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CGIAR INITIATIVE ON Fragility to Resilience in Central and West Asia and North Africa

IFPRI INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

IWMI International Water Management Institute

Characterizing and Assessing Innovation Platforms in Central and West Asia and North Africa

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About ICARDA
Established in 1977, the International Center for Agricultural Research in the Dry Areas (ICARDA) is a non-profit, CGIAR Research Center that focusses on delivering innovative solutions for sustainable agricultural development in the non-tropical dry areas of the developing world.

We provide innovative, science-based solutions to improve the livelihoods and resilience of resource-poor smallholder farmers. We do this through strategic partnerships, linking research to development, and capacity development, and by taking into account gender equality and the role of youth in transforming the non-tropical dry areas.

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Key messages

- Innovation platforms (IPs) can provide a multidisciplinary research environment to test outcome-oriented research/scientific ideas, technologies, and innovations. These are particularly effective when agrifood challenges require cross-sectoral solutions and joint efforts of stakeholders who have a stake in both the problem and solution. IPs allow stakeholders to experiment together and share knowledge, resources, benefits, and risks for issues they cannot solve on their own, and benefit from the synergistic effects of working together.

- IP functions include innovations relating to technology, capacity development, organization, policy, institutional governance, and the integration of these dimensions. Contemporary tools of monitoring, evaluation, and learning (MEL) can be used to assess the IPs' contribution to these dimensions and generate lessons for future scaling.

- Three aspects of the IPs can be monitored and evaluated. These are activities, process changes, and results generated by the IP for beneficiary groups. The member stakeholders or a designated sub-team should define the indicators and rubric thresholds to measure these changes.

- The International Centre for Agricultural Research in the Dry Areas (ICARDA) can upgrade its research stations into National Innovation Platforms (NIPs) by engaging diverse partners and stakeholders to jointly identify their challenges and test their innovations to address those challenges. For example, improved varieties of cereals and forages could be entry points to set up NIPs in these research stations.

- ICARDA's country offices may be able to characterize the research stations and take the initiative to set up a NIP. The characterization and assessment of the research stations can proceed with the involvement of key stakeholders, including policymakers and the private sector.

1. Background

Recent evidence suggests that gross domestic product (GDP) growth in agriculture is two-to-three times more effective in reducing poverty and malnutrition, particularly in low-income countries, compared to an equivalent amount of growth in non-agricultural sectors (World Bank, 2007; Christiaensen and Martin, 2018; Ivanic and Martin, 2018). However, countries in Central and West Asia and North Africa (CWANA) are experiencing low agricultural growth due to conflict, gender inequalities, and youth unemployment (Baum and Al-Zu'bi, 2021). Farmers also struggle to access new agricultural innovations and technologies, and to manage risks as there are few agricultural policies and institutions (public and private) that adequately support them. CWANA countries also have public policy processes that are complex and not necessarily responsive to emerging development challenges (Bhuiyan and Farazmand, 2020; Baum and Al-Zu'bi, 2021).

A CGIAR Regional Initiative on Fragility to Resilience in Central and West Asia and North Africa (F2R-CWANA), under the Resilient Agri-Foods Systems (RAFS) Action Area, aims to collaborate with government agencies, relevant policy research centers, universities, policy makers, private sector, and researchers in the region to promote evidence-based policymaking. The goal is to facilitate the creation of new policy pathways and ensure CWANA's agrifood systems are effective and resilient through partnerships and innovation platforms (IPs), which suit the demands of partners and the unique needs of youth, women, and other marginalized groups in fragile agroecosystems.

In this context, F2R-CWANA aims to set up and/or strengthen National Innovation Platforms (NIPs), which are intended to be physical "Living Labs". These will be situated on the ground in the agroecologies, communities, and partnership networks (i.e., public-private-producer partnerships) where innovations will be evaluated, adapted, and adopted. These NIPs are necessary to test technologies, tools, approaches, and innovation packages developed by CGIAR and its partners.

Setting up and strengthening NIPs provide an enabling environment to allow governments, private sector, civil society, and non-governmental organizations (NGOs) to work together. They are expected to provide a synergistic win-win situation for each actor to address the challenges of fragile agrifood systems in the region. In partnership together, these stakeholders can create effective, inclusive, and resilient national agrifood systems.

2. Goal and objectives

The goal of F2R-CWANA is to advance innovations in partnerships, policies, and platforms for effective, inclusive, and climate-resilient transformation of agrifood systems in the region. These innovations can help address prohibitive issues in agrifood systems (e.g., poor multisectoral coordination, lack of policy coherence, poor governance, etc.) and build robust regulation and governance systems across the CWANA region through co-learning and testing of innovations in multistakeholder processes. The objective of the F2R-CWANA research is to identify the main challenges and opportunities of making national agrifood systems more effective, inclusive, and resilient.

Active engagement with key regional stakeholders (farmers, decision-makers, private sector, development organizations, financial institutions, etc.) is crucial, so National Alliances of Stakeholders (NAS) will be established. As well as building a collective understanding of the institutional constraints in enabling CGIAR scientific innovations to reach farmers at scale, the NAS will help address the innovation needs of end users/beneficiaries of agricultural innovation systems or value chains (e.g., farmers) as part of an overall strategy for agrifood transformation. Through the NAS, open dialogues (in collaboration with farmers, local communities, public institutions, and private sectors) should also help address various bottlenecks that hinder an enabling policy environment and create clarity on the current understanding of challenges and opportunities for agricultural growth.

Through the NAS, IPs can be created and/or strengthened to provide a multidisciplinary research environment to test outcome-oriented research/scientific ideas, technologies, and innovations. Such IPs will be particularly useful when agrifood challenges require cross-sectoral solutions and joint efforts of multiple stakeholders. Multiple NIPs can be created within a NAS to address specific or generic sub-agrifood transformation challenges in CWANA.

3. Characteristics of innovation platforms

Schut *et al*. (2017) define an IP as a space for learning and change by individuals or groups representing their organizations with diverse backgrounds and interests. The individuals or groups represent different stakeholders such as farmers, water users, youth, traders, food processors, researchers, government officials, etc. The stakeholders come together to discuss and diagnose problems, identify opportunities, and find solutions to overcome bottlenecks and achieve their goals (Schut *et al*., 2017; 2019). Not all constraints will require an IP and, often, it is better to look for simpler alternatives to address research and development challenges (Schut *et al*., 2018). If an individual or a single organization can address the challenge, an IP approach is not required. Instead, short-term collaborations or formal bilateral contractual arrangements between stakeholders can address these challenges and exploit opportunities (Head, 2008; Schut *et al*., 2018; 2019). Therefore, one should not aim to generalize IPs as a panacea to solve every problem or promote IPs as the one-size-fits-all partnership approach. It is important to emphasize the partnership function (what goal needs to be achieved by the IP at the end of the joint action plan) above the partnership form (e.g., IP, training workshop, bilateral contract, etc.) needed to achieve the goal (e.g., address a bottleneck) through a multistakeholder process. Below, we outline the core functions of IPs, which is the focus of this manual.

It is essential to "think more critically about when, how, and in what form IPs can contribute meaningfully to agricultural development impacts" (Schut *et al*., 2017; 2019). An IP is more useful when individuals/organizations have a stake in both the problem and solution, and they want to experiment together by sharing knowledge, resources, benefits, and risks for issues they cannot solve individually – but will benefit from the synergistic effects of working together in multi-stakeholder process (Schut *et al*., 2017; 2018; 2019; Thorpe *et al*., 2021).

An IP may not be the best strategy to reach out to large numbers of farmers. In such cases, building on existing public or private extension services/systems may be more relevant and cost-effective (Schut *et al*., 2017). Grouping farmers to transfer predetermined packages of agricultural technologies and providing one-off meetings or training for a selected group of stakeholders, are not functions of an IP.[1] If an IP is an appropriate tool to use for a particular context, it is crucial that the IP members are closely involved in defining first their problem, and then their vision, objectives, and pathways to achieve their anticipated solutions/goals. Platform members must also have a common understanding of how to monitor, evaluate, and share lessons among themselves and others outside of the IP.

Regarding the design of an IP, it is important to perform a stakeholder analysis to identify the potential stakeholders and their expectations. Consideration must also be given to how potential stakeholders will cover the transaction costs of running an IP – including facilitation cots, their ability to manage conflict, and their negotiation skills when dealing with multistakeholder processes (Thorpe *et al*., 2021). When setting up the IP, agroecological and socio-economic diversity or heterogeneity of farmer groups should be considered for adequate representation. In addition to identifying the specific constraints that an IP will be attempting to solve, it is also critical to identify the level at which the IP is established – local, regional, or national level. If the IP is set up at the local level, for example, there should be coordinating mechanisms to engage higher-level policymakers to ensure sufficient support is received to achieve the intended development impact.[2]

It is not advisable to include individuals or organizations who have no intention of collaborating in a participatory way, or who do not respect the visions of other platform members, or who are not willing to explore solutions to development challenges (Schut *et al*., 2017). These types of stakeholders will disrupt the innovation process. The stakeholder analysis can help refine IP member selection within a certain

1 See the detailed functions of an IP in Schut *et al*. (2017).

2 Policy-level challenges cannot be solved by local-level IPs. Local-level IPs can help demonstrate how policies are working on the ground but need to be complemented by higher-level advocacy (Schut *et al*., 2017).

set of criteria and so try to select those most willing to collaborate.

Following IP design, the selected members can move to the different cycles of IP implementation (Schut *et al*., 2017).[3] The initiation phase requires a project, or a few individuals to take the initiative to form the IP around an agreed topic. This is then followed by defining the platform focus, ensuring joint understanding of the bottleneck, testing, and refining of innovations, developing the capacity of platform members, and scaling of successful innovations in an iterative learning process. During the last phase, IP members may re-assess the scaling process, discuss a new focus, and identify new options as an exit strategy, or transition. For optimal IP management, about 20 to 40 individuals are sufficient to start the IP, but later in the process, it is possible to decrease or increase this number depending on the needs of stakeholders (Schut *et al*., 2017; 2018).

3 Rather than initiating an IP, it is better to evaluate existing IPs and assess their suitability to the intended objectives of involved stakeholders (Cullen *et al*., 2014).

4. Functions of innovation platforms

IPs can be characterized by their core intended objectives/functions. The objectives/functions of IPs include innovations relating to technology, capacity development, organization, policy, institutional governance, and a combination of two or more of these innovation dimensions (Schut *et al*., 2017). Therefore, IP functions are subject to the context of each agricultural innovation system[4] as an entry point (e.g., seed system, agrifood processing system, agricultural marketing, etc.). The core functions of an IP include, but are not limited to:

Technical/technology

IPs can help members develop and test specific (new) technologies (e.g., new wheat variety), and new ways to organize individuals and organizations to effectively solve problems and capitalize on opportunities from new technical knowledge or technologies.[5] Thus, technological experimentation, learning, and knowledge development are the central elements of innovation. Therefore, complex challenges facing stakeholders could be addressed with better integration and synergies among technical, organizational, and institutional dimensions of innovation.

Capacity development

IPs can help enhance the capacity of various stakeholders to learn, self-organize, and innovate, as well as nurture members' skills regarding entrepreneurship, representation, coordination, and communication. However, a good facilitator is needed to enhance actors' capacity in various dimensions of the innovation system indicated above. This is because the capacity development process requires good coordination, facilitation and reaching of compromises (negotiation) so that no stakeholder is overlooked in the process due to varying interests, power asymmetry and networking capacity (Cullen *et al*., 2014).

Policy development

Another key function of IPs is to engage and sensitize policy advocates and decision-makers around policy gaps, as well as to generate evidence on the same through multi-stakeholder actions and processes. IPs create a conducive space for policymakers to be engaged, made aware of existing policy gaps, and be included in processes to create evidence about how best to address these gaps. IPs, therefore, help enable policymakers to act on a specific issue of policy interest with the active participation of relevant stakeholders – who would have been more difficult to coordinate and address in the absence of such a forum.

Institutional (governance, coordination, etc.)

According to Schut *et al*. (2017), the formation and operation of IPs can be seen as an institutional innovation in itself because of changes to the collaboration/interaction process among the actors and organizations involved. A new way of working is created to overcome the jointly identified obstacle and to improve the impact of their collective action. Other institutional functions of an IP include facilitation and lobbying for institutional change (such as policy innovation and new business models), network brokering through identifying and linking different actors, and stimulating new actor relationships (Schut *et al*., 2017).

Organizational

One of the core functions of IPs is managing the innovation process through the coordination of interactions and facilitation of negotiation and learning among different actors. IPs can start as informal networks which are then forged into more formalized organizational structures, such as public-private partnerships, with the goal of becoming self-sustaining entities (Schut *et al*., 2017). The organizational function of an IP could relate to its sustainability (exit-strategy) during the transition phase of the IP and ownership issues (leadership roles) along the different implementation cycles. For example, the IP may be promoted into an organizational entity with a redefined focus to address a bigger national or regional challenge than when it was originally established.

4 An agricultural innovation system is a network of actors (individuals, organizations, and enterprises), together with supporting institutions and policies in the agricultural and related sectors that bring existing or new products, processes, and forms of organization into social and economic use (Hall *et al*., 2006; IFPRI, 2019).

5 It should be noted that even if the core function of an IP is technological innovation, it does not mean that the organizational and the institutional dimensions are excluded. IPs address complex problems in an integrated manner because they explore the technical, organizational, and institutional dimensions of innovation albeit in varying extents (Schut *et al*., 2017).

In summary, the core function/objective of an IP might be to tackle a specific technological, organizational, institutional or a combination of these challenges within a value chain (e.g., access to high-quality potato seeds) or a more generic problem that needs to be addressed across various value chains (e.g., farmers' access to agricultural credit) (Schut *et al*., 2017). Another key function of IPs is to support participatory action research (that involves multiple stakeholders of varying disciplines) through cycles of designing interventions, testing them in practice, observing if activities bring about desirable change, and reflecting on factors of success and failure which can then be fed into iterative phases of learning (Schut *et al*., 2017).

Once the IP has achieved its objective, its members may (or may not) decide to take up new challenges or may even leave the IP if their needs have been met. It is also important to underline that IPs do not necessarily fulfil all the above functions at once, and there may be a certain sequencing of the functions (Lamers *et al*., 2017; Schut *et al*., 2017). The involvement of different stakeholder groups may change during different phases or functions (Lamers *et al*., 2017), because the composition of the IP may differ during platform implementation phases and functions.

5. Assessment of innovation platforms

IPs can be assessed based on the contributions of participatory action research and outcome-oriented research, but it can often be challenging to sustain them (due to limited finance and lack of capacity, etc.,) and measure their long-term impacts for beneficiaries. An effective monitoring, evaluation, and learning (MEL) system is needed to ensure that IPs function well, i.e., that they are participatory, achieve their goals, and generate lessons for future scaling (Lundy *et al*., 2013). Some tools are applied to measure and evaluate innovation activities, stakeholder connections and interactions, and the results of these processes by setting a clear theory of change at the start (Traoré and Sparrow, 2018; Thorpe *et al*., 2021). From the establishment of IPs, members should: identify the changes they anticipate to cause as a result of the IP; establish indicators to track IP performance over time, including innovation activities; clarify who will design and participate in the innovation process; agree on what to do about emerging results; implement collaborative learning processes among members (Lundy *et al*., 2013; Schut *et al*., 2017); and decide collectively on how IP members will assess the overall effectiveness of the multistakeholder process (Thorpe *et al*., 2021). All IP members should be part of the MEL team to define the above issues and set indicators for IP performance assessment.

The purposes of MEL systems are to assess the functioning and effectiveness of IPs to improve policy and practice, spot problems and correct them early in the process, develop the capacity of member stakeholders, facilitate collaborative learning among stakeholders, and improve connections among the stakeholders. Through these actions, MEL can help improve IP activities, change policies, and promote changes across various intervention areas and scales, such as farm, community, market, watershed, policy, research, etc. For example, Schut *et al*. (2017) highlights that challenges related to access to good quality seed may be best addressed at the village or community level, whereas irrigation problems may be best addressed at a watershed level. MEL seeks to document and value these changes with diverse actors in a participatory process, and so MEL information should be generated for the duration of the IP and provide feedback along the way. The MEL process should also be iterative so that knowledge is built and refined over time. It can also be formally linked with impact assessments of beneficiaries in program participation, despite challenges to making concrete attributions of the IP on beneficiary groups, especially in longer-term (Duncan *et al*., 2013). This is because the problems IPs attempt to solve are complex, take longer time, tend to involve divergent interests, conflict, and uncertainty, and impacts such as 'innovation capacity' and side benefits are intangible, hard to quantify and making attribution difficult (Duncan *et al*., 2013).

In the context of CWANA, several research methods and tools can be applied to assess the performance of IPs. Multidisciplinary researchers across the CGIAR will be engaged in the IP implementation process in close collaboration with international, regional, and national partners in the CWANA region – with particular focus on five selected countries: Egypt, Lebanon, Morocco, Sudan, and Uzbekistan. Mixed research methods (qualitative and quantitative) will be applied to co-design the process, generate data, and subsequently analyze data and reporting. Several monitoring tools can be applied, such as a social network analysis, outcome mapping, the Most Significant Change technique, process monitoring tools (such as digital storytelling, participatory video, photography, farmer field days, and learning fairs), and other qualitative research methods. These tools are part of the contemporary MEL methods for assessing the performance of research and development programs as well as IPs. Details of these MEL tools are described in subsequent sections.

5.1. Indicators for monitoring and evaluation

Three aspects of an IP can be monitored and evaluated. These are activities, process changes, and results generated by the IP for beneficiary groups (Lundy *et al*., 2013). The member stakeholders or a designated MEL sub-team should define the indicators and rubric thresholds across the different dimensions of changes: activities, processes, and results.

5.1.1 Activities:
These can be technical, organizational, and institutional dimensions of innovation activities designed by IP members to solve a problem or exploit an opportunity. These activities may include technologies, methods,

approaches, policies, empirical evidence, or tangible products to provide solutions to complex agrifood system challenges. Monitoring these activities can help track progress, provide feedback, and improve performance. The activities may also include the various functions of the IP such as knowledge generation, marketing activities, facilitation of multistakeholder information flows, building of entrepreneurial skills, policy development, or resource mobilization (Schut *et al*., 2017). The MEL team can develop specific indicators and thresholds for activity monitoring when setting an action plan for the IP. The stakeholders could also assess the effectiveness of the IP by setting a clear theory of change at the beginning with a set of activity indicators which would then be refined over time as the innovation process proceeds (Thorpe *et al*., 2021).

5.1.2 Process changes:
These include changes in knowledge, attitudes, and practices (KAPs) of the IP members and the organizations or groups they represent, and the working relationships/interactions between them. Monitoring process outcomes indicate how the IP changes the KAPs of individuals and the working interactions among them, including knowledge sharing, collaboration, advocacy, and influence. Specific indicators and thresholds can be co-developed and agreed upon by the designated MEL team or the IP members. That is, a pre-KAP assessment is needed to establish a baseline for the IP, and a post-KAP assessment can then measure tangible qualitative and quantitative process changes created by the IP. This process change monitoring can be framed within a clear theory of change to track the effectiveness of the multistakeholder platforms or IP process changes over time (Thorpe *et al*., 2021).

5.1.3 Results:
These are the impacts of IPs on the intended beneficiaries. Monitoring and evaluation of results provide quantitative and qualitative evidence of IP work, which can be compared with other partnership approaches (i.e., bilateral contractual agreements, training workshops, cluster farming groups). Monitoring results relate to formal impacts (Khandker *et al*., 2010) and, in this case, IP contribution and impacts can be attributed to certain beneficiary groups by using control groups and econometric tools that can help address attribution bias.

5.2. Monitoring and evaluation tools

Certain issues should be considered when applying MEL tools for IP. It is vital to base monitoring on a coherent outcome logic model (inputs-activities-process-results/outputs-outcomes-impact) (Thorpe *et al*., 2021), feed the findings back to guide the platform's work, and develop information materials to share lessons with non-members. It is also important to note that monitoring and evaluation of IPs can take several forms and may shift over time. The MEL team can pay attention to these changes over time and find suitable MEL tools to measure each of the changes.

Both numbers and stories matter for the effective monitoring of an IP (Thorpe *et al*., 2021). Applying various methods can therefore help capture the quantitative and qualitative nature of the expected changes to triangulate key findings. MEL tools that integrate qualitative and quantitative methods have been developed specifically for IPs, such as the Learning System for Agricultural Research for Development (LESARD) (Sartas *et al*., 2017; Schut *et al*., 2017).

The MEL team should track activities, processes, and results in KAPs, network dynamics, emerging evidence, advocacy, and changes at the household or community level to attribute the contribution and impacts of IPs. Depending on the different MEL stages, suitable tools can be applied for each purpose (Lundy *et al*., 2013). Project management tools such as Gantt charts, participatory budgets, and after-action reviews are useful to track progress against action plans for activity monitoring, for example.

Certain MEL tools can be used to monitor the process of IPs. For example, outcome mapping[6] can help track how the innovation process will effect change in partner organizations against a set of progress indicators. The Most Significant Change technique can be applied to collect reflection stories from diverse participants. Other tools for process monitoring include digital storytelling, participatory video, photography, farmer field days, and learning fairs that facilitate feedback in ways that overcome power imbalances. Power imbalances are usually evident in IPs, and so it is crucial that these are acknowledged and addressed through participatory

6 https://www.betterevaluation.org/methods-approaches/approaches/outcome-mapping.

approaches to promote inclusive innovation (Cullen *et al*., 2014). Social network analysis helps to visualize changes in relationships among platform actors by identifying their centrality and power, all brokering and bridging actors, and any potential bottlenecks (Schut *et al*., 2017). The social network analysis (Schut *et al*., 2017) can also help identify visual and quantitative measures of actor relationships by collecting data during stakeholder participation and engagements. Participatory impact pathways combine elements of outcome mapping and social network analysis to document shifts in KAPs, and relationship dynamics. This approach can also help clarify how platforms influence communities not directly participating in the IP.

Traditional impact evaluation tools can also help monitor platform results. For example, household surveys can be used to gather panel data to compare the situation before and after (or with and without) the platform's interventions. It is critical to allow IP participants to ponder what is working, what is not, and what adjustments are required (Lundy *et al*., 2013). An annual reflection workshop is one potential tool that could be used to document these reflections.

5.3. Responsibility for monitoring and evaluation

Monitoring and evaluation may involve different people but should involve IP members from the outset (Lundy *et al*., 2013). That means that the indicators for assessment and rubric thresholds for measuring performance, which can be reshaped as the process proceeds, should be agreed upon by key IP members. However, the type of members that primarily participate in the process depend on whether the activity, process, or results of the IP are monitored. IP members who are directly involved in the activities, for example, can monitor and evaluate the IP activities. Researchers may conduct a participatory analysis into how innovation affects the KAPs of members and the relationships among them at the process level by engaging the IP members in evaluation studies. Monitoring of results should involve members of the platform and researchers with expertise in documenting IP outcomes and sharing results more widely with internal and external stakeholders.

Monitoring can also be designed and coordinated by the platform facilitator, the initiating organization, or a sub-group of platform members (including researchers). Depending on the complexity of the platform, it may be best to form a sub-group in charge of monitoring and evaluation (Lundy *et al*., 2013; Schut *et al*., 2017; 2018). If the platform seeks to develop or evaluate solutions to a specific problem for certain beneficiary groups, it should include end-users or beneficiaries to provide feedback on the platform's activities and achievements. For example, in the context of the International Center for Agricultural Research in the Dry Areas (ICARDA), stakeholders can discuss and agree on potential indicators for performance assessment of NIPs. These potential performance assessment indicators (demand, genetic technological innovations, scaling, innovations and technologies, and governance) may include but are not limited to:

- Number of farmers visiting the IP per year (i.e., demand from farmers).
- Number of training/field visits organized per year.
- Number of crop varieties grown and evaluated (i.e., genetic technological innovations).
- Number of seed or crop varieties taken up by the private sector (i.e., scaling).
- Number of researchers/students working on the IP (i.e., innovations).
- Number of researchers visiting the IP.
- Number of cultivation/cropping techniques evaluated by the IP (i.e., technologies).
- Number of participatory varietal testing organized with farmers and consumers.
- Number of multistakeholder meetings organized around the IP (i.e., governance).

6. NIPs for F2R-CWANA

ICARDA has research stations in Merchouch, Morocco and Terbol, Lebanon. Moreover, ICARDA and other organizations participating in F2R-CWANA conduct research work with the National Agricultural Research and Extension Systems (NARES) at their research stations in Wad Medani in Sudan, Sids in Egypt, and Karshi in Uzbekistan. The researchers within the research stations conduct their research and development programs in collaboration with farmers, NARES, and other public stakeholders.

Through F2R-CWANA, CGIAR aims to upgrade these research stations into NIPs by engaging diverse partners and stakeholders (including the private sector and marginalized groups), to jointly identify their challenges and test their innovations to address and assess those challenges. The NIPs can provide a conducive space for the co-design and testing of innovations to address complex challenges faced by communities in their agricultural production, business development, marketing, and natural resources management for sustaining resilient livelihoods. For example, improved varieties of cereals and forages could be entry points to set up NIPs in these research stations. As the platforms progress, additional best-bet technologies/innovations could be introduced and evaluated by platform members.

However, analyzing the strength, weakness, opportunity, and threats (SWOT) of the research stations should be done before upgrading them to NIPs. A SWOT analysis can help characterize these research stations – considering their specific agroecological niche and identify the opportunities and challenges in upgrading them into NIPs. The SWOT analysis can also help characterize the partnership function (what goals need to be achieved) and identify the partnership modality to achieve the goal for a particular context (e.g., IP, training workshop, bilateral contract, etc.).

ICARDA's country offices may be able to characterize their research stations and then take the initiative to set up a NIP by inviting other key stakeholders to join, based on some of the principles highlighted in this manual (Section 5) and CGIAR IP guidelines (Lundy *et al*., 2013; Schut *et al*., 2017). The characterization and assessment of the current research stations can proceed with the involvement of key stakeholders (including policymakers and the private sector), who have a stake in research-for-development. Alternatively, other forms of stakeholder partnerships can be adopted if IPs are not feasible for a particular context across ICARDA and NARES research stations.

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