



International Center for Agricultural Research in the Dry Areas
(ICARDA)

Center Commissioned External Review of
ICARDA's Capacity Development Function

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A. EXECUTIVE SUMMARY

Changing Agricultural Research in a Changing World

There is considerable change in the environment within which ICARDA operates. At the *macro-level* we see climate change, the world economic crisis, and political change within the region. At the *micro-level* there are changes in funding and resource availability.

Challenges (or Threats)

This presents many challenges to ICARDA, including reduced core funding; the trend to Collaborative Research Projects with diverse stakeholders to relate to, and the added complexity brought by proposed (and necessary) expansion. There is also the threat of competition from capacity development functions elsewhere as well as the current scarcity of qualified young agricultural scientists.

Opportunities

Change can also offer opportunities. There has been a renewed international interest in Food Security. The changes in funding have created (and have been designed to create) increased potential for partnerships and collaboration, and with that, exposure to alternative (sometimes improved) practices. There are also potential efficiency gains, including opportunities for selective outsourcing, in-sourcing, and capacity-sharing.

Analysis

The CCER panel has carried out a Strengths-Weaknesses-Opportunities-Threats (SWOT) Analysis of ICARDA's Capacity Development Function (Figure 1 in the report, below). The SWOT analysis also highlights perceived *Weaknesses*, as well as addressing some of the *Challenges / Threats* and *Opportunities* referred-to above.

Capacity Development in ICARDA

Within ICARDA the capacity development function is not simply an issue for the Capacity Development Unit (CDU). The main engine of ICARDA's capacity development is its research programs and units and their scientists, who themselves deliver training. The NARS are major stakeholders. CDU's role should be integrative, coordinating, cross-cutting and facilitative.

Vision for the Capacity Development Function in ICARDA: Management and Leadership

To recall the words of Peter Drucker¹, 'Management is about doing things right; Leadership is doing the right things' (there is a difference!)

Doing the right things

It is clear to the CCER Panel that ICARDA's research is very much aligned to the needs of its beneficiaries. There are, of course, emerging areas of research that may need to be considered, and these are mentioned from time to time, but the scientific focus of ICARDA's work is fundamentally sound. However, in terms of exploiting this excellent research to meet the ultimate objectives (of *poverty reduction*; improving *food security, nutrition and health*; and *sustaining natural resources*) ICARDA needs to respond to the changes, meet the challenges, and exploit the opportunities referred to above. This, in turn, means that

¹ Peter F. Drucker, 1909 – 2005, Austrian-born management consultant and writer.

ICARDA must, in terms of its Capacity Development (CD) function, adopt new orientations, neatly summarised in the three CGIAR core principles - *impact, integration and partnerships*. Some, though not all, of the detail of how to do this, can be found in the *Recommendations* of the current report. The CCER panel hopes that the majority of these will inform ICARDA's forthcoming CD strategy.

Doing things right

Similarly, it is clear to us that ICARDA can be very satisfied in the quality of its research. It does this well. However, as the *Capacity Development Value Chain* (Annex 15) shows, there is a further requirement to deliver the products of excellent research to the ultimate beneficiaries. This is the crux of capacity development. Once ICARDA's CD strategy has been set, it must be effectively implemented. There are a number of contributors to this: *management, programmes and units, National Agricultural Research Systems* (NARS) and other partners, and support units within ICARDA, particularly the *Capacity Development Unit* (CDU). We found some localised views of the CDU as simply a logistics function. This is wrong, wasteful, and clearly not the purpose for which the CDU was created. There are many activities and functions that contribute to CD within ICARDA, and a number of contributors with responsibility for its success. With this in mind, the CD Collaboration Matrix (Annex 16) is a first attempt by the CCER Panel to articulate responsibilities across the whole of ICARDA's CD function. We recommend that this should be used as a basis for a more thorough reallocation of those responsibilities.

Recommendations

There follows, as part of this Executive Summary 28 recommendations that the CCER Panel would like to make. The same 28 Recommendations are presented in tabular format as Annex 18 of this report.

Resources

Supporting the rethinking of CD within ICARDA may require additional or diverted resources. The panel believes that any such resource input will pay dividends in terms of a more efficient and effective capacity development function at ICARDA.

HEADLINE RECOMMENDATIONS

1. Strategic – ‘Doing the right things’

1.1 Envisioning Capacity Development at ICARDA

Recommendation 1: Identify, prioritize from, and nurture ICARDA’s comparative advantages. The CCER panel has identified these in the *Strengths* quadrant of the *SWOT Analysis* in Figure 1, below. These should be maintained and should play a part in the prioritization of target activities in ICARDA’s CD strategy. (See Part 5.1 of Main Report)

Timescale: Immediate and continuing

Recommendation 2: Engage fully and strategically with CGIAR’s Capacity Development Platform. Thus benefitting from best practice in the international R&D community and enabling the more efficient use of assets through partnership working with other capacity development provision throughout CGIAR. (See Part 4.4 of Main Report)

Timescale: Medium Term and continuing

Recommendation 3: Produce a new Capacity Development Strategy for ICARDA using this CCER report as a source. This should be led by the Head of CDU working with ADG for ICC, DDG for Research and the Capacity Development Committee. (See Part 7.1 of Main Report)

Timescale: Short Term

1.2 Changing the perception of the role of the CDU

Recommendation 4: Restructure CDU to include a proposed new role as a Virtual Academy. The Virtual Academy would exploit ICT possibilities to reflect and underpin the role of the CGIAR Capacity Development Platform (See Part 7.2 of Main Report).

Timescale: *Timescale: Medium Term*

Recommendation 5: Re-emphasise CDU’s developmental and integrative (rather than just logistics) role through the better utilization of staff time and the restructuring of CDU as shown in Fig. 4, p.31). Identify and integrate all CD functions within ICARDA, define processes and the cross functional responsibilities. Use the *CD Collaboration Matrix* (Annex 16) as a basis to articulate, and where necessary, redefine responsibilities across the whole of ICARDA’s CD function. (See Parts 5.8, 6.1, and 7.1 of Main Report).

Timescale: Immediate

Recommendation 6: Rationalize CDU’s existing logistics role by removing inappropriate aspects (such as dealing with accommodation) and maintain and improve the remaining, appropriate, aspects of the logistics role (such as ensuring timely communication between NARS, trainees, and trainers. (See the CD Collaboration Matrix (Annex 16) and Parts 5.8, 6.1, and 7.1 of Main Report, as above).

Timescale: Short Term

1.3 Supporting the future role of the CDU

Recommendation 7: Recognize the crucial role of CDU in driving the new capacity development strategy of ICARDA and the support this role with resources. See the CD Collaboration Matrix (Annex 16) and Parts 5.8, 6.1, and 7.1 of Main Report, as above).

Timescale: Immediate

Recommendation 8: Support CDU with time and resources to engage with other CD functions in the CGIAR within the Capacity Development Platform and discuss these with ICARDA training providers (Programmes and Units) through the medium of the Capacity Development Committee (See Part 6.4 of Main Report).

Timescale: Short term

Recommendation 9: Extend the range and depth of cooperation with ARIs within and outside the Region by CDU-led engagement working through the NARS. Recent examples include Needs Surveys and specific visits to Country Centers (See Part 6.5 of Main Report).

Timescale: Immediate and continuing

2. Operational: 'Doing Things Right'

2.1 Structure and Policy Issues

Recommendation 10: Develop a Quality Management Manual for the capacity development Function throughout ICARDA. The likely main components of such a system are shown in Annex 17 for the use and development in further ICARDA strategy (See also Part 5.8 and 6.1 of the Main Report).

Timescale: Short Term

Recommendation 11: Involve CDU in developing bids for new projects and in Project Inception Workshops (See Part 6.2 of Main Report).

Timescale: Immediate

Recommendation 12: Create full-time Program Training Coordinator roles within each ICARDA Research Program/Unit as communication between ICARDA's various CD functions is a crucial factor in its success. In particular, holders of this role should be specifically tasked with liaison between research-led training and the CDU (See Part 5.1 of Main Report).

Timescale: Short Term

Recommendation 13: Extend the range and depth of cooperation with Donor Organisations. Efforts expended in meeting and understanding the aspirations of donors as well as providing them with good evidence of impact, are likely to be very valuable (See Part 6.6 of the Main Report).

Timescale: Medium Term and continuing

2.2 Operational and Support Issues

Recommendation 14: Adopt and support a software system for training data management (a 'database') This will involve three stages: the investigation of options; design (possibly by a consultant) and recruitment to a technical post (with database skills) within CDU (See Part 5.1 of Main Report).

Timescale: Short Term

Recommendation 15: Appoint to a new senior post to support the management of 'ICARDA HQ Operations'. The current Head of CDU should continue to hold responsibility for and provide leadership to CDU in its role in coordinating and facilitating CD activities within ICARDA. However the panel feels that support is needed to free time for the envisioned increased CDU role (See Part 7.2 of Main Report).

Timescale: Short Term

Recommendation 16: Adopt Training Needs Assessment and Training Impact Assessment processes, as well as the regular review of the production of the Annual Training Plan (See Parts 4.3.1 and 4.5 of the Main Report).

Timescale: Short Term

Recommendation 17: Maintain contact with ICARDA trainees ('alumni') and trace and track their continued development. This initiative requires the cooperation of ICARDA researchers (personal contacts), Regional Coordinators and NARS, but should be led-out by CDU and maintained using the proposed database (See Part 5.4.1 of the Main Report).

Timescale: Short Term

Recommendation 18: Review the way that the CD function and CDU activities and resources are funding from the funding streams available to ICARDA. Core funding appears to be insufficient for ambitious investments and possibilities of 'top-slicing' of restricted projects to support capacity development should be examined. (See Part 7.1 of the Main Report).

Timescale: Medium Term

Recommendation 19: Create, populate and maintain an accessible web-based 'Knowledge Bank' within ICARDA and establish a Knowledge Management culture in ICARDA. This would require CDU, CODIS and IT to cooperate to take the initiative (See Part 5.7 of the Main Report).

Timescale: Medium Term

2.3 Training Delivery Improvement

Recommendation 20: Improve understanding of the needs for training through Needs Assessment Surveys and Visits, and through NARS Regional and National meetings (See Part 4.3.1 of the Main Report).

Timescale: Short Term

Recommendation 21: Adopt appropriate and transparent trainee selection criteria and communicate and implement these. This would involve the CDU, through the Capacity Development Committee in relating criteria to intended learning outcomes, and then specifying and monitoring both technical and linguistic trainee requirements (See Part 5.2.1 of the Main Report).

Timescale: Immediate

Recommendation 22: Develop, through the Capacity Development Committee (with support from HR and Finance) a coherent and consistent policy of trainee support (stipends, per diems, housing and other benefits) and revised trainee contract (See Part 5.2.2 of the Main Report).

Timescale: Short Term

Recommendation 23: Investigate and invest in E-learning and other modes, for greater efficiency of delivery (See Part 5.4.1 of the Main Report).

Timescale: Short Term

Recommendation 24: Review potential for outsourcing training to NARS, ARIs and other CD functions within CGIAR (See Part 5.1 and 5.4.1 of the Main Report).

Timescale: Medium Term

Recommendation 25: Standardize training materials and evaluate regularly for content and quality. These to include comprehensive and consistent course documentation e.g. curricula, descriptions, intended learning outcomes, and content (See Part 5.3 of Main Report).

Timescale: Short Term and continuing

Recommendation 26: Implement trainee performance evaluation on all ICARDA training courses. This appears to be inconsistent and possibly could be more rigorous. Current thinking is to differentiate between a trainee having *attended*, *completed* and *successfully completed* a training course (See Part 5.2.4 of the Main Report).

Timescale: Immediate

Recommendation 27: Implement a system of evaluation, appraisal and development of trainers, using standard trainer evaluation forms and occasional peer assessment of trainers. The results of both should be referred to during appraisal, and needs for enhancement (e.g. presentation skills training) could be assessed (See Part 5.4.3 of the Main Report).

Timescale: Short Term

Recommendation 28: Review modality of courses and ensure proper planning of logistics and capacity. Some evidence on changing requirements on modalities was gathered from the CCER Country Visits (see Annexes 8-12) and more systematic data gathering has been instigated by CDU (see questions 4 to 7 of Annex 13: NARS Training Needs Assessment Survey). The NARS responses to these questions will form a sound basis for review.

Timescale: Short term

Figure 1: SWOT Analysis of ICARDA's Capacity Development Function

<p>Strengths:</p> <ul style="list-style-type: none"> - Excellence in research - This translated into strong reputation for Scientific Excellence - Quality of Training - Individualization of Coaching - Geographical Location - Long history of experience, and of satisfied trainees (many of whom are now leading figures in their own right) - Excellent Facilities - Strong Networks with outreach offices and NARS , ARIs etc. - Strong new leadership - Access to external expertise 	<p>Weaknesses:</p> <ul style="list-style-type: none"> - No leadership for 5 last years - CD function is fragmented - Relatively underfunded - Weak data base - CD Coordination / cooperation across ICARDA units - No quality control established yet for trainees or trainers, including training materials - No follow-up established yet with trainees (Alumni) - Renewal and insecurity of contracts
<p>Opportunities</p> <ul style="list-style-type: none"> - Agriculture and especially Food Security again a major issue - ICARDA can show that / where it adds value along the value chain - Cooperation and Synergies promising - Technical Innovation a great opportunity - USPs include networks, extension abilities and on the job training - Options are: new employees, reshuffling ownerships, outsourcing, intelligent use of synergies - Using reputation to empower national partners thus attracting national sponsors - Results-driven performance measurement & management 	<p>Threats:</p> <ul style="list-style-type: none"> - Climate change - World economic crisis - Political change within the region - Competition with other providers of research and training - Timescales, deadlines, work pressure - Reduced core funding: 70 to 30 % - Move to larger projects with more stakeholders (CRPs) - Diversity of regions served and diversity of their needs - Acceleration of Food problems worldwide, especially for the rural poor - Shortage of young scientists in agriculture

B FULL REPORT

Part 1: Introduction

ICARDA, the International Center for Agricultural Research in the Dry Areas, is a not-for-profit organisation specialising in agricultural research and training, with a particular focus on dry-area developing countries. The Center is one of 15 members of the worldwide Consultative Group on International Agricultural Research (CGIAR), representing donors and researchers, whose mission is to 'alleviate poverty and hunger and achieve food security in developing countries'. ICARDA's own mission is *'To contribute to the improvement of livelihoods of the resource-poor in dry areas by enhancing food security and alleviating poverty through research and partnerships to achieve sustainable increases in agricultural productivity and income, while ensuring the efficient and more equitable use and conservation of natural resources'*.

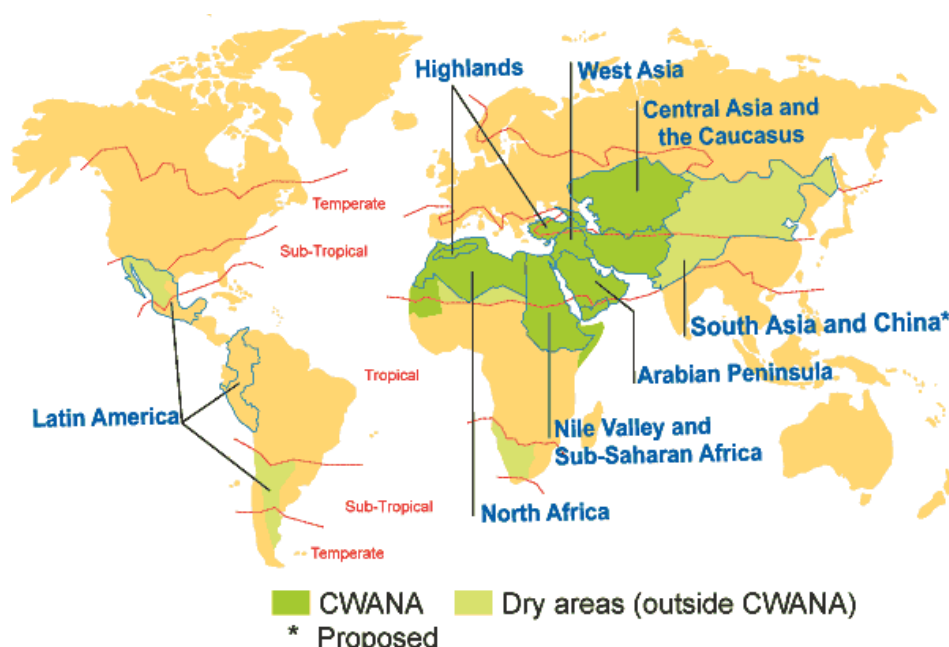


Figure 2: ICARDA's geographical scope of engagement²

ICARDA has a global mandate for the improvement of barley, lentil and faba beans; a dry-area climatic focus on water-use efficiency, rangeland and small ruminant production, and a regional focus on improving production of bread wheat, durum wheat, and chickpeas in Central and West Asia and North Africa. It also works on improved land management, diversification of production systems and value-added crop and livestock products. Social, economic and policy research is an integral component of ICARDA's research to better target poverty and to enhance the uptake and maximize impact of the research outputs³. The aim is to achieve results in two ways: firstly, through improvements in productivity and sustainability; and secondly, by capacity-building through knowledge transfer.

² Source: www.icarda.cgiar.org

³ Source: ICARDA Strategic Plan

1.1 ICARDA's capacity development function in context

Capacity development is at the heart of ICARDA's mission. It is of crucial importance that the results of research are transferred through proper knowledge and technology transfer means, to the national and regional research institutions, and ultimately, by extension, to the end beneficiaries: farmers, producers, and the populations they serve. This is done through the range of training programs that the Center provides, and supported by ICARDA's workshops, seminars, publications and technical services. *Figure 2* shows how each ICARDA function and level is involved with capacity development function of ICARDA. CDU is only one element of this integrated collaborative system of capacity development and in order to achieve success in this role the whole system needs to collaborate effectively.

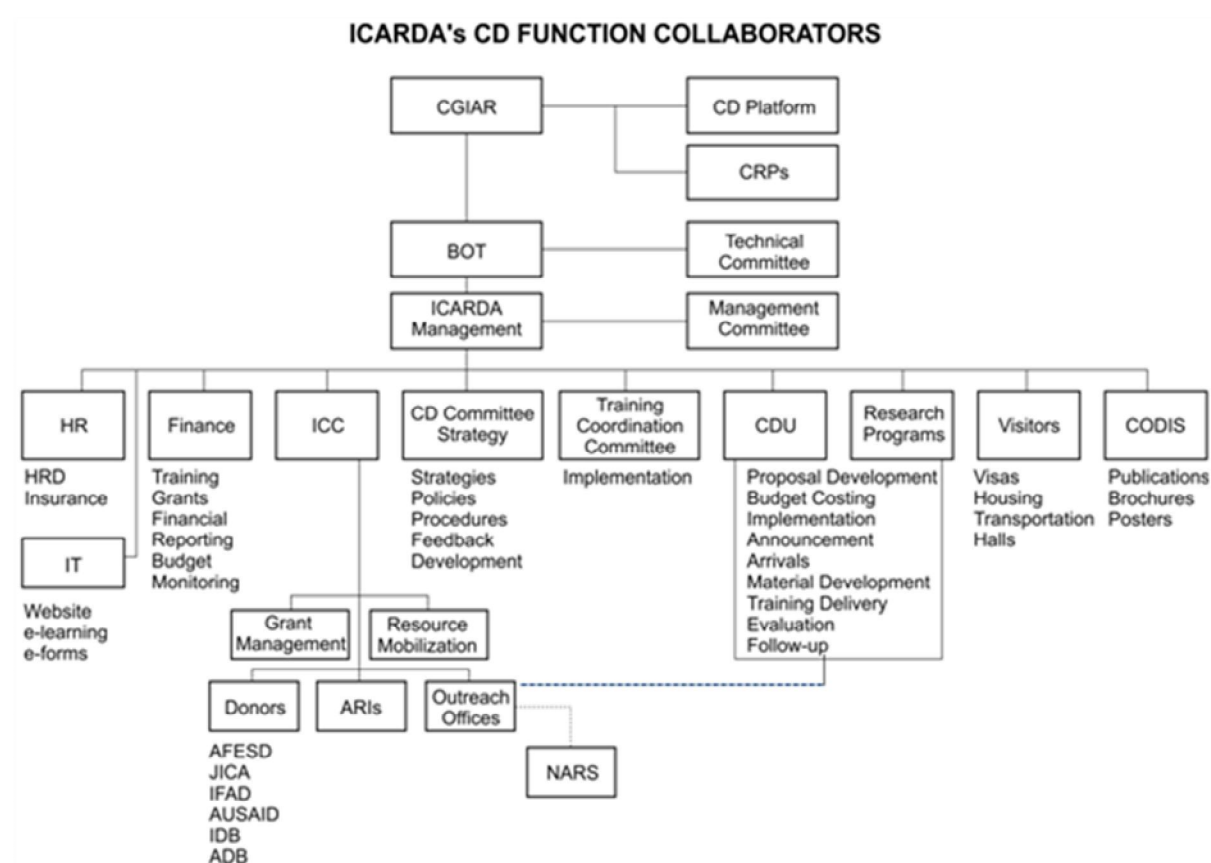


Figure 3: Collaborators in the CD Function in ICARDA

Since 1978, ICARDA has provided training opportunities to over 17,000 individuals from more than 100 countries⁴. The levels of training range from Research and Senior Fellowships, Graduate Training (MSc or PhD in collaboration with a partner university), Non-Degree Individual and Group Training, and Internships and hosting of beneficiaries of Young Scientist schemes. Group Training can be in the form of *long-term* (4-18 weeks) or *short-term* (1-3 weeks) intensive courses, and are delivered at ICARDA's headquarters or other sites (e.g. 'in-country') and including short-term courses that are specifically organized within collaborative projects and are focused on enhancing the capacity of project partners in specific areas related to the project goals. Course content covers the entirety of ICARDA's research agenda, and includes: crop improvement, *ex-situ* and *in-situ* conservation of

⁴ Source: www.icarda.cgiar.org

biodiversity, genebank management, biotechnology & genetic engineering, plant pathology and disease surveillance, entomology and integrated pest management, integrated water management, sustainable agricultural production systems, conservation agriculture, GIS/RS and spatial analysis, scientific writing and presentation, seed certification & production, plant variety protection, socio-economics, IPM, crop/livestock integrated production systems, small ruminants management and nutrition, rangeland management, conservation agriculture, adoption and impact assessment, drought management, gender studies and research methods.

Part 2: Composition and Terms of Reference of the Panel

The CCER panel comprised:

- Professor Dr. Abderrazak Daaloul
- Professor Dr. Michael von Gagern
- Professor Dr. David Greenwood (Panel Chair)

Terms of Reference were provided to guide the panel's review activities and these were drafted under four headings, namely: *Strategic Aspects*, *Technical and Procedural Aspects*, *Coordination and Partnership*, and *Resources and Management*.

A full copy of the CCER Terms of Reference, CCER Schedule of Activities and CCER Panel Members' Details can be seen in *Annexes 1-3: Details of the Center-commissioned External Review (CCER)* comprising:

- *Annex 1: CCER Terms of Reference,*
- *Annex 2: CCER Schedule of activities, and*
- *Annex 3: CCER Panel Members' Details.*

Part 3: Data collection for the CCER

3.1 Methodology

The methodological approach adopted for this review comprised three broad elements, namely:

- Documentary information
- Interviews at ICARDA HQ
- Country Visits

3.2 Documentary information

The panel members were in receipt of documentary information (including reports and other publications such as charts, plans and web-based materials (these are detailed below and in Annex 4: *Documentation made available to the Review Panel*).

3.3 Interviews at ICARDA HQ

Interviews and observations were made by panel members at ICARDA Headquarters. Interviews were carried out with ICARDA management, programme directors and unit heads, research scientists and trainers, members of the capacity development unit, and current and past trainees of ICARDA's programmes (these are detailed below, in 3.3 *Interviews at ICARDA HQ*, in Annex 5: *Interviews at ICARDA Headquarters*, and in Annex 7: *Analysis of ICARDA interviews: a thematic matrix*.

3.4 Country Visits

Materials and information were accessed by panel members during pre-arranged 'Country Visits' to Regional Offices in North Africa, Nile Valley, West and Central Asia (these are detailed in Annex 6: *Interviews during Country Visits*). Questions contained within the Terms of Reference of the CCER were circulated ahead of the country visits by the Head of CDU. An example response to TOR questions from the Ethiopian NARS is included as Annex 12. The following documents contain more detailed results of the Country Visit interviews:

Annex 8: Regional Offices Visits –Nile Valley & Sub-Saharan Africa;

Annex 9: Regional Offices Visits –West Asia;

Annex 10: Regional Offices Visits –North Africa & Syria and

Annex 11: Regional Offices Visits –Turkey & Uzbekistan.

Part 4: Capacity development within ICARDA

4.1 ICARDA's capacity development function within ICARDA

ICARDA's Strategic Plan 2007-2016 is entitled *Improving Livelihoods in Dry Areas*. Within this document, ICARDA's research agenda is stated to be 'multiinstitutional, multi-thematic, multidisciplinary, participatory, and implemented in collaboration with farmers and a wide range of other partners, while linking research to development'⁵. The resulting research portfolio is built on four major research programs:

- Biodiversity and Integrated Gene Management
- Integrated Water and Land Management
- Diversification and Sustainable Intensification of Production Systems
- Social, Economic and Policy Research

The Strategic Plan emphasizes that training should be integral to each research theme, that NARS should be assisted in institutional capacity building, that more doctoral and post doctoral fellowships should be made available and that research on the most effective means of knowledge transfer should continue.

4.2 The Capacity Development Unit (CDU)

The driver and coordinator of capacity development within ICARDA is The Capacity Development Unit (CDU). Located in premises in the Tel Hadya facility in Aleppo, the CDU currently comprises four staff, namely: a Head (Dr. Iman El Kaffass), two Training Coordinators (Laurice Abdel Majid and Afif Dakermanji) and a Training Assistant (Najah Hajj Jumah).

4.3 CD and targeting the requirements of National Agricultural Research Systems (NARS)

4.3.1 Assessment of needs

The importance of responsive, demand-driven training has already been stressed. The process of assessing the needs of training users has been historically performed through the bi-annual national and regional coordination meetings between ICARDA and its NARS partners, which are attended by representatives of CDU. However, one instance was reported of such a meeting not taking place.⁶

Additional methods of *needs assessment* should be considered. A recent innovation is that the CDU designed and circulated a "NARS Capacity Development Needs Assessment Survey" to all NARS and the results from these (and their regular updates) will form the basis of training plans for subsequent years.

A further example of effective training needs assessment was the recent visit to Eritrea by Head of CDU, accompanied by the Regional Coordinator of the Nile Valley and Sub-

⁵ 'Improving Livelihoods in Dry Areas'. ICARDA Strategic Plan 2007-2016 p.ix

⁶ Interview with North Africa NARS (Tunisia and Morocco)

Saharan Africa Regional Program (NVSSARP). The result, subject to approval by the Eritrean authorities, will be a 5-year capacity development plan for the Eritrean NARS. The Director General of the Eritrean National Agricultural Research Institute, when interviewed⁷ was highly appreciative of this form of strategic needs identification. A copy of the *Needs Assessment Survey Form* is included in Annex 13 of this report. The following item, in *Annex 14* is entitled *Eritrea Needs Assessment Visit Results*. This approach may prove an effective model for training needs assessment, particularly for targeting new or neglected/less scientifically developed research systems with affirmative action for training.

Although we do not detail the specific needs that were mentioned by NARS during the country visits, an exception should be made in the case of the agricultural scientist 'generation gap' that was experienced in all NARS interviewed (and indeed, we understand, worldwide). A severe shortage of young incoming talent has been the experience of all respondents. Programmes such as the AFESD-funded Young Scientist Programme (YSP) are particularly valued to try to address this. The panel understands that there are plans in ICARDA to develop a Fellowship program to address the same shortfall.

We therefore recommend:

(RECOMMENDATION 4.3)

- 1 Rethink tools for establishing training needs assessment
- 2 Needs assessment visits be carried out to targeted NARS
- 3 All NARS to be systematically and regularly reviewed using the "NARS Capacity Development Needs Assessment Survey"
- 4 Continue and expand YSP and Fellowship programs to address 'generation gap'

4.4 CD and CGIAR's new structure (CRPs) and the CD Platform

The recently-reformed Consultative Group on International Agricultural Research (CGIAR) defines its four aims as : reduction in poverty; increased global food security; improvement in nutrition; and better management of natural resources⁸. The three core principles that underlie the mechanisms for achieving this are: *impact*, *integration* and *partnerships*. The capacity development function within each CGIAR Centre is crucial to each of these, and the *Capacity Strengthening, Learning and Knowledge Sharing Platform* initiative is designed to enhance capacity development and to combat the fragmentation and possible erosion of such activities that has arisen from the recent decline of core funding. The activities and initiatives of the Platform are intended to:

- Enhance the efficiency and effectiveness of the CGIAR Research Programs (CRPs)
- Adopt best practices by the international research and development community
- Strengthen the capacity of national partners to innovate in agriculture
- Reach out to end users and facilitate their use and reuse of IPGs
- The involvement of scientists in global research and learning networks
- Strengthen the capacity of universities to form skilled human capital for the AR4D system
- Promote new knowledge sharing, management and information technology tools and methods.

⁷ Interview with Dr. Iyassu Ghebretatios, DG of National Agricultural Research Institute, Asmara, Eritrea (Thursday, 14 April, 2011)

⁸ Source: 'A Strategy and results framework for the CGIAR'. February 4, 2011

The Platform contemplates a capacity development function to entail a wide range of activities, including participatory research, action learning, thesis research, mentoring, fellowships and internships, group training, production of learning materials and curriculum development noting that ‘all these interventions strengthen both individual and organizational capacity’. Furthermore, the Platform emphasises the role of Information and communication technology (ICT) and innovative knowledge-related tools.

We therefore recommend:

(RECOMMENDATION 4.4)

- 1 Full and strategic engagement with the CGIAR's new Capacity Development Platform in order to benefit from best practice within the international R&D community and enable the more efficient use of assets.
- 2 More inclusion of CDU in the early stages of planning capacity development activities within projects especially CRP1.1 that ICARDA leads

4.5 The assessment of impact of ICARDA's activities

Impact is an increasingly important criterion upon which the appropriateness and quality of ICARDA's work, like that of all research-led institutions, is judged. It is a pre-requisite to the funding of most projects, and its demonstration is often mandatory. ICARDA currently addresses this in different ways, including its ‘Impact Brief’ series of publications. However, given the increased importance of achieving and demonstrating impact, new ways of doing this must be instigated.

We therefore recommend:

(RECOMMENDATION 4.5)

- 1 That CDU institute a process of Training Impact Assessment, and informed by this and by the Training Needs assessments (see 4.3.1, above) a regular review of training activity should take place
- 2 That CDU , through CGIAR Capacity Development Platform, and other means, investigate ways of measuring CD impact
- 3 The acquisition of an appropriate computer database and human resource skills to use it

Part 5: Technical and Procedural Aspects within the CDU

The Capacity Development Unit (CDU) at ICARDA interacts with two ICARDA committees, namely:

- The Capacity Development Committee (chaired by the Head of CDU and comprising ADGs, Program Directors and the Heads of IT and CODIS) for CD strategy;
- The Training Coordination Committee (chaired by the Head of CDU and comprising representatives from Programmes) for operational matters involving training.

The Committees meet once a month and additionally, as required. The CCER panel attended a meeting of The Capacity Development Committee (CDC) and met with members of the Training Coordination Committee (TCC).

5.1 Competitiveness of training activities

In view of the earlier comments on achieving and measuring impact, ICARDA must ensure the continued appropriateness and quality of its training (including modalities) as well as its sustainability in terms of competitiveness. In order to do this in the changing environment that ICARDA faces, it must review and prioritize its training strategies, re-focussing on areas where it can most clearly 'add value' in comparison with other CIARG Centers.

We therefore recommend:

(RECOMMENDATION 5.1)

- 1 A review of training offered by other CGIAR centers and a report by the Capacity Development Committee on ICARDA's comparative advantages over other Centers;
- 2 Prioritisation, by the Capacity Development Committee of training and CD activities that maximise impact;
- 3 A review by the Capacity Development Committee of the potential for outsourcing training to NARS and ARIs (see also 5.4.1, below);
- 4 Creating full-time *Program Training Coordinator* roles within each ICARDA Research Program/Unit; these individuals to serve on the Training Coordination Committee.

5.2 Selection, monitoring, evaluation and follow-up of trainees

5.2.1 Selection and nomination procedure of trainees

It is apparent from our interviews, with training deliverers, National Co-ordinators and trainees themselves, that the procedure for invitation, nomination and selection of trainees from NARS should be reviewed. Specifically, there have been examples of the NARS sending trainees that fell below both the levels of language ability and academic / technical attainment and/or qualifications set by ICARDA. In the laudable wish to satisfy the NARS' wishes, these trainees have, in many cases been accepted, and the result impacts upon the quality of the training delivered. Trainers will necessarily tend to pitch their level at the 'lowest common denominator'. Some trainers have managed to intercept such problems and insist on preparatory work to raise the potential trainee to a threshold level of acceptability. However, this is not always practicable given the timescales involved and the problem remains.

We therefore recommend that:**(RECOMMENDATION 5.2.1)**

- 1 Selection criteria for every training course or event should be set through consultation between CDU and the relevant ICARDA Research Programs or Units, be transparent and communicated by CDU to the NARS and other training users, as appropriate.
- 2 Once new procedures are in place, they should be more rigorously enforced. Ideally, CDU would seek more applications than places available for trainees to enable selection from a pool of qualified applicants.
- 3 Regional and Country Coordinators to be informed of more rigorous procedure to ensure their 'buy-in'.
- 4 CDU to consult with Regional and Country Coordinators and relevant ICARDA colleagues to refocus on the timeliness of the availability – nomination – selection - acceptance process.

These observations are applicable to both group and individual training, though with the latter, there is less of a problem, as the individuals are naturally subjected to a certain level of selection. In all cases, selection criteria should be transparent and adapted to the level of the training

5.2.2 Training contract terms: benefits and responsibilities

There is the need to reconsider the contracts offered to individual trainees. There have been examples of different benefits (stipends, *per diems*, housing allowances) being offered to individual trainees, who have subsequently discovered this in discussions between themselves. Those on inferior terms have naturally felt aggrieved. Whilst absolute equality is not always possible (for example, some donors may be required by their own rules to offer enhanced stipends) every effort should be made to ensure that the benefits afforded to trainees should be adequate and equitable. It is equally important that aspiring trainees are made aware of their terms and benefits in advance of accepting a training contract with ICARDA, so that they can plan their own resources accordingly.

We therefore recommend that:**(RECOMMENDATION 5.2.2)**

- 1 Information gathering by CDU on behalf of the Capacity Development Committee and with input from Finance Department (to include differing country costs).
- 2 Standardisation of terms and benefits should be agreed at the CD Committee and these to be incorporated into ICARDA's publicity materials (e.g. the website).
- 3 The overall 'training contract' to be reviewed and the key objectives should be:
That the benefits that are offered are realistic, transparent and equitable, and
That ICARDA's expectations of the trainee are clearly set out and understood.

5.2.3 The trainee 'experience'

In our interviews with individual graduate trainees currently working at ICARDA, some expressed dissatisfaction with the current housing arrangements (University student accommodation); others with local transportation arrangements; and generally the costs of subsistence were considered high. A more serious problem was the failure, in some cases (e.g. individual Biotechnology trainees), to obtain necessary materials (chemical agent) for

laboratory work. There appear to be long 'lead times' for procuring these materials. Another concern was the inaccessibility of technician support when the trainees were attempting to use unfamiliar equipment, and the limited time with some supervisors due to research travel obligations.

We therefore recommend:

(RECOMMENDATION 5.2.3)

- 1 A review of current logistical (particularly accommodation, but also in-country transportation and visa requests) arrangements for trainees.
- 2 That trainee special procurement requirements are identified and addressed at an early stage in their engagement by ICARDA.
- 3 That a system be developed to ensure that agendas for hosting individual trainees be developed well in advance and that tasks be allocated to trainers, supervisors and technicians to ensure efficient implementation.

5.2.4 Monitoring and evaluation of trainees

There are many reasons why it is important to evaluate the results of training. We understand that the former system (where completion certificates were given to all attendees) is in the process of being modified by CDU. The new system is intended to differentiate between attendance, completion, and successful completion.

We therefore recommend that:

(RECOMMENDATION 5.2.4)

- 1 The new system be refined by discussion at Capacity Development Committee;
- 2 The new system implemented on all courses.
- 3 NARS be informed of the new system of certification and its meaning.

5.2.5 Follow-up of trainees and networking

ICARDA has had a long and successful history of success in contributing, through training, to the career development of many scientists, researchers, policy-makers and implementers. Many of the most successful people in the sector (regionally and beyond) have benefitted at some time in their careers from training experiences with ICARDA, and hold ICARDA in fond regard. Personal networks (between former trainees, between trainees and their supervisors and trainers) are very strong and plentiful. However, as ICARDA seeks to expand its reach, whilst maintaining its service quality, we perceive a need to formalise and systematise this connectivity. This would not be at the expense of the excellent informal links that have existed, and should continue to exist.

We therefore recommend

(RECOMMENDATION 5.2.5)

- 1 The development of a e-platform for maintaining contact with ICARDA trainees
- 2 The production of a low-cost, regular, electronic and paper-based (where necessary) ICARDA newsletter to past trainees.
- 3 The development of a database of all ICARDA trainees, regularly updated with details of their career progression, location, etc.

5.3 Preparation and provision of training materials

5.3.1 Quality of training materials

The quality and consistency of materials for training are variable throughout ICARDA. These should be of a consistent high quality. Where possible these should be standardised and should always be of a high quality. **Typically, the materials pertaining to a training module would comprise:**

- a training module descriptor, giving course curriculum, learning outcomes and required and suggested reading;
- a set of course materials in the form of a training manual or academic papers, as appropriate;
- a set of lecture slides or PowerPoint presentations pertaining to the module;
- (for repeat short training courses) a short annual review of the training module.

The format of these materials may be paper-based, CD/DVD, or web-based (the latter being advantageous for future development of E-learning (see below). The language of training materials should be English, but may be translated, if necessary (particularly for Russian or Arabic speaking trainees.)

We therefore recommend:

(RECOMMENDATION 5.3)

- 1 The development of clear and well focused curricula. These curricula should be adapted to the expected level of trainee competence and confidence.
- 2 Full course descriptions on all levels of training courses (and published in brochures, leaflets, and website information).
- 3 A reasonable level of English as a Prerequisite for nomination
- 4 Translation of training materials, where this would be predictably necessary (e.g. with Central Asian trainees).
- 5 The employment of training material developer to integrate and coordinate the tasks with the research programs and units.

5.4 Delivery of training

5.4.1 Workload of training deliverers

It was evident from discussions with current and past trainees of ICARDA that the knowledge, skills and attitude of ICARDA scientists was extremely good and to them represented a most valuable input into their own career development. However, there are clearly issues to be addressed in terms of the time that scientists *can* and *do* allow for training preparation and delivery.

During the interviews carried out with training deliverers there were numerous references to short timescales, insufficient preparation time, surprise requests to train, competing calls on their time and, in general, excessive workloads that threaten the quality of the training delivered. This is particularly true where the relevant specialist team is small, or even composed of one individual.

Over its history, ICARDA has facilitated the development of many personnel from NARS. This represents a resource that is, to –date, only partially utilised by ICARDA's training and capacity building portfolio. By partnering with the more scientifically advanced NARS and their country-based ARIs, it would be possible to rethink the training and capacity building workload. In some cases, the NARS are advanced enough to be Centres of Excellence in specific topic areas, and the panel saw evidence of this (e.g. GIS delivery in Jordan).

Similarly, individuals who have, in the past benefitted from training at ICARDA may be available to deliver training on their specialist subjects at ICARDA HQ. Finally, the standardisation of training materials and their digitisation into suitable form for an E-learning Platform (see below) may offer greater efficiency of delivery, either through true distance delivery, or to support a 'blended learning' approach.

We therefore recommend **(RECOMMENDATION 5.4.1)**

- 1 Where possible, and without compromising quality, the outsourcing of training to NARS or possibly to other CGIAR centers where they are capable of becoming Centres of Excellence.
- 2 Where possible, and without compromising quality, the use of ICARDA Alumni, where available and suitable, for delivering training at ICARDA
- 3 Considering the use of E-learning and other modes, for greater efficiency of delivery;

5.4.2 Prioritisation of training as an element of researcher activity

Despite the possibilities (discussed above) of outsourcing some training, it is highly likely that training will remain an important element of scientists'/researchers' activities. The panel observed an imbalance as to what proportion of an individual's time that actually represented: the range was from 0 to almost 100%! It is clearly sometimes unavoidable that disproportionate demands are made on researchers' time, but this should be an exception rather than a rule.

In terms of the wider picture, it would be useful to compare the attitude to the proportion of researcher time spent training at ICARDA, to the situation in other CGIAR centers.

It was suggested that there is a natural tendency by researchers to be appraised on performance indicators other than training (for example, publications). If training and capacity development is to remain a role of most researchers, this should be reflected in performance appraisals.

We therefore recommend **(RECOMMENDATION 5.4.2)**

- 1 A more considered balance of researcher workload, achieved by 'smoothing' training input requirements in the Annual Training Plan.
- 2 Benchmarking training demands on researchers against other CGIAR centers.
- 3 A proper recognition, with performance evaluation, of training as a significant role of the typical ICARDA researcher.

5.4.3 Evaluation, appraisal and development of trainers

Not every good researcher is a good trainer. Nevertheless, an element of training delivery is quite properly incorporated into researchers' roles, and it is important that staff deliver this function in a fit-for-purpose manner. Completion of standardised course evaluation forms should be mandatory for all group training, and used for feedback and improvement purposes (via Module Review). Individual training evaluation could be obtained on a one-to-one basis from trainees. Although there was no mention of any weaknesses in this area in our discussions with trainees.

As a matter of good practice, we recommend that	(RECOMMENDATION 5.4.3)
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| <ol style="list-style-type: none">1 Standardised course evaluation forms should be used for all group training;2 Trainers be required to have a 'light touch' peer assessment once per annum (this would take the form of a colleague 'sitting-in' on a training session);3 Issues arising from peer assessment and evaluations to be discussed at appraisals;4 Resources (including time) to be made available for presentation skills training for trainers. |
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5.4.4 Language in training delivery

The issues of language have already been mentioned in Section 5.3.2, above. Many trainers, and some of the NARS mentioned deficiencies in English of some potential (and actual) trainees. Training materials can be translated (see above, 5.3) but this is not so convenient with training delivery. One 'spin-off' advantage of having supplementary e-learning materials is that it enables trainees to revisit lectures in their own time.

We therefore recommend:	(RECOMMENDATION 5.4.4)
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|---|
| <ol style="list-style-type: none">1 A reasonable level of English as a Prerequisite for nomination2 ICARDA may consider English preparatory courses, cooperating with local and regional providers of such training in order to not carry the whole burden.3 Use of supplemental, e-learning materials. |
|---|

5.4.5 'Modality' and balance of training delivered

A commonly-encountered statement from the NARS during the panel members' Country Visits was that short group training courses of less than 4 weeks were too intensive. A balance between class work and hands-on lab or fieldwork was preferred over a longer period.

We therefore recommend:	(RECOMMENDATION 5.4.5)
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| <ol style="list-style-type: none">1 The duration (especially of short courses) and balance between theory and practice is kept under review. Evidence on changing requirements was gathered from the CCER Country Visits (see Annexes 8-12) and more systematic data gathering has been instigated by CDU (see questions 4 to 7 of Annex 13: NARS Training Needs Assessment Survey). The NARS responses to these questions will form a sound basis for review. |
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5.5 'Soft skills' development for NARS

It was clear from the panel's Country Visits (see *Annexes 8-11* for summarised reports) that NARS are variously positioned on a spectrum of 'developmental maturity'. Some are well-developed and are candidates for becoming 'Centers of Excellence' in certain areas of expertise; others are needy, with poor research infrastructure and a shortage of qualified personnel. Their capacity building and training needs vary accordingly. While there is a need for basic science in the less-developed NARS, at the more developed end of this spectrum there is a great demand for soft skills – research methodology, scientific writing, proposal writing, presentation skills, and so on.

We therefore recommend that:

(RECOMMENDATION 5.5)

- 1 ICARDA to offer courses on methodological, scientific writing, and presentation skills for NARS upon request and need establishment.

5.6 Logistical support and data management

5.6.1 Annual Planning

The standard Annual training plan has been adapted to suit new funding regimes and modalities (restricted projects, individual degree and non-degree training plans and also NARS training plans). This should make availability more visible. A training descriptor template has been designed by CDU, and is being introduced as standard.

5.6.2 Data Management

There is a clear need for a proper electronic database for records and information-mining purposes. The current system (based on word files) is not adequate. Such an investment could save invaluable time and produce more accurate and effective reports when needed. The new system requires an individual skilled in IT database design and use, though the design element could be outsourced to a consultant in the short-term.

We therefore recommend:

(RECOMMENDATION 5.6)

- 1 CDU should obtain a reliable software system for data management.
- 2 There will be a need for an individual with database skills, firstly design, then management (the former may be a consultant).

5.7 Potential ICT developments: Knowledge capture and E-learning

ICARDA must confirm its role as a 'knowledge organization' and this will include the use of modern ICT technologies so that research knowledge is captured in a form that enables it to be widely accessed by those for whom ICARDA is seeking to build capacity. This requires a developing Knowledge Bank that is accessible, shareable and searchable by participants in ICARDAs regional networks and other partnerships, including programmes and projects.

E-learning (which permits distance learning) is a major opportunity for remote or supplementary access to training. CDU has identified several possible partners that would assist in ICARDA's adoption of an E-learning platform. It is important that close partners are consulted to achieve maximum compatibility with any existing systems that they use. The

task of populating this with learning materials from ICARDA's courses is a significant one, but it is important to make a start as soon as possible.

We therefore recommend:

(RECOMMENDATION 5.7)

- 1 CDU should adopt a competitive and compatible E-learning platform.
- 2 Create, populate and maintain an accessible web-based Knowledge Bank
- 3 There will be a need for an individual with IT skills to coordinate the e-learning function (at the beginning this may be a consultant).

5.8 Quality management and the CDU's role

Within ICARDA the capacity development function is not simply an issue for the CDU. The main engines of capacity development are, after all, researchers from Programmes and Units who themselves deliver the training. Responsibilities, such as the quality of the materials they deliver, are theirs. The CDU's role should be an integrative one involving the coordination, facilitation and planning of the Center's training activities, and the management of cross cutting issues. It is important, therefore, to develop a Quality Management system along the CD value chain - Annex 15, which makes it easy for the CDU to identify, integrate and coordinate all CD functions within ICARDA, define the processes and the cross functional responsibilities. A matrix, exemplifying how this could be done is provided in *Annex 16 (Capacity Development Collaboration across ICARDA)* and *Annex 17 (CD Quality Management Diagram)*.

We therefore recommend:

(RECOMMENDATION 5.8)

- 1 The production of a revised version of the *Capacity Development Function* Collaborators chart in *Annex 16* showing responsibilities for the CD Function throughout ICARDA.
- 2 Using this chart as a basis, develop a Quality Management Manual for the CD Function throughout ICARDA

Part 6: Planning, Coordination, Partnership and Cooperation

6.1 Coordination and Quality Management

The capacity development functions are cross-operational, i.e. they pervade all programs and units of ICARDA. This is a special challenge for the planning and coordination, organising, control, and improvement of capacity development at ICARDA. The way to solve this is for the CDU to establish and maintain a Quality Management System (QMS). This would help to establish clear responsibilities, transparent processes, and easy access to information for decision-making.

We therefore recommend:

(RECOMMENDATION 6.1)

- 1 The establishment of a proper Quality Management System. The likely main components of such a system are shown in Annex 17 (see below, p. 71).

6.2 Co-ordination and synergy within ICARDA programmes and projects

CDU should act collaboratively with research programs. Currently there is a Training Coordination Committee that liaises between Programmes/ Units and the CDU. There is a case for a stronger link, which could be achieved by locating an individual with specific responsibility for training within each Program / Unit.

ICARDA's involvement in capacity development is demand driven and the principal engine for this is its Projects. The CDU, **as facilitator and coordinator of Capacity Development**, should be involved at project inception; physically, at the Inception Workshop or remotely by setting an agenda at the workshop for discussions on capacity development.

We therefore recommend:

(RECOMMENDATION 6.2)

- 1 The creation of a *Program Training Coordinator* role within each ICARDA Program/Unit that is specifically tasked with training and liaison with CDU.
- 2 Early involvement of CDU in projects. CDU to be present, or have a CD agenda at all Inception Workshops.

6.3 Co-ordination and synergy between NARS and ICARDA

ICARDA's goal is to meet the needs of NARS with specific training. This has been dealt with in an earlier section. However, NARS offer a potential rich source of capacity for ICARDA to utilise or facilitate the use of. CDU should investigate which NARS could be designated 'Centers of Excellence' in specific topic areas / sub-disciplines. Similarly NARS offer insights into new potential partners that are extension and development-orientated in order to maximise impact from research work.

We therefore recommend:

(RECOMMENDATION 6.3)

- 1 Collaboration with NARS and ARIs to exploit specific areas of expertise by outsourcing.
- 2 Further the idea of 'Centres of Excellence' in partner countries.
- 3 Explore access to new, development-orientated partners through NARS networks.

6.4 Partnership and cooperation with CGIAR centres

In the 'new order' that ICARDA faces, there would appear to be the likelihood of fewer, larger programs with multi-participation from various CG Centers. This represents both a challenge, of coordination and an opportunity in terms of partnership and cooperation with the other centers on issues of capacity development. There is already a CGIAR Platform for Capacity Development, using an e-Network which the Head of CDU is actively engaging with.

Other CG Centers will have expertise in areas not possessed by ICARDA; they may have better systems and materials. In this case, ICARDA, through CDU in close collaboration with the Center's Research Programs and Units, should adopt and adapt the good practices that they find.

Finally, some training requirements may be better served by other CG Centers, provided that they meet the quality standards that ICARDA requires.

We therefore recommend:	(RECOMMENDATION 6.4)
<ol style="list-style-type: none">1 Full support, in terms of time and resources, for the CDU to engage with other CD functions in the CGIAR within the Capacity Development Platform.2 Being prepared to share best practice with other CGIAR Centers.3 Explore possibilities of limited 'pooling' of training requirements and capacity with other CGIAR centers.4 Ultimately, the <i>virtual</i> integration of ICARDA capacity development function with CGIAR Centers' capacity development function.	

6.5 Partnership and cooperation with ARIs

ICARDA already enjoys cooperation with ARIs through the medium of NARS. There is clear potential for extending these links, both in terms of deeper links with existing ARI partners, and links with other ARIs (including those outside the region) in the North and the South.

We therefore recommend:	(RECOMMENDATION 6.5)
<ol style="list-style-type: none">1 Extending the range and depth of cooperation with ARIs within and outside the Region.	

6.6 Partnership and cooperation with donors

Donor organisations are, of course, crucial to ICARDA's work. Donors can also offer routes to infrastructure funding, without relying on funding elements within a restricted project. For example, we understand that a proposal may be submitted to AFESD for funding graduate and fellowship opportunities. Efforts expended in meeting and understanding the aspirations of donors as well as providing them with good evidence of impact, are very valuable.

We therefore recommend:	(RECOMMENDATION 6.6)
<ol style="list-style-type: none">1 Extending the range and depth of cooperation with Donors in support of ICARDA's vision and mission.	

Part 7: Vision for capacity development in ICARDA

There is considerable change in the environment within which ICARDA operates. Changes at the *macro-level* include Climate Change, the world economic crisis, and political change within the region. At the *micro-level* there are concerns over funding, structure and capacity and resource availability (particularly, as has been noted, the scarcity of qualified young agricultural scientists.) These changes present many challenges to the capacity development function in ICARDA, and many of these feature in the SWOT analysis featured above at the end of the Executive Summary to this report. These include:

- Reduced core funding; dependency on a 'slice' of restricted project funding
- Move to CRP-type project funding with multitude of stakeholders to manage/relate to;
- Global expansion creating increased language difficulties with trainees;
- Competition from CDU functions in other organisations.

Similarly change can offer opportunities. We have identified the following:

- Renewed international interest in Food Security
- Increased potential for partnerships and collaboration
- Increased potential for adoption of best practices
- Opportunities for selective outsourcing / in-sourcing / sharing capacity

7.1 Capacity development function in ICARDA: expectations and demands

In order to tackle these challenges and opportunities, the capacity development function within ICARDA must:

- Embrace demand-driven development and impact-orientated strategies
- Adopt new ICT technologies and alternative training modalities
- React flexibly to needs of trainees, nominating bodies and funders

The CDU's role in this is crucial. Whilst it has already been noted that capacity development is all-pervasive throughout ICARDA, CDU is its facilitator and coordinator.

We therefore recommend:

(RECOMMENDATION 7.1)

- 1 Re-emphasis of CDU's developmental and integrative role through the better utilization of staff time and the restructuring of CDU as shown in Fig. 4, p.31). Identify and integrate all CD functions within ICARDA, define processes and the cross functional responsibilities. Use the CD Collaboration Matrix (Annex 16) as a basis to articulate, and where necessary, redefine responsibilities across the whole of ICARDA's CD function.

7.2 Proposed CDU Structure and Operation

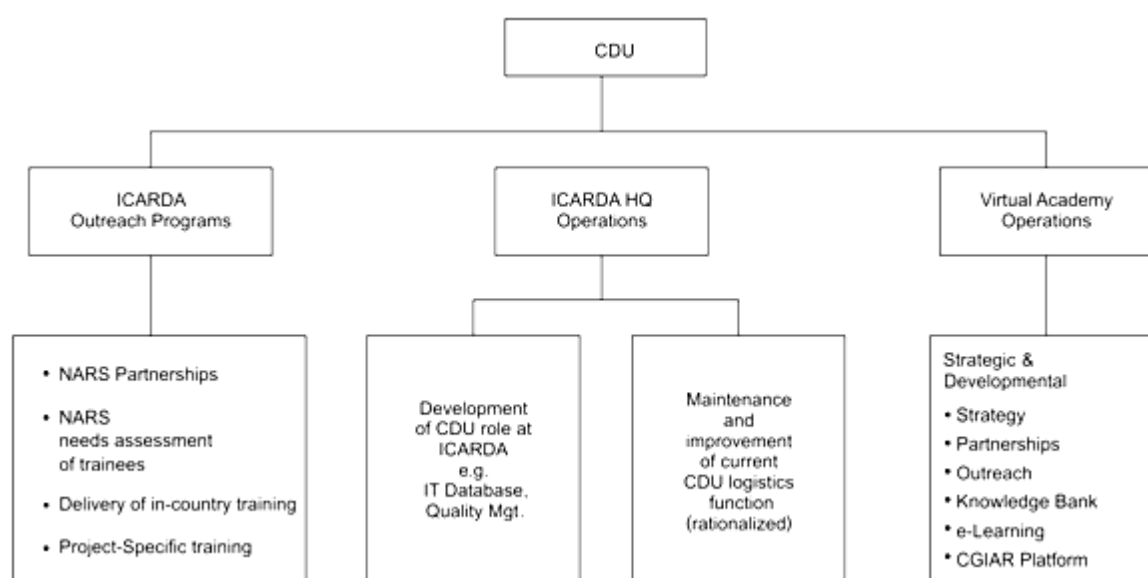
In order to fulfil these responsibilities, CD efforts need to be re-shaped and re-focused. This involves the CD Committee and CDU at Center level, working with analytical feedback from Research Programs and Units, and includes:

- Awareness and adoption of best practice in the field;
- Embracing available ICT technologies for information storage and communication
- Adopting flexible methods of delivery

Figure 4 (below) illustrates some possible changes to the structure of the CDU. In the figure, CD activities are shown as ICARDA Outreach Programs, 'ICARDA HQ Operations' and 'Virtual Academy Operations'. The concept of the *Virtual Academy* is one that is designed to reflect and underpin the role of the CGIAR Capacity Development Platform, to which all capacity development units within CG Centers (including the CDU at ICARDA) should contribute. The CDU also plays a coordinating and facilitating role in ICARDA Outreach Programs, with close partnership with NARS. In terms of 'ICARDA HQ Operations', these have been shown as *Maintenance and Improvement of Current CDU Logistics function*, and *Development of CDU role at ICARDA*. Regarding the former, some at ICARDA incorrectly equate CDU's role with logistics. In fact, some aspects of training logistics (accommodation, e.g.) are probably inappropriate for a capacity development unit.

The second (*Development of CDU role at ICARDA*) refers to CDU's important role, referred-to above, as a cross-cutting coordinator between the various contributors to capacity development within ICARDA. Equally, the CDU is ideally placed to take on new initiatives such as a proper training database and a Quality Management System (see earlier comments on both these issues)

Figure 4: Re-shaping the role of the CDU



We therefore recommend:

(RECOMMENDATION 7.2)

- 1 The rationalisation of CDU's existing logistics role (e.g. by removing inappropriate aspects, such as dealing with accommodation) and the maintenance and improvement of the remaining, appropriate, aspects of the role.
- 2 The re-emphasis of CDU's developmental and coordinating role, through the better utilization of staff time (see 1, above) and the restructuring shown in Figure 3.
- 3 The restructuring of CDU to include a new role as a Virtual Academy (see 7.2 and Fig. 3)

7.3 Implementation: supporting the future role of CDU

The future role of ICARDA CDU depends on internal and external developments. Some of them can more easily be driven by management decisions and operational intelligence than others. The following table may illustrate what is being alluded to:

Drivers	Internal	External
Can be driven by management	<ul style="list-style-type: none"> - Information & Communication flow (Data base, e-learning, Quality Management) - Employment policy (each program needs one person for training, CDU needs Technical person on the operational level) - Use of Synergies cross functional inside ICARDA and with partners, Data base maintenance, Curriculum development, Language improvement and other soft skills - Outsourcing: Data bank development, Setting up of Quality Management System, 	Cooperation with CRP's (Platform, synergies, Virtual Academy)
Cannot be driven by management	Personalities, Mishaps (except for foreseeable ones)	Weather, Climate, War and Peace,

Figure 5: Implementing change

The table shows that a lot can be done and can start now, and it is not too late to keep up with competitors. Few competitors have the comparative advantages enjoyed by ICARDA, and these have been referred to throughout the report.

We therefore recommend:	(RECOMMENDATION 7.3)
1	Appointing to a new senior post to support the coordinating and facilitating CD activities within ICARDA..
2	A new technical post to maintain the database and assist in leading out the proposed Quality Management System
3	A new role supporting the development and management of Virtual Academy Operations ⁹

⁹ Initially this role could be taken by the current Head of CDU (providing that support was available for what has been referred to as 'ICARDA HQ Operations').

C. References

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D. Abbreviations and Acronyms

ADG-ICC	Assistant Director General for International Cooperation and Communication
ARI	Advanced Research Institute
BIGM	Biodiversity and Integrated Gene Management
BoT	Board of Trustees
CAC	Central Asia and the Caucasus
CCER	Center-Commissioned External Review
CGIAR	Consultative Group on International Agricultural Research
CRP	Collaborative (CGIAR) Research Program
DDG-R	Deputy Director General for research
DSIPS	Diversification and Sustainable Intensification of Production Systems
EPMR	External Program and Management Review
GIS	Geographic Information System
ICARDA	International Center for Agriculture Research in the Dry Areas
IWLM	Integrated Water and Land Management
NARS	National Agricultural Research Systems

E ANNEXES

Annex 1: CCER Terms of Reference (TORs)

Capacity building is a core priority of ICARDA because of the important role it plays in economic growth and development as well as addressing the rapid changes in the bio-physical, socio-cultural, technological and policy environments of the agricultural innovation systems in the developing as well as the developed world. The 2206 CGIAR System-Wide Evaluation of the Impact of Training in CGIAR Centers identified a number of capacity issues that need to be addressed.

ICARDA Strategic Plan 2007-2016 presents the evolution of ICARDA's mandate, mission and research and capacity development portfolios. ICARDA uses advances in science and technology to offer new directions to promote food security. A main element of these directions is new approaches in human and institutional capacity development that enables national agricultural research systems (NARS) to build a cadre of well trained male and female researchers and extension agents. For this purpose, the integrated research and training activities in ICARDA include those carried out at headquarters and those conducted in collaboration with NARS and facilitated by the Center's outreach programs. Capacity development at ICARDA is coordinated by the Capacity Development Unit (CDU) under the International Cooperation and Communication (ICC). Cycles of change were experienced in the mandate of ICARDA as well as changes in the external environment.

This resulted in the need to re-visit the CD activities and align them with those of ICARDA's as stated in the Center's Strategic Plan 2007-2016. In addition, the revolution in Electronic learning and increased utilization of web-based technologies will continue to offer excellent opportunities for advancing capacity development. It is time for CDU to utilize ICTs for high-quality agricultural education and training by providing a comprehensive learning technology system in order to strengthen the innovation capacity of NARS partners. Learning content adapted to the target groups and supported by rich and individualized learning environments and services are key for sustainable learning. In this regard, a comprehensive CCER is needed to further enhance the effectiveness of ICARDA's capacity development activities and their impact on NARS and to guide the development of a strategic plan for capacity development at ICARDA. The following terms of reference are suggested to guide the CCER:

I. Strategic Aspects:

1. Does the Capacity Development Program, including its declared mission, objectives and activities address appropriately the new directions and overall objectives adopted in the Center's Strategic Plan 2007-2016? How far are the capacity development activities in line with the thematic and geographic focus of ICARDA as indicated in its strategic plan? How far does the program fit with the EPMR recommendations?
2. Is CDU's targeting of specific NARS with specific programs adequate and appropriate? Did ICARDA's capacity development efforts influence positively the NARS research outputs and outcomes and did they increase the NARS outreach nationally?
3. Are the capacity development activities consistent with and relevant to the CGIAR's new capacity development platform? How far are the types and quality of training programs offered responsive to new directions/developments in the CGIAR system? Do the activities respond to the new program structure of the CGIAR system (CRP's)?
4. Has an impact assessment taken place recently assessing what was learned and whether this was reflected on national GDP, population health, improving livelihoods, food security or environmental sustainability? What were the lessons learned from this impact assessment, if it had taken place?

II. Technical and Procedural Aspects:

5. How competitive are ICARDA's degree, non-degree training and internship activities and what are the measures/changes needed to make them more competitive?
6. Are processes for the selection of trainers/trainees and monitoring and evaluation of training and follow up on its impact adequate for the delivery and sustainability of quality training to NARS?
7. Are processes for the development, updating, review and evaluation of training material adequate to ensure competitiveness of the material with most up-to-date research findings and its fulfilment of the needs of the trainees and their institutions?
8. Is the proportion of researcher's time spent on training and capacity development in the last 2 years comparable to that of researchers of other CGIAR centers?
9. Does the percentage and content of general research skill development training, soft skills for researchers and extension agents or tailored training for grass-root organizations meet the needs of ICARDA's partners and compare with other CGIAR centers offerings?
10. What lessons can be learned from ICARDA's long experience in capacity development? What strengths and what gaps exist and what recommendations can be made on modalities, approaches and delivery systems and timelines?

III. Coordination and Partnership:

11. How effective is the coordination with ICARDA's research and outreach programs with regard to capacity development activities under various restricted projects?
12. To what extent does capacity development unit contribute in writing the training and capacity development components in different research programs (ICARDA's and CGIAR's)?
13. Are current partnerships including those with other CGIAR centers, advanced research institutions (ARIs) and NARS adequate and appropriate for advancing ICARDA's capacity development objectives?

IV. Resources and Management:

14. Are available human resources, material, financial and technological resources at CDU adequate to meet the rising expectations and demand?
15. Is the process of capacity development programs' costing, budgeting and financial control/management efficient and capable of handling the function's expansion?
16. Are training data bases effective and efficient?
17. Is Capacity Development at ICARDA capable of moving into distance and e-learning? What are the gaps and how can they be overcome?
18. Are the current resources of CD capable of expanding to cover organizational/institutional capacity development of NARS as well as researchers' capacity development?
19. What is the current funding for capacity development activities in terms of percentage of total center funding (based on 2010 funding level)? And are ICARDA and CDU successful in mobilizing adequate funding for capacity development activities?
20. What is the cost efficiency of ICARDA's capacity development programs as compared with similar CGIAR centers?

Annex 2: CCER Schedule of Activities



*International Center for Agricultural Research in the Dry Areas
(ICARDA)*

Suggested Agenda for ICARDA's Capacity Development CCER

April 3 – April 21

Purpose of the Visit

To conduct the Center Commissioned External Review (CCER) for ICARDA's Capacity Development Function which will be used in developing ICARDA's Strategic Plan for Capacity Development 2012-2016.

Work Plan and Timetable:

April 1 – 2	CCER team arrival
April 3 - 18	CCER takes place with meetings at ICARDA, document review, document analysis, travel to NARS, visits and interviews
April 19-21	Final information checks and writing of report
April 21	Presentation and submittal of Draft CCER Report to ICARDA's Management
April 26	ICARDA's comments on factual errors sent to CCER Chair
April 28	Corrections received and ICARDA's response finalized and forwarded to BoT
May 9	CCER Chair Presents report to BoT

Suggested Agenda:

Sunday April 3, 2011 – Meetings with ICARDA Senior Management

08:00-08:30	Transportation to ICARDA	Visitors Services
08:30-09:30	Meet with the Director General	Dr. Mahmoud Solh
09:30-11:00	Meet with Assistant Director General (International Cooperation & Communication)	Dr. Kamel Shideed
11:00-12.30	& with the Head of CDU & CDU team	Dr. Iman El-Kaffass
12:30-13.30	Lunch Break	
13.30-15.00	CCER Team Meeting	
15.00-16.00	Meet with DDG Research	Dr. Maarten van Ginkel
16.00-17.00	CCER Team Meeting	

Monday April 4, 2011 – Meetings with ICARDA Program Directors & CRPs Focal Points

08:00-08:30	Transportation to ICARDA	Visitors Services
08:30 – 11:00	Director of Integrated Water & Land Management Program (IWLMP) & Coordinator CRP 5 (Dr. Theib Oweis) & Coordinator CRP 7- Climate Change (Dr. Mohamed Karrou)	
11:15 – 13:30	Director of Diversification and Sustainable Intensification of Production Systems Program (DSIPS) & Coordinator CRP 1.1. (Dr. Rachid Serraj) & Coordinator CRP 3.7 – Livestock - Dr. Barbara Rischkowsky	
13:30- 17.00	Lunch Break and CCER Team Meeting	

Annex 2: CCER Schedule of Activities (contd.)

Tuesday April 5, 2011- Meetings with CRPs Focal Points (Continued)

08:00-08:30	Transportation to ICARDA	Visitors Services
08:30- 11:15	Meet with Director of Biodiversity & Integrated Gene Management (BIGM) & Coordinator CRP 3.2 – Dr. Michael Baum & Coordinator CRP 3.4- Legumes -Dr. Mohamed Imtiaz & Coordinator CRP 3.6- Cereals - Dr. Stefania Grando	
11:30 – 13:30	Meet with Director& Scientists of Social, Economics & Policy Research Program (SEPR) & Coordinator CRP 2 (Dr Aden Aw Hassan)	
13.30 – 17.00	Lunch Break & CCER Team Meeting	

Wednesday, April 6, 2011 – Meetings with Research Unit Heads

08:00-08:30	Transportation to ICARDA	Visitors Services
08:45-9:15	Head and Scientists of: Seed Unit	Dr. Zewdie Bishaw
09:30-10:00	Genetic Resources Section/GRS	Dr. Ahmed Amri
10:15-10:45	Geographic Information Systems/GIS Unit	Dr. Eddy De-Pauw
11:00-11:30	Seed Health Lab	Dr. Siham Asaad
11:30-13:00	Meet with ICARDA Coordination Committee	
13:00-14:00	Lunch Break	
14:00-14:30	Meet with Acting Farm Manager	Dr. Jurgen Diekmann
14:30- 15:30	ICARDA Facilities Visit	
15:30- 17.00	CCER Team Meeting	

Thursday, April 7, 2011 – Meetings with Sr. Scientists, Degree Supervisors

08:00-08:30	Transportation to ICARDA	Visitors Services
08:30-11:00	Meet with sample of degree and non-degree trainees	
11:00 -13.00	Meet with a group of Degree Training Supervisors and Sr. Scientists working with non-degree trainees: Bread Wheat Breeding/Biotech. Research Scientist (Dr. Francis Ogbonnaya), Range Ecology & Management Research Scientist (Dr. Mounir Louhaichi), Entomologist (Dr. Mustapha El-Bouhssini), Manager of the Virology Lab (Dr. Safaa Kumari)	
13:00- 14.00	Lunch Break	
14.00 – 15.30	Attend Capacity Development Committee (Strategy)	
15.30-17.00	CCER Team Meeting	

Friday, April 8, 2011 and Saturday April 9, 2011 – CCER Team Meeting

Sunday April 10, 2011 – Meetings with Sr. Scientists heavily involved in headquarters and in-country training activities

08:00-08:30	Transportation to ICARDA	Visitors Services
08:30-09:00	Project Leader ACIAR	Dr. Colin Piggitt
09:00-10.00	Meet Coordinator Food Security Project/YASP Scholarship	Dr. Habib Halila
10:00-13.00	Attend Group and Individual Training	Mr. Abdul Aziz Niane
13:00- 14.00	Lunch Break & CCER Team Meeting	
14.00-15.00	Meet with Executive Secretary to the Board	Dr. Elizabeth Bailey
15.00-17.00	CCER Team Meeting	

Annex 2: CCER Schedule of Activities (contd.)

Monday, April 11, 2011 – Meetings with Training Strategy Committee and Administrative Directors and Unit Heads & Start Country Visits

08:00- 08:30	Transportation to ICARDA	Visitors Services
09:00-10:00	Meet with Director of Human Resources	Mr. N.P. Rajasekharan
10:00-17:00	CCER Team Meeting	

D. Greenwood travels to Amman Monday, April 11 at 7.00 am.

Monday - Friday, April 11 & 15, 2011 (Country Visits)

- ICARDA Partners in Syria – ICARDA/Syria Training Collaboration
– in Aleppo & Damascus – (April 12 and 14) Dr. Majd
Jamal
- West Asia Regional Office, Amman (April 11) Dr. Nasri Haddad
- Nile Valley, Regional Office, Cairo (April 13-15) Dr. Fawzi Kharajeh
- Turkey Office (April 12) Dr. Mesut Keser

- CAC Regional Office, Tashkent (April 13-15) Dr. Joseph Turok
- Visits to Tunisia and Morocco took place earlier (March 22-26, 28) Dr. M. El-Mourid

*Visits include meeting at ICARDA's regional offices and with NARES and past and current trainees from the region

Sunday to Wednesday April 17, 18, 19 & 20

CCER Team meetings, visit reports analyses and synthesizing, clarification meetings, cross-checking and triangulation with involved parties + report writing

Thursday April 21, 2011

Presentation to ICARDA Management Committee and submittal of the report in its final version.

Annex 3 CCER Panel Members' Details

Professor Abderrazak DAALOUL, PhD, MSc.

Emeritus Professor at National Institute of Agronomy of Tunisia (INAT)

Former Director General for Agricultural Production, Ministry of Agriculture, Tunisia.

Expertise: Genetics, plant breeding, agricultural development and planning in dry areas.

Education: 1964-1968: ENSAT, Tunisia, Agricultural Engineer; 1968-1969: Faculty of Sciences Tunis, Certificate of biochemistry, microbiology and plant physiology; 1969-1972: Oregon State University, USA, M.Sc. Agronomy/Plant Breeding; 1972-1974: Oregon State University, USA, Ph.D. Genetics/Plant Breeding.

Experience: 1968-1969: Researcher at the Institut National de Recherche Agronomique de Tunisie (INRAT); 1969-1973: Graduate studies at Oregon State University; 1973-1974: Principal Scientist Cereal Genetics Laboratory, INRAT; 1974-1976: Assistant Professor of Genetics and Plant Breeding at the Institut National Agronomique de Tunisie (INAT); 1976-1980 Director Ecole Supérieure d'Agriculture du Kef (Tunisia); 1980-1982: Associate Professor of Genetics and Plant Breeding and Head of the Genetics, Plant Breeding and Biometry Unit at INAT; 1982-2003: Professor of Agronomy, Genetics and Plant Breeding, INAT; 1982-1989: Head Agronomy and Plant Breeding Department, INAT; 1989-1991: Director General INAT; 1991-1994: President Institut de la Recherche et de l'Enseignement Supérieur Agricoles; 1994-2003: Director General for Agricultural Production, Ministry of Agriculture. Member of INAT Scientific Board 1980-1989; Member of the Plant Genetic Resources National Committee 1980-2003; Member of the Operational and Coordinating Committees of A.T.T. Project (MIAC/ USAID) 1979-1988; Member of several negotiating teams for bilateral cooperation projects with USA, France and International Funding Agencies, 1979-2003; Member of the Consultative Board of the Arab Centre for Studies of Agriculture in Dry areas 1974-1976 and 1991-1994; Representative of Tunisia to the International Commission on Plant Genetic Resources FAO-Rome 1982-1999; Regional Representative of WANA Region to the Consultative Group on International Agricultural Research 1990-1993; Member Consultative Scientific Board Centre International des Hautes Etudes Agronomiques Méditerranéennes 1992-1994; Member Agricultural Programme Committee of the Permanent Scientific Council for Francophone Countries 1992-1994; Board Member of CIMMYT 1994-1999. Author of some 60 publications.

Professor Michael von Gagern, PhD, MSc.

Professor Michael von Gagern is an academic professional with a broad educational background and a wide range of practical experience as a university professor, researcher, author, businessman and consultant in many parts of the world. Von Gagern's PhD was in Philosophy from Fribourg, Switzerland MG and his Masters Degree in Finance from Penn State University, the USA. Von Gagern taught in the US, Germany, Egypt, Italy and Saudi Arabia. His areas of specialization are Business and Society, International Development and Finance. He is also the founder, chairman and consultant in small and medium size and mostly ecologically oriented firms in Germany. MG helped to establish the first "German" Universities in Singapore and Cairo. He was the Director of MBA and Continuous Education Program, Head of Department and Professor of International Business at the German University in Cairo (GUC) from 2003 – 2008 and is now Quality Management Advisor for the Transfer of Technology branch of the King Saud University (since Nov. 2008). In the broad spectrum of his consultancy, coaching and training work MG derives his strength as a consultant from his wide range of theoretical work and his practical experience, which enable him to solve problems, and implement programs in the simplest common sensual trans-disciplinary way.

Specialist Subject Areas

- Organizational Management
- Continuous Education Management and MBA Programs
- Integrated Quality Management according to International Standards.

- Executive Coaching and Training, Strategic Skills Development
- International Business and Finance, Theory and Practice
- Start-ups, Institutional Change and Organizational Restructuring
- Decision Analysis, Motivation, and Development of Sense of Quality
- Research Writing
- Report Writing and Proof Reading

Professor David Greenwood, PHD, MSc, MA, FCIQB, PGDip Const. Mgt.

Professor David Greenwood holds a Ph.D. from Reading University, BA & MA from Cambridge and MSc from Heriot Watt University. Currently he is Professor and Associate Dean of Research and Consultancy at the School of the Natural and Built Environment, Northumbria University in the United Kingdom. He is also Director of the University's Sustainable Cities Research Institute, an internationally renowned institute for environmental, social and technical sustainability research. Professor Greenwood specialises in the program/project management of sustainable development, and project analysis, development, assessment and risk management. Greenwood has published over 90 international academic papers and has authored and co-authored several books and textbooks in the field of project management. He is member of the Engineering & Physical Sciences Research Council Peer Review College, member of Le Conseil International du Bâtiment (CIB), commission member of CIB W117 (Performance Measurement and Evaluation), external assessor for research development, City University Hong Kong and Professeur Invité, Institut Universitaire Professionnalisé (Béthune, France). He is a keen internationalist with over twenty years of experience in consulting, training and lecturing around the world for academia and research, governmental and international non-governmental organizations. Greenwood has led high performing international projects and teams, lectured and provided consultancy on the design, assessment and re-engineering of performance-based programs in universities and research centers in Lybia, Egypt, France, Singapore, China and of course the United Kingdom among others. He is an active promoter of outreach to industry, community and the professions, and of initiatives that promote these associations to engender better practice in the work and living environments. As head of research and consultancy in the largest academic department of its type in the UK, he has at his disposal a wide range of expertise in concepts and modalities relating to research and knowledge transmission.

Annex 4: Documentation made available to review panel

Nr.	Document Name	Ref. / Status / Comments
1	Capacity Strengthening in CGIAR: Status, trends and future directions	Draft report not for circulation
2	ICARDA Annual Report 2009	ICARDA
3	Improving Livelihoods in Dry Areas: Strategic Plan, 2007-2016	ICARDA
4	Improving Livelihoods in Dry Areas: Stepping Up through Capacity Development	Slide Presentation by Dr. Kaffass
5	The Capacity Strengthening, Learning and Knowledge Sharing Platform of CGIAR	
6	Capacity Strengthening in CGIAR: Status, trends and future directions: summary of the main findings, recommendations and implications for ICARDA	Dr. Iman El Kaffass
7	Six Month Review	Dr. Iman El Kaffass
8	Report of the CCER of Food Legumes Research at ICARDA within Biodiversity and Integrated Gene Management Program at ICARDA	CCER
9	Report of the CCER of Integrated Water and Land Management Program at ICARDA	CCER
10	Report of the CCER of ICARDA Human Resource Development and Communication Documentation and Information Services (CODIS)	CCER, February 1997
11	Changing Agricultural Research in a Changing World: A strategy and results framework for the reform of CGIAR	CGIAR
12	EPMR Report on ICARDA	EPMR (outline)
13	CRPs link	
14	AFESD and ICARDA	
15	Teaching Course Template: Suggested Title: Advanced Course on New Techniques for Sustainable Sheep and Goat production in CWANA Dry Environments	ICARDA
16	Integrated Crop-Livestock production	ICARDA Short Course document,
17	ICARDA In-House Seminars: Spring 2011	ICARDA, 2011

Annex 5: Interviews at ICARDA Headquarters, Tel Hadya, Aleppo, Syria

<i>ICARDA Management</i>	Mahmoud Solh	Director General
	Maarten van Ginkel	DDG-research
	Kamel Shideed	ADG-ICC
	Majid Jamal	ADG – Government liaison
	Koen Geerts	ADG-CS
	N.P. Rajasekharan	Director, Human Resources
	Erwin. Lopez	Director, Finance
	Elizabeth Bailey	Executive Assistant to the Director General
	Tareq Bremer	Grants Management Officer
<i>Program Directors</i>	Michael Baum	Director, BIGM program
	Rachid Serraj	Director, DSIPS program
	Aden Aw Hassan	Director, SEPR program
	Theib Oweis	Director, IWLM program
<i>Unit Heads</i>	Ahmed Amri	Head, GRS Unit
	Eddy De-Pauw	Head, GIS Unit
	Zawdie Bishaw	Head, Seed Unit
	Siham Asaad	Head, Seed Unit Health
	Iman El Kaffass	Head, CDU
<i>BIGM Scientists</i>	Stefania Grando	BIGM, barley Breeder
	Francis D. Ogonnaya	BIGM, biotechnologist (cereals)
	M. El-Bouhssini	BIGM, entomologist
	M. Imtiaz	BIGM, chickpea breeder
	Habib Halila	Project Manager, FoodSecurity
<i>IWLM Scientists</i>	Mohammed Karrou	IWLM, water and drought
	Manzoor Qadir	IWLM, water resources
<i>DISIPS Scientists</i>	Barbara Rischkowsky	DISIPS, livestock scientist
	Colin Piggitt	DISIPS, conservation (ACIAR)
<i>CDU Staff</i>	Laurice Abdel Majid	Training Coordinator
	Afif Dakermanji	Training Coordinator
	Najah Hajj Jumah	Training Assistant
<i>Training Coordination Committee</i>	Abdoul-Aziz Niane	Seed Science and Technology
	Ravi Gopal Singh	Cropping System Agronomist
	Samir Hajjar	BIGMP
	Bilal Humeid	Genetic Resources Unit

Trainees and Graduates currently in attendance at ICARDA

Annex 6: Interviews during Country Visits Tunisia (22-26 March 2011)

<i>North Africa offices Tunis</i>	Mohamed El-Mourid	Regional Coordinator, North Africa
	Amamou Habib	DG, IRESA
	Ben Salem Moncef	DG, Centre Regional de Recherche des Grandes Cultures (CRRGC) Beja
	Rezgui Salah	Professor at INAT
		National Coordinator, IRDEN Project
	Khatteli Houcine	DG, IRA Medenine
	Neffati Mohamed	Coordinator, Medicinal & Aromatic Plants (PAM), IRA Medenine
	Taamallah Houcine	Coordinator, ICARDA/IRA Medenine
	Jemmali Mnaouar	DG, BNG (Gene Bank) Tunis
	Ben Dhiab Sonia	Biotechnologist, BNG
	Kharrat Mohamed	Legume Breeder, INRAT
	El Faleh Mouldi	Barley Breeder & Head of Field Crops Lab, INRAT
	Gharbi M. Salah	Durum Breeder, INRAT
	Haj Salah Halim	DG, Institut National des Grandes Cultures (INGC)

Morocco (28-29 March 2011)

<i>Regional Research Center of Settati, Morocco</i>	Boutfirass Mohamed	Agronomy
	Bahri Abdeljabar	Agricultural Engineering
	Nsarellah Nasserlehaq	Wheat Breeding
	Laamari Abdelali	Agricultural Economy
	Elmzouri El Houssine	Head, Research/Development Dept.
	El-Gharous Mohamed	Head of the Center
	Lhaloui Saadia	Entomology - IPM
<i>INRA offices Morocco</i>	Dahan Rachid	Scientific Division
	Abdelmajid El Idrissi Ammari	General secretariat
	Hadarbach Driss	Human Resource Management and Training Department (DGRHF)
	Sebbata Olman	Information and Communication Divn.
	Kradi Chafik	Information and Communicatio Divn.
	Belmisen Sanae	Human Resource Management and Training Department (DGRHF)
	Beqqali Mohamed	Head of Human & Financial Res.
	Iraqi Driss	Head of Biotechnology Unit
	Udupa Sripada	ICARDA Scientist

Jordan (11 April 2011)

<i>West Asia Regional Partnership Offices Amman, Jordan</i>	Nasri Haddad, Abdallah Amari Saleh Bader Faisal Awawdeh	Regional Coordinator, WARP ICARDA Coordinator in Palestine former-DG for SBAR in Iraq DG for NCARE, Amman
<i>Past Trainees</i>	Samia Akroush Fadel Ismael	Badia Benchmarking project Biotechnology
<i>Current Trainees</i>	<i>Observed NCARE joint course training in GIS for trainees from Egypt, Iraq, Jordan, Lebanon, Morocco, Palestine, Syria, Yemen.</i>	

Syria (12- 14 April 2011)

<i>Faculty of Agriculture Aleppo University GCSAR, Douma</i>	Sobhi Mouna Ahmed El-Ahmed M. Walid Taweel Shawki El-Salti	Deputy Dean for Research Professor of Pathology, Plant Protection DG, GCSAR Head of Training
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Turkey (12 April 2011)

<i>Turkey Office, Ankara</i>	Mesut Keser NN Ayten Salantur Kürsad Özbek Mustafa Gakmak	ICARDA Coordinator Turkey Deputy DG of NARS Researcher, Haploid Breeding Gene Bank Researcher, Agricultural Research Institute Ekisehim
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Uzbekistan (13-15 April 2011)

<i>Tashkent Office</i>	Dr. Jozef Turok	Head of Program Facilitation Unit, CGIAR Program for CAC and Regional Coordinator
	Dr. Zakir Khalikulov Dr. Ram, C. Sharma Dr. Aziz Nurbekow Zhokid Ibragimov	Deputy Regional Coordinator Breeder Head of Innovation CIP Assistant in Agricultural Economics / Marketing
	Kristina Toderich Nariman Nishanov Dr. Maria Glazirina Tulkun Yuldashev	Plant Scientist – Biologist/Agronomist Project officer Crop Modelling Consultant Irrigation / Drainage Specialist

Egypt (13-17 April 2011)

<i>NVSSARP offices Cairo</i>	Fawzi Karajeh Atef Swelam	Regional Coordinator, NVSSAR National Prof. Officer, Water Mgt.
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	Bayeh Mulatu, Mohamed Ahmed Salih, Iyassu Ghebretatios,	Senior Researcher, Ethiopia Sudan DG, NARI, Asmara, Eritrea
<i>At ARC Campus Cairo</i>	Mohamed Osman Salah Abdel-Momen Ahmed El-Deen Wakba	ARC Egypt, President Vice-President for Research Vice-President for Extension & Training
<i>Past Trainees that have benefitted from ICARDA training over the past few years</i>	Ragab Hassan Mouna Sulaiman Samir Mahmoud Enas Abbas Neamat Allah Halal Basiouny Fatma Moursi	Socio-Economics Gender and Socio-Economics GIS Socio-Economics Water Productivity Gender and Socio-Economics Gender and Socio-Economic

Annex 7: Analysis of ICARDA interviews: a thematic matrix

Themes	Interviewees	DG	DDG R	ADG- ICC	ADG- CS	DG EAsst	PD & UH	Sc's	TOR	CDU
CGIAR System				✓						✓
Funding and changes in funding patterns				✓			✓			
CRPs and their new approach				✓	✓	✓	✓			✓
ICARDA Goals & Strategic Plan (2007-2016)		✓	✓							✓
Resource availability (especially)						✓	✓	✓		
Scientists / researchers			✓			✓	✓	✓		✓
Recognition of training in appraisals			✓				✓	✓		
Materials / equipment				✓			✓	✓	✓	
Research		✓		✓			✓			
Funding (past and future sources and modes)		✓			✓		✓			✓
Role			✓				✓	✓		✓
NARS Needs/donors		✓	✓		✓		✓	✓		✓
Surveys							✓			✓
Regional Coordination Meetings		✓	✓				✓	✓		✓
Specific Projects			✓				✓		✓	✓
Responsiveness to needs (e.g. of NARS)			✓					✓	✓	
Expertise at HQ		✓	✓			✓	✓		✓	✓
Degree		✓	✓			✓	✓	✓	✓	✓
Non-Degree		✓	✓			✓	✓	✓	✓	✓
Duration of training courses							✓	✓	✓	✓
Partnership with Collaborators (eg NARS)			✓			✓	✓	✓		✓
Curriculum Development (in region/NARS)		✓					✓			
Response time			✓				✓	✓		✓
Quality of Training			✓							✓
Trainees							✓	✓		
Competitiveness of application			✓				✓	✓		✓
Selectivity (Nomination of Trainees)								✓		✓
Technical / Language ability								✓		
Trainers & Quality of Trainers				✓	✓	✓	✓		✓	✓
Curricula & learning outcomes							✓	✓		✓
Consultants , part-time, Alumni			✓	✓		✓	✓			✓
Training Materials (quality, standards)			✓	✓		✓	✓	✓	✓	✓
New Techniques (e.g. E learning)			✓	✓		✓	✓			✓
Opportunities for outsourcing			✓			✓	✓			✓
Competitiveness /benchmarking						✓	✓			✓
Terms of contract for trainees							✓	✓	✓	✓
Logistics, housing, wellbeing							✓		✓	✓
Affordability					✓		✓			✓
Data Base and Information Management							✓			✓
Follow up, Feedback, Effectiveness, Impact							✓	✓		✓
Train the Trainers							✓	✓		✓
Updating							✓			✓
Networks for training and research			✓	✓		✓		✓		
CGIAR centres			✓	✓			✓	✓		✓
Other training organisations			✓	✓			✓			
ARIs and Universities (Regional / Global)			✓	✓			✓		✓	✓
Consultants and part-time trainers			✓	✓			✓			
Follow up, Feedback, Effectiveness, Impact							✓	✓		
Updating							✓	✓		

Annex 8: Regional Offices visits – Interview Responses (Nile Valley and Sub-Saharan Africa)

VISIT TO: ICARDA's Regional Office NVSSARP				BY:DG	DATE: 13-17 Apr
Interview questions	Eritrea	Ethiopia	Sudan	Egypt	
1. <i>Is ICARDA's targeting of specific NARS with specific programs adequate and appropriate?</i>	Yes, but short term and long term trainings needed to upgrade staff, especially young people. Urgent needs for soft skills	Great help from ICARDA since 25 years. Need for more training to adapt to decentralization of research	Yes, appropriate and adequate, but non-degree training badly needed. New needs: breeding, BIOTECH, GIS	Yes, Young scientists program very well accepted	
2. <i>Did ICARDA's CD efforts influence positively the NARS research outputs and outcomes and did they increase the NARS outreach nationally?</i>	Greatly needed and appreciated	Yes, particularly in projects, which were run jointly. Some projects were discontinued after financial resources not renewed	Yes reflected in upgrade of NARS research output	Greatly needed and appreciated	
3. <i>Has an impact assessment taken place</i>	No, but great impact in water productivity, barley improvement, Village Based Cereal enterprise. 2 case studies.	There are initiatives for impact assessment in the country. Results hopefully before the end of 2011	NO, but improvement in research output .	No, but good results in water harvesting benchmarking.	
4. <i>How competitive are ICARDA's degree and non-degree training activities and what are the measures /changes needed to make them more competitive?</i>	Both categories competitive	Both categories were competitive. Yet focus too much on crops. Need for diversification and NARS participation in identifying needs	competitive	ICARDA is competitive. High level of scientific proficiency, good repository of scientific knowledge	
5. <i>Does the % and content of general research skills, soft skills for researchers and extension agents or tailored training for grass root organizations meet needs?</i>	Yes, they do both.	Individual non-degree trainings have helped the capacity building of technical assistants a lot. Group trainings on special issues useful even for beginners. Yet, no benefit from tailored training for	Yes both	Scientific writing, proposal writing, presentation and communication skills required.	

		grass-root organizations. Significant benefit from degree trainings		
6. <i>What lessons can be learned from ICARDA's long experience in capacity building development?</i>		A sustainable knowledge transfer is possible, and so is material exchange and physical capacity building processes. Esp. joint projects	We can rely on the high quality of ICARDA	Can rely on high quality of ICARDA
7. <i>What strengths and gaps exist and what recommendations can be made on modalities, approaches and delivery systems and timelines?</i>	Notice given to trainees – sometimes days! Mixing overseas and local trainees desirable. Also location changes. Soft skills training needed.	Strength: Continued provision of support Gaps: few individuals and group trainings. Seed health training. GIS disease surveillance.	Strength: Information Management, water management, and socio-economic studies. Gaps: Biotech, GIS, appropriate husbandry of wheat and legumes. Recommendation: Regenerate degree training for our young scientists.	Strength: International expertise, strong, highly qualified teams; good network Gap: Lack of information accidental knowledge of trainings. Degree training with many complaints Recommendation: Like to play a role in the outsourcing of ICARDA
8. <i>How effective is the coordination with ICARDA's research and outreach programs with regard to CD activities under various restricted projects?</i>	No problem with efficiency	No problem but limited funding so that skills needed can not be addressed	Effective but not the expected feedback	Good coordination

Annex 9: Regional Offices visits – Interview Responses (West Asia Regional Office - Amman)

VISIT TO: Jordan			BY:DG	DATE: 11 April 2011
Interview questions	Jordan	Palestine	Iraq	
1. <i>Is ICARDA's targeting of specific NARS with specific programs adequate and appropriate?</i>	Yes, but short term and long term trainings needed to upgrade staff, especially young people. Urgent needs for soft skills	In terms of topic area, yes. Logistically, there are difficulties for Palestinian trainees to move around the region.	Yes, appropriate (subject to severe limitations due to the situation in that country).	
2. <i>Did ICARDA's CD efforts influence positively the NARS research outputs and outcomes and did they increase the NARS outreach nationally?</i>	Greatly appreciated	Yes, but severe limitations on mobility from Palestine externally, restricts what can be done.	Yes, but severe limitations on mobility within Iraq restricts what can be done (see below).	
3. <i>Has an impact assessment taken place?</i>	Not formally. Suggested that this is an area for discussion in the neat future	No, but felt that there is impact	Not as such. But the work in Northern Iraq (Nineveh) with alternative cultivation methods is particularly grass-roots orientated and impactful.	
4. <i>How competitive are ICARDA's degree and non-degree training activities and what are the measures/changes needed to make them more competitive?</i>	They are competitive in both senses (i.e. in terms of what is offered, and also the selection of trainees).	There are obvious difficulties in both countries. On the one hand it is difficult to recruit trainees to the criteria set down by ICARDA (particularly where younger trainees are demanded). There are travel difficulties in both countries: e.g. mobility of Palestinians (e.g. to visit ICARDA HQ) and entry of outsiders into Iraq.		
5. <i>Does the % and content of general research skills, soft skills for researchers and extension agents or tailored training for grass root</i>	Significant benefit from degree training and longer-term group training courses at ICARDA. Keen interest in any extension to YSP	Group training on special issues useful. Most effective access for Palestinian trainees is via regional	Due to the particular situation in the country, the most successful training modality is larger group visits to ICARDA HQ by Iraqis.	

<i>organizations meet needs?</i>	and in furthering links between ICARDA and ARI in Jordan.	office (i.e. Amman).	The roll-out to grass roots (extension agents, farmers) is slow and problematic, but as good as could be expected.
6. <i>What lessons can be learned from ICARDA's long experience in capacity building development?</i>	More linkage (via country office) to ARI. An example of good practice observed by the reviewer was a GIS workshop being delivered by ARI staff (most of whom were ICARDA-trained)	Local problems limit effectiveness, although the attitude and quality of ICARDA is appreciated	
7. <i>What strengths and gaps exist and what recommendations can be made on modalities, approaches and delivery systems and timelines?</i>	Soft skills training and scientific writing skills would be useful.	Strength: Continued provision of support. Main weakness is lack of young researchers likely to emerge as well as problems in logistics of mobility within the region.	Also grateful for continued ICARDA support, given the limitations. Again, weakness is in lack of young people, and the isolation of Iraq restricting the flexibility of modes of working.
8. <i>How effective is the coordination with ICARDA's research and outreach programs with regard to CD activities under various restricted projects?</i>	No problem with efficiency	Best approach is via intermediary NARS (e.g. Jordan).	Effective, given the constraints

Annex 10: Regional Offices visits – Interview Responses – North Africa and Syria

VISIT TO: Tunisia – Morocco - Syria	BY: AD	DATES: March 22.-26; 28. To 29 April 12, 14. 20011	
Interview questions	Tunisia	Morocco	Syria
1. <i>Is ICARDA's targeting of specific NARS with specific programs adequate and appropriate?</i>	Yes, but degree training needed and long term training	Yes, long term training needed	Yes, long term training needed
2. <i>Did ICARDA's CD efforts influence positively the NARS research outputs and outcomes and did they increase the NARS outreach nationally?</i>	Yes, new varieties Better seeds; maps for water and land; gene bank	Yes, new varieties Better seeds; maps for water and land; gene bank; Pest resistance	Yes, papers and theses, new varieties, better seeds; no-till –drill; strengthen national outreach;
3. <i>Has an impact assessment taken place</i>	No, must be developed	Indicators neede	Need to be developed
4. <i>How competitive are ICARDA's degree and non-degree training activities and what are the measures/changes needed to make them more competitive?</i>	They are, but more is needed	ICARDA's non degree training less competitive than CIHEAM	Very competitive, even compared to US output
5. <i>Does the % and content of general research skills, soft skills for researchers and extension agents or tailored training for grass root organizations meet needs?</i>	Yes they have good preparation for research in the country, not so much for the soft skills. Also the extension agents need more training	Yes for science and soft skills, but extension need more development	Yes they have good preparation for research in the country, not so much for the soft skills. Extension agents are well prepared
6. <i>What lessons can be learned from ICARDA's long experience in capacity building development?</i>	Must be adapted to new technologies and environments, like climate change	Must be adapted to new technologies and environments, like climate	Must adapt to new technologies and environments (climate)
7. <i>What strengths and gaps exist and what recommendations can be made on</i>	Strengths: competence; Knowledge of country needs;	Strengths: competence; Knowledge of country needs;	Strength: degree training, university involvement,

<i>modalities, approaches and delivery systems and timelines?</i>	readiness to cooperate; broad field of interest; well connected with some other CGIAR centres, government institutes and universities; Trust; Threats: Budgetary; rising competition; problem of following – up; climate, drought; mega-umbrella Recommendation: Improve Information flow and establish NA regional meetings.	readiness to cooperate; broad field of interest; well connected with some other CGIAR centres, government institutes and universities; Trust; Threats: Budgetary; rising competition; problem of following –up; climate, drought; mega-umbrella Recommendation: Improve Information flow and establish NA regional meetings.	cooperation with NARS Threats: Budgetary; rising competition; problem of following –up; climate, drought; mega-umbrella Recommendation: For non-degree trainings need to develop a Young Scientist program for training to rejuvenate the stock of Human Resources in Syria's scientific community.
8. <i>How effective is the coordination with ICARDA's research and outreach programs with regard to CD activities under various restricted projects?</i>	Can be developed further Involve CD person in project / proposal preparation	Very efficient because of MCGP grant program, which sponsors one full ICARDA senior scientist working for training. Yet, Can be developed For project / proposal preparation	Very effective because of close cooperation with government agencies
Summary: NARS capacity development needs			
Tunisia is a most valuable partner for ICARDA and this Partnership must be further developed. ICARDA is an outstandingly good and highly appreciated training and research institution. It needs to strengthen the young scientists. All partners asked for training in proposal and scientific writing and for tools and applications of e learning c. NA regional meeting is being requested.			
Morocco is a most valuable partner for ICARDA and this Partnership must be further developed. ICARDA is an outstandingly good and highly appreciated training and research institution. It needs to strengthen the young scientists All partners asked for training in proposal and scientific writing and for tools and applications of e learning NA regional meeting is requested. NA regional meeting is being requested			
Syria needs to strengthen the young scientists. All partners asked for training in proposal and scientific writing and for tools and applications of e-learning NA regional meeting is requested.			

Annex 11: Regional Offices visits – Interview Responses – Turkey and Uzbekistan

VISIT TO: Turkey and Uzbekistan	BY: MG	DATE: April 12 – 16 20011
Interview questions	Turkey	Uzbekistan
1. <i>Is ICARDA's targeting of specific NARS with specific programs adequate and appropriate?</i>	Yes, but more training cooperation desired: preferred long term	Yes, but closer cooperation desired preferred long term
2. <i>Did ICARDA's CD efforts influence positively the NARS research outputs and outcomes and did they increase the NARS outreach nationally?</i>	yes	definitely
3. <i>Has an impact assessment taken place</i>	Very much needed	needed
4. <i>How competitive are ICARDA's degree and non-degree training activities and what are the measures/changes needed to make them more competitive?</i>	competitive	English preparatory courses have been great comparative advantage
5. <i>Does the % and content of general research skills, soft skills for researchers and extension agents or tailored training for grass root organizations meet needs?</i>	Needs improvement	Needs a lot of improvement
6. <i>What lessons can be learned from ICARDA's long experience in capacity building development?</i>	Must be adapted to new technologies and environments	Must be adapted to new technologies and environments
7. <i>What strengths and gaps exist and what recommendations can be made on modalities, approaches and delivery systems and timelines?</i>	Strengths: competence; Knowledge of country needs; readiness to cooperate; broad field of interest; well connected with some other CGIAR centers government institutes and universities; Trust; diplomatic skills Threats: Budgetary; rising competition; problem of following –up; climate, drought; mega-umbrella	Strengths: competence; Knowledge of country needs; readiness to cooperate; broad field of interest; well connected with other CGIAR centers, government institutes and universities; Trust; diplomatic skills; networking in the region Threats: Budgetary; lonely cowboy syndrome; low level of skills, particular English and soft skills of trainees; vastness of region; problem of following –up; climate, drought; mega-umbrella
8. <i>How effective is the coordination with ICARDA's research and outreach programs with regard to CD activities under various restricted projects?</i>	Can be developed further	Restrictions cause social, technical, and budgetary problems. Pooling of money to pay for general CD functions desirable

Summary: NARS capacity development needs
Turkey is a most valuable partner for ICARDA and this Partnership must be further developed. Turkey is not completely self-funded. Additional support and synergies are needed. There are too many untrained people. Training is the key and is needed almost infinitely. ICARDA is an outstandingly good and highly appreciated training and research institution. Turkey needs impact assessment training and ICARDA should cooperate with Turkish development centers
Uzbekistan has a special role in the portfolio of ICARDA outreach regions due to historical and cultural issues, which should be appreciated. Training is the key and is needed almost infinitely. ICARDA is an outstandingly good and highly appreciated training and research institution. ICARDA should insist on training criteria and should help to provide prerequisite training by cooperating with national institutions. ICARDA should begin developing distance learning, the offices should be connected through interactive data base, and for the trainers – and trainees the concept of oriented continuous education in the donor interest should be developed. Particular interest of the Kashkardaya Scientific Research Institute in Karshi to become a Center of Excellence and regional Hub.
Summary: Comments from ARIs
Turkey: Cooperation with ICARDA of high value for ARIs on all levels of training and coaching of researchers
Uzbekistan: Cooperation with ICARDA of high value for ARIs esp. Tashkent State Agrarian University re: internships and practical and curriculum development

Annex 12: Example Response to TOR questions: Ethiopia

1. Is ICARDA's targeting of specific NARS with specific programs adequate and appropriate?

The Ethiopian NARS has been enjoying, for well over 25 years, the provisions from ICARDA of different supports that include trainings of various natures (non-degree trainings for individuals, groups, degree trainings and scientist visits), provision of research materials, mainly germplasms and physical capacity building such as vehicles, field and laboratory and office facilities. In the early years when the Ethiopian NARS had only 22 centers out of which eight have been working on crops on which ICARDA has global mandates, the training opportunities that have been made available to us annually used to be adequate. But, after the decentralization of agricultural research in Ethiopia and the establishment of regional research institutes and more centers, the trainings though appropriate have become increasingly inadequate. All the germplasms provisions are all appropriate and adequate whereas the physical capacity building has been linked with the availability of full-fledged projects.

2. Did ICARDA's capacity development efforts influence positively the NARS research outputs and outcomes and did they increase the NARS outreach nationally?

The capacity development efforts of ICARDA in the Ethiopian NARS in relation to capacity building have been influencing the research work positively. This has been mainly the case when there are active projects jointly planned and run by ICARDA and the Ethiopian NARS. A case I am more familiar with and might serve as one of the successful co-run projects was the barley improvement project through which several researchers including me received higher degree training. Beside the degree trainings, more beginners and technical assistants received non-degree training at ICARDA. Moreover a series of group trainings, local travelling workshops and research planning and reporting fora have been organized, annually, until the project ended. This has allowed the Ethiopian NARS to train more research assistants and development agents on important topics that could help them see the development of agriculture in an integrated ways than otherwise. All the capacity development efforts of ICARDA have indeed been reflected in the NARS research outputs and outcomes and also increased the NARS outreach nationally. In barley, we did not keep the momentum and continued in a manner that should be after the project ceased due to the limited financial resources.

3. Has an impact assessment taken place recently assessing what was learned and whether this was reflected on national GDP, population health, improving livelihoods, food security or environmental sustainability? What were the lessons learned from the impact assessment, if it had taken place?

This is undergoing across the country to see the impact of technologies transferred to farmers. We expect that the assessment results will be made available before 2011 passes and will get answers to this question.

4. How competitive are ICARDA's degree and non-degree training activities and what are the measures/changes needed to make them more competitive?

Both categories of trainings have indeed been competitive and we have been benefiting both from the degree and non-degree trainings that ICARDA has been organizing. However, regarding the non-degree trainings the diversity has been low and focused more on crops, some socio-economic and research extension areas. In these areas, too, the opportunities that have been made available to us have also been limited in number. This is despite the large geography of the country and the expanding NARS done in order to respond to the ever increasing demand for better agricultural technologies by the rural mass. Therefore, in order to make the trainings more responsive to the Ethiopian NARS current needs, participating of the Ethiopian NARS, directly in the identification of areas of individual and group trainings and their organization and implementation is important.

5. Does the percentage and content of general research skill development training, soft skills for researchers and extension agents or tailored training for grass root organizations meet the needs of ICARDA's partners?

Although both the content and proportions of practical and soft skill focused trainings received by the Ethiopian NARS are difficult to put in absolute terms, they have been meeting some of the needs of the Ethiopian NARS. For instance the individual non-degree trainings have been very useful in advancing the capacity of technical assistants to carry out the routines with confidence and in better ways. This has been very much the case for most that had the chance to attend such training. The group trainings that have been given on special topics such as integrated disease and pest management have been very useful even for beginner researchers. On the other hand, we benefited least from tailored training for grass root organizations such as improving the skill and knowledge base of informal seed growers who are instrumental in the accelerated diffusion of new crop varieties in the country at large. The benefit from degree trainings have been significant and include the sponsorships given to some who studied in foreign Universities, for others who studied within the country and also those who were given the opportunity to carry out in full or partially of their theses works at ICARDA. All higher degree trainees have been fulfilling the needs of the Ethiopian NARS during and after completion of their respective studies.

6. What lessons can be learned from ICARDA's long experience in capacity building development?

From the Ethiopian NARS perspective, the lesson that can be learned is the possibility of having developed a sustainable knowledge transfer, material exchange and physical capacity building processes that could continually provide needed supports. These have been more significant during periods when there are full-fledged projects co-run by ICARDA and the Ethiopian NARS.

7. What strengths and gaps exist and what recommendations can be made on modalities, approaches and delivery systems and timelines?

The strength that exists is the continued provision of support to the Ethiopian NARS in different areas of significance to the development of agricultural research and generation of usable outputs. The gaps in light of the needs of the Ethiopian NARS include the following: (i) individual and group trainings have been few; (ii) there are no regular assessment of the physical and material capacity needs of the Ethiopian NARS from the partnership; (iii) critical shortage of active full-fledged projects The working modalities or protocols should be co-

worked by emphasizing all the time on the current needs of the Ethiopian NARS like as what has been gathered using questionnaires developed and distributed by ICARDA and filled by different directorates in the Ethiopian NARS. The approaches to be used and the delivery systems should be made economical and allow the transfer of skill and knowledge to more researchers, assistants in the Ethiopian NARS, development agents in the extension sector and contact farmers. Continual assessment of the needs of the Ethiopian NARS will allow us to know the current needs and accordingly plan timely trainings.

8. How effective is the coordination with ICARDA's research and outreach programs with regard to capacity development activities under various restricted projects?

There has not been problem of efficiency in effecting coordinated capacity development activities with ICARDA whenever there have been co-run full-fledged projects. It is rather the unavailability of significant funding to address the Ethiopian NARS critical needs (restricted projects) in a timely manner that has been interfering with the progresses.

Annex 13: NARS Training Needs Assessment Survey



Since its inception in 1977, the International Center for Agricultural Research in the Dry Areas (ICARDA) has been working closely with NARS partners on contributing to the improvement of livelihoods of the resource-poor in dry areas by enhancing food security and alleviating poverty through research and partnerships to achieve sustainable increases in agricultural productivity and income, while ensuring the efficient and more equitable use and conservation of natural resources. Parallel to its research activities, ICARDA has trained more than 16,800 trainees in group and individual training in areas such as biotechnology applications, crop improvement, seed production and delivery systems, integrated pest management, natural resources management particularly on-farm water use efficiency and productivity, agronomy- particularly conservation agriculture and soil fertility, crop-livestock integration, small ruminants management and husbandry, rangeland management and forage production, protected agriculture and value-added activities, adoption and impact assessment, experimental design and statistical analysis and quality assurance among others. In its attempt to continue its demand-driven training and capacity development activities, ICARDA is distributing this questionnaire to assess the needs of its partners in the coming 3 years. In our capacity development activities we always keep abreast with world developments, the information technology revolution and the research and training tools revolution.

Kindly answer the following questions to the best of your knowledge. Also, please attach an organizational chart of your organization (if available). Once filled, please return the questionnaire to your ICARDA's contact. We appreciate your support and collaboration.

1. Which disciplines, programs, departments and staff in your organization you think should benefit from ICARDA's Capacity Development programs and training activities?

Department (s):

Program (s):

Suggested Staff: positions and numbers (you may attach a list)

2. What knowledge, skills and attitudes are necessary for your staff to conduct their work properly and to achieve the goals of the organization? Please refer to their job descriptions and to the following knowledge and skills that ICARDA offers, and add other needs that are not in the below table.

Knowledge, skills and attitude necessary for the job	Current level					Priority of this knowledge, skill or attitude change				
	Excellent	Good	Average	Poor	Unsatisfactory	Very High	High	Moderate	Low	Very Low
Ex. Biotechnology										
Cereal (wheat and barley) & food legume (lentil, faba bean and chickpea) breeding										
Breed Characterization										
Integrated Management of Cereal and Legume Pests										
Pre-Breeding & Improvement of Wheat Collection, Conservation and Utilization of Genetic Resources										
Crop Improvement and Crop Resilience Technologies										
Variety Identification, Maintenance & Quality Seed										
Seed Health, Quality Seed Production, Seed Multiplication and Seed Enterprise										
Water Management technologies (supplemental)										
Water harvesting and Ground Water Recharge										
Watershed Characterization										
Salinity Management										
Improved land management practices and technologies										
Integrated Natural Resource Management										
Conservation of Agro-biodiversity										
Agronomy research (conservation agriculture)										
Protected agriculture and high-value crops										
Animal nutrition and the use of agro-industrial by-products										
Small ruminants management & husbandry										
Livestock Enhanced Productivity										
Dairy processing as income generating activity										
Mapping Rangeland Resources										
Rangeland management & forage production										
Livelihood assessment & poverty analysis										
Precision Farming										
Extension Development: Communication with farmers and Change Management										
Gender Integration in Research										
Experiment design & data analysis										
Adoption & Impact Assessment Approaches										
Project Management										
Risk Management										
Natural Disaster Management										
Policy Development										
Quality Assurance										
Intellectual Property Rights										
Proposal Writing										
Participatory Decision Making										
Women Leadership & Decision Making										
Marketing and Exporting for Farmers										
Small Business Enterprises										
Presentation and Communication Skills										
Other (Specify)										

3. Once you identify the knowledge and skills needed please rank the highest 10 of them in terms of priority to your organization, in the following table (Priority areas are areas that would harm the organization's performance if not done properly)

Priority	Knowledge, skill or attitude needed
1	
2	Etc.
10	

4. Which of the following types of capacity development and training are appropriate for your staff?
Please indicate its level of appropriateness to your staff and your organization

Appropriateness of Training/Capacity Development Activity	Very	Less	Not
Short term (1 to 4 weeks) group training			
Long -term (Over 4 weeks) group training			
Individual degree mentoring (for M.Sc. & Ph.Ds)			
Individual short term (3 weeks) non-degree training			
Individual long term (up to 6 months) non-degree training			

5. What sort of training are you interested in:

☐ Train the trainer (Advanced training to train other staff)
☐ Train individuals with direct responsibilities to the job
☐ Both
☐ Other (please specify)

6. What are your training funding sources? Please allocate % in each of the below choices.

☐ Your internal organization training budget
☐ External donor budget
☐ Collaborative research program with ICARDA
☐ Other (Please specify)

7. Do you prefer that the group training takes place at:

☐ ICARDA headquarters in Aleppo
☐ ICARDA's nearest regional office
☐ Locally in your country or organization
☐ Other countries, institutions outside of your region (please name)
☐ Other (please specify)

8. Will you also need to benefit from ICARDA's expertise in organizational restructuring and development to develop your organization systems and policies to meet objectives?

Yes ☐ No ☐ Comment _____

9. Please name the most beneficial training activities provided by ICARDA to your organization in the last 5 years.

10. Additional comments or suggestions regarding the ICARDA training and capacity development activities:

Annex 14: Eritrea Needs Assessment Visit Results

Prepared by: Iman El-Kaffass

Introduction:

The vision of the Agricultural Sector in Eritrea is **to ensure food security for the population**. This was emphasized by every responsible we interviewed during the capacity development needs assessment visit to Eritrea. The statements of the Minister of Agriculture were: “The Eritreans are hard working people who know what they want to do. What we need is targeted technical support and case studies of successful countries in the region. These case studies could be of practical aspects of agricultural development, of innovation in using local material, or of types of crops that are suitable to this changing environment, something that can help right away.”

The visit to Eritrea was for three days from November 20 to 24 during which senior authorities including HE the Minister of Agriculture, the Directors of Departments in MOA and officials from different NARS institutions were interviewed regarding the needs of capacity development in agriculture in Eritrea. In addition to the interviews multiple documents were collected from the institutions visited that helped identifying the capacity development needs. The methodology used in the needs assessment is described below. The results of the interviews and the document reviews were compiled and analyzed. This report presents the findings and recommendations.

Methodology:

The needs assessment was based mainly on semi-structured interviews and document review. Interview questions were prepared in advance (copy attached) asking specific questions but also allowing opportunity for arising questions to be asked and answered. Individual interviews were used with senior authorities namely HE the Minister of Agriculture and Directors of Departments within the Ministry of Agriculture and the NARI. Group interviews were used with Ministry and NARI technical staff and unit heads. Individual interviews were for an hour each, while group interviews were for two to three hours.

Answers to questions asked during the interviews were reported on paper directly, so that by the end of the interview all statements are documented in writing. Interviewees were asked about the thematic areas that were of priority to their departments/units, the type of training they would like ICARDA to offer; whether short term (2 weeks) or long-term (4 to 6 months), group or individual training, degree or non-degree training. Interviewees were also asked whether they wanted the training to be offered in Eritrea, in another country in the region or at ICARDA headquarters in Aleppo, Syria. Interviewees were requested to state their opinion on whether it is preferable to open the training to MOA and NARI scientists from all over Eritrea or to focus on one geographic or thematic area and then test the results. Finally, interviewees were asked to identify target audience for the training and whether the aim was to train the trainer or to train individuals on the job.

Highlights of the Assessment Survey:

1. **Six training priorities:** Irrigation Water Management and Soil Enrichment, Integrated Crop and Livestock Development, Integrated Farming System (Farm Management Planning and Development), Seed Selection and Production, Dairy Production Technology and Marketing and Monitoring and Evaluation.
2. The preference to **develop capacity by “catchment” or “sub-catchment”**: so training should not target all of agricultural staff in Eritrea but should target one catchment with comprehensive training approach (animals, crops, water, rangeland, forages, policies, etc.). Once impact is assessed the experience can be transferred to another catchment. This can be a livelihood improvement project that ICARDA leads in Eritrea.
3. Preference is for **group training for 2-4 weeks conducted in Eritrea**, unless there is a real justification to conduct it elsewhere. Only special individual training may be conducted abroad.

4. Preference is given to **train the trainer**, whenever this is possible, so that the impact of the training can be widened and can reach more Eritrean populations.
5. **Relevant knowledge transfer** should be the focus of all training and research activity rather than ICARDA researchers and scientists doing the work themselves.
6. Preference is given to training that has instant impact: targeting **going from “lab” to “farmer.”**
7. Training of **extension agents** is a priority especially in communication with farmers and in reporting of results. Also training of **women and farmers associations**, in addition to **researchers**.
8. There is an urgent need for **technical assistance in: a) the establishment of a seed unit** (organizational wise) and the development of a 5 years plan for the unit, **b) the establishment and management of a Greenhouse, and c) capacity strengthening of the central lab at the MOA.**

Description of the Visit and Main Findings: The visit was for 3 days during which the following authorities were interviewed (the agenda of the visit is attached):

Ministry of Agriculture:

1. HE the Minister of Agriculture: Mr. Arefaine Berhe
2. The Planning and Statistics Division Head (IFAD Coordinator): Mr. Ukbay Tedros Agricultural Promotion and Development Department
3. The Director General of Agriculture Promotion and Development: Mr. Heruy Asghedom
4. The Director General of Agriculture Extension Department: Mr. Bekuretsion Habte
5. Head Seed Unit: Mr. Seyoum Mesfin Regulatory Services Department:
6. The Director General of Regulatory Services Department: Mr. Tekleab Mesghena Zoba Agriculture Services:
7. The Head of the Ministry of Agriculture in Zoba Debub: Mr. Bahta Tedros
8. The Head of the Ministry of Agriculture in Zoba Maekal: Mr. Ghide Haile Hamelmalo Agricultural College:
9. The Dean of HAC: Mr. Semere Amlesom
10. Head of Department: Mr. Tesfamichael Abraha National Agricultural Research Institute:
11. The Head of NARI: Dr. Iyassu Ghebretatios
12. The Human Resources Development Director:
13. Head of the Crop Improvement Division: Mr. Tsegay Berhane
14. Head of the Livestock Research Division: Dr. Tsegay Tesfay
15. Head of Natural Resources Management Division: Mr. Asmerom Kidane
16. Head of Agricultural Engineering Division: Ms. Soloma Haila

Expressed Training Needs by Problem Issue:

1. Water Management:

The interviewees agreed that **rain infrequency and non-uniformity** is the main problem for Eritrea. They all started by mentioning how vital water management was to them. The Head of Agriculture in Zoba Debub stated that, “Eritrea needs dams and dam management, water harvesting, spate and sprinkler irrigation and data processing technology.” He added that Zoba Debub has around 140 micro dams but they are unable to utilize them effectively because there are no qualified human resources. The head of the Planning and Statistics emphasized the need to move from rain fed agriculture to irrigated and supplementary agriculture and to focus on soil and water conservation and the reduction of soil erosion. He emphasized the importance of watershed management, GIS Modeling, soil and water conservation, ground water pumping and farm power systems. There is also a need for training to regulate the use of irrigation water, and to measure and manage the water holding capacity of the land.

2. Staple Crops, Cereals and Legumes:

There is a need to train junior researchers in legumes and pulse on innovation and to prepare them to play a more substantive role in the field. Also, a big gap exists in the area of plant protection, improved crop

resilience, cereal disease control, IPM and training for weed scientists. Also, training is needed on crop varieties with high yield and on integrated approaches to crop and livestock development. Researchers also emphasized the need for training on biotechnology and conservation and utilization of genetic resources.

3. Seed:

Training on seed was emphasized as high priority by the interviewees. The need includes seed production and multiplication, seed enterprise, variety maintenance, screening seed varieties, lab standards, seed health, seed packaging and processing, seed quality certification, regulating seed standards and assistance in the development of the central lab used for seed quality control at NARI.

4. Forages, Rangeland and Livestock Production:

There is a need to introduce new varieties of livestock, to train on the selection, improvement and management of breeds, on fodder production, silage introduction, and livestock health. Also, training in this regard should cover dairy production technology, improving milk quality, practical models of production, processing and marketing and success stories in this regard. As for Forages there is a need to train on development of alfalfa and on means to improve the value of forages to fill in the gap in feed and for rangeland development in western low-land and Eastern low-land.

5. Conservation Agriculture:

Due to the importance of the issue, training needs were emphasized on means to treat and utilize the land effectively, effect multiple harvesting even in dry periods, combating land degradation, improvement of land productivity and reducing or eliminating tillage operations. The expressed needs for training in this area also covered practicing crop rotations, using fertilizers as appropriate and the accompanying change in soil management practices.

6. Horticulture:

The tissue culture lab knowledge is needed. At NARI they have the lab and equipment but they need training. It was suggested that an expert may travel to Eritrea for a month to conduct the training. There is also a need for an expert to help build a green house, start its operation, certify the operation and train people down to farmers' level on using it. Training on the functioning of cold stores for horticultural products was also expressed as a need. This expertise is needed for few months as the regular training of a week or two will not be enough for that purpose.

7. Women and Community Development:

The need for agricultural income generating activities for small farmers and communities was emphasized. The emphasis was on training on small irrigation projects for women around which they can raise cows or vegetables, in addition to capacity building of leaders of farmers' associations such as fruit and vegetables associations, poultry associations and dairy associations on increased productivity and marketing techniques.

It was suggested that ICARDA leads a project on livelihood improvement of a defined "geographical area" and bring in other centers with different expertise to train the lead farmers on farm management with a comprehensive approach that should include the improvement of high value crops, livestock production, seed and crop processing and marketing, with a focus on income generating activities and on impacting production, productivity and sustainability.

Levels and Modalities of Training:

Train the trainer is the focus of decision makers at NARI and the Ministry of Agriculture. Young researchers as well as extension people, pastoralists, farmer associations leaders at the levels of zoba, sub-zoba and kababis (cluster of villages) form the recommended population for training. These potential trainees need to have exchange with and exposure to their counterparts in other countries.

There is also an interest in sending young researchers on non-degree training missions to ICARDA's headquarters or regional offices. Further discussions regarding the most appropriate fields and the duration of the recommended non-degree training should follow. As for degree training, and due to the fact that very few

researchers in NARI are enrolled or plan to enroll in degree training, scholarships are needed in this regard and ICARDA's support is sought. Finally, NARI and the Ministry of Agriculture welcome seminars by ICARDA scientists on new issues and technology in Agriculture as part of the knowledge transfer.

Summarized Priorities:

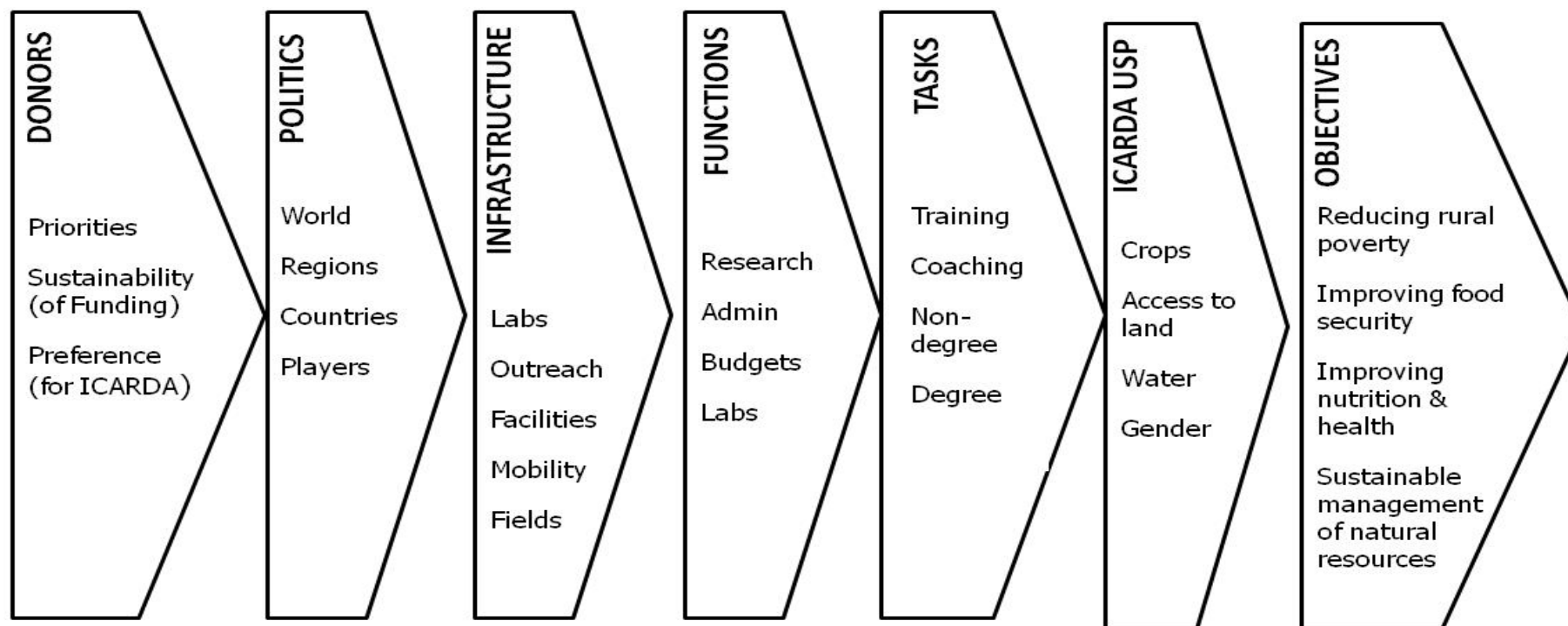
The following table summarizes the areas of capacity development priorities and allows for ICARDA's planning of its strategy in the coming 5 years:

Annex 14: Eritrea Needs Assessment Visit Results (continued)

Training Thematic Area	Priority topics	ICARDA Plan in 5 years (to be determined with involved parties from ICARDA and Eritrean MOA & NARI representatives)
Water Management	Drip Irrigation Spate Irrigation Supplemental Irrigation Soil and Water Conservation Erosion Reduction Watershed Characterization Terracing Dams Construction and Management Water Harvesting Ground Water Recharge and Enrichment Standards to Regulate and use Irrigation Water Drought Management Soil, Water, Plant Relations Water Management Systems' Planning	Urgent 2011- Eritrea & 2 at HQ 4 to 6 wks- 1 trainee- HQ - 2012
Cereals and Legumes	Improved Crop Resilience Conservation and utilization of Genetic Resources Biotechnology Integrated Management of Cereals & Food Legume Pests Disease Control – IPM Wheat Improvement	ICARDA Scientists to visit 2 to 4 weeks in 2011, if possible 1 researcher to be trained at HQ to become Sr. Res in Legum April/May 2011 – 10 days/Eritrea
Seed	Screening of Seed Varieties Local Seed Potential Assessment Identifying Quality Seed of Cereals & Legume Seed Production and Multiplication Seed Enterprise Seed packing, processing and certification Regulating Seed Standards	2012 Seed lab standards/Eritrea May 2011- then repeated yearly for 5 years-group/Eritrea
Rangeland	Community Based Rangeland Range Development	2012 Group training/Eritrea
Forage	Addressing Feed gaps Alfalfa	Group training/Eritrea Zobas 2012

Livestock	Livestock Enhanced Productivity Feed and Fodder Production Milk Improvement Dairy Products Animal Farm Management	ICARDA Scientist to visit Eritrea for 6-8 weeks
Conservation Agriculture	Efficient Land Use Multiple Harvesting and Crop Rotation Reducing Tillage Sustainable Soil Management Practices and Technologies	1 Scientist to visit HQ 4-6 wks
Horticulture	Tissue Culture Green House and Cold Stores Management	ICARDA Scientist to visit for 3 months + 1Ph.D. &2 technicians receive training at HQ for 6 months
GIS	GIS in Support of Policy and Management Interventions	Needed before May 2011 at ICARDA headquarters
Management Training	Station Management Gender Mainstreaming Risk and Vulnerability Management Disaster Management Participatory Service Delivery Land Conflict Management Decision Making and Problem Solving Change Management Time Management Women Leadership	At HQ for groups of 20 starting 2012
Communication for Extension Business Farmers	Communication and Dissemination of Info Surveying and Reporting	Group training for 20 each in Eritrea, to be repeated over 5 years
Technical Skills Training	Scientific Writing Research Proposal Writing Design of Experiments Statistical Analysis Research Methodologies Monitoring and Evaluation Adoption and Impact Assessment	2012 for young scientists in NARI Same Same

Annex 15 The Capacity Development Value Chain



ANNEX 16: Capacity development collaboration across ICARDA

(Key: OR= Operational Responsibility; C= must cooperate; I = must be informed; D= decides; FD= Final Decision; A=Advise (-)=Not Applicable)

ICARDA CD FUNCTION	CGIAR CD PLATFORM	BOARD TECHN. COM	MANAGEMENT COM	DDG, RESEARCH	ADG ICC	ADG CORP. SERV.	ADG GOVT LIAISON	PROGRAMMES / UNITS	CDU	CODIS	IT	CD COMMITTEE	TRAINING COORD. CTEE	OUTREACH (NARS)	OUTREACH (DONORS)	GRANTS MGMT	FINANCE	HR	VISITORS	FACILITIES, SECURITY
CD ACTIVITIES																				
CD STRATEGY	I	FD	D	C	D	I	C	C	OR	C	C	C	I	C	C	C	I	I	I	I
CD POLICIES	A	FD	D	C	D	I	C	C	OR	C	C	C	I	C	C	C	I	I	I	I
CD PROCEDURES	A	FD	D	C	C	I	C	C	OR	C	C	C	C	C	I	C	I	I	I	I
PLANNING COURSES	I	I	I	I	I	I	I	OR	OR	I	I/C	C	C	C	C	C	I/C	I	I/C	I/C
COSTING OF COURSES	I	I	A	I	D	I	I	C	OR	I	I/C	C	I/A	C	I	C	I/C	I	I/C	I/C
AGREEING CD COURSES	I	I	D	D	FD	I	I	C	OR	I	I	D	I	C	C	I	C	I	I	I
ANNOUNCE/ PROMOTE	I	I	I	I	I	I	I	C	OR	-	-	C	I	C	I	I	I	I	I	I
TRAINING DELIVERY	I	I	I	I	I	I	I	OR	C	-	C	-	C	C	I	I	I	I	I	C
TRAINER SELECTION	-	-	I	I	I	-	-	OR	C	-	C	D	C	C	-	-	I	I	-	-
TRAINEE SELECTION	-	-	I	I	I	-	-	C	OR	-	I	C	D	FD	-	-	I	I	-	-
MATERIAL DEVELOPT.	A	-	-	I	I	I	-	OR	C	C	C	D	C	A	-	-	C	-	-	I
TRAINEE INSURANCE	-	-	-	-	-	I	-	-	C	-	-	I	A	I	-	-	I	OR	C	C
TRAVEL & VISA PROCESSING	-	-	-	-	-	I	-	-	C	-	-	I	A	I	-	-	I	-	OR	C

ICARDA CD FUNCTION	FACILITIES, SECURITY etc	VISITOR SERVICES	HR	FINANCE	GRANTS MGMT	OUTREACH (DONORS)	OUTREACH (NARS)	TRAINING COORD.CTEE	CD COMMITTEE	IT	CODIS	CDU	PROGRAMMES / UNITS	ADG GOVT LIAISON	ADG CORP. SERV.	ADG ICC	DDG, RESEARCH	MANAGEMENT COM	BOARD TECHN. COM	CGIAR CD PLATFORM	CD ACTIVITIES
ACCOMMODATION	C	OR	-	I	-	-	I	A	I	-	-	C	-	I	-	I	-	-	-	-	-
TRANSPORT	C	OR	-	I	-	-	I	A	I	-	-	C	-	I	-	I	-	-	-	-	-
EVALUATION / FEEDBACK	I	I	I	I	-	I	C	C	C	I	I	OR	C	I	I	I	I	I	I	I	-
FOLLOW-UP	I	-	OR	I	I	-	C	C	D	I	-	OR	I	-	C	FD	I	D	-	-	-
DATABASE	I	-	OR	I	I	-	C	C	D	OR	-	OR	I	I	C	FD	I	D	-	I/C	-
E- LEARNING	I	-	C	I	I	-	C	C	I	OR	C	OR	OR	OR	C	FD	C	D	-	I/C	-
E-MAIL FOR TRAINEES	I	-	C	I	I	-	C	C	I	OR	-	OR	I	I	C	FD	C	D	-	I	-
ROOMS & EQUIPMENT	I	-	-	C	-	-	I	C	D	I	-	OR	C	-	C	I	D	I	I	-	-
PCs FOR TRAINING	I	-	-	C	-	-	I	C	D	OR	-	OR	I	-	C	I	D	I	I	-	-
LABS & CONSUMABLES	C	-	-	I	-	-	-	C	D	I	-	OR	OR	OR	-	C	D	C	I	A	-
TECHNICAL SUPPORT	-	-	C	C	-	-	-	-	A	C	OR	OR	C	-	C	D	D	C	C	A	-
CDU FACILITIES	I	I	C	C	C	-	I	A/I	D	C	C	OR	C	C	-	C	D	C	C	I	-
WEBPAGE	-	-	A	A	A	I	C	C	D	OR	C	OR	C	C	C	I	C	FD	D	I	-
REPORTING TO DONORS	-	-	-	C	-	A	I	-	C	-	-	OR	C	C	I	I	C	I	I	A	-

Annex 17 Capacity development quality management diagram according to ISO 9000

5. Management Responsibility		6. Resource Management		7. Product – Service Realization		8. Measurement, Analysis, Improvement	
5.1	Management Commitment Vision & Mission	6.1	Issues to be considered Strategic Plan	7.1	Issues to be Considered Phases of CDU Service Realization	8.1	Issues to be considered Strategic Plan
5.2	Needs and Expectations of Interested Parties	6.2	People	7.1.1	Logistics		
5.2.1	The Community	6.2.1	Hiring Administrative Staff	7.1.2	Train the Trainers	8.2	Measurement & Monitoring
5.2.2	Trainees	6.2.2	Hiring Teachers / Researchers	7.1.2.1	Program	8.2.1	M&M of System Performance
5.2.3	The Business Community	6.2.3	Salary & Benefits	7.1.2.2	Curricula	8.2.2	M&M of processes
5.2.4	Statutory & Regulatory Requirements and Legal Bodies	6.2.4	Involvement of People, Awareness, Motivation	7.1.2.3	Practice (internships and practical) Field	8.2.3	M&M of Product / Service
5.2.5	Board and Sponsors	6.2.5	Training & Development	7.1.2.4	Degree and non-degree	8.2.4	M&M satisfaction of Interested Parties
5.2.6	The Academy	6.2.6	Health & Safety	7.1.2.5	CI, Marketing, Media, Fundraising		
5.2.7	Partners other Universities	6.3	Work Environment Infrastructure	7.1.2.6	Teaching, Tutoring, Coaching, Didactics	8.3	KPI s
		6.3.1	Work place	7.2	Managing CD Activities in accordance with Interested Parties and Existing Circumstances		
5.3	Quality Policy	6.3.2	Equipment, Teaching Material	7.2.1	Specification of Product / Service		
5.4	Planning & Budgeting	6.3.3	Infrastructure and Access to Laboratories	7.2.2	Review of Specification (Curricula etc.)		
5.4.1	Quality Objectives	6.3.4	Access to Knowledge Pool	7.2.3	Change Management	8.4	Control of Non-Conformity
5.4.2	Quality Planning	6.4	Information Material: Books, Journals, Data Banks	7.3	Design & Development of Processes	8.4.1	On Non-Conformity
5.4.3	Budgeting Implications	6.5	Infrastructure: Accommodation, Mobility Trainers & Trainees	7.4	Purchasing, Acquisitions	8.4.2	Audits, Self-evaluation
5.5	Responsibility, Authority, Communication - Governance			7.5	Production / Service Operations	8.4.3	Non-conformity Review
5.5.1	Responsibility and Authority	6.6	Suppliers & Partners	7.5.1	Controlled Interdependence of all		

5. Management Responsibility		6. Resource Management		7. Product – Service Realization		8. Measurement, Analysis, Improvement	
					Processes		
5.5.2	Management Representative	6.7	Natural Resources	7.5.2	Validation: Total Integrated Quality Management. (Independence of Verification)	8.5	Analysis of Data
5.5.3	Internal Communication	6.8	Financial Resources	7.5.3	Identification, Traceability		
5.5.4	External Communication	6.8.1	Cash Flow	7.6	Management of Measuring & Monitoring Devices	8.6	Improvement
5.6	Management Review	6.8.2	Budget: Hard- and Software	7.6.1	Tools of Empirical Research	8.6.1	Corrective Action
5.6.1	Review Input	6.8.3	Budget: Visitors, Exchange Students	7.6.2	Exams, Tests, Quizzes, Essays, Theses	8.6.2	Preventive Action
5.6.2	Review Output	6.8.4	Budget: Consumables			8.6.3	Continual Improvement

Annex 18 Table of Recommendations

DOING THE RIGHT THINGS		
Headline Recommendation	Details / reference to CCER Report	Evidence
Envisioning Capacity Development at ICARDA		
1. Identify ICARDA's comparative advantages prioritize and nurture these. <i>Timescale: Immediate and continuing</i>	<ul style="list-style-type: none"> ➤ Consider the CD Value Chain (See Annex 15) ➤ Exploit ICARDA's Unique Selling Proposition ➤ Identify and develop the areas of advantage ➤ See Part 5.1 of Main Report 	<ul style="list-style-type: none"> ➤ SWOT analysis in CCER Report ➤ Interviews with NARS and ARIs ➤ Interviews with trainees ➤ Interviews with ICARDA personnel
2. Engage fully and strategically with CGIAR's Capacity Development Platform. <i>Timescale: Medium Term and continuing</i>	<ul style="list-style-type: none"> ➤ Benefit from best practice in international R&D community ➤ Enable the more efficient use of assets ➤ See Part 4.4 of Main Report 	<ul style="list-style-type: none"> ➤ Interviews with Head of CDU ➤ Briefing from ADG for ICC
3. Produce a new CD strategy for ICARDA using CCER report as a source. <i>Timescale: Short Term</i>	<ul style="list-style-type: none"> ➤ Head of CDU to work with ADG for ICC and Capacity Development Committee ➤ See Part 7.1 of Main Report 	<ul style="list-style-type: none"> ➤ Interviews with Head, CDU ➤ Briefing from DG & ADG for ICC
Changing the perception of the role of the CDU		
4. Restructure CDU to include a proposed new role as a Virtual Academy <i>Timescale: Medium Term</i>	<ul style="list-style-type: none"> ➤ See Part 7.2 of Main Report 	<ul style="list-style-type: none"> ➤ Interviews with Head of CDU ➤ Briefing from ADG for ICC ➤ Interview with DDG (R)
5. Re-emphasise CDU's developmental and integrative role rather than just a logistics role. <i>Timescale: Immediate</i>	<ul style="list-style-type: none"> ➤ ICARDA must confirm its role as a 'knowledge organization' ➤ See Part 5.8, 6.1, and Recommendation 7.1 of Main Report and Annex 16 (CD Collaboration) 	<ul style="list-style-type: none"> ➤ Interviews with Head of CDU ➤ Briefing from ADG for ICC ➤ Interview with DDG (R)
6. Rationalize CDU's existing logistics role and maintain and improve this function. <i>Timescale: Short Term</i>	<ul style="list-style-type: none"> ➤ See Part 7.2 of Main Report and CD Collaboration Matrix (Annex 16) 	<ul style="list-style-type: none"> ➤ Interviews with Head of CDU ➤ Interviews with ICARDA personnel
Supporting the future role of the CDU		
7. Recognize the crucial role of CDU in driving the new capacity development strategy of ICARDA and support this role with resources. <i>Timescale: Immediate</i>	<ul style="list-style-type: none"> ➤ See Part 7.1 of Main Report ➤ See CD Collaboration Matrix (Annex 16) 	<ul style="list-style-type: none"> ➤ Interviews with DG, ADG for ICC, DDG (R), Head of CDU

8. Support CDU with time and resources to engage with other CD functions in the CGIAR within the Capacity Development Platform. <i>Timescale: Short term</i>	<ul style="list-style-type: none"> ➤ See CCER Report Recommendation 6.4 ➤ Share and acquire best practice with other CGIAR Centers 	<ul style="list-style-type: none"> ➤ Interviews with Head of CDU
9. Extend the range and depth of cooperation with ARIs within and outside the Region. <i>Timescale: Immediate and continuing</i>	<ul style="list-style-type: none"> ➤ See CCER Report Recommendation 6.5 ➤ Relationships/opportunities will arise at project level in CRPs 	<ul style="list-style-type: none"> ➤ Interview with Head CDU ➤ Interviews with ADG ICC, DDGR ➤ Interviews with NARS and ARIs
DOING THINGS RIGHT		
Headline Recommendation	Details / reference to CCER Report	Evidence
Structure and Policy Issues		
10. Develop a Quality Management Manual for the CD Function throughout ICARDA. <i>Timescale: Short Term</i>	<ul style="list-style-type: none"> ➤ See Annex 17 of CCER Report (<i>CD Quality Management Diagram to ISO 9000</i>) and use as a basis 	<ul style="list-style-type: none"> ➤ Interview with Head of CDU ➤ Interviews with ICARDA personnel
11. Involve CDU in developing bids for new projects and in Project Inception Workshops. <i>Timescale: Immediate</i>	<ul style="list-style-type: none"> ➤ CDU to be present, or have a CD agenda at all Inception Workshops and meetings. ➤ See Part 6.2 of Main Report 	<ul style="list-style-type: none"> ➤ Interview with Head of CDU
Headline Recommendation	Details / reference to CCER Report	Evidence
12. Create full-time Program Training Coordinator roles within each ICARDA Research Program/Unit. <i>Timescale: Short Term</i>	<ul style="list-style-type: none"> ➤ See CCER Recommendation 5.1 ➤ Holders to be specifically tasked with liaison between research-led training and CDU. 	<ul style="list-style-type: none"> ➤ Briefing from DG
13. Extend the range and depth of cooperation with Donor Organisations <i>Timescale: Medium Term and continuing</i>	<ul style="list-style-type: none"> ➤ See CCER Report Recommendation 6.6 ➤ Donors may offer specific infrastructure (i.e. CDU) funding 	<ul style="list-style-type: none"> ➤ CCER Recommendation
Operational and Support Issues		
14. Adopt and support a software system for training data management ('database'). <i>Timescale: Short Term</i>	<ul style="list-style-type: none"> ➤ CDU to investigate options ➤ Consider use of a consultant for selection and design ➤ Recruit to a CDU technical post with database skills 	<ul style="list-style-type: none"> ➤ Document: <i>Capacity Strengthening in CGIAR</i> ➤ Interview with Head CDU
15. Appoint to a new senior post to support the management of 'ICARDA HQ Operations' <i>Timescale: Short Term</i>	<ul style="list-style-type: none"> ➤ A new senior post to support the management of regular CDU activities (<i>7.2 Proposed CDU Structure and Operation</i>) ➤ Head of CDU released to devote time to enhanced role of CDU 	<ul style="list-style-type: none"> ➤ CCER Recommendation

16. Adopt <i>Training Needs Assessment</i> and <i>Training Impact Assessment</i> processes. <i>Timescale: Short Term</i>	<ul style="list-style-type: none"> ➤ CDU to conduct regular Training Needs Assessments (4.3.1) ➤ CDU to conduct regular Training Impact Assessment (4.5) ➤ CDU to regularly review Annual Training Plan production 	<ul style="list-style-type: none"> ➤ Interviews with Programme/Unit Heads ➤ Interviews with NARS and ARIs ➤ Interview with Head CDU
17. Maintain contact with ICARDA trainees ('alumni') and trace and track their continued development. <i>Timescale: Short Term</i>	<ul style="list-style-type: none"> ➤ See CCER Report Recommendation 5.4.1 ➤ Use proposed database and web to maintain trainee contact ➤ NARS will help but must be led by CDU 	<ul style="list-style-type: none"> ➤ Interviews with Trainers and Head of CDU ➤ Interviews with NARS and ARIs
18. Review funding streams for CD and CDU and re-design if appropriate. <i>Timescale: Medium Term</i>	<ul style="list-style-type: none"> ➤ CDU is among lowest (<5% of total funding) of CD units in other CGIAR centers ➤ Core funding and 'top-slice' restricted projects 	<ul style="list-style-type: none"> ➤ Documentation¹⁰ benchmarking against other CGIAR CD functions. ➤ Interview with ADG GCS
19. Create, populate and maintain an accessible web-based 'Knowledge Bank' within ICARDA <i>Timescale: Medium Term</i>	<ul style="list-style-type: none"> ➤ CCER Report Recommendation 5.7 ➤ Establish a Knowledge Management culture in ICARDA 	<ul style="list-style-type: none"> ➤ CCER Recommendation
Training Delivery Improvement		
20. Improve understanding of the needs for training through Needs Assessment Surveys and Visits, and through NARS meetings. <i>Timescale: Short Term</i>	<ul style="list-style-type: none"> ➤ See CCER Report Recommendation 4.3.1 ➤ See NARS Training Needs Assessment (Annex 13) ➤ Extend CDU visits to NARS / outreach offices 	<ul style="list-style-type: none"> ➤ Interviews with NARS ➤ Interview with Head CDU
21. Adopt appropriate and transparent trainee selection criteria and communicate and implement these. <i>Timescale: Immediate</i>	<ul style="list-style-type: none"> ➤ See CCER Report Recommendation 5.2.1 ➤ Relate criteria to intended learning outcomes ➤ Specify & monitor technical & linguistic levels 	<ul style="list-style-type: none"> ➤ Interviews with all ICARDA staff ➤ Interviews with NARS and ARIs
22. Develop coherent and consistent policy of trainee support (stipends, <i>per diems</i> , housing and other benefits) and revise trainee contract <i>Timescale: Short Term</i>	<ul style="list-style-type: none"> ➤ See CCER Report Recommendation 5.2.2 ➤ Benefits offered to be realistic, transparent and equitable ➤ ICARDA's expectations of trainees are clear 	<ul style="list-style-type: none"> ➤ CD Committee meeting
23. Investigate and invest in E-learning and other modes, for greater efficiency of delivery. <i>Timescale: Short Term</i>	<ul style="list-style-type: none"> ➤ See CCER Report Recommendation 5.4.1 ➤ E-learning can enhance understanding of site delivery 	<ul style="list-style-type: none"> ➤ Interviews with all ICARDA staff ➤ Interviews with NARS and ARIs

¹⁰ 'Capacity Strengthening in CGIAR: status, trends and future directions'.

<p>24. Review potential for outsourcing training to NARS, ARIs and other CD functions within CGIAR.</p> <p><i>Timescale: Medium Term</i></p>	<ul style="list-style-type: none"> ➤ Outsource training to NARS, ARIs and CGIAR where appropriate, and without compromising quality (5.1 and 5.4.1) ➤ Centers of Excellence/Regional hubs initiative 	<ul style="list-style-type: none"> ➤ Briefing from ADG for ICC ➤ Interview with Head CDU ➤ Interviews with NARS and ARIs
<p>25. Standardize training materials and evaluated regularly for content and quality.</p> <p><i>Timescale: Short Term and continuing</i></p>	<ul style="list-style-type: none"> ➤ See CCER Report Recommendation 5.3 ➤ Comprehensive and consistent course documentation ➤ Curricula, descriptions, outcomes, content 	<ul style="list-style-type: none"> ➤ Briefing from DG and ADG for ICC ➤ Interview with Head CDU ➤ <i>Courses offered</i> leaflets (not comprehensive)
<p>26. Implement trainee performance evaluation on all ICARDA training courses:</p> <p><i>Timescale: Immediate</i></p>	<ul style="list-style-type: none"> ➤ See CCER Report Recommendation 5.2.4 ➤ Differentiate between <i>attended, completed</i> and <i>successfully completed</i>. 	<ul style="list-style-type: none"> ➤ Interview with Head CDU
<p>27. Implement a system of evaluation, appraisal and development of trainers.</p> <p><i>Timescale: Short Term</i></p>	<ul style="list-style-type: none"> ➤ See CCER Report Recommendation 5.4.3 ➤ Standard course evaluation forms to be used ➤ Peer assessment as an element of appraisal ➤ Presentation skills training for trainers 	<ul style="list-style-type: none"> ➤ Interview with DDC (R) ➤ Interview with Head CDU
<p>28. Review modality of courses and ensure proper planning of logistics and capacity.</p> <p><i>Timescale: Short term</i></p>	<ul style="list-style-type: none"> ➤ Standardize and regularize where possible ➤ Close coordination with NARS and CRPs ➤ Timely information through leaflets / website ➤ Ensure lab support and consumables 	<ul style="list-style-type: none"> ➤ Interviews with NARS and ARIs ➤ Interviews with trainees