAOB Chair;
- ICEC Committee Chairs;
- All ICEC Commodity Analysts;
- Analysts by Committee; and
- Analysts by Agency.

When analyzing the individual performance indicators under each competency, there were some ratings that were 4.5 or below. These ratings are highlighted in each section as areas in which foundational skills exist, but could be improved to raise the bar to one of excellence in those areas.

5.3 INTERPRETING THE RESULTS

The findings detail the survey results for the three different positions: the WAOB Chair, the ICEC Committee Chairs and the ICEC Commodity Analysts. The competencies for each position were tailored to best represent the skills necessary to perform that job. The survey format consisted of 4 to 5 competencies for each position with 5 to 8 performance indicators to define each competency. Respondents were asked to rate each performance indicator based upon the extent to which they were effective in demonstrating a given indicator. They then gave an overall rating

for the competency. Finally, each respondent rated the importance of the competency for performing that job. A copy of the assessment can be found in Appendix 2. An example of an individual competency in assessment form is shown in Figure 12 below.

Figure 12 - Example of Competency in Assessment Form

ROLE 3: ICEC COMMODITY ANALYST

Using the following scale, to what extent do you, or the person for whom you are rating, EFFECTIVELY demonstrate the following:

0	1	2	3	4	5	6
N/A	Minimal		▲			Very Great
	Extent		Midpoint = 3.5			Extent

A. Teamwork

62. Shares information with other analysts.
63. Accepts criticism and direction.
64. Represents agency consensus regardless of personal opinion.
65. Acknowledges different and varying opinions and maintains an awareness of what other analysts are doing (internal and external).
66. Presents work and negotiates ideas without becoming defensive.
67. **Overall Competency:** Teamwork.
68. **Overall Importance:** Given the ICEC process and the importance of WASDE production, how important are the above to performing effectively in your job? Please use the importance scale where 1 = Not Important At All and 6 = Essential.

The Datatrac/PwC Team used an assessment of 3.5 (on a scale of 1 to 6) as the midpoint to identify competency strengths in those areas in which the “bar was already high”, but might be raised to one of excellence. A score of 4.5 or above indicates this level of excellence. Participants that were assessed at this level are perceived to be extremely effective in demonstrating a given competency. The bar charts in the following sections show a dotted line across the graph at the 4.5 height. Ratings above this line fall into the “effective to a great extent” category. A score greater than 3, but less than or equal to 4.5 was considered an opportunity for improvement in which a group proved to be effective and skillful, but supplemental training could raise the bar for that competency to one of excellence. In only a few instances, the aggregate ratings were found to fall below the dotted line in the figures below. A score below a 3 was considered a priority area for training development. In only one case, results fell below a 3 on the effectiveness scale. Therefore, overall assessments showed the entire WASDE/ICEC workforce to be highly qualified in doing their jobs.



Similarly, all of the competencies had mean⁹ scores toward the high end of the scale in *importance*, indicating that these competencies are important to the ICEC process. Meaningful distinctions in both the effectiveness and importance scales on all indicators confirmed that these indicators are perceived to be the skills, knowledge and behavior that are required for the WAOB Chair, ICEC Committee Chairs, and ICEC Commodity Analysts to effectively participate in the ICEC process.

The Datatrac/PwC Team aggregated and averaged the results to find the mean score for each competency and performance indicator. The results are displayed as shown below:

- Competency assessments for the WAOB Chair;
- Competency assessments for the ICEC Committee Chairs;
- Competency assessments for all ICEC Commodity Analysts;
- Competency assessments for the ICEC Commodity Analysts by Committee; and
- Competency assessments for the ICEC Commodity Analysts by Agency.

In addition to collecting competency data, Datatrac/PwC collected and analyzed demographic data in order to make assertions about participant experience. Participants completing self-assessments were asked to respond to four questions:

- How many total years have you been dedicated to ICEC activities?
- How long have you worked for the agency in which you are employed?
- How long have you worked for the USDA?
- What is your grade?

The competency survey captured data on the experience level of the participants in the following categories:

- Less than 1 year
- More than 1 year, but less than 5 years
- More than 5 years, but less than 10 years
- More than 10 years, but less than 15 years
- More than 15 years

This demographic information is summarized in those sections pertaining to Committee Chairs and analysts.

⁹ “Mean” is the average of all ratings across respondents. Mean scores were used because they best summarize the representative response for a group by spreading the collective ratings across all its members in the sample.



5.4 COMPETENCY ASSESSMENTS FOR THE WAOB CHAIR

The WAOB Chair was assessed on the following competencies: Insight, Administrative Management, Product Management, and Teamwork. Figure 13 below displays the competency ratings for the WAOB Chair broken down by type of respondent.

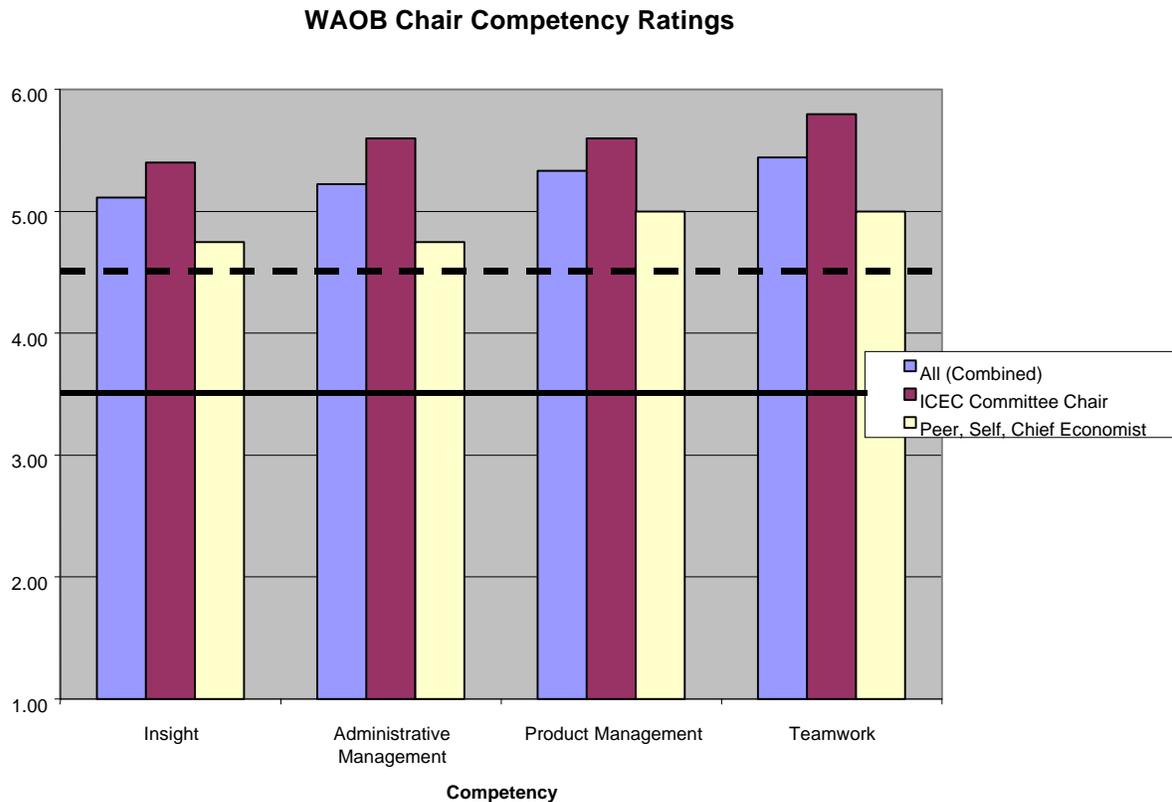


Figure 13 - World Agricultural Outlook Board Chair Competency Ratings

As seen above, the overall ratings are high indicating that the WAOB Chair is performing very well in all aspects of the job. In addition, the ICEC Committee Chair ratings indicate that his work is highly respected by those whom he manages. He is also considered to be a strong performer by his peers and immediate supervisor, the Chief Economist. Aggregate ratings by all respondents for the individual performance indicators were also high across the board.

5.5 COMPETENCY ASSESSMENTS FOR THE ICEC COMMITTEE CHAIRS

Demographics: The Committee Chairs are well qualified with respect to tenure in the ICEC process and within the USDA. The majority of the chairs have been involved with the ICEC process for more than 10, but less than 15 years. In addition, the majority have been employees in other USDA agencies, and therefore, have been part of the USDA for more than 15 years. All respondents indicated their grade to be GS/GM-15.



Competency Results: The Committee Chairs were rated on the following competencies: Substantive Knowledge, Analytical Thinking, Teamwork, Understanding of Organization Mission/Goals, and Product Management. Figure 14 below displays the competency ratings for the Committee Chairs.

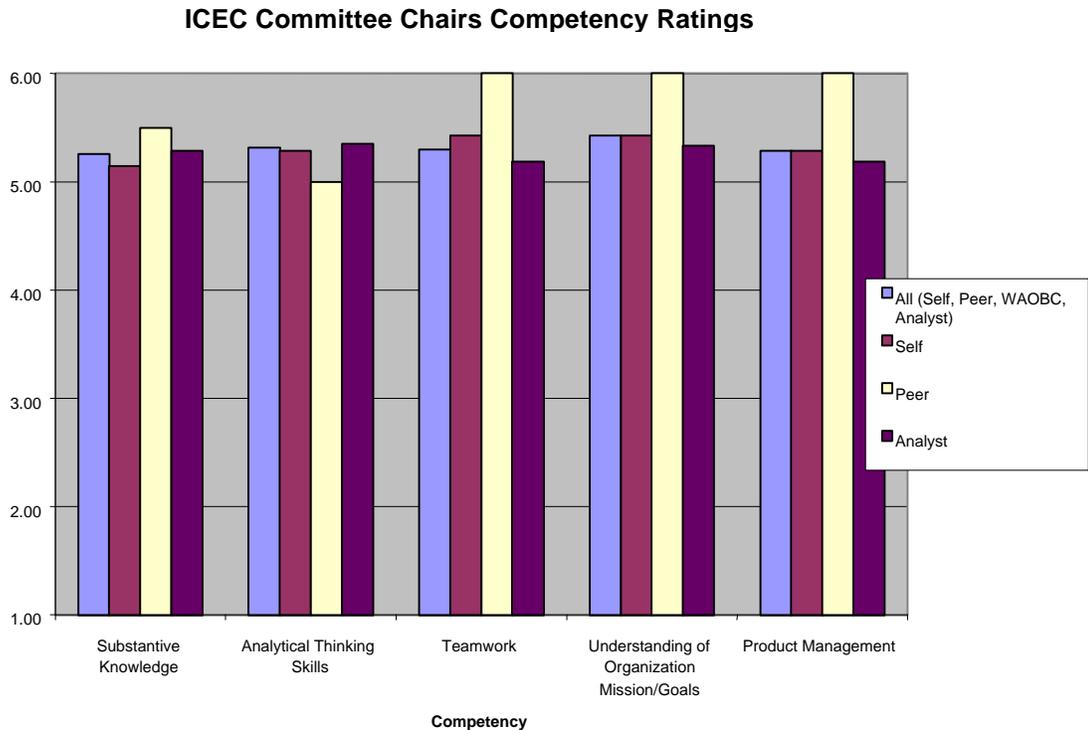


Figure 14 - ICEC Committee Chair Competency Ratings

Figure 14 above illustrates the high level of ability possessed by the Committee Chairs. Aggregate ratings by all respondents are all well above a 5 on the 6-point scale, indicating that as a group, the committee chairs are effective, to a great extent, in demonstrating those competencies most important to performing their jobs. This perception is supported by each group of raters in that no rating falls below a 5 for any one competency.

Performance Indicator Results: When analyzing aggregate ratings for the performance indicators, again ratings were toward the high end of the scale with no ratings falling below a 4.5 illustrating strong proficiency across the board. Analyzing the aggregate performance indicator ratings by respondent also showed high skill levels. It is important to note that there was one instance in which the self rating indicated an area which could be strengthened. These results are shown in Table 9 below:



Table 9 - ICEC Committee Chair Performance Indicator Ratings

ICEC COMMITTEE CHAIR	All (Self, Peer, WAOBC, Analyst)	Self	Peer	Analyst
E. PRODUCT MANAGEMENT--Effectiveness	5.28	5.29	6.00	5.19
58. Delivers and distributes criticism in a constructive manner.	4.84	4.50	6.00	4.85

Self assessments indicate that committee chairs could strengthen their ability to deliver and distribute criticism in a constructive manner to aid in the development of their analysts’ skills. Attention to this area could benefit the analysts who report that they rarely receive feedback with respect to how to improve their performance. In summary, the committee chairs are extremely strong performers in the ICEC process.

5.6 COMPETENCY ASSESSMENTS FOR THE ICEC COMMODITY ANALYSTS

5.6.1 COMPETENCY RESULTS FOR ALL ANALYSTS

Demographics: The analysts surveyed had a range of years of experience both with the ICEC process and in their respective agencies. Over 37% have supported the ICEC process more than 10 years, of which, over 20% having been involved for over 15 years. Another 26% have been involved with the ICEC process between 5 and 10 years. The remaining 37% have participated in the ICEC process less than 5 years. Of all analysts who responded, 75% always participate in the ICEC process, 15% often participate, and 10% sporadically participate.

As expected, the analysts have been with their agencies longer than their participation in the ICEC process. Almost 40% of the participating analysts have been in their respective agencies for more than 15 years. Twenty percent have been in their agencies more than 10 years and approximately 15 percent have been with their agencies more than 5 years. The remaining 25% have been with their agencies less than 5 years. This mix is approximately the same when measuring total years of service in the USDA.

With respect to grade, the majority of analysts are GS/GM 13 and 14. Approximately 55% of all participating analysts are a grade GS/GM 13; whereas, almost 30% are GS/GM 14. Only 3% are GS/GM 15, and the remaining 12% are GS-12 or below. Overall, this is an experienced group with a sound mix of experienced analysts who can aid in the training of less experienced analysts in order to transfer knowledge and skills in case of turnover or retirement of seasoned participants.

Competency Results: The commodity analysts were assessed on the following competencies: Teamwork, Substantive Knowledge/Industry, Analytical Thinking, Communication, and Professionalism/Commitment. Aggregate competency scores for analysts were also high, again reinforcing previous evidence of the caliber of individuals involved in the ICEC process. The aggregate ratings are shown in Figure 15 below:

All Analyst Competency Ratings

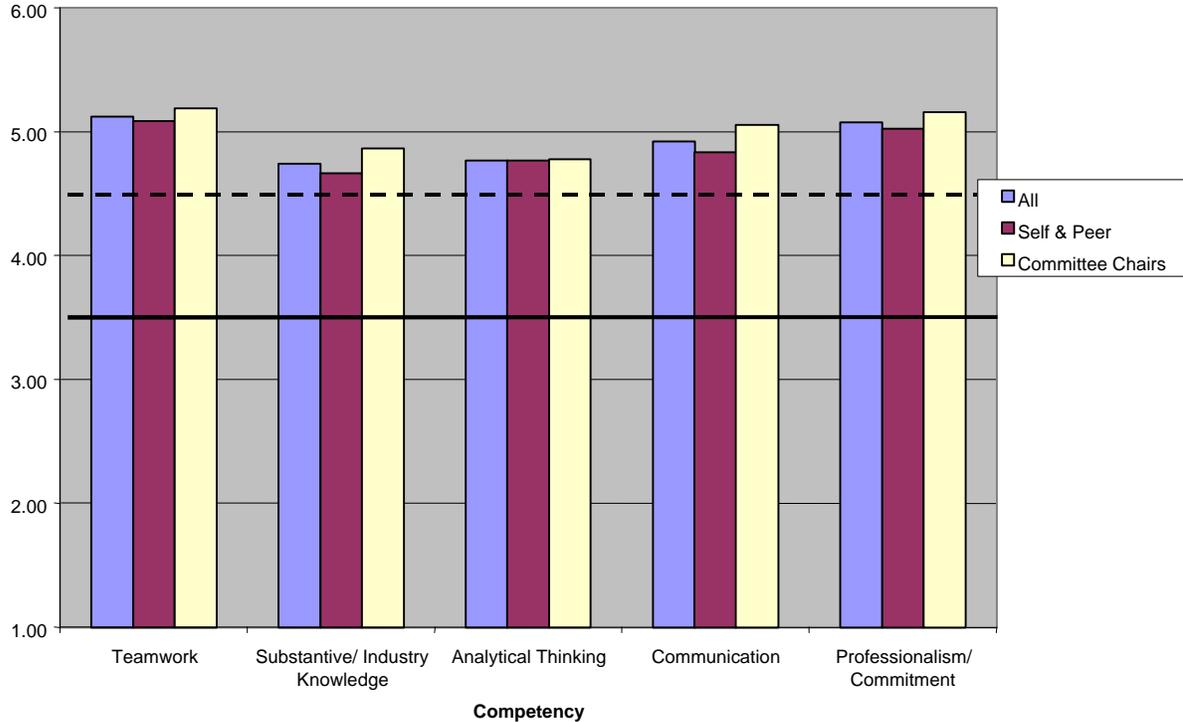


Figure 15 - All Analyst Competency Ratings

Competency ratings for all analysts are well above the mid-point indicating strong performance in all competencies. A review of the performance indicators also concludes that the analysts, as a whole, are effective performers. Some differences do appear, however, when analyst skills are profiled by committee and agency. This is, in part, due to the fact that the committees and agencies operate in different operating environments. The following details results from the assessment.

5.6.2 COMPETENCY RESULTS FOR ANALYSTS BY COMMITTEE

Demographics: Committee demographics look very similar to the results presented in the above section. When reviewing years of experience with the ICEC process, the majority of committees have an even mix of experienced and inexperienced analysts. The Wheat & Feed Grains and Soybean, Cottonseed, & Oils committees have slightly more experienced analysts compared to Rice, Sugar, and Livestock & Poultry, all of which have a larger proportion of analysts with less than 5 years of experience. This data is depicted in Figure 16 below.



Analyst Years of Experience with ICEC Process By Committee

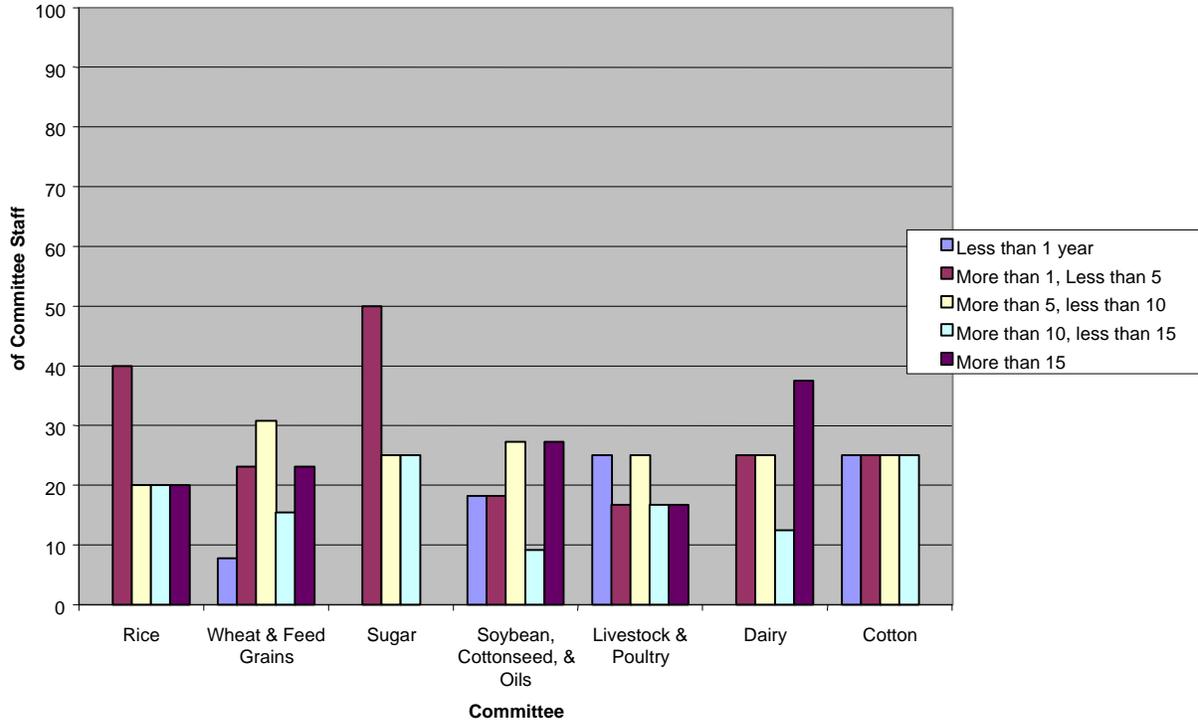


Figure 16 - Analyst Years of Participation in ICEC Process by Committee

The participants were also asked to document how often they attend ICEC/WASDE meetings using the following terms: Participates Always, Participates Often, or Participates Sporadically. The following chart outlines the analysts’ responses by committee.

Committee Name	Participation in ICEC Meetings (%)		
	Participates Always	Participates Often	Participates Sporadically
Rice	100%	---	---
Wheat & Feed Grains	60%	20%	20%
Sugar	100%	---	---
Soybean, Cottonseed & Oils	80%	10%	10%
Livestock & Poultry	88%	13%	---
Dairy	60%	20%	20%
Cotton	67%	33%	---

The results from the analysts on the Dairy and Wheat & Feed Grains committees show that on these committees, almost half of the committee’s analysts are only able to participate on a part-time basis. This finding is significant in terms of the organizational issues addressed in section 3 of this study.



With respect to experience in their respective agency, the majority of analysts in all, but the Livestock & Poultry committee have on average more than 10 years experience in their respective agencies, indicating the depth of experience that can be leveraged by Committee Chairs. The Livestock & Poultry committee has a more diverse group with respect to years of agency experience: approximately half have more than 10 years experience and half have less than 10 years experience. This is the same proportion when looking at total years experience with the USDA. Finally, as expected from the results above, the grade of the majority of analysts participating in each committee is either a GS/GM-13 or GS/GM-14.

Competency Results: The aggregate results for the analysts participating on any one committee are generally high. Figure 17 illustrates the ratings by competency for analysts on each committee as perceived by all respondents (the analysts themselves, their peers, and the Committee Chairs).

Comparison of All Analyst Ratings by Committee

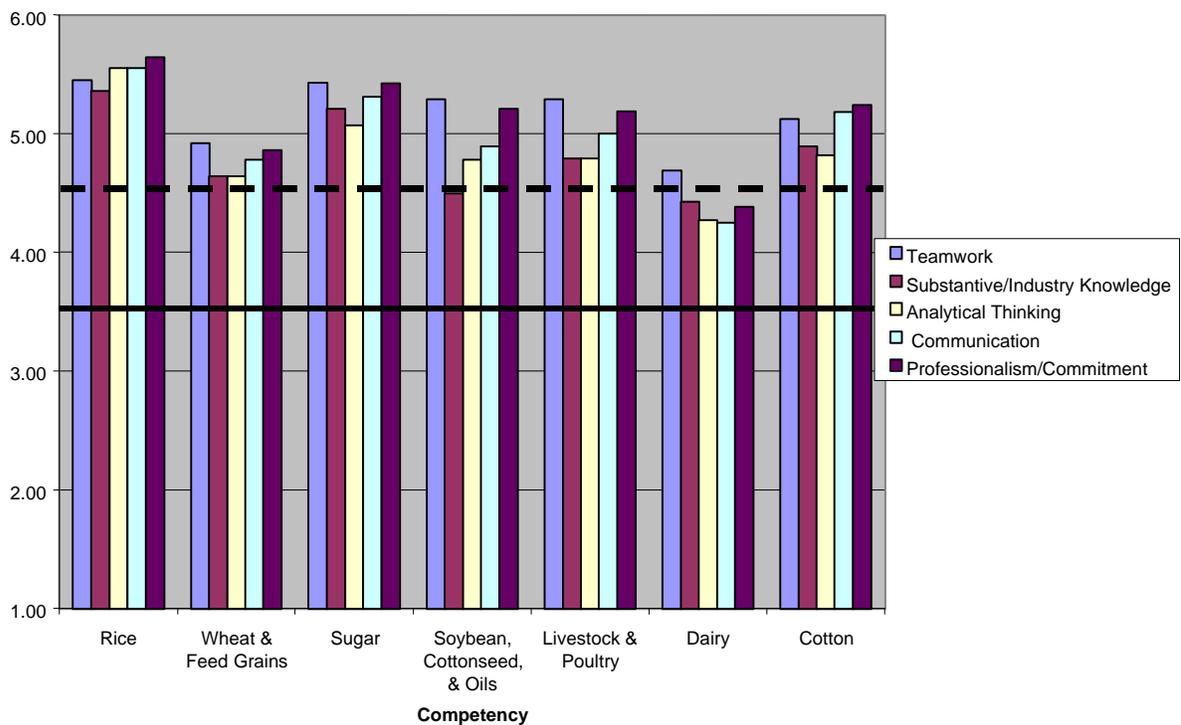


Figure 17 - Analyst Competency Ratings by Committee

As shown in Figure 17, all of the committees have aggregate scores well above the midpoint. The analysts are especially strong in teamwork and commitment. The substantive knowledge, analytical thinking, and communication competency ratings are slightly lower than the remaining competencies, suggesting that these areas, though strong, could be strengthened in almost all committees. It is important to note that the Dairy scores fall below a 4.5 in a few categories, indicating areas in which foundation skills are strong, but could be strengthened. This lower aggregate score is in part reflective of lower self and peer scores pulling the average down. Also,



the fact that the committee chair was recently hired and only able to assess one of the Dairy analysts, may have contributed to the lower scores as compared to the other committees. If ratings were available for all analysts, aggregate ratings would probably have been equivalent to those of other committees. A breakdown of scores by type of respondent is shown in Figure 18 and Figure 19.

Comparison of Analyst Self Ratings by Committee

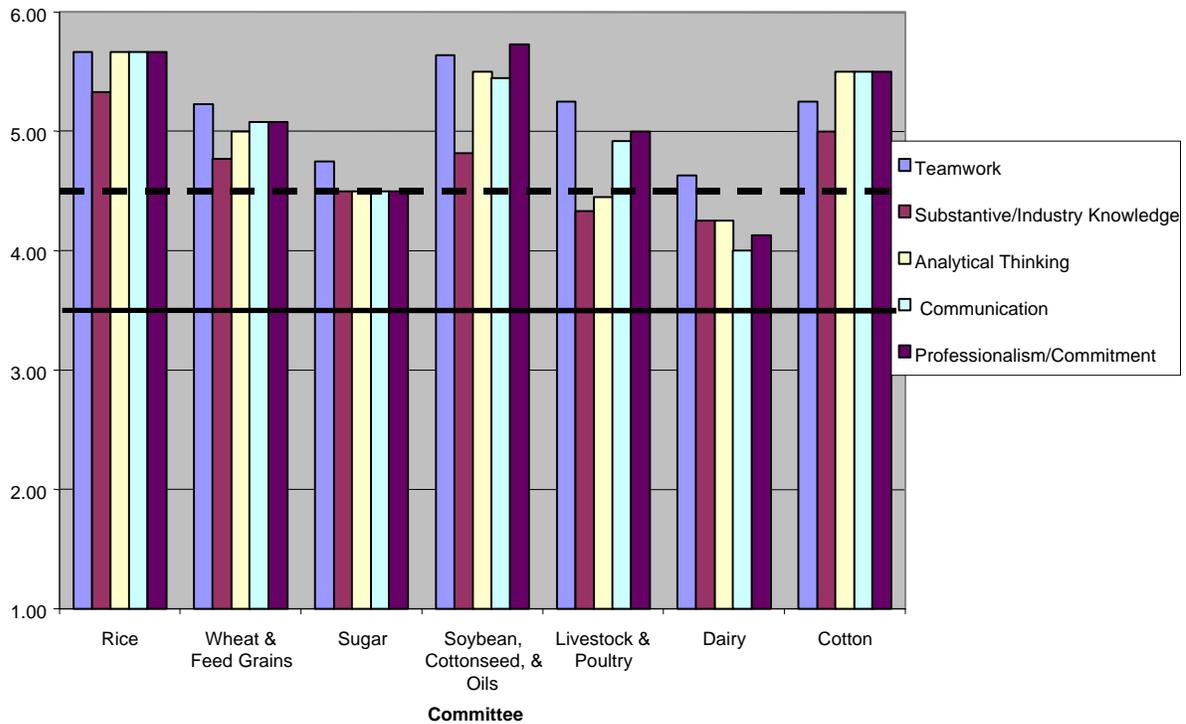


Figure 18 - Analyst Self Competency Ratings by Committee

Figure 18 shows that the aggregate Self ratings are well above the midpoint, indicating strong skill levels. However, in the case of Sugar, Livestock & Poultry, and Dairy assessments, effectiveness ratings fall below a 4.5, indicating that these analysts have a strong foundation in the given competencies, but their skills could be strengthened in order to perform at a higher level. These perceptions reflect the idea that the analysts are aware of their varying strengths and knowledge, but their performance could improve in some areas.

Figure 19 below portrays the aggregate Peer ratings by committee.



Comparison of Peer Ratings of Analysts by Committee

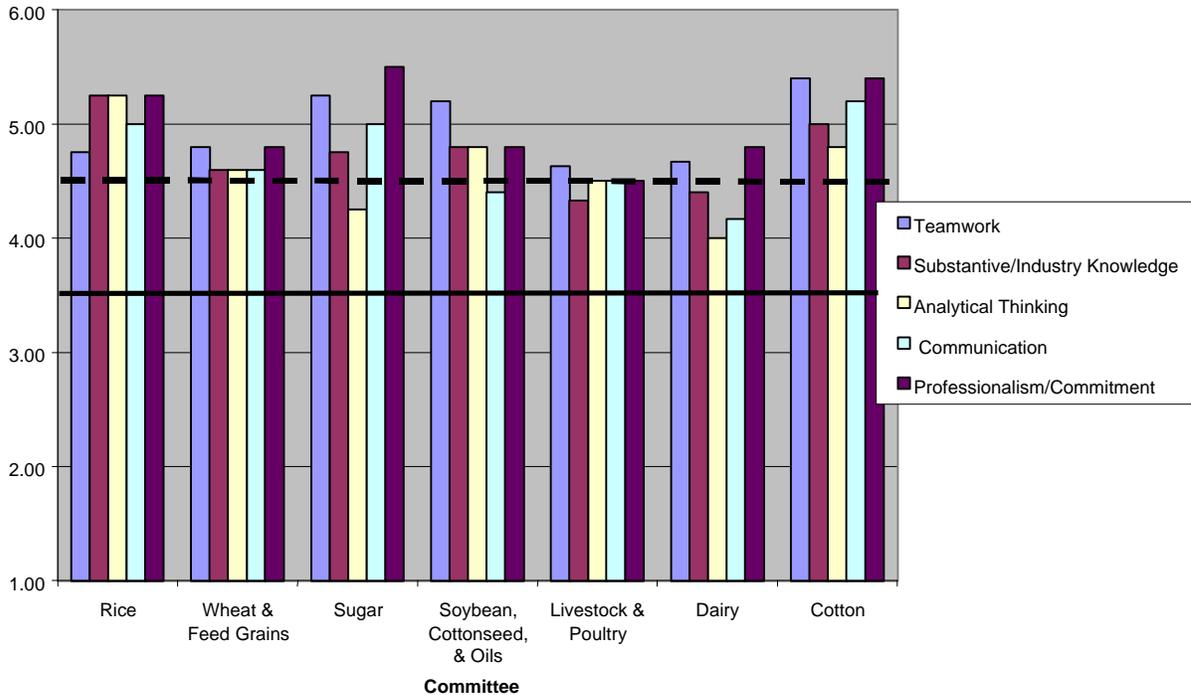


Figure 19 - Analyst 'Peer' Competency Ratings by Committee

The peer scores mirror the self ratings, but are slightly lower. For four committees, Livestock & Poultry, Wheat & Feed Grains, Soybean, Cottonseed & Oils, and Dairy, at least three peers were not able to answer the majority of questions about their identified peer. This indicates that within a committee, the analysts do not work intimately with one another or often do not even know the individuals with whom they work. Therefore, a tremendous amount of knowledge sharing and leveraging is not in effect amongst committee members. This is an area in which sound knowledge management practices could greatly benefit communities of commodity experts by creating dialog between experts throughout the agency.

Committee Chair ratings of each competency will not be shown due to variations in interpretation of the assessment scale by various Committee Chairs. However, an overall rating of all analysts by the Committee Chairs is displayed in Figure 15 above, indicating that analysts are effective in performing their jobs across all committees.

Performance Indicator Results: As described above, there are a few differences in performance indicator ratings when analyzing committees by type of respondent. At the same time, self and peer aggregate ratings pinpointed those performance indicators that showed strong foundational skill levels, but could be improved to raise the bar to one of excellence. Those performance indicators, that received only moderate effectiveness ratings (3-4.5) per group, are shown below.



Again, the Committee Chair responses are not included in this portion of the analysis due to different interpretations of the scale. In addition, results for the competency “Substantive Knowledge/Industry” will not be displayed in order to preserve confidentiality.

RICE COMMITTEE

Judging by overall ratings, the Rice committee was strong in all categories. However, peer ratings indicate that effectiveness could be improved in the area of teamwork—accepting criticism and negotiating ideas without becoming defensive. Strengthening these areas could strengthen the unity of the committee. Those indicators are listed in Table 10 below:

Table 10 - Rice Analyst Performance Indicator Ratings

ICEC COMMODITY ANALYST-- RICE COMMITTEE	All (Self, Peer, Comm. Chairs)	Self	Peer
A. TEAMWORK—Effectiveness	5.45	5.67	4.75
63. Accepts criticism and direction.	5.27	5.33	4.50
66. Presents work and negotiates ideas without becoming defensive.	5.09	5.33	4.25
D. COMMUNICATION—Effectiveness	5.55	5.67	5.00
89. Exercises sensitivity and discretion.	5.27	5.33	4.50

WHEAT & FEED GRAINS COMMITTEE

For the Wheat & Feed Grains committee, scores were again very high. Yet, there were a few indicators that were rated slightly less effective than others by both self and peer ratings. Those indicators are shown in Table 11:



Table 11 - Wheat & Feed Grains Analyst Performance Indicator Ratings

ICEC COMMODITY ANALYST-- WHEAT & FEED GRAINS COMMITTEE	All (Self, Peer, Comm. Chairs)	Self	Peer
A. TEAMWORK—Effectiveness	4.92	5.23	4.80
62. Shares information with other analysts.	4.89	5.08	4.50
63. Accepts criticism and direction.	4.58	4.85	4.33
64. Represents agency consensus regardless of personal opinion.	4.76	5.00	4.50
C. ANALYTICAL THINKING—Effectiveness	4.64	5.00	4.60
81. Utilizes appropriate analytical tools and continually refines them to reflect changes in structure of agriculture.	4.44	5.00	4.50
D. COMMUNICATION—Effectiveness	4.78	5.08	4.60
90. Interacts and establishes rapport with a network of industry contacts.	4.64	4.46	4.86
E. PROFESSIONALISM/COMMITMENT—Effectiveness	4.86	5.08	4.80
95. Recognizes own deficiencies and works to strengthen these areas.	4.35	4.77	4.00

As with Rice peers, Wheat & Feed Grain peers feel that teamwork, although strong, could be strengthened to improve effectiveness with respect to sharing information and accepting and supporting group decisions. Peers also indicated that analysts could utilize analytical tools more effectively. Finally, self ratings indicate that a better network of industry contacts could be developed.

SUGAR COMMITTEE

Sugar committee self and peer ratings were similarly high, with none of the ratings falling below a 4.0 on a 6.0 scale, indicating strong foundational skills. Those indicators are described in Table 12. However due to the number of indicators below a 4.5 in the categories of Analytical Thinking and Communication, it seems that both peers, and in some cases, the analyst themselves view those areas as those in which improvement could be made.



Table 12 - Sugar Analyst Performance Indicator Ratings

ICEC COMMODITY ANALYST-- SUGAR COMMITTEE	All (Self, Peer, Comm. Chairs)	Self	Peer
A. TEAMWORK—Effectiveness	5.43	4.75	5.25
65. Acknowledges different and varying opinions and maintains an awareness of what other analysts are doing (internal and external).	5.29	4.50	5.00
C. ANALYTICAL THINKING—Effectiveness	5.07	4.50	4.25
78. Continually evaluates the credibility/validity of sources and data.	5.07	4.75	4.00
79. Asks appropriate questions to elicit useful data.	5.07	4.75	4.00
80. Isolates and assimilates information in a logical, rigorous manner.	5.21	4.75	4.50
81. Utilizes appropriate analytical tools and continually refines them to reflect changes in structure of agriculture.	5.14	4.75	4.25
82. Focuses on the big picture while adjusting estimates at a very detailed level.	5.31	5.00	4.33
83. Applies in-depth knowledge of economics and statistical analysis.	5.08	4.25	4.33
D. COMMUNICATION—Effectiveness	5.31	4.50	5.00
86. Articulates economic and industry market rationale for forecasts in a well-crafted argument.	5.31	4.50	5.00
87. Provides adequate justification to support conclusions.	5.00	5.00	3.50
88. Integrates relevant information and presents it in an understandable way.	5.14	4.50	4.50
89. Exercises sensitivity and discretion.	5.23	4.25	5.00
E. PROFESSIONALISM/COMMITMENT—Effectiveness	5.42	4.50	5.50
93. Adjusts to situations that may arise.	5.23	4.50	4.67
95. Recognizes own deficiencies and works to strengthen these areas.	5.33	4.25	5.50

In addition, in the areas of Professionalism/Commitment and Teamwork, ratings for acknowledging others’ opinions, recognizing own deficiencies, and adjusting to situations are 4.5 or below and could be strengthened.

SOYBEAN, COTTONSEED, AND OILS COMMITTEE

For the Soybean, Cottonseed, and Oils committees, there were only a few instances in which ratings were 4.5 or below.



Table 13 - Soybean, Cottonseed, & Oils Analyst Performance Indicator Ratings

ICEC COMMODITY ANALYST-- SOYBEAN, COTTONSEED & OILS COMMITTEE	All (Self, Peer, Comm. Chairs)	Self	Peer
C. ANALYTICAL THINKING—Effectiveness	4.78	5.50	4.80
81. Utilizes appropriate analytical tools and continually refines them to reflect changes in structure of agriculture.	4.50	5.20	4.50
E. PROFESSIONALISM/COMMITMENT—Effectiveness	5.21	5.73	4.80
93. Adjusts to situations that may arise.	4.96	5.45	4.40
94. Identifies information gaps and seeks to develop new sources of information to supply the data	4.92	5.50	4.50

As shown in Table 13, Peer ratings indicate that effectiveness could be strengthened in utilizing analytical tools, adjusting to situations, and identifying new information. However, on the whole, performance by analysts on this committee is strong.

LIVESTOCK AND POULTRY COMMITTEE

The Livestock and Poultry committee Self and Peer ratings show that analysts feel that they are highly effective in all competencies except for Analytical Thinking and Communication--areas in which they are moderately effective. The indicators listed in Table 14 show that analysts feel they could improve in these areas in order to strengthen committee findings during the ICEC process, as well as communicate those findings. In addition, accepting criticism and negotiating solutions were identified by peers as less effective skills than others.

Table 14 - Livestock and Poultry Performance Indicator Ratings

ICEC COMMODITY ANALYST-- LIVESTOCK & POULTRY COMMITTEE	All (Self, Peer, Comm. Chairs)	Self	Peer
A. TEAMWORK—Effectiveness	5.29	5.25	4.63
63. Accepts criticism and direction.	5.07	4.92	4.20
66. Presents work and negotiates ideas without becoming defensive.	5.19	5.17	4.50
C. ANALYTICAL THINKING—Effectiveness	4.79	4.45	4.50
78. Continually evaluates the credibility/validity of sources and data.	4.77	4.67	4.50
79. Asks appropriate questions to elicit useful data.	5.03	5.00	4.17
80. Isolates and assimilates information in a logical, rigorous manner.	5.07	5.08	4.20
82. Focuses on the big picture while adjusting estimates at a very detailed level.	4.70	4.75	4.14
83. Applies in-depth knowledge of economics and statistical analysis.	4.63	4.42	4.60
D. COMMUNICATION--Effectiveness	5.00	4.92	4.50
86. Articulates economic and industry market rationale for forecasts in a well-crafted argument.	4.70	4.55	4.25
87. Provides adequate justification to support conclusions.	4.81	4.83	4.25
88. Integrates relevant information and presents it in an understandable way.	4.84	4.83	3.88



DAIRY COMMITTEE

The Dairy committee Self and Peer ratings were slightly lower than the majority of aggregate scores for other committees as shown in Table 15. It is important to note that both peer and self ratings are similar. This may indicate that the analysts are well aware of their strengths, but also those areas in which they can improve. The majority of the performance indicators for this committee had aggregate ratings by both self and peer at or below 4.5 on the six-point scale.

Table 15 - Dairy Analyst Performance Indicator Ratings



ICEC COMMODITY ANALYST-- DAIRY COMMITTEE	All (Self, Peer, Comm. Chairs)	Self	Peer
A. TEAMWORK—Effectiveness	4.69	4.63	4.67
62. Shares information with other analysts.	4.77	4.25	4.67
63. Accepts criticism and direction.	4.43	4.00	5.00
65. Acknowledges different and varying opinions and maintains an awareness of what other analysts are doing (internal and external).	4.58	4.38	4.50
66. Presents work and negotiates ideas without becoming defensive.	4.63	4.38	4.60
C. ANALYTICAL THINKING—Effectiveness	4.27	4.25	4.00
78. Continually evaluates the credibility/validity of sources and data.	4.15	4.13	4.20
79. Asks appropriate questions to elicit useful data.	4.29	4.13	4.60
80. Isolates and assimilates information in a logical, rigorous manner.	4.38	4.50	4.20
81. Utilizes appropriate analytical tools and continually refines them to reflect changes in structure of agriculture.	4.42	4.38	4.50
82. Focuses on the big picture while adjusting estimates at a very detailed level.	4.14	4.00	4.20
83. Applies in-depth knowledge of economics and statistical analysis.	3.93	3.88	3.83
D. COMMUNICATION—Effectiveness	4.25	4.00	4.17
86. Articulates economic and industry market rationale for forecasts in a well-crafted argument.	4.13	3.63	4.33
87. Provides adequate justification to support conclusions.	4.00	3.88	3.67
88. Integrates relevant information and presents it in an understandable way.	4.24	4.00	4.00
89. Exercises sensitivity and discretion.	4.05	3.63	4.17
90. Interacts and establishes rapport with a network of industry contacts.	4.31	3.75	5.00
E. PROFESSIONALISM/COMMITMENT—Effectiveness	4.38	4.13	4.80
93. Adjusts to situations that may arise.	4.08	3.88	4.50
94. Identifies information gaps and seeks to develop new sources of information to supply the data.	4.00	3.75	4.40
95. Recognizes own deficiencies and works to strengthen these areas.	4.23	4.13	4.40
96. Responds to deadlines.	4.83	4.63	5.33

COTTON COMMITTEE

The Cotton Committee self and peer ratings were high across the board as shown in Table 16. There was only one performance indicator, identified by peers that fell below a 4.5. That performance indicator is ‘Applies an in-depth knowledge of economics and statistical analysis.’



Table 16 - Cotton Analyst Performance Indicator Ratings

ICEC COMMODITY ANALYST– COTTON COMMITTEE	All (Self, Peer, Comm. Chairs)	Self	Peer
C. ANALYTICAL THINKING— Effectiveness	4.82	5.50	4.80
83. Applies in-depth knowledge of economics and statistical analysis.	4.56	5.25	4.33

The performance indicators, that are identified in the above tables in no way indicate poor performance. They do, however, indicate areas in which strong foundational skills exist, but could be strengthened to aid in the development of committee knowledge, skills, and behavior. Identification of these indicators is intended to provide management information on Self and Peer perceptions of current skill levels and needs so that management can provide initiatives or supplemental training to improve the performance of their committees as a whole.

5.6.3 COMPETENCY RESULTS FOR ANALYSTS BY AGENCY

Demographics: Demographics covering the number of years that analysts were involved in the ICEC process show that the experience of the analysts varies from one agency to another. Of the four support agencies involved in the production of the WASDE, ERS has the highest number of participants who are veterans of the ICEC process, with 57% of their analysts participating in the process for ten years or more. In contrast, a little over half of the FAS analysts (53%) have participated in the ICEC process for five years or less. The breakdown of ICEC participation for FSA is evenly distributed between all tenure categories with respect to length of participation. Sixty percent of the FSA analysts participating in the ICEC process had between five and fifteen years experience. In the case of AMS, one analyst has participated in the process more than five years, but less than ten years, and the other analyst has participated for more than fifteen years.

Of those self assessors who responded to the question of participation, the following results accrued:

Agency Name	Participation in ICEC Meetings (%)		
	Participates Always	Participates Often	Participates Sporadically
ERS	91%	---	9%
FAS	71%	21%	8%
FSA	50%	25%	25%
AMS	100%	---	---

With respect to tenure in their parent agency, the majority of the analysts have worked in their respective agencies for more than ten years. More specifically, 93% of the ERS analysts, who participated in the competency assessment, have worked at their agency for more than ten years, in comparison to 44% of the FAS analysts. Approximately half of the FSA analysts have worked at their agency for more than fifteen years. Of the two AMS analysts surveyed, one analyst worked more than one year, but less than five, and the other had worked more than fifteen years at their agency. This breakdown was almost identical when analyzing data pertaining to the average length of time an individual has worked for the USDA.



Competency Results: As iterated in the previous subsections, the aggregate competency scores for analysts from the supporting agencies were generally high. Figure 20 displays the competency ratings for the analysts by agency.

ICEC Commodity Analyst Competency Ratings by Agency

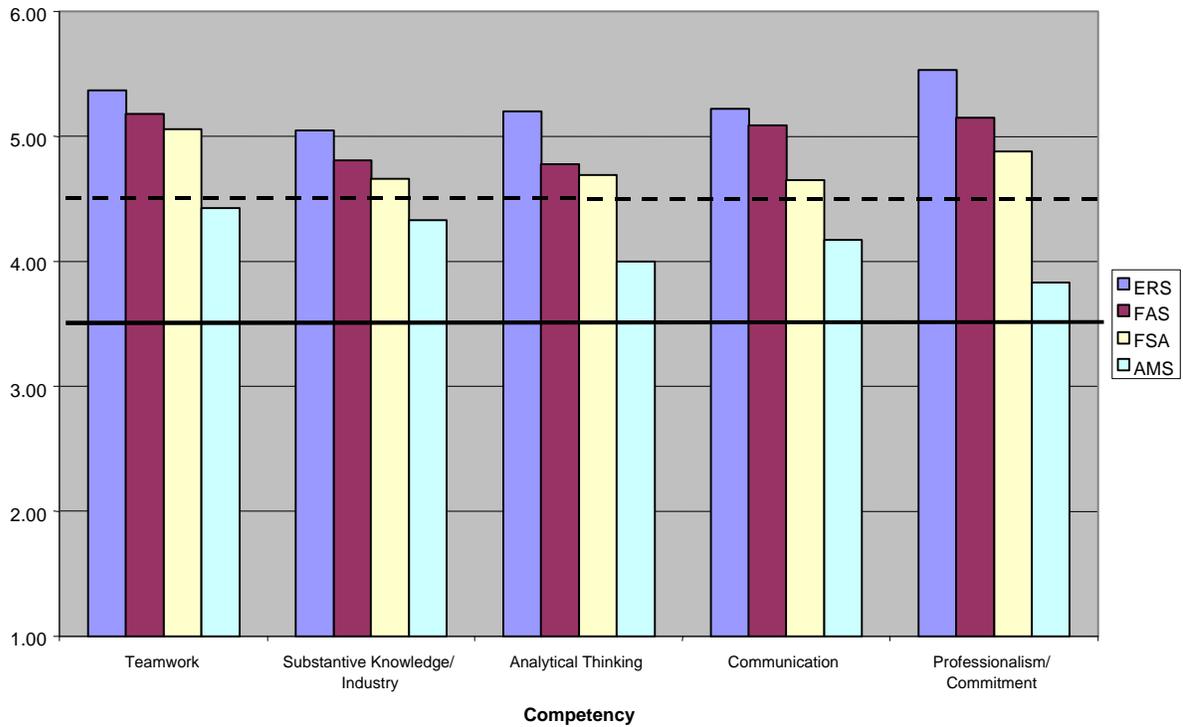


Figure 20 - Analyst Competency Ratings by Agency

Figure 20 above illustrates that the majority of the agencies provide highly skilled analysts to the ICEC process. Aggregate ratings by all respondents for ERS, FAS, and FSA analysts fall higher than a 4.5 on the 6-point scale, indicating that these agencies’ analysts are effective, to a great extent, in demonstrating those competencies important to participation in the ICEC process.

Regarding the AMS assessments, it is important to note that only two analysts from AMS were identified as being core participants in the ICEC process. Looking at the assessment results of the individual groups of raters, it appears that, in general, AMS participants as a whole (to include self and Agency Supervisor assessments) rated AMS analysts lower than did the other agencies. The Committee Chairs, on the other hand, gave high ratings for AMS analysts’ performances. AMS supervisors and analysts may have interpreted the effectiveness scale differently than the other participants. This often happens when the groups surveyed have different work environments. As a result of the small sampling, the Datatrac/PwC Team did not have sufficient data from which to draw meaningful conclusions for that agency.

However, looking at the perception of each group of raters for the other above mentioned

agencies, there are some instances where the aggregate ratings of combined Self, Peer, Committee Chair, and/or Agency Supervisor fell slightly below 4.5. Although the high scores show that these analysts are effective and skillful, as stated in Section 5.3, “Interpreting the Results”, a score greater than 3, but less than 4.5 was considered an area in which supplemental training could raise the bar in a particular competency. These areas will be examined by each agency in the following sections. The Substantive Knowledge competency will be addressed in a separate section.

ERS COMPETENCY ASSESSMENT RESULTS

Competency Results: Figure 21 below displays the competency ratings for the ERS analysts.

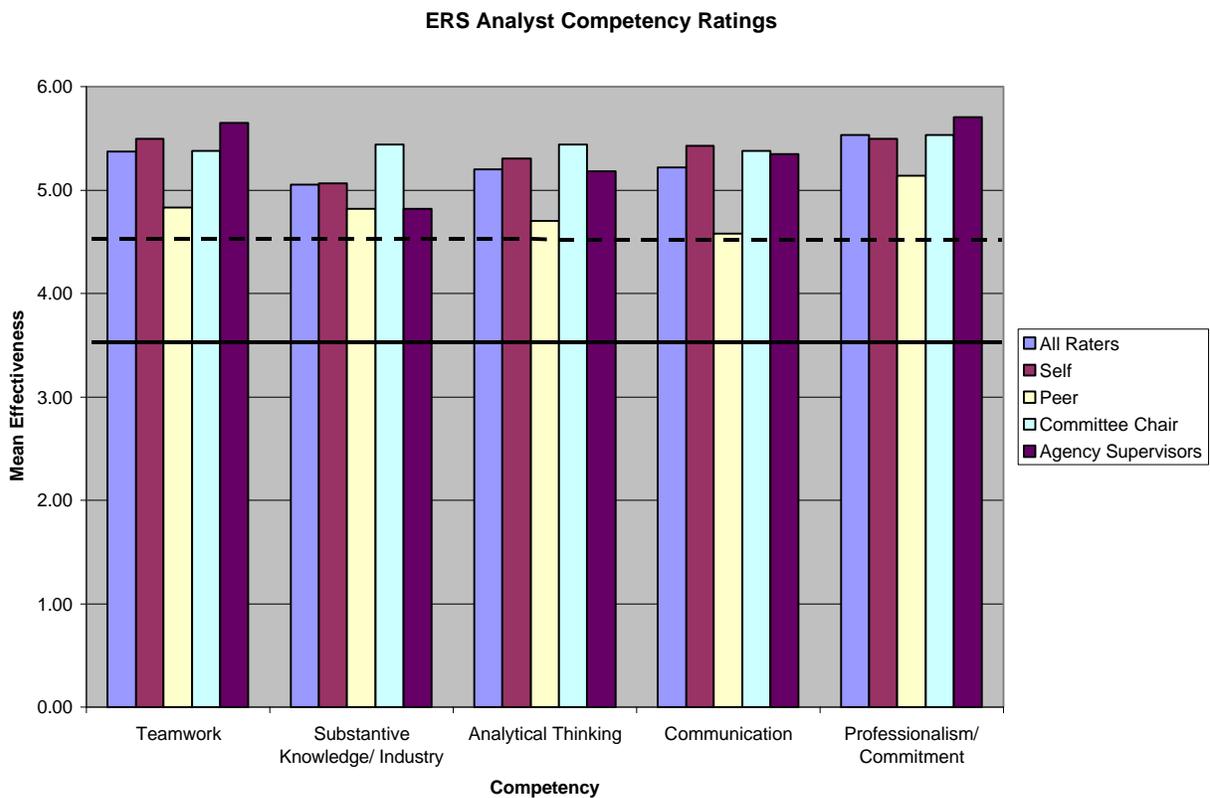


Figure 21 - ERS Analyst Competency Ratings

As illustrated in the diagram above, ERS analysts were rated high on all competencies by all respondents. Aggregate ratings by all respondents are all well above a 4.5 on the 6-point scale, indicating that as a group, the ERS analysts are strong in these competencies. This perception is supported by each group of raters in that no rating falls below a 4.5 for any one competency.

Performance Indicator Results: However, when analyzing the aggregate performance indicator ratings by type of respondent, there were instances in which a particular group’s ratings indicated areas of moderate skill level that could be strengthened. These results are shown in Table 17:

Table 17 - ERS Analyst Performance Indicator Ratings



ERS ICEC COMMODITY ANALYST	All Ratings (Combined)	Self	Peer	Committee Chair	Agency Supervisor
C. ANALYTICAL THINKING--Effectiveness	5.10	5.31	4.54	5.22	5.20
79. Asks appropriate questions to elicit useful data.	5.07	5.21	4.40	5.19	5.24

As shown, none of the combined ratings fell below the midpoint of 3.5, indicating the ERS analysts possess a solid foundation in this performance indicator. The Peer assessments show that ERS may need to strengthen their ability to ask appropriate questions to elicit useful data. Overall, it appears as though ERS is a strong and effective performer in the ICEC process.

FAS COMPETENCY ASSESSMENT RESULTS

Figure 22 below displays the competency ratings for the FAS analysts.

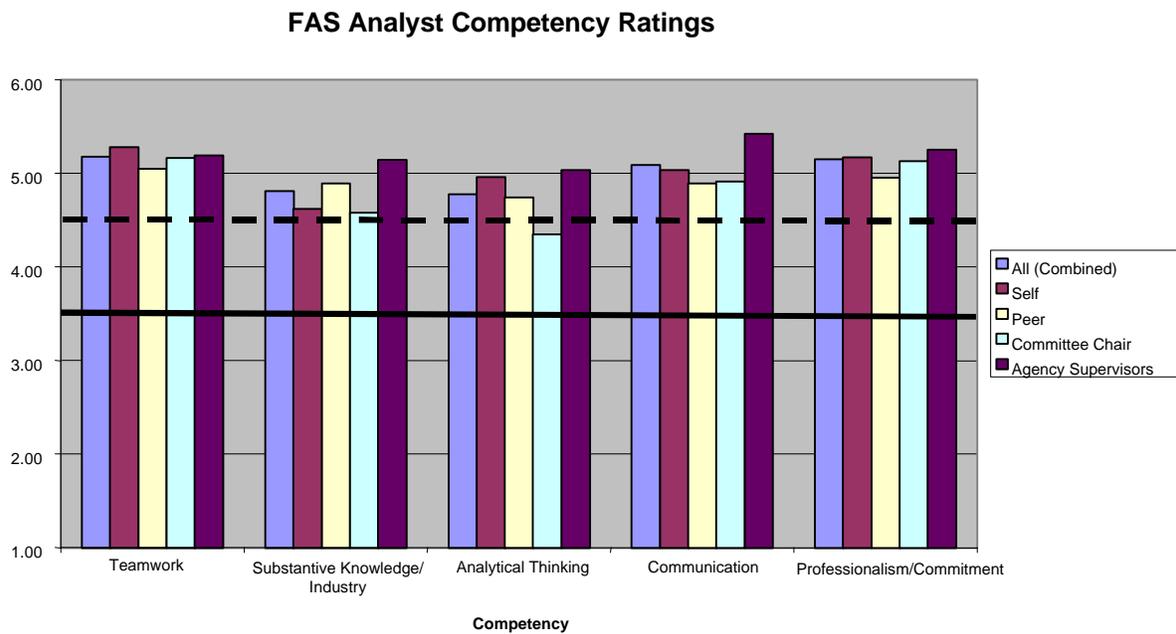


Figure 22 - FAS Analyst Competency Ratings



As illustrated in the above figure, FAS analysts were rated relatively high on all competencies by all rater categories. Aggregate ratings by all respondents are all above a 4.5 on the 6-point scale, indicating that as a group, the FAS analysts are strong in these competencies.

Performance Indicator Results: However, when analyzing the aggregate performance indicator ratings by respondents, there were instances in which respondent ratings indicated areas of moderate skill level that could be strengthened. These results are shown in Table 18 below:

Table 18 - FAS Analyst Competency Ratings

FAS ICEC COMMODITY ANALYST	All Ratings (Combined)	Self	Peer	Committee Chair	Agency Supervisor
C. ANALYTICAL THINKING—Effectiveness	4.78	4.95	4.72	4.42	4.99
81. Utilizes appropriate analytical tools and continually refines them to reflect changes in structure of agriculture.	4.59	4.86	4.67	4.00	4.83
82. Focuses on the big picture while adjusting estimates at a very detailed level.	4.78	5.04	4.74	4.32	5.00
83. Applies in-depth knowledge of economics and statistical analysis.	4.59	4.82	4.78	4.00	4.77

Overall, the effectiveness of this competency is slightly lower than the other competencies. As the corresponding performance indicator scores are above the midpoint of 3.5, it is apparent that strong skills are well established in this area; however they could be strengthened to raise the overall performance of the FAS analysts in this area. One reason FAS analysts were rated lower in this competency may be due to the fact that the nature of their work does not require them to utilize modeling tools and statistical analysis, rather their expertise lies in marketing and collecting information. Results of the workload survey tend to corroborate this point.

FSA COMPETENCY ASSESSMENT RESULTS

Competency Results: Figure 23 below displays the competency ratings for the FSA analysts.



FSA Analyst Competency Ratings

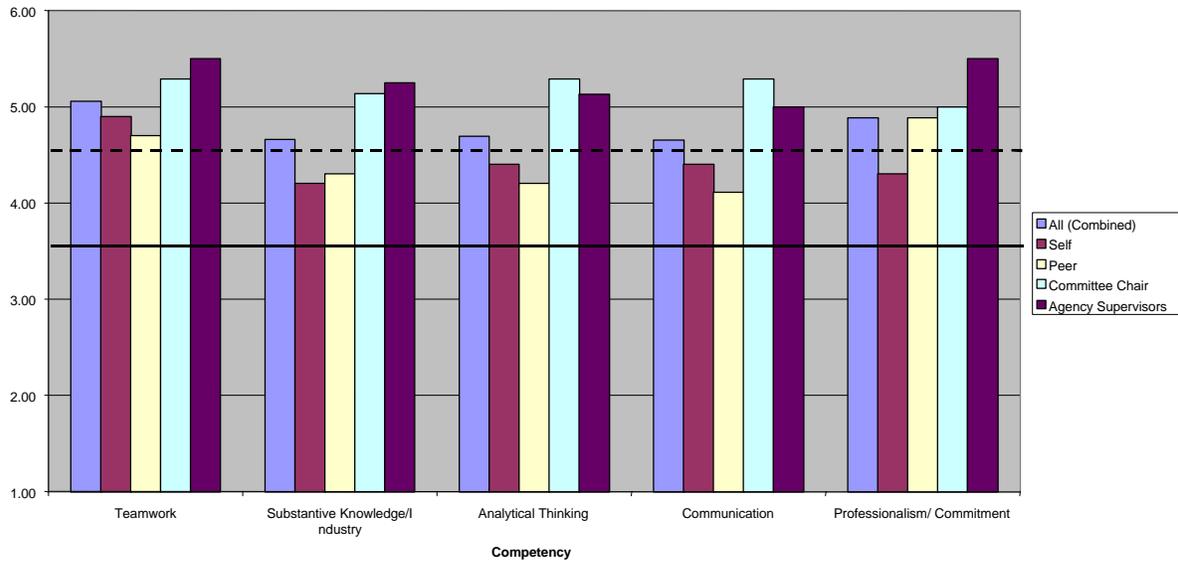


Figure 23 - FSA Analyst Competency Ratings

As displayed in the graph, FSA analysts were rated relatively high on all competencies by all rater categories. Aggregate ratings are all above a 4.5 on the 6-point scale, indicating that as a group, the FSA analysts are effective in these competencies.

Performance Indicator Results: However, when looking at the individual rater group aggregate ratings and when analyzing the aggregate performance indicator ratings by respondents, there were instances in which respondent ratings indicated areas of moderate skill level that could be strengthened. These results are shown in Table 19 below:



Table 19 - FSA Analyst Performance Indicator Ratings

FSA ICEC COMMODITY ANALYST	All Raters (Combined)	Self	Peer	Committee Chair	Agency Supervisors
A. TEAMWORK--Effectiveness	4.93	4.80	4.54	5.33	5.08
62. Shares information with other analysts.	4.82	4.40	4.70	5.30	4.88
64. Represents agency consensus regardless of personal opinion.	5.13	5.50	4.38	5.67	5.00
65. Acknowledges different and varying opinions and maintains an awareness of what other analysts are doing (internal and external).	4.89	4.50	4.60	5.29	5.38
66. Presents work and negotiates ideas without becoming defensive.	4.92	4.80	4.40	5.38	5.25
C. ANALYTICAL THINKING--Effectiveness	4.63	4.40	4.14	5.14	5.08
78. Continually evaluates the credibility/validity of sources and data.	4.71	4.70	4.11	5.14	5.00
79. Asks appropriate questions to elicit useful data.	4.79	4.40	4.50	5.14	5.25
80. Isolates and assimilates information in a logical, rigorous manner.	4.85	4.30	4.67	5.43	5.25
81. Utilizes appropriate analytical tools and continually refines them to reflect changes in structure of agriculture.	4.75	4.70	4.50	4.86	5.00
82. Focuses on the big picture while adjusting estimates at a very detailed level.	4.62	4.10	4.33	5.14	5.13
83. Applies in-depth knowledge of economics statistical analysis.	4.53	4.20	4.10	5.14	5.00
D. COMMUNICATION--Effectiveness	4.57	4.26	4.16	5.23	4.80
86. Articulates economic and industry market rationale for forecasts in a well-crafted argument.	4.41	3.90	4.22	5.14	4.63
87. Provides adequate justification to support conclusions.	4.51	4.40	4.00	5.14	4.75
88. Integrates relevant information and presents it in an understandable way.	4.58	4.20	4.20	5.25	4.88
89. Exercises sensitivity and discretion.	4.59	4.20	4.11	5.38	4.86
E. PROFESSIONALISM/COMMITMENT--Effectiveness	4.74	4.30	4.67	4.96	5.19
93. Adjusts to situations that may arise.	4.78	4.20	5.14	5.00	5.00
94. Identifies information gaps and seeks to develop new sources of information to supply the data.	4.61	4.20	4.63	4.71	5.00
95. Recognizes own deficiencies and works to strengthen these areas.	4.55	4.00	4.50	4.71	5.13

All performance indicators were rated above the midpoint of 3.5, indicating that strong foundational skills exist in these groups, but that these competencies could be strengthened. In addition, the majority of the lower ratings come from the self assessments, indicating that FSA



analysts would like to strengthen their ability in these four competencies. In addition, most of the lower Peer ratings are found under the Analytical Thinking and Communication competencies, reinforcing the lower self ratings in those areas.

SUBSTANTIVE KNOWLEDGE COMPETENCY ASSESSMENT RESULTS

The competency indicators in this competency are specific to the type of expertise an analyst brings to the committees. The various types of information found in these competency indicators were gathered from the various interviews conducted with Committee Chairs and commodity analysts. Each analyst was rated on all of these competency indicators, with the understanding that no one analyst should excel in all competency indicators; his/her strengths would depend upon the agency in which they are employed. Figure 24 below illustrates the aggregate results of all respondents.

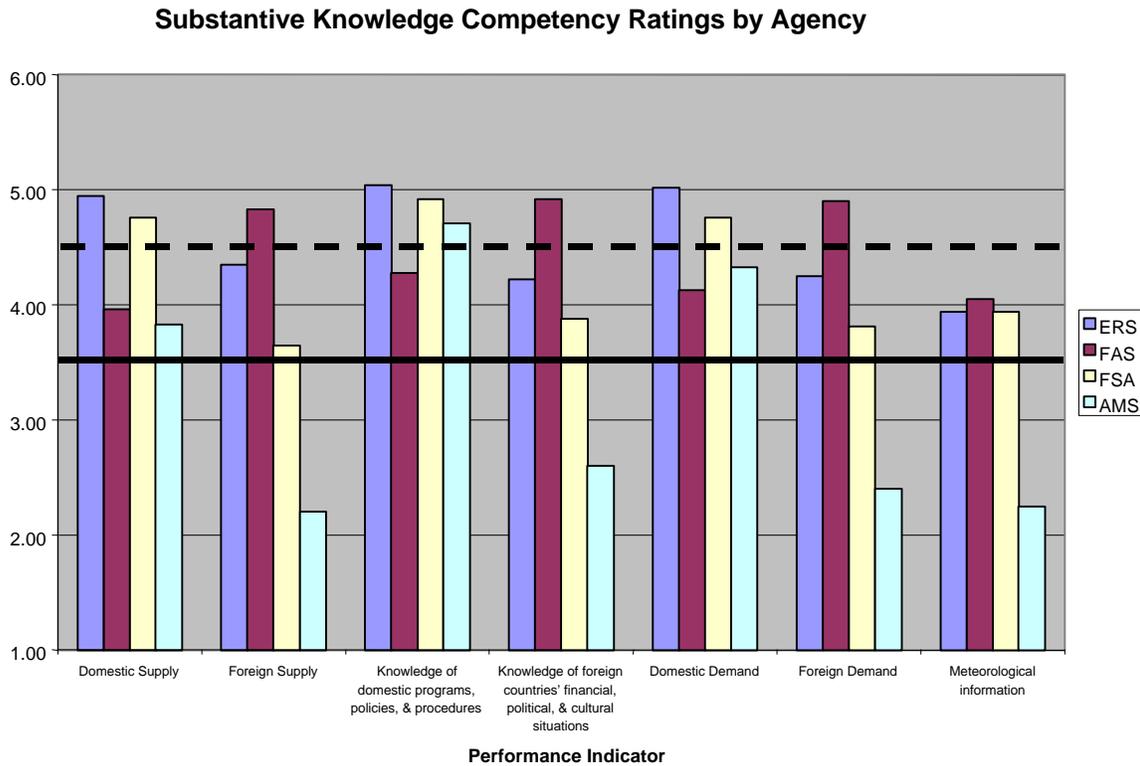


Figure 24 - Analyst Substantive Knowledge Ratings by Agency

This chart illustrates that the various agencies bring different strengths to the ICEC process. This is to be expected as the various agencies' mission and focus requires them to concentrate on different areas of the agricultural sector. It is important to note that many of the Committee Chairs used the "No Information Available" response to mean not applicable when completing the Substantive Knowledge section. This was thought to have resulted in inflated scores for some of the categories. When the Team looked at the results of the assessments, both with and without the Committee Chair responses, it was found that the variation in the scores was negligible. Therefore, the above results accurately reflect the aggregate of all rater groups.



Beginning with the ERS results, we see that the aggregate ratings by all respondents were significantly higher in the following areas: domestic supply and demand and knowledge of domestic programs, policies, and procedures. As might be expected, all ratings in these competency indicators are above a 4.5 on the 6-point scale, indicating that as a group, ERS analysts are strong in these areas. According to the WAOB, this is a recent shift in strength—ERS used to bring more expert foreign knowledge in the past.

In contrast to ERS, the results for FAS show that their strengths are in foreign supply and demand and knowledge of foreign countries' financial, political, and cultural situations. Again, all ratings in these competency indicators are above a 4.5 on the 6-point scale, which show that FAS analysts are highly effective in these areas. This is an expected strength due to the mission of FAS.

FSA analysts' strengths are similar to those of ERS analysts. Aggregate competency indicator ratings are above a 4.5 on the 6-point scale for the following areas: domestic supply and demand and knowledge of domestic programs, policies, and procedures.

Finally, AMS results show that their strength is in the knowledge of domestic programs, policies, and procedures. The aggregate rating for this competency indicator is above a 4.5 on the 6-point scale, indicating that AMS analysts are strong in this area. Again, it is important to note that these results are reflective of a very small sampling.

5.7 CONCLUSION

Overall, the WAOB Chair, the ICEC Committee Chairs, and the ICEC Commodity Analysts are strong performers and meet the requirements of all competencies. With respect to competency ratings by all respondents, all groups rated high on the effectiveness scale in every competency category. Within the individual competencies, there were some cases in which groups of respondents had aggregate ratings between 3 and 4.5, indicating areas in which foundational skills are well developed, but could be improved. The low number of performance indicators, that fall into these areas supports the fact that all participants in the ICEC process perform at a highly effective level.

Continuing the Use of Competency Assessments: It is important to maintain an agency-wide focus on the value of using the competencies and performance indicators to develop and recognize staff. Therefore, the competency documents themselves provide the first vehicle of communication. Combined with a targeted communication and leadership effort, they provide an important opportunity to clearly articulate the critical requirements for success as a participant in the ICEC process. The institutionalization of the competencies and performance indicators will contribute to managerial development of the organization as a whole.



Knowledge Transfer: Our approach was designed to provide opportunity for transfer of knowledge and capability to ICEC representatives. At the beginning of the process, we identified three individuals, each from a different agency to actively participate in the development of the competency models. The individuals who formed the competency assessment team were Kitty Smith (ERS), Henry Bahn (USDA Extension Service), and John Love (WAOB).

These individuals were provided with a copy of our competency assessment methodology. Throughout the development of the competency models, we worked closely with each member to train them in the competency building process. Individuals were tasked to:

- Conduct interviews to gather performance indicators;
- Develop performance indicator statements;
- Develop and name competency sets;
- Providing quality assurance;
- Identify culturally sensitive issues, and
- Act as a liaison to stakeholders.

Through these means, team members were able to actively participate in each step and gain hands-on experience in competency model design.

We recommend that the competency models be revisited annually or every two years and led by the Team Members mentioned above. To review the competencies, we recommend a half-day session with subject matter experts to validate or revise the competency models. This process will ensure that any outdated competencies and performance indicators are updated to meet current job requirements. In addition, this process will capture any new competencies or performance indicators that arise, such as those related to the use of new technology or management practices. This continual redesign process is necessary to ensure that competency categories are in line with business needs. We recommend, that if at all possible, the competency categories remain the same, and only the performance indicator statements change to enable comparisons on a year to year basis. However, if any major changes do occur, such as a drastic change in the mission or role of an assessed position, the competency model and indicators need to be completely redone.

Individual Performance Assessment: In addition, the competency model could be tailored for use as an individual performance assessment. This assessment would provide constructive feedback to each individual on strengths and areas for improvement and should be linked to a rewards system. By creating this link, ICEC process managers are able to create incentives for employees to exhibit the desired human behavior contained in the competency and performance indicator statements. For instance, given the recommendations for knowledge management, the agencies and ICEC heads could develop a knowledge management competency, that measures the extent to which participants are actively transferring and sharing knowledge. The performance indicators under this competency should flesh out the kinds of behaviors expected of the WAOB Chair, Committee Chairs and analysts with regard to knowledge management. Then, if these desired behaviors are met, the individual will be rewarded.



Or, given the recommendation for a performance evaluation and rewards system, the agencies and ICEC heads could development a management competency for the WAOB Chair and Committee Chairs. The performance indicators would detail new responsibilities, such as the completion of performance evaluations, annual reviews, and orientation for new analysts. The development of these additional competencies, that are linked to rewards, will help focus the performance of ICEC process participants and reinforce the importance of those competencies by rewarding employees for exhibiting all desired competencies.



SECTION 6 – FINDINGS AND RECOMMENDATIONS

6.1 SUMMARY FINDINGS

The WASDE/ICEC Process: The existing WASDE/ICEC process is sound, provides adequate security safeguards, and produces a WASDE report that is highly regarded by both internal and external stakeholders/users as reliable, accurate and consistent.

The existing WASDE/ICEC process is heavily dependent on support from USDA agency commodity analysts, without whom the process will not function and whose continued career development and reward systems must be consistent with the value of the end product.

The WASDE commodities are traded in a world market. The statutory mandate for the WASDE requires that USDA provide a “world-view” for consensus estimates of the WASDE commodities, not just domestic projections. This requirement appears to obviate any possibility of publishing the U.S. crop data, supplied by NASS, on a separate schedule from the rest of the WASDE data, without causing significant aberrations in the commodity markets and agribusiness industry.

The WASDE is used extensively as a reference tool and data source by customers and stakeholders outside USDA. Because it is the only report of its kind, it is widely viewed as the “one best estimate” or benchmark for commodities, especially among commodity brokerage firms who themselves must estimate commodity prices. USDA is the only entity with world-wide resources available to collect the WASDE data.

The WASDE reports undoubtedly influence the commodities market. The WASDE is recognized in the market as objective, independent, and the best forecast report available. No other government organization was found to produce a comparable market forecast report.

The Workload Survey: The Workload survey collected responses from 58 commodity analysts in FAS, FSA, ERS, and AMS. The workload analysis shows that the equivalent of 22 staff members from supporting agencies are employed in the process, in addition to the members of the WAOB. The total number of USDA staff touched by the WASDE/ICEC process has been estimated by this study to be between 70 and 80, including the WAOB and commodity analysts from support agencies. Thus, although not all staff participated in the survey, the survey represented a substantial sample for purposes of this study. Therefore, by extrapolating from the survey data, it is estimated that nearly 30 full time equivalent (FTE) commodity analysts are required in the production of the WASDE through the end-to-end WASDE/ICEC process, for the busier months of the year.



There is a wide disparity in the level of effort provided to WASDE-related processes by the four support agencies. For example, the number of commodity analysts who participate in the WASDE/ICEC process varies (on average) from a low of two for AMS to a high of 38 for FAS. Overall, analysts from the four agencies divide their time about 60/40: 60% in working for their home agencies (6400+ hours per month) and about 40% in working directly for the WASDE/ICEC process (4200+ hours per month). In terms of level of effort, the principal subscribers to the WASDE/ICEC process are ERS and FAS. Although the workload data show that FAS contributes much more heavily to the process than other agencies, the team had no yardstick to determine whether any of the other agencies were not contributing enough staff time to the process. This study found no evidence to correlate the missions of the supporting agencies to their current level of support for the WASDE/ICEC process.

Conclusions that can be drawn from the workload survey are that efficiency improvements should be targeted in the following areas:

- The level of effort required to support the marginal core business processes of the WASDE/ICEC process are significant to warrant focusing efficiency improvement efforts to reduce the level of resources required by the process, or to maintain and utilize the existing level of resources more effectively.
- Suggestions for building knowledge communities presented later in this report identifies appropriate resources from the agencies mandated to contribute to the WASDE/ICEC process.
- Alleviate contributing resources at the agency level by leveraging analytical resources with more general knowledge and experience rather than with more experienced commodity analysts. For example, in ERS the ratio of qualified Ph.D-level analysts to other staff is approximately 2 to 1. This presents an opportunity to assist Ph.D. staff by leveraging cheaper and more flexible resources in support of some core business processes that will free up the senior staff for either agency-related activities or more critical WASDE/ICEC processes, such as consensus building.

This study found no evidence to correlate the missions of the supporting agencies to their current level of support for the WASDE/ICEC process. The principal motivators for agency involvement in the process appear to be a history of interest in commodity-related issues. There are no metrics available to demonstrate whether the level of support from any of the supporting agencies is adequate to meet their own requirements or those of the WAOB/ICEC. A guideline is needed that provides either the incentive or the mandate for all four agencies to support commodity outlook forecasting and the WASDE/ICEC process.

Interagency involvement is essential to the WASDE/ICEC Process: The WASDE/ICEC process is cyclical in nature and depends heavily on the interagency involvement of approximately 75 commodity analysts from the WAOB and the four principal supporting agencies (NASS involvement was not a subject of this study). Total resources in the WASDE/ICEC support agencies have declined dramatically since the reorganization of 1994. The overall staff reduction



across the Department, based on 1993 staffing levels, has been about 15%, whereas, the staff reductions in agencies supporting the WASDE have ranged from 2.5% in FAS to 32.4% in ERS (with AMS and FSA reductions at 12.5% and 23.3% respectively). Comparable data is not available for the WAOB, but it appears that they have had a slight increase over that time period. As the availability of commodity analyst resources becomes even more constrained, the mission of the WAOB will be in direct conflict with the mission of those very agencies upon whom success of the process depends.

WASDE estimates can move the markets: An implicit assumption in production of the WASDE report is that the commodity projections must serve the Department as a “benchmark” forecast of the commodity industry without unwarranted effect on the commodity markets. This means that the WASDE projections are, by their nature, conservative estimates of year-end supply, demand, and price. Therefore, they reflect only known market conditions or program decisions without regard to future events or decisions.

The ICEC consensus building process is costly, but effective: The findings of this study indicate that the current ICEC process for generating the monthly WASDE report are both efficient and effective. However, a preliminary analysis indicates that future prospects for a continuation of that record of success are not so sanguine.

Mission of the ICEC must be reaffirmed and strengthened: The mission of the WAOB and the resultant and inherent objectives of the WASDE process can be explicitly defined; namely, to provide commodity forecast and outlook management information to the Secretary. Regulations governing the WASDE/ICEC functions are so dated as to be detrimental to performance of the mission in a constrained resource environment. There is a need to strengthen the existing mission through renewal of governing Departmental regulations and reaffirmation of the mission of the WASDE. In view of the critical role played by the supporting USDA agencies, the updated regulation should be used as a vehicle to achieve alignment of agency and Department goals with regard to the WASDE. As commodity analyst resources become more and more constrained, this alignment becomes even more important since the WAOB mandate may cause resource conflicts between supporting the WASDE and competing agency objectives.

Organizational Misalignment Regarding the Authority, Responsibility and Accountability for Commodity Analysts: The organizational and reporting structures of the WAOB/ICEC are not in congruence with the principles of good organizational design. The CFR clearly delineates that the WAOB Chair is *responsible* for ensuring the quality and independence of the WASDE report. The WAOB Chair is also responsible for ensuring that the analyst resources participating in the ICEC process have access to relevant data and produce high-quality estimates. Therefore, in the current environment, authority and responsibility to request and to utilize quality resources from different agencies for ICEC related activities reside with the WAOB Chair.

However, the current matrix management structure is not conducive to the management of resources required to produce the WASDE estimates. In that case, authority and responsibility



(per the CFR) reside with the WAOB Chairperson. The CFR, however, is silent with regard to the assignment of accountability for those supporting resources. Accordingly, the accountability for resources participating in ICEC has been assumed by the agency supervisors. In the current environment of declining resources, this misalignment is causing conflicts between the authority of the WAOB Chair for analyst participation and the accountability of the agency supervisors.

Thus far the WAOB has formally done little to provide agency supervisors with management information regarding WAOB support requirements or the analysts' performance while participating in ICEC activities. This creates a problem in that agency heads are being held accountable for analysts' performance, and, in the absence of demonstrated WAOB responsibility, are assuming responsibility for the quality and participation of ICEC resources. The agency heads have little knowledge of the analysts' performance, the desired skills and competencies, or the required level of their analysts' participation in ICEC activities. This dynamic creates a management information "vacuum" between agency heads and the WAOB that will ultimately lead to miscommunications, misinterpretations of intentions and a struggle for resources.

The WAOB/ICEC is a Knowledge Based Organization: Given the nature of the WASDE/ICEC process and the role of the WAOB, it is evident that the production of the WASDE draws on deep knowledge, experience, and expertise. The characteristics and attributes of the WASDE/ICEC process and its associated resources provides for the conclusion that the WAOB, and those contributing to the ICEC process, are part of a knowledge-based organization. As a knowledge-based organization, effective knowledge management can help the WAOB and the WASDE/ICEC process by:

- improving process and staff efficiency and performance;
- increasing the rate of innovation and both data and knowledge sharing;
- ensuring that vital knowledge is not lost when individuals leave the Department; and
- facilitating the efficient and expeditious building of consensus.

Knowledge Management Strategy is Needed: The Department has no formal knowledge management strategy in place for the identification, management and sharing of information and knowledge. This has wide ranging implications for the WASDE/ICEC process, the WAOB, and supporting agencies. Potentially, there are two alternatives, although poles-apart, that may serve as a focus for a general knowledge management strategy.

Commodity and Economic Analysis Strategy is Needed: There is no formal strategy in place across the Department to manage data and information by commodity or economic type. Departmental activities related to economic and commodity analysis have not been given a recognized identity and career path based on a strategy to manage data and information by commodity or economic issue. Instead, agency commodity analysts are given direction and focus by the senior agency management. Although the Department wishes to provide a single voice for commodity outlook and forecast reports (that is clearly satisfied by the WASDE/ICEC process) the overall strategy is for the continued production of economic and commodity outlook and



situation analysis is unclear. The WAOB is the primary business function of the Department in which the economic and commodity analyst contribution are formally recognized. A Department-wide strategy is needed to collectively bring together analysts with common interests from across the Department.

Competency Indicators Were Assessed Correctly: All of the competency ratings had mean scores towards the high end of the scale in importance, indicating that these competencies are important to the ICEC process. Meaningful distinctions in both the effectiveness and importance scales on all indicators confirmed that these indicators are perceived to be the skills, knowledge and behavior that are required for the WAOB Chair, ICEC Committee Chairs, and ICEC Commodity Analysts to perform their jobs.

All Competency Ratings Were Above Average: Aggregate ratings for the ICEC participants, and committees as a whole, was not possible due to the fact that each position was rated using a different set of competencies and performance indicators. However, when analyzed individually, ratings for each of the three positions were high, confirming the high caliber of participants in the ICEC process as a whole. In almost all competency categories, the aggregate competency ratings for all respondents were above a 4.5 indicating that the WAOB Chair, the committee chairs, and the analysts are effective to a great extent in demonstrating those competencies necessary for performing their jobs

ICEC Experience of Agency Commodity Analysts Varies by Agency: Demographics for the number of years that analysts were involved in the ICEC process show that the experience of the analysts varies from one agency to another. Of the four support agencies involved in the production of the WASDE, ERS has the highest number of participants who are veterans of the ICEC process, with 57% of their analysts participating in the process for 10 years or more. In contrast, a little over half of the FAS analysts (53%) have participated in the ICEC process for 5 years or less. The breakdown of ICEC participation for FSA is evenly distributed.

Participation of Analysts Varies by Agency: According to self responses, all of the Sugar and Rice committee analysts always participate in the ICEC process. On the Livestock committee, 88% of the analysts always participate, and 13% participate often. On the Soybean, Cottonseed, & Oils committee, 80% always participate, 10% participate often, and 10% participate sporadically. On the Cotton committee, 67% always participate and 33% participate often. Finally, on the Dairy, Wheat and Feed Grains committees, 60% of the analysts always participate, 20% often participate, and 20% participate sporadically. This means that, on average, about half of the available agency analysts participate on the ICEC only on a part-time basis.

Overall, the WAOB Chair, the ICEC Committee Chairs, and the ICEC Commodity Analysts are strong performers: In general, all of those that participated in the competency assessment meet the requirements of all competencies at a high performance level. With respect to competency ratings by all respondents, all groups rated high on the effective scale in every competency category. Within the individual competencies, there were some cases in which



groups of respondents had aggregate ratings between 3 and 4.5, indicating areas in which foundational skills exist, but could be improved. The low number of performance indicators, that fall into these areas supports the fact that all participants in the ICEC process perform at a highly effective level.

6.2 SUMMARY OF RECOMMENDATIONS

The following are the principal recommendations of this second phase study and assessment of the WASDE/ICEC process:

6.2.1 ORGANIZATIONAL IMPROVEMENT

Acknowledge WAOB Chair's authority: The WAOB Chair has expressed his concern for the adequate resources and for the quality of future WASDE reports. The WAOB Chair, however, has met some resistance because of a misunderstanding of his authority to require the participation of agency analysts with the necessary skills to support the ICEC process. This authority must be reaffirmed by the Department and acknowledged by supporting agencies in order for the WAOB Chair to acquire the proper skill set. In addition, agency heads must recognize the importance of and necessity for certain analysts to dedicate the forty-odd hours each month to the WASDE production process. This is not to say that this recognition eliminates flexibility for the agencies to rotate these experts, but communicates the fact that the WAOB Chair has the authority to utilize expertise from various USDA agencies during the time necessary to complete the ICEC process.

Improved high level cooperation through improved communication: The WAOB should improve communications with agency heads through the use of management-level meetings. In order to justify the participation of current and future analysts, the WAOB must be able to effectively communicate the level of current analyst participation, as well as additional resource needs to agency heads. Knowledge of resource needs could easily be assimilated during periodic meetings with ICEC Committee Chairs. This information could then be presented to agency representatives in a forum similar to the Management Advisory Team (MAT) meetings currently used to conduct this project. This forum would allow both the WAOB Chair and agency heads to present their concerns and needs in order to achieve a compromise. Consistent with the authority of the WAOB Chair, agency heads would be able to contribute the necessary resources to the ICEC process. This forum could be held on a monthly or quarterly basis.

Communication of expectations: ICEC committee chairs have expressed concern over the level of participation by certain analysts. The committee chairs acknowledge the tremendous workload faced by those analysts trying to complete both agency and ICEC commitments, but concede that only those analysts that actively participate on a regular basis are the most beneficial to the process. Therefore, the WAOB could benefit from outlining some basic requirements for participation in the ICEC process. Enforcement of professional concepts, such as regular



participation, preparedness, and related matters, could greatly improve the efficiency of the ICEC process. In addition, communication about the specific competencies necessary for a strong performance would aid agencies in identifying appropriate resources. Currently, no such information is provided. If expectations are not met and specific performance problems arise, these issues could be communicated and discussed during the MAT meetings.

Similar direction from committee chairs to their analysts could also improve understanding of specific expectations the chair has for each analyst with respect to producing WASDE estimates. A brief one-on-one orientation session with each new analyst may help to solidify understanding of the ICEC process, individual analysts' roles, and specific tasks expected to be completed by each individual. If an evaluation and rewards system was also created, as suggested below, the specifics of this process should also be communicated.

Develop an analyst selection process: Currently, agency commodity analysts are “volunteered” to participate in the ICEC process. This forces the Committee Chairs to rely upon the enthusiasm and dedication of certain individuals for the production of WASDE estimates. At times, this results in Committee Chairs utilizing the skills of individuals who do not greatly add to the process and resulting WASDE report. In order to allow committee chairs to create effective committees, the WAOB Chair must effectively communicate to the agencies the needs of each committee with respect to analytic resources. Then, the agencies, following this criteria, could send up to three resumes of analysts with appropriate skills from which the Committee Chair or WAOB Chair could select. This system would allow agencies the flexibility to offer available resources, yet at the same time, would allow Committee Chairs and the WAOB Chair the flexibility to build a more productive committee. In addition, the selection of an individual by the WAOB organization would instill a sense of allegiance to the ICEC organization, thus strengthening the idea of shared authority and responsibility over ICEC resources.

Develop a performance evaluation system: Currently, agency supervisors prepare annual assessments for analysts despite the amount of time spent by that analyst on ICEC activities. As indicated by the workload assessment, for the majority of participating analysts, each spends one week per month on ICEC activities. Therefore, one fourth of an analyst's work year is not spent in the agency, but under the direction of the ICEC committee chairs. Yet, ICEC committee chairs are not able to directly contribute to the evaluation of their analysts. The development of a performance assessment that could be completed by committee chairs and factored into the overall evaluation produced by the agency would improve the accuracy of each assessment since the assessment would reflect work performed both in the agency and on the ICEC committee. This tool would help committee chairs effectively communicate expectations and areas for improvement to each individual. Currently, many analysts stated that they are uncertain of how

valuable their contributions are to the ICEC process and would find the feedback from the WAOB extremely valuable.



Develop a rewards system: Every performance assessment should be accompanied by a complimentary rewards system that gives incentives for employees to perform well in any given position. If a committee chair observes that the work of one analyst is exceptional and this information is factored into the agency performance evaluation, the analysts' efforts should be reflected in an appropriate reward system of the agency. Similarly, this individual would be selected to participate in the ICEC process again. The opposite would be true if an analyst proved to be a poor performer. Hopefully, the incentive system would build prestige for the position of ICEC analyst, and thereby strengthen the quality of resources contributed to the process. The combination of the evaluation system with a rewards system would align performance and incentives in an effort to communicate expectations, improve performance, strengthen skills, build loyalty, and elevate job prestige, and bring renewed strength to the enthusiasm of analysts that are currently being pulled in multiple directions. For example, one way to promote knowledge management through a reward system would be institute a performance criteria, "contributes to Knowledge Management databases" as either a performance requirement or a reward requirement. Another example would be for the support agencies to consider instituting the fulfillment of a rotational assignment with the ICEC as a prerequisite for promotion within the agency.

Conduct regular competency assessments: In order for the WAOB Chair to effectively communicate resource needs, analyst competency data must be available. To conduct competency assessments, the WAOB Chair must identify the competencies necessary for strong performance on ICEC activities as well as the competencies possessed by each analyst in order to compare the two. This study provides the necessary models (see Appendix 2) to define these competencies. In this way, skill gaps can be identified pertaining to demographic breakdowns (i.e. by committee or agency). Once gaps in skills are identified, the WAOB Chair can either recruit the appropriate resources from participating agencies or target training to develop skills within existing analysts. If done on a consistent basis, this process will indicate how competencies and aggregate skills change over time. This activity should include periodic succession planning for the ICEC Chairs and supporting commodity analysts (see section 3.8).

Develop a training program for committee chairs and analysts: Once the competency assessment results are tallied, gaps in skill level can be identified. These represent opportunities for developmental training. Training needs can then be prioritized, and a program of supplemental training can be created to improve performance in those areas of highest priority. Later, additional programs can be developed to aid in the development of the remaining skill areas. In this way, the appropriate training programs are identified and implemented with respect to greatest need.



6.2.2 EFFICIENCY IMPROVEMENT

Knowledge Management: New technologies and management approaches are changing the traditional economics of managing professional intellect and capital. An effective knowledge management strategy must be developed that accomplishes the following:

1. **Boost professionals' problem solving abilities through capturing knowledge in systems and software:** As integrated knowledge management software tools and products are continually emerging in the market place, there are a number of existing office information system technologies that may be utilized to support capturing the intellectual capital that drives the WASDE/ICEC process. Relevant products are readily available from Microsoft and Lotus, and include:

- Discussion databases to capture questions, responses and ongoing discussions;
- Workflow analysis and knowledge inventory to codify an enterprise's internal processes and understand where knowledge repositories are; and
- Document management systems to improve access to repositories of digital information.

The Intranet offers new opportunities that may provide an adequate point of entry for a small-scale knowledge management effort that would be required for the WASDE/ICEC process and associated agency inputs. The success of an Intranet-based knowledge management solution is contingent upon recognizing the implications of the data-to-knowledge management process and adequate focus on the required cultural and organizational issues.

2. **Overcome professionals' reluctance to share information:** Information sharing is critical as intellectual assets, unlike physical assets, increase in value with use. Overcoming professionals' natural reluctance to share their most precious asset, knowledge, presents some common and difficult challenges. Competition among professionals often inhibits sharing, and assigning credit for intellectual contributions is difficult. Because professionals' knowledge is their power base, strong inducements to share are necessary.

These inducements become more effective when they form part of a performance assessment program with resulting rewards and incentives. Breaking down organizational, systems, and working around process barriers will prove to enhance the economic and commodity analysis knowledge and expertise in the Department. This could further improve the quality and depth of the WASDE and other forecast and outlook reports.

3. **Organize around intellect:** The silo organizational boundaries are unlikely to be broken down even in the long-term. Currently the organizational structures are seen as a barrier to



effective knowledge management, not so much due to their existence, but the degree of power of the organizational infrastructure over the functional economic and commodity analysis. This is a traditional problem in matrix organizations, and it is always difficult to determine whether the solution lies in organizational initiatives or process improvement initiatives.

4. ***Develop a knowledge management strategy:*** The best knowledge management strategy for commodity and economic analysis in support of the WASDE/ICEC process probably lies somewhere between a strategy that is closely tied to the individual, where knowledge is shared through direct person-to-person contacts, and one in which management and sharing of knowledge is done by leveraging the use of information technology. The greater the need is for reliable and accessible data the more the strategy should favor the application of a “technology network.” The greater need is for access to the human knowledge component to give meaning and value to the data, the more the “human network” strategy will benefit the process. The important factor in selecting a strategy is to begin with a recognition that a knowledge management strategy is required, and form a project team to develop a tailored strategy that can become an ethos adopted by the WAOB and supporting agencies to manage the WASDE/ICEC process.
5. ***Develop a commodity and economic analysis strategy:*** A Department-wide strategy is needed to collectively bring together analysts with common interests from across the Department. Such a strategy would also facilitate the recruitment and accession for resource gaps within the Department, and a collective and collaborative business case to support budgetary funding increases. While this may not entirely be within the organizational reach of the WAOB, there is an opportunity for the WAOB to provide direction to this effort.
6. ***Invest in a knowledge culture:*** Although the WASDE/ICEC process requires the collection, preparation, and building of consensus, there is still a prevailing sense of “knowledge is power.” Currently analyst knowledge is brought to the ICEC meetings in “floppies and folders.” This culture is reinforced by the IT infrastructure. Although information may be shared through publication of outlook, forecast, and market pricing related reports, there is a reluctance to allow direct access to agency owned data that support the official forecast. Despite an overriding culture that limits knowledge sharing, it is evident that analysts have overcome these barriers where personalities and professional interests have allowed.



6.2.3 GENERAL RECOMMENDATIONS:

What the Department Must Do:

1. It is imperative that the existing departmental memos and regulation covering the mission and function of the WAOB and ICEC, dating back almost twenty years, be updated to reflect today's realities. A regulation that contains substantially the criteria laid out in the example in Appendix 6 should be prepared by the Office of Chief Economist and approved by the Secretary and Under Secretaries of each of the affected agencies. In conformance to the Government Performance and Results Act, the new regulation should define the mission of the WAOB and ICEC in terms that are both customer-oriented and outcome oriented. The regulation should also define the role of each support agency with regard to both the commodity outlook function and individual support for the WASDE/ICEC function. The new regulation should also empower the WAOB Chair to become an active resource management of agency commodity analysts, on whom the success of the WASDE/ICEC process depends.
2. The Department should periodically review and reaffirm the fundamental mission of both the WAOB and the WASDE as providers of management information to support policy and program decisions for the Secretary and senior managers.
3. The Department should favorably consider agency requests for personnel staffing increases for commodity analysts that meet the core competency requirements established through this study.

What the Chief Economist Must Do:

1. The Chief Economist must ensure that the WAOB Chair is provided appropriate delegations to achieve the mandates of the new regulation.
2. The Chief Economist should mediate resource issues between the WAOB and support agencies to ensure continued success of the Board's functions.
3. The Chief Economist should authorize a staff position to support the WAOB Chair to achieve three critical missions: (1) Oversight for assignment and assessment of requirements for agency resources; (2) Leadership in establishing new opportunities for sharing commodity data between support agencies and the WAOB; and (3) Leadership in knowledge management methods, procedures and technologies.
4. Establish guidelines for the supporting agencies in terms of their level of responsibility in the WASDE/ICEC process.
5. Form a project team to develop a tailored knowledge management strategy that can be



adopted by the WAOB and supporting agencies to manage the WASDE/ICEC process.

What the WAOB Must Do: It is essential that the WAOB proactively manage of the human capital that makes the WASDE/ICEC process possible. To that end the WAOB Chair must:

1. Take action to implement the mission defined in the proposed regulation.
2. Establish a staff position supporting the ICEC with responsibility for three critical missions: (1) Resource management and coordination of the assignment and assessment of agency resources; (2) Leadership in establishing new opportunities for sharing commodity data by commodity among support agencies and the WAOB; and (3) Leadership in knowledge management methods, procedures and technologies.
3. Form a project team to develop a tailored knowledge management strategy that can be adopted by the WAOB and supporting agencies to manage the WASDE/ICEC process.
4. Assist support agencies to optimize the level of support required on a month-to-month basis.
5. Work with supporting agencies to foster acquisition of highly qualified commodity analysts that best meet the competency requirements of the ICEC as identified by this study.
6. Serve as a focal point for knowledge management and data sharing among ICEC support agencies and the WAOB including download, preparation, processing, and sharing of commodity data throughout the Department.
7. Contribute to the performance appraisal of commodity analysts from supporting agencies.
8. Lead interagency forums for periodic re-evaluation of the ICEC process.

What the Support Agencies Must Do:

1. Affirm their commitment to the WASDE/ICEC process and provide a career path with incentives and rewards for the commodity analyst function.
2. Formally assign primary and alternate commodity analysts to each ICEC committee based on the core competency requirements of this study.
3. With coordination of the WAOB, ERS and FAS should establish a joint project to create commodity centers of excellence to collect, process, evaluate and share commodity related data. These centers of excellence should also serve as a forum for periodic assessment of the resources needed to support the WASDE.
4. Work cooperatively with WAOB committee chairs and staff to periodically re-evaluate the capabilities of commodity analysts assigned to the ICEC.



5. Work cooperatively with WAOB committee chairs and staff to periodically re-evaluate the ICEC processes for improved efficiency and more effective output products.



APPENDICES

- APPENDIX 1. PROCESS MODELS**
- APPENDIX 2. COMPETENCY MODELS AND ASSESSMENT**
- APPENDIX 3. WORKLOAD SURVEY**
- APPENDIX 4. WORKLOAD SURVEY DATA**
- APPENDIX 5 BENCHMARKING AND END-USER REQUIREMENTS**
- APPENDIX 6 EXAMPLE – SECRETARY’S MEMORANDUM**



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APPENDIX 1 – PROCESS MODELS

1.0 CURRENT OPERATIONS

This section documents the methods and procedures of functional process analysis that were employed by the Datatrac/PwC team to model the existing, or AS-IS, interagency activities that encompass the WASDE/ICEC process (e.g. those interagency activities and resources dedicated to development of commodity estimates and the production and publication of the World Agricultural Supply and Demand estimates on a cyclic basis).

1.1 PROCESS MODELS

The modeling methods used in this study are not unique. However, they were carefully chosen to model the WASDE/ICEC process in three distinct views: Concept of Operations, WASDE/ICEC Consensus Process, and the WASDE/ICEC Core Business Process. Each of the process models provide expanded levels of detail to promote understanding of the underlying AS-IS process. They also provide an operational framework to support the development of survey tools for capturing commodity analysts' resource requirements and their core competencies.

The "Concept of Operations" view (section 1.2) provides a high level framework of the internal and external WASDE/ICEC resource components, including the Secretary, the World Board, agency resources, and external customers and stakeholders. It illustrates the continuous interaction among these resources in terms of information flow.

The "WASDE/ICEC Consensus Process" view (section 1.3) provides greater detail by focusing on those interagency activities that comprise the pre-lockup and lockup segments of the process. This model was very useful in assisting process participants to recognize and identify various activities in the consensus process and identify the individual commodity analysts involved in the process.

A third view was developed which focuses on the activities of the individual commodity analysts. This "WASDE/ICEC Core Business Process" view (section 1.4) addresses not only those activities that the commodity analyst must perform to support the WASDE/ICEC consensus process, but also those corollary commodity research and analysis activities associated with their other job functions and agency-related processes.

These three models, or views, of the WASDE/ICEC process were used to support three types of



analysis.:

- The Concept of Operations model provided a conceptual framework for stakeholder analysis and the assessment of internal interfaces and feedback loops within the process. Appendix 5 of this report addresses benchmarking and end-user requirements.
- The WASDE/ICEC Consensus Process model was used to analyze the specific activities involved in the pre-lockup and lockup phases of the process. Based on a survey of the WAOB committee chairs, it was used as a baseline for estimating the total number of commodity analysts involved in the WASDE/ICEC process in a given month. However, this view is not detailed enough to determine the level of workload commitment required of each agency to support the WASDE/ICEC process. The initial survey did, however, identify those analysts who play a key role in the process. This core group was also surveyed to obtain data for a workload analysis. That survey required development of an additional model.
- The ICEC Core Business Process Model introduced the additional procedural definition of commodity analysts' data collection, research and dissemination activities to frame the workload survey. The results of that survey are discussed later in this section.

1.2 CONCEPT OF OPERATIONS VIEW

1.2.1 INTRODUCTION

The purpose of this section is to put into context, albeit at a very high level, an operational framework and model for the interagency process governed by the WAOB and the ICEC Chairs for the production of the WASDE. This operational framework is then described further by important organizational elements, to describe, appreciate, and appraise the WASDE and interagency processes. This operational framework is referred to as the “Concept of Operations.”

The *Concept of Operations* may be defined as the overarching *modus operandi* for the WAOB and the agency commodity and weather analysts for the production of the WASDE in accordance with the reporting and publishing timetable.

In order to present this overarching *modus operandi*, the Datatrac/PwC Team developed a model to show the relationship between the entities involved in the end-to-end process for the production of the WASDE. This is a dynamic model, and by using this framework, it becomes possible to identify inputs, outputs, and feedback loops that are important to the overall process for the production of the WASDE.

1.2.2 THE WASDE/ICEC CONCEPT OF OPERATIONS FRAMEWORK

In considering the WASDE and the ICEC process it is important to develop an analytical

framework or model that captures the high level concept of operations. This model may then be used as the structure for analysis and interpretation of the WASDE/ICEC process. The schematic in Figure 1 below sets out an operational framework for the WAOB and the ICEC process:

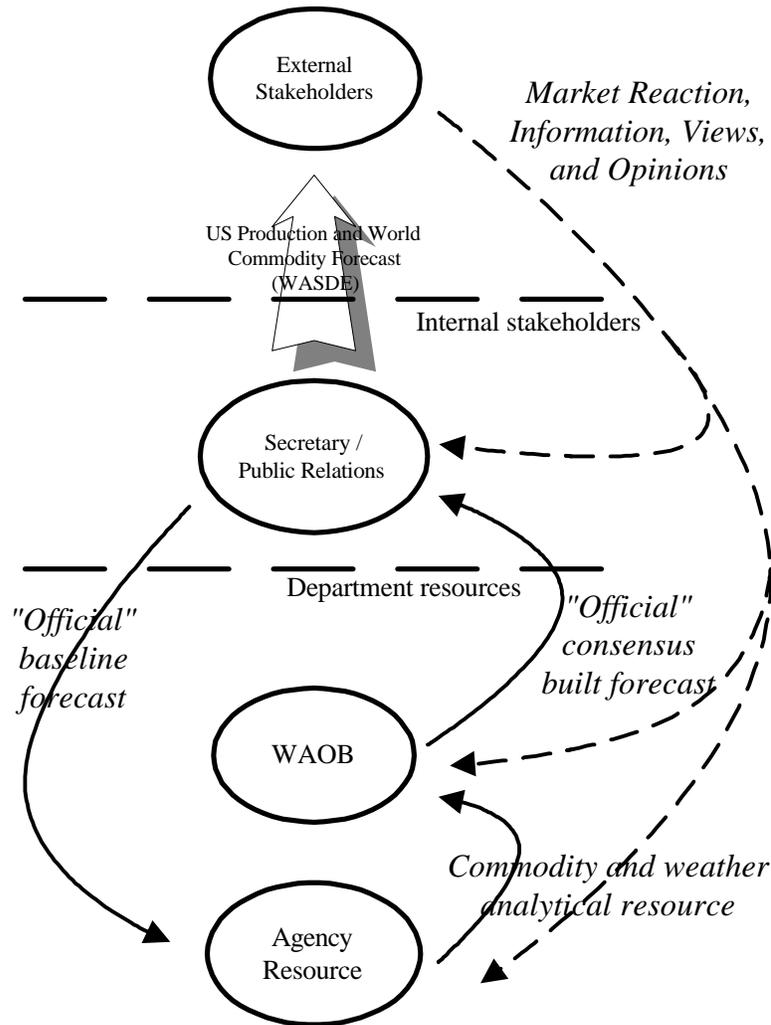


Figure 1

1.2.3 CHARACTERISTICS OF THE WASDE/ICEC CONCEPT OF OPERATIONS

The dynamics of the concept of operations are important to understand, and some further insight into the WASDE/ICEC process may be gained through appreciating the concept of operations in this way. By considering the concept of operations of the WASDE, significant characteristics and attributes may be identified. The degree of significance of these attributes and characteristics varies, and both primary and secondary characteristics are identified and presented below.

Knowledge-based: The production of management information through the WASDE requires a knowledge-based or information-based end-to-end process. The WASDE is the collection of



consensus built forecasting and outlook information, produced by experienced, knowledgeable, and time honored commodity analysts and researchers. The linear nature of the process, from agency resource through the publication of the WASDE, necessarily links the quality of the WASDE directly to the quality of the agency resources available to contribute to the process.

Knowledge-based organizations and processes pose their own special management problems: motivating and rewarding specialists; creating a vision that can unify an organization of specialists; devising a management structure that works with the interagency task force; and ensuring the supply preparation and testing of top management people¹⁰.

Management information: The primary purpose of the WASDE/ICEC process is to generate and publish accurate, timely, and consistent management information for the Secretary of Agriculture. The WASDE/ICEC process has been mandated and built to serve the management information needs of the Secretary, to allow him to present a single, common, and consensus-built view of world agriculture supply and demand. However, the nature of this management information and a consequence of its publication, results in a deep-rooted involvement from a diverse group of external stakeholders, in addition to the agencies in the Department.

Mutual benefit: It can be concluded that the WASDE/ICEC process operates as a “virtuous cycle”; agencies must provide the resources, but also derive a benefit from the WASDE information as a feedback to their commodity-related agency processes. An important characteristic of the WASDE/ICEC process is the extent that it is mutually beneficial to all parties contributing to it. The concept of operations model also lends itself to identifying these "carrot and stick" dynamics. Although the agency resources do contribute heavily to performance of the WASDE/ICEC process (the "stick"), especially when operating in an environment of limited resources, the agencies do derive benefits both directly and indirectly from the process (the "carrot").

From complexity to simplicity: At the lower end of the concept of operations, commodity analysts and program managers are operating in a complex environment. The WASDE/ICEC process facilitates movement from the complexity of world-wide inputs of commodity data through a structured process to (relative) simplicity of output data. This process provides management information that is accurate, timely, and consistent, and, therefore, may be understood by a diversity of internal and external users.

Supply and demand estimate workload: The overall workload required to produce the WASDE may be constant over a calendar year, but the workload associated with producing supply and demand estimates by commodity type is directly correlated to the seasonality and marketing calendar of that particular commodity. Therefore, workload by commodity type fluctuates with heavy and light workload throughout the calendar year.

People-based: The process is people-based and, although assisted and facilitated by local

¹⁰ Extract from the executive summary of “The Coming of a New Organization,” *Peter F. Drucker, Harvard Business Review, January-February 1988.*



technology and information systems, both the process and employees rely very heavily on the knowledge and interaction of the people touching the process. Automated knowledge management systems for capturing and retaining the existing expertise of commodity analysts are not readily available or utilized by most members of the WASDE/ICEC process.

Driven by function rather than organization: Presenting the concept of operations in this framework does not readily show the impact that the production of the WASDE has on organizational design. The WASDE/ICEC process is driven by function rather than by organization. Although production of the WASDE is managed and controlled under the direction of the WAOB Chair, the input to the process comes from agencies within the Department. Therefore, although a single organization retains ownership, accountability, and oversight of the process and the required output, these inputs are made from a variety of sources. This type of structure often results in organizational design conflicts as there is not a linear alignment of accountability, authority, and responsibility over the management of the agency commodity analysts contributing to and participating in the process.

Linear, sequential, and systematic: Although a variety of agency resources may contribute to the WASDE/ICEC process, the concept of operations is linear and sequential in nature. However, it must be recognized that the dynamics of the inputs to the process and associated feedback loop creates a "virtuous cycle" which provides much needed management information, market views and opinions.

The WASDE/ICEC process is systematic in terms of following a pre-determined and published timetable and is published on an annual basis.

Control mechanism: The WASDE/ICEC concept of operations plays an important role as a control mechanism governing the production and publication of management information. Information generated by the WASDE/ICEC process is used not only by the Secretary as baseline management decisions, but also by departmental managers and internal/external users.

Diversity of views and opinions: By the very nature of forecasting, there is a diversity of views and opinions on the world outlook for the supply and demand of commodities reported in the WASDE. Through the consensus building undertaken by the WAOB, the divergent views and opinions are managed and formulated into the single, consensus-built view of the Department.

1.3 THE WASDE/ICEC CONSENSUS VIEW

1.3.1 INTRODUCTION

The WASDE/ICEC Consensus Process is a cyclic activity that engages the interagency resources of the WAOB and at least five other USDA agencies in the development of official government estimates of commodity supply, use and price. These estimates are revised at least once a month



using the most recent "economic intelligence" data gleaned from foreign attaches, other world market sources, and from data on U.S. crop and livestock production and use.

1.3.2 THE WASDE/ICEC CONSENSUS MODEL

The monthly WASDE report is a compilation of this interagency data that provides a Department-wide consensus of estimates for year-end commodity supply, use, and price. In this context "year-end" may be different for different commodities. For example, the production cycle for cattle is considerably different than that of corn. Therefore, each WASDE report represents the best "snapshot" of future commodity outcomes that can be derived from available market data. As soon as one monthly WASDE report is published, the cycle of data collection, data processing, consensus building and information dissemination begins for the next WASDE/ICEC cycle. Figure 2 shows the consensus process for a typical monthly WASDE cycle.

The ICEC are comprised of nine commodity-oriented committees, supported by an Agricultural Projections Specialist and Financial Economist. The committees (Wheat, Rice, Feed Grains, Oilseeds, Cotton, Sugar, Meat Animals, Poultry, and Dairy) meet with representatives from designated USDA agencies at the beginning of each month to start the consensus process that develops supply, demand, and price estimates for each WASDE commodity. Each committee issues a monthly schedule of ICEC meetings in conformance with an annual WASDE/ICEC calendar. A number of preliminary meetings precede the lock-up session each month. These meetings are used to present findings from economic models and reach a preliminary consensus on commodity projections. Those agencies that contribute most directly to this interagency process are the Agricultural Marketing Service (AMS), the Economic Research Service (ERS), the Farm Service Agency (FSA), and the Foreign Agricultural Service (FAS).

The final consensus process is conducted under "lockup" conditions in order to secure the final commodity estimates prior to a single release (8:30 am EST) to the trade press and the Internet. The WASDE was originally released at 3:00 pm. However, the time was changed after the Chicago Board of Trade and Chicago Mercantile Exchange made a strong case that the Asia markets were trading on the WASDE information before it was available in the U.S.

Each WASDE/ICEC cycle is divided into those activities accomplished prior to the lockup and those conducted within the overnight lockup environment. Figure 2 illustrates the activities that comprise the overall WASDE/ICEC consensus process flow. Figure 2 also highlights the division of activities between pre-lockup and lockup processes.

The lock-up process was first mandated by an August 1982 Departmental Regulation. Committee procedures during the lock-up revolve around the receipt of National Agricultural Statistical Service (NASS) data for U.S. crop production. The State Statistical Offices (SSO) transmit U.S. crop and livestock production data to NASS every month that is encoded and kept in a safe until it is made available to the appropriate interagency committee in the lock-up. All telephones are disconnected and computer systems are secured against tampering. The lock-up area is also monitored to detect the presence of electronic surveillance equipment. These security procedures



are in place to ensure that no one outside the lock-up has access to the production data or commodity estimates before they are issued to the general public as official Department estimates. Even the Secretary is not apprised of the contents of the WASDE and U.S. Crop Production reports prior to entering the lock-up area. The Secretary or his representative signs the WASDE and U.S. Crop Production reports in the lockup area before receiving a situation briefing on the current, monthly U.S and world estimates. The signature ceremony attests to the fact that the reports were produced within the established security procedures. The penalties for violating these security procedures are quite severe.

In a typical lock-up session, the ICEC committee chair must be prepared to assess the NASS data and facilitate a discussion between agency analysts. The committee chair must work with whoever attends the committee meeting to achieve consensus. The chairman has about two hours to achieve consensus and put the final production numbers into a balance sheet with supporting rationale.

In order to meet the time constraints on achieving consensus and preparing the narrative justification, it is often necessary to develop “what if” scenarios in the pre-lock-up meetings that reflect the impact that the NASS data “could have” on the world estimates during the lock-up committee reviews. This approach eliminates most of the “surprises” that could occur in the lock-up if the NASS data falls outside the expected range of production estimates for a given commodity. However, such surprises do occur during the lock-up process, and the committee may be called on to respond quickly to unexpected NASS data and produce a revised estimate.

The trigger event that culminates the WASDE/ICEC lockup phase is the release of U.S. crop production and stocks estimates data by NASS. The U.S. agricultural data is collected by SSOs using many types of survey instruments and even satellite photography. Once collected and aggregated, the NASS data for U.S. crop and livestock production and stocks is released only to the interagency committees (activity 4.2) inside the lockup area at approximately 3:00 am the night of the lockup (dashed line on the diagram, Figure 2). Although the National Agricultural Statistics Service (NASS) also plays a critical role by collecting U.S. crop data and providing it for interagency review, they are not an official part of the WASDE/ICEC process. The NASS data is accepted verbatim by the interagency committees and then combined with earlier estimates of foreign agricultural commodity supply and use data furnished by the FAS.

Unlike the NASS data, foreign production data from FAS is reviewed by the interagency committees prior to the lock-up. It is subject to considerable analysis and debate over variables such as the effects of weather and changes in world demand for the commodity, before arriving at a final consensus estimate. If uncertainties arise in the ICEC committee meeting for a particular commodity, such as conflicting production reports or uncertain weather in a region of the world, the Pre-Lockup Meeting, chaired by the head of the World Board, is used to resolve issues prior to the lockup.

Activity 1.0 in Figure 2 illustrates the interaction between the principal agencies involved in the



WASDE/ICEC consensus process, including field activities of both FAS and NASS. The top activity lane (labeled **ERS/FAS/FSA/AMS**) shows the involvement of commodity analysts from each of those agencies in each of the core consensus activities in the second lane, labeled **WAOB/ICEC Consensus Process**. At the time Figure 2 was developed this diagram was inadequate to show the details of the involvement of commodity analysts in the consensus process. The ICEC Core Business Process Model (Figure 3) was developed for that purpose.

The interagency reviews are illustrated in Figure 2 by the pre-lockup activities, which generally occur two weeks before WASDE production. They are composed of a series of ICEC meetings facilitated by the WAOB Committee Chairs (activities 2.3 through 2.6, except 2.5). ICEC Committee meetings during this pre-lock-up period are primarily focused on analysis of foreign commodity data made available by FAS and a variety of other sources, such as industry contacts, trade journals, and observations of USDA officials on foreign travel.

The Pre-Lockup Meeting is conducted by the WAOB chair (activity 2.5). It usually deals with commodity issues that are of special interest or that may pose a problem in the lockup sessions. Activity 2.1.1 illustrates the role of the WAOB staff that supports the Joint Agricultural Weather Facility. Weather briefings are an integral part of the pre-lockup data gathering activity and are usually a formal part of the issue briefings in the Pre-Lockup Meeting.

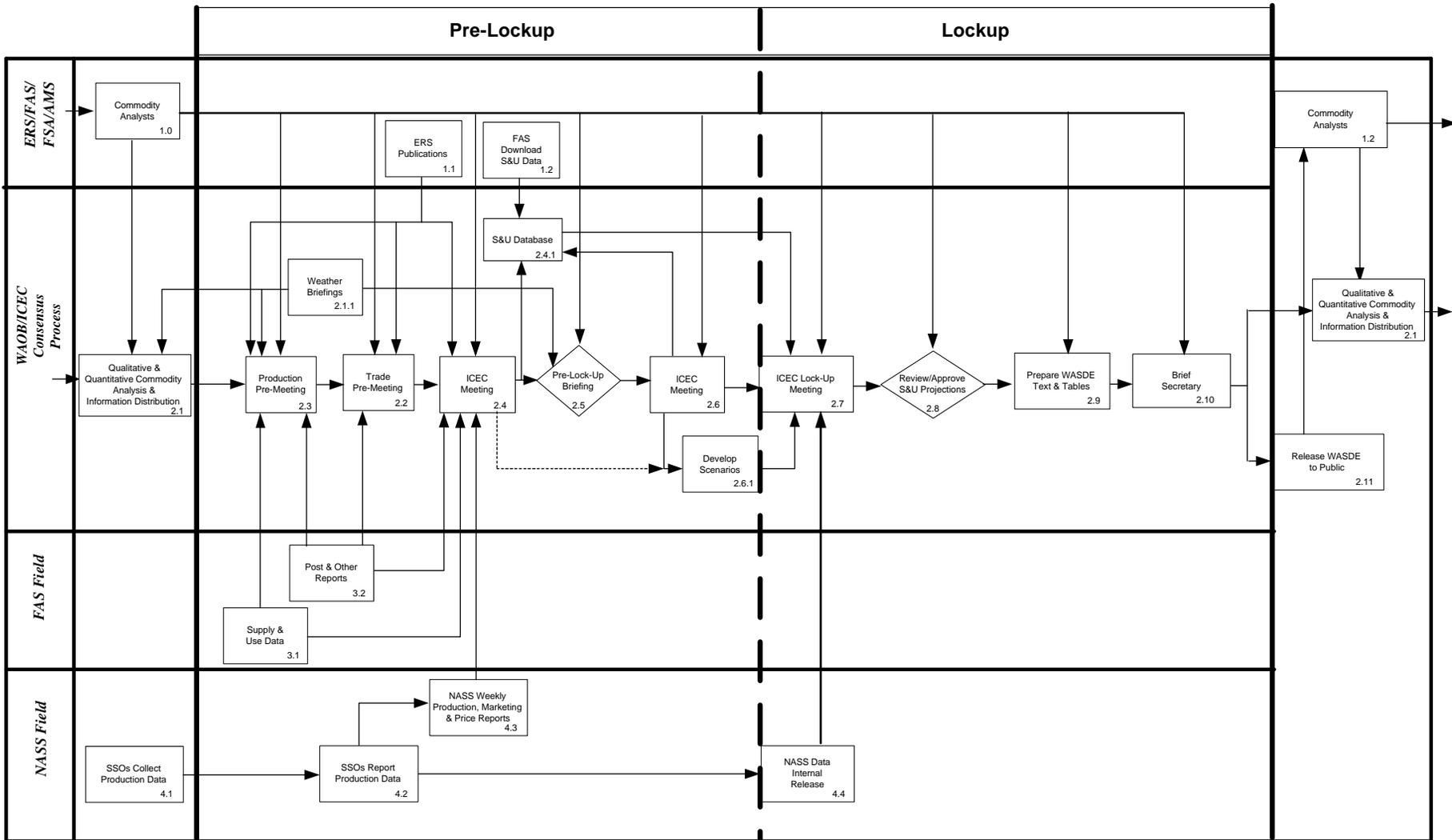
Activity 2.6.1 illustrates that during this pre-lockup phase many of the interagency committees attempt to predict the contents of the NASS crop report prior to its official release in the lockup session. The NASS data is always accepted without debate as the official department forecast for U.S. production and stocks. However, the actual values these estimates take on are not revealed until after the lockup session is officially convened (secured).

In conjunction with this interagency support, FAS provides a database that captures the relevant WASDE data for foreign production, trade, etc. The data is downloaded from the FAS mainframe computer to the WAOB database (activity 1.2 in Figure 2) to support the pre-lockup and lockup activities. The Rice Committee chair plays a key role in the data capture and formatting of the FAS data for use in the WASDE.

Data gathering and assessment activities of the pre-lockup phase are supported by field elements of both FAS (activities 3.1 and 3.2) and NASS (activities 4.2 and 4.3). These weekly and periodic publications are used by agency and ICEC commodity analysts as a basis for continuous assessment of commodity estimates - both for current month and prior months. Also shown on the diagram are a wide variety of ERS commodity periodicals and outlook reports that may also come into use by the ICEC committees during this phase (Activity 1.1). This data, combined with a myriad of other information, such as trade press releases, informal contacts, public addresses, and agency research, provides a continuous flow of commodity-related information that is critical to the vitality of the interagency process. This on-going commodity analysis is shown in the diagram in Figure 2 as activity 2.1, **Qualitative and Quantitative Commodity Analysis and Information Distribution**. This "bookend" activity illustrates the cyclic nature of the



WASDE/ICEC process. It not only completes the lockup phase of the process for one month, but also provides the continuity of operations that prepare for and begin the pre-lockup phase of next month's WASDE/ICEC cycle.





1.4 THE WASDE/ICEC CORE BUSINESS PROCESS VIEW

The purpose of this section is to introduce the core business processes of the WAOB and the operation of the interagency committees.

The focus of the Core Business Process Model is to reduce duplication, eliminate non-value added activities, verify business processes, and improve accuracy, timeliness, and usefulness of commodity estimates for users, customers, and stakeholders. This model is the foundation for a requirements analysis, business process value analysis, and core competency assessment and the eventual recommendation streamlined business processes in the second phase of the study.

1.4.2 DEFINING CORE BUSINESS PROCESSES

The business process model allows the replication and evaluation of workload by core business process that has the advantage of being consistent across all of the individuals involved in the WASDE/ICEC process. The workload survey is an important input to the replication and evaluation of workload.

Workload is only one of many attributes that may be overlaid on each business process. Other attributes, such as benchmark performance information, the extent to which the process is manual or automated, and appropriated funds or operational costs per process may be identified. Understanding these attributes of each business process will contribute to the final deliverable of this study as recommendations for performance improvement.

1.4.3 MAPPING CORE BUSINESS PROCESSES

The development of core business process models for the WAOB and the interagency process becomes an important part of understanding commodity analysis activity and workload. Every business or organization is made up of a number of core business processes that are essential to its success in delivering products and services to its customers. To avoid confusion, for the purposes of this study, the following definitions apply:

A **business process** may be defined as a set of linked activities taking inputs and transforming them to create outputs. Ideally, the transformation that occurs in the process should add value to the input by creating an output that is more useful, effective and of value to an organization's internal and/or external customers.

Inputs may be in the form of information, work-in-progress or materials.

Outputs may be either completed products, delivered services or interim products that are consumed or transformed in the next process.

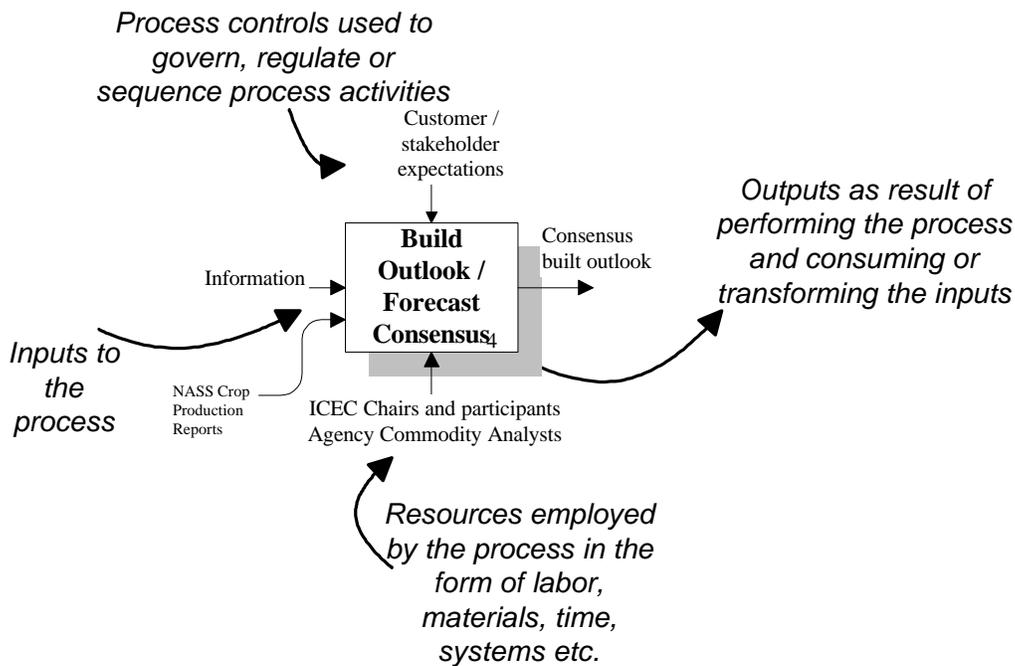
Process mapping of core business processes is a means of visually representing the high level

activities of an organization. It is used to understand and communicate what is being done and what needs to be done across functional boundaries. The complete collection of core business processes and their relationship with each other forms an ‘end-to-end’ view of the organizational business unit, from initial process inputs through the production of the final output. An end-to-end view also shows how the core business processes are integrated and what kind of collaboration is required with outside agencies.

Process mapping or modeling provides a graphical depiction of the sequence of core business processes; all inputs and outputs, resources consumed and governing controls.

The process modeling approach employed in the preparation of the WASDE/ICEC process maps is based on a set of internationally recognized conventions and techniques for documenting core business processes

An example of a process map for a core business process is given in the Figure 3 below. Each process is given a number, a name denoted by a “verb/noun” phrase, and a set of inputs, process controls, outputs and resources employed. These modeling conventions define how each process interacts with other processes and entities inside and outside of the model.



In general, every process has at least one input, one control and one output, although most processes denoted in the WASDE/ICEC core business process map have more than this.



1.4.4 THE WASDE/ICEC CORE BUSINESS PROCESS MODEL

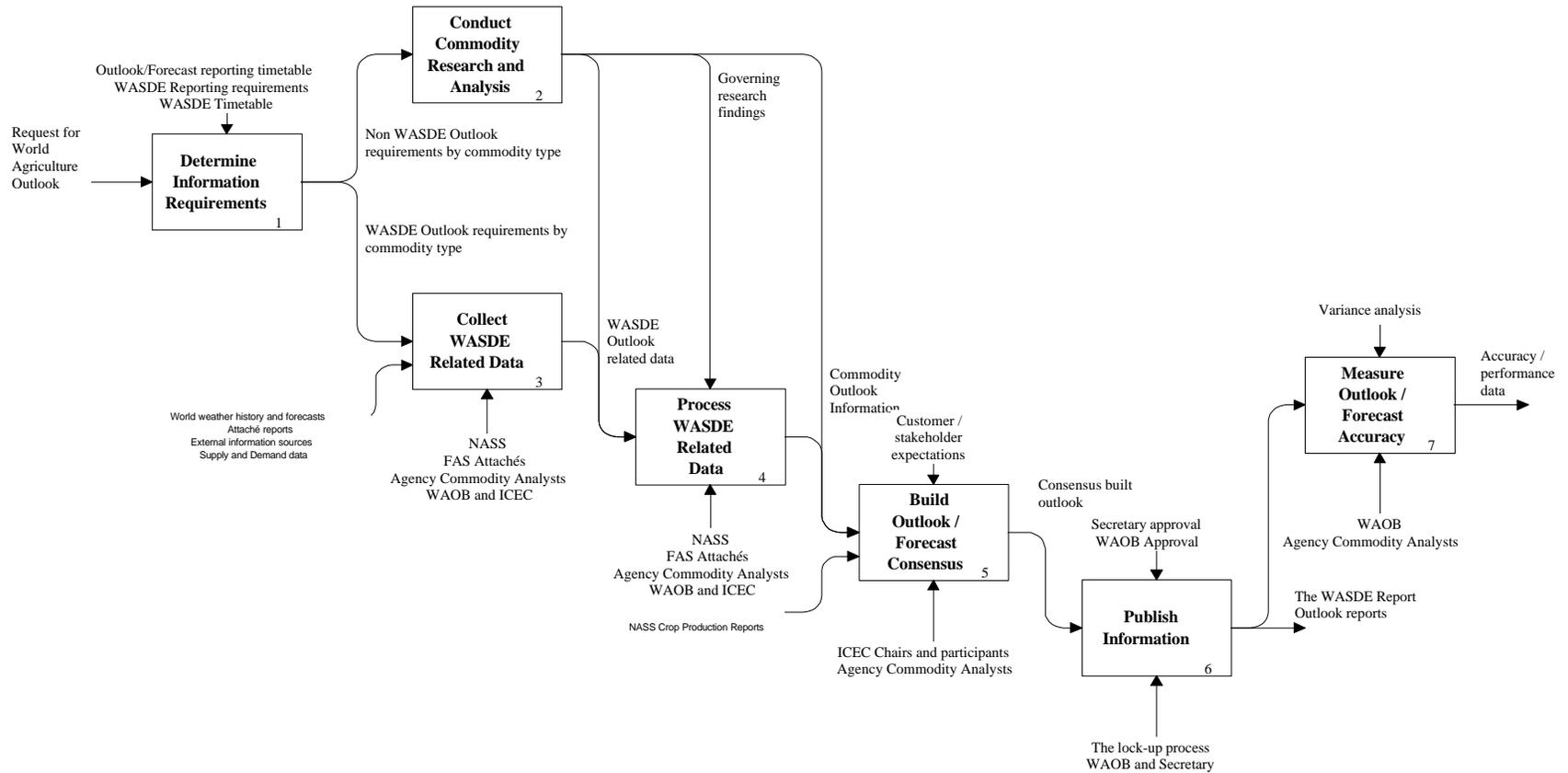
The WASDE core business process model is shown in Figure 3 on the following page. The table that follows Figure 3, Table 3 - Definition of Core Business Processes, lists the significant supporting activities of each core process, with a description of the key outputs from the process.

Reference the core processes labeled “Determine Information Requirements” and “Conduct Commodity Research and Analysis.” The example activities that make up these processes are complementary to the WASDE/ICEC process. That is, they must be performed by a commodity analyst on a continuing basis regardless of involvement in (although perhaps assisted by) the WASDE/ICEC process. These may be agency outputs, such as circulars or outlook reports that require commodity analysis and forecasting activities – for WASDE-related commodities or not.



Figure 3

WASDE/ICEC Core Business Process Model





APPENDIX 2 –

COMPETENCY MODELS AND ASSESSMENT INSTRUMENT

2.0 ICEC COMPETENCY MODELS

The purpose of this section is to introduce and discuss the ICEC Competency Models. The goal of the first three stages of ICEC competency assessment was to build competency models that would accurately reflect the success traits, skills and behaviors of the three roles to be studied. The models will allow the team in the next month to assess the current competencies of the ICEC through the use of a survey instrument. The final version of the competency models have been configured into a wheel formation for clarity and ease of understanding. The wheel configuration signifies that the skills, traits and behaviors are part of a larger whole and are interrelated and interconnected.

2.1 EXPLANATION OF THE COMPETENCY MODELS

The models attempt to illustrate key areas of expertise, called “competency clusters,” that give a general theme to a certain set of behavioral indicators or skills. The competency clusters are presented in the inner circle of the model. The outer circle contains certain skills and behaviors that further define the competency cluster. These skills and behaviors are called “performance indicators.” They have been developed to capture discreet skills and behaviors and are written in a format to suggest that these skills and behaviors are observable and can be measured.

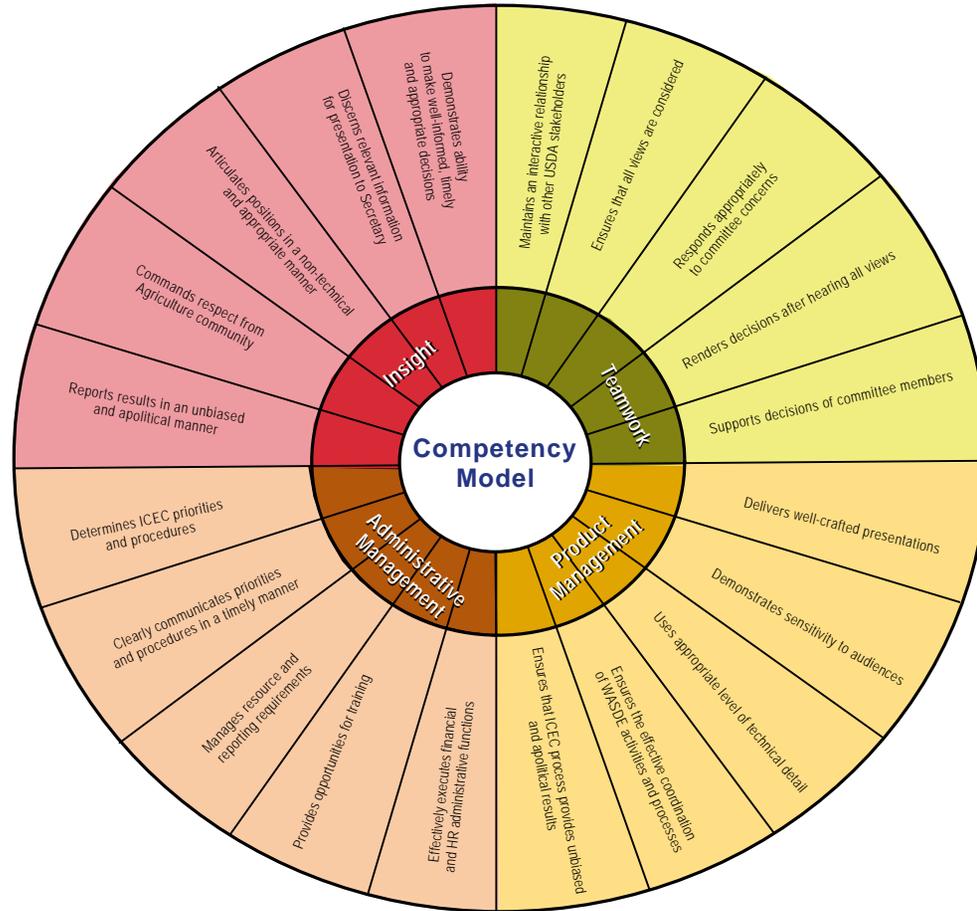
The competency models for the three ICEC roles were developed by the team and presented in first phase deliverable. The models were used in this phase of the ICEC analysis as a basis for assessing the effectiveness of the participants’ in the WASDE/ICEC process.

2.1.1 THE WAOB CHAIR MODEL

The WAOB Chair Model is presented in Figure 1 below:



Figure 1
World Agricultural
Outlook Board
Chair Competency
Model



90720



The World Board Chair Model includes the following four competency clusters:

- Technical Insight,
- Administrative Management,
- Product Management and Teamwork.
- Teamwork

Each cluster in the model is comprised of five observable skills or behaviors. A summary description of each of the clusters is included below.

Technical Insight: Under the CFR, the WAOB Chair is bestowed the following authority: to “assure that all committee members have the basic assumptions, background data and other relevant data regarding the overall economy and market prospects for specific commodities” and to “review for consistency of analytical assumptions and results all proposed decisions made by Commodity Estimates Committees prior to any release outside the Department.” The WAOB Chair, therefore, should possess a high level of overall technical wisdom and skill level with regard to commodity estimates in order to exert that authority.

Although the WAOB Chair position does not require the level of technical skill that an analyst position, for example, it should exhibit a general level of facility and wisdom in agricultural economics, statistics and industry knowledge. In addition, the World Board Chair should be able to discern important commodity-related policy and program issues and to present an integrated picture to his or her audiences.

Administrative Management: The WAOB Chair also serves as the administrative manager of the ICEC process. It is incumbent upon the Chair, therefore, to identify and communicate ICEC priorities and to recruit, manage and train resources in a manner that is most conducive to producing a high quality WASDE report.

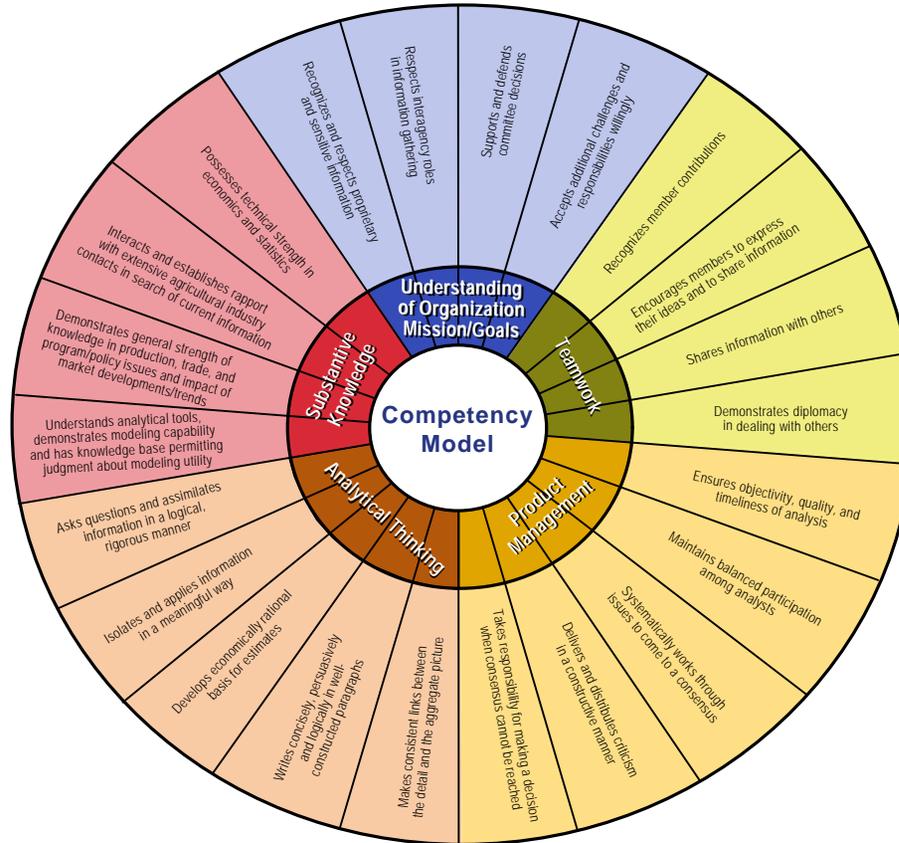
Product Management: The WAOB Chair has clearly established authority, responsibility (as per the CFR) and accountability for the WASDE estimates and for the production of the WASDE report. The Chair also serves as the principle spokesperson for the ICEC when the WASDE is completed and should communicate results in a manner sensitive to his or her audiences.

Teamwork: The WAOB Chair should coordinate with agency supervisors on the utilization of agency resources. The Chair may also serve in a consensus building capacity when disputes arise but, as per CFR authority, must also serve as final reviewer (i.e., decision-maker) with regard to the release of WASDE forecasts. The Committee Chair Model is presented in Figure 2 below:



Figure 2

ICEC Committee Chair Competency Model



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The Committee Chair Model includes the following five competency clusters:

- Substantive Knowledge,
- Analytical Thinking,
- Understanding of Organization Mission/Goals,
- Product Management,
- Teamwork.

Each cluster in the model is comprised of three to five observable skills or behaviors. A summary description of each of the clusters is included below.

Substantive Knowledge: A Committee Chairperson should primarily serve as a consensus builder within the committee, but could, when schedule commitments require, serve as a final decision-maker. A Committee Chair should possess an exceptional set of technical skills and industry contacts complemented with wisdom in agricultural industry economics.

Analytical Thinking Skills: In managing the production of high quality forecasts, a Committee Chairperson must be able to solicit relevant information from agency analysts (as per delegated authority from WAOB Chair) and to facilitate the interpretation and integration of the WASDE information, forming a consensus of opinion among the analysts. The responsibility for well-crafted, well-written reports also falls upon the Committee Chair.

Understanding of Organization Mission/Goals: A Committee Chair may serve as the final authority on committee-specific WASDE forecasts, at the discretion of the WAOB Chairman. Committee Chairs should also be cognizant of department and agency priorities and should be sensitive to the proprietary nature of the WASDE information.

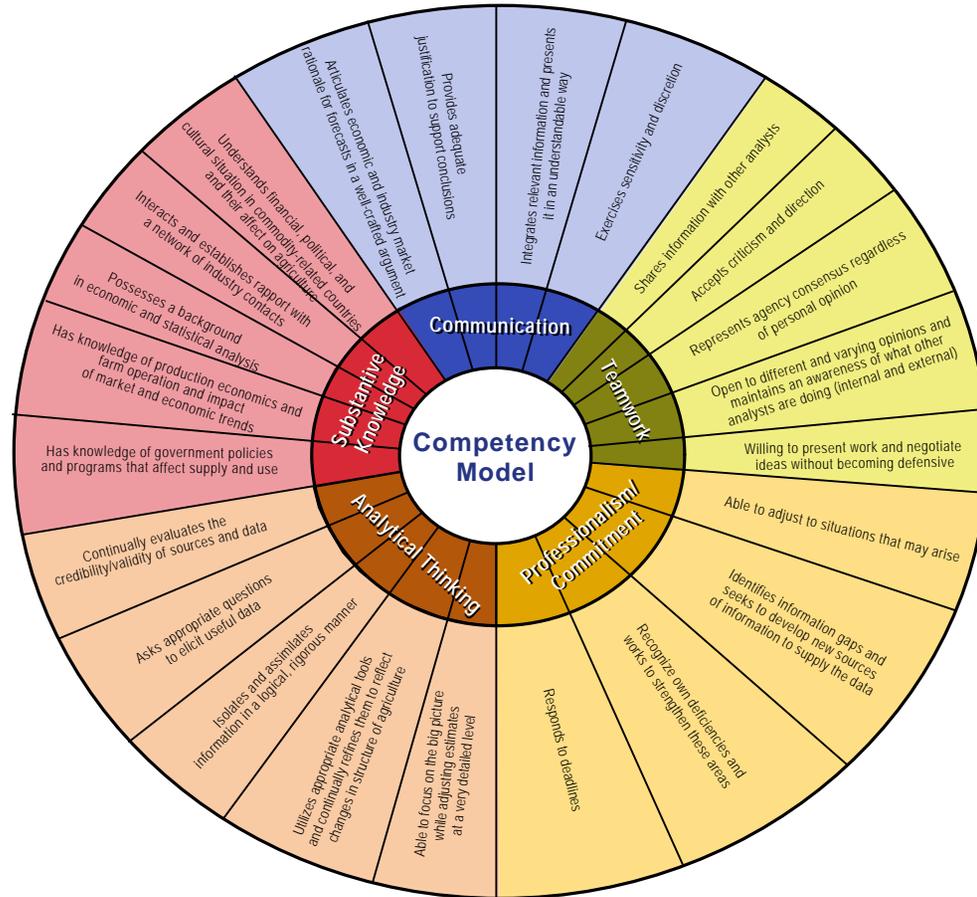
Product Management: As delegated by the WAOB Chair, the Committee Chair has authority, responsibility and accountability for the coordination of his or her commodity committee's WASDE process, ensuring that the process and results remain fair and objective. The Committee Chair may also serve as the principle spokesperson for the commodity committee when the committee's forecasts are reported and should communicate results in a manner sensitive to his or her audiences.

Teamwork: The Committee Chair should demonstrate fairness and objectivity in his or her management of committee processes with respect to the consideration of all analysts' views and analytical arguments.

2.1.3 THE ICEC COMMODITY ANALYST MODEL

The ICEC Commodity Analyst Model is presented in Figure 3, below:

Figure 3
ICEC Commodity Analyst Competency Model



90720



The Commodity Analyst Model includes the following five competency clusters:

- Substantive Knowledge,
- Analytical Thinking Skills,
- Professionalism/Commitment,
- Communication,
- Teamwork.

Each cluster in the model is comprised of three to five observable skills or behaviors. A summary description of each of the clusters is included below.

Substantive Knowledge: A Commodity Analyst should possess an exceptional set of technical skills and industry contacts complemented with a solid general knowledge of agricultural industry economics. In addition, an Analyst should bring a global perspective and should understand the interaction of the national and international political, cultural and financial variables that will ultimately affect commodity estimates.

Analytical Thinking Skills: A Commodity Analyst should develop a rigorous and disciplined framework that would serve as a guide to soliciting objective data and to building a case for his or her commodity estimates. An Analyst should support their estimates with objective and subjective justification for their position.

Professionalism/Commitment: A Commodity Analyst should demonstrate flexibility and commitment with regard to their responsibilities. An Analyst should also be self-aware, continuously evaluating their own strengths and weaknesses and working to achieve a balanced set of advanced skills.

Communication: A Commodity Analyst should be able to clearly articulate the rationale for their estimates in a well-crafted and integrated argument and should provide clear documentation to support it. Analysts should also be sensitive to others and should demonstrate discretion in committee deliberations.

Teamwork: A Commodity Analyst should be open to new information, constructive discussion and negotiations during deliberations to arrive at official committee estimates. Once committee deliberations are completed, the analyst should support and uphold the decisions of the committee.

2.1 COMPETENCY ASSESSMENT INSTRUMENT: The following section contains the survey form and instructions for completing the Competency Assessment. This instrument was used to compile data from the WAOB Chair, ICEC Committee Chairs, commodity analysts, their peers, and their supervisors. This instrument has been validated by the ICEC Study, competency assessment phase, and can be used periodically by the WAOB and/or support agencies to re-



United States Department of Agriculture

USDA Interagency Commodity Estimates Committees Study

assess these competencies.



APPENDIX 3 WASDE/ICEC WORKLOAD SURVEY

MEMORANDUM

TO: All USDA Personnel Involved in the Department's Interagency Commodity Estimates Program

FROM: Keith Collins /s/
Chief Economist

SUBJECT: Workload Analysis Survey

As many of you are aware, the Department has hired a contractor to conduct a study of the efficiency and effectiveness of the current Interagency Commodity Estimates Committees (ICEC) process used to develop commodity projections via the World Agricultural Supply and Demand Estimates (WASDE). An essential part of that study is to make an assessment of the workload that is imposed on participants involved in capturing, processing and publishing data for the current WASDE process.

You have been identified as a participant in the WASDE process. The attached instructions and survey form are designed to help the study team evaluate the level of effort required to produce the WASDE and to assess other commodity-related workload. Your input is important to this effort.

This workload survey will help managers better understand the resource requirements of the WASDE process. Please give the contractor team your full support in completing this survey. It should not require a great deal of time to complete. However, it will require that you read through the materials and familiarize yourself with the requirements of the survey. You are being asked to make your "best estimates" of the percentage of your monthly workload that is related to assisting the interagency committees in production of the WASDE. The information you provide will be completely anonymous. Your responses will be used only in an aggregated form, along with those of the other survey participants. All survey material will be destroyed after the data gathering is complete.

Thank you for your assistance in this matter.



USING A CORE BUSINESS PROCESSES MODEL TO ESTIMATE WORKLOAD

Every business or government agency is made up of a number of core business processes that are essential to its success in delivering products and services to its customers. A core business process model was developed for the USDA interagency process to provide a better understanding of how much effort is required of commodity analysts, from several agencies, to perform their critical role in production of the WASDE report. For the purposes of this study:

A *core business process* is defined as a set of activities that take inputs, transform them, and create outputs. The output created should be of value to internal and external customers.

Inputs may be in the form of information, work-in-progress or materials.

Outputs are either inputs into the next process, completed products or delivered services.

A core process model of the USDA Commodity Analysis Business Processes was developed to assist in the determination of the workload required to produce the WASDE report. That model is presented on the following page.

One purpose of the ICEC Study is to quantify the workload that is directly attributable to those business processes that generate the WASDE report. Therefore, the business process model on the next page and the attached workload survey form make clear a distinction (dashed line) between the role the agency commodity analyst to support “agency-related” commodity analysis and research functions as opposed to those “WASDE-related” functions that are directly associated with production of the WASDE report. **It is understood that this distinction may be somewhat arbitrary and may require you to make a “best guess” of the percentage of your time you spend in each operational function.**

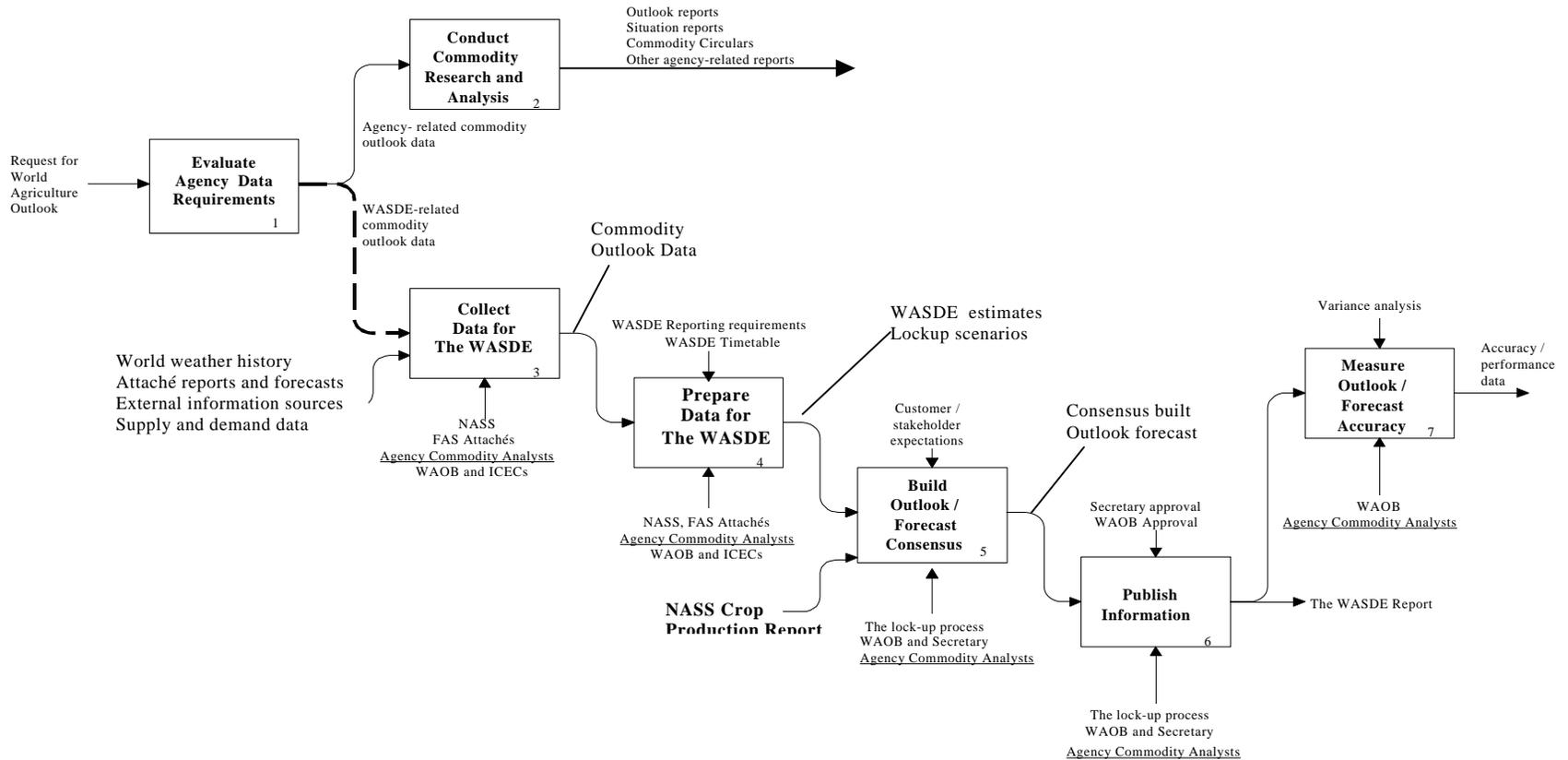
For the purposes of this study, it is assumed that you play a role in both agency-related and WASDE-related processes. It is also assumed that the time you spend in agency-related processes, must be performed on a continuing basis for your parent organization, regardless of the time you commit to the assisting in production of the WASDE. Agency-related activities are associated with producing agency-specific outputs, such as circulars or outlook reports, that require commodity analysis and forecasting activities. Those activities may or may not be associated with WASDE commodities.

For example, if it takes three months to produce an outlook report on world cotton production, and another month for ICEC review and approval, all of the time spent in those activities should be shown in the survey as “agency-related” workload. However, if that report is later used to prepare input data for a WASDE process, the time to prepare and present that input data should be reported as WASDE-related workload.

For the purposes of this study, only those ICEC processes that are associated with producing the WASDE report are considered to be WASDE-related. These are referred to as the WASDE/ICEC processes.



USDA Commodity Analysis Core Business Process Model





COMPLETING THE WORKLOAD SURVEY (ATTACHED SPREADSHEET)

Working through the following steps will help you complete the workload survey:

Step 1: Study the Commodity Analysis Core Business Process Model and begin to think about the model in relation to your job, the processes you undertake, and the time you spend on these processes.

Step 2: Review the attached Workload Survey Form. It is composed of a two-page worksheet with a separate workload estimating section for each core business process. Take a few minutes to study the form. Note that most of the form is comprised of examples of the types of activities that might be involved in each of the seven core business processes shown in the model on the previous page. You are asked to furnish a “best estimate” of your workload only for the core business processes - not the example activities.

Step 3: Go to the worksheet and enter the type of commodity or commodities that you currently devote time to, both agency-related or WASDE-related commodities. Also enter your staff grade and years of service. This data will help us build a general profile of the common attributes of commodity analysts involved in the WASDE/ICEC process.

Also specify the span of months (e.g. February – April) that your workload level, associated with the WASDE/ICEC, process is heaviest. Do the same for the lightest months. If all months require the same workload to support the WASDE/ICEC process, so state and enter workload estimates accordingly in the next section.

Reference the columns labeled “Heaviest” and “Lightest” WASDE workload. Enter your best estimate of the percentage of your total monthly time spent in each of the core processes, for each workload category (Heaviest and Lightest). The difference between the two percentages should account for the seasonality, or peaks and valleys, in workload over the commodity production and marketing year. In the column labeled Heaviest, enter your best estimate of the percentage of your time devoted to each core process in those months in which WASDE/ICEC-related workload is high. Make a similar estimate for each process in those months when seasonal factors reduce your WASDE/ICEC-related workload.

Note that you are asked only to estimate the percentage (%) of your time you spend in each core process, on a monthly basis. You are not required to convert that time to actual hours. For purposes of this study, the estimates you provide will be aggregated with all others and applied to a standard baseline of 160 hours per month.



This is not an audit of your work habits or your level of effort. The study report will not identify your specific responses to the workload survey.

Step 4: The next step is to provide any other information that will assist us in evaluating the workload data. In the column labeled “Process Automated” please check the appropriate box that best indicates the extent that automaton is employed in the delivery of the core business process, or indicate if a future opportunity exists for using automated methods and tools. If there is an opportunity for new methods and tools, please provide recommendations in the narrative section labeled “Collaborative Agencies/Entities and/or Automation Tools.”

This section should also be used to list those “collaborative agencies or entities” (internal and external) that are involved in the delivery of the process. Also use this section to identify any “Automation Tools” (software) that are already being used to assist the core business processes.

Use the last section “Other Notes and Useful Information” to provide any other information that you feel would be helpful in evaluating resource requirements for the WASDE/ICEC process.

Step 5: If you received the workload survey via e-mail, please return the completed form to, Al Luke, at a.luke@datatrac-dc.com. You may also FAX the completed survey form to 703-934-9824.

Thank you for your time for completing the survey. If you require any further information or assistance, please feel free to call Al Luke at Datatrac on 703-934-9800 or Owen Barwell at PricewaterhouseCoopers on 703-633-4324



Workload Survey Form (Not Showing Examples of Activities)

GRADE: _____ Years of Service: _____ Commodity Type(s): _____ _____	WASDE Workload		Process Automated (Please Check One)				Collaborative Agencies / Entities and/or Automation Tools	Other Notes and Other Useful Information
	Heaviest	Lightest						
	% time Monthly	% time Monthly	No	Partial	Comp lete	Oppor tunity		

Heaviest WASDE
Months _____
Lightest WASDE Months _____

Commodity Analysis Supporting Agency Programs

Evaluate Agency Data Requirements	<input type="checkbox"/>					
Conduct Commodity Research & Analysis	<input type="checkbox"/>					
Other Agency-Related Activities	<input type="checkbox"/>	<input type="checkbox"/>				

Commodity Analysis Supporting the WASDE/ICEC Process

Collect Data for the WASDE	<input type="checkbox"/>					
Prepare Data for the WASDE	<input type="checkbox"/>					
Build Outlook/Forecast Consensus	<input type="checkbox"/>					
Prepare and Publish the WASDE	<input type="checkbox"/>					
Measure Outlook/Forecast Accuracy	<input type="checkbox"/>					
TOTAL	100%	100%				



APPENDIX 4 - WORKLOAD SURVEY DATA

4.1 Introduction: The following pages contain the various compilations of data developed from the workload survey that were used to draw conclusions and recommendations in the main body of the report.

4.2 Summary of Workload Survey Data

Number of Participants

Agency	Competency Survey	Workload Survey	WASDE Process
ERS	14	18	18
FSA	9	10	9
FAS	32	27	38
AMS	2	3	2
WAOB	7	5	7
Total	62	63	74

Periodicity of WASDE-Related Workload

Light WASDE Months	Transition	Heavy WASDE Months
Dec - Mar	Apr	May - Nov

Workload Split Between WASDE/ICEC Process and Agency Work

	WASDE-Related	Agency-Related
Based on Avg. Agency Workload	25%	75%
Based on Gross Agency Workload	40%	60%

Monthly Average Analyst Workload = 40 hrs. per month
Number of FTEs Required for WASDE/ICEC Process = 22



AGENCY:	No. WASDE Participants	<u>Agency-Related Workload</u>			<u>WASDE-Related Workload</u>		
		Avg. Monthly Hours	Agency Total	% of Total Hrs.	Avg. Monthly Hours	Agency Total	% of Total Hrs.
ERS	18	x100	= 1800	28%	x60	= 1060	25%
FAS	38	x79	= 3002	47%	x81	= 3078	72%
AMS	2	x138.5	= 277	4%	x21.5	= 43	1%
FSA	9	x149	= 1341	21%	x11	= 99	2%
Total Hours			6420			4280	
% of Total			60%			40%	

<i>WASDE/ICEC Core business process</i>	<i>Agency Input</i>	
	<i>FTEs</i>	<i>% of FTEs</i>
Evaluate Agency Data Requirements	6.8	11.8
Conduct Commodity Research & Analysis	21.9	37.8
Conduct Other Agency-Related Activities	7.2	12.4
<i>Sub-total</i>	<i>36.0</i>	<i>62.0</i>
Collect Data for WASDE	6.8	11.6
Prepare Data for WASDE	7.4	12.7
Build Outlook/Forecast Consensus	5.1	8.8
Prepare and Publish the WASDE	1.7	3.0
Measure WASDE Forecast Accuracy	1.1	1.9
<i>Sub-total</i>	<i>22.0</i>	<i>38.0</i>
<i>Total</i>	<i>58.0</i>	<i>100.0</i>



Non-WAOB Participants in the November WASDE/ICEC Process

ICEC/Agency	ERS	FAS	AMS	FSA	Total
Livestock:	6	4			10
Dairy	1	5	2	4	12
Sugar	2	2		1 *	5
Rice	1	5		1	7
Oilseeds	1	13			14
Grain	5	8 *****		2	15
Cotton	2	4 ****			6
TOTAL	18	41	2	8	69
PERCENT	26.1	59.4	2.9	11.6	100

Total for each agency is the total number of commodity analysts by agency supporting the November WASDE. The number of * indicate the number of analysts attending the committee but counted as attendees in other committees.



Non-WAOB Participants in the January WASDE/ICEC Process

ICEC/Agency	ERS	FAS	AMS	FSA	Total
Livestock:	6	5	1		12
Dairy	1	1	1	5	8
Sugar	1	1		0 *	2
Rice	1	7		1	9
Oilseeds	1	8 ***			9
Grain	5	7 *****		3	15
Cotton	2	6 ****			8
TOTAL	17	35	2	9	63
PERCENT	27.0	55.6	3.2	14.3	100

Total for each agency is the total number of commodity analysts by agency supporting the January WASDE. The number of * indicate the number of analysts attending the committee but counted as attendees in other committees.



FTE Equivalent Contribution to Marginal WASDE/ICEC Core Business Processes

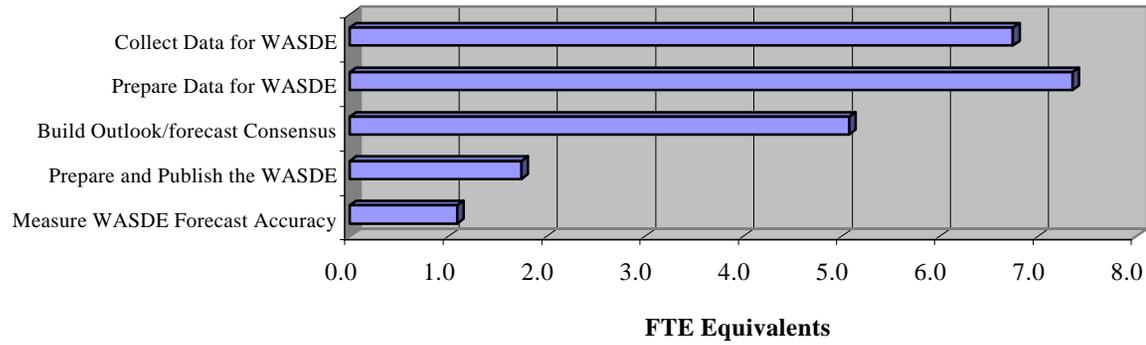
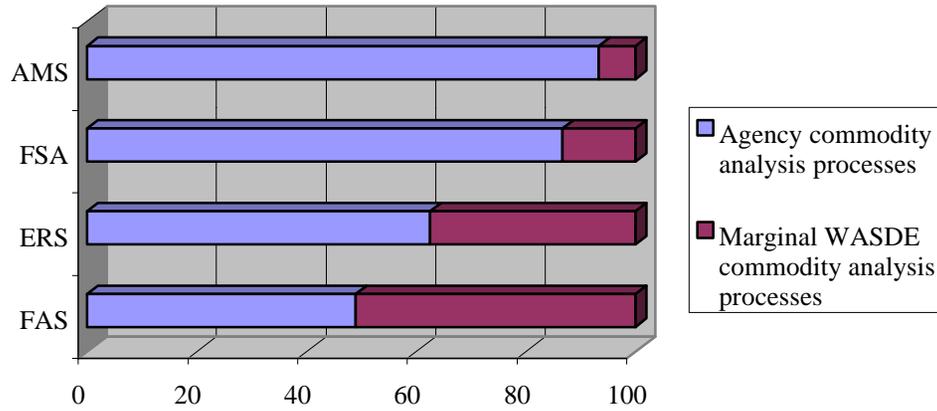


Figure 5
Percentage Workload by Agency for WASDE/ICEC Processes





**Summary of WASDE/ICEC Workload Survey Results by Agency
Percentage of Monthly Work Hours for Core Business Processes**

ICEC Core Business Process:	ERS	ERS	FAS	FAS	AMS	AMS	FSA	FSA	Average	Average
	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light
Evaluate Agency Data Requirements	13	14.4	8.8	9.5	22.3	22.3	14.5	15.6	14.65	15.45
Conduct Commodity Research & Analysis	42.5	40.8	26.7	26.3	40	40	60.6	60.1	42.45	41.8
Other Agency-Related Activities	7.3	15.5	14.1	19.8	31	31.3	11.5	11.5	15.975	19.525
Collect Data for WASDE	6.6	6.4	18.9	16.2	2	2	4	4.2	7.875	7.2
Prepare Data for WASDE	12.8	11	17.3	15.6	1.7	1.7	3.3	3.1	8.775	7.85
Build Outlook/forecast Consensus	12.2	9.8	9	8	2.3	2	3.9	3.9	6.85	5.925
Prepare and Publish the WASDE	2.7	1.4	4	2.6	0.7	0.7	1.6	1.1	2.25	1.45
Measure WASDE Forecast Accuracy	3.1	1.7	1.8	2	0	0	0.5	0.5	1.35	1.05
TOTAL	100.2	101	100.6	100	100	100	99.9	100	100.175	100.25

Heavy = Estimates for Months when WASDE Workload is Heaviest
Light = Estimates for lighter months



Summary -WASDE/ICEC Workload Survey Results by Agency
Monthly Average Work Hours (based on 160hrs/mo.) by Core Business Process

	ERS	ERS	FAS	FAS	AMS	AMS	FSA	FSA	Avg. Analyst Workload
	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	
ICEC Core Business Process:									
	Agency-Related Processes								
Evaluate Agency Data Requirements	20.6	23	14.1	15.2	23.1	24.9	35.7	35.7	23.4
Conduct Commodity Research & Analysis	68	65.3	42.7	42.1	97	96.1	64	64	67.9
Other Agency-Related Activities	11.7	24.8	22.6	31.7	18.4	18.4	49.6	50.1	25.6
TOTAL	100.3	113.1	79.4	89	138.5	139.4	149.3	149.8	116.9
% OF GRAND TOTAL	63%	70%	49%	56%	87%	87%	93%	94%	73%
WASDE-Related Processes									
Collect Data for WASDE	10.6	10.2	30.2	25.9	6.3	6.7	3.2	3.2	12.6
Prepare Data for WASDE	20.5	17.6	27.6	25	5.6	5	2.7	2.7	14.1
Build Outlook/forecast Consensus	19.5	15.7	14.3	12.7	6.2	6.3	3.7	3.2	10.9
Prepare and Publish the WASDE	4.3	2.4	6.2	4.2	2.6	1.8	1.1	1.1	3.6
Measure WASDE Forecast Accuracy	5	2.7	2.9	3.2	0.8	0.8	0	0	2.2
TOTAL	59.9	48.6	81.2	71	21.5	20.6	10.7	10.2	43.3
% OF GRAND TOTAL	37%	30%	51%	44%	13%	13%	7%	6%	27%
TOTAL ALL PROCESSES	160.2	161.7	160.6	160	160	160	160	160	160



**Raw WASDE/ICEC Process Workload Survey Data
Percentage of Analyst Time Spent by Core Business Process
ERS Workload Survey**

Core Process WASDE Activity	1 Heavy	1 Light	2 Heavy	2 Light	3 Heavy	3 Light	4 Heavy	4 Light	5 Heavy	5 Light	6 Heavy	6 Light	7 Heavy	7 Light	8 Heavy	8 Light	Heavy Total	Light Total
	4	4	69	82	2	2	1	1	10	5	10	5	4	0	1	1	101	100
	10	15	35	44	5	5	10	10	10	10	20	15	5	0	5	1	100	100
	5	5	50	50	5	0	5	10	15	20	15	10	0	0	5	5	100	100
	10	5	35	10	10	60	5	5	20	10	15	10	0	0	5	0	100	100
	10	15	56	56	5	5	5	5	5	5	12	8	2	1	5	5	100	100
	15	25	25	25	10	20	15	10	15	10	10	15	5	5	5	0	100	110
	30	25	53	35	10	37	2	1	2	1	3	1	0	0	0	0	100	100
	10	10	64	70	15	15	2	1	5	3	1	1	3	0	0	0	100	100
	30	30	28	31	6	3	16	16	6	6	8	8	6	6	0	0	100	100
	5	10	10	5	5	8	5	5	40	40	28	25	2	2	5	5	100	100
	10	10	30	30	10	10	20	20	10	10	5	5	5	5	10	10	100	100
	5	5	75	80	5	5	4	0	5	5	6	5	0	0	0	0	100	100
	15	15	40	40	10	10	10	10	25	25	0	0	0	0	0	0	100	100
	30	30	30	30	20	20	5	5	5	5	10	10	0	0	0	0	100	100
	5	5	65	82	5	5	1	1	20	5	4	2	0	0	0	0	100	100
	30	30	40	40	5	5	5	5	15	15	2.5	2.5	2.5	2.5	0	0	100	100
	10	15	35	45	5	10	10	10	20	10	10	5	5	0	5	5	100	100
	30	20	20	30	10	25	10	5	15	5	12	10	2	2	1	3	100	100
AVERAGE %	12.9	14.4	42.5	40.8	7.3	15.5	6.6	6.4	12.8	11	12.2	9.8	2.7	1.4	3.1	1.7	100.1	101
Work Hrs	20.64	23.04	68	65.3	11.68	24.8	10.56	10.24	20.48	17.6	19.52	15.7	4.32	2.24	4.96	2.72	160.2	161.6

Work Hours are based on 160 hour month

Agency-Related Workload in Heavy WASDE Months =	100.3	WASDE-Related Workload in Heavy WASDE Months =	59.84
Agency-Related Workload in Light WASDE Months =	113.1	WASDE-Related Workload in Light WASDE Months =	48.48

Legend of Agency-Related Activities:

1. Evaluate Agency Related Data Requirements
2. Conduct Commodity Research and Analysis
3. Other Agency-Related Activities

Legend of WASDE-Related Activities:

4. Collect Data for WASDE
5. Prepare Data for WASDE
6. Build Outlook/Forecast Consensus
7. Prepare and Publish the WASDE
8. Measure WASDE Forecast Accuracy



Raw WASDE/ICEC Process Workload Survey Data

Percentage of Analyst Time Spent by Core Business Process - FAS Workload Survey

Core Process	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	Heavy	Light
WASDE Activity	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Total	Total
	11	5	40	25	5	5	22	10	11	50	11	5	0	0	0	0	100	100
	20	20	40	60	5	5	10	5	10	5	10	5	5	0	0	0	100	100
	7	5	25	25	3	5	25	25	10	10	10	10	10	10	10	10	100	100
	5	6	5	10	1	1	65	65	8	4	7	5	7	7	2	2	100	100
	5	1	20	10	65	85	1	0	2	0	2	2	5	2	0	0	100	100
	2	2	20	30	4	8	20	18	35	30	7	4	12	8	0	0	100	100
	5	19	45	38	5	6	22.5	13	18	19	2.25	2.5	2.25	2.5	0	0	100	100
	3	10.7	47	53.3	6	7	16.8	10.5	22.2	15	1.7	1.5	2.3	3	1	1	100	100
	5	10	40	40	20	25	25	15	4	4	3	3	1	1	2	2	100	100
	0	10	0	5	5	5	40	40	25	25	20	13	10	0	0	2	100	100
	5	5	15	15	45	50	5	5	10	10	20	15	0	0	0	0	100	100
	2	4	42	45	6	11	10	8	25	20	10	10	3	1	2	1	100	100
	2	4	42	45	6	11	10	8	25	20	10	10	3	1	2	1	100	100
	10	5	10	5	30	60	15	10	10	5	10	5	10	5	5	5	100	100
	4	3	41	44	5	7	16	15	22	20	7	6	4	4	1	1	100	100
	40	35	30	25	7	15	10	10	5	5	5	5	2	2	1	3	100	100
	5	5	60	60	25	25	5	5	0	0	5	5	0	0	0	0	100	100
	11	6	41	23	2	14	7	6	18	31	11	11	5	3	5	6	100	100
	40	30	30	30	5	15	5	5	5	5	5	5	5	5	5	5	100	100
	4	4	10	10	85	85	0	0	0	0	1	1	0	0	0	0	100	100
	5	5	50	50	5	5	0	0	25	20	25	20	0	0	0	0	110	100
	2	2	0	0	25	40	45	40	10	6	10	6	8	6	0	0	100	100
	0	3	10	10	0	2	40	40	45	40	2	2	0	0	3	3	100	100
	5	5	15	20	5	5	15	20	35	25	15	15	5	5	5	5	100	100
	3	5	4	10	3	25	35	25	47	29	8	4	0	0	0	2	100	100
	10	20	25	10	5	10	10	5	20	5	20	40	5	5	5	5	100	100
	27	27	13	13	3	3	34	34	19	19	3	3	1	1	0	0	100	100
AVERAGE	8.815	9.507	26.67	26.3	14.11	19.8	18.86	16.2	17.27	15.6	8.924	7.93	3.909	2.648	1.815	2	100.4	100.07
Work Hrs	14.1	15.21	42.67	42.2	22.58	31.7	30.18	25.93	27.63	25	14.28	12.7	6.255	4.237	2.904	3.2	160.6	160.12
Agency-Related Workload in Heavy WASDE Months =							79.35											
Agency-Related Workload in Light WASDE Months =							89.07											
WASDE-Related Workload in Heavy WASDE Months =																81.24		
WASDE-Related Workload in Light WASDE Months =																71.05		



**Raw WASDE/ICEC Process Workload Survey Data
Percentage of Analyst Time Spent by Core Business Process
FSA Workload Survey**

Core Process	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	Heavy	Light
WASDE Activity	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Total	Total
	3	11	80	80	7	7	0	0	3	1	2	1	5	0	0	0	100	100
	3	6	85	85	2	2	0	0	3	1	2	1	5	5	0	0	100	100
	7.5	7.5	47.5	42.5	20	20	10	12.5	5	5	10	12.5	0	0	0	0	100	100
	45	45	40	40	10	10	1	1	1	1	2	2	1	1	0	0	100	100
	4	4	84	84	1	1	4	4	2	2	5	5	0	0	0	0	100	100
	20	20	65	65	10	10	1	1	1	1	2	2	1	1	0	0	100	100
	7.5	7.5	50	52.5	25	25	7.5	5	5	5	2.5	2.5	0	0	2.5	2.5	100	100
	42	42	42	42	10	10	1	1	0	0	1	1	4	4	0	0	100	100
	5	5	60	60	5	5	10	10	10	10	10	10	0	0	0	0	100	100
	7.5	7.5	52.5	50	25	25	5	7.5	5	5	2.5	2.5	0	0	2.5	2.5	100	100
AVERAGE	14.45	15.55	60.6	60.1	11.5	11.5	3.95	4.2	3.5	3.1	3.9	3.95	1.6	1.1	0.5	0.5	100	100
Work Hrs	23.12	24.88	96.96	96.2	18.4	18.4	6.32	6.72	5.6	4.96	6.24	6.32	2.56	1.76	0.8	0.8	160	160

Work Hours are based on 160 hour month

Agency-Related Workload in Heavy WASDE Months =	138.5	WASDE-Related Workload in Heavy WASDE Months =	21.52
Agency-Related Workload in Light WASDE Months =	139.4	WASDE-Related Workload in Light WASDE Months =	20.56

Legend of Agency-Related Activities:

1. Evaluate Agency Related Data Requirements
2. Conduct Commodity Research and Analysis
3. Other Agency_Related Activities

Legend of WASDE-Related Activities:

4. Collect Data for WASDE
5. Prepare Data for WASDE
6. Build Outlook/Forecast Consensus
7. Prepare and Publish the WASDE
8. Measure WASDE Forecaast Accuracy



**Raw WASDE/ICEC Process Workload Survey Data
Percentage of Analyst Time Spent by Core Business Process**

AMS Workload

Survey

Core Process	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	Heavy	Light
WASDE Activity	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy	Light	Total	Total
	40	40	40	40	8	8	5	5	5	5	0	0	2	2	0	0	100	100
	25	25	60	60	10	10	0	0	0	0	5	5	0	0	0	0	100	100
	2	2	20	20	75	76	1	1	0	0	2	1	0	0	0	0	100	100
AVERAGE	22.33	22.33	40	40	31	31.3	2	2	1.667	1.67	2.333	2	0.667	0.667	0	0	100	100
Work Hrs	35.73	35.73	64	64	49.6	50.1	3.2	3.2	2.667	2.67	3.733	3.2	1.067	1.067	0	0	160	160

Work Hours are based on 160 hour month

Agency-Related Workload in Heavy WASDE Months =	149.3	WASDE-Related Workload in Heavy WASDE Months =	10.67
Agency-Related Workload in Light WASDE Months =	149.9	WASDE-Related Workload in Light WASDE Months =	10.13

Legend of Agency-Related Activities:

1. Evaluate Agency Related Data Requirements
2. Conduct Commodity Research and Analysis
3. Other Agency_Related Activities

Legend of WASDE-Related Activities:

4. Collect Data for WASDE
5. Prepare Data for WASDE
6. Build Outlook/Forecast Consensus
7. Prepare and Publish the WASDE
8. Measure WASDE Forecaast Accuracy



WASDE/ICEC Process Workload Survey Data
ERS Heavy (H) and Light (L) Workload by Month(1 indicates survey participant's choice)

Commodity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L
Oilseeds	1			1		1			1				1					1						1
Wheat & Grain						1			1				1		1									1
Grain	1			1		1		1	1			1	1		1		1		1		1			1
Various Grain		1					1						1											1
Poultry	1						1					1												1
Grain	1			1		1	1		1		1		7		1		1	1			1		1	1
Grain			1								1										1			
Grain		1		1		1	1		1			1							1					1
Cattle			1			1			1			1			1			1			1			1
Sugar									1		1		1		1		1						1	
Sugar									1		1		1		1		1					1		
Cotton				1		1		1	1			1	1		1		1		1		1		1	1
AVERAGE	4	2	2	5	0	7	4	2	9	0	3	6	13	1	5	2	4	2	5	0	4	3	1	8



WASDE/ICEC Process Workload Survey Data

FAS Heavy(H) and Light (L)Workload by Month (1 indicates survey participant's choice)

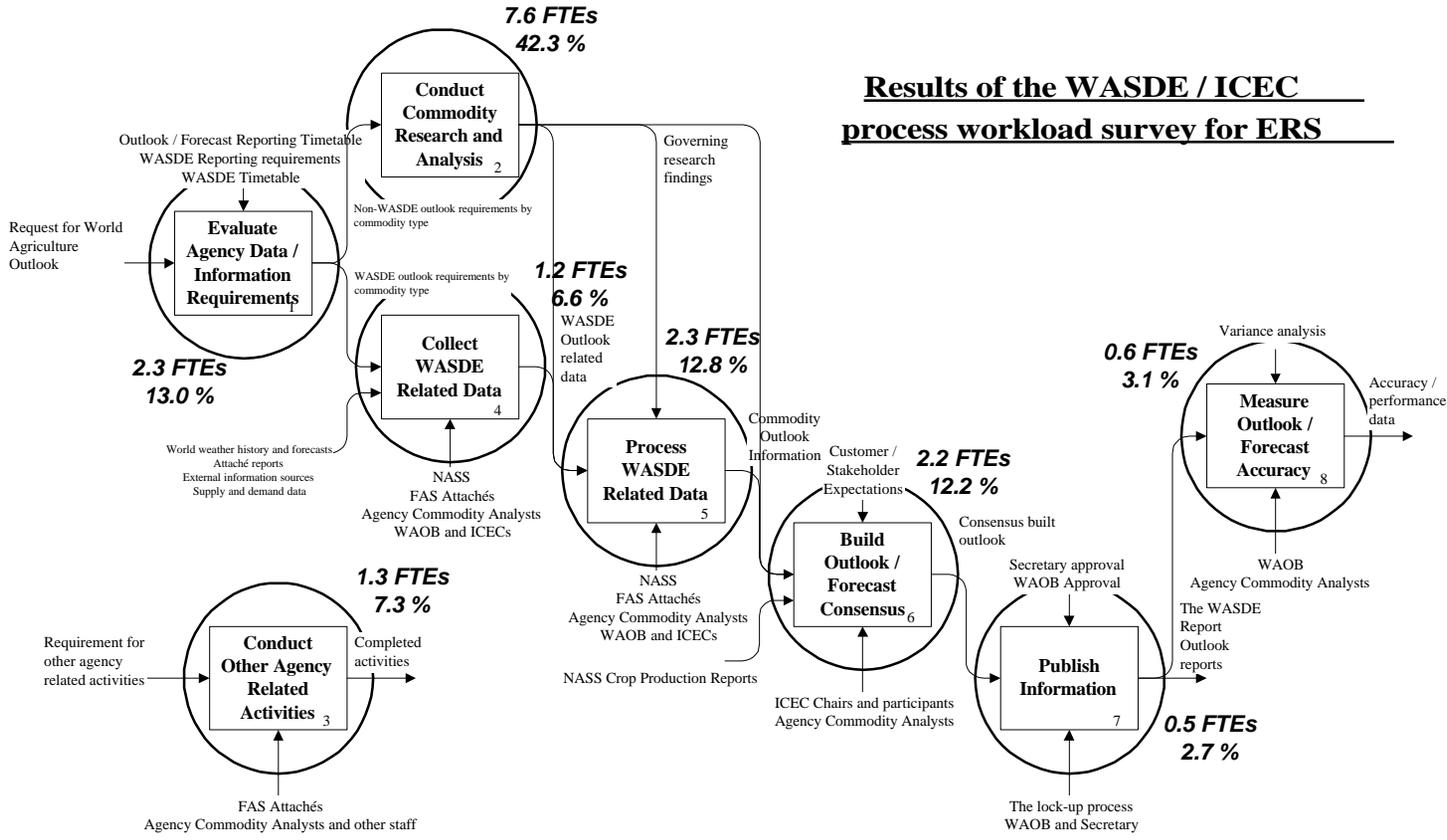
Commodity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L	H	L
	Grain		1		1			1		1														
Grain	1		1				1		1			1		1								1		1
Grain		1		1	1		1		1		1		1		1			1	1			1		1
Grain				1		1	1		1															
Dairy/Poultry		1		1		1		1		1		1		1		1		1	1					1
Cattle						1														1				
Livestock						1														1				
Hogs						1														1				
Oilseeds				1		1								1		1								
Oilseeds	1			1		1		1	1		1		1			1		1	1		1			1
Various Grain		1		1	1		1		1		1		1		1		1		1		1			1
Various Grain	1		1		1		1		1		1		1	1	1		1		1		1			1
Oilseeds		1		1		1		1	1		1		1		1		1		1		1			1
Oilseeds		1		1		1		1	1		1		1		1		1		1		1			1
Cotton		1		1					1		1		1		1		1		1		1			
Cotton						1		1		1	1		1		1		1				1			
Cotton		1		1		1		1			1		1		1		1		1		1			1
Cotton				1		1		1			1		1		1		1		1		1			
Oilseeds/Cotton				1				1						1										1
Oilseeds/Cotton								1								1				1				
Oilseeds/Cotton						1																		
Oilseeds/Cotton		1						1				1												1
Corn				1						1														1
	3	9	3	13	6	10	9	7	11	2	10	2	11	3	8	3	7	4	11	2	8	2	3	9



	ERS		FAS		AMS		FSA		TOTAL	
	% Hours	FTE	% Hours	FTE	% Hours	FTE	% Hours	FTE	FTEs	%
Evaluate Agency Data Requirements	13.0	2.3	8.8	2.4	22.3	0.7	14.5	1.5	6.8	11.8
Conduct Commodity Research & Analysis	42.3	7.6	26.1	7.0	40.0	1.2	60.6	6.1	21.9	37.8
Other Agency-Related Activities	7.3	1.3	14.1	3.8	31.0	0.9	11.6	1.2	7.2	12.4
Sub total	62.6	11.3	49.0	13.2	93.3	2.8	86.7	8.7	36.0	62.0
Collect Data for WASDE	6.6	1.2	18.9	5.1	2.0	0.1	4.0	0.4	6.8	11.6
Prepare Data for WASDE	12.8	2.3	17.3	4.7	1.7	0.1	3.3	0.3	7.4	12.7
Build Outlook/forecast Consensus	12.2	2.2	9.0	2.4	2.3	0.1	3.9	0.4	5.1	8.8
Prepare and Publish the WASDE	2.7	0.5	4.0	1.1	0.7	0.0	1.6	0.2	1.7	3.0
Measure WASDE Forecast Accuracy	3.1	0.6	1.8	0.5	0.0	0.0	0.5	0.1	1.1	1.9
Sub total	37.4	6.7	51.0	13.8	6.7	0.2	13.3	1.3	22.0	38.0
Total	100.0	18.0	100.0	27.0	100.0	3.0	100.0	10.0	58.0	100.0



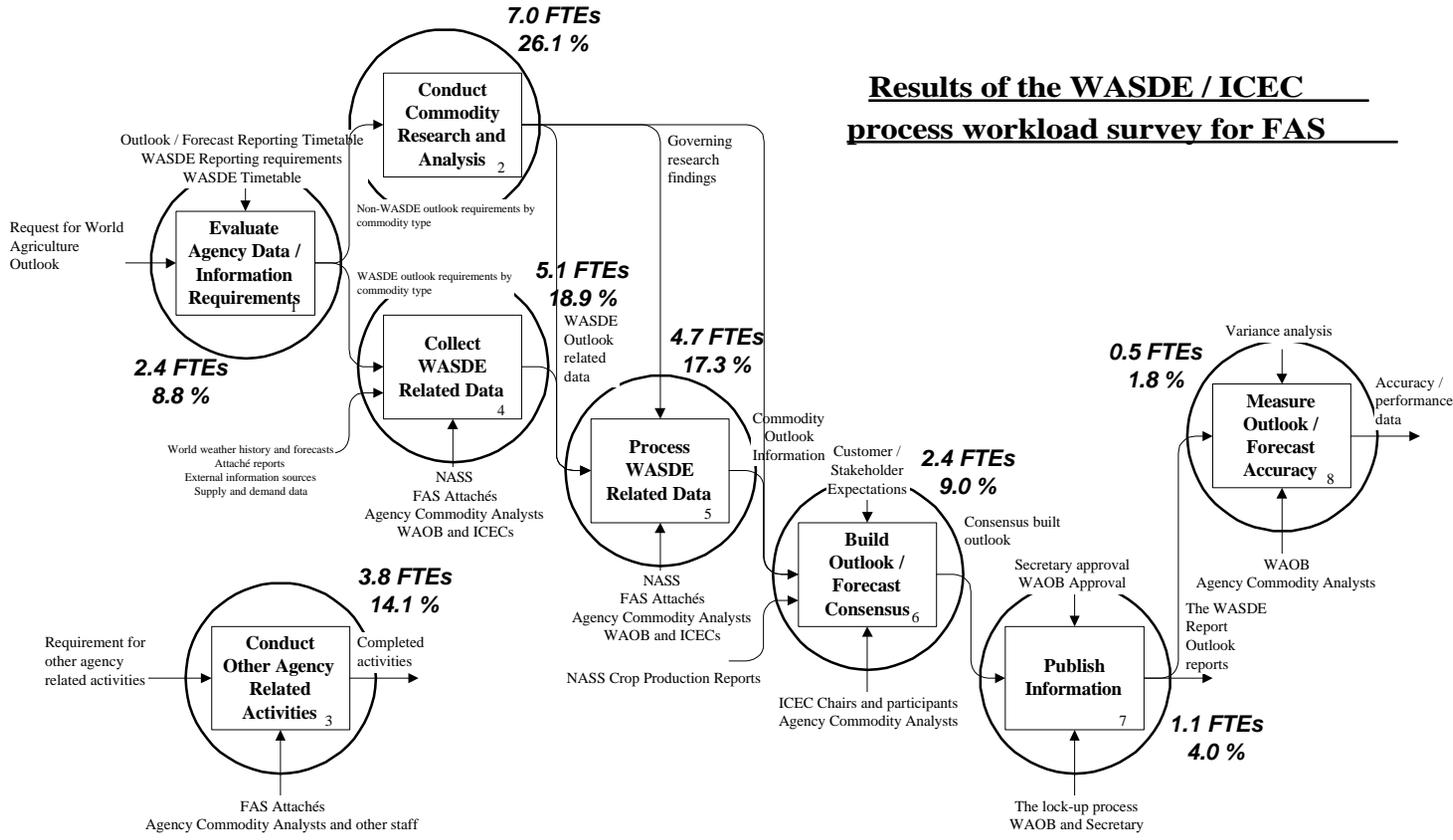
Mapping FTEs to WASDE / ICEC Core Processes



WASDE / Inter-agency Commodity Estimates Committee Core Processes	Process flow title: page-1	Author and further info: Owen Barwell 703 633 4324	Last edit date: 4/7/99	Page: 1 of 1 File: v1appendix.doc
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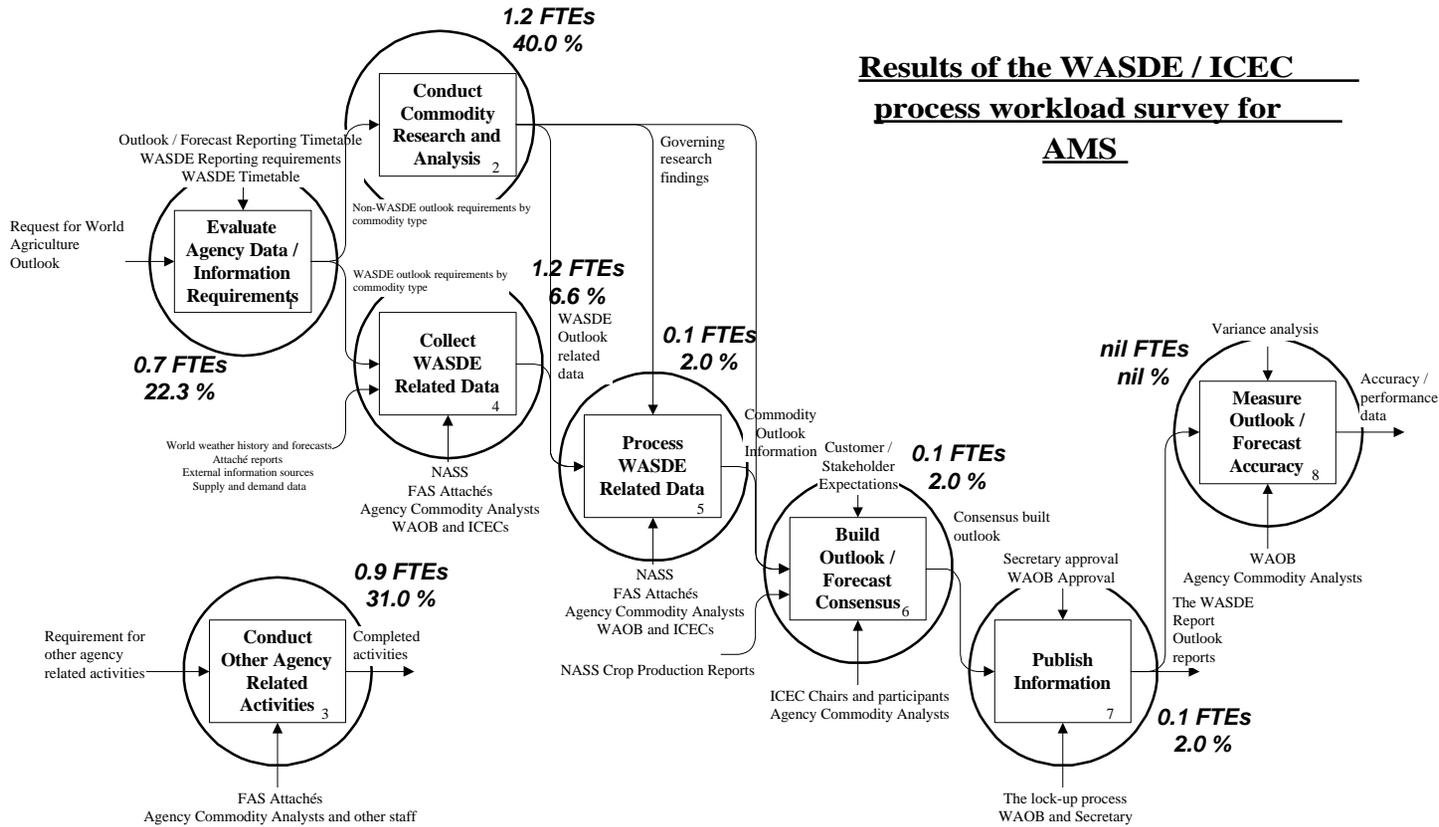
Mapping FTEs to WASDE / ICEC Core Processes



WASDE / Inter-agency Commodity Estimates Committee Core Processes	Process flow title: page-1	Author and further info: Owen Barwell 703 633 4324	Last edit date: 4/7/99
		Page: 1 of 1 File: v1appendix.doc	



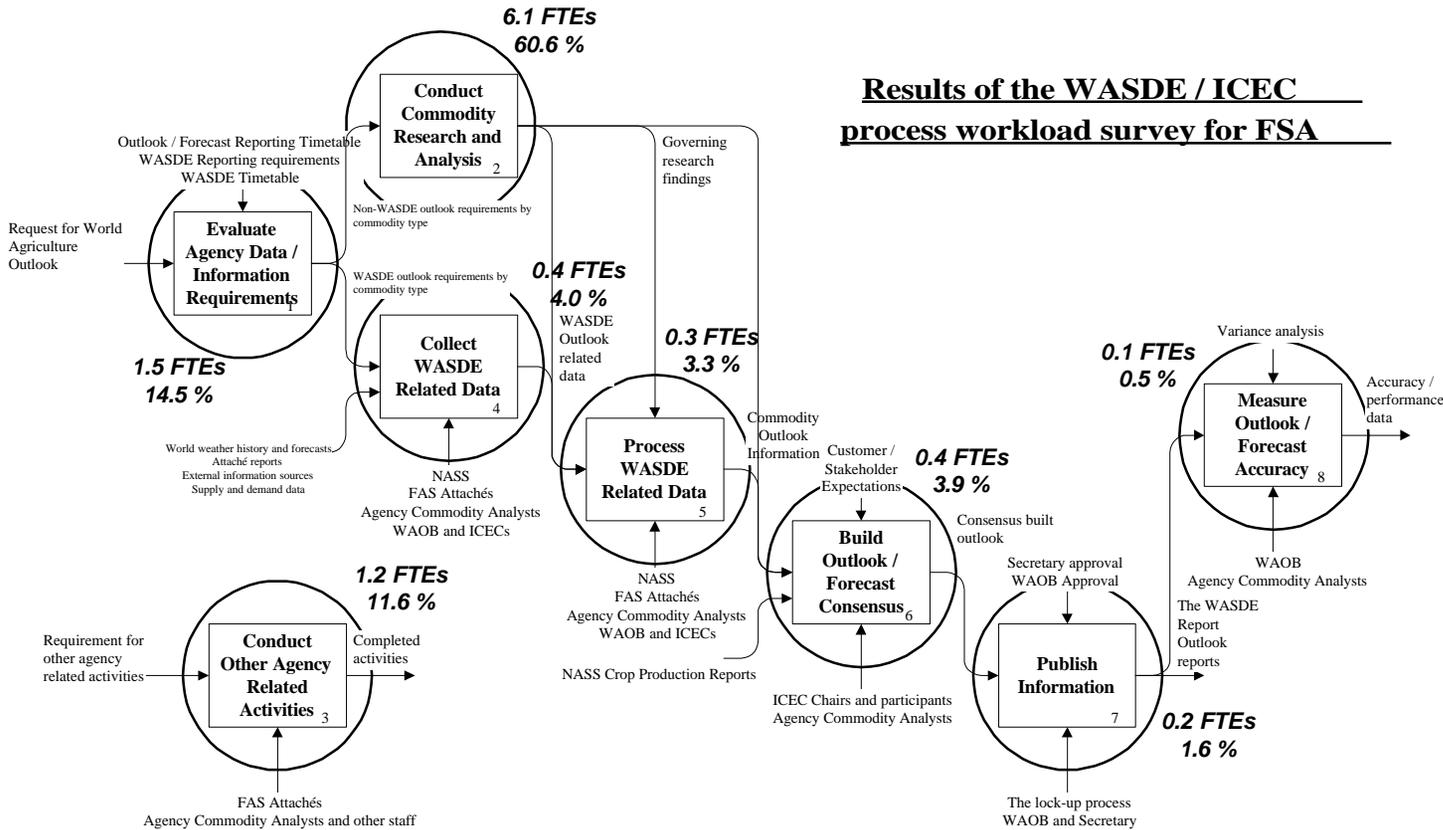
Mapping FTEs to WASDE / ICEC Core Processes



WASDE / Inter-agency Commodity Estimates Committee Core Processes	Process flow title: page-1	Author and further info: Owen Barwell 703 633 4324	Last edit date: 4/7/99	Page: 1 of 1 File: v1appendix.doc
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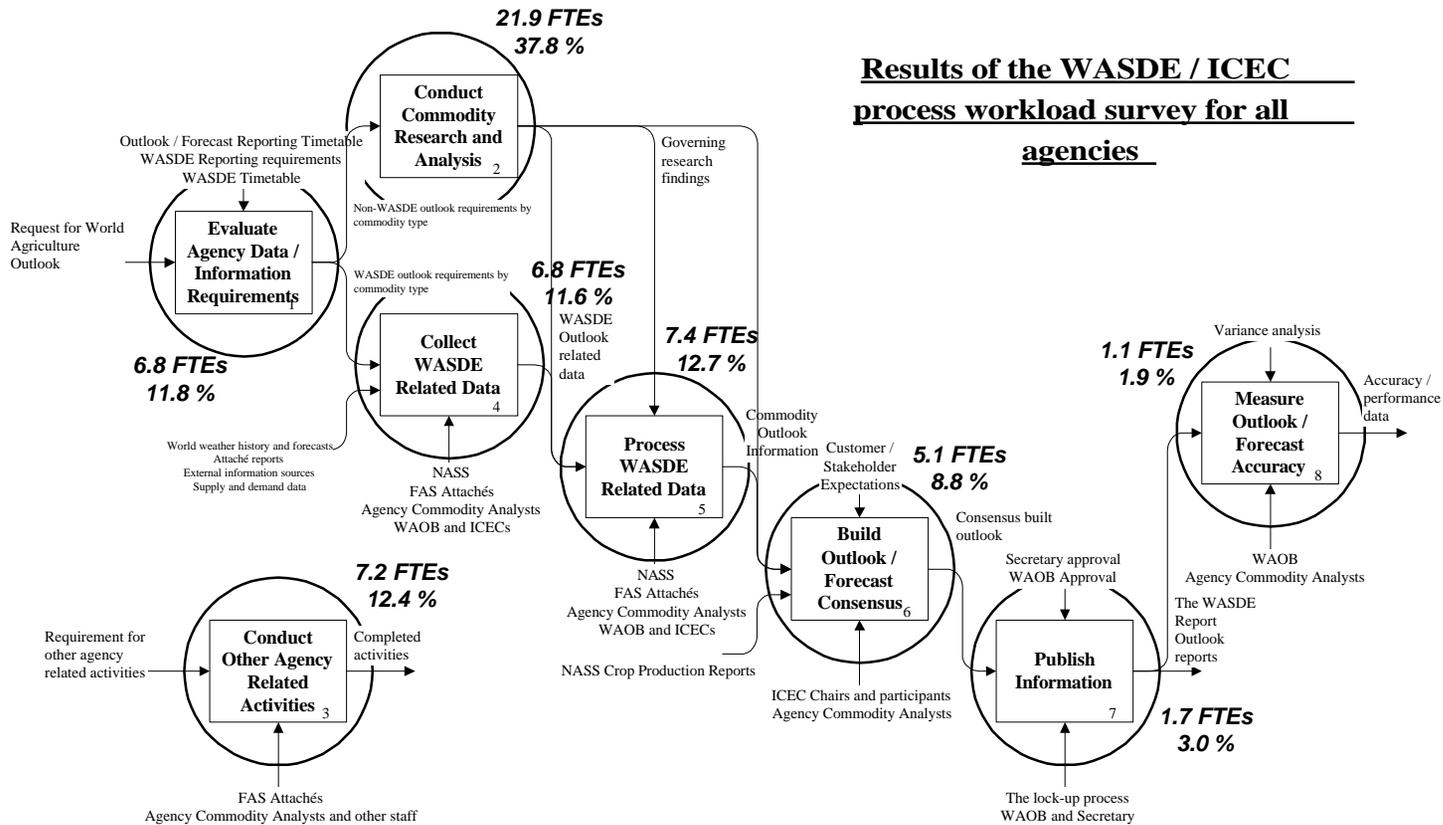
Mapping FTEs to WASDE / ICEC Core Processes



WASDE / Inter-agency Commodity Estimates Committee Core Processes	Process flow title: page-1	Author and further info: Owen Barwell 703 633 4324	Last edit date: 4/7/99		Page: 1 of 1 File: v1appendix.doc
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Mapping FTEs to WASDE/ICEC Core Processes



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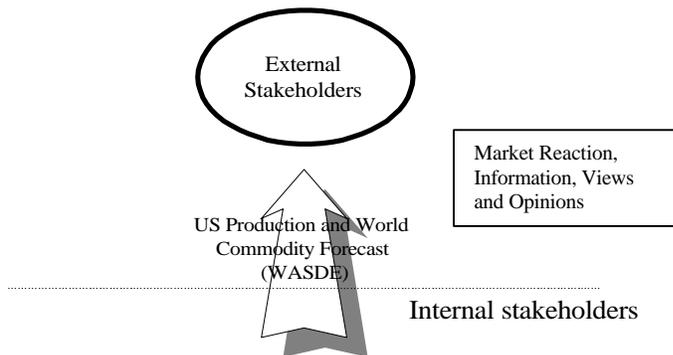
APPENDIX 5 - BENCHMARKING AND END USER REQUIREMENTS

5.1 BACKGROUND

As previously stated, under the direction of the Chief Economist, WAOB manages the ICEC commodity estimating and forecasting process and publishes the monthly WASDE report.

The WASDE is both an intelligence estimate of future commodity supply, demand, and price, as well as an official Department-wide consensus on commodity projections. The WASDE/ICEC process allows the USDA to “speak with one voice” regarding farm commodities and prices for the United States and the world, based on the “benchmark” estimates of the most recent WASDE report.

This term “benchmark” may also be applied to the production of the report and the ICEC process itself. In essence, this part of the study contains information gathered from individuals and organizations with vested interests in the operations of the USDA, including the ICEC process, and the production of the WASDE.



5.2 BENCHMARKING AND MARKET RESEARCH

Benchmarking is a technique for comparing an organization’s internal performance to the external standards of excellence. This information is used to attain best in class performance¹¹.

¹¹ Coopers & Lybrand LLP Benchmarking Database, Jan. 6, 1999.



With reference to this ICEC Study, the benchmarking process was used to identify how the production of the WASDE influences key stakeholders in the commodities market.

These key stakeholders included WASDE users on political committees on Capitol Hill, trade associations and agricultural publications, and key commodity brokers on the Chicago Mercantile Exchange. By interviewing each type of stakeholder, input was gained with reference to various issues regarding the WASDE, including:

- The purpose of the WASDE.
- Its influence on the commodities market.
- How it used, and its perceived value in various agricultural communities.
- The competencies required to produce the WASDE.

5.3 THE APPROACH

5.3.1 MARKET RESEARCH

Three groups of WASDE users were identified and interviewed as part of the benchmarking study/market research initiative: **political contacts**, primarily from main agricultural committees on Capitol Hill; **social contacts**, or representatives from various trade associations, agricultural publications, and university agriculture departments, and; **economic contacts**, who mainly represent key commodity brokerage firms on the Chicago Mercantile Exchange.

5.3.2 BENCHMARKING EXTERNAL STAKEHOLDERS

The second portion of the benchmarking study included comparing the USDA and the WASDE report to other forecast reports produced by other departments or agencies within the Federal Government.

Specifically, reports produced by the US Federal Reserve, the US Department of Commerce, and the US Department of Energy were researched and compared to those produced by the USDA, specifically the WASDE.

There were two main objectives of this comparison. They included:

- Determining the “uniqueness” of the WASDE report and process and what that means.
- Identifying best practices of other departments, which in turn could be applied to the WASDE.

Research of these other departments revealed that the WASDE was indeed unique and that few comparisons could be made with reference to it and the reports produced by the departments



outlined above.

The Department of Energy is one other department that produces a monthly forecast report. In Section 5.4, **External Stakeholder Benchmarking**, the Department of Energy's monthly forecast report is compared to the USDA's WASDE. While some similarities exist, this section outlines how the WASDE still generally maintains its unique position as a matchless forecast report, which is not comparable to any other.

5.4 MARKET RESEARCH: USER INTERVIEWS

5.4.1 POLITICAL CONTACTS

The following topics were included in the interviews with various political contacts on Capitol Hill:

- Main Purpose of the WASDE.
- WASDE's Influence on the Commodities Market.
- Use of the WASDE.
- Benefits of Having the WASDE.
- Possible Improvements to Make to the Report.
- Competencies Required to Produce the WASDE.

Among those interviewed were both high-level and lower-level contacts on Capitol Hill. The term "high-level" refers to individuals, such as economists on the House and Senate Agriculture Committees, Legislative Directors, or Chiefs of Staff. The term "lower-level" refers primarily to Legislative Aides who work for Senators and Representatives that serve on the Senate and House agriculture committees and subcommittees.

The feedback almost entirely comes from "high-level" contacts on Capitol Hill. Through "cold calling" more than ten offices, it became clear that "lower-level" contacts were not familiar with the WASDE.

5.4.2 SOCIAL CONTACTS

Among those interviewed were social contacts, who represent trade associations, publications, or universities. With the names provided by the Chairs of the various ICEC, these interviews focused on the following topics:

- Main Purpose of the WASDE.
- WASDE's Influence on the Commodities Market.
- Possible Improvements that can be made to the WASDE.



- Farmer's Access, Use of, and Interest in the WASDE.
- Competencies Required for the Production of the WASDE.

Social contacts consistently made reference to farmers' access to, use of, and interest in the WASDE.

5.4.3 COMMODITY BROKERS CONTACTS

Over ten key commodity brokers on the Chicago Mercantile Exchange were interviewed. As previously stated, representatives of these firms included economists, traders, and leaders of research departments.

While these CME interviews were similar to those of the political and social contact interviews, they included a few additional topics, including two that are "USDA specific."

The following are all the areas outlined in the tables:

- Role of the USDA in Commodity Markets.
- Role of the World Agricultural Outlook Board.
- The WASDE report, its Use, and its Affect on the Commodities Market.
- Possible Improvements to the WASDE.
- Other Organizations' Forecast Reports.

Commodity brokers gave more negative feedback than the political and social contacts. To accurately depict exactly how many contacts contributed to the negative feedback, the terms "majority" and "minority" are used in Section 5.3.4, **Interview Results**. In this case, the "majority" represents approximately 70-80% of those interviewed, while the "minority" represents 20-30% of those interviewed.

5.5 INTERVIEW RESULTS

Main Purpose of the WASDE: Simply stated, nearly all the political contacts interviewed believe that the WASDE is designed to be a reliable and dependable reference tool, that provides timely and accurate estimates for various commodities around the world.

Similarly, the social contacts also primarily saw the WASDE as a reference tool which notes the supply and demand of the various commodities.

Commodity brokers view the purpose of the WASDE much in the same way as the political and social contacts. They note that the WASDE interprets the supply and demand numbers for the general public. They also view the report as a consolidation of facts and a best "single estimate."



Influence on the Commodities Markets: Political contacts stated that the WASDE is viewed as the official data source of major markets. Because no other similar report is produced by any other agency, be it in the private or public sector, the WASDE does indeed influence the commodities market. The majority of those interviewed expressed this view. Only one political contact noted that the “time of the year” affects how much the market is affected by WASDE numbers, if at all.

Social contacts did not comment on the WASDE’s influence on the commodities market. Each simply stated that indeed the numbers do affect the market, in a “positive way.” Moreover, social contacts view the USDA as an unbiased and accurate source of data.

Commodity brokers stated that the WASDE influences the commodities market. Without the WASDE, an information void would exist. Private industry would attempt to formulate a reasonable proxy. Furthermore, the integrity of the information in the WASDE would be missed.

Use of the WASDE: Political contacts stated that the WASDE is used primarily as a reference tool, specifically to keep individuals with a vested interest in agricultural issues informed and up to date. The WASDE also aids political contacts in dealing with constituents from the agricultural community, by providing them with pertinent information, e.g. USDA forecast numbers. However, these political contacts who deal with constituents from the agricultural community are not “lower-level” Legislative Aides, but “high-level” economists. Thus, one can imply that constituents who may contact their Representatives’ offices either do not specifically refer to the WASDE, or only converse with “high-level” contacts. While the latter is possible, the former is more probable, at least for constituents from small and medium size farms.

Social contact interviews focused on farmers’ use and knowledge of the WASDE. Generally speaking, farmers receive the information contained in the WASDE through other means. Small and medium size farms most likely are not familiar with the report itself. Instead, they receive the information through wire services, newsletters or other publications, and through the media. Larger farms may have access to the WASDE via the internet, but still rely on publications, such as farm journals and newsletters. Farmers often do not have the knowledge of supply and demand and economics to process the information contained in the WASDE themselves.

Commodity brokers use the WASDE much like the political and social contacts. However, while it is used as a reference tool by the clear majority, several brokers commented that if USDA numbers differ from their own, they do not change their estimates. In fact, a limited, but existent minority stated that they “barely glance” at the report and instead, rely on information from clients for more accurate data. It should be noted that among all those interviewed, (political, social, and economic contacts), less than 25% contributed to this feedback.

Benefits of the WASDE: It is clear that there are many benefits to having the WASDE report. First and foremost, it is the only report of its kind produced by any organization or agency. It provides one set of undisputed numbers that are derived by the USDA’s vast global resources.



These global resources provide a significant political benefit as well. The WASDE allows political contacts to better gauge how best to formulate policy, specifically trade policy. The WASDE also “opens” political contacts to world economic and social conditions.

WASDE Data Compared to Other Organizations Output: In short, no other organization or agency produces anything that is comparable to the WASDE. Other federal agencies do produce forecast reports, however, they are not similar to the WASDE in their preparation, their release, or in their production. Section 5.4, External Stakeholder Benchmarking elaborates on this point.

Improvements to the WASDE: The clear majority of political contacts were satisfied with the WASDE, its format, its accessibility, and its content. One political contact noted that only economists should make recommendations with reference to improving the WASDE’s content.

Unlike the political contacts interviewed, the social contacts made consistent reference to possible improvements that could be made to the WASDE. While generally pleased with the report, there was concern over the loss of knowledgeable and experienced USDA staff due to retirement. Maintaining the integrity of the report would require knowledgeable people replacing those who are leaving USDA.

The majority of the commodity brokers cited few, if any, improvements that could be made to the WASDE. However, a sizable minority stated that the WASDE needs more historical data included in the report. Several brokers said that 15-20 years of such data would provide useful background for data contained in the WASDE. This would allow for easier identification of yearly “market trends.”

Competencies Required for the Production of the WASDE: The following competencies were most frequently cited: objectivity, independence, and exhibiting a solid statistical background. The depletion of USDA staff members, specifically those with considerable industry knowledge, was a point addressed in some interviews. Some political contacts also expressed a concern with reference to whom, if anyone, would replace retiring USDA staff members. With industry experience being the key to understanding commodities, new hires who have recently completed graduate school cannot easily assume the roles of former USDA staff who have significant experience.

Social contacts noted similar competencies, including: objectivity, independence, and being able to maintain statistical validity in preparation of the WASDE and all USDA reports. These contacts also mentioned that preventing political influence during WASDE production was significant.

Commodity brokers were more verbal with reference to the competencies required for the production of the WASDE than the political and social contacts. While they too cited objectivity and independence as key competencies, they also noted more personal characteristics. In their opinion, personality traits are important in the production of any report of this magnitude, especially one that affects the world market.



Role of the USDA: The USDA is widely respected among commodity brokers. They realize that the USDA often provides information that cannot be found elsewhere and at any cost.

The majority of the commodity broker contacts interviewed commented positively on the current and past role of the USDA. For instance, USDA numbers are considered the benchmark and the best available. The organization, as a whole, is widely respected by most as well. Conversely, a definite minority believed that the strength of the USDA as an organization has diminished in recent years given the decline in the availability of human resources. The minority also stated that the USDA is often conservative in its outlook, and as a result, may “soften the market’s mood” and cause a “lag” in the market. In other words, when a shortage appears, the USDA may report lighter on the demand side. When a surplus appears, the USDA may underestimate crop sizes. These comments are significant in that certain commodity brokers have serious criticisms of the USDA in general. Such criticism did not surface in the political or social contact interviews

5.6 EXTERNAL STAKEHOLDER BENCHMARKING

Benchmarking is useful in identifying efficiency and improvement opportunities. For example, one of the goals of conducting the market research outlined in the previous two sections was to formulate alternative solutions to deal with the WASDE’s inefficiencies.

Similarly, benchmarking USDA and “WASDE-specific” practices against other departments and agencies within the federal government serves a similar purpose.

To that end, several departments were targeted, including: U.S. Department of Commerce, U.S. Federal Reserve, and U.S. Department of Energy. Research revealed that only the Department of Energy produced a forecast report on a regular basis.

Department of Energy: The U.S. Department of Energy is a leading science and technology agency whose research supports the United States’ energy security, national security, environmental quality, and contributes to a better quality of life for all Americans¹².

Among the agencies within the Department is the Energy Information Administration (EIA). This agency addresses key issues affecting the Department of Energy, including changes in the electric power industry, the impact of technological changes on future energy markets, oil and other energy supply, consumption and price developments, and the energy-economic impact of environmental quality controls¹³.

This agency prepares short-term energy supply, demand, and price projections every month. These projections are published in the *Short Term Energy Outlook Report*.

¹² U.S. Dept. of Energy Web Page (<http://www.DoE.gov>)

¹³ Energy Information Administration Web Site (<http://www.eia.doe.gov>)



Comparison with the WASDE: The *Short Term Energy Outlook Report* is similar to the WASDE in that it too is a forecast report. It deals with supply and demand issues, specifically with reference to international oil, U.S. oil, U.S. natural gas, U.S. coal, and U.S. electricity supply and demand. Nevertheless, there are significant differences between the WASDE and the *Short Term Energy Outlook Report*.

First and foremost, the report preparation process differs greatly. Approximately seven individuals coordinate their efforts to produce the Department of Energy report on a monthly basis (some of these individuals do not work on this effort full-time):

- Four Economists or Operational Research Analysts
- One Mathematician
- One Writer/Editor
- One Contract Support Person
- One Database Support Person (if needed)

Secondly, the report deals with broad national issues. It is not a top secret report, and the information is not considered confidential until its release. Unlike the WASDE, there is no lock-up session.

Finally, the forecasts and numbers contained in the *Short Term Energy Outlook Report* do not influence or play a role in the markets¹⁴

5.7 GENERAL CONCLUSIONS/SUMMARY

There are several clear conclusions that can be drawn as a result of the market research.

First and foremost, in general the WASDE is used “across the board” as a reference tool and data source for individuals with some interest in agricultural issues or in the commodities market. It is the only report of its kind; therefore, it is the principal reference for commodity supply and demand estimates.

Secondly, while some criticism exists with reference to the accuracy of the WASDE numbers, no better numbers exist. The report, which uses the “one best estimate approach, is widely viewed as a benchmark for all other estimates, especially among commodity brokerage firms who themselves must estimate commodity prices. The USDA has the most vast resources available to collect data. Therefore, generally stakeholders generally cannot imagine another entity producing a comparable or superior report.

¹⁴ Conclusion based on data gathered from phone interviews with Department of Energy contacts who are involved in the production of the *Short Term Energy Outlook Report*. No empirical evidence to support or challenge this claim has been found.



Whether or not the market could survive without the WASDE is questionable. The majority of those interviewed agree that the absence of the WASDE would provide a disservice to the industry. Many commodity brokers say that they could not operate without the report. Similarly, key political and social stakeholders would sorely miss the “reference tool” since they rely on it as a means to verse themselves and their constituents in the world commodities market situation.

Finally, based on data gathered from the interviews, the WASDE numbers almost undoubtedly influence the commodities market in the interviewed individuals’ opinions. (Nearly 90 % of those interviewed strongly agreed with this statement).¹⁵

This is not surprising given the absence of other comprehensive and reliable forecast reports. Simply stated, in the eyes of the stakeholders, the WASDE is the best forecast report available. Stakeholders recognize its objectivity and independence. They are so pleased with its content that they not only anticipate its release on a monthly basis, but find little or no reason to improve the report.

The Department of Energy’s Short Term Energy Outlook Report is similar to the WASDE in that it is a forecast report produced by a federal agency on a monthly basis. However, the similarities between it and the WASDE end there.

The WASDE is a much more complicated report that affects the world commodities market. Unlike the Short Term Energy Outlook Report, it is unique in that its data is derived from the USDA’s vast global resources. It does not deal with “broad national issues,” but those of a complex and global variety. Its release is much anticipated by stakeholders in the agricultural and commodities community, and its absence would be sorely missed. Simply stated, these qualities are simply not evident in the Department of Energy’s report, nor any other forecast report in the public or private sector.

¹⁵ Further research revealed that USDA releases (including the WASDE), do affect the commodities market. However, these sources state that this influence has diminished in recent years. The following sources outline both conclusions.

Fortenbery, T. Randall and Daniel A. Sumner, “The Effects of USDA Reports in Futures and Options Markets,” *The Journal of Futures Markets*, Vol. 13, No.2, pp. 157-173, 1993.

Colling, Phil, L., Scott H. Ervin, and Carl R. Zulaugh, “Reaction of Wheat, Corn, and Soybean Fortunes Prices to USDA ‘Export Inspections’ Reports,” *Review of Agricultural Economics*, No. 18, pp. 127-36, 1996.



United States Department of Agriculture

USDA Interagency Commodity Estimates Committees Study



APPENDIX 6 EXAMPLE – SECRETARY’S MEMORANDUM

EXAMPLE UNITED STATES DEPARTMENT OF

May xx, 1999

SECRETARY’S MEMORANDUM NO. 1769, Revised

1. Office of Chief Economist. The Chief Economist will delegate authority to the Chairman, World Agricultural Outlook Board pursuant to Section 2.29 (a) (3) , through (a) (7), and Section 2.72 of 7CFR2, Volume 1 Subpart L (Revised as of January 1, 1998):

2.

Related to Interagency Commodity Estimates Committees:

- Establish Interagency Commodity Estimates Committees for Commodity Credit Corporation price-supported commodities, for major products thereof, and for commodities where a need for such a committee has been identified, in order to bring together estimates and analyses from participating agencies and to develop official estimates of supply, utilization, and prices for commodities, including the effects of new program proposals on acreage, yield, production, imports, domestic utilization, price, income, support programs, carryover, exports, and availability for export.
- Designate the Chairman, who shall also act as Secretary, for all Interagency Commodity Estimates Committees (ICEC).
- Assure that all committee members have the basic assumptions, background data and other relevant data regarding the overall economy and market prospects for specific commodities.
- Review for consistency of analytical assumptions and results all proposed decisions made by Commodity Estimates Committees prior to any release outside the Department.
- Establish guidelines for the USDA agencies supporting the ICEC process in terms of their level of responsibility for resources.
- Coordinate resource requirements between the WAOB and support agencies to ensure continued success of the Board’s functions.



- Establish resource guidelines for the supporting agencies in terms of their level of responsibility in the WASDE/ICEC process.
2. World Agricultural Outlook Board. The mission of the World Board is to provide commodity outlook management information to support policy decisions of the Secretary and senior Department managers and to serve as the single voice of the Department on agricultural commodity forecasts.

To accomplish that mission and the above delegations the World Board Chair will:

- Take action to implement the mission through an interagency commodity estimating and outlook and situation reporting process, organized around the ICEC and supported by designated USDA agencies.
 - Actively manage personnel and information resources supporting the interagency process through the ICEC.
 - Assist support agencies to optimize the level of support required on a month-to-month basis.
 - Foster programs to capture and manage the commodity estimating knowledge and data for sharing among ICEC support agencies and the World Board.
 - Contribute to the performance appraisal of commodity analysts from supporting agencies.
 - Lead interagency forums for periodic re-evaluation of the ICEC process.
3. Interagency Commodity Estimating Committees. The purpose of the interagency process is to improve the consistency, objectivity, and reliability of USDA forecasts of year-end supply, demand and price for strategic farm commodities. The Department must maintain a visible role in coordinating and publishing market intelligence data.

One of the principal forms of this activity is publication of the World Agricultural Supply and Demand Estimates (WASDE) report. The WASDE is both a short-range forecast and an official, Department-wide consensus on year-end supply, demand, and price for designated farm commodities. The WASDE is one of the primary outlook reports that allows the Department to “speak with one voice” on policy and program issues related to key farm commodities. The WASDE report is viewed as a benchmark within the marketplace and a guideline for commodity-related market activity.

Under the direction of the Chief Economist, the WAOB manages the ICEC commodity estimating and forecasting process and publishes the WASDE report. Senior commodity analysts at the WAOB chair the commodity estimates committees and are assisted by



designated members of the supporting agencies

4. Supporting USDA Agencies. Successful completion of the WAOB/ICEC mission is fully dependent on the support of commodity analysts assigned from the following agencies: Economic Research Service (ERS), Farm Services Agency (FSA), Foreign Agricultural Service (FAS), and Agricultural Marketing Service (AMS). These agencies are tasked to provide direct staff support to the World Board in accomplishing the ICEC mission.

To ensure the continued success of the WAOB/ICEC functions, designated USDA support agencies will:

- Affirm their commitment to the WAOB/ICEC process in their annual performance plans and provide a career path with incentives and rewards for the commodity analyst function.
- Formally assign primary and alternate commodity analysts to each ICEC committee.
- Coordinate commodity estimating among support agencies through centers of excellence. These COE will collect, process, evaluate and share commodity-related data throughout the Department. The centers will also provide a forum to periodically assess the resources required to support the ICEC process.
- Work cooperatively with World Board committee chairs and staff to periodically re-evaluate the capabilities of commodity analysts assigned to the ICEC process.
- Work cooperatively with World Board committee chairs and staff to periodically re-evaluate the ICEC processes for improved efficiency and effectiveness.