SUPPORTING PARTICIPATORY AGRICULTURAL LAND USE CONSOLIDATION FOR SUSTAINABLE DEVELOPMENT AND FOOD SECURITY IN EGYPT

FINAL REPORT

FOR GENERAL DISTRIBUTION

Submitted by

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Cairo 6 March 2022

Acronyms

CAAC Central Administration for Agricultural Cooperatives
CAPMAS Central Agency for Public Mobilization and Statistics

CBE Central Bank of Egypt

CDA Community Development Association ECES Egyptian Center for Economic Studies

EGP Egyptian Pounds

EIB European Investment Bank EKN Netherlands Embassy ESA Egyptian Survey Authority

EU European Union

GIZ German International Development Agency

GoE Government of Egypt
KfW German Development Bank

MALR Ministry of Agriculture and Land Reclamation

MSMEDA Micro, Small, and Medium Enterprise Development Agency

MLD Ministry of Local Development MSS Ministry of Social Solidarity

MWRI Ministry of Water Resources and Irrigation NUCA New Urban Communities Authority

PMU Project Management Unit

REPD Real Estate Publicity Department RVO Netherlands Enterprise Agency

USAID United States Agency for International Development

WFP World Food Programme WUA Water User Association

Units of Land Measure

Feddan 4200 m2 Hectare 2.38 feddans Oirat 1/24 of a feddan

The views and opinions expressed in this scoping study are those of the author and do not necessarily reflect the position of RVO or the Dutch Ministry of Foreign Affairs.

Arabic Terminology

al dariba al 'aqaria annual property tax al haiez al 'umrani urban growth boundary

al 'omda village headman

al-shahr al-'aqari Real Estate Publicity Department (REPD)

al-sigil al-shukhsiDeed registryal-sigil al-'ainiTitle registrybersimEgyptian cloverfahlfield boundary market

gamaaya ziraai agricultural cooperative

gamaaya al ahlia lil tanmiya CDA

hod (pl. ahwad)irrigation basinhayah karimaDecent Life Initiativehyaziinagricultural plot cultivators

kart al fellah farmer credit card

lua'ah tanfiziya executive regulations for a law

isterdad amlak al-dowla return of State land markaz (pl. marakaz) rural district

maslaha al-shahr al-'aqari Real Estate Publicity Department (REPD)

mastaba (pl masatab) raised crop row

mas'uleenagricultural or social officermerwasmall irrigation channelmesqasmallest irrigation ditch

naga' rural hamlet

qirat land area measure (24 qirats = 1 feddan)

ruqm qawmi lil aqar national property ID number

ruwabit mustakhadimi al miya WUA

saha towqia confirming contract signature

tawkil power of attorney

tawsia basita simplest form of company under Company Law urfi traditional paper contract between two parties

wada' al-yed hand claim on land

zemam boundary of agricultural tax in Old Lands

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EXECUTIVE SUMMARY

This report was commissioned by the Netherlands Enterprise Agency (RVO.nl). RVO is responsible for the implementation of the LAND-at-scale programme, a demand-driven land governance support programme. The programme currently holds a portfolio of projects in 14 countries. LAND-at-scale supports interventions based on the UN Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGT), with particular attention to interventions that support food security, rule of law, private sector development, gender equality and climate action. In the context of LAND-at-scale, the Netherlands Embassy in Egypt requested RVO to scope and formulate opportunities for a programme in Egypt that closely builds on earlier NL-supported interventions to address increasingly fragmented land holdings in Upper Egypt. The Terms of Reference for this report call for a preparatory study to gain deeper insight of and knowledge for the programming of a participatory, blended land management approach in Egypt from 2022 onward. Specifically, the Terms of Reference calls for a study focusing on the ongoing MALR/WFP project in Upper Egypt and on ways to reinforce its outcomes.

Context: Land management and land tenure in Egypt

Today, the official land and property registration regime in Egypt is difficult for citizens, procedurally complicated, and almost completely out of date, thus only some 5 percent of properties in Egypt can be considered fully registered. The story of how this situation came to pass is long and convoluted, starting with the inability to implement across the country two major pieces of legislation: Deed Law No. 114/1946 (al-sigil al-shukhsi) and the Title Law No. 142/1964 (al-sigil al-'aini). As a result, a number of quasi-legal procedures have evolved over the years that conveniently sidestep the official registration system and allow for relatively straightforward, quick and inexpensive means to conclude most property transfers. Such semi-formal systems of transfer are used not only by individual buyer and sellers, but also even by government agencies and private companies. They are not perfect and fraud is a remote possibility, but for most they are sufficient. The Government has recently undertaken efforts to make the registration system less difficult, but fundamental reform of the legislative and institutional frameworks is still needed, particularly for agricultural land in Upper Egypt.

<u>Context: The land tenure situation and increasingly fragmented agricultural holdings in Egypt's Old Lands</u>

There are some 6.5 million feddans under cultivation in what are considered Egypt's Old Lands. All of this cultivated land is watered from the Nile under flood irrigation and is very productive. About 40% of this land is held by roughly 3.7 million small-holders, there has been an inexorable trend towards land fragmentation, and the average size of holdings decreased from 3.8 feddans in 1960 to 2.2 feddans in 2010. Over the same period the percentage of landholders with less than one feddan went from 26.4 percent in 1960 to 48.3 percent in 2010. Fragmentation makes very small plots less productive and, in many cases, hardly economically viable. The main reason for fragmentation is rapid farm family population growth and inheritance practices. There is general agreement – by Egyptian government officials, local level functionaries and professionals, farm families, and commentators – that there is little or no need for formalized registration of agricultural parcels in the Old Lands, at least for small parcels.

Context: The livelihoods of smallholder farm families

It is well known that rural areas of Egypt have levels of poverty that are significantly higher than national averages, and in fact some rural areas, in particular those in Upper Egypt, well over half of the population live below the government poverty line. Even though the agricultural lands held by small holder families are small and becoming smaller, the benefits derived from these holdings remain extremely important for the lives of these families. Thus, ways of increasing the productivity of and income from cultivated fields would help the whole family economy in multiple ways.

Context: The institutional and stakeholder landscape in Egypt's Old Lands

There are some 4300 village administrate units in Egypt, almost all of which are found in the Old Lands, with populations that range from 5,000 to 25,000 persons. The cultivated area of each village in the Old Lands can vary considerably, usually between 2,000 and 12,000 feddans. The most important institutions at the village level are the following: (1) The village administration is usually limited to the Village Chief, a person appointed by the respective governor. (2) The village headman is a village notable whose position is mainly honorary, although his role is to promote social harmony. (3) The village agricultural cooperative is present in virtually every village in the Old Lands. Although they are structured under cooperative principles to represent their members, over time they have evolved into more executive institutions implementing government policy, and their main role today is managing the distribution of subsidized fertilizers, and other agricultural inputs at subsidized prices. Their record as means of organizing better farming methods and raising agricultural productivity has been limited thus far. (4) Community Development Associations of one sort or another are found in most villages in the old lands. They are formed by members and registered under the Ministry of Social Solidarity. Development partners frequently work with selected CDAs since they are elected bodies and can be supported with training, office organization, etc. (5) Water users' associations are groups of farmers who use the same source of irrigation water who come together to replace individual lift pumping by more efficient collective single point pumping as well as ditch lining and participatory water management. The promotion of the concept of WUAs, mainly by development partners in partnership with the Ministry of Water Resources and Irrigation, dates from the early 1980s. Since 1994 legislation has made WUAs legal entities.

Context: The gender dimension

It is clear that, although legally women have rights of inheritance, property holding, and the ownership and management of businesses, in reality the pursuit of these rights has been seriously compromised in rural areas by long-held traditional social attitudes that confine the roles of women to domestic and family affairs. In effect, it is the men in a family who undertake almost all farming activities and who have the final say on managing family assets, including land assets. Furthermore, it is almost exclusively men who enter into village organizations and who engage in village politics, and at best women's interests are expressed and negotiated through family structures and where most decisions affecting women's claims on property rights dominated by the male heads of families.

Current Government policies and strategies relating to Old Lands

Based on government sectoral and national plans, as well as on recent national initiatives and proclamations, the most prominent government plans for the development of the Old Lands are (1) the conservation of irrigation water and (2) improving the livelihoods of poor small holders and rural populations in general.

The Egyptian government has, since the 2000s, become more and more concerned with the country's absolute water limits and have adopted a policy of modernizing irrigation and farming practices in the

Old Lands in order to reduce the amounts of water consumed. The idea is that a through a wholesale reduction of traditional flood irrigation and its replacement by modern irrigation methods, water requirements in the Old Lands can be dramatically reduced.

The government has long adopted policies and programs to combat the high levels of poverty in the Old Lands, particularly among small holders and particularly in Upper Egypt. Recently, with the launching of the huge Decent Life Initiative by the President in 2019, the government has redoubled its efforts and has made improving the livelihoods of the inhabitants of the Old Lands one of the most important of national projects.

It should be added that government policies towards the Old Lands include applying climate mitigation and adaptation methods, in particular in promoting different crops (especially those that are heat and pest resistant and that require less water) and in improved farming patterns.

<u>Description of the MALR/WFP land use consolidation efforts</u>

Land use consolidation¹ pilot projects in the Old Lands began with the 2013-2019 project called the Adaptation Fund Project budgeted at US\$ 6.9 million and targeting 49 villages in five governorates of Upper Egypt, executed by MALR and implemented by WFP. This project was mainly concerned with broad measures to improve food productivity and to mitigate the effects of climate change on small holder agriculture, including land use consolidation pilots.

The current MALR/WFP project (2020 through end 2023) is budgeted at US\$ 8.7 million, targeting 60 villages also in five governorates of Upper Egypt and funded by the Netherlands Embassy. This project is continuing the main activities of the earlier 2013-2019 project through similar modalities, but with more emphasis on voluntary land use consolidation and the promotion of its adoption both as an end in itself and as a mechanism to introduce improved farming methods.

Current project activities begin with 5 to 15 cultivators of the consolidated parcel – usually equalling 15 to 20 feddans in total – themselves organizing the work (with the PMU team as needed). Land improvement is carried out – soil levelling, ploughing guided by laser stations and sometimes the creation of raised rows. At the same time the mesqa and merwa supplying water may need upgrading to improve water efficiency and to fit with the consolidated fields. There may be more sophisticated improvements, including the substitution of diesel pumps with electric pumps running on solar power, the replacing of irrigation channels with buried PVC pipes and valves, and the introduction of full underpressure networks. Depending on the season the main field crops under the project will be wheat, sorghum, corn (dura) or some vegetables. Sugarcane has been included on the pilot basis (with drip irrigation and intercropping). The Project pays for these improvements at 100% for the first season, reduced to 75% for the second, 50% for the third, and finally 25% for the fourth.

Assistance to CDAs selected for the Project may include upgrading office capacities, training in various tasks including keeping records and M&E. CDAs and their cultivators may access farm extension and

¹ Throughout this report, the term land use consolidation is used to describe activities carried out under the WFP/ MALR projects. Technically, a better phrase for 'land use consolidation' might be 'agricultural parcel consolidation' or 'consolidated cultivation.' But since the term land use consolidation was used by WFP/ MALR from the beginning, we follow this. Land consolidation on the other hand is defined as: a highly effective land management instrument that allows for the improvement of the structure of agricultural holdings and farms in a country, which increases their economic and social efficiency and brings benefits both to right holders as well as to society in general. A good overview of land consolidation approaches in different countries, including their legislative issues can be found here: https://www.fao.org/3/ca9520en/ca9520en.pdf

technical support. CDAs are encouraged to promote land use consolidation concepts among neighbours and in different hamlets and villages through farm-to-farm visits, sharing documentation, through social media, etc.

In about 20 percent of pilot land use consolidation efforts water user associations (WUAs) have been formed. Organization of WUAs and registration with MWRI are facilitated by the Project's PMU.

In each village, CDAs also promotes small farm enterprises that are traditionally run by women. Support in technical advice and small, interest free loans from a revolving fund. The most common activities are livestock and poultry raising.

Benefits to farmers are basically in (1) increased yields and (2) lower costs. The per-feddan yields for most crops are said to increase by 20 to 50 percent. Lower costs relate to savings on diesel fuel consumption for pumps, on the use or rent of farm machinery, on the lower purchase and transport costs of inputs, and the lower costs of transporting and marketing outputs, both due to increased economies of scale. Land use consolidation and associated improvements also can reduce irrigation water consumption considerably, and this is reflected in cost and time savings. Despite some observers being worried that the motivation to adopt land use consolidation and associated improvements will diminish or disappear once the subsidy is exhausted. But anecdotal information points to considerable buy-in by farmers and general popularity of the idea, with continued interest after the subsidies are exhausted and also of neighbouring farmers adopting land use consolidation even without Project support.

For each consolidation pilot area, the participating farmers (hyaziin) are recorded by the participating CDA (based on records obtained from the village agricultural cooperative, along with their cultivated holding in feddans or qirats and their locations. Every six months these records are updated by the CDA to reflect changes – such as farmers who drop out, plots that are sold or rented, and new farmers who join the pilot area. It is important to stress that these are the only efforts that touch upon land tenure. The actual (usually multiple) ownership status of a holding is not recorded or investigated.

A STRATEGY FOR PROMOTING LAND USE CONSOLIDATION IN UPPER EGYPT

Grouping together small field parcels, collectively preparing land for planting, unifying both crop input and output efforts, and making associated irrigation improvements create economies of scale and have been shown to reduce overall costs, raise crop productivity per feddan, reduce labour requirements, and reduce irrigation water consumption. The benefits of such land use consolidation clearly increase the income of participating small holder families and improve their land assets. And associated improvements in field geometry and in the delivery of irrigation water to fields results in significant overall water savings. These benefits conform well to and dovetail with the two overarching government policies directed towards the Old Lands – improving the livelihoods of poor small holder families and rationalizing the consumption of Nile waters.

The challenge of spreading the concept and practice of land use consolidation throughout Upper Egypt (not to mention the Delta) is great. In the current MALR/WFP efforts only a tiny portion of cultivated lands have come under land use consolidation pilots, and on average only 1 to 3 percent of these lands have so far been consolidated in the 60 target villages. It is thus clear that efforts must be ratcheted up several-fold in order for the productivity and water-saving benefits of land use consolidation to have a macro impact.

Thus, the question is how best to stimulate a huge expansion of the land use consolidation idea and lay the groundwork for its adoption by many more small holders. This overall goal can be translated into four themes or specific objectives:

- 1. Maximize the adoption of further land use consolidation pilots (and further additions by cultivators to ongoing pilots) under the modalities of the current MALR/WFP project (especially in and around the sixty project villages).
- 2. Optimize the demonstration effect of MALR/WFP land use consolidation successes to promote the concept throughout Upper Egypt (and eventually the Delta), concentrating on specific crops with the most potential.
- 3. Promote the concept of land use consolidation and its advantages in national dialogues on sustainable agricultural development.
- 4. Conceptualizing less costly and more efficient projects for future land use consolidation projects that might be attractive to international donors as well as MALR and MWRI (including initiatives undertaken by, for example, the CBE).

The proposed project would be an add-on to the current MALR/WFP project, which finishes at the end of 2023. This add-on project is expected to run in total for 3 to 3.5 years, thus it would finish towards the end of 2025 and extend as much as two years beyond the MALR/WFP project. This should be seen as an advantage, since over the 2024-2025 period (1) the MALR/WFP project results and successes could be fully analysed and used in land use consolidation promotion, (2) there would be a champion for land use consolidation in place to help the MALR beyond the MALR/WFP project, and (3) there would be a sort of bridging facility should there be additional investments in land use consolidation projects in the future.

1. INTRODUCTION

This report responds to a Terms of Reference (Egypt land governance study LAS21EG10, September 2021). It calls for a study to gain deeper insight of and knowledge for the programming of a participatory, blended land tenure approach in Egypt from 2022 onward, and it has two objectives: (1) to provide a solid analysis of existing land governance practices at both national and local levels, and (2) to provide a stakeholder analysis and needs assessment to set up a network for LAND-at-scale interventions appropriate to the Egyptian context, including buy-in by institutions and sketching out potential implementing partners. Specifically, the Terms of Reference calls for focus on the ongoing MALR/WFP project in Upper Egypt.

This Terms of Reference relates to the LAND-at-scale Formulation Plan "Supporting participatory land (use) consolidation for sustainable development and food security in Egypt," RVO and Netherlands Embassy, June 2021, LAS20EG01. This Formulation Plan looks at the context and baseline situation and sketches out possible land governance interventions. The main objective of these interventions is to build on the existing EKN-funded MALR/WFP project in Upper Egypt that has successfully applied bottom-up land use consolidation practices, with an aim to introduce a component which includes land registration, land use planning, land consolidation, and dispute resolution. The overall scaling objective is to build institutional capacity and to apply a blended approach which contributes to more efficient agricultural production, improves ecological outcomes, and strengthens food security. This add-on project is expected to have a design/formulation phase (Phase 1) followed by a roll out over three years (Phase II).

The Netherlands Enterprise and Development Agency (RVO) has already begun or is setting up LAND-at-scale projects in fourteen countries with a focus on Africa and the Middle East. The LAND-at-scale programme has as a main objective "to directly strengthen essential land governance components for men, women and youth that have the potential to contribute to structural, just, sustainable and inclusive change at scale in lower- and middle-income countries/regions/landscapes. LAND-at-scale will realize this objective by fostering a comprehensive, integrated and tailor-made approach. LAND-at-scale will therein focus on support to upscaling of successful pilots, providing support to innovative interventions with upscaling potential, integrating tested and new initiatives, and investing in increased knowledge and learning." (Ministry of Foreign Affairs of the Netherlands and the Netherlands Enterprise Agency, February 2019)

It should be pointed out that the LAND-at-scale programme takes much of its conceptualization from the global Fit-for-Purpose Land Administration movement, which promotes new, local and practical solutions to difficult land surveying, registration, and tenure issues. Various global institutions have sponsored this approach, starting in 2011-2015.²

The Consultant selected for this study began work in Egypt on 6 November 2021 and completed his assignment by 31 March 2022. Besides numerous meetings with stakeholders at the national

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² See UN-Habitat, *Fit-for Purpose Land Administration: Guiding Principles for Country Implementation*, Nairobi, 2016, especially pp 2-6.

level, the Consultant also carried out local level studies in Upper Egypt, specifically assessing ongoing efforts of the MALR/WFP project in the governorates of Qena, Luxor, and Aswan.

2. RELEVANT CONTEXT

2.1 Land management and land tenure in Egypt

Today, the official land and property registration regime in Egypt is difficult for citizens, procedurally complicated, and costly for most property transactions. Such was observed also by the Prime Minister, who was quoted as saying in February 2021 that "About 95 percent of our real estate in Egypt is unregistered." The story of how this situation came to pass is long and convoluted, but it is worth making an effort to summarize the situation.

At the start of the 20th Century the British colonial administration began surveying all agricultural lands in Egypt (mainly for taxation purposes) and by 1925 most of these lands had been entered into a cadastre and formally recorded by the Egypt Survey Authority (ESA), with cultivated land divisions (the smallest of which was the *hod* or basin) and individual fields demarcated. Cadastre and mapping work was also begun in urban areas, and most of Cairo and some other cities had been surveyed by 1935.

Two laws were issued in 1946 and 1964 that set out the legislative framework for the current property registration systems in Egypt. The first, Deed Law No. 114/1946 (*al-sigil al-shukhsi*) set up the notary deed system (based on and organized by individual ownership, a paper-based Personal Folio). The second, Title Law No. 142/1964 (*al-sigil al-'aini*), a paper-based Real Folio, allowed the registration of property that was based on and classified by the property itself and the cadastre for the locale. Both of these laws confirmed that it is the Ministry of Justice that manages property registration through its *shahr al-'aqari* offices located throughout Egypt, and it is the Egypt Survey Authority (ESA) that carries out property surveying and inspection for property verification and maintains an up-date cadastral mapping systems.

All properties (land and buildings) in Egypt are required to be registered under this legislative and institutional framework in order to be considered legally transferred. The bureaucratic and clerical requirements of this property registration system are cumbersome and complicated, if not labyrinthine. In order for a property transaction to be registered under either the Deed or Title systems, a clear chain of title from the last time the property was entered into the registry, usually when it had been part of a larger agricultural land parcel, is required. For many lands and properties in both urban and rural areas, establishing this chain, which usually goes back for decades, extremely difficult, mainly because, at some point in the chain, there was a deceased owner whose inheritors were never officially declared.

Property maps and registries for individual *ahwad* (basins) in the Old Lands are kept at the local REPD offices, and transfers and mutations are recorded when an individual parcel is formally registered. But since few buyers/sellers go through the hassles and expenses associated with such

³ <u>Al Ahram Weekly</u>, "Egypt's government to amend Real Estate Registration Law; postpone enforcement till January," 28 February, 2021.

registration (even if the required documentation exists), in any particular *hod* only a small percentage of the land area will transactions be recorded, meaning that for most parcels information is out of date.

The considerable expenses associated with such a property registration regime have made it considerably unattractive. Even though there have been various moves to reduce fees, there is still a 2.5 percent transfer tax of the declared value and numerous fixed fees. In addition, navigating through the system and preparing necessary documentation requires lawyers, whose fees can be considerable, especially in complicated situations.

The situation has not been helped by the difficulties facing the ESA in performing its role in the existing property registration regime. By the law the ESA is responsible for maintaining and updating cadastre records and maps as well as field surveying, but it has, as an independent economic authority, found it challenging to access the resources to fulfil such a crucial role. Also, by law the ESA is an essential part of the individual property mutation process, especially for the Title registration system, by inspecting and verifying property details in conjunction with the relevant REPD office. Poor coordination between the ESA and REPD offices, as well as cumbersome paperwork requirements and the significant fees attached, have added to the unattractiveness for citizens seeking to have their lands or properties properly registered.

How then are freehold properties in Egypt transferred and how is ownership documented? The answer is that a number of quasi-legal procedures have evolved over the years that conveniently sidestep the official registration system and allow for relatively straightforward, quick and inexpensive means to conclude most property transfers. These mainly use 'urfi contracts, which are simple two-party preliminary sales contracts that should be witnessed by at least two persons. For many, these simple paper contracts are sufficient, but for more security it is possible to have these contracts endorsed in the courts under the saha towqia or the more stringent and lengthy da'wa saha wa-nafaz procedure. Alternatively, the seller of a property can issue a power of attorney (tawkil) to the buyer, giving him all ownership rights over the property, including transfer to a third party, and then this *tawkil* can be endorsed, just as in the case of the sale of a car, at a shahr al-'agari office (Since 2019 this endorsement is said to have been declared unacceptable, but it is sometimes still used). Again, it helps for a lawyer to represent either the buyer or seller or both. Such semi-formal systems of transfer are used not only by individual buyer and sellers who dominate land and property markets in both rural and urban areas of Egypt, but also even by private companies that are selling new housing units or plots in subdivisions. They are not perfect and fraud is a remote possibility (such as selling the same property more than once), but for most. they are sufficient.

The weakness of the official real property registration and cadastre systems has been known for some time. There have been various recent GoE initiatives that could be said, at least partially, to tackle some of these weaknesses. First, since 2016 there have been legislative and procedural innovations to regularize the long-standing confusions and abuses over hand claims (*wada' alyed*) on public land usually on desert fringes, for which various documentation is used. Under the current "return of State land" (*isterdad amlak al-dowla*) campaign, tens of thousands of parcels of mainly agricultural land are being investigated and regularized, meaning that 'serious' cultivators will be able to gain titles, but only by paying for them. Second, there are legislative

efforts to apply and improve the full Deed registration system in the new towns (under Law No. 27/2018). While laudable in terms of objectives, applying this law conflicts with modalities and long-standing policies of the New Urban Communities Authority (NUCA). Furthermore, this effort does not extend to other areas of Egypt where most properties exist (and where some 98 percent of the population live).

It should be added that there are other initiatives that are relevant to the legality of properties. These relate to resolving building violations in some urban and rural areas that should result in clarifications of their status. (Law No. 17/2019), and Law No. 144/2017 to regularize the encroachment on state private land. Furthermore, a system is said to be in its final phase that would establish unique identification numbers for every property in Egypt (*ruqm qawmi lil aqar*, piloted in Port Said Governorate). And The Ministry of Planning with the Military Survey Authority are constructing a new, multi-layer national map that will inventory country-wide infrastructure in detail.

Also, there are legislative changes currently being put in place which amend stipulations in the Real Estate Registry Act (Law 114/1946), and these are expected to trim the painstaking registration process by (1) waiving the need to obtain pre-approval at the REPD office prior to obtaining the 'blue contract' and putting a time ceiling on the entire process, and (2) decoupling them from payment of property sales taxes and other fees. The pre-approval stage, as things stand, requires on-ground inspections by notaries, a documentation of provenance, and other steps that usually take months.⁴ It is not known how far these reforms will impact the overall land registration system since they, as with Law No. 27/2018 mentioned above, are mainly restricted to making registration easier for new housing units.

More fundamental reform of the property registration regime has been initiated. Since 2018 drafts of a new law have been discussed to fundamentally revamp and modernize the Title registration system under Law142/1964. A draft law incorporating such comprehensive reform was submitted to Parliament in late 2018, but it has stalled over the last four years, and its fate is unsure. Furthermore, even should agreement over many contentious issues be reached and the draft law approved and signed into law, the thorny and detailed issues of the practical application of this law will need to await the drafting of its executive regulations (*lua'ah tanfiziya*), which could very well take many years.⁵

(For a full discussion of the various problems that have grown up surrounding property registration and transfer, please refer to World Bank, *Assessment of Land Governorate in Egypt*, January 2020.)

2.2. Egypt's Old Lands: The land tenure situation and increasingly fragmented agricultural holdings

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⁴ Enterprise, "Cabinet looking to encourage more property registrations," 11 November 2021, https://enterprise.press/stories/2021/11/11/cabinet-looking-to-encourage-more-property-registrations-57953/. See also Prime Ministerial Cabinet, 10 November 2021,

https://web.facebook.com/EgyptianCabinet/posts/269247685245659?_rdc=1&_rdr. Finally, see Nahla Abul-Ezz, "Easing laws on real estate," *Al Ahram Weekly*, 3-9 February 2022, p. 3.

⁵ It is worth noting that it took ten years for the executive regulations of Law 142/1964 to be promulgated.

There are some 6.5 million feddans under cultivation in what are considered Egypt's Old Lands, that is, land that irrigated by the Nile and that lies inside the *zeman*.⁶ All of this cultivated land is watered from the Nile under flood or basin irrigation (*ray el ghamr*) through hierarchical systems of canals and drains. The land is very productive, with two and sometimes three crops possible every year, and it is characterized by mainly small land parcels held as freehold.⁷ About 40% of this land is held by roughly 3.7 million small-holder families, defined by the FAO as those holding less than three feddans.⁸ The actual area of the Old Lands diminishes every year due to illegal construction around villages and urban expansion.

All cultivated parcels in the Old Lands were surveyed and cadastered in the early decades of the 20th Century, being divided into basins (*hod*, pl. *ahwad*, usually 20 to 150 feddans in size) that were delineated by main and branch canals or by roads, drains, or other physical features. Although holdings were formally registered at the time, over the succeeding decades there has been an inexorable trend towards land fragmentation under land transfer processes that have been only rarely been officially recorded. The Agricultural Census of Egypt, held every 10 years, shows this dramatically increasing fragmentation of agricultural land 'holdings' (presumably *hiaza*, not ownership): The average size of holdings decreased from 3.8 feddans in 1960 to 2.7 feddans in 1990 and to 2.2 feddans in 2010. Over the same period the percentage of landholders with less than one feddan went from 26.4 percent in 1960, to 36.1 percent in 1990, and to 48.3 percent in 2010.⁹ It should be added that these average holdings are frequently not contiguous, being scattered in local areas. And a single "holding" is frequently made up of several family land owners.

Fragmentation of holdings and the loss of scale economies have many problems, mainly to do with uneven irrigation, difficulties in using agricultural machinery, difficulties of supplying fertilizers and other inputs, difficulties in harvesting and transport, and surface areas lost to paths and boundaries. Together, fragmentation makes very small plots less productive and, in many cases, hardly economically viable. It should be noted that average figures of land fragmentation in the Old Lands disguise the fact that agricultural land holding sizes in Upper Egypt are considerably smaller than the national averages.

The main reason for fragmentation is rapid farm family population growth and longstanding inheritance practices. By law and tradition all inheritors of a farmer are given land shares, either formalized by Inheritance Declarations after death or simply understood (see also Box 1). With the average family having four to seven children, it is easy to imagine how quickly cultivated lands are split again and again. Other causes of fragmentation include the sale or rental of cultivated land parcels, both of which are easily carried out through simple 'urfi contracts.

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⁶ The *zeman* is the official limit of cultivated lands, inside which are applied the agricultural land tax, and thus the *zeman* line runs physically along both the western and eastern sides of the Nile Valley and Delta.

⁷ There had been significant amounts of small-holder of land reform land which was the result of land-redistribution in the 1950s and 1960s, but these lands were returned to their original owners in the 1990s. Yet these lands continue to be managed under a parallel system of registration.

⁸ FAO, CIRAD, and CIHEAM, Study on Small-Scale Family Farming in the Near East and North African Region: Egypt, 2017.

⁹ *Ibid.*, MALR Consolidated Results of Agricultural Censuses, 1960, 1990, and 2010, Table 1.4.

Box 1: The Declaration of Inheritance (a'alan al warasa)

The Declaration of Inheritance is a well-known document in rural Egypt that stipulates the shares of property owned by all inheritors of a person upon his or her death. It requires only a Certificate of Death to be issued by the local Health Office, and there is no time limit put upon its issuance. The distribution of inheritance is based on the number of legal inheritors and their degree of family relation to the deceased, with shares based mainly on Islamic customary law (applying mainly to sons and daughters and spouses). Each inheritor must be named in the Declaration along with his/her share. Any inheritor can decline his/her share to all others proportionally for a stated financial compensation. Most often the Declaration of Inheritance can be processed and issued at the local REPD office, although in cases of dispute the Declaration must be sanctioned in local Family Courts.

Source: *Al Youm Al Seba*a, "Understanding the documents needed to issue a Declaration of Inheritance," 14 July 2021 (in Arabic).

Only very rarely are various kinds of land transfers formally registered, even if the property under mutation itself was in the past registered at the REPD. The costs and hassles of pursuing full registration are too onerous, and in most cases a simple *urfi* contract (drawn up by a local notable and signed by two witnesses) is sufficient. These contracts typically mention the name of the cadastre *hod*, the dimensions of the plot in question as well as the total area, and the adjacent holdings east, south, north and west. Almost never are maps or marked satellite images included in the contract documentation. Obviously, such documentation is thus open to interpretation and confusion, and it is only because everyone in an extended family and their neighbours knows onthe-ground who holds what parcels (and their physical boundaries) that the whole system can operate and evolve over time. Conflicts and disputes do arise, but these would still exist to some extents were a full land registration regime in place.

Among the costs of land and property transfers are a sales tax that amounts to 2.5 percent of the sales price. This must be paid for all formally registered properties as well as those sold via traditional *urfi* contracts (at least those that come to light through court endorsements) It should be noted that the only annual tax is the very small agricultural tax (*dariba al 'atian al zara'iya*) that, for small holders with under three feddans, is waived. There is also an annual real estate tax (*al dariba al 'aqaria*) imposed by the Ministry of Finance, but this only applies to built properties.

In summary, there is general agreement – by Egyptian government officials, local level functionaries and professionals, farm families, and commentators – that there is little need for formalized registration of agricultural parcels in the Old Lands, at least for small parcels. The costs and complications of obtaining such formal registration are simply too onerous (if not impossible under current laws), and other simple 'sidestepping' methods for land tenure verification and transfer have proven quite sufficient. The only concrete reason to have full registration is to be able to use agricultural land assets as collateral for bank loans, and this is something that is rarely practiced (and is in fact socially discouraged, for good reason). It should be added that full land registration is a base requirement in order to obtain a construction permit, but this is not an issue for cultivated Old Lands lying outside city perimeters (*al haiez al 'umrani*).

2.3. The livelihoods of smallholder farm families

It is well known that rural areas of Egypt have levels of poverty that are significantly higher than national averages, and in fact some rural areas, in particular those in Upper Egypt, well over half (and even two-thirds) of the population live below the government poverty line (estimated by CAPMAS to represent 32.5% of the national population in 2018). And although migration from rural areas to small towns and the major cities has been common over the decades, the higher birth rates among rural families has meant that population growth in these areas remains greater than national averages (which equalled 2.4 percent per annum over the 2006-2017 intercensal period). Again, this is most acute in Upper Egypt. Even though the average size of farm families in Egypt has decreased slightly from 5.75 in 1990 to 5.25 in 2010, it remains much higher than the national average family size of 3.90 persons.¹⁰

Over time small holder families have found numerous ways of coping with their situations. Many farm families have developed hybrid livelihoods, with some members finding permanent employment in local government or in nearby commercial ventures, with some working seasonally as hired farm workers, and with some opening small businesses. And some members of farm families, especially younger members, have preferred to move to nearby towns to find urban sources of employment.

Also, farm activities are not limited to the production of cash crops. Animal husbandry is extremely widespread, with almost 70% of small holders maintaining large ruminants in 2009-2010 and almost 50% maintaining small ruminants. Fodder is mostly self-grown, especially *bersim* (Egyptian clover). In addition, most farm families grow their own onions and other vegetables, with excess sold at local weekly markets. In addition, many families still bake their own bread and use flour produced from their own wheat. The raising of animals and the tending of small vegetable gardens is mainly the responsibility of a small-holder family's women, as are a number of artisan activities, including bread-baking.

In these situations, even though the agricultural lands held by small holder families are small and becoming smaller, the benefits derived from these holdings remain extremely important for the hybrid lives of these families. Income derived from farm production serves as solid basis that can be relied on in hard times and that can provide funding for other pursuits. Also, such income becomes a kind of safety net in difficult economic times, as has been the case during Covid 19. Thus, ways of increasing the productivity of and income from cultivated fields would help the whole family economy in multiple ways.

2.4 The institutional and stakeholder landscape in Egypt's Old Lands

A quick review of important institutions and stakeholders that affect the lives of smallholders in Egypt (and especially Upper Egypt) will help to clarify both obstacles and opportunities surrounding efforts to support land use consolidation.

There are some 4300 village administrate units in Egypt, almost all of which are found in the Old Lands, with populations that range from 5,000 to 25,000 persons. Within the administrative boundaries of each village will usually be found the principal or "mother village" agglomeration

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¹⁰ *Ibid.*, p 14.

¹¹ *Ibid.*, Annex A26.

plus a number of smaller satellite agglomerations (*nuguaa* or hamlets). The cultivated area of each village in the Old Lands can vary considerably, usually between 2,000 and 12,000 feddans. The most important institutions at the village level are:

The village administration is usually limited to the Village Chief (rais el qaria), a person appointed by the respective governor. He (never a she) is the contact point for other, higher government administrations such as the courts, directorates of national ministries, and security agencies. It is rare that the Village Head has a staff or a functioning office.

The village headman (al 'omda) is a village notable whose position is normally hereditary. The position of Headman is mainly honorary, although his role is to promote social harmony and to resolve disputes. He (never she) is most likely to deal with security branches of government.

The village agricultural cooperative (gamaaya ziraaiya) is present in virtually every village in the Old Lands and number a total of 4310 cooperatives. They are run by the Central Agricultural Cooperative Union of the MALR through a hierarchy of higher-level cooperatives at the governorate and markaz levels. 12 On average each village cooperative has roughly 800 members and 3 employees (almost exclusively men). They have been present in villages for decades (now functioning under Law 122/1980). Although they are structured under cooperative principles and should represent their members, over time they have evolved into executive arms of government, and their main role today is limited to managing the distribution of fertilizers, seeds, pesticides, and other agricultural inputs at subsidized prices, based on lists of members and the areas in feddans cultivated by each. They also sometimes advance credit to member cultivators, and recently this system has been upgraded with digital credit cards (kart al fellah) in coordination with the Egyptian Agricultural Bank, even though overall the financial resources of village cooperatives remain very limited. For a review of agricultural cooperatives, see ECES 2021. 13

Community Development Associations (gamaayat al ahlia lil tanmiya) of one sort or another are found in most villages in the old lands. They are formed by members (and an elected board of directors) under the Ministry of Social Solidarity (MSS), according to NGO Law 84 of 2002 (as amended). Most village CDAs were first formed with government backing in the 1960s, but many became dormant. Today, throughout the Old Lands CDAs represent a wide mix of types and levels of activities. According to the MSS, a CDA's purpose (for example agricultural development, literacy and education, youth, or religious charity) must be clearly defined and only one CDA of a certain purpose can be established in a particular geographic area. Donor agencies, in partnership with one or more ministry, frequently work with selected CDAs since they are elected

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¹² These village cooperatives are called Cooperative Societies for Agricultural Credit. There is a different administrative system for cooperatives in land reform lands and in new lands.

¹³ Egyptian Center for Economic Studies, *View on News*, Issue 32, 14 April, 2021, http://www.eces.org.eg/PublicationsDetails?Lang=EN&C=1&T=1&ID=1289&Views-On-News-(Views-On-The-Crisis)---Edition-32:-Drivers-of-Change-Series:-A-new-model-for-Agricultural-Cooperatives-in-Egypt

bodies and can be supported with training, office organization, etc. Women are often active members of CDAs.

Water users' associations (WUAs, ruwabit mustakhadimi al miya) are groups of farmers who use the same source of irrigation water who come together to replace individual farmer pumping at multiple points along a *mesqa* (sub-branch ditches usually serving less than 100 individual cultivators and irrigating 10 to 100 feddans) by more efficient collective pumping as well as ditch lining and participatory water management. The promotion of the concept of WUAs, mainly by donor agencies in partnership with the Ministry of Water Resources and Irrigation (MWRI), dates from the late 1970s and early 1980s. Since 1994 legislation has made WUAs legal entities that are registered under MWRI. In spite of considerable donor support for WUA projects both in Delta governorates and in Upper Egypt, enthusiasm for WUAs among farmers has tended to diminish after project funding ceases. 14 Higher-level water organizations have also been promoted, such as District Water Boards, Integrated Water Management Districts, and Branch Canal Water Users Associations.

Legal services (and legal literacy) Small holders in the Old Lands must navigate through many official procedures and undertake considerable paper work for property transfers, obtaining building permits, resolving land disputes, confirming inheritance rights, etc. Although some very simple processes can be undertaken by individuals, most processes are complicated and not well understood, and it is local lawyers who are the main recourse for these. Such lawyer offices are found in nearby small towns and, in some cases, even at the village level. These lawyers make a point in understanding the various legal processes required and have developed personal connections with officials in the courts and the REPD offices (present at the *markaz* level). Informal interviews with local lawyers confirm that the greatest work load involves property cases, representing up to 75% of all cases. The fees demanded by lawyers for their services depend on the time spent as well as the number of court appearances and the volume of paper work, and thus these fees can be substantial, especially for poor clients. However, most lawyers reduce their fees significantly for the very poor or operate pro bono.

At the national level the main stakeholders with remits for agricultural development in the Old Lands are two ministries – the Ministry of Agriculture and Land Reclamation (MALR) and the Ministry of Water Resources and Irrigation (MWRI). Both are old and large ministries with a wide presence throughout rural Egypt, mainly through directorates within each of Egypt's 22 rural governorates. These two ministries also have a number of specialized institutes and agencies. It should be added that the Ministry of Local Development (MLD) oversees all governorates in Egypt and the hierarchical governance system within rural governorates (districts, towns, and villages), and the MLD has set up its own initiative called the Development of Upper Egypt Program.

Of course, with a rural population which represents half of the country, almost all Egyptian ministries, agencies, banks and funds have at least some activities in the Old Lands. In particular,

¹⁴ See International Water Management Institute, "Brief Retrospective on Water Users Associations in Egypt," draft, 2013, https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1064.1048&rep=rep1&type=pdf

government bodies dealing with poverty alleviation have a strong presence, such as the Ministry of Social Solidarity and the Micro, Small, & Medium Enterprise Development Agency (MSMEDA, which replaced the Egypt Social Fund for Development in 2017).

It could be said that there is a crowded field of international donors that are engaged in the agricultural sector in Egypt, almost of which have primary interests in the Old Lands. In 2020 the Ministry of International Cooperation valued the total international agricultural portfolio at USD 545 million, with prominent and long-term engagement in the country by FAO, IFAD, WFP, GIZ, USAID and CARE. Other donors with more recent engagement in the sector include the EIB, the Arab Fund for Economic and Social Development, the EU, KfW, plus bilateral donor agencies from France, Italy, the Netherlands and Kuwait. Activities include aspects of food security and climate impact, land reclamation, support for water user groups, developing better inputs, and ways to improve output marketing and higher value exports (such as medicinal plants, dried tomatoes, etc.) Some donors support kinds of corporate farming and vertical value chains, including encouraging the formation by cultivators of private companies and export collectives. In the country of the companies and export collectives.

2. 5 The gender dimension

There is a copious amount of development literature that addresses the position of women in rural Egypt, and it is clear that, although legally women have rights of inheritance, property holding, and the ownership and management of businesses, in reality the pursuit of these rights has been seriously compromised by long-held traditional social attitudes that confine the roles of women to domestic and family affairs. ¹⁷ In effect, it is the men in a family who undertake almost all farming activities and who have the final say on managing family assets, including land assets. Furthermore, it is almost exclusively men who enter into village organizations and who engage in village politics. Over the past twenty years a number of donor-financed projects relating to rural development in Egypt have included gender dimensions to address the issues of women empowerment and women rights. For example, the current MALR/WFP project "... intends to introduce gender transformative approaches that encourages women participation and empowerment while being compatible with local traditions and customs." ¹⁸

Much has been learned through these efforts in Upper Egypt, but the fact remains that, especially when it comes to the management of rural land assets, it is very much a man's world, one where

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¹⁵ Egypt Today, "Portfolio of Egypt Agricultural Sector Contains 13 Projects Worth \$545 Million,"

¹⁶ One example of donor engagement in agricultural development in Old Lands and support for smaller corporate farming and better marketing is IFAD. It recently completed a project called PRIME (Credit and Financial Services: Promotion of Rural Incomes through Market Enhancement Project) in both Delta and Upper Egyptian governorates. In 2019 IFAD also prepared a new project called STAR (Sustainable Transformation for Agricultural Resilience in Upper Egypt) with total costs of USD 270 million. As of January 2022, this project is awaiting approval of the Egyptian government.

¹⁷ For a good survey document on the subject, please refer to World Bank, "Women Economic Empowerment Study," May 2018, which looks at the causes and effects of the very poor female participation rates in the Egyptian labour force. See also Economic Research Forum, "Rural Women in Egypt: Opportunities and Vulnerabilities," Working Paper 1359, October 2019.

¹⁸ World Food Program, "Project Proposal: Strengthening Climate Resilience and Food Security through Livelihood Enhancement and Rural Innovation in Southern Egypt," 2019.

at best women's interests are expressed and negotiated through family structures and where most decisions affecting women's claims on property rights are dominated by the male heads of families. This situation remains in spite of measures to ensure the transparency of inheritance (see Box 1).

This lack of women's involvement in the management of land assets is clearly seen in the land use consolidation operations of the current MALR/WFP project. During extensive field trips, virtually all those directly engaged in plot consolidation activities and in group discussions were men. Only at best 5% of cultivators (*hayaziin*) listed in a particular land use consolidation scheme were women.

2.6 Current Government policies and strategies relating to Old Lands

Based on government sectoral and national plans, as well as on recent national initiatives and proclamations, it is possible to summarize how the government plans for the development of the Old Lands. Most prominent are (1) the conservation of irrigation water and (2) improving the livelihoods of poor small holders and rural populations in general.

(1) Conservation of Irrigation Water. The Egyptian government has, since the 2000s, become more and more concerned with the country's absolute water limits and have adopted a policy of modernizing irrigation and farming practices in the Old Lands in order to reduce the amounts of water consumed, with the aim of being able to devote more irrigation water for horizontal expansion in desert areas and thus dramatically increase the areas under agriculture. There have been a number of mega projects launched for desert reclamation (Toshka and the New Valley, North Sinai, the 1.5 million feddan Reef al Misri (Egyptian Countryside) project, and, most recently, the 2 million feddan project called the New Delta on the North Coast). The idea is that a through a wholesale reduction of traditional flood irrigation and its replacement by drip and sprinkler irrigation (as well as by the lining of branch canals and *mesqas* or their replacement by underground piping), water requirements in the Old Lands can be dramatically reduced. The reuse/mixing of agricultural wastewater for horizontal expansion is also part of the strategy. Until now promoting modernization of irrigation methods in the Old Lands has only had very limited results, mainly because of the high costs involved and the reluctance of farmers to try out the new technologies. Yet it seems that today there are more and more efforts (and investments) being devoted to this policy, as well as more regulations forcing changes in irrigation practices. For example, there are many investments being undertaken by the Egyptian government through the MWRI, the most visible of which are the ongoing concrete-lining of branch and sub-branch canals throughout the Old Lands. Also, it is understood that MWRI will soon make mandatory the conversion of five feddan tranches of cultivated land to modern techniques. In addition, many of the MALR's efforts are aimed at supporting the switch towards modern irrigation methods in the Old Lands and the reduction of heavy water-consuming crops. Furthermore, Egypt has embarked on a massive program of sea water desalination to meet growing demands for water for urban and industrial pursuits. In other words, the country is adopting wholesale efforts to meet the challenge of increasing water scarcity, and since over 85 percent of water consumption is for agriculture, rationalizing water consumption in this sector, especially in the Old Lands, takes highest priority.

(2) *Combatting poverty*. The government has long adopted policies and programs to combat the high levels of poverty in the Old Lands, particularly among small holders and particularly in Upper Egypt. Recently, with the launching of the huge Decent Life Initiative (*hayah karima*) by the President in 2019, it seems the government has redoubled its efforts and has made improving the livelihoods of the inhabitants of the Old Lands one of the most important of national projects. This Initiative started with a first 3-year phase which is targeting the thousand or so poorest villages. And in 2021 the President decided to expand the project to all Egypt's 4300 villages, with a total budget of EGP 700 billion, and "nothing of this magnitude has ever been pursued before in Egypt's modern history." Sanitation systems, drinking water services, electricity networks, local roads, new schools, new health units and hospitals, new youth centres, improved housing, new post offices, small enterprise loans, vocational training centres, better internet networks, and other improvements are part of the Decent Life Initiative. Practically all government ministries and many NGOs are engaged in this Initiative.

It should be added that government policies towards the Old Lands include applying climate mitigation and adaptation methods, in particular in promoting different crops (especially those that are heat and pest resistant) and in improved farming patterns. Also, the government has a long-standing policy of preserving Old Land agricultural fields from encroachment by illegal construction, a serious problem in and around rural settlements and small towns, especially in the Delta.

2.7 Description of the MALR/WFP land use consolidation efforts

Land use consolidation pilot projects in the Old Lands began with the 2013-2019 project called "Building Resilient Food Security Systems to Benefit the Southern Egypt Region" (also called the Adaption Fund Project) budgeted at US\$ 6.9 million and targeting 49 villages in five governorates of Upper Egypt, executed by MALR and implemented by WFP. It included the setting up of 14 Water Users Associations and the improvement of 17 *mesqas*. This project only addressed land use consolidation as one of a number of initiatives, and it was mainly concerned with broad measures to improve food productivity and to mitigate the effects of climate change on small holder agriculture. Its first component related to the adaptation to climate change specifically through building resilience in agricultural and livestock and poultry production as well as introducing and using low-cost water saving solutions. The second component included capacity building for climate knowledge and adaptation replication aiming at scaling up the results achieved by the first component and disseminating lessons learned.²⁰

The second project, currently running from 2020 through end 2023, is called "Strengthening Climate Resilience and Food Security through Livelihood Enhancement and Rural Innovation in Southern Egypt." It is Dutch funded and budgeted at US\$ 8.7 million, targeting 60 villages also in five governorates of Upper Egypt. This project is continuing the main activities of the earlier 2013-2019 project through similar modalities, but with more emphasis on voluntary land use consolidation and the promotion of its adoption both as an end in itself and as a mechanism to introduce improved farming methods and more suitable crop selection.

¹⁹ Azza Sedky, "Progress on the Decent Life initiative," *Al Ahram Weekly*, 3-9 February 2022, p. 9.

²⁰ See Magda Ghoneim, Final Project Evaluation Report, 20 December 2020, WFP.

(There is said to be a third project currently being considered, to be financed by the Central Bank of Egypt. It would expand the efforts of the second project to 30 additional villages. No information is available on this project.)

The current project takes the following steps when it launches project initiatives in particular villages.

- (1) In a potential *markaz* (district), PMU-WFP team vets potential CDAs to identify the most active and the most competent.
- (2) WFP team consults with local CDAs and MALR directorates to identify the likely candidate *ahwad* (agricultural basins). These should be far from villages buildings, be associated with one *nagaa* (hamlet) and the *hod* should be between 70 and 90 feddans.
- (3) The team undertakes community mobilization: group discussions and awareness raising of families cultivating in the particular *ahwad*. (Some events are organized.) On average an individual plot will be from 5 *qirats* to 2 feddans.
- (4) All families cultivating/owning in the target *hod* are visited by the team, including a representative of the directorate of the MSS. Individual/family holdings and the main cultivator of each are identified. In most cases a single cultivator, who represents all land owners/farmers of a plot, is identified and agreed on. A sketch map of the *hod* and the holding boundaries is drawn up collectively, including main *meskas* and other features. The relevant agricultural cooperative at the administrative village level is brought in to confirm holdings.
- (5) On the ground and with concerned cultivators the traditional plot boundary markers (*fahl*) are replaced by iron markers. These are confirmed through formal meetings and any individual plot owners/cultivators within a *hod* who decline to join the scheme are left to cultivate as before. GPS locations are recorded.
- (6) Each representative cultivator in a land use consolidation scheme enters into a contract with the CDA. This is not registered, but records of the size of holding of each cultivator are kept by CDA.
- (7) Work begins with the cultivators of the consolidated parcel organizing the work with the PMU team, as needed. Land improvement is carried out soil levelling, ploughing guided by laser stations and sometimes the creation of raised rows (*masatab*). At the same time the *mesqa* suppling water may need upgrading (masonry lining and metal sluices) and the *merwa* channels may need reconfiguration to fit with the consolidated fields. There may be more sophisticated improvements, including the substitution of diesel pumps with electric pumps running on solar power, the replacing of *merwa* channels with buried PVC pipes and valves, and the introduction of full under-pressure irrigation networks. This last improvement is specifically aimed at allowing either sprinkler or drip irrigation.

- (8) Depending on the season the main field crops under the project will be wheat, sorghum, corn (*dura*) or some vegetables. There are two main seasons (winter and summer) with some margin for a third inter-season crop. Sugarcane, which grows for 4-5 years and is harvested every year in the winter, has been included on the pilot basis (with drip irrigation and intercropping). There is in theory great potential for expanding land use consolidation and new techniques for sugarcane. (See Box 2) Egyptian clover (*berseem*) is a very popular field crop since it provides the main fodder for farm animals, but since it follows an annual cycle and has no particular harvesting rhythm, it has not been included as a land use consolidation crop.
- (9) Assistance to CDAs may include upgrading office capacities (computer, filing cabinets, etc.), training in various tasks including keeping records and M&E. CDAs and their cultivators may access farm extension and technical support, especially from experts of the MALR's research centres on new crop varieties and new techniques. CDAs are encouraged to promote project concepts among neighbours and in different hamlets and villages through farm-to-farm visits, sharing documentation, through social media, etc.
- (10) In about 20 percent of pilot land use consolidation efforts water user associations (WUAs) have been formed. This occurs when all cultivators rely on a particular *mesqa* channel for irrigation. Organization of WUAs and registration with MWRI are facilitated by the Project's PMU.
- (11) In each village, CDAs also promotes small farm enterprises that are traditionally run by women. Support in technical advice and small, interest free loans from a revolving fund. The most common activities are livestock and poultry raising. In particular the raising of ducks has proven a great success, especially since they are resistant to diseases and the heat.
- (12) For each consolidation pilot area, the participating farmers (*hyaziin*) are recorded by the participating CDA (based on records obtained from the village agricultural cooperative, along with their cultivated holding in feddans or *qirats* and their locations. Every six months these records are updated by the CDA to reflect changes such as farmers who drop out, plots that are sold or rented, and new farmers who join the pilot area. It is important to stress that these are the only efforts that touch upon land tenure. The actual (usually multiple) ownership status of a holding is not recorded or investigated.

Box 2 Sugar Cane

Sugar cane is, by far, the leading cash crop in Upper Egypt. Its cultivation and industrial processing have a long history, and there are currently 8 state-owned factories that contractually purchase the harvest according to a government determined price. The factories process the sugar cane and produce refined sugar, molasses, and other by products. One million tons of refined sugar are produced in Egypt, on average, each year, from sugar cane. Sugar beet cultivation adds 1.4 million tons of sugar, but there still is a shortfall, requiring the importation by Egypt of 0.8 million tons of sugar each year to meet an annual demand of 3.2 million tons.

325,000 feddans are under sugar cane cultivation in Egypt, almost all in Upper Egypt, especially in the governorates of Qena, Luxor, and Aswan. The sugar cane is planted once every 4-5 years and is harvesting annually, usually

between `January and March. A fallow or rotating year should follow, as the soil becomes depleted. whence the cycle is repeated.

Most sugar cane production is carried out by small holder farm families, and it is estimated that 500,000 Egyptian families depend on its cultivation. The peasants like sugar cane because it requires little labour over the year (except at harvest time), and the foliage (*gulwah*) can be used to feed farm animals. However, irrigation requires considerable water every 7-10 days, and fertilizer must be applied frequently.

The harvesting of the sugar cane is labour intensive, requiring the organization of teams made up of neighbours and youth. Other costs include fertilizers, transport to the factories by tractor or ducoville rail (which must be rapid, as the cane stocks quickly dry out and peasants are paid by weight), and irrigation (mainly costs of diesel fuel for pumps). It is said that in the last few years yields per feddan have decreased, due to increased heat (climate change), water logging in some areas, and soil exhaustion.

Source : *Al Ahram Online*, "Bitter reality for Egypt's sugar cane farmers," 12 January 2018. :https://english.ahram.org.eg/News/288020.aspx

The subsidy element, based on the costs of interventions on a particular consolidated parcel, will depend on the land improvements, the cropping, and the irrigation improvements. The Project has a formula of diminishing the cost over time, with 100% subsidy the first season, 75% the second season, 50% the third season, etc. Some observers are worried that the motivation to adopt land use consolidation and associated improvements will diminish or disappear once the subsidy is exhausted. But anecdotal information points to considerable buy-in by farmers and general popularity of the idea, with continued interest after the subsidies are exhausted and also of neighbouring farmers adopting land use consolidation even without Project support.

Benefits to farmers are basically in (1) increased yields and (2) lower costs. Increased yields depend on the surface area of consolidation, the improvements, and also the crops. The perfeddan yields for most crops are said to increase by 20 to 50 percent. But as far as is known these increased yields have not been documented. Lower costs relate to savings on diesel fuel consumption for pumps, on the use or rent of farm machinery (especially tractors), on the lower purchase and transport costs of inputs, and the lower costs of transporting and marketing outputs, both due to increased economies of scale. Land use consolidation and associated improvements also can reduce irrigation water consumption considerably, and this is reflected in cost and time savings.

Documentation and monitoring and evaluation are carried out by the CDAs and reinforced by the Project PMU staff. There are monthly and quarterly reports compiled by the PMU, and WFP itself carries out M&E efforts on a semi-annual and annual basis. Records of cultivators in a scheme and their area contributions are kept by the CDA on a seasonal (six-month) basis. There appears to be very little mapping of land holding work, other than, for some schemes, polygons that show the total area of a scheme overlaid on satellite images.

The project management unit of the MALR/WFP Project is crucial for all stages. The staff of the PMU are hired by or seconded to the PMU by MALR and there is a hierarchical structure with overall project management in the MALR administrative headquarters in Luxor (overseen by the MALR's Executive Agency for Comprehensive Development Projects in Cairo), with a lead engineer in each of the five governorates, under which are both social and engineering staff (mas'uleen). The heaviest work load is in setting up CDA activities and in the land use

consolidation arrangements in each village, but recurrent village visits by PMU staff are required throughout the years. Staff are very motivated but are overloaded with work, and financial reporting and financial clearances being particularly burdensome.

3. A STRATEGY FOR PROMOTING LAND USE CONSOLIDATION IN UPPER EGYPT

3.1 Strategic Approach

The title of the LAND-at-scale Formulation Plan "Supporting participatory land (use) consolidation for sustainable development and food security in Egypt" is appropriate as the overall objective for any additional, piggy-backing activities attached to the current MALR/WFP project. (As a minor detail, perhaps the word 'supporting' could be replaced by 'promoting.') Grouping together small field parcels, collectively preparing land for planting, unifying both crop input and output efforts, and making associated irrigation improvements create economies of scale and have been shown to reduce overall costs, raise crop productivity per feddan, reduce labour requirements, and reduce irrigation water consumption. The benefits of such land use consolidation clearly increase the income of participating small holder families and improve their land assets. And associated improvements in field geometry and the delivery of irrigation water to fields results in significant overall water savings. These benefits conform well to and dovetail with the two overarching government policies directed towards the Old Lands – improving the livelihoods of poor small holder families and rationalizing the consumption of Nile waters.

But the challenge of spreading the concept and practice of land use consolidation throughout Upper Egypt (not to mention the Delta) is great. In the 60 MALR/WFP project villages spread throughout five governorates, only a tiny portion of cultivated lands have come under land use consolidation pilots, usually less than 100-200 feddans per village. Given that typically agricultural lands in a village found in Upper Egypt range from 3,000 to 10,000 feddans, on average only 1 to 3 percent of these lands have so far been consolidated. Even if it is assumed that small holder parcels represent less than 40 percent of the total, it is clear that efforts must be ratcheted up several-fold in order for the productivity and water-saving benefits of land use consolidation to have a macro impact.

Thus, the question is how best to stimulate a huge expansion of the land use consolidation idea and lay the groundwork for its adoption by many more small holders. This overall goal can be translated into four themes or specific objectives.

- 1. Maximize the adoption of further land use consolidation pilots (and further additions by cultivators to ongoing pilots) under the modalities of the current MALR/WFP project (especially in and around the sixty project villages).
- 2. Optimize the demonstration effect of MALR/WFP land use consolidation successes to promote the concept throughout Upper Egypt (and eventually the Delta), concentrating on specific crops with the most potential.

- 3. Promote the concept of land use consolidation and its advantages in national dialogues on sustainable agricultural development.
- 4. Conceptualizing less costly and more efficient projects for future land use consolidation projects that might be attractive to international donors as well as MALR and MWRI (including initiatives undertaken by, for example, the CBE).

The overall objective as well as the specific objectives are quite focused on a single goal: promoting the land use consolidation concept in the Old Lands.

3.2 Phasing

The proposed LAND-at-scale project, "Supporting participatory land use consolidation for sustainable development and food security in Egypt" would be an add-on to the current MALR/WFP project, which finishes at the end of 2023. This add-on project is expected to run in total for 3 to 3.5 years, thus assuming it starts by mid-2022, it would finish towards the end of 2025 and extend by as much as two years beyond the MALR/WFP project. This should be seen as an advantage, since over the 2024-2025 period (1) the MALR/WFP project results and successes could be fully analysed and used in land use consolidation promotion, (2) there would be a champion for land use consolidation in place to help the MALR beyond the MALR/WFP project, and (3) there would be in place a sort of bridging facility should there be additional investments in land use consolidation projects in the future.

3.3 Possible foci and tasks

The add-on project would explore, develop, and consolidate means of promoting and expanding the land use consolidation experiment in Old Lands. Most would require an exploratory effort during the first six months to ascertain feasibility and specific modalities to be pursued during the remaining two to three years of the add-on project, and a first phase completion report, called "Analysis of Replication Opportunities and Constraints" would be a key output. Here is a preliminary list of possible tasks and activities to be pursued:

- 1. Assess outreach and promotion efforts for whole project literature, social media, publicity campaigns, word of mouth, focus meetings, farmer exchanges etc. Are these sufficient promotion techniques? Are key groups being ignored? How might they be improved and made more effective?
- 2. Develop narratives of successes from the 60 villages, including (a) take up of the idea and execution (b) expansion (new additions and new plots, both with and without subsidies) and (c) success in meeting Egypt's policy goals reduction of water use, modern irrigation methods, increased field productivity) etc. To the extent possible, a similar exercise would be applied to the 49 villages of the earlier Adaptation Project.

- 3. Carry out simple mapping overlaid on satellite images of a sample from of the 60 village plot consolidations. Maps would show the extent and subdivisions of the consolidations, plus the associated physical improvements (*mesqa* and *merwa* improvements), buried pipe networks and values, new pumps, etc.) It should be possible to show plot consolidation and cropping change overtime, using historical Google Earth images.
- 4. Using the assessment under (1) above, and with materials developed under (2) and (3), develop packages/kits and strategies for land use consolidation promotion aimed at specific groups and audiences, as well as enhanced means of propagation. For example, what might be the best propagation approaches aimed at groups of farmers who might spontaneously want to form land use consolidation groups?
- 5. A particular propagation effort would target international donors and INGOs who might wish to fund further land use consolidation pilots.
- 6. Look at the performance of CDAs (again, a sample of the 60 villages). Can they and their roles be sustained beyond the MALR/WFP project and the support it gives? What will they need as a minimum? What might be sustainable sources of financing? How might the Ministry of Social Solidarity be involved, as well as large national NGOs?
- 7. Look at Water User Associations embedded in pilot land use consolidation efforts (legal format, organization and management, popularity among beneficiaries, future roles?) More generally, could WUAs nationwide become a vehicle for promotion and adoption of land use consolidation concepts in Old Lands?
- 8. Undertake exploratory discussions with sample of agricultural coops and MALR's Central Administration for Agricultural Cooperatives (CAAC). Could coops also undertake/promote land use consolidation efforts), perhaps using fertilizers as an entry point?
- 9. Explore marketing and vertical linkage dimensions for land use consolidation crops, plus contract farming and horticultural export value chains. There are a number of innovative projects (mostly donor funded with the private sector) that have entered this arena, and it would seem logical that output from land use consolidation efforts, which create scale economies, would be amenable to such vertical integration and stronger articulation of crop marketing.
- 10. Explore legal and social ramifications of the evolution of land use consolidation groups into registered companies (e.g *tawsia basita* formats). As a possible addition, is there some form of enabling legislation that could be devised to give land use consolidation groups a particular legal personality?
- 11. Focus on particular crops as vehicles for the promotion of land use consolidation, especially using improved crop varieties. Wheat, a strategic crop, is an obvious possibility, and there is a great potential for consolidating sugar cane holdings (combined

with drip irrigation, new pumps, and intercropping). Even land use consolidation for *bersim* production might be considered.

- 12. Assess the role of technical support to farmers in land use consolidation pilots. Crop and farming experts from the institutes of the MALR are used in the current MALR/WFP project to advise on various technical matters. Is the use of such expertise useful? How might technical support to farmers engaged in land use consolidation be improved. Perhaps a link with foreign (Dutch) agricultural research institutes could be made. And, could there be an expanded role for technical support that would itself serve to promote land use consolidation?
- 13. Consider what would be the approach and modalities to extend the practice of land use consolidation to the Old Lands in the Delta. There are different crops, seasons, and local realities, but agricultural land fragmentation is nearly as severe in the Delta as it is in Upper Egypt, and there is no reason not to at least formulate an approach for its propagation in the very populated Delta.
- 14. Promote the concept of land use consolidation and its advantages in national dialogues on sustainable agricultural development?

3.4 Particular Issues

Sustainability Issues

There are two main sustainability issues. The first relates to the costs and funding of land use consolidation efforts, and the second relates to institutional sustainability, particularly the financial sustainability of CDAs.

The costs of both the Adaptation Project (2013-2019) and the current project (2020-2023), while not astronomical, are significant, especially when one divides total costs by the number of direct beneficiary farm families or by the number of feddans consolidated. Once there are no more direct subsidies attached to land use consolidation efforts, there is some doubt as to whether the current momentum can be maintained. Thus, it is important to uncover more cost-efficient ways to expand land use consolidation efforts. As can been seen on the ground in Upper Egypt, the advantages of land use consolidation are well understood and to some extent the concept should sell itself. But there need to be ways devised of reducing the per small holder or per feddan costs of project-based interventions. Some of these are to be explored under tasks outlined in Section 3.3 above.

The MALR/WFP projects have relied on village-level CDAs as the main vehicle for implementation. These have been the pivot around which farmers participating in land use consolidation pilots have been incentivized, organized, and funded. However, CDAs in rural Egypt have had an ambiguous past and the main problem lies in having sustainable sources of

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²¹ Technically, a better phrase for 'land consolidation' might be 'agricultural parcel consolidation' or 'consolidated cultivation.'

self-financing once donor project support is withdrawn. This is a difficult issue, but one that must be tackled if land use consolidation using the vehicle of CDAs can go to scale.

Land tenure and registration efforts?

From the discussion in Section 2.1 above it should be obvious that alternative, sidestepping methods of land tenure security and land exchange are very common, and also that the formal land registration regime under existing legislation has been left to atrophy. This is a problem that the current authorities have inherited from previous governments, and there are currently efforts underway that try to make property registration easier.

Perhaps in the future, if there is fundamental reform of the land registration regime, there could be value in the very small steps taken under MALR/WFP land use consolidations to record and document land holdings of participating farmers. Any application of a new, formal land registration system, should it be legislated and applied, will require extensive and laborious adjudication of land holdings and their boundaries throughout Egypt, and for this reason having land records of holdings and transfers in agricultural lands will be important. Thus, it could be useful to undertake, on a sample basis in some MALR/WFP villages, a small research effort to dig into the real ownership patterns that lie beneath the land parcels represented by participating farmers (the *hyaziin*) and to what extent there exists ownership documentation that might be useful in the future.

There is another related idea that deserves attention. This would be to investigate the possibility, on a pilot basis, of developing material for farm communities on legal literacy, especially as it relates to property and inheritance. This would require serious investigations of feasibility and modalities, and it is a much larger issue that the promotion of land use consolidations.