

REPORT

Yemen's Ministry of Agriculture, Irrigation and Fisheries

Part II: Capacity building recommendations

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Preface

This report was compiled by a team of staff and consultants working with the International Growth Centre (IGC), a partnership between the London School of Economics and Political Science and the University of Oxford. It was prepared at the request of the Executive Bureau for the Acceleration of Aid Absorption and Support for Policy Reforms (hereafter the Executive Bureau) in the Office of the Prime Minister in the Government of Yemen (GoY). Financing for this study was provided by the United Kingdom's Foreign, Commonwealth, and Development Office (FCDO) Yemen office (under the Affordability of Food and Finance in Yemen (AFFY) project). A companion piece—an institutional assessment—has been produced separately. That report provides a broader institutional analysis and assessment that lays the groundwork for the capacity building recommendations advanced in this document.

Both the institutional analysis and capacity building recommendations were compiled between September 2022 and January 2023 through a combination of literature reviews and online searches, along with interviews with Yemeni government officials, which took place either through videoconference or through face-to-face discussions with the local team in Aden. The team was also able to gather data from various Yemeni sources, although the conflict has compromised both the amount and quality of data available. The team did not have access to the institutions or areas controlled by the Houthi *de facto* authorities (DFA), nor to any of the staff, data and information historically based in Sana'a.

The analysis was headed by Dr. Robert P. Beschel Jr. and Paul Dyer, who are based in Alexandria Virginia. Both are non-resident fellows with the Middle East Council on Global Affairs based in Doha. Members of the international team included Michael Schaeffer (independent consultant), who is based in Tunis, and Rina Oberai (independent consultant), who is based in London. The international team worked closely with a local team on the ground in Aden from the Executive Bureau under the Prime Minister's Office. Working under the overall leadership of Dr. Afrah Al-Zouba, this team was managed by Maher Othman and consisted of Tawfik Al-Dobhani and Rim Al-Naggar. Substantive and logistical guidance and support were provided by Camilla Sacchetto from the IGC's State Fragility initiative, based in London, who participated actively in all phases of the team's analysis and operations.

The team would like to thank our counterparts within Ministry of Agriculture, Irrigation, and Fisheries (MoAIF) for their excellent and enthusiastic cooperation in the preparation of this report.

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About

The Executive Bureau for the Acceleration of Aid Absorption and Support for Policy Reform

The Executive Bureau for the Acceleration of Aid Absorption and Support for Policy Reforms was established in 2013 to improve of Yemen's Internationally Recognised Government's absorption of pledges from development partners. The overall objective of the Executive Bureau is to work closely with government institutions to accelerate the absorption levels of foreign funds to implement development projects. The Executive Bureau also has the mandate to improve the government's capacity through technical support provided by donors in forms of consultancies, expertise, and capacity building. Importantly, the Prime Minister of Yemen is a member of the Bureau's board of directors.

The International Growth Centre

The International Growth Centre (IGC) works with policymakers in developing countries to promote inclusive and sustainable growth through pathbreaking research. The IGC is a global research centre with a network of world-leading researchers and a set of country teams and policy initiatives engaged in Africa, South Asia, and the Middle East. Based at LSE and in partnership with the University of Oxford, the IGC is majority funded by the UK FCDO.

The State Fragility initiative

The State Fragility initiative (SFi) is an IGC initiative that aims to work with national, regional, and international actors to catalyse new thinking, develop more effective approaches to addressing state fragility, and support collaborative efforts to take emerging consensus into practice. SFi brings together robust evidence and practical insight to produce and promote actionable, policy-focused guidance in the following areas: state legitimacy, state effectiveness, private sector development, and conflict and security. SFi has financial support from the FCDO and The Rockefeller Foundation.

List of abbreviations

Abbreviation	Meaning
FCDO	Foreign, Commonwealth and Development Office
GoY	Government of Yemen
HRM	Human Resource Management
IGC	International Growth Centre
IT	information Technology
MoAIF	Ministry of Agriculture, Irrigation and Fisheries
MoCSI	Ministry of Civil Service and Insurance

Introduction

1. This report is a companion document to an **Institutional Assessment of the Ministry of Agriculture, Irrigation and Fisheries (MoAIF)** in Yemen. The Institutional Assessment reviews the current strategic and operational challenges facing the Ministry, that are among the most significant confronting any government agency in the Middle East and perhaps the world. They range from geopolitical challenges within a country that is still emerging from conflict, to a complex and evolving set of relationships with sub-national governments and subordinate entities, to the physical challenge of restoring infrastructure and equipment destroyed by war, to budgets that are woefully insufficient to support even basic operations, to improving staff capacity and morale, to coping with the implications of a recent merger that could potentially be reversed in the future.
2. This report builds upon this analysis and asks the all-important question: **what is to be done?** In the face of such uncertainty and with such limited resources at its disposal, how can MoAIF best begin the work of reconstruction? The report begins by laying out some of the key priorities and assumptions that should inform the Ministry's rebuilding effort and guide future decision-making along critical dimensions. It argues that senior management have an opportunity to, in essence, create a new central entity focused on performing a limited number of tasks well—an arrangement that is consistent with both modern approaches to public sector management and current realities on the ground in Yemen. This role will entail focusing upon policy, data, regulation, and grant-making, along with monitoring performance. It will also involve coordinating and facilitating the work of others active in these sectors—including sub-national governments, non-profit organisations, and the private sector.
3. The report proceeds to lay out a series of recommended next steps for the Ministry along two scenarios. The first, **"Coping within a low resource environment,"** focuses upon measures that MoAIF could take right away. These initiatives are both valuable in their own right and will help to lay the groundwork for a more comprehensive reform effort downstream. The list of five measures includes: (1) implementing a number of strategic decisions, (2) improving internal and external coordination with relevant stakeholders, (3) better leveraging existing opportunities for capacity building, (4) building internal capacity to utilise external resources, and (5) filling critical skills gaps.
4. Should additional resources become available, MoAIF will be able to pursue a more expansive reform agenda. Under this second scenario, **"Utilising additional funding to best advantage,"**

MoAIF should look for consultancy support and equipment to establish key functions, some of which (such as information and communications technology) are cross-cutting and others (such as the agricultural and fisheries labs) are sector-specific. The Ministry should initiate a major recruitment effort focused heavily upon bringing in younger staff with technical skills in priority areas in accordance with a strategic manpower plan. The Ministry should also strengthen its training and capacity building efforts by acquiring the necessary physical infrastructure for both in-person and online training and by developing course material focused upon staff induction and providing employees with a range of basic technical competencies in areas, such as project appraisal and management.

5. The report concludes with a discussion of the substantial strategic and operational risks confronting MoAIF and how they can be mitigated. Two attachments include: (1) an initial matrix of current donor funding in the agricultural and fisheries sectors; and (2) an initial survey of MoAIF laboratory requirements conducted by Executive Bureau for the Acceleration of Aid Absorption and Support for Policy Reforms staff in Aden.

Moving forward: Key assumptions and priorities

Where are we going? A description of the ideal end state

6. In many respects, the desired outcomes of the MoAIF are clear. The Ministry's mandate would match its capacity and ability to deliver high quality goods and services to its constituents. The Ministry will support a significant expansion of production in the agricultural and fisheries sectors to combat food insecurity and improve rural livelihoods. It will do so in a sustainable manner that is consistent with Yemen's natural resource base. It will protect Yemen's fish stocks from over-exploitation, prevent desertification, protect the public from floods and ensure the efficient use of Yemen's water resources. It will ensure adequate food stocks at home while opening new high-value markets for Yemen's agricultural and fish products abroad.
7. In achieving these objectives, the Ministry will take appropriate and well-considered policy decisions that effectively balance the interests of all Yemenis. Its organisational structure will be as lean and efficient as possible. It will mobilise the available financial and human resources in an efficient and effective manner. It will be a desirable agency in which to work, attracting talented

staff and motivating them to be productive. It will make wise investments in infrastructure that will expand production and ensure that goods make it to market with a minimum of loss. It will use its recurrent budgets efficiently, ensuring that staff have adequate resources to perform their duties without being loose or wasteful. Its financial control, audit, and procurement functions will provide reassurance to donors and other stakeholders that resources are used for the purposes intended. The Ministry will use information technology (IT) to provide accurate, timely data for decision-making and enhance the speed and transparency of government operations. It will communicate effectively internally as well as with external stakeholders.

8. The path to this end state will be long and arduous, but it is not impossible. The transition to Aden and merger of the ministries provides an opportunity to start from scratch and in essence rebuild the Ministry from the ground up. The key will be to put in place an effective strategy for obtaining this desired end-state and to implement it tenaciously and consistently over time.
9. This section articulates a number of key assumptions and guiding principles in pursuit of this strategy. They are presented below under five headings: (1) developing a strategy for reform, (2) forging strong relations with the private sector and other external partners, (3) organisational alignment and functions, (4) financial management, and (5) human resource management. The assumptions themselves are summarized in **Box 1** and laid out more fully in the text below.

BOX 1: EIGHT KEY ASSUMPTIONS UNDERLYING THE RECOMMENDATIONS

1. The need for scenario-based planning
2. Establishing the requirements for evidence-based decision-making
3. Creating an enabling environment for private sector led growth
4. Subsidiarity and a clear division of labour between units and levels of government
5. Strong financial management systems and controls for receiving donor support
6. Filling the “missing middle” of technical staff
7. Focus upon recruiting and onboarding junior staff over re-training older staff
8. Recruitment should proceed at a measured pace against a strategic manpower plan

Developing a strategy for reform

- 10. Assumption 1: The need for scenario-based planning.** In light of the considerable uncertainty surrounding the resource envelope that MoAIF will ultimately have to work with, the Ministry needs to have at least two approaches for developing its capacity. The first is designed to operate under the current environment of severe resource constraints. It consists of initiatives that can be implemented within the next 4-6 months with operational budgets that are virtually non-existent and with only limited donor support. Any initiatives under this rubric will be, by definition, modest and tightly constrained. Yet, their virtue is that these activities can be implemented right away by either the Ministry itself or by the Ministry acting in concert with the broader Government of Yemen (GoY). These initiatives will also build the groundwork for a broader institutional reform effort downstream.
- 11.** It is also important to plan for a less constrained environment in which MoAIF would receive significantly greater support from the GoY and the donor community and would be able to implement a much broader and more ambitious plan for capacity building. This situation represents a “best-case” scenario.
- 12.** Reality may end up somewhere in the middle, with improved resource flows that are better than what exists today but fall short of expectations. Under these circumstances, appropriate adjustments can be made. The discipline of thinking about resource flows under both best- and worst-case scenarios should inform decision-making in the middle, so that senior officials will be prepared to make appropriate tactical adjustments to maximise their capacity under varying resource envelopes.
- 13. Assumption 2: Establishing the requirements for evidence-based decision-making.** A second assumption is that the Ministry needs to prioritise putting in place systems that will generate accurate real-time data for decision-making in all spheres of its operations. For example, a comprehensive survey of fish stocks does not exist, depriving the Ministry of crucial data that it needs in managing one of its most precious resources.¹ The Ministry lacks regular, timely data on fish catches at many landing sites, including those within areas under GoY control. It also has lost the capacity to collect accurate statistics on agricultural production.
- 14.** The Ministry lacks systems to generate the most basic administrative data, such as those covering staff size and composition, the technical skills of its employees, or the demographic profile of its staff. There are no systems in place for monitoring staff absenteeism or for generating timely data on the status of project implementation. The absence of such systems can create a dysfunctional environment in which sub-optimal practices can thrive. It also deprives MoAIF management of the information they need to effectively manage the limited resources at their disposal.

¹ Under the World Bank's recent *Program on Sustainable Fishery Development in the Red Sea and Gulf of Aden*, the Bank is supporting an effort by FAO to conduct such a survey (UNDP, 2022). See the matrix of donor activity provided in **Attachment 1** below.

Forging strong relations with the private sector and other external partners

- 15. Assumption 3: Creating an enabling environment for private sector-led growth.** The importance of private-sector led growth has been recognized as far back as the Ministry of Fish Wealth's *National Fisheries Strategy (2012-2025)*, which held that the private sector would be a crucial driver in achieving economic development.² The Ministry's role would be one of fostering an enabling environment for private sector-led growth and divesting itself from direct participation in food production or distribution, provided that there are no market failures and the private sector would be in a position to undertake such tasks.
- 16.** While the private sector is fragmented and has been constrained by the lack of financial resources, there is scope for greater partnership between MoAIF and various private actors in both agriculture and the fisheries sector. Engaging private sector investors, particularly medium and large Yemeni firms (as well as international investors where deemed appropriate), would help accelerate the rebuilding of the sector and key elements of the value chain that are currently holding back production and productivity. Ways to expand the private sector's role are outlined in detail in paragraphs 43-48 below.
- 17.** For the agriculture sector, aside from farming, these might include infrastructure like irrigation, warehousing, cold storage, and markets or wholesaling services, as well as machinery and agricultural inputs, like fertilizer, pesticides, and seed, and agricultural services, like veterinary care and quality assessment. Many agricultural services previously provided by public companies were privatized in the early 2000s.³ However, services like seed distribution under the General Seed Multiplication Corporation and well-drilling companies were kept under the ministry because of a desire to maintain subsidized services. Now, with many of these services – public and private – having collapsed or been weakened over the war – there is a chance to expand the role of the private sector across the sector.
- 18.** In fisheries, between 70-90 percent of production is artisanal, and the live fish catch has not increased during the conflict. Though there are enough basic boats, there is a clear need to support artisanal fishing with repairs, engines, fishing nets and GPS systems—all areas where the private sector could help to alleviate bottlenecks. The conflict has disrupted the fisheries value chain, and the private sector could support

² Ministry of Fish Wealth, 2013

³ Management Systems International, 2008.

improved marketing and the uptake of practices to ensure better preservation and processing of the fish catch. The private sector could also support MoAIF with information, communication, and technology systems. In addition, the private sector has shown interest in asset rehabilitation at the local level.

19. Enabling the role of the private sector within agriculture and fisheries harkens back to the Aden Agenda and Decree No. 100 (Agenda for 21st Century Agriculture) passed by the Council of Ministers in 2000.⁴ While these reforms were not fully realized, they promoted limited role for government, which would focus on providing research, protecting Yemeni agriculture through quarantine and animal and plant health protections; oversight to natural resources; and agricultural and fisheries promotion. The agenda saw a mix public and private role in extension services, spate irrigation management, tree production, and the provision of agricultural credit, with seeds and agricultural inputs, machinery rental, and fruit tree production devolving to the private sector and local cooperatives.

Organisational alignment and assignment of functions

20. **Assumption 4: Strengthening subsidiarity and a clear division of labour between units.** A fourth major assumption involves the relationship between MoAIF and other levels of government. Modern practice in public sector management has focused upon principal-agent theory and the “purchaser-provider” split. Under this approach, best exemplified by New Zealand, ministries should focus upon core functions, such as formulating policy and regulations for their sector; they would outsource as many routine tasks as possible to other entities for implementation, such as lower tiers of government, private companies, or non-profit organisations.
21. It is unclear whether such arrangements are desirable or even feasible in the current Yemeni context, and the “right” balance of responsibilities is often highly contextual. It is an open question as to whether MoAIF would have the capacity to operate effectively in such an environment. Yet, as noted above, it is also the *de facto* reality under which the Ministry currently finds itself. Many traditional functions have already been assumed by the governorates or other entities. Donors are currently bypassing the Ministry to work with local partners, and the Ministry’s footprint in the field is at best uneven.

⁴ Management Systems International, 2008.

22. In light of these circumstances, the optimal division of labour between the MoAIF and other important actors and stakeholders should be based on the principle of subsidiarity, which maintains that tasks should be conducted by the lowest level of government that can effectively perform them. Such entities typically have a better feel for local needs and priorities. It is also easier to mobilise revenues when citizens can see a direct benefit between the taxes or user fees they provide and the services they are receiving.
23. Under this approach, MoAIF would be responsible for policy development in the agricultural, irrigation, and fisheries sectors. It would promulgate legislation and regulations for these sectors. It would maintain national statistics on food production. It would oversee key functions, such as inspection and certification through the national laboratories and research centres. It would license fishing vessels and inspect fish processing facilities. It would provide training for staff working in these sectors at both the national and sub-national levels. It would provide grants to sub-national governments for the development of infrastructure and funding for the collection of regular statistics. And it would audit these investments to make sure that they are implemented effectively.
24. At the sub-national level, the governorates will be responsible for constructing and maintaining infrastructure within their areas of operations, as well as for the routine reporting of data on agricultural production, irrigation, and fishery operations. There is an inherent tension in the dual reporting relationships that branch offices have to both governorates and the Ministry. Ensuring alignment will require a clear recognition of their dual accountability relationships by all relevant parties. It will also require mechanisms to ensure that branch offices and governorates are incentivized to align their activities with the Ministry, which can be done by monitoring performance according to clearly established metrics and adjusting central grants and resource flows accordingly.

Financial management

25. **Assumption 5: Ensuring strong financial management and controls, which is essential to receive donor support.** The reality is that current operating and investment budgets of the Ministry are insufficient to perform the mandate that MoAIF has been given. Capital budgets are well short of what is required for reconstruction and rehabilitation, and many units have not received any operating budgets at all. As outlined in the Institutional Assessment, the GoY's fiscal position is currently in structural deficit, and it is unlikely to be in a position to provide the necessary support for some time to come. Some MoAIF operations can be augmented through tax and user fees, whose collection

has fallen off in recent years or been appropriated by others. Yet, the reality is that, for MoAIF to be re-established as an important actor in the ongoing struggle against food insecurity, significant donor funds will be required for at least a decade or more.

26. For a variety of reasons, MoAIF's internal cash management and financial control systems are currently not able to provide donors with confidence that their resources would be utilised for the purposes intended. A top priority will need to be improving these systems so that donors will feel comfortable utilising them to provide direct financial support to the Ministry.

Human resource management

27. As noted in the Institutional Assessment, MoAIF confronts a host of deep-rooted problems in human resource management. They span a range of HR-related issues, from challenges in attracting, recruiting, and retaining talented staff, to improving skills mix and staff composition, to managing and motivating staff and coping with chronic absenteeism and non-performance, to cleaning up the payroll and retiring staff who have passed retirement age. The restructuring of HR practices will be a lengthy effort and require close collaboration with other government agencies, such as the Ministry of Civil Service and Insurance (MoCSI). This effort should be guided by several principles and assumptions that are outlined below.

28. **Assumption 6: Filling the "missing middle" of technical staff.**

MoAIF is struggling with many staff constraints, but none are more pressing than the lack of qualified technical staff. This shortage is particularly acute with regard to front-line workers in areas, such as agricultural extension, agricultural economics, animal husbandry, forestry management, veterinary medicine, civil, irrigation and hydrological engineers, environmental and soil scientists, fisheries inspection, marine biology, and food processing. Skilled recruits are needed to staff laboratories and research centres. Skilled staff will also be needed in key support areas, such as audit and accounting, project planning and financial management, program and project evaluation, statistics, and information technology.

29. MoAIF should concentrate on filling these critical skills gaps through recruitment, targeting younger workers who have the requisite skills and training (possessing either a bachelor's or an advanced degree) and will be with the Ministry for decades. It should avoid bringing on board staff with generic clerical and administrative backgrounds with a high school education or below. In pursuit of this objective, MoAIF may wish to set a recruitment target (say a ratio of 4:1 or 5:1 in terms of technical versus administrative staff) over the next three years.

30. Assumption 7: Focusing on recruiting and onboarding junior staff

over retraining older employees. The actual size of the Ministry itself is relatively small, consisting of around 335 employees, with plans to expand to 400 in the near future. There are some counterpart staff at the governorates level. Thousands of additional employees are mapped to subordinate authorities, which include laboratories, research centres, and agencies, such as the Red Sea and the Gulf of Aden Authorities or regional agricultural offices. Some state-owned enterprises, such as the Al-Mukalla and Shokra canneries, also retain significant numbers of employees.

31. The aggregate number of these employees is unknown, and data on their technical skills or demographic profile does not exist. Multiple MoAIF officials expressed the view that many of these entities had either ceased functioning or were working with reduced staff numbers. Many employees in these entities are reported to be past the age of retirement or do not appear to be regularly showing up for work. It is also unclear if they have been receiving salaries on a regular basis.

32. It may be tempting to view the redeployment of these staff or their conversion to MoAIF employees as a near-term solution to the Ministry's acute staffing problems. Several MoAIF officials advocated an approach centred on retraining and redeployment. However, global experience with staff retraining programs raises concerns about such an approach. Most employees who benefit from retraining schemes tend to be younger and more educated. Often, they are more highly motivated and technically savvy. Younger employees will also, hopefully, be with the Ministry for many years to come, providing a greater return on the resources invested in onboarding and capacity building. It would be far preferable to offer older employees a severance package (should funding permit), rather than to seek to retrain them for new positions within a restructured ministry. If some have skills that are in high demand, they can always be brought back under limited duration consulting contracts.

33. Assumption 8: Recruitment should be done at a measured pace against a strategic manpower workforce plan. It is critically important that MoAIF develop a strategic workforce recruitment plan as soon as possible. Such a plan will allow the Ministry to scale up on a phased basis in a manner aligned with its current resource base and managerial and absorptive capacity. Should significant additional resources be forthcoming, the temptation will be to staff up rapidly. The danger under such a scenario is that staff would be brought on board who lacked the requisite skills and would not be able to contribute effectively to alleviating critical technical bottlenecks. Even worse, there could be a surge in patronage or nepotism-based recruitment, which could undercut donor willingness to support the Ministry's expansion in the future.

Scenario 1: Coping within a low-resource environment

- 34.** As noted above, this report advances recommendations along two projected scenarios. The first addresses initiatives that MoAIF can undertake right now in its current low-resource environment. These activities require limited funds and are largely quick-win initiatives that involve changing current policies and management practices or filling important information gaps. These measures are both valuable in their own right and will help to lay the groundwork for future reforms. With limited exceptions, they are also activities that are within the Ministry's mandate and will not require extensive coordination with other entities either within or outside of the GoY.
- 35.** There are five sets of activities that can take place within the current environment. The first would be for the Ministry to initiate a set of strategic decisions that will be necessary to take forward a major capacity building effort. The second would focus upon strengthening internal and external coordination mechanisms. The third would seek to take full advantage of existing opportunities for training and capacity building financed by various donors. The fourth would build capacity to manage external resources. And the fifth would focus on filling critical skills gaps, largely in financial management, project planning, audit, and procurement. Each is discussed further below.

Near-term priority 1: Taking strategic decisions

- 36.** A list of potential strategic decisions for senior MoAIF leadership is provided below in **Box 2**. Many reforms under this rubric are intended to accomplish several related goals. The first is to create the institutional and organisational framework to support a major rebuilding and reconstruction effort. The second is to establish the empirical basis for downstream reforms by providing senior decision-makers with the information they will require to make evidence-based decisions. The third is to communicate to potential donors that the Ministry is serious about reform and can be an effective and reliable partner. Taken together, they will hopefully create a "virtuous circle," in which progress in some areas will create positive momentum that drives change in other areas.
- 37.** This list is not comprehensive. The political and administrative viability of these recommendations will need to be further probed and tested, and the implementation of these reforms would need to be carefully prioritised and sequenced.

BOX 2: STRATEGIC DECISIONS FOR MOAIF LEADERSHIP

Organisational structure:

- Further integrate back-office functions beyond human resources, including financial management (planning, budgeting, internal audit), legal, communications and IT. Move all staff and units performing ministry-wide functions under the Minister.
- Formalise new reporting relationships and publish a new organisational chart.

Human Resource Management:

- Conduct a civil service census and maintain an up-to-date registry of civil servants that is linked to the payroll.
- Initiate the payment of employee salaries by direct deposit.
- In consultation with the MoF and MoCSI, create a formal list of specialties and job titles for the Ministry and create a formal list of sanctioned positions.
- Implement a robust system for monitoring staff absenteeism.
- Identify all staff eligible for retirement and begin a phased effort to retire them.
- Create (or designate) a central HR committee consisting of senior ministry officials to oversee recruitment and staff development plans.
- Develop a phased strategic workforce plan to guide recruitment, planning for both "best-" and "worst-" case funding scenarios.
- Initiate a review of the pay and grading structure utilised by the Ministry.
- Secure facilities that can be used for the training and onboarding of Ministry staff.

Financial management and information technology:

- Conduct an inventory of all IT equipment currently owned by the Ministry as part of a broader scoping study on Ministry-wide ICT systems and requirements.
- Conduct an asset inventory of all properties and equipment (i.e., trucks, boats, motorcycles) owned by the Ministry and its subordinate agencies.

Relations with other GoY entities, including subordinate agencies:

- Reactivate the Food Security Cabinet Subcommittee
- Carry out assessment of coordination protocols with the Coast Guard and how the MoAIF can work with that agency to enable more effective patrolling of coastal waters for illegal foreign fishing boats.
- Conduct a staff and payroll audit for employees of subordinate entities and affiliated employees at the subnational level (particularly the governorates and general authorities). Prepare an accurate, comprehensive, and up to date database.
- Conduct a detailed inventory of subordinate agency financial and physical assets, including a damage assessment for loss due to war or neglect, and identify critical gaps.

Relations with external actors:

- Undertake a stakeholder mapping exercise to identify critical Yemeni stakeholders in the relevant sectors, including corporations, NGOs, user associations, etc.
- Develop an accurate, up to day map of current donor activities and training efforts. Place current MoAIF staff in relevant training offerings.
- Initiate regular meetings with all donors active in the agricultural, irrigation, and fisheries sectors. Designate a senior official to oversee donor coordination.
- Review mechanisms to engage medium and large-scale investors in the fisheries sector including leveraging donors, public private partnerships, and political risk insurance (for regional FDI). Also conduct a review to ensure an enabling business environment to attract domestic investment and regional FDI.

Near-term priority 2: Improving internal and external coordination

- 38.** There are hundreds if not thousands of stakeholders in the agriculture, irrigation, and fisheries sectors, and it will be vital that MoAIF coordinate effectively with them. Coordination will ensure that various ministries and units do not work at cross-purposes. It will help leverage and utilise scarce financial resources to best advantage, and it will generate buy-in and support for the Ministry among various stakeholders. Notwithstanding its benefits, coordination comes at a cost in terms of staff time and flexibility of action (especially in the short term), and not all relationships will be equally important or require similar levels of effort. It will be important for MoAIF to get the balance right—to

put in place appropriate mechanisms to ensure the proper level of engagement with different sets of stakeholders both within and outside of government.

39. This section looks at three particularly important sets of relationships: (1) better integration with other government agencies, including ministries, governorates, and general authorities, (2) better integration with other Yemeni stakeholders, such as NGOs and the private sector, and (3) better integration with donors.
40. **Better integration with other government entities.** As a ministry within the GoY, MoAIF needs to establish close working relations with other ministries and agencies whose mandates and activities touch upon its operations. The MoAIF currently participates in a range of inter-governmental bodies.⁵ Some are general in nature, such as the Council of Ministers or the Supreme Economic Council. Others are more narrowly focused upon specific issues and challenges, such as the Food Security Committee and the High Committee for Water and the Environment.
41. In principle, the two sub-cabinet committees—Food Security and the High Committee for Water and the Environment—hold the greatest promise for ensuring effective coordination in the areas of most immediate interest to MoAIF. However, it does not appear that they are currently fulfilling this role. The Food Security Committee, for example, is composed of the Ministry of Planning, the Ministry of Water and Environment, and MoAIF. It used to meet periodically but has not met recently. Another committee—also called the Food Security Committee—was formed a few years ago by UN agencies and key international NGOs and is being managed under UN auspices. The prospect for enhanced collaboration and greater integration in the work of these committees should be carefully examined, with the goal of establishing Yemen's Food Security Committee to play an effective role in coordinating the GoY's response on this critical agenda.
42. Another area where inter-agency coordination mechanisms could be reviewed involves the protection of Yemen's fishing grounds from exploitation by illegal fishing. This will involve working closely with the Yemeni Coast Guard as well as the Combined Maritime Forces Command based in Bahrain. The procedures and protocols governing collaboration between these entities should be reviewed to improve the timely detection and interdiction of illegal fishing within Yemen's exclusive economic zone.

5 A non-comprehensive list would include membership in the Council of Ministers, the Supreme Economic Council, the High Committee for Water and the Environment, the Food Security Committee, the Yemeni- Saudi Joint Committee, the Yemeni- Ethiopian Joint Committee, and the Yemeni-Syrian Joint Committee, the Yemeni-Iraqi Joint Committee.

- 43.** Beyond Cabinet, it will be important for MoAIF to forge effective coordination arrangements with subnational entities, such as the governorates, the General Authorities, the Center for Study of Marine Life, the Credit and Agricultural Cooperative (CAC) Bank and the canneries and fish factories. The World Bank is helping to create a network of General Authorities for Fisheries, and the Ministry should participate actively in this effort.
- 44. Better integration with Yemeni stakeholders.** A second important element of improved coordination will involve reaching out to various stakeholders outside of government. They include agricultural and fisheries associations, private corporations, NGOs working on relevant environmental issues, such as biodiversity and habitat protection, rural and coastal women's associations, and the like. It will be important for the Ministry to conduct a stakeholder mapping exercise to identify the most important actors in the agricultural, irrigation and fisheries sectors.
- 45.** Not all of these stakeholders will be equally important to the Ministry and its operations, nor will each of them require the same level and type of engagement. Once the list of stakeholders has been compiled, it can be divided into groups in terms of the frequency and intensity of engagement required and the extent to which it will require one-way information sharing or two-way engagement and dialogue. Important stakeholders, such as fisheries associations, agricultural exporters or NGOs working on biodiversity could require monthly or quarterly meetings. Others could be reached through different means, such as annual meetings, email distribution lists or web-based dissemination.
- 46. Better integration with the private sector.** Private investors have been hesitant to invest in developing Yemen's agriculture and fisheries sector in the context of the ongoing civil war. Engaging private capital, particularly medium and large Yemeni firms (as well as international investors where appropriate), would help to accelerate the rebuilding of the sector and remove key bottlenecks that are currently holding back production and productivity.
- 47.** Engaging the private sector can take many guises, from simply reforming regulation in a way that encourages private sector growth to actively seeking to privatize existing state-owned enterprises (SOEs) or to form public-private partnerships to provide missing infrastructure and services. Each comes with benefits and downsides, particularly political challenges from vested interests in the status quo on, one hand, and a public which might see an increased role by large private sector firms as a risk to existing livelihoods. Some needed investments might be highly capital intensive, suggesting that they would be more appropriate as public sector investments with funding

from multilateral donors. Still, finding roles for the private sector not only provides authorities with a means of rapidly increasing services in the context of scarce financial and human resources. It also would introduce much needed competition and productivity into the sector, while creating jobs higher on the value chain than currently available in either sector. On the other hand, state investment in agriculture and fisheries may be crowding out potential private sector investment in various aspects of the sectors.

- 48.** For the agriculture sector, aside from farming, areas for private investment might include infrastructure like irrigation, warehousing, cold storage, and markets or wholesaling services, as well as machinery and agricultural inputs, like fertilizer, pesticides, and seed, and agricultural services like veterinary care and quality assessment. For fisheries, this includes a host of pre-processing facilities (e.g., cold storage, ice making, gear sales, repair) and services in the shore-based cluster (e.g., handling and transfer facilities, landing sites, ports).
- 49.** In the fisheries sector, Public-Private Dialogue (PPD) can be a platform to engage with the private sector. Appropriate PPD mechanisms could give a voice to private actors and ensure consistency with local and national level strategies and policies. The body would include participation with key stakeholders along the value chain, including cooperatives, associations, local partners, and government.
- 50.** Building partnerships with medium and large enterprises will also be important to develop the fisheries sector for higher growth and value addition.⁶ These may be more beneficial in some areas. For example, pre-processing facilities (e.g., cold storage units, ice-making, gear handling, repair) could benefit from public-private partnerships (PPPs) with support from fishery associations. On the other hand, the shore-based cluster in the fisheries value chain—which includes handling and transfer facilities and landing site infrastructure—requires highly capital-intensive investments. They may be more appropriate as public sector investments with funding from multilateral donors.

⁶ It must be noted that while much of fish production is artisanal, the processing cluster is composed of medium size or large firms (SMEPS, 2019). Export companies are also large sized and handle freezing, packaging, branding, and storing fishery products.

51. Private sector investors have been hesitant to invest in developing Yemen's fisheries sector. To encourage a shift in perception, the Ministry could consider undertaking the following initiatives in **Box 3** based on international best practice.⁷

BOX 3: INITIATIVES TO ADVANCE PRIVATE SECTOR DEVELOPMENT IN AGRICULTURE AND FISHERIES

- **Investment Climate:** An enabling environment for investment is the most effective way to attract investment. This includes policies and regulations, such as strong fishery policies and regulations and ensuring compliance and enforcement of existing regulations and policies. It also entails the simplification of administrative barriers to investment (e.g., procedures and costs to operate a business). Furthermore, targeted support can be provided for diversification efforts (e.g., aquaculture). In this regard, experience from other countries points to the role of incentives in attracting investment (including FDI) though these need to be designed carefully.
- **Targeted support:** Often, to promote specific industries, governments provide financial incentives or targeted support. This might be relevant in Yemen for the promotion of aquaculture or other innovative means of promoting agricultural or fisheries diversification. Such incentives might include co-investment, grants, or tax holidays. They are complex and need to be carefully designed but can attract investment (including foreign direct investment, such as from Gulf countries) by reducing the potential risk and raising the potential returns from investment in post-conflict environments.
- **Development partners:** As initial support, development partners can help in setting up appropriate frameworks and institutional mechanisms to initiate private-sector engagement in a post-conflict setting. They can provide critical funding, global expertise, technical advice, and coordination.
- **Public-Private Partnerships:** PPPs have the potential to mobilise private sector funding and expertise in areas, such as infrastructure. Natural resources, such as fisheries are attractive for PPPs even in a post-conflict scenario.
- **Political Risk Insurance:** Foreign investors can be insured from political risk and even conflict through international institutions, such as the Multilateral Investment Guarantee Agency (MIGA) or the Overseas Private Investment Corporation (OPIC), the U.S. government's development finance institution.

⁷ Caluag, 2013

52. Better Integration with Donors. Prior to 2015, multiple donor interventions helped to build infrastructure and capacity in Yemen's fisheries sector. The most notable are laid out in Box 4 below.

BOX 4: SELECTED EXAMPLES OF DONOR ACTIVITY IN THE FISHERIES SECTOR, PRE-2015

- UNDP's Economic Diversification Support Program for Yemen (Fisheries Component).
- Yemen Fisheries Investment Project financed by International Fund for Agricultural Development (IFAD), Islamic Development Bank, and the European Union.⁸
- Five large-scale fisheries projects supported by the World Bank and co-financed by the European Union, UNDP, and others.⁹

53. Since the start of the conflict, donor support has been more focused on livelihoods and food security, although, in recent years, it has gradually begun to include the longer-term development of the fisheries and agriculture sectors. For example, the World Bank is supporting the value chain for sustainable fisheries, while the Kingdom of Saudi Arabia is supporting the fisheries sector in several governorates through the distribution of modern fishing boats (see the Matrix of Donor Support in **Attachment 1**). Donors currently active in the fisheries and agriculture space include the World Bank, UNDP, FAO, GIZ, Islamic Development Bank, Arab Agriculture Fund, EU, the Kingdom of Saudi Arabia, Kuwait, and the Netherlands, among others. However, a key concern of the MoAIF is that these donors are bypassing the Ministry to work directly with either other tiers of government (e.g., the governorates and regional authorities) or other entities (e.g., the laboratories or the fishery cooperatives).

⁸ IFAD, 2010

⁹ UNDP, 2022. The first three projects (1970s and 80s) focused on providing fishing boats and building fishing ports, processing facilities, receiving stations and cold storage facilities. The fourth project (early 1990s) aimed to increase fish catch, improve market efficiency and connectivity, and provided technical assistance related to research and women's involvement in the fisheries sector. The fifth fisheries project (2010-2015) improved fisheries management by the Ministry of Fish Wealth (MoFW), supported fisheries infrastructure and fish quality, provided cooperative and livelihoods development for fishing communities, and supported MFW's project planning and design of future ports and landing sites.

- 54.** Donors engage directly at the local level and have limited consultations with the MoAIF. Given the fragile and complex governance structure in Yemen, several donors have adopted a model of implementation that partners with UN agencies as recipients of grants and directly supports local communities. According to some development partners, this approach reflects deficiencies in outreach and capabilities of the Ministry and is consistent with the nature of projects which have strong local components that require building the capacity of local communities. The development partners acknowledge that the Ministry is an important stakeholder and consultations are both necessary and helpful. They also agree that if the Ministry was open to review its organisational structure, then donors may have an opportunity to address gaps and develop capacity building tools for the Ministry.
- 55.** Under these circumstances, MoAIF can take steps immediately to improve its coordination with donor agencies. The first is to engage in frequent bilateral and multilateral contact with donors active in this sector and to maintain an accurate and up to date database of their activities and partnerships. An initial step in this direction can be found in the matrix provided in **Attachment 1**, which can be further expanded and elaborated upon. The Ministry should initiate monthly or bi-monthly meetings between donors active in the sectors under its jurisdiction. Representatives from MoPIC should also be involved, along with the General Authorities. To give this forum profile and gravitas, the initial meetings should be chaired by the Minister.
- 56.** To effectively manage this effort, MoAIF should identify a lead advisor and/or unit with responsibility for donor coordination to directly support the Minister. On paper, the Director General for Public Relations and International Affairs would appear to be the optimal administrative home for this function, although other arrangements may be possible. It is important that responsibility for heading the donor coordination effort be vested in a senior official directly under the Minister who is respected as a fair and neutral arbiter by all relevant parties. It will also be important for the secretariat supporting this function to gather all relevant documents regarding donor activity in one place. Ideally, they would be digitally archived and accessible to both Ministry staff as well as the general public. It will be particularly important to supplement this collection by gathering performance and monitoring and evaluation assessments, so that both the Ministry and its donor partners can learn from what has worked (and what has not) in the past.

Near-term priority 3: Leveraging existing opportunities

57. Building upon the Matrix of Donor Activity in **Attachment 1**, MoAIF can utilise existing donor programs along several dimensions. First, it can participate in donor activities that have direct implications for the sector. For example, the World Bank's *Program on Sustainable Fishery Development in the Red Sea and Gulf of Aden (SFISH)* is supporting several important initiatives with major implications for the fisheries sector. They include establishing sub-national fishery governance committees led by the General Authority for Fisheries, which will complement fishing strategies and regulations and serve as a coordinating and consultative platform for stakeholders. Managed properly, these sub-national fishery governance committees could be an important forum for improving inter-governmental coordination, as noted above. There may be important benefits in having this initiative led at the sub-national level, but MoAIF should have a seat at the table. The Ministry can also use these efforts to strengthen data reporting practices and standards and to participate in the development of sub-national fishery management plans.
58. Other ongoing or planned donor initiatives may provide opportunities for the training and capacity building of MoAIF staff. USAID's PRAGMA program conducts training and capacity building on a wide variety of topics that are of interest to MoAIF, such as training across the value chain for beekeeping and honey. Other donors are providing support to the MoF and line ministries on the preparation of budgets and investment plans, financial bookkeeping and keeping proper documentation and streamlining revenues.
59. MoAIF should make a dedicated effort to identify and exploit these opportunities, which will come to the Ministry as a free good. Not only will they be valuable in providing technical skills and training, but they will also help to establish and build relationships with donors that may be useful for downstream programs.

Near-term priority 4: Building capacity to manage external resources

60. Discussions with senior MoAIF management and staff underscored their unanimous desire to receive donor funding directly—ideally through direct budget support. At a time when the operating budgets for many MoAIF units are effectively zero, Yemeni counterparts expressed considerable frustration that the vast majority of donor assistance currently bypasses the Ministry and is flowing directly to local entities and partners.

- 61.** Numerous international agreements call on donors, such as the World Bank, USAID, the European Union and UNDP, to use government systems to the maximum extent possible for the delivery of development aid. These agreements acknowledge that when government systems are utilised, there are payoffs in terms of strengthening these systems coupled with improved efficiency and ownership. Such approaches also reduce the demands upon developing country governments to respond to different donor reporting cycles and formats. The use of government systems allows international aid to be better integrated with a given government's own expenditure decisions, reducing the duplication of effort, increasing the leveraging of development assistance, and improving the sustainability of activities and results.
- 62.** Despite these benefits, assessments by the World Bank and UN have revealed weak correlation between the strength of government systems and the extent to which international partners are willing to use these systems for the delivery of aid.¹⁰ The central reason for this disconnect is that both governments and donors often take an all-or-nothing stance. They believe that the use of government systems implies a total reliance upon such systems (or the delivery of budget support), rather than understanding that all donors, including the most risk-averse, can and should use some government-based systems even under the highest fiduciary risk conditions. Furthermore, studies have shown that international commitments and actions are insufficient to boost the use of government systems in the absence of deliberate steps by government partners.
- 63.** Discussions with Yemeni and donor officials revealed a series of challenges in integrating international aid in planning, budgeting, and reporting. These issues include the differences in the incentives faced by institutions (and individuals) to share information, along with whether and how the information can be generated, and what is the appropriate format at appropriate times for government processes and the budget system. They also highlighted concerns about weaknesses in the broader accountability framework. In Yemen's system, different government units collect data for different purposes at different times in the planning, budgeting, budget execution, and reporting cycle. The result is that information on international aid included in any budgeting processes may be incomplete and partial. The reported information may be inconsistent over time because it may be reported in different formats and for overlapping time spans. By the time reports are published, they may be too late to be useful for oversight and accountability, they may also no longer be relevant in helping stakeholders understand what is working and why.

¹⁰ UNDP, p. 36, 2021

- 64. Challenges for improving donor aid.** A leading factor complicating the introduction of donor aid into Yemen's budget system is the fragmentation and misalignment of Yemen's planning, budgeting, and reporting processes and instruments. At the time of this dialogue, Yemen's planning and budget preparation system was in a state of flux. In planning, the old sector strategic plans were apparently being replaced. In the budget planning and reporting arena, the fragmentation of the underlying system between the recurrent and investment budgets—each with its own instruments and units—results in different information collected by different units across the budget cycle. This fragmentation and overlaying of instruments and processes results in a lack of clarity across and inconsistency between sectors, which raises the transaction costs for international donor and government actors alike.
- 65.** A lack of clear institutional arrangements for aid information and its integration is also a problem. The GoY does not appear to have an approved aid management strategy/policy that has been effectively communicated to the MoAIF. A clear, comprehensive, readily understood aid management policy and strategy would not only set out the rules for aid management, but it also would help to bring clarity on how aid management cycles are to be integrated with Yemen budget cycles through the coordination of information flows.
- 66. Establishing the preconditions for greater donor participation.** There are several appropriate entry points for improving the integration of donor systems with MoAIF planning, budgeting, and reporting practices. First, MoAIF must decide what information is important and how it will be used as a basis for clear rules. An initial step in this regard is for MoAIF to formulate clear rules for: (1) providing donor information, and (2) reflecting donor information in different planning, budgeting, and reporting documents. Various aid financing instruments and requirements for having aid on budget necessitate the adoption of a clear set of rules for introducing sectoral donor aid into the MoAIF's sectoral strategy and budget by the GoY.
- 67.** Second, MoAIF should create clear processes/rules for the participation of donors in ministerial planning and budgeting cycles. MoAIF should establish clear expectations of the donors' role in providing, classifying, and verifying information, in clarifying the status of expected disbursements and actual use of information, in determining whether and how disbursement information will be adjusted given the timing of data collection, and the purpose for which it is collected. This will enable donors to be clear on the frequency of and the rationale for the collection of aid information. It will also enable them to set up their internal systems to collect information from headquarters and/or the project level cost-effectively, and to make appropriate

judgements on how to adjust data according to agreed principles.

68. In moving forward, the MoAIF should start with existing systems, paying attention to the underlying reasons for the barriers preventing these systems from working properly. Any attempt to reform the institutional arrangements for managing aid information in Yemen and its integration on budget should address existing problems in public financial management, including building additional capacity in audit, financial control, and project management.
69. An initial step would be to agree on a simplified budget coding structure. Further, the purchase of a small standalone financial management system, or the application of a web-based (simple) financial management system would allow the Ministry to begin the process of tracking and managing its finances more efficiently. Training in the management and accounting for these systems should be one of the first steps in any progressive move forward.

Near-term priority 5: Filling critical skills gaps

70. The task of filling staff vacancies will be both a near- and a medium-term priority. In the near-term, MoAIF can take a number of important decisions, some of which are outlined in **Box 2** above and others that are described below, to establish the framework for a major upgrade in MoAIF's staff capacity and human resource management practices.
71. As resources permit, MoAIF needs to urgently increase its staff capacity in critical areas under the purview of a strategic workforce recruitment plan. An HR Committee consisting of senior management and the HR Department should be tasked with developing a comprehensive strategic workforce plan that will govern recruitment over the next three years. The HR Committee should meet regularly and be the vehicle through which staffing priorities are developed and articulated, collectively ensuring that recruitment takes place in accordance within a broader strategic vision. In a world of limited budgets, it will also be the forum through which staffing trade-offs are made between competing units and priorities. Once in place, the HR workforce plan should guide all recruitment. While scope can be retained for limited staffing outside of the plan, it should be kept to an absolute minimum—no more than 5 or 10 percent of the total and only to respond to emergency gaps.
72. Within the plan, priority should be given to filling the “missing middle”—staff with key technical skills that will allow them to perform front-line service delivery roles or fill critical support positions in financial management. Priority should be given to bringing on board junior staff who will be technically savvy and can work at the Ministry for a decade or more. Along with this

effort, the Ministry should create a formal inventory of job titles and technical skills that it requires and review how its current staff profile fits within this framework.

- 73.** In terms of front-line technical skills, over the next five years the MoAIF should focus heavily upon recruiting staff with technical and financial skills. High priority technical recruits would include the following specialties: (1) agricultural economists and extension workers, (2) fisheries inspectors, (3) lab workers in agriculture and marine sciences, (4) veterinarians and specialists in various agricultural and fisheries sub-fields (e.g., beekeeping, wheat, horticulture, aquaculture), (4) civil, irrigation and environmental engineers, and (5) statisticians.
- 74.** To enhance MoAIF's prospects to receive donor funding, the second priority for near-term recruitment would be to build the Ministry's internal capacity for project management, cash management, fiduciary controls, and audit and financial reporting. A major recruitment push should take place for staff with these skills at both the Ministry and the regional offices and general authorities. MoAIF and governorate staff should be trained to generate reliable data on program implementation and impact. This would include analysing beneficiary databases and utilising independent financial management systems. It would also include working with independent payment agencies with robust accounting and internal control practices, along with well-defined financial management arrangements for transfer of funds and financial reporting.
- 75.** To help fill immediate skills gaps, the MoAIF should explore the possibility of secondments or placing donor-funded staff in the critical areas outlined above. Such staff will help both in doing the day-to-day work of the Ministry as well as establishing practices and protocols in the areas falling within their domain. As a part of their terms of reference, such staff should also be required to train and prepare counterparts who can assume their duties in 2-3 years after their contracts expire.

Scenario 2: Utilising additional funding to best advantage

Overview

76. Scenario 2 considers how MoAIF's capacity building effort should be structured in an environment where additional donor resources or GoY funding becomes available. It adopts a "building block" approach. The strategic uncertainties surrounding the MoAIF's future are pronounced, and many cannot be easily resolved by the Ministry or even the broader GoY. The Ministry will therefore need to focus upon rebuilding functions and units from the ground up, so they can operate effectively in a variety of organisational configurations. It will also be important to recruit and develop staff who possess fungible skills and capacities that will fit into an evolving organisational structure and work environment.
77. Drawing upon the findings from the Institutional Assessment, MoAIF should structure its broader organisational development effort along three dimensions. The first will involve providing direct support to establishing and/or rebuilding certain key units and functions that will be essential for its operations moving forward. The second will be a major intake effort to recruit and develop talented staff in key technical areas, building upon the discussion in Scenario 1 Near Term Priority 5 above. And the third will involve developing the Ministry's training infrastructure and capacity so that it can provide its staff with basic training in certain areas and skill sets. Each will be discussed below.

Medium-term priority 1: Establishing key ministry functions and units

78. To expand food production and improve rural livelihoods, MoAIF will need to rebuild certain sets of functions that have been destroyed or degraded during the conflict. Restoring these functions will involve the provision of a comprehensive assistance package that would need to be sustained over several years. Some of this work will involve improvements to core systems and processes, such as communications and IT, which will need to take place in an integrated manner across the Ministry. Other interventions will be discrete and sector-specific, such as strengthening beekeeping or veterinary medicine. All this assistance would best be provided through consultancy support. It may also involve institutional twinning and/or partnership arrangements, particularly with countries in the GCC.

79. Such interventions could take place either on a one-off basis or be bundled together. Each would require conducting a detailed scoping study, developing a strategy for institutional development for the function (or unit) in question, facilitating recruitment and training efforts as necessary, and developing appropriate procedures and protocols for activities, such as inspection, testing and certification. It would also include the provision of the necessary equipment to operate technical laboratories or to put in place IT systems for the Ministry.
80. Examples of such institutional strengthening would include:
- 1) In the agricultural sector, establishing (or re-establishing) centres and/or laboratories overseeing the production of wheat, coffee, honey, dates, cotton, livestock, milk, and poultry. It would also include efforts to strengthen certification standards and procedures, along with the control of insect pests such as locusts. Such measures are needed for both food security as well as quality control.
 - 2) In the fisheries sector, it would include investing in marine research institutions, such as the General Authority for Marine Sciences and Aquaculture Research or the Center for Study of Marine Life. It would include strengthening efforts to monitor fish stocks, survey pollution and environmental damage, explore opportunities for aquaculture and fish farming, and oversee processing across the value chain. It would also include providing advice and technical assistance in areas, such as the tracking and monitoring of fishing grounds or long-distance communications.
 - 3) The Ministry's role marketing and promotion of agricultural products and fisheries depends on a strong marketing team within headquarters, which can focus on national and international campaigns.
 - 4) For MoAIF more generally, it would involve establishing the central IT unit through the provision of a centralized server and data centre, the creation of a Ministry-wide network, the development of IT standards to ensure cost-effectiveness and inter-operability, and the purchase of computers and smartphones that will allow data from the field to be gathered and integrated on a real-time basis.
81. The result of an initial survey of laboratory equipment needs is provided in **Attachment 2**. While this survey is useful in establishing an initial baseline and underscoring the degradation of these centres and laboratories, a more comprehensive assessment of their human and technical needs is required. A plan to upgrade the Ministry's ICT systems will require a similar detailed scoping study.

Medium-term Priority 2: Rebuilding cadres and developing new staff

82. The section on filling urgent staffing needs in Near Term Priority 5 above highlighted skills gaps that should be addressed immediately. It also recommended that some of them be filled on a temporary basis through donor funding and secondments if possible. Beyond these pressing priorities—and operating in a phased approach in accordance with an established strategic workforce plan—the Ministry will need to pursue a multi-year effort to recruit staff in a broad range of technical disciplines.
83. A list of priority technical specialties for recruitment is provided in **Box 5** below. The specific numbers to be recruited under each category will need to be determined by the HR Committee drawing upon the civil service census and other factors, such as population density, development priority, or the size and depth of the applicant pool. All of this information should be incorporated into the strategic manpower plan, which should be updated on a quarterly basis and include data on ongoing and completed recruitment. The plan must also take into account related factors of operational budget, office space and furnishing, training, benefits and other associated costs.

BOX 5: PRIORITY TECHNICAL SPECIALTIES FOR RECRUITMENT

Agricultural sector:

- Agricultural extension
- Agricultural marketing
- Veterinary sciences
- Animal husbandry
- Forestry
- Environmental engineering
- Biology (plant and insect pathologies)

Irrigation sector:

- Irrigation engineers
- Civil engineers
- Hydrological engineers
- Agricultural engineers

Fisheries sector:

- Fisheries inspection
- Fishing technologies
- Marine biology
- Food processing and quality control
- Fisheries marketing

Financial management and administration:

- Information and communications technology
- Accounting and financial management
- Audit
- Monitoring and evaluation
- Human resource management
- Statistics

84. To the greatest extent possible, the Ministry should target younger staff and/or recent graduates with appropriate degrees in the relevant disciplines (agriculture, engineering, economics, computer science, etc.). All these positions should be sourced meritocratically through a competitive recruitment process that would include panel interviews and graded evaluations. The Ministry faces an important opportunity to enshrine meritocratic principles moving forward, and to give strong signals that any recruitment will scrupulously follow HR guidelines without *wasta* or favouritism.
85. Ministry staff have expressed interest in redeploying significant numbers of staff currently serving in SOEs or subordinate agencies. However, as noted above, it is unlikely that such staff would have the technical background, motivation, and lengthy career horizon to compete with recent graduates. They could be allowed to compete for job openings alongside other potential recruits and be selected if they are the best applicant for the job. But they should not be reassigned or given any preferential treatment either individually or collectively.
86. To redress the current staffing imbalance, during the next three years, the MoAIF should put in place a 4:1 or 5:1 rule on recruitment—a commitment to staff four or five positions requiring front-line technical specialists or critical financial management cadres for every back-office administrative and/or clerical position created. Particular attention should be devoted to recruiting staff based in the governorates and various field offices, which are likely to encounter a wave of demographically induced retirement over the next 3-4 years.

Medium-term priority 3: Rolling out training and capacity building across the ministry

87. This report has argued that MoAIF needs to take advantage of current donor training opportunities that present themselves, as they offer an immediate and cost-effective way to build staff skills and capacity. However, they will not be sufficient for the medium to long term. MoAIF will need to create a variety of training courses and events that are tailored to its unique needs.
88. MoAIF should pursue two sets of activities under this rubric. The first is to put in place the required infrastructure to train large numbers of staff through a mixture of in-person training and online courses. The second is to develop a set of generic training programs that will be used to train staff at both the national and sub-national levels. This would include training for the orientation and onboarding of new staff. It will also include training in certain generic sets of skills that will be of value across a range of jobs and disciplines. Both are discussed below.

- 89. Developing the infrastructure for training.** It will be important that MoAIF put in place the infrastructure that will allow it to train and develop its employees. There was wide agreement among staff that many of the Ministry's earlier capacity building activities came to a standstill after its training facility was transferred over to the Ministry of Technical Education back in 2001. The Ministry could explore having this facility returned to its jurisdiction or, as would probably be quicker, secure alternative dedicated space for training. Initial requirements would be modest and include only 1-2 rooms capable of housing around 30 students, although there should be potential for scaling-up later. MoAIF will also need to identify dedicated faculty and administrative staff to manage this function, although early in the process such staff could be kept to a minimum and current Ministry employees could be utilised to provide course content.
- 90.** As more resources become available and the Ministry's technical capacity expands, MoAIF will want to supplement its in-person training with online courses and materials. Such training can either take advantage of existing online materials or make use of content created specifically for Ministry employees. Virtual courses can also be utilised to facilitate training for field-based staff.
- 91. Preparing general courses for staff and consultants at central and subnational levels.** As noted above, MoAIF's training effort should initially focus upon two sets of activities. The first would include training for the induction of new staff. This would include an introductory course on the Ministry covering its mandate, areas of operation, organisational structure and staffing, and reporting relationships. Such a course would also include basic information on the regulations covering financial management, procurement and HR guidelines that govern Ministry operations, as well as basic HR information on salary ranges, benefits, the performance review process, etc. Other more tailored modules could include an introduction to basic operations for selected staff, such as those working on agricultural extension or fisheries inspection.
- 92.** Basic training courses should also be created for both new and existing employees on certain sets of skills and functions that will be of value in a wide range of settings and disciplines. This would include training in areas, such as: (1) IT, (2) project appraisal and cost/benefit analysis, (3) project management, (4) basic accounting and financial management systems, (5) procurement rules and regulations, (6) human resource management, and (7) softer skills, such as leadership, team building, and communications.

93. What should not be included as part of this broader effort is technical training in narrow specialties and disciplines. Such training should take place through individual consultancies, such as those addressing animal husbandry or aquaculture. But these sets of skills are niche in nature and would affect only a limited number of employees. It would not be cost-effective for the Ministry to develop such training courses in the early days of re-establishing its training function, although they could potentially be added later as demand merits.

Key risks and mitigation strategies

94. Any reform program must confront risks, and those confronting the MoAIF are huge. Most of the strategic risks below will depend upon developments beyond the control of MoAIF and even the GoY. They cannot be avoided or even substantially mitigated, although careful scenario-based planning may help senior management to respond more quickly to events as they unfold. Operational risks, however, can be minimised through careful management and foresight. The most pronounced strategic and operational risks are highlighted below.

Strategic risks

95. **The broader political situation deteriorates.** One of the main strategic risks confronting MoAIF would be a resumption of full-scale conflict or an expansion of the territory under control of the de facto authorities. An outbreak in fighting would severely compromise MoAIF's ability to access infrastructure and clients in the field. It would also make it more difficult to patrol Yemen's coastlines and combat illegal fishing. Renewed conflict would create additional pressure upon the GoY to divert its limited resources to defence expenditures, further complicating the Ministry's already precarious financial position.
96. **The GoY and MoAIF is unable to secure regional ownership and buy-in.** Beyond the territory and institutions controlled by the de facto authorities, the MoAIF currently faces restricted access even in areas nominally under GoY control. A variety of local actors with varying degrees of influence and legitimacy, ranging from governorates and local communities to militias to criminal gangs and terrorist organisations, are active in different regions and pursuing agendas that may or may not be aligned with those of the Ministry. Ensuring their cooperation, buy-in and support or minimising their potential opposition will be a significant challenge moving forward.

- 97. The MoAIF undergoes further restructuring.** The MoAIF was established in its current configuration in December 2020, when Yemen's Cabinet was reduced from 36 to 24 ministerial portfolios and the Ministry of Agriculture and Irrigation and the Ministry of Fish Wealth were merged. Some Ministry staff have noted the possibility that the merger of these different sectors may be undone at some point in the future—hence their reluctance to consolidate certain functions, such as back-office operations. Yet there is no indication that the downstream separation of these two sectors is under contemplation, and several knowledgeable observers noted that if anything the GoY may experience further pressures towards consolidation. Most OECD countries range between 15 to 22 cabinet ministries, so the administrative and financial case for further cabinet expansion would be weak. Under these circumstances, MoAIF would be better served by treating the merger as an established fact and restructuring its operations accordingly than waiting for a potential reorganisation that shows little sign of materialising over the near- to medium-term future.
- 98. Additional funding does not materialise.** MoAIF's budget is inadequate to support its most basic operations. Unless additional resources are forthcoming from donors or the GoY, the Ministry will find it difficult to break out of its current low-level functioning to fulfill the mandate it has been given. MoAIF can mitigate some of these challenges by improving the collection of revenues and user fees to which it is currently entitled and by proactively cultivating donor support. The recommendations advanced under Scenario 1 will also be helpful in this regard.

Operational risks

- 99. Continued absence of empirical data for decision-making.** One of the more pronounced findings to emerge from this study has been the difficulty in gathering timely and robust data for managerial decision-making. Even basic managerial questions—such as the number of staff actually employed by the Ministry and its affiliated agencies—have been difficult to answer with any degree of precision.
- 100.** The quality of the Ministry's decision-making will depend directly upon the accuracy and timeliness of technical and managerial information. An aggressive effort to plug these data gaps and put in place systems and procedures for gathering data will be valuable in their own right and will help signal to donors that the Ministry is serious about evidence-based decision-making.

- 101. Additional resources may be diverted to patronage-driven recruitment.** MoAIF currently lacks both a strategic workforce plan and robust payroll controls. Should the Ministry benefit from a significant expansion in its operational budget, there is a risk that part of these additional resources would be absorbed in a round of patronage-driven recruitment, in which staff with limited skills and training would be brought into low-level clerical and administrative jobs. The Ministry desperately needs talented and tech-savvy staff and cannot afford to spend its heavily constrained personnel budget on employees who bring limited value added.
- 102.** The best way to mitigate this problem would be to adopt the HR recommendations advanced in this report, including the establishment of a Ministry-wide HR Committee and strategic workforce plan, the proposed 5:1 ratio for recruiting technical versus administrative staff, the payment of salaries via direct deposit, and the civil service census and workforce audits. Efforts should also be made to crack down on chronic absenteeism.
- 103. The ministry may fail to attract and retain talented technical staff.** A related risk is that the Ministry fails to recruit the technical staff that it needs for a variety of reasons, including salaries and terms and conditions of employment that are unattractive and non-competitive, lack of adequate opportunities for career progression, or a work environment that is dangerous, stifling, or uninspiring. An important challenge for the HR Committee will be building an environment that allows the Ministry to recruit and retain the talented staff it needs. A review of salary and benefits and practices for human resource management should help address these issues.
- 104. Weaknesses in procurement and financial management may lead to the misallocation and/or diversion of resources.** This report recommends moving to a model in which the Ministry focuses on grant-making and performance monitoring, and the actual implementation of public works would reside largely with the governorates or local farming or fisheries associations. This arrangement runs a risk of corruption and the misallocation of funds and should be implemented in a phased manner as capacity is developed. To mitigate this risk, Ministry staff will need to be trained and incentivised to carefully monitor the use of funds. Local government employees will need to be trained in procurement and financial management, and there will need to be serious consequences (including termination and prosecution) for the diversion and/or misuse of funds. Transparency in publishing information on the resources made available to local communities can also help to mitigate this risk.

Attachments

Attachment 1: Matrix of donor activity in the fisheries and agriculture sectors in Yemen, 2022 (non-exhaustive)¹¹

Project	Areas of Intervention	Details
WORLD BANK		
<p>Program on Sustainable Fishery Development in Red Sea and Gulf of Aden (SFISH) May 2022, USD 45mn</p>	<p>Component 1: Strengthening regional collaboration in management of marine fisheries and aquaculture in the RSGA region</p> <p>Component 2: Improving Economic Opportunities, Food Security and Effective Management of Fishery Production in Yemen (USD 35.14mn)</p> <ul style="list-style-type: none"> • Sub-Component 2.1: Improving the resilience of the fishery value chain for sustained livelihoods • Sub-component 2.2: Governance systems and knowledge developed for effective management and climate resilience of fisheries 	<p>The Development Objective of the overall program is to promote regional cooperation for sustainable fishery management in the RSGA region and strengthen the effective fishery production and value chain in RSGA countries.</p> <p>Of which sub-component 2.1 focuses on governance systems:</p> <ol style="list-style-type: none"> 1. Establishing of sub-national fishery governance committees led by the General Authority for Fisheries (GAF): <ul style="list-style-type: none"> • Aim is to complement the implementation fishery strategies and regulations related to management of fisheries. • Sub-national governance committees will act as coordinating and consultative platforms for stakeholders (e.g., fishery authorities, fishers and other involved in the value chain, academia, and business chambers and associations). 2. Establishing approaches for regular fishery data collection and reporting under limited capacity setting 3. Study on fishery sector diversification and development of a business model 4. Developing sub-national fishery management plans: <ul style="list-style-type: none"> • Develop and pilot two management plans and that are climate informed. • Will utilise evidence from fishery stock assessment that is conducted by FAO and other related studies recently undertaken. • Will use participatory approaches i.e., consulting relevant line ministries and departments, development partners, academia and think tanks, civil society organisations, international and local non-governmental organizations and private sector chambers and associations, and use the sub-regional fishery governance committees which will monitor the implementation of the plans.
Food and Agriculture Organization (FAO)		
<p>Increasing Resilience through Innovative and Sustainable Improvement of Food Security and Livelihoods for Returnees, IDPs, Migrants and Host Communities in the Western Coastal areas of Yemen 2021 (Closing Dec. 2023)</p>	<p>FAO In coordination with the Ministry of Agriculture, Irrigation (MoAI) and the Ministry of Fish Wealth (MFW)</p>	<p>Vulnerable Households are supported through agricultural and fishery in-kind inputs, and training.</p> <p>A fish stock assessment is being undertaken as a desktop study and survey (supported by World Bank).</p>

¹¹ This table is based on interviews with development partners and desk research. See IFC Value Chain Analysis for comprehensive list of projects implemented since 1973 in the fisheries sector.

Project	Areas of Intervention	Details
UNDP		
Implementing partner for SFISH (WB) and other upcoming donor grants. Preparation of the multi-donor capacity development project (concept note stage)	<p>Fisheries: focused as part of larger livelihoods program until recently, but current projects look at it as core sector and focus on value chains.</p> <p>Agriculture: 3 elements: 1) desertification (forestry department), 2) genetic engineering (research authority), and 3) community-based initiatives.</p>	<p>Because of the current fragile environment, the UNDP works through a bottom-up approach mainly at the local/district level.</p> <p>UNDP has not worked at the policy level since 2013 when it provided support to both the Ministry of Agriculture and Fisheries on their strategies and action plans.</p>
The Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ)		
Strengthening the resilience and participation at local level in Yemen (SRPL) 2021 (Closing April 2023)		The project aims to improve the framework conditions for increasing the income security of households dependent on artisanal fisheries and thereby ultimately boost their resilience.
PRAGMA (USAID)		
Programs with USAID, FCDO, Government of Kuwait	<p>Agriculture/livelihoods: grassroots support through training for farmers involved in four value chains i.e., horticulture changes with seasonality (e.g., onions, coffee, honey, and livestock in coordination with Ministry).</p> <p>Fisheries: Grassroots support for fisherfolk and SMEs on fishing methods and cleaning, processing, ice buckets and bleeding on boats, landing sites, transport, value chain to factory, factories and processing, quality improvement standards, recipes to create value added etc.</p> <p>Institutional reform: support to Ministry of Finance and line Ministries (MoAIF, Health, Education etc.) on preparation of budgets and investment plans, financial bookkeeping, keeping proper documentation and streamlining revenues (to present to MOPIC and send MOF for review and adding to the budget).</p>	<p>PRAGMA works on broad range of areas including macro (finance, trade, ports, customs, and tax), private sector/SME/job creation/capacity building, access to finance with private banks, and livelihoods/linkages in sectors, such as agriculture and fisheries, etc. There is also potential interest from IFC for fish farming.</p> <p>PRAGMA works along the whole value chain e.g., for honey, provide farmers support on feed for bees, health of bees, hives and extraction, hygiene standards, packaging, market linkages, etc.</p>
Kingdom of Saudi Arabia		
Saudi Development and Reconstruction Program for Yemen (SDRPY)	<p>SDRPY focuses on seven key sectors: agriculture and fisheries, health, water, education, energy, transportation, and government and public sector infrastructure.</p> <p>Projects to develop and maintain key government infrastructure.</p>	The Saudi Development and Reconstruction Program for Yemen has supported the fisheries sector in various governorates through the distribution of modern fishing boats. (e.g., One hundred modern fishing boats were distributed among local fishermen in Hadramout in 2020, as the fourth batch of upgraded fishing boats distributed by SDRPY in different Yemeni governorates).

Attachment 2: Initial survey of MoAIF laboratory requirements¹²

Agricultural Sector

Reference areas/ Sub-sectors	Main components required	Applicable notes
WORLD BANK		
Animal health/ Animal production	<ul style="list-style-type: none"> • Most animal disease diagnostic equipment • Diagnosis and sero-surveillance tools and devises • Personal protective and safety equipment and tools • Equipment for the safe disposal of biochemical and chemical waste • Most chemical solutions for disease diagnosis and testing • Backup generator systems to complement the public network 	These components are needed for the Central Veterinary Laboratory (CVL). Only a few parts are available, and most no longer function properly. Current solar power system needs to be updated/ replaced.
Beekeeping	<ul style="list-style-type: none"> • Lab equipment for quality testing and control • Equipment and tools for protecting and modernizing beekeeping and honey production through branding and standards 	The ministry supports beekeeping, yet detailed requirements are yet to be developed and defined
Crop production	<ul style="list-style-type: none"> • Means and tools for improving local seeds through promoting research facilities and affiliated centers at regional levels. 	Supported by the FAO

Fisheries Sector

Reference areas/ Sub-sectors	Main components required	Applicable notes
Laboratory and standardisation	<ul style="list-style-type: none"> • All tools and devices for quality control and verification • Digital Muffle Furnace (DMF005) • Hot plate (F60-Stirrer) • Conductivity Meters • Benchtop PH meters 	These are only examples of Laboratory and standardisation inputs to be provided. Related details and specifications are available

¹² This survey was undertaken in December 2022 by Yemen Executive Bureau staff and consultants. It is preliminary in nature and will require more detailed review and analysis to develop the specific capacity building strategies and equipment requirements for individual units and functions.

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State Fragility initiative

The State Fragility initiative (SFi) is an International Growth Centre (IGC) initiative that aims to work with national, regional, and international actors to catalyse new thinking, develop more effective approaches to addressing state fragility, and support collaborative efforts to take emerging consensus into practice. SFi brings together robust evidence and practical insight to produce and promote actionable, policy-focused guidance in the following areas: state legitimacy, state effectiveness, private sector development, and conflict and security. SFi has financial support from the UK Foreign, Commonwealth, and Development Office (FCDO) and The Rockefeller Foundation.

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