Food and Agriculture Organization of the United Nations

Office of Evaluation

Evaluation Report of the "Bioenergy and Food Security Rapid Assessment tool – GCP /GLO/357/GER"

Final Report

September 2014

Food and Agriculture Organization of the United Nations

Office of Evaluation (OED)

This report is available in electronic format at: http://www.fao.org/evaluation

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Acknowledgements

We gratefully acknowledge the staff of the Bioenergy and Food Security (BEFS) team, which has supported us with documentation and very valuable insight into the design of the program and the BEFS Rapid Assessment (RA) tool they have been very responsive and helpful to our questions, and we very much appreciate the time spent. The Bioenergy program staff at FAO has also provided us with tireless support and guidance, throughout the process. We would also like to thank the evaluation office of FAO for providing us support and guidance in the process of writing this report, and for valuable feedback on its content and strucutre.

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Acronyms

ET	Evaluation Team
FPMIS	Field Programme Management Information System
OED	FAO Office of Evaluation
PC	Programme Committee
ProDoc	Project Design Document
SMART	Specific, Measurable, Assignable, Realistic and Time-related
ToC	Table of Contents
BEFS	Bioenergy and Food Security
RA	Rapid Assessment
AF	Analytical Framework
IADB	Inter-American Development Bank
MDGs	Millennium Development Goals
UNFCC	United Nations Framework Convention on Climate Change
CDM	Clean Development Mechanism
MEAs	Multilateral Environmental Agreements
GEF	Global Environmental Facility
TWG	Technical Working Group
TCP	Technical Cooperation Program
NBB	National Biofuels Board (of the Philippines)
PCA	Philippines Coconut Authority
SRA	Sugar Regulatory Association (of the Philippines)
GAEZ	Global AgroEcological Zones
ARI	Advanced Research Institute
AfDB	African Development Bank
ADB	Asian Development Bank
IFAD	International Fund for Agricultural Development

Executive Summary

ES1. An evaluation of GCP/GLO/357/GER, the Rapid Assessment (RA) tool created by FAO's Bioenergy and Food Security (BEFS) project has been carried out over the period 1 Feb to 30 April 2014. The evaluation aimed at determining the effectiveness of the BEFS RA tool and at determining the potential for uptake of the BEFS RA tool, and its prospects for future use and programmatic sustainability. The evaluation had also the aim of providing useful guidance to FAO in supporting the future activities of the Bioenergy program, as it entered a new phase of work, after the BEFS project conclusion.

ES2. Field visits were carried out to Malawi and to the Philippines. A solid methodology, based on validation and triangulation of the information collected underpinned the evaluation. The appropriateness and value of the tool was also assessed through evaluating background documentation, and talking to key experts in the field of bioenergy, as well as to other key stakeholders.

ES3. Overall, the evaluation team received very positive feedback on the BEFS RA program. Like any quantitative tool or model, the primary importance of the RA tool is to facilitate the organization of data and to encourage clear thinking to occur around issues of high importance to bioenergy. The Evaluation Team (ET) saw evidence of this having occurred during the piloting process. In particular, in the countries visited stakeholders would like to continue using and improving the tool, so that its data could be better customized and so that its use can be further expanded to consider a wider set of bioenergy options.

ES4. There is overall agreement that the 'tool-building' phase of BEFS is coming to an end, and that the project should now enter an implementation and capacity-building phase. This is already happening, with the support of additional funding from the German government, and will be the major focus of the BEFS program in the remainder of this year, and the coming ones as well.

ES5. There are a number of key recommendations that the evaluation team would make to both the BEFS program team as well as FAO, at large, that are intended to enhance the future impact of FAO's work on bioenergy and increase the effectiveness of how it interacts with client countries on this topic in future.

Recommendations

Recommendation 1: for FAO (BEFS team)

Improving data cleaning and the training and outreach experience for future users of the BEFS tool.

ES6. There is a clear advantage and benefit to partnering with universities and advanced research institutes (ARIs) in the development and application of the BEFS RA tool. These universities and ARIs could be in the client countries themselves, or outside of them – but would have researchers and analysts with a set of skills that could enhance and add value to the BEFS RA team. In some cases, such capacity coming from universities and ARIs could help to refine and further validate information going into the tool, and could assist in creating additional capacity and human capital within the countries, by training scientists and researchers who can become the future users and champions of the tool in future efforts to improve and expand the use of the tool within the policy planning process. They would, therefore, serve as useful 'reservoirs' of potential future capacity for the country, as a whole, and assist in maintaining expertise at the country-level.

ES7. Given that there's already interest from multi-lateral organizations such as the World Bank and the IADB in taking up the BEFS RA tool in their own country support programs, these

are also very fruitful forms of partnerships to pursue. Future partners of this kind could be the Asian Development Bank (ADB), the African Development Bank (AfDB), the International Fund for Agricultural Development (IFAD) and other similar organizations.

Recommendation 2: for FAO (BEFS team)

Strengthening future partnerships for BEFS RA tools including by building and reinforcing partnerships with advanced research institutes and through partnerships with multi-lateral organizations to ensure sustainability

ES8. FAO plays a key role in facilitating and enabling the BEFS team to operate effectively with stakeholders in the client countries. A strategy should be devised, in coordination with the BEFS and larger Bioenergy group, to identify the key regions where a minimum critical mass of expertise is needed to push future program initiatives.

ES9. There is a clear advantage and necessity to having a good BEFS focal point in the regional offices, so as to provide a critical linkage between headquarters staff and the stakeholders and experts at the country-level, and to serve as effective 'champions' of the BEFS RA approach to the client countries that are already engaged, as well as to others who might potentially benefit and/or show interest in engaging in the BEFS RA process in future. The loss of the focal point in the Asia & Pacific regional office has been filled with an interim appointment, thus far, but needs to be followed up with a longer-term replacement who can be dedicated to the task of continuing the momentum that has begun in getting key ASEAN member countries to engage in the BEFS process.

Recommendation 3: For FAO and relevant Technical divisions

FAO should support the Strengthening of the bioenergy sector expertise in the regions also through filling key vacancies in the regions.

ES10. There appears to be a lot of 'competition' occurring at the country level for engagement with stakeholders in the field of bioenergy – sometimes coming from other UN agencies who are also engaged in this topic, but whose efforts are not well coordinated with FAO's. Having additional support and expertise in bioenergy at the regional- and country-level of FAO's wider infrastructure and network will help to promote the visibility of the BEFS RA tool, as a knowledge product of FAO as an organization, and will also help in carrying out the coordination function with other UN bodies that also work within the region on similar topics.

ES11. One way to avoid heavy overlap with existing UN activities is for FAO to carve out a niche for bioenergy that complements other agricultural sector-focused support and analysis that FAO does – such as with the value chains of agriculture. Bioenergy is clearly a way of adding value to the agricultural and agroforestry sector – which FAO has a unique mandate, within the UN system, to support. By finding ways to mainstream the analysis of bioenergy as a value-enhancing (but potentially resource-competing) sector to agriculture, the work of the BEFS team would be magnified by FAO's overall presence on these topics, and the sustainability of the BEFS RA work and knowledge products could be further enhanced. By strengthening this regional- and country-level capacity and its linkage with the BEFS team, FAO will also enable the wider organization to function 'as One' when it comes to engaging with countries on bioenergy and related issues.

Recommendation 4: for FAO

FAO should avoiding program conflict and overlap with existing UN activities by coordinating closely with similar UN programs in target countries and mainstreaming bioenergy in agricultural value chain work

1 Introduction

1.1 Background and purposes of the evaluation

1. The Bioenergy and Food Security Rapid Appraisal Project", GCP/GLO/357/GER, was carried out over two years (24 April 2012 to 30 April 2014) with an initial budget of €1 267 577 , granted by the government of Germany (equivalent to USD 1,699,165 – of which USD 1,660,000 was approximately spent by the time of the submission of the terminal report of the BEFS project (21st March 2014).

2. This evaluation of the BEFS RA tool was carried out from February to May 2014, and intended to determine the extent to which the BEFS RA methodology is both appropriate and valuable to carrying out the assessment of bioenergy potential and viability in the project pilot countries.

3. The evaluation is also aimed at determining the effectiveness of the tool and its potential impact, at country-level and theextent to which the national institutions and agencies within the piloting countries are likely to use and adapt the tool.

4. Lastly, the evaluation is intended to provide lessons for the BEFS team, and for the Bioenergy program (and other related programs at FAO), and recommendations addressing the next phase of the BEFS project focusing on awareness-raising and capacity-building. This phase has already begun and will continue throughout the rest of 2014 and beyond .

5. The Terms of Reference of the evaluation report, as followed by the evaluation team, is included in this report under Annex I.

1.2 Methodology of the evaluation

6. The Evaluation Team (ET) has assessed the BEFS RA tool through its own read of the project documentation, as well as through conversations with key experts in the field of bioenergy and with the main stakeholders of the project – such as the government and industry-level personnel who interacted with the BEFS team during the conceptualization and piloting phases of the project. The ET adopted a participatory and consultative approach, and listened to a wide range of comments from both experts and subject matter specialists, as well as from stakeholders at country-level, with whom the BEFS RA team interacted during the project. This allowed the ET to draw up on the experiences of those who were directly engaged in the outreach and training activities of the BEFS RA team, so as to better assess the effectiveness of the capacity strengthening activities. The interviews that we carried out also helped us to gauge the likelihood that the tool would be retained in usage within the policy planning process of the government ministries or planning agencies that were engaged within those countries The comments received during interviews of some key experts who work in the field of bioenergy and food security were very useful in giving the ET an additional perspective of the applicability of the analytical approach used in the BEFS RA, and an in-depth perspective of how the BEFS RA tool performs compared to other similar approaches. The experts who were interviewed were both external to FAO, as well as within FAO's departments – which also provided us with a useful perspective from both within and outside the organization.

7. The project team used semi-structured interviews with a range of stakeholders including expert, subject matter specialists and BEFS users or potential users. In addition to interviews carried out in person or remotely over phone or skype – the evaluation team extensively reviewed available documentation. . This included program progress and completion reports, training

materials, implementation roadmaps for BEFS pilot countries, as well as other key references and reports.

8. The ET participated in the peer review meeting of the BEFS RA tool that took place on 13 February 2014, at FAO headquarters. This brought the evaluation team in direct contact with the BEFS project team and some of the key internal and external subject matter experts, and provided a good basis for following up with a number of these experts with in-depth interviews by the ET. Being able to participate in the peer review meeting and to hear the discussions and interactions between the BEFS RA team and the invited experts has led to a better understanding of how the tool is perceived and understood by the expert community and has highlighted key points of concern and interest that the expert community have, with respect to the BEFS RA tool, and its overall conceptual design and framework.

9. The limited project duration its pilot nature and the absence of a clear monitoring mechanism, did not allow the systematic data analysis on tool's uptake and utilization, at this stage. The ET will address this point later in the reportas the very tight timeline within which the project was executed did not lend itself well to the possibility to achieve a level of penetration and dissemination that can generate useful statistics or indicators of use trends and impact. Therefore, there could not be any direct quantitative analysis of data in this evaluation that could provide actual indicators of program effectiveness. Nonetheless, the information gathered during the course of the evaluation is sufficient to provide a useful and informative picture of the BEFS RA projects and on its potential for continued influence and impact at the country level.

2 Context of the project/programme

10. The BEFS RA tool directly addresses the issue of bioenergy and food security – which have been areas of active research, debate, and policy attention over the last 8-9 years within FAO and the wider agricultural and development policy community.

11. In the 2006-2008, there was a widespread concern over the rapidly rising prices in international food markets, and a great deal of speculation over the role that global drivers such as energy demand and climate change, might be playing in it. The price of a number of key agricultural commodities increased rapidly, and the expansion of biofuels was considered among one of the key causes of this increasing trend. For this reason, in 2008 FAO convened a high-level conference to discuss the challenges for food security posed by climate change and bioenergy with both experts and prominent policy makers from around the world. In order to better coordinate the analysis around the interaction of bioenergy and food security, FAO created the Bioenergy and Food Security program within the department of Natural Resources Management and the Environment, which also addressed issues of climate change that were also featuring prominently in FAO's analytical & outreach agenda.

12. In response to repeated request from FAO member countries for analytical and operational assistance in addressing the complex issues around bioenergy and food security, the BEFS project developed and tested a comprehensive Analytical Framework (AF) within three countries – Tanzania, Thailand and Peru. The BEFS AF brought to bear a sophisticated and comprehensive toolbox to investigate both the potential for bioenergy production, but also its potential impact (and perhaps synergy) with food production and security in the countries of interest. The AF combined both detailed analysis of agronomic and technological potential in the production of biofuel feedstocks and products, but also examined the socio-economic impacts – both as a function of world market forces upon the countries of interest, as well as the potential economy-wide effects that domestic bioenergy production could likely generate within their own

borders. Building on this detailed analytical framework of BEFS, the Bioenergy and Food Security Criteria and Indicators (BEFSCI) project was subsequently launched, in order to develop a set of criteria, indicators, good practices and policy options for sustainable bioenergy production – so as to provide additional guidance for policy makers on how bioenergy production might foster rural development and food security. This was done in parallel with efforts of several other multilaterals – such as the Inter-American Development Bank (IADB), which developed its own 'scorecard' system to provide similar indicators of impact and sustainability of bioenergy to its own member countries.

13. Despite their utility and positive reception by researchers and policy analysis, both the full-blown BEFS AF and the BEFSCI tools embodied a sophisticated set of analytical processes that had fairly high requirements in terms of data, skills, as well as resources for any client country that wanted to make use of it. As an example of this, the total time needed to carry out the full BEFS analysis (such as those undertaken in Tanzania, Peru and Thailand) was typically up to 24 months, and required the sustained inputs of numerous experts and modelling groups, both internal and external to FAO – with commensurate requirements for resources. For this reason, it was deemed that the applicability of the BEFS AF and of some of the BEFS/BEFSCI tools might be limited in less-developed countries, where capacity and resources to carry out detailed and complex analyses could be limited. The BEFS team began to think of an alternative analytical tool (or set of tools) that could provide these countries with guidance and help, in the face of the continued (and even increasing) interest of investors who were approaching them with proposals.

14. The BEFS Rapid Assessment project was launched with the specific purpose of providing a simplified set of methodologies and tools that would allow for a rapid but still accurate analysis in these countries facing major data, capacity and resource constraints.

15. The BEFS RA project was created in coordination and congruence with other UN and multi-lateral initiatives, and was intended to be relevant to several key Millennium Development Goals (MDGs), such as MDG1 on the eradication of extreme poverty and hunger as well as MDG7 on environmental sustainability. The linkages of bioenergy and the mitigation of climate change, as embodied in the United Nations Framework Convention on Climate Change (UNFCC), was also a motivation for the project, with a view to the possibility for financing mitigation-focused, developing country projections as is provided for through mechanisms such as the Clean Development Mechanism (CDM) of the Kyoto Protocol. The connection between bioenergy and other multilateral efforts was also made, by linking it to Multilateral Environmental Agreements (MEAs) such as those working against deforestation and desertification, through the better use of tree-based biomass for energy, as well as to a number of Global Environmental Facility (GEF) operational programs relevant to renewable energy.

3 Analysis of project concept and design

16. The BEFS RA project is built around two goals – namely, to make a tested RA tool available for use, and to put in place the facilitation mechanisms needed to support the implementation of the BEFS RA process.

17. The key impact that is envisioned within the project design is that countries who undertake the BEFS RA process will have appropriately-developed policies, strategies and programs on sustainable bioenergy – that safeguard both food security as well as the environment. Both the goals and intended impacts are clearly laid out within the logical framework of the project's inception document. The theory of change that was elaborated with

the BEFS RA project design document (ProDoc) and logical framework connects the project activities and its resultant outputs to the ultimate intended impact of the BEFS RA project. The logframe of the ProDoc describes the project's influence upon the decision-making capacity of the country-level regulatory agencies, natural resource managers, and policy makers with the relevant ministries of energy, agriculture, transportation, forestry, natural resource management and other key decision-making bodies that have bearing on both the design and implementation of bioenergy projects at the country-level. The BEFS RA process envisions that the involvement of key agencies in the piloting of the RA tool within the country – covering both the inception, data-gathering, testing and validation phases – will create a basis of broad-based knowledge, awareness, buy-in and institutional investment that would be carried forward in the ongoing policy- and investment-planning process that the BEFS process would support. Whereas it is not possible or feasible to engage with each of the various ministries or agencies that are relevant to the various bioenergy options that might be feasible or under consideration within the country – the BEFS RA process relies up on the creation of a high-level technical working group that can form the nexus of cross-ministerial and –agency cooperation and dialogue that is necessary for the proper planning and harmonization of policies relevant to the creation and maintenance of a viable bioenergy sector.

18. The project logframe entails SMART indicators (Specific, Measurable, Assignable, Realistic and Time-Related) that provide a good starting point for being able to judge the degree of uptaking that is occurring in BEFS RA pilot countries.

19. Given the importance of data and expert information in the parameterization and in determining the results and outputs that come from the tool, the way in which the BEFS RA team make use of data during the training and capacity-strengthening process is of key importance. One of the most useful outcomes of undergoing the BEFS RA process is in improving the way in which data organization, cleaning and validation occurs, so as to ultimately ensure the use of the best possible information in the tool. This is an important process to ingrain in the minds of the stakeholders, as part of the training and capacity-strengthening process.

20. Within the very tight, 24-month framework, that was allocated for the project to achieve its objectives – the creation of a piloted assessment tool and the establishment of a facilitation and support mechanism for countries interested in using it seems, on the face of it, to be feasible and doable – although we appreciated the time pressure that was implicit in the design of the project by the budget holder and outside the control of the BEFS RA team. The fact that the BEFS RA team is on-schedule to deliver the final version of the RA tool that has been piloted in 2 countries already attests to the feasibility of the first of these goals. There is, indeed, a facilitation mechanism that has been developed to support the implementation of the BEFS RA approach in the countries in which it has already been piloted, as well as in those which have expressed an interest in undertaking the RA process. Additional funding for promoting the awareness-raising and capacity strengthening has already been provided to the BEFS program, and a new set of activities will commence this calendar year (2014). However, whether this mechanism can continue to be maintained at the intended level of effectiveness and close involvement that is needed (keeping in mind the low technical and organizational capacity that some countries may have, when approaching FAO for help in this field) is highly dependent upon the level of resources – both financial and human – that FAO can bring to bear on these country-level requests.

21. The institutional arrangements that was specified within the project design of the BEFS RA seem to be appropriate

22. The project design allowed for country-level focal points to be identified, who would serve as key points of contact for the BEFS team within the project countries, and were intended

to provide an 'anchor' for tool design, testing and piloting of the methodology, and the outreach process with country-level stakeholders. In addition to this, an 'help desk' should be established at FAO headquarters that would provide needed technical assistance and support to both the focal points as well as to the country-level experts and stakeholders that were involved in the piloting and implementation process for the RA tool.

23. The budget that was suggested in the project inception document appears to have been adequate to completing the task, and it was, in fact, underspent by about USD 40,000 – which supports the feasibility of achieving the envisaged project outputs within the given budget. Whether the additional resources allocated to strengthening the outreach and capacity-strengthening of BEFS RA in the coming years will be adequate is beyond the ability (and outside of the scope) of this team to evaluate – but will depend upon whether the key focal points can manage to support the process and to help put together an effective technical working group that can be able to follow through with the envisaged process.

4 Analysis of the implementation process

4.1 Project/programme Management

24. In our assessment of the BEFS RA project, we find that the operational management functions were carried out in an effective and appropriate way, in order to achieve the stated goals of the project workplan, and to make the most effective use of resources provided to the project. We were aware that there was a 'dual' nature to the BEFS team – reflecting the juxtaposition of staff that were hired and contracted to the project in a very specific way, as well as the permanent program staff that are attached to the Bioenergy program of FAO, and whose terms continue beyond the completion of the BEFS project. From our interviews with the project staff themselves, it was clear to the ET that a cohesive project team was created during the course of the project, and that there was an effective partnering of permanent and project-bound staff that carried out the activities of designing and piloting the BEFS RA tool in the target countries of interest.

25. Having a key 'focal point' (i.e. an FAO staff member dedicated to bioenergy issues) at the country-level who would be a key resource and contact person for the local members of the technical working groups (TWGs) was also an important and effective way in which to make sure that there was a viable link between the BEFS team and consulting experts at headquarters, and the consultants and experts that were engaged to support the working group activities at the country-level.

26. The very tight deadlines that were set by the budget holder of the project, to complete the design and piloting of the tool, were achieved with an impressive degree of coherence to the milestones that were laid out. There is no doubt that more could have been achieved with a longer timeline – which was an opinion shared both by the project staff themselves, as well as by some key respondents. But, within the timeline laid out for the project, the key objectives were achieved. The design of the workplans for the BEFS RA project adhered to the project timelines and were largely driven by the expectations of the budget holder to complete all project activities within a 2 year period which was a very ambitious goal.

27. The fact that he project has managed to deliver on its two main outputs within the intended 24 month period – and to do so within the allocated budget – is strong evidence that the management of the project, the budget and the staff were effectively carried out. There don't seem to be any gaps or delays in the process that were not made up for – such that the overall

project was able to be delivered – and no such delays were reported in the terminal report of the project.

28. The normal monitoring and reporting practices were followed in the course of the project -- with regular half-yearly reports being produced by the project management, which were intended to report progress on activities, implementation, budget expenditure, impacts and outcomes, as well as to report any problems. Along with each report, a detailed work plan was also made for the subsequent reporting period – such that a constant process of self-evaluation and (if needed) self-correction could be carried out. These progress reports were reviewed by both FAO as well as the donor, and were supplemented with a full mid-term review, as well as with annual technical reviews and the terminal reporting activity itself – which has already been concluded and submitted by the project management

29. The project followed and benefited from a complete and continuous process of monitoring and evaluation, throughout the lifecycle of the project.

4.2 Financial resources management

30. In our assessment, the management made effective use of the resources provided under the project budget, even despite the very ambitious goals that the project was set to achieve. As was stated before, the project was able to deliver all of its outputs while underspending by approximately USD 40,000 in the course of 24 months –Close monitoring of expenditures was maintained by the donor country through the course of the project, and that additional funds were provided to the Bioenergy program of FAO to carry on with further outreach and capacity-building activities.

31. The breakdown of the project budget indicated in the ProDoc, shows how the BEFS RA project was supposed to allocate the project resources to broad categories of expenditure

Budget Categories	**Budget amount**	**shares of total budget**
Staff Salaries	797,525	47%
Consultants	263500	16%
Contracts with Research partners	105,000	6%
Travel	78,000	5%
Training	121,000	7%
Procurement & Technical Support Services	101,160	6%
General Overheads, Operating Expenses, Chargebacks and Support Costs	232,980	14%
Total	**1,699,165**	

32. Almost 50% of the budget went towards supporting the salaries of the project staff, although the efforts of the staff across the various components of the project – such as tool development, outreach, capacity strengthening – cannot be directly determined from the budget information that the ET has. The 12% of the intended expenditure that was allocated for travel and training is most likely a part of what was spent on capacity-building and outreach, as is a large share of the 16% spent on consultants.

33. The project exercised excellent financial management.

4.3 Efficiency and effectiveness of the institutional arrangements including Government's participation

34. In the BEFS RA project, the outreach and capacity-strengthening activities heavily relied upon the involvement and engagement of the FAO country and regional offices, which played a key role in establishing the contacts with key stakeholders within the regions of interest, and in facilitating the activities of the project within those countries, at a basic operational level. From our discussions with BEFS RA project staff and representatives from the country and regional offices, there was a very good rapport that was established between the headquarters-based staff and those staff in the regional offices, during the course of project implementation. The designation of a dedicated national consultant or a BEFS 'focal point' within the regions or countries of interest also seemed to be a key element of achieving the necessary contact and interaction with stakeholders within these regions. To clarify the difference for the reader – the 'focal point' is an FAO staff person from the national or regional office who is dedicated to bioenergy issues, whereas a national consultant is a non-FAO person who serves as an expert with linkages to key institutions of policy and/or research. Therefore the selection of the particular consultant or 'focal point' of the BEFS project becomes of paramount importance in ensuring the effectiveness of the outreach and capacity-strengthening activities and for ensuring the longer-term sustainability of the BEFS RA tool within those regions in which it was piloted. Based upon the assessment of the contributing role that the focal points played in the design and piloting of the BEFS RA tool, the ET considers that the selection of the consultants and focal points was done in an effective way, and exerted a positive impact on how the project performed in the client countries. In some cases, the national consultant can play an even more important role than the focal point – given their knowledge of local conditions and institutions, and can greatly increase the effectiveness of the FAO staff person serving as a focal point.

35. In order to engage with other key ministries that are implicated in the design and implementation of bioenergy policies, however, the technical working groups (TWGs) that were engaged by the BEFS RA project allowed key representatives and experts from those ministries to interact and participate directly in the inception, piloting, testing, training and awareness-raising activities of the RA project. In the case of the Philippines, the TWG already existed since there was an active bioenergy program already underway – whereas it had to be created in the case of Malawi. As long as a knowledgeable, active and effective focal point could be identified and maintained throughout the inception, piloting, testing and awareness-raising stages of the project – the effective links between that focal point and the BEFS RA team (who also comprise the help desk that is designed to provide additional support) could be maintained. In the case of the Asia Pacific Region at the moment, a very capable interim focal point in the FAO regional office for Asia and the Pacific is currently filing the vacancy left by the departure of the previous focal point role in an effective way. But how to move forward effectively with the plans for scaling up outreach and implementation of feasibility assessments within the ASEAN region will greatly depend upon having a full-time and dedicated focal point who can fulfil a key supporting role within the region. From our discussions on this point, there appears to be a level of financial and programmatic commitment that FAO needs to make in order to fill and continue to fund this position.

36. The BEFS RA project was able to leverage the use of its own internal resources, as well as those of the regional offices, in order to deliver a knowledge- and decision-support tool that reflects FAO as one corporate body.

37. The decision of the BEFS RA team to establish technical working groups also seems to have been a very good one, for the purposes of creating a more broadly-represented group of stakeholders with whom to engage during the inception and piloting phases of the tool

development. This would also facilitate relevant dialogue at country level between ministries and agencies involved in policy coordination and data collection for the tool, itself. The technical working group (TWG) within Malawi was chaired by a representative of the ministry of environment, for example, but contained representatives from other key ministries such as agriculture, finance, forestry and other key sectors which are affected by the existing and proposed bioenergy programs within Malawi. Our interviews with the stakeholders in Malawi who participated in the piloting, outreach and capacity-building activities of the BEFS RA project conveyed a strong interest in the BEFS RA tool and indicated that there is a strong possibility for further use of the BEFS RA tool in the country-level planning and policy design processes for the bioenergy sector. In the Philippines, BEFS RA project took advantage of the already existing Technical Working Group formed by experts from different agencies (14 in total) whose main responsibility and task is to support the National Biofuel Board in monitoring and evaluating the implementation of the Philippine Biofuels Program. The TWG has carried out a crucial role in the preparation and implementation of the piloting in the Philippines. This indicates to use that the TWGs were an effective means of carrying out the piloting of the BEFS RA tool, and contributed to the impact of the project in the client countries.

5 Analysis of results and contribution to stated objectives[1]

5.1 Achievements at Outputs level

38. In the workplan of the BEFS RA project, there are a clear set of outputs that are to be produced by the end of the project lifecycle. The most important of these is the BEFS RA tool, itself, and its supporting documentation that will allow a broad range of users to be able to access it from the FAO website (or other channels) and to explore its application within their own country or regions. The final version of the BEFS RA tool, however, was only envisioned to be achieved at the very end of the project, and is currently on track for completion and dissemination by the time the final version of this report is submitted. Our evaluation, thus far, is based upon the experiences of stakeholders in the Philippines and Malawi using earlier versions of the BEFS RA tool that were available at the time of outreach and capacity-building in those countries. Therefore, we cannot assess project final outputs,, as they are yet to come – but can only on intermediate outputs and on BEFS potential for uptake in othr client countries.

39. The other key output of the project is the facilitation mechanism that was intended to support the implementation of the BEFS RA approach at country-level. This has been established in the form of the BEFS RA help desk, which operates out of FAO headquarters, and which is staffed by the program team. The process by which the BEFS RA tool was piloted and tested with stakeholders is a major part of the facilitation mechanism, which relies upon a strong network of BEFS focal points who can liaise directly with country offices within the client regions, and interact effectively with the country experts, consultants and members of the technical working groups. This process has already been demonstrated in the pilot countries, and seems likely to be replicable, as long as those strong regional focal points remain engaged and adequately supported with FAO or other resources from interested partners.

40. To further clarify what was achieved during the 2-year project period, relative to what was intended and programmed within the ProDoc of BEFS RA, we have summarized the achievement of outputs in the following table.

[1] The term 'results' includes outputs and outcomes

Intended Outputs	Indicators/Targets	Achievement/ Outlook
Impact goal: Countries have developed policies, strategies and programmes on sustainable bioenergy development that safeguard food security and the environment (directly in line with FAO Organizational Result F5)		
Outcome – Countries apply the BEFS-RA	Three or more non-pilot countries have started or at least submitted an official request on the BEFS-RA process by the end of the project	
Output 1 – Tested Rapid Appraisal tool is available	After 12 months interim RA available. After 24 months final revised RA available that can be implemented within 6 months. Final revised RA documents in English,.	A comprehensive Interim BEFS RA version has been developed by month 12. A dry run of the tool was carried out in June 2013 (month 14) The final revised English version of the BEFS Rapid Appraisal (Excel tools and user manuals) has been delivered in month 24 and put available on the FAO/BEFS website
Activity 1.1 – Develop the RA approach and tools	The approach for the Rapid BEFS appraisal is established, including training manuals and guidelines for using the tool.	The approach has been established and draft manual for the tool components delivered (and shared with the donor) by month 12
Activity 1.2 – Test the RA in the field in two pilot countries	The BEFS-RA is tested in two pilot countries by month 18.	The BEFS-RA has been tested in two countries by month 21 (month 15 in Malawi, month 21 in Philippines). The date for the second piloting has been delayed due to a change in the original plan. Cambodia was originally envisioned as the second pilot country, in the hope of creating synergies with BEFS ASEAN project. However, because of delay in country activities under BEFS ASEAN project and uncertainties linked to general elections and to considerable number of bank holidays in Cambodia for the period planned for the piloting, the plan for pilot testing has been changed and decided to have it in the Philippines.
Activity 1.3 – Incorporate feedback and finalize country analysis and RA		Incorporation of feedback from the two piloting countries has been carried out timely
Output 2 – Facilitation mechanisms to support implementation of the BEFS-RA are in place	After 12 months interim roadmap is produced After 24 months roadmap to support country uptake is finalized (The roadmap describes support options that countries can use) Funding opportunities are documented Support mechanisms in place	A draft "BEFS implementation Manual" (also named "roadmap" in the original logical framework) has been completed by month 13. After circulating it among relevant FAO staff and external stakeholders and revise it accordingly, it has been finalized and its final version uploaded on the FAO/BEFS website by month 24 Outreach targeting potential resource partners was conducted, and led, for the time being, to the commitment of the World Bank ESMAP programme to fund the implementation of the BEFS RA Natural Resources component in Pakistan.
Activity 2.1 – Raise awareness	3 Regional offices and at least 3 subregional offices have attended an awareness-raising meeting At least 3 partner organizations have participated in an awareness-raising meeting	A network of regional BEFs Focal points (RAF, RAP and LAC) has been created . Awareness raising was carried out for FAO Regional Offices, partner organizations and policy decision makers from over 40 countries as foreseen in the project workplan.

	Decision-makers from at least 10 countries have been made aware	
Activity 2.2 – Design the roadmap	The structure and content of the roadmap is defined by month 12	The structure and content the "BEFS implementation Manual" (also named "roadmap" in the original logical framework) has been defined by month 13
Activity 2.3 – Set up a help desk system to support countries	Help desk is operational within 1 to 3 months Contact focal points are established	The person in charge of the help desk has been identified by month 3. The Help desk rendered assistance to a number of governments who expressed interest in BEFS work. 2 contact focal points (RAP and LAC) have been established by month 3 (as foreseen in the workplan), while Regional Office for Africa (RAF) has been identified only in month 9
Activity 2.4 – Explore funding opportunities	Funding opportunities explored both within FAO and with at least three external resource partners	During the awareness raising meetings held along the whole period of the project, potential funding opportunities have been explored with more than three resource partners (e.g. World Bank, ERBD, EU DEG Energy, DG Agri, DG DEVCO, OPEC Fund for International Development, Asian Development Bank

41. This table shows that there were some changes made to the implementation of activities, based on very pragmatic considerations (such as potential political unrest due to elections, etc), which seem reasonable given the need to adhere to the 2-year timeframe for the project.

42. Overall, key outputs of the BEFS RA project were produced and delivered.

5.2 Achievements at Outcome level

43. In terms of project outcomes – this would relate to the overall impact that is sought by the project – namely, to enable the creation of effective policies for bioenergy, at the country- and region-level, that are conscious of both food security and environmental sustainability objectives. The outcomes that would lead towards this ultimate impact being realized can only occur if the actual planning and policy-making that would guide the design and implementation of a viable and sustainable bioenergy sector were at a fairly advanced stage, and could be observed to be having actual effects on the bioenergy sector (and the wider soci-economic and physical environment) in the country. This, to date, has not directly happened as a result of the BEFS RA project – and wouldn't reasonably be expected to within the 24-month period allocated in the project lifecyle. The project outputs have been able to materialize within this timeframe, which is already a significant achievement. The level of interest at the country-level, and on the part of multi-lateral resource and implementing partners who have expressed an interest in taking up the BEFS RA approach demonstrates evidence that there is significant potential for realizing outcomes in the actual planning, assessment and implementation process that could be facilitated by the BEFS program.

44. There are very strong indications that this project does have the potential to achieve its intended outcome, if it was given a longer timeframe within which to carry out its role in supporting the analytical capacity of client countries, and providing an enabling environment for effective planning and decision-making about the needed investments, regulations and institutional arrangements needed to create a viable and sustainable bioenergy sector.

5.3 Gender equality

45. Gender equality has been adequately and appropriately addressed by the BEFS RA project. The BEFS RA project has, embedded within its design and inception, sensitivity to the issue of gender equity. The project team had close contact with gender experts within FAO, and took on board the suggestions of both stakeholders and outside experts in incorporating some key elements of analysis that are needed to better understand how improved bioenergy production and provision can benefit the lives of women, in both rural and urban settings. As a result of this interaction and considering time and energies devoted by rural women looking for sources of fuel for domestic energy services the framework explicitly covers household uses of energy, and provides a basis for evaluating the potential of cooking and heating fuels.

46. In terms of the outreach and dissemination activities of the BEFS RA project, there were a large number of women included in the capacity-strengthening activities. More than half of the stakeholders interviewed in the Philippines were women, and were closely involved in the capacity-building process of BEFS RA. Therefore, the ET believes that a good gender balance was achieved in the outreach of the project.

5.4 Capacity development

47. Given that such a large component of the project consists of outreach, awareness-raising and capacity strengthening – the ET considers that the aspect of capacity development has been more than adequately addressed by the project. The design of the project inception and piloting phase made explicit efforts to inform stakeholders of the BEFS analytical framework and to train key analysts at the country-level in how to introduce new and relevant data into the tool, and to use it for carrying out analysis. There has been considerable effort in producing manuals and informational documentation that explains the structure and use of the model – such that they can be directly applied in future capacity development and training exercises.

48. The table below provides information on the numbers and distribution of participants and stakeholders that were involved in the capacity-building activities carried out in Malawi and the Philippines

Malawi:

Ministry/Agency/Organization represented	**Number of participants from agency/organization**
Ministry of Water and Irrigation	2
Department of Energy	6
Ministry of Transport	1
Ministry of Labor& Vocational training	1
Ministry of Economic Planning & Development	1
Ministry of Trade & Industry	1
Ministry of Information	2
Ministry of Lands & Housing	2
Ministry of Finance	2
Ministry of Agriculture & Food Security	1
Total participants	17

49. A strong representation of participants came from the Ministry of Energy in Malawi, but there was also a broad representation from other ministries, as well. There was a larger number of participants in the capacity-building activities carried out in the Philippines, as is seen in the table below. Based on the experiences we heard from the BEFS RA team, we believe that the

difference mostly reflects the advanced degree of policy engagement that has occurred in the bioenergy sector in the Philippines, and the fact that it is farther along in the scaling-up process of bioenergy, compared to Malawi. The fact that most of the participants to the capacity-building sessions in Malawi were only willing to come if they were compensated with daily 'sitting' fees, as opposed to the largely voluntary participation of stakeholders in the Philippines reflects a difference in how stakeholders engage with outside organizations like FAO, and made it easier to get highly-engaged and motivated people to attend the outreach sessions in the Philippines.

The Philippines:

Ministry/Agency/Organization represented	Number of participants from agency/organization
Sugar Regulatory Administration	7
University of the Philippines	6
Philippines Agricultural Development & Commercial Corporation (PADCC)	2
Philippines Coconut Authority	5
National Biodiesel Board	2
Department of Energy	4
Department of Trade & Industry	1
Department of Science & Technology	1
Department of Transportation and Communications	1
Planning & Policy Studies Office	1
Oil Industry Management Bureau (OIMB)	3
Total participants	33

50. Overall, there seems to have been effective outreach in both countries – although we know that the capacity-building done in the Philippines was done with a more advanced version of the BEFS RA tool, and that the participants were able to be more hands-on with the tool, as a result. The representation of agencies and ministries within the capacity-building activities in both countries reflects a good effort by the BEFS RA team to make broad outreach.

51. During the capacity development process, the BEFS RA team gave participants the opportunity to think about how the tool could support existing evaluation efforts that were ongoing within the internal programs carried out by the participating agencies – such as assessment of fertilisation and intercropping programs. In this way, the participants were able to reflect on how the tool could be used to improve their operational analysis and internal management capacity.

5.5 Human-Rights Based Approach

52. Aside from the various multilateral environmental agreements (MEAs) that the project was set up to ally itself to – it has also maintained a conscious linkage to other development initiatives that have a human-rights based emphasis. One such initiative is the World Summit for Sustainable Development (WSSD) and the Johannesburg Plan of Implementation, which for "improved access to reliable and affordable energy services for sustainable development" and for further efforts to the utilization of renewable energies. The BEFS RA team has also created linkages to the "Sustainable Energy for All" (SE4A) initiative, which advocates for widespread access to affordable bioenergy, and which has had positive interactions with the BEFS RA team and the Bioenergy program of FAO.

53. This type of congruence with initiatives focused on the right to clean and affordable energy, along with the emphasis on food securityshow that the BEFS RA project upholds good alignment with key principles of human rights, in its approach.

5.6 Partnerships and Alliances

54. The BEFS RA project has, through its outreach and awareness-raising activities, gained some valuable contacts and partnerships with multi-lateral organizations such as the World Bank and the Inter-American Development Bank (IADB). The partnerships with these multilateral organizations – which consists of the bank staff working on projects in consultation with the BEFS RA team – will result in the BEFS RA methodology and tool being used directly in country-specific projects that the IADB and World Bank will be carrying out. The evaluation team believes that this bodes well for BEFS RA sustainability in the Future. The Energy Sector Management Assistance Program (ESMAP) of the World Bank is proceeding with the implementation of the BEFS RA approach in its country-operations in Pakistan, and is likely to draw further up on the BEFS RA approach in other work, if it proves successful in supporting their analysis in South Asia. The BEFS RA project (and the previous BEFSCI project) has been in dialogue with the Inter-American Development Bank (IADB) for some time, since the time that IADB launched its own biofuels "scorecard" initiative. The fact that they want to fund the implementation of the BEFS RA approach in two Latin American countries, following the final completion and release of the BEFS RA tool at the end of April, offers further evidence that some significant and potentially very impactful partnerships and alliances have been built with agencies that can further the outcomes and impacts of the BEFS RA project, through their own country operations and programs. The European Bank for Reconstruction and Development has also been in dialogue with the BEFS team about the use of the RA tool in some Eastern European countries – and will likely continue negotiations beyond the official close of the project, at the end of April, and the final release of the tool.

6 Analysis by evaluation criteria

6.1 Relevance

55. Overall, the BEFS RA project has great relevance to FAO's mandate to maintain and enhance food security within its member countries, as well as to enhance the productivity and value-added within the agricultural sector also through the use of bioenergy. The kind of technical support that the BEFS RA team provided to the stakeholders and clients in the pilot countries, as well as to interested regional bodies such as ASEAN, is also relevant to FAO's mission to provide concrete policy support and technical assistance to the implementation of the agricultural sector development strategies of its member countries. The support to the design of bioenergy programs that the BEFS RA project carried out was also highly relevant to the policy interests and goals of the project donor.

56. Nearly all of the experts expressed the uniqueness of the BEFS RA approach, and confirmed that it held a unique place in the range of assessment tools that have been applied to the study of bioenergy policy

57. all conveyed very strong and positive opinions about the relevance of the RA tool, and its utility in addressing the key questions about bioenergy. Also stakeholders at country level conveyed a uniform opinion that the RA tool addresses an important set of issues regarding access to energy, efficiency-enhancing technologies, and improving the management of natural resources that are affected by the production of food, fibre or fuel products.

58. By providing direct support to country-level decision-making and planning for the agriculture and other closely-coordinated sectors through direct interaction with government administrators and through the Technical Cooperation Facility, the project has produced a tool

and a capacity-strengthening process that also supports FAO's Global Goals and its strategic objective to promote food security among its member countries.

6.1.1 The case of the Philippines

59. In the Philippines, some of the major national bodies involved in the design of biofuels and bioenergy policy in the country were involved in the pilot process and were part of the technical working group that was established in that country to help guide the inception phase and inform the exploration of technological and policy options for the bioenergy sector. The active presence and participation of organizations such as the Philippines Coconut Authority (PCA) and the Sugarcane Regulatory Administration (SRA) – both of which belong to the National Biofuels Board (NBB) of the Philippines – within the Technical Working Group and in the training and outreach activities that were held by the BEFS team is a strong indication of the relevance that they attributed to the BEFS RA tool, and the programmatic goals of the Rapid Appraisal process. The TWG, in its turn, assists and guides the activities of the NBB of the Philippines, which is composed of a number of relevant government agencies, as shown in the graphic below. Representatives of these agencies sit in the TWG, which helped to enhance the relevance of the analysis and piloting design that was undertaken.

National Biofuel Board- composition

1. DOE – heads the NBB
2. Department of Agriculture (DA) – ensures feedstock supply
3. Department of Science and Technology (DOST) – spearheads research and development (R&D)
4. Department of Labor and Employment (DOLE) – ensures social coverage of farmers and industry laborers
5. Department of Finance – monitors importation
6. Department of Trade and Industry (DTI) – promotes biofuels investment
7. Philippine Coconut Authority (PCA) – manages the biodiesel program
8. Sugar Regulatory Administration (SRA) – manages the bioethanol program
9. Department of Agrarian Reform (DAR) – promotes the sustainable development of idle agrarian reform communities (ARCs) through biofuels investments ((*additional non-voting member*)
10. Department of Environment and Natural Resources (DENR) – ensures all biofuels projects are environmentally compliant (*additional non-voting member*)
11. Department of Transportation and Communications (DOTC) – ensures the protection of transport groups ((*additional non-voting member*)
12. National Commission on Indigenous Peoples (NCIP) – promotes the indigenous peoples (IP) areas for biofuels and protect the right of indigenous people groups (*additional non-voting member*)

Source: National Biofuels Plan 2013-2030

60. In the Philippines, the stakeholders feel there is a need in the country for this type of analytical tools and BEFS RA address those needs. They described the areas in which this tool is mostly needed: 1) that of monitoring and assessing the achievement of the biofuels policy that was started in 2008; 2) supporting the planning process (particularly on productivity side); 3) supporting the revision of mandates and the identification of complementary feedstocks to reach those targets, and finally 4) the evaluation of projects.

61. Stakeholders in the Philippines mentioned that food security is a concern within the country, and a tool that shows potential biofuel development not in contrast with food security is perceived as addressing an important need. The NBB can use it to provide quantifiable and measurable assessment and recommendations to inform and assure legislators about the viability of biofuel sector development the does not conflict with food security. The fact that the tool has been developed by FAO tool is very much appreciated since it gives credibility to assessment process.

6.2 Efficiency

62. The fact that the BEFS RA project was able to achieve the completion of its two main outputs within the stated 24 month period, and to remain within the allocated budget for the activity is a major indication that the project was delivered with a high degree of management efficiency. The BEFS RA project was also able to make the best use of the internal human

resources of FAO – including its own project staff, as well as the expertise of key personnel in other FAO departments.

63. The cross-departmental collaboration that was used by the BEFS RA project helped the team to come up with figures, technical coefficients, data on country-level mandates, labor requirements, the use of fertilizers in developing countries, data about crop residues and how they are used, and to provide general advise about the technical approach that could be followed in building the tool.

64. One element of efficiency that we observed in the implementation of the BEFS RA project was in how the project staff made use of the internal expertise of other FAO staff in various divisions, to assist in refining the data verification, the model calculations, as well as the overall tool design – so that it was as understandable as possible. By doing so, they were able to save on the resources that would otherwise have to be spent on hiring outside consultants, while making use of the knowledge that is already being generated within ongoing FAO program activities and which is embodied in the program staff that were consulted.

65. An example of how internal FAO expertise was drawn upon by the BEFS RA staff is seen in the case of understanding the importance of livestock residues in bioenergy and agricultural systems. In this case, the expert in AGAS (Animal production and health division) checked the methodology used by the BEFS RA tool and provided relevant literature about the ratio of crop biomass to post-harvest residues. He also supported the team in coming up with figures for usage of residues as feedstock and other uses (fence, paper, roof), and made the team aware about how extensively crop residues are used in crop and livestock systems.

66. Another example of the efficient use of internal FAO knowledge resources and expertise is in the use of an expert from NRC (Climate, Energy and Tenure division) to help the team to develop and review the part of the tool dedicated to the important issue of land tenure, and to create voluntary guidelines that could be embedded into the BEFS framework. Similar use was made of internal FAO expertise in forestry resources, energy, as well and land and water resources.

6.3 Effectiveness

67. There are several aspects of how the BEFS RA project was implemented, which we felt were particularly effective, and enhanced the project's influence and impact in the piloting phase. One key aspect concerned the selection of regional, country-level focal points and national consultants who provided linkages between the BEFS RA project team and the key decision-makers, experts and stakeholders in the target countries. The effectiveness of the piloting process of the RA tool was further enhanced by the creation/ involvement of the Technical Working Groups (TWGs) within the client countries, that played a key role in the design and piloting of the RA tool, and helped to convey the insights and feedback of key stakeholders, analysts and country experts to the BEFS RA team. Even though the BEFS RA tool has not been used in the actual implementation of policy in the pilot countries, the piloting process itself was carried out in an effective manner, and the potential of the RA tool was clearly demonstrated to the stakeholders who were involved in the training and outreach process.

68. The stakeholders that we interviewed in the Philippines would like to engage in further work in customizing the data and the specification of technologies to better fit the local context – which would also provide them with a sense of its applicability to their planning process. The fact that piloting countries are now in a position to embark on this kind of work demonstrates that the piloting process was effectively carried out. Some aspects which could have been improved, in the piloting process, to enhance its effectiveness were that of giving more time to

the local participants to internalize the mechanics and steps of utilizing the tool – ranging from the manipulation of data in the Excel sheets, the decisions of which key assumptions to impose and testing the various links in the tool. The ET recognizes that time constraints are a reality of any piloting or capacity-strengthening exercise, and that trade-offs have to be made between how much material to cover in a training, versus the detail with which the material is covered. No doubt there will be subsequent refinements to the piloting and training approach that the BEFS team will incorporate from participant feedback into future capacity-strengthening efforts.

69. The BEFS RA tool lead users to think systematically about the data needs for the analysis, and provided them with a useful opportunity to organize some key pieces of information. The process of piloting the RA tool also brought together stakeholders from various ministries and different backgrounds of expertise (within the TWGs) and was effective in getting an important cross-sectoral dialogue started, which is extremely useful for coordination and planning for the pilot countries.

70. We saw clear evidence that the BEFS RA tool helped the stakeholders to think more clearly about the linkages between bioenergy, agriculture and other key sectors of the economy during the piloting process, to better organize the information needed to examine these relationships. The stakeholders in those countries (particularly the Philippines) wanted to continue using and improving the tool, so that its data could be better customized and so that its use can be further expanded to consider a wider set of bioenergy options.

71. Once the final version of the BEFS RA tool and the accompanying documentation are released on the BEFS website, and through other dissemination channels, we expect that its effectiveness and impact will be greatly enhanced.

6.4 Sustainability

72. It should be stated at the outset that the evaluation team's assessment of the sustainability of the BEFS RA tool is based upon two key aspects: (1) That there will continue to be funding and resource support for the maintenance of further piloting of the RA tool from either internal FAO resources or external donors or clients willing to pay for services; and (2) that there will continue to be interest in piloting, customizing and applying the BEFS RA tool at the country-level.

73. These assumptions are reflected in the project logframe, which describes the ability to sustain output #2 (the creation of a facilitation mechanism that supports BEFS RA implementation) as being dependent upon the manifested and concrete interest of resources partners to fund future analyses of food-security and environmentally-focused bioenergy potential. As has already been stated – this support has already been forthcoming from both the German government, and multi-laterals such as the World Bank and the Inter-American Development Bank have expressed interest in taking up the design of the BEFS approach (and the tool itself) in their own internal operations to support bioenergy projects for their client countries. As long as this kind of support is forthcoming from resource partners, it is possible for this capacity-strengthening and decision-support component of the BEFS project's output to be realized. As further evidence of the sustainability of the project, the government of Côte D'Ivoire has offered to co-fund 50% of the implementation of the BEFS RA approach in the country, while the other 50% is being sought from a multi-lateral agency (in particular, the OPEC Fund for International Development – OFID), or from FAO's Technical Cooperation Program (TCP). This is clear evidence that there is interest and commitment at country-level for the BEFS approach, with concrete offers of support and co-financing that can enhance future sustainability of the BEFS RA tool and its approach.

74. Another underlying factor which should contribute to the sustainability of the BEFS RA tool is its use and dissemination. The BEFS RA tool clearly seems to fill a need for which there is considerable demand at the country-level. The fact that multi-lateral agencies like the World Bank and the IADB are interested in using the BEFS RA tool and approach in their own country operations is a good indicator of the potential for its future use and development, and should greatly enhance its sustainability.

75. A factor that could help in making BEFS RA better known and in building an enabling environment that could allow some of the investors to support countries in running the BEFS RA is the use of the High Impact Opportunities (HIO) on sustainable bioenergy of "Sustainable Energy for All". As suggested by most of experts interviewed, HIO on sustainable bioenergy could serve as a platform that can help aligning the overlap between bioenergy initiatives currently happening.

76. There is overall agreement that the 'tool-building' phase of BEFS is coming to an end, and that the project should now transition towards an implementation and capacity-building phase. This is already happening, with the support of additional funding from the German government, and will be the major focus of the BEFS program in the remainder of this year, and the coming ones as well. The ET sees the expansion of capacity-building efforts, rather than continuous model-building, to be a vehicle for the future sustainability of the program.

77. The stakeholders expressed a clear interest in using the tool and into digging deeper into the data that it uses, and finding out more about what it does and how they can further customize it. Since the development of bioenergy involves multiple sectors within these countries (i.e. agriculture, energy, forestry, etc) the establishment of a technical working group during the inception and piloting phases was a good approach, and already establishes a mechanism and quasi-institution that can enhance the sustainability of the BEFS approach in future planning exercises.

78. Building up on the interactions that the BEFS team has already had with some key technical experts in other FAO departments (Ag Production, Development Economics, etc) should also contribute towards its future sustainability since it will promote the awareness of the tool within the institution, and make it more likely to be used by other departments and in the context of other countries who might be able to benefit from the use of some of the key modules of the BEFS RA tool.

79. In the case of the Philippines, especially, there was the involvement of researchers at the University of Los Baños – particularly the national BEFS consultant. The involvement of universities and advanced research institutes as partners and collaborators in the development and outreach activities of the RA tool has shown benefits, and could be of future benefit to the further development and dissemination of the RA tool. The researchers and students from the universities and research institutes can facilitate the process of capacity-strengthening, data collection and the technical improvement of the tool components, as well. This was a point that came out strongly in some of the discussions that we had with country-level stakeholders. In fact, some of the researchers at the University of Los Baños are already working on adapting the RA tool for different data – which is a positive indication of the potential for its continued use, development and application towards country-level assessment and planning in the country.

80. The BEFS team has already established a 'help desk' for the RA tool at headquarters, which will be able to provide assistance to users in various regions and countries, in terms of technical assistance and advice. This will be a key part to maintaining a growing network of users in partner institutions and in the various regions in which the BEFS RA tool will be applied in future.

6.5 Impact

81. Considering the piloting nature of the project and its short duration it is difficult and premature to assess its impact.

82. On the other hand, we have been able to observethat the BEFS RA project has exerted some influence up on the thinking that goes into bioenergy sector planning.. This is something that bodes well for the future potential for impact that can come from the BEFS RA project, and for the ability of the BEFS RA process to have significant impact on policy and on other country-level outcomes.

83. A significant outcome of the BEFS RA process is its contribution in in terms of raising awareness about knowledge management and the need to build better infrastructure for the management of data and knowledge. This can be observed in the case of Malawi.

84. As a result of the piloting exercise in Malawi, the personnel within the Ministry of Agriculture now realise that it needs to better organize its internal data so that it can better support the needs of the BEFS RA tool – or any tool like it, that might be used in the future.

85. In the case of the Philippines, our discussions with stakeholders revealed a clear interest, on their part, to continue working with the BEFS RA tool and the overall BEFS approach – so that further customization of the tool could be done with data from the Philippines, and so that it can be better utilized in the ongoing planning process for the sector – in tandem, perhaps, with other tools of analysis that they're already using. The Evaluation Team sees strong evidence that the BEFS RA project has the potential to achieve its intended outcome, and that it would be able to strongly influence the planning and decision-making around the necessary investments, regulations and institutional arrangements for the bioenergy sector. Given a longer timeframe for implementation than the short period of this project, the BEFS RA approach has the ability to enhance and support the analytical capacity of client countries, and achieve ultimate impact through creating an enabling environment for better investment and policy decisions that can lead towards a viable and sustainable bioenergy sector.

7 Conclusions and Recommendations

86. The BEFS framework is highly relevant to assessing the challenges faced by many of FAO's client countries in enhancing the potential for bioenergy and managing some of the interactions with agriculture and the potential tradeoffs in environmental quality and food security. The BEFS RA tool makes use of the BEFS analytical framework in an effective way, and provides a useful tool that country-level analysts, experts and decision-makers can use to assess the potential benefits and tradeoffs around bioenergy that exist. The tool, therefore, is both useful and relevant to the needs that decision-makers and analysts have for assessing the bioenergy needs and potential of their countries.

87. The ET found the process of designing the RA tool as well as the implementation of the piloting of the RA tool to be effective – especially in the way that it made use of country and regional focal points and technical working groups to coordinate the interactions between the BEFS team and the country stakeholders and experts. The efficiency of the BEFS RA project is demonstrated not only in how well it managed the budget and financial resources available to the project, but also in how it made use of the internal expertise of FAO specialists in the design of the tool – such that the need for hiring external technical experts was minimized.

88. The ET noted strong evidence that the RA tool has made a difference in the way information about bioenergy and agriculture is organized and analysed by analysts involved in the piloting process, and that there is continuing interest to further adapt the tool and expand its application in those countries. This points to a strong potential for impact and also points to the potential sustainability of the RA tool and approach. Further evidence of sustainability for the project has been given by the expressed interest of multi-lateral donors (such as IADB and the World Bank) as well as by countries themselves to fund efforts to apply the RA tool to specific empirical cases.

89. These aspects point to the fact that, overall, the project was a success, and that it was able to deliver on what it promised within the short span of the project implementation. With more time and resources, the project could have done more and perhaps reached more countries – with the implementation of the piloting becoming more refined and effective with each new application, as was evident in how the piloting process evolved between its implementation in Malawi and (later) the Philippines. FAO, through internal program support, could provide the kind of sustained resources that can further the goals of the project – but also can play a key role in enhancing the effectiveness of the RA tool and its piloting by strengthening the technical expertise on bioenergy within the regional and country offices. The importance of maintaining adequate staff level in regional FAO offices, to supplement the efforts of the BEFS RA team, is one of the key recommendations that we will now describe.

90. We have summarized the key recommendations that we can make to the BEFS team and FAO as shown in the section below.

8 Recommendations

91. Even though the project is formally coming to an end, there will still be some key staff remaining at FAO within the Bioenergy program, who will take on the responsibility of maintaining the 'help desk' for BEFS and continuing the outreach, capacity-strengthening and awareness-raising that will now be the main focus for the BEFS RA program. These recommendations are, therefore, intended to provide these remaining team members with advice and insight that we have gathered from the evaluation process, that should be helpful in maximizing the influence, effectiveness and future impact that the dissemination and uptake of the BEFS RA tool can have as it continues to spread to a wider network of potential users and clients.

92. Echoing our previous observation there should be some special attention given to the use of data during the training and capacity-strengthening process, given the importance of data and expert information in the parameterization and in determining the results and outputs that come from the tool. One of the most useful outcomes of undergoing the BEFS RA process is in improving the way in which data organization, cleaning and validation occurs, so as to ultimately ensure the use of the best possible information in the tool. This is an important process and should be ingrained in the minds of the stakeholders, as part of the training and capacity-strengthening process.

93. The ET agrees with the recommendations of the interviewed experts that the model-building phase of the BEFS RA project is over, and that it should transition to capacity-building and outreach. We already see a movement towards this, within the BEFS team, and applaud this.

Recommendation 1: for FAO (BEFS team)

Improving data cleaning and the training and outreach experience for future users of the BEFS tool.

94. There is a clear advantage and benefit to partnering with universities and advanced research institutes (ARIs) in the development and application of the BEFS RA tool. These universities and ARIs could be in the client countries themselves, or outside of them – but would have researchers and analysts with a set of skills that could enhance and add value to the BEFS RA team. In some cases, such capacity coming from universities and ARIs could help to refine and further validate information going into the tool, and could assist in creating additional capacity and human capital within the countries, by training scientists and researchers who can become the future users and champions of the tool in future efforts to improve and expand the use of the tool within the policy planning process. They would, therefore, serve as useful 'reservoirs' of potential future capacity for the country, as a whole, and assist in maintaining expertise at the country-level.

95. Given that there's already interest from multi-lateral organizations such as the World Bank and the IADB in taking up the BEFS RA tool in their own country support programs, these are also very fruitful forms of partnerships to pursue. Future partners of this kind could be the Asian Development Bank (ADB), the African Development Bank (AfDB), the International Fund for Agricultural Development (IFAD) and other similar organizations.

Recommendation 2: for FAO (BEFS team)

Strengthening future partnerships for BEFS RA tools including by building and reinforcing partnerships with advanced research institutes and through partnerships with multi-lateral organizations to ensure sustainability

96. FAO plays a key role in facilitating and enabling the BEFS team to operate effectively with stakeholders in the client countries. A strategy should be devised, in coordination with the BEFS and larger Bioenergy group, to identify the key regions where a minimum critical mass of expertise is needed to push future program initiatives.

97. There is a clear advantage and necessity to having a good BEFS focal point in the regional offices, so as to provide a critical linkage between headquarters staff and the stakeholders and experts at the country-level, and to serve as effective 'champions' of the BEFS RA approach to the client countries that are already engaged, as well as to others who might potentially benefit and/or show interest in engaging in the BEFS RA process in future. The loss of the focal point in the Asia & Pacific regional office has been filled with an interim appointment, thus far, but needs to be followed up with a longer-term replacement who can be dedicated to the task of continuing the momentum that has begun in getting key ASEAN member countries to engage in the BEFS process.

Recommendation 3: For FAO and relevant Technical divisions

FAO should support the Strengthening of the bioenergy sector expertise in the regions also through filling key vacancies in the regions.

98. There appears to be a lot of 'competition' occurring at the country level for engagement with stakeholders in the field of bioenergy – sometimes coming from other UN agencies who are also engaged in this topic, but whose efforts are not well coordinated with FAO's. Having additional support and expertise in bioenergy at the regional- and country-level of FAO's wider infrastructure and network will help to promote the visibility of the BEFS RA tool, as a knowledge product of FAO as an organization, and will also help in carrying out the coordination function with other UN bodies that also work within the region on similar topics.

99. One way to avoid heavy overlap with existing UN activities is for FAO to carve out a niche for bioenergy that complements other agricultural sector-focused support and analysis that FAO does – such as with the value chains of agriculture. Bioenergy is clearly a way of adding value to the agricultural and agroforestry sector – which FAO has a unique mandate, within the

UN system, to support. By finding ways to mainstream the analysis of bioenergy as a value-enhancing (but potentially resource-competing) sector to agriculture, the work of the BEFS team would be magnified by FAO's overall presence on these topics, and the sustainability of the BEFS RA work and knowledge products could be further enhanced. By strengthening this regional- and country-level capacity and its linkage with the BEFS team, FAO will also enable the wider organization to function 'as One' when it comes to engaging with countries on bioenergy and related issues.

Recommendation 4: for FAO

FAO should avoiding program conflict and overlap with existing UN activities by coordinating closely with similar UN programs in target countries and mainstreaming bioenergy in agricultural value chain work

Annex 1 Evaluation Terms of Reference

1 Background of the Project

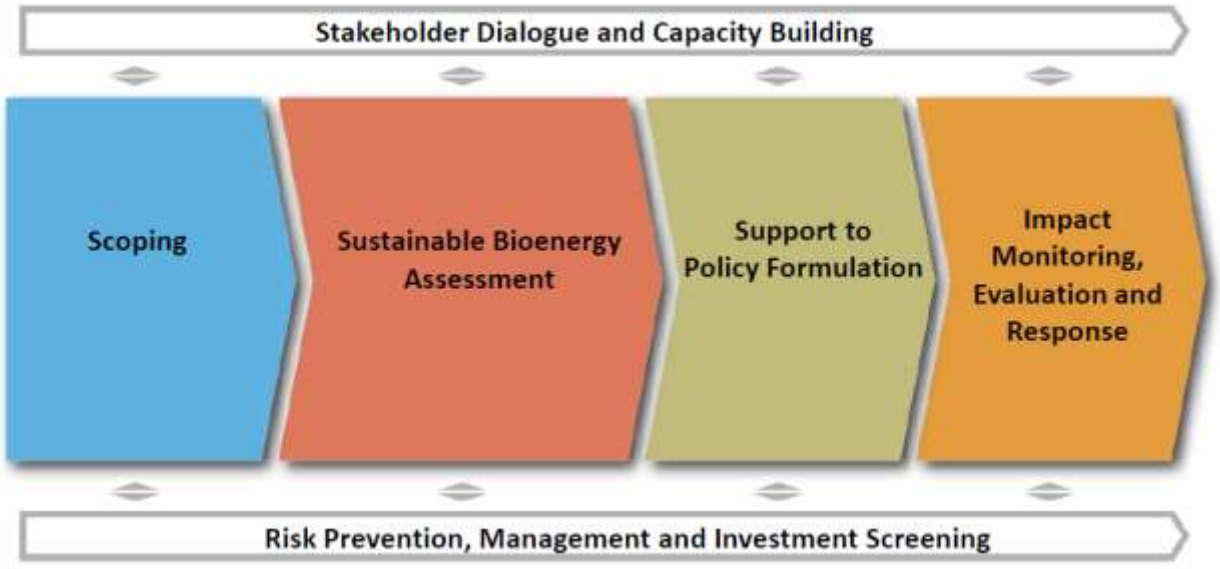
1. The global demand for bioenergy, and especially liquid biofuels, has been rapidly growing, driven mainly by climate change mitigation and energy security policies, and increasing oil prices. This can create both opportunities and risks for developing countries, with possible repercussions on food security.

2. The relationship between bioenergy and food security is complex and multifaceted. In order to ensure that modern bioenergy development is environmentally and socially sustainable and that it fosters rural development and food security, both opportunities and risks need to be properly considered when a bioenergy policy is designed or revised. In particular, the viability and sustainability of different biofuel development pathways, and the resulting effects on food security, need to be thoroughly assessed by policy makers.

3. A number of developing countries affected by food insecurity, are in the process of developing bioenergy policies and targets, often in the lack of adequate information on the viability and sustainability of domestic biofuel production, on the environmental and socio-economic effects of this production, and on the associated repercussions on food security. In the meantime, a number of these countries are being approached by prospective bioenergy investors.

4. Over the last few years, FAO set up a number of initiatives to shed light on the implications of bioenergy and food security in order to help countries ensure that such developments are sustainable. FAO has developed the Bioenergy and Food Security (BEFS) Approach to support and guide policy makers, see Figure 1.

Figure 1: The Bioenergy and Food Security Approach of FAO.



5. In order to shed light on these complex issues and help policy makers address them, the FAO Bioenergy and Food Security (BEFS) and Bioenergy and Food Security Criteria and Indicators (BEFSCI) projects developed a comprehensive Analytical Framework (AF) and set of tools to help countries develop a sound information set on which to base their bioenergy policies; prevent and manage ex-ante the risks associated with bioenergy developments; and assess and respond ex-post to the impacts of bioenergy development.

6. The BEFS AF has been implemented so far in a number of countries. Official requests for technical assistance for carrying out the BEFS analysis have been submitted to FAO by additional countries. In addition, the FAO Regional Office for Asia and the Pacific (FAORAP) with the support of the ASEAN Secretariat (ASEC) is currently implementing a regional technical cooperation project (TCP) on Bioenergy and Food Security in ASEAN based on the BEFS Approach and Rapid Appraisal.

7. However, some of the methodologies described in the BEFS AF require considerable data, capacity and resources to use. In addition, implementing the full BEFS analysis can take up to 24 months. Therefore, as stressed by a number of stakeholders, most developing countries, particularly those with low capacity, would not be able to carry out such analysis and use the aforementioned AF and other tools without substantial external support.

8. For this reason, it was proposed that a simpler, less detailed – but still technically sound – set of methodologies and tools, i.e. for a BEFS Rapid Appraisal (BEFS-RA) be developed. The project, "Bioenergy and Food Security Rapid Appraisal" (BEFS RA, GCP/GLO/357/GER) was therefore launched with support from the Government of Germany to address this need. The Project Document was signed by FAO and the Government of Germany as the donor on 24 April 2012. The project has a scheduled duration of 24 months and a budget of USD 1 699 165. The project started on 1 May 2012 and its activities will end on 30 April 2014.

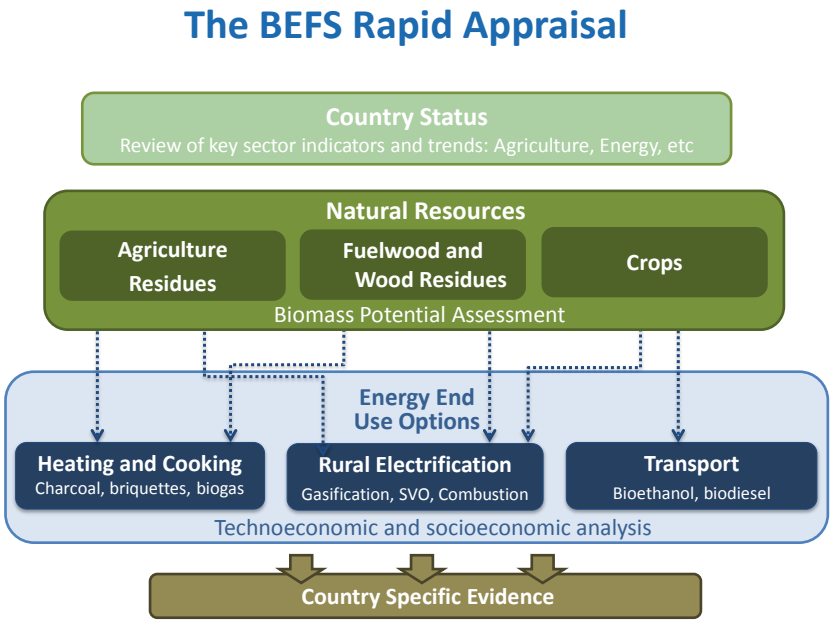
9. The BEFS RA toolbox is one of the components under the BEFS Approach. It offers a first level of assessment of all bioenergy options of interest to a country, covering the following dimensions; assessment of potential feedstock production for bioenergy production, techno-economic analysis and socioeconomic analysis. The aim of the BEFS RA is to provide policy-makers with a preliminary indication of the sustainability of bioenergy development and of the associated environmental and socio-economic effects of relevance to food security. It is intended to help guide countries in excluding some options and helping understand the requirements for more detailed analysis on the options that are more environmental, technical and socioeconomically viable.

10. The BEFS RA is to be developed under the conceptual framework of the BEFS AF, which comprises the following areas of analysis:

- The **natural resource base**, i.e. the availability of land, water and residues for bioenergy production;
- The **techno-economic viability** of different feedstocks and processing technologies and the international competitiveness of the domestic sector;
- The **economy-wide effects of bioenergy development**, e.g. on economic growth and poverty reduction; and
- The effects of bioenergy development on household welfare, particularly that of poor households.

11. The BEFS RA covers the whole biofuel supply chain from feedstock production to processing plant gate, see Figure 2. It considers all bioenergy options including solid, liquid and gaseous biofuels and covers the following end-uses: rural electrification, transport and heating and cooking. Feedstock options investigated encompass all agricultural products including crops and residues, forestry and wood processing residues and livestock residues.

Figure 2: The Bioenergy and Food Security Rapid Appraisal: Components and Tools



12. Food security considerations were designed to be interwoven throughout the whole appraisal. Potential for bioenergy feedstock production is meant to be strictly in addition to food production, in order to mitigate competition with the latter. Options for employment and income generation along the biofuel supply chain are considered, with an emphasis on smallholder inclusion. For each of the issues above, the RA sought to comprise a practical set of tools to allow for a descriptive analysis that could be completed in around six months, following two months of scoping.

13. The development of a BEFS RA tool should enable the implementation of more bioenergy and food security analyses in developing countries, including in least developed countries facing major data, capacity and resource constraints, and where bioenergy developments are already taking place in a dearth of proper information and assessments.

14. In order to support the implementation of BEFS RA in interested countries, in line with the Project Document a number of facilitation mechanisms were put in place by the project, including:

- A roadmap (BEFS Implementation Manual) describing support options (and the related processes/steps) that countries can use in order to implement the analysis, and the required processes/steps;
- A help desk with focal points, established and maintained by the project in collaboration with relevant FAO offices/units, training of staff from FAO's regional and sub-regional offices on BEFS RA, establishment of a BEFS network among these offices and FAO headquarters.
- Liaising with relevant FAO country offices and at least three selected external resource partners to mobilize the resources required to implement the BEFS analysis in interested countries.

15. In addition, in order to ensure that as many policy makers as possible in developing countries are aware of the BEFS RA, and thus strive to apply it, awareness-raising events for

decision-makers from at least 10 countries will be organized at regional, sub-regional and national levels.

16. Under the project, the BEFS RA (including related training manuals and guidelines) is to be developed, tested in two pilot countries, and subsequently refined over a period of 24 months. Malawi and later the Philippines were selected for piloting and the full RA process, accompanied by coordination and dialogue with the relevant ministries, has occurred in the former so far.

17. The entire BEFS RA work will be developed against the backdrop of existing work addressing key socio-economic issues in the context of bioenergy development, such as: the recently adopted Voluntary Guidelines on Governance of Tenure of Land, Fisheries and Forests in the context of National Food Security; the Voluntary Guidelines to support the progressive realization of the right to adequate food in the context of national food security; the UN-Energy Decision Support Tool for Sustainable Bioenergy which among other things provides guidance on participatory approaches to ensure inclusive bioenergy development and the BEFSCI Operator Level Food Security Assessment tool that addresses both physical displacement and displacement of income/livelihoods and assets.

18. Furthermore, the tools developed under this project will seek to enhance the sustainability of other similar technical assistance projects particularly BEFS scoping activities initiated with funding from Technical Cooperation Programme (TCP) in Malawi, the Philippines and other countries.

19. The Impact or Development Goal of the project is that countries have developed policies, strategies and programmes on sustainable bioenergy development that safeguard food security and the environment. It is intended to be directly in line with the previous FAO Organizational Result F5 - Countries have strengthened capacities to address emerging environmental challenges, such as climate change and bioenergy.

20. The project Outcome is that countries apply the BEFS RA. The two Outputs of the project are the following:

i A tested Rapid BEFS Appraisal Tool is available.
ii Facilitation mechanisms to support implementation of the BEFS-RA are in place.

21. A roadmap (BEFS Implementation Manual) describing support options that countries can use will be produced and funding opportunities will be explored and secured as far as possible. In addition, awareness-raising will be carried out for FAO decentralized offices, partner organizations and decision-makers from at least 10 countries. Finally, a help desk for countries that are interested in the implementation of the BEFS-RA will be established at FAO headquarters.

22. The project has been managed at FAO Headquarters in the NRC Division, under an International Project Coordinator who is also the Budget Holder. A Technical Adviser provides technical support to the project in close collaboration with technical experts and stakeholders both at international and country level. The NRC Bioenergy Team Leader is to provide guidance as necessary. Additional technical support is to come from the two regular programme staff BEFS experts.

23. A number of experts and consultants was contracted for the project to contribute knowledge, experience and technical expertise. A Letter of Agreement with Università della

Tuscia has been developed to contribute to the development of the BEFS RA. In pilot countries, the FAO Representation was engaged to facilitate project implementation and dialogue with national authorities.

2 Purpose of the Evaluation

24. The Project Document for the initiative foresees a final evaluation prior to the completion of the project. The evaluation will be conducted to provide accountability to the donor and FAO. However, at the same time it will be tailored to address issues of interest to the project team, and to offer lessons for future efforts to promote the RA tool and for FAO's work on BEFS as a whole. This orientation requires an examination of the BEFS RA tool in the broader context of the BEFS approach.

25. The key issues that the evaluation will address, and which relate to and can be found under the evaluation criteria of relevance, effectiveness and sustainability in the section below, are the following:

- To what extent the BEFS RA methodology is a valuable and appropriate approach on the bioenergy-food security nexus, according to the global expert community. What is the likely quality of the RA data and its analysis compared to that which the AF provided? Do the results from application of the RA tool provide a sound preliminary indication for policy-makers, and what is the quality of the initial national roadmaps developed under related national projects? The evaluation will survey the views of the World Bank, Asian Development Bank, IEA, EU, UNECA, NEPAD, GBEP and other institutions in the expert community as well as project partners on this issue. An assessment of the tool is important considering that an FAO follow—up project will seek to expand awareness of it and build capacity of regional centers to provide implementation support on it.
- To what extent the pilot-country national government institutions are adopting or likely to adopt institutional, political, technical or financial follow-up measures to the use of the RA tool and their roadmaps developed. Are there preliminary lessons the evaluation can offer in terms of enhancing the uptake and promoting further BEFS analysis for policy-making in the future?
- As the follow-on project, "Capacity Development in the Use of the Bioenergy and Food Security Rapid Appraisal Tool" (GCP/GLO/511/GER) is planned to begin in early 2014 to enhance the general and technical knowledge of the BEFS RA tool for countries, potential funders and regional partners, what lessons might the project under study provide for awareness-raising and capacity building?

26. The intended stakeholders of the evaluation are:

- FAO engaged staff from the Natural Resources Department – Climate, Energy and Tenure Division (including project staff and management), Land and Water Division, Agriculture and Consumer Protection Department – Animal Production and Health Division, Economic and Social Development Department – Agricultural Development Economics and Gender, Equity and Rural Development Divisions, and the Technical Cooperation Department – the Policy Support Division working on climate change;
- The national partner institutions in the pilot countries, Malawi and the Philippines, mainly the members of the BEFS Working Group in Malawi and the National Biofuels Board and its Technical Working Group in the Philippines, and technical staff involved in the project;

- External partners who have collaborated on the development and implementation of the Project: Università della Tuscia, Conservation International, Energy Institute Hrvoje Požar;
- The donor, the Government of Germany.

3 Evaluation framework

3.1 Scope

27. The evaluation is intended to provide an assessment of implementation and achievements. It is understood that it may be difficult to make conclusions about the sustainability and impact of the project at this stage, because the main final output, a tested BEFS RA, is due only at the end of the project. It also lies in the very purpose of this project: in developing a new methodology or tool its impact and sustainability are not easy to evaluate.

28. The evaluation will cover the entire period of the project, including its preparation. It will involve a visit to Malawi, one of the countries in which the RA tool was piloted. Although the pilot in the Philippines has proceeded more successfully in the view of the project team, it began relatively recently, and for the additional reasons of budget and time the country will not be visited. In this regard, there is some limitation to the evaluation although the evaluation team will interview stakeholders in the Philippines via teleconference and those in FAO involved in supporting the project's activities there. The project appears to have learned from its experiences in Malawi, but as the pilot there has been the only experience that the project has had with full implementation a visit to that country would be important. The timing of the evaluation is planned for the months of February and March 2014.

3.2 Evaluation criteria

29. The project will be critically assessed through the internationally accepted evaluation criteria, i.e. relevance, efficiency, effectiveness, impact, and sustainability. In line with the new FAO project cycle, the evaluation will assess compliance with the following UN Common Country Programming Principles: Human Rights Based Approaches (HRBA)/ Right to Food/ Decent Work; Gender equality, Environmental sustainability, Capacity Development and Results Based Management.

3.3 Evaluation issues

I. Relevance of concept and design

a. The project's relevance to the following:
   - FAO's Global Goals and Strategic Objectives/Core Functions;
   - Other programmes/projects in the sector;
   - National strategic plans (agriculture, bioenergy, climate change, etc.) in the pilot countries, and the sector, institutional, political and economic contexts of the countries where the RA tool has been piloted and BEFS-related challenges there;
   - The methodologies and approaches on the bioenergy-food security nexus that the global expert community would find valuable and appropriate.

b. Robustness and realism of the approach underpinning the project;

c. Clarity, coherence and realism of the Logical Framework of the project and of its design, including:
   - The causal relationship between inputs, activities, outputs, expected outcomes (immediate objectives) and impact (development objectives);
   - Validity of indicators, assumptions and risks;

- Approach and methodology, especially the design of the RA tool, the project's notion in terms of how the tool is to be used, , and whether the global expert community on bioenergy and related issues views the tool as a sound approach;
- Resources (human and financial) and duration;
- Stakeholder and beneficiary identification and analysis;
- Institutional set-up and management arrangements;

II. Effectiveness of outputs and outcome

d. Overall effectiveness of the project, actual or potential, in attaining its objectives:

e. Description and analysis of the outputs produced, in terms of quantity, quality and timeliness. Key outputs for the evaluation team to assess are
   - the BEFS Rapid Appraisal set of tools and related manuals, and
   - Facilitation mechanisms to support the implementation of the BEFS Rapid Appraisal as there are: BEFS Implementation Manual, BEFS website/helpdesk, awareness raising activities.

f. Description and analysis of the outcomes achieved, expected and unexpected, their robustness and expectations for further uptake and diffusion. In particular, as stated in Section 2 above, the evaluation will examine the likely quality of the RA data and its analysis compared to that which the AF provided, whether the results from application of the RA tool provide a sound preliminary indication for policy-makers, and what the quality is of the initial national roadmaps developed under related national projects. The project outcome against which the evaluation shall assess achievement is the application of the BEFS RA in countries.

g. Use made by the project of FAO's normative and knowledge products and actual and potential contribution of the project to the normative and knowledge function of the Organization.

III. Efficiency and effectiveness of project implementation process

h. Assessment of project management:
   - Quality, realism and focus of work plans;
   - Assessment of delivery, causes and consequences of delays and of any remedial measure taken, if any;
   - Monitoring and feed-back loop into improved management and operations;
   - Staff management;
   - Development and implementation of an exit strategy;

i. Institutional Setup:
   - Administrative and technical support by FAO HQ, regional, sub-regional and country office, as appropriate;
   - Institutional set-up and internal review processes and coordination;
   - Inputs and support by the Government/s and resource partner/s.

j. Assessment of financial resources management, including:
   - Adequacy and realism of budget allocations to achieve intended results;
   - Adequacy and realism of Budget Revisions in matching implementation needs and project objectives;
   - Rate of delivery and budget balance at the time of the evaluation and in relation to work-plans.

IV. Analysis of the application of the UN common country programming principles and cross-cutting themes:

k. Analysis of gender mainstreaming for gender equality. This will include:
   - The extent to which potential existed for the BEFS RA tool to incorporate the gender dimension in its methodology;
   - extent to which gender equality considerations were taken into account in project implementation and management;

l. Analysis of the Capacity Development dimension in the design, implementation and results of the project, at individual, organizational and enabling environment levels. This will include CD on both technical and soft-skills, i.e. planning, budgeting, partnering and negotiating. Although national capacity building through testing of the tool was not an objective of the project, it would be useful to the donor and potential follow-up project for the evaluation to examine to what degree it took place in the pilot countries. Similarly, the establishment of BEFS Working Groups in the pilot countries was not an objective of the project, and these entities were created through other FAO projects (a TCP in the case of Malawi) or already existed (as in the Philippines). The evaluation will nevertheless contribute by assessing to what extent these institutions created an enabling institutional environment to support the tool's use and its results, and seek to provide lessons on the institutional environment needed for the use of the tool and its findings. The evaluation will also assess the training planned within FAO at the regional and sub-regional levels at the end of the project upon completion of the RA tool.

m. Analysis of the adoption of the Human-Rights Based Approach, namely:
   - the integration of the Right to Food dimension and principles, in the design, implementation and results of the project; and
   - the integration of decent rural employment concerns in the design, implementation and results of the project. It should be noted that the project is based implicitly on the notion that people have a right to food, and the tool and broader BEFS approach is help ensure that biofuels production does not adversely affect the production of or access to food.

n. Analysis of Partnerships and Alliances, namely:
   - how they were planned in the project design and developed through implementation;
   - their focus and strength; and their effect on project results and sustainability

o. While project evaluations normally examine how the environmental impacts were taken into consideration and addressed in the project, following the steps and criteria contained in the FAO Environmental Impact Assessment guidelines, in this case there were no environmental impacts foreseen from introduction of the tool. Instead, the RA tool will be assessed based among other criteria on whether it adequately considers the environment.

V. Impact

p. Overall impact of the project, actual or potential, positive and negative, produced directly or indirectly, intended or unintended; and

q. Overall contribution of the project to FAO Country Programming Frameworks, Organizational Result/s and Strategic Objectives, as well as to the implementation of the corporate Core Functions.

VI. Sustainability

r. The prospects for sustaining and up-scaling the project's results after the termination of the project. Specifically, as stated in Section 2 above, the evaluation will assess the extent to which the pilot-country national government institutions are adopting or likely to adopt institutional, political, technical or financial follow-up measures to the use of the RA tool and their roadmaps developed.

30. Based on the above analysis, the evaluation will draw specific conclusions and formulate recommendations for any necessary further action by Government, FAO and/or other parties to ensure sustainable development, including any need for follow-up or up-scaling action. The evaluation will draw attention to specific good practices and lessons to be learned as they are of interest to other similar, future activities. Specifically, as mentioned under Section 2, are there preliminary lessons the evaluation can offer in terms of enhancing the uptake and promoting further BEFS analysis for policy-making in the future? And, as the follow-on project, "Capacity Development in the Use of the Bioenergy and Food Security Rapid Appraisal Tool" (GCP/GLO/511/GER) is planned to begin in early 2014 to enhance the general and technical knowledge of the BEFS RA tool for countries, potential funders and regional partners, what lessons might the project under study provide for awareness-raising and capacity building? Any proposals for further assistance will include specification of major objectives and outputs and indicative inputs required.

4 Evaluation methodology

4.1 Approach and tools

31. The evaluation will adhere to the UNEG Norms & Standards.

32. The evaluation will adopt a consultative and transparent approach with internal and external stakeholders throughout the evaluation process. Triangulation of evidence and information gathered will underpin the validation of evidence collected and its analysis and will support conclusions and recommendations.

33. The evaluation will make use of the following tools: desk review of existing reports, publications and other documents; semi-structured interviews (or teleconferences) with key informants, stakeholders and participants in FAO HQ and partner organisations, supported by check lists, surveys and/or interview protocols and questionnaires with field staff in the pilot countries; direct observation during field visits; and the Strengths, Weaknesses, Opportunities and Threats (SWOT) framework for assessment of project results.

4.2 Stakeholders and consultation process

34. The evaluation team will discuss in detail with the key stakeholders of the project and will take into account their perspectives and opinions. Key stakeholders will include:

- Project Task Force members;
- Government representatives from the national partner organizations;
- The resource partner;
- FAO Representatives in the participating countries and the relevant staff in the regional and sub-regional offices; and
- Partner organizations involved in the design and implementation of the project.

35. The evaluation team will establish contact and maintain close liaison with: the FAO Office of Evaluation; the Project management and Core Team members at headquarters; stakeholders in the pilot countries; and all other key collaboration partners and stakeholders.

Although the evaluation team is free to discuss with the authorities concerned anything relevant to its assignment, it is not authorized to make any commitment on behalf of the pilot country Governments, the donor or FAO. The team will present its preliminary findings, conclusions and recommendations to the project stakeholders in the visited country/ies and insofar as possible, in the relevant FAO Decentralized Office and in HQ, to obtain their feedback at the end of the data-gathering phase.

36. The draft ToR will be circulated among key stakeholders for comments before finalisation; suggestions will be incorporated as deemed appropriate by OED. The draft evaluation report will also be circulated among key stakeholders for comments before finalisation; suggestions will be incorporated as deemed appropriate by the evaluation team.

5 Roles and responsibilities

37. FAO Budget Holder (BH), the Lead Technical Officer (LTO) and the Project Task Force (PTF) of the project to be evaluated are responsible for initiating the evaluation process, drafting the first version of the Terms of Reference, and supporting the evaluation team during its work. They are required to participate in meetings with the team, make available information and documentation as necessary, and comment on the draft final terms of reference and report. Involvement of different members of the project Task Force will depend on respective roles and participation in the project.

38. The BH is also responsible for leading and coordinating the preparation of the FAO Management Response and the Follow-up Report to the evaluation, fully supported in this task by the LTO and PTF. OED guidelines for the Management Response and the Follow-up Report provide necessary details on this process.

39. FAO Office of Evaluation assists the BH and LTO in drafting the ToR, in the identification of the consultants and in the organization of the team's work; it is responsible for the finalization of the ToR and of the team composition; it shall brief the evaluation team on the evaluation methodology and process and will review the final draft report for Quality Assurance purposes in terms of presentation, compliance with the ToR and timely delivery, quality, clarity and soundness of evidence provided and of the analysis supporting conclusions and recommendations.

40. The Office of Evaluation has also a responsibility in following up with the BH for the timely preparation of the Management Response and the Follow-up to the MR.

41. The Evaluation Team is responsible for conducting the evaluation, applying the methodology as appropriate and for producing the evaluation report. All team members, including the Team Leader, will participate in briefing and debriefing meetings, discussions, field visits, and will contribute to the evaluation with written inputs for the final draft and final report.

42. The Team Leader guides and coordinates the team members in their specific work, discusses their findings, conclusions and recommendations and prepares the final draft and the final report, consolidating the inputs from the team members with his/her own.

43. The Evaluation team will be free to expand the scope, criteria, questions and issues listed above, as well as develop its own evaluation tools and framework, within time and resources available.

44. The mission is fully responsible for its report which may not reflect the views of the Government or of FAO. An evaluation report is not subject to technical clearance by FAO although OED is responsible for Quality Assurance of all evaluation reports.

45. As a contribution to the OED Knowledge Management System:

- the Team Leader will be responsible for completing the OED quantitative project performance questionnaire, to be delivered at the same time with the final evaluation report;
- OED will ask all team members to complete an anonymous and confidential questionnaire to get their feedback on the evaluation process.

6 Evaluation team

46. Mission members will have had no previous direct involvement in the formulation, implementation or backstopping of the project. All will sign the Declaration of Interest form of the FAO Office of Evaluation.

47. The evaluation team will comprise the best available mix of skills that are required to assess the project, and as a whole, will have expertise in all the following subject matters

48. The evaluation team will consist of two members. The team shall have solid academic, practical and organizational background so that the combined skills of the team mentioned below are covered:

- Bioenergy, Food Security and Sustainability issues;
- Technical knowledge of natural resources assessment, techno-economic and socio-economic analysis of bioenergy production;
- Capacity development and communication knowledge;
- Sensitivity to and experience in assessing cross-cutting issues;
- Conduct of evaluations.

49. Team members will have had no previous direct involvement in the formulation, implementation or backstopping of the project. All will sign the Declaration of Interest form of the FAO Office of Evaluation.

50. Furthermore, to the extent possible, the team will be balanced in terms of geographical and gender representation to ensure diversity and complementarity of perspectives.

7 Evaluation deliverables

51. The evaluation report will illustrate the evidence found that responds to the evaluation issues, questions and criteria listed in the ToR. It will include an executive summary. Supporting data and analysis should be annexed to the report when considered important to complement the main report.

52. The recommendations will be addressed to the different stakeholders and prioritized: they will be evidence-based, relevant, focused, clearly formulated and actionable.

53. The evaluation team will agree on the outline of the report early in the evaluation process, based on the template provided in Annex I of this ToR. The report will be prepared in English, with numbered paragraphs, following OED template for report writing. Translations in other languages of the Organization, if required, will be FAO's responsibility.

54. The team bears responsibility for submitting the final draft report to FAO's Office of Evaluation (OED) within two weeks from the conclusion of the mission. Within (time-span to be decided on a case by case basis) additional weeks, FAO will submit to the team its comments and suggestions that the team will include as appropriate in the final report within maximum two weeks.

55. Annexes to the evaluation report will include, though not limited to, the following as relevant:

- Terms of reference for the evaluation;
- Profile of team members;
- List of documents reviewed;
- List of institutions and stakeholders interviewed by the evaluation team;
- List of project outputs;
- Evaluation tools.

8 Evaluation tentative timetable

56. The evaluation is expected to take place primarily during February and March 2014. However, given the closure of the project in April and the need to allocate time for the Management Response, some interviews with external stakeholders may be conducted in December once the team has been recruited. This will help ensure the timely delivery of the final evaluation report. The timetable below shows a tentative programme of travel and work for the evaluation team. It will be finalised upon the recruitment of the evaluation team.

Activity	**Date**	**Duration**	**Responsibility**
TOR finalization	December 2013	3 weeks	PTF and OED
Background preparation of evaluation team (ET)	January 8 2014	2 days	ET, with PTF support
TL Travel to Rome	February 2	1 day	ET
Mission in Rome-HQ: interviews with project team, other HQ staff, partners, stakeholders	February 3	5 days	ET, with PTF support
Team Member mission to Malawi	February 9	6 days	ET
Preparation and delivery of debriefing on preliminary findings and recommendations	February 18	1 day	ET
Draft evaluation report sent to OED for quality assurance	February 24	10 days (from Feb. 10)	ET
Review and circulation of draft report to project team, and to stakeholders (TBC)	March 3	5 days	OED
Project team and stakeholder comments provided on draft report	March 14	2 weeks	PTF and stakeholders
Production of final report	March 17	1 day	ET
OED circulation of final report and Management Response request to BH	March 28	2 weeks	OED

Annex 2 Brief profile of evaluation team members

Siwa Msangi is a Senior Research Fellow within the Environment and Production Technology Division and leads IFPRI's research theme on Global Food and Natural Resources. His work focuses on the major socio-economic and bio-physical drivers affecting agricultural production and trade, and their impacts on nutrition, poverty and the environment. Siwa manages a research portfolio that includes the economic and environmental dimensions of sustainable intensification of agriculture, aquaculture and livestock, biofuels and the bioeconomy, climate change impacts on agriculture and climate adaptation, as well as resource management of surface and groundwater.

Francesca Farioli is Senior Researcher and Coordinator of the Unit "Energy, Environment and Development" at CIRPS-Interuniversity Research Centre for Sustainable Development, Sapienza University of Rome, where she teaches classes on Energy and MDGs at the Master on "Development and Project Design". She serves on the board of the International Conferences on Sustainability Science and is founding member of the International Society for Sustainability Science. She is Director of the Italian Association for Sustainability Science, and conducts research in several African countries on bioenergy for sustainable development, sustainability assessment, and policy implications. Her approach aims to bridge research, practice and policy. She formed part of experts at FAO for development of indicators and good practices for the Global Bioenergy Partnership initiative (GBEP) and the Bioenergy and Food Security Criteria and Indicators (BEFSCI) Project. Dr. Farioli is the coordinator of several national and EU research and capacity building projects focused on energy for sustainable development, climate change and mitigation, and sustainability assessment methods and tools.

Annex 3 List of documents reviewed

1) Pro Doc Bioenergy and Food Security Rapid Appraisal Project ("BEFS Rapid Appraisal") GCP(GLO/357/GER
2) Project Progress Reports (4 Reports)
3) Terminal Report (draft version)
4) BEFS Rapid Appraisal Peer Review), FAO HQ, Rome, 13 February 2014. Peer Review Feedback and comments
5) Report on the BEFS Rapid Appraisal Tool Piloting 9th-12th July 2013, Lilongwe, Malawi
6) **FAO**, 2014. FAO's Bioenergy and Food Security (BEFS) Approach – Implementation Guide. Rome, Italy, Food and Agriculture Organization of the United Nations
7) **FAO**. 2014. Tenure Related Issues in Bioenergy Development – Short Guidance. Rome, Italy, Food and Agriculture Organization of the United Nations
8) BEFS Rapid Appraisal Training and Pilot Testing in Malawi (Lilongwe, 9 – 16 July 2013) Training assessment sheet responses
9) The BEFS RA training in the Philippines Evaluation sheets results
10) Presentations made by BEFS team at the pilot training in Philippines (Manila 20-25 January 2014)
11) Presentation made by Ruby de Guzman to NBB, "BEFS Rapid Appraisal Training and Pilot Testing- Rural Electrification: SVO and Gasification" Manila 25 January 2014
12) Presentation made by Rosemary Gumera to NBB, "BEFS Rapid Appraisal Training and Pilot Testing Techno-economic and Socio-economic Analyses: Transport tool", Manila 25 January 2014
13) Presentation made at NBB meeting by Rex Demafelis and Matthew Leete, "BEFS in ASEAN +3 Philippines Pilot Country Activities &Final Roadmap Recommendations", February 2014
14) BEFS Rapid Appraisal Excel tools and user manuals
15) Republic of the Philippines Department of Energy.CIRCULAR No. DC2011-12-0013 UTILIZATION OF LOCALLY-PRODUCED BIOETHANOL IN THE PRODUCTION OF E-GASOLINE CONSISTENT WITH THE BIOFUELS ACT OF 2006
16) Republic of the Philippines Department of Energy. Mandatory use of biofuel blend
17) National Biofuels Plan 2013-2030

Annex 4 List of institutions and stakeholders met during the evaluation process;

Here following is a list of persons (and their affiliated institutions and contacts) that were met and interviewed during the evaluation process:

1. Jeremy Woods, Imperial College, Jeremy.woods@imperial.ac.uk
2. Klas Sander, World Bank, ksander@worldbank.org +1 202 458 5710
3. James Thurlow, IFPRI J.Thurlow@cgiar.org
4. Michael Brüntrup, German Institute for Development Policy, Michael.Bruentrup@die-gdi.de +49 228 94927-164
5. Giacomo Branca, Università della Tuscia , branca@unitus.it
6. Henry Garcia, Ministerio de Minas y Energia del Peru, hgarciabustamante@hotmail.com hgarcia@minam.gob.pe
7. Harinder Makkar, FAO-AGAS, harinder.makkar@fao.org
8. Walter Kollert, FAO-FOM, walter.kollert@fao.org
9. Renato Cumani, FAO-NRL, renato.cumani@fao.org
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12. Olivier Dubois, FAO-NRC, Olivier.dubois@fao.org
13. Matthew Leete, FAO Reg. Off. Asia and Pacific matthew.leete@fao.org
14. Gertrude Kambauwa, Ministry of Agriculture and Food Security (Malawi), gkambauwa@gmail.com
15. Adwell Zembele, Ministry of Economic Planning and Development, zembeleadwell@gmail.com
16. Prof. Rex Demafelis, University of the Philippines Los Banos, National BEFS consultant, rbdema@yahoo.com
17. Rosemary Gumera, Sugar Regulatory Administration, Manager III Planning and Policy Department (Philippines), marujazz@gmail.com ppd_mgr@sra.gov.ph
18. Ruby de Guzman, Department of Energy, Chief Renewable Energy Management Bureau (Philippines), rubydguzman@yahoo.com rguzman@doe.gov.ph
19. Celia Raquepo, Philippine Coconut Authority , Senior Science Research Specialist, TWG member
20. Alvin Lim, Department of Energy, Division of Oil Industry and Monitoring, Chief , TWG member ,
21. MA. Regina Bautista-Martin, Administrator, Sugar Regulatory Administration (Philippines), srachief10@yahoo.com
22. Jose Rojo Alisla, Chief of Staff of Administrator Martin, Sugar Regulatory Administration (Philippines),
23. Loreto Carasi Philippine Council for Industry, Energy and Emerging Technology Research & Development (PCIEERD.DOST)- Eng., TWG member

24. Judith Ann Mae M. Luna, Philippine Agriculture Development and Commercial Corporation, TWG member
25. Mario Pocholo M. Orense, Dept of Trade & Industry, Resource-Based Industries Dept, Investment Specilialist, TWG member
26. Alex Galicia, Sugar Regulatory Administrationm Project Evaluation & Monitoring Officer
27. Rajendra Aryal, FAO Representative in the Philippines
28. Aristeo A. Portugal, Assistant FAO Representative (Programme) Manila
29. Joy L. Masongsong, FAO Programme Assistant, Manila
30. Joy Clancy, University of Twente, j.s.clancy@utwente.nl
31. Dianna Gillespie, Abt Associates, Dianna_Gillespie@abtassoc.com

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37. Erika Felix, Erika.Felix@fao.org
38. Heiner Thofern, Heiner.Thofern@fao.org

Annex 5 List of project outputs

1. **FAO**, 2014. FAO's Bioenergy and Food Security (BEFS) Approach – Implementation Guide. Rome, Italy, Food and Agriculture Organization of the United Nations.
   FAO, 2014. L'Approche Bioénergie et Sécurité Alimentaire (BEFS) de la FAO – Guide de mise en œuvre. Rome, Italy, Food and Agriculture Organization of the United Nations.
   FAO, 2014. Planteamiento sobre Bioenergía y Seguridad Alimentaria (BEFS) de la FAO – Guía de Implementación. Rome, Italy, Food and Agriculture Organization of the United Nations.
2. FAO's BEFS Approach – At a glance (8-pager) L'Approche BEFS de la FAO – D'un coup d'oeil (8-pager) El Planteamiento BEFS de la FAO – En breve (8-pager)
3. BEFS Rapid Appraisal Excel tools and user manuals

   - Introduction
   - Country Status
   - Crop Production
   - Crop Budget
   - Woodfuel Harvesting and Wood Residues
   - Woodfuel Plantation Budget
   - Charcoal
   - Briquettes
   - Biogas
   - Gasification
   - Straight Vegetable Oil
   - Combustion
   - Transport

   available at http://www.fao.org/energy/befs/rapid-appraisal/en/

   Also available in French and Spanish.
4. **FAO.** 2014. Tenure Related Issues in Bioenergy Development – Short Guidance. Rome, Italy, Food and Agriculture Organization of the United Nations.
5. **FAO.** 2014. Questions foncières dans le développement de la bioénergie – Bref guide. Rome, Italia, Food and Agriculture Organization of the United Nations
6. **FAO.** 2014. Cuestiones de tenencia en el desarrollo de bioenergía – Guía breve. Rome, Italy, Food and Agriculture Organization of the United Nations.
7. BEFS RA pilot testing and training in Lilongwe, Malawi, June 2013
8. BEFS RA pilot testing and training in Quezon City, the Philippines, January 2014