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Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 21-Nov-2016 | Report No: PIDISDSC19877



BASIC INFORMATION

A. Basic Project Data

Country Mexico	Project ID P160570	Parent Project ID (if any)	Project Name Agricultural Services for Food Security and Competitiveness (P160570)
Region LATIN AMERICA AND CARIBBEAN	Estimated Appraisal Date Jan 30, 2017	Estimated Board Date Mar 24, 2017	Practice Area (Lead) Agriculture
Lending Instrument Investment Project Financing	Borrower(s) Secretaría de Hacienda y Crédito Público (SHCP)	Implementing Agency SAGARPA,ASERCA	

Proposed Development Objective(s)

Improve agricultural storage system and related financial and information services for food security and competitiveness.

Financing (in USD Million)

Financing Source	Amount
International Bank for Reconstruction and Development	100.00
Total Project Cost	100.00

Environmental Assessment Category B-Partial Assessment	Concept Review Decision Track II-The review did authorize the preparation to continue
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Other Decision (as needed)



B. Introduction and Context

Country Context

The Mexican economy continues to expand at a moderate annual rate of 2.5%, similar to other OECD countries. Private consumption has been the main driving force of economic activity on the back of stronger job creation, real wage growth, and credit expansion. Growth is projected to continue at approximately 2.5% in 2016. A challenging external environment, including lower oil prices, a gradual tightening of monetary policy in the United States, and a slowdown of growth perspectives in emerging market economies, has contributed to a significant depreciation of the Mexican peso, which over the past two years has lost nearly 30% of its value against the US dollar. A further decline in oil prices and an increase in financial market volatility in early 2016 led to additional currency depreciation.

In early 2016 fiscal and monetary policy authorities announced supplementary public expenditure reductions equivalent to 0.7% of GDP. The priority is to maintain prudent monetary, financial, and fiscal policies to create the conditions for stronger growth in the medium term, which should also be supported by the structural reforms under implementation, aimed at raising productivity, competitiveness and potential output growth. In the short term, fiscal austerity measures are creating the need for re-thinking the role of the public sector in many economic activities and the prioritization of public spending across competing needs.

Despite Mexico's significant economic and social improvements, stagnant productivity and insufficient inclusiveness are critical causes of persistent poverty, inequality, and regional disparities. In 2014-2015, the poverty rate stood at 46% (about 55.3 million people), with a higher incidence in rural and semi-urban areas. Between 2010 and 2014, annual income of the bottom 40 percent of the population grew at a trivial 0.1%, while the annualized mean income growth over this period was just 0.5%. Poverty reduction has been unequal across the territory; 5 of the 32 states (Chiapas, State of Mexico, Oaxaca, Puebla and Veracruz) account for 56% of the extreme poor in 2014. Public policy interventions can affect productivity to improve earnings; inclusiveness to make sure that the poor and indigenous communities have access to services and market information; and sustainability so that expansion of rural development does not deteriorate Mexico's resource base.

In this context, the Government of Mexico has initiated a process to consolidate of social assistance and support programs, including in agriculture and rural development, to improve efficiency and effectiveness for poverty reduction, promote productivity and leverage economies of scale. Agriculture and rural development programs have represented between 0.5% and 2% of Mexico's budget over the past decade, similar to the 0.8% to 2.4% observed in other OECD countries, and much less than other segments of the Mexican economy (7% for housing and urban development or 3% for education, for example). Spending in the sector has increased in nominal terms but has remained constant, as a percentage of the budget.

Sectoral and Institutional Context

Agriculture continues to be an important sector in the economy, accounting for around 13% of Mexico's GDP, when considering the forward and backward linkages created through primary production, post-harvest agro-industrial processes and food production. The sector employs on average 13% of the formal labor force in the country (or 7 million people formally engaged in the sector), with important regional differences. Almost one quarter of Mexico's population (representing more than 24 million people) lives in rural areas and depend on agriculture for their livelihoods (45% of the employed rural labor force works in the primary sector). The rural poverty rate (61.6%) is far higher than the urban rate (40.6%), with rural poverty perpetuated by the low productivity of labor in the agricultural sector among other structural factors.



Agricultural land represents 55% of the total land area of Mexico (or close to 112 million hectares of arable land), with 5.5 million agricultural units devoted mostly to the production of cereals such as maize, wheat and sorghum. One half of the agricultural land is under communal ownership (*ejido*), which has important implication for land use, particularly in the south of the country. Although only 6% of agricultural land is irrigated, agriculture consumes 77% of water in Mexico and is a source of increasing conflict, in particular in the semi-arid northern states. Limited access to credit contributes to hindering investments for boosting productivity, especially for the small producers across the country.

There are important geographical differences in the structure and performance of the agricultural sector in Mexico. In the South, agriculture plays an important social role for food security, while in the North it is a key driver of economic development through commercial, export-oriented agriculture. The average productivity of the sector is low in comparison with other OECD countries and differs across regions, masking a sharp sector duality. Most agricultural producers (73%) are small (<5ha) and semi-subsistent, employing traditional, rainfed production practices, and concentrated in the Center and South of the country, working on 6% of the total arable land. Around 5% are large producers (>20ha), well-integrated, and predominantly export-oriented. Farm units with more than 100 hectares represent 2% of the total units and concentrate two-thirds of the land dedicated to agriculture. This has generated a heterogeneous sector where producers with high productivity profiles and strong market orientation coexist with low income small and medium producers with minimal level of commercial connection to local/national markets.

The current agricultural policy is on improving productivity, competitiveness, sustainability, and equity, while safeguarding national food security. Agriculture sector policies are set out in both the Agricultural Sectoral Plan and the Special Concurrent Program (*Programa Especial Concurrente*, PEC). The Agriculture Sector Plan is aligned with the National Development Plan, and features two overarching objectives: to guide the development of a productive agricultural sector and to ensure food security. SAGARPA programs designed to advance these objectives represented about one fifth of its 2015 budget. The plan includes five goals directly related to agriculture and food security: (a) to boost food production through investment in physical, human and technological capital; (b) to promote partnerships that generate economies of scale and add value in food production; (c) to safeguard the food supply through risk-management mechanisms; (d) to encourage the sustainable use of natural resources; and (e) to reduce the risk of food shortages in rural areas. The PEC was created to combine different federal agriculture and rural development programs and as a mechanism for implementing the 2001 Law of Sustainable Rural Development (*Ley de Desarrollo Rural Sustentable*). SAGARPA oversees agricultural sector policy and coordinates the PEC, but it does not have authority over other ministries involved in executing PEC programs.

Improving agricultural productivity and competitiveness faces important challenges. Some are structural and difficult to overcome (land fragmentation), while others can be more easily tackled and gradually resolved (access to rural credit, integration into local and regional markets, information on prices, risk management, and storage capacity, capacity building for better management practices, including technological packages (inputs), etc.). Improving the productivity of priority crops, such as maize, is a necessary condition for market inclusion of small and medium agricultural producers. Encouraging production of marketable surpluses and ensuring adequate post-harvest management, through storage, are important factors in the improvement of the competitiveness of agricultural producers, enabling them to make decisions regarding the time and place of sale and opening opportunities for financing, using their production as a collateral.

Current programs are working to improve farmer productivity and increase access to markets, and these programs will need additional support to link with the storage system and maximize their impacts. SAGARPA is implementing a number of programs seeking to increase yields, stabilize yields, and increase income of farmers. The Sustainable Modernization of Traditional Agriculture (MasAgro) program implemented by CIMMYT promotes sustainable



intensification of maize and wheat. The Special Program for Food Security (PESA) coordinated by FAO works with family agriculture promoting improvements in production as well as supporting linkages to markets in the case of surplus production. Attempts to raise productivity will have limited success if smallholder linkages to markets are not strengthened simultaneously. Similarly, strengthening market linkages will have little benefit with existing low levels of productivity. In this context, building on both of the above mentioned programs, the project will collaborate with these institutions to ensure that producers enhancing productivity and generating surpluses have access to storage infrastructure and marketing services to facilitate their access to markets.

There have been fewer attempts to empower small producers to assume a more active role in the commercialization of their grains and other agricultural products. This has been driven by their small scale, diversity of production, high risk of compliance with market quality standards, and lack of financing. Moreover, current storage infrastructure of agricultural commodities in Mexico is insufficient and/or inadequate, lacking the necessary equipment and norms to determine and maintain the uniformity of the quality of production. In 2013, the overall grain (dry) storage system capacity was about 32.7 million tons, which resulted in an annual deficit of grain storage capacity when national and import quantities were taken into consideration. This reduces the ability for intertemporal arbitrage, for smoothing commercialization and consumption patterns of the grains and for distribution to where demand is high at the national level. Furthermore, the use of traditional storage has contributed to high levels of grain losses. According to SAGARPA estimates, post-harvest losses in maize, wheat and beans range between 5% and 25% of total production, due to grain humidity and related fungal and pest problems. At the micro level, where home storage and traditional structures are used, losses range between 13% and 28%, representing an important constraint to food security.

There are important grain storage infrastructure disparities between the central/southern states and the states located in the North of the country, where most current storage infrastructure is located. As a consequence, commercial surpluses, trade balances, financial and transportation costs affect producers differently. The four states with major storage capacity are Tamaulipas, Jalisco, Sinaloa and Guanajuato in the North. This infrastructure is complemented with modern storage facilities integrated with semi-mechanized and mechanized equipment, with a storage capacity that goes from 5 up to 50 thousand tons. These facilities are also well integrated into upstream value chains such as storage, packing, and distribution. In contrast, the states in the South lack the storage capacity and commercialization conditions to meet current market demands. The majority of existing silos and collection centers have not been modernized and lack the necessary equipment for grain conservation.

There are 16 large private warehouses in the country, concentrated mostly in the North, managing general merchandise, including large volumes of agricultural storage. They are linked to around 2,000 smaller storage facilities for grains, oilseeds and cotton, also concentrated mostly in the North and Center of the country, with diverse range of quality assurance mechanisms. These facilities are formed by close to 10,000 individual structures such as warehouses, courtyards, and silos, many of them in substandard conditions and hence unusable. Volume and uniform quality of products are critical for access to these facilities, which constrains the inclusion of small and medium producers. Warehouses and storage facilities are generally located near large urban (consumer) centers and away from agricultural production areas. Commercialization costs, shaped by the lack of organization, access to training and, access to market information in real time, when combined with low volumes and high transport costs, generate important financial burdens on producers, further prohibiting participation of small agricultural units. This has also limited the interest of the private sector in working with them, which has further alienated them from grain supply chains in the country.

Access to finance is one of the biggest challenges for Mexican producers. Small and medium-sized producers have limited access to financial resources given the heterogeneous agrarian structure also linked to land tenure patterns, relying on non-traditional and informal financial services. Rural credit services are provided mostly by entities that are not connected to the regulated financial system, which implies higher financial costs for producers and also complicates the development of a credit history that would allow them to participate in commercial or development banking services. In recent years, financial services provided by commercial banks to the agricultural sector have been



reduced and many institutions dedicated to agricultural promotion have been disassembled. Credit to the agricultural sector has decreased from 1.8% of GDP in 1994 to 0.1% in 2012. Agricultural rural credit, training and technical provision is centered on FIRA (*Fideicomisos Instituidos en Relación a la Agricultura*) and FND (*Financiera Nacional de Desarrollo*). Beyond the need of credit for rural production activities, there is also a need for other financial services to strengthen agricultural value chains. Integrating financial products into existing agricultural commercial systems can improve the socio-economic conditions of small and medium-sized producers.

Storage and financial services are closely linked. Mexico has undertaken steps to promote the development of a warehouse receipt system under the General Law of Organizations and Auxiliary Activities of Credit. A recent move to privatize warehouses opened up opportunities for the development of inventory-based financing using so called *certificados de depósito* (or deposit certificate). However, although deposit certificates are regulated by law and are well received and accepted by financial institutions, since they are similar to a liquid guarantee, financial institutions perceive the rural sector as too risky, and they do not want to lend into the sector unless they have a very liquid and solid guarantee to mitigate losses; hence, only a few large-scale rural producers who have tangible assets to use as collateral have traditionally been able to access this instrument. Enforcement of the requirement by warehouses that receive agricultural products for deposit to subsequently provide relevant information to the Integrated Information System for the Storage of Agricultural Products is lacking. This has atomized information on the current inventories; in- and outflows of stored goods; transactions with the deposited goods; a report indicating certificates of deposit and pledges issued, cancelled or traded; and in certain cases, phytosanitary or animal health related information.

A well-functioning mechanism for the registration, licensing, oversight and inspection of warehouses is an important element to ensure that warehouse receipts are acceptable collateral for financial institutions; acceptable for commodity exchange related transactions; as well as to guarantee that warehouses meet basic structural, operating and financial conditions. The actors responsible for monitoring warehouses should be well defined but can vary, depending on whether local, regional or national markets are involved. In less structured settings, the monitoring functions can be delegated to value chain actors who have the incentive to perform it well, given the valued relations they have created with producers, traders or processors. This is important in the context of Mexico where the current structure of storage is very much skewed towards larger units and where small storage units can also play an important role, especially in the South.

Added to these challenges is the structure and transparency of Mexican agricultural markets, especially for the main crops, such as maize, which inhibit the participation of small and medium size producers. Spot price information for many agricultural commodities is very fragmented, and not readily available within and across regions or on a daily basis. The only reference prices available in Mexico are spot and future prices from the neighboring USA. This has created significant information asymmetries in the sector, which have contributed towards an oligopolistic behavior by large warehouses (charging high storage costs) and a near oligopsony in the buying of grains, with 4 large companies (3 private and 1 public) dictating (low purchase) prices. Prices are set by negotiating prices between buyers and sellers by region using the Chicago futures market as a reference. This price negotiation establishes the price “basis” in relation to Chicago, which is then reflected in the forward contracts agreed between buyers and sellers. This negotiated price is a critical market distortion and the main reason why there is no price formation in Mexico. Furthermore, the reference price of Chicago is based on trading of yellow corn, while Mexico is the world’s largest producer of white corn, including many native varieties that are valued for their distinctive features. The use of a reference price from the Chicago futures market thus equalizes – and in many cases reduces – the values of many Mexican corn commodities. These market-price distortions have important economic implications as they reduce comparative advantages that Mexico can have in trading white corn with other large consumers (such as many African countries), as well as limits the development of local and regional markets for different corn varieties. Lack of a grain inventory database and user-friendly climate information further exacerbate the ability of producers, private and public entities to make decisions. This is true for maize and other important crops in Mexico.



Relationship to CPF

The proposed project is consistent with the World Bank Group's Mexico Country Partnerships Strategy (CPS) 2014-2019. One of the four strategic themes of the CPS is Unleashing Productivity in order to foster new enterprise creation, grow innovation, and upgrade infrastructure. It specifically aims to increase competitiveness of businesses through a) streamlining key regulations and removing barriers to competitiveness, with a targeted focus on Small and Medium Enterprises (SMEs) b) improving innovation within the private sector and supporting investments to boost productivity and c) upgrading infrastructure for increased competitiveness. The proposed project directly addresses this thematic area by focusing on increasing the competitiveness of small and medium agricultural production units throughout the country by reducing barriers, including providing access to transparent pricing information of agricultural commodities, increasing access to financial mechanisms in the sector and supporting investments in human capital to improve agricultural productivity. In addition, one of the project's main focus areas will be rehabilitating and constructing new infrastructure for improved grain storage (where public and private sector investment will be sought) to boost the competitiveness of small and medium producers in the national and international markets.

The Mexican National Development Plan (NDP) 2013-2018 seeks to increase national prosperity by improving productivity in a number of areas, including the promotion and strengthening of entrepreneurship and small and medium-size businesses and the promotion of investments and competitiveness of the agriculture sector. Objective 9 of the NDP refers to improving rural producers' income by increasing Mexican presence in global markets, linking producers with value-added processes. The Plan also fixes quantitative objectives in terms of increasing the share of domestic production in the supply of main grains and oilseeds from 58% in 2011 to 75% in 2018, doubling the primary agriculture GDP growth to an annual rate of 3% and bringing the agro-food trade balance from a deficit to zero. The project will advance these targets by investing in infrastructure and support systems to help agricultural production units become more competitive and promoting financing and capitalization of the rural sector, linking risk management with rural finance investments and programs.

This project is also aligned with the objectives established in the Agricultural Sectoral Plan, and with program consolidation efforts being undertaken by SAGARPA. Among them is the focus on boosting productivity in the agricultural and food system through investments in physical, human and technological capital to guarantee food security and inclusiveness; on promoting competitiveness to minimize post-harvest losses during storage, and on strengthening public private partnerships in the sector, as well as on providing relevant market information for decision making.

Mexico has taken important steps for strengthening financial inclusion, including the creation of two coordination bodies, the Committee on Financial Education and the National Council on Financial Inclusion, established by the government in 2011. Furthermore, in June 2016, the President announced the policy for financial inclusion. This policy is aligned to the project's development objectives, as it has among its goals to increase the development of financial infrastructure and services with a special focus on the rural population living in the southern and south-eastern regions of the country.

This project builds off of earlier work requested by the Mexican Government (Hacienda and SAGARPA) and completed under the Agricultural Risk Programmatic Approach (P132987), and it is informed by analytical work done collaboratively with the Government of Mexico and FAO on benchmarking storage systems (P158258). Moreover, the project complements the Bank's ongoing efforts to improve productive and financial inclusion of rural areas in Mexico, including the FIRCO, BANSEFI, NFD and Special Economic Zones Projects.



C. Proposed Development Objective(s)

Note to Task Teams: The PDO has been pre-populated from the datasheet for the first time for your convenience. Please keep it up to date whenever it is changed in the datasheet.

Improve agricultural storage system and related financial and information services for food security and competitiveness.

Key Results (From PCN)

The following key results are proposed for measuring achievement of PDO:

- 1) New and rehabilitated agricultural storage capacity (in tons) for project beneficiaries available and used
- 2) Financial instruments (in value) utilized by project beneficiaries
- 3) An information system is established and used for decision making (number of users)

D. Concept Description

The overall goal of this project is to promote more efficient and effective agricultural commercialization contributing to food security and competitiveness in prioritized areas of the country. Each of the proposed project components will contribute to developing market conditions that enable producers to participate in a storage system that incentivizes productivity through profitable commercialization practices, reduces losses through post-harvest management, facilitates access to financial mechanisms, and differentiates prices through symmetric information to compete in national and global markets.

The Agency for Services toward the Commercialization and Development of Agricultural Markets (ASERCA for its Spanish acronym) is the best positioned institution to lead this work. ASERCA, a decentralized agency of SAGARPA, has a mandate to: 1) promote the commercialization of surpluses of maize, wheat, sorghum, soy and beans and 2) position Mexican agriculture products in global markets. The main work of ASERCA includes providing incentives for the commercialization of commodities through contract farming, production guarantees, risk coverage and incentives for storage. The agency has a budget of roughly MX\$10 billion per year, and reaches around 260,000 beneficiaries per year (or 4% of those formally employed in agriculture), many of whom are large farmers. Through its price support system (also known as Objective Income, *Ingreso Objetivo*) embedded into the contract farming, ASERCA has been stabilizing prices of grains in Mexico. The reduced variation of prices across time, has undermined the incentives to store and the demand for storage capacity. This is a very costly path for ASERCA to follow and there is a renewed interest by ASERCA in incentivizing storage and grain commercialization in the country.

ASERCA's role in the agriculture sector will need to adapt to take on more leadership with provision of services to small and medium farmers in poorer states. With the current fragile level of market organization, lack of appropriate physical and financial infrastructure, and coexisting asymmetries between agricultural production regions, there is an important role for ASERCA to lead the improvement of the national agricultural storage and information systems. As a public agency, ASERCA currently invests 98% of its annual budget in supporting the commercialization of grain through the provision of price guarantees and incentives, focused primarily on contract farming approaches with large farmers in the north and center of Mexico. Until now, the poorer regions in the South have operated at scales too small to participate in ASERCA's incentive programs. Within the scope of the project, ASERCA will expand its role to also include the provision of support for the productive and financial inclusion of small and medium farmers and help them become more commercially viable, contributing to the overall growth and value of the sector.



A World Bank Storage Study highlighted the need for investments in improved storage infrastructure, inclusive financial mechanisms and aggregated and transparent information. At the request of the Mexican Government, and in collaboration with ASERCA and FAO, in 2015/2016 the World Bank undertook an in depth study on the Mexican warehousing and storage system. The study included an analysis of existing storage infrastructure, an assessment of financial mechanisms used to support storage systems and benchmarking other countries for best practices and lessons learned in other systems. An analysis of the results highlighted the need for the construction and rehabilitation of storage infrastructure, the need for more inclusive financial mechanisms and the essentialness of a comprehensive information system for information collection and dissemination. The project will be structured around these three interlinked agriculture services - storage, financial mechanisms and information. All are essential to achieving the project development objectives: increased storage capacity could stimulate increased production which can in turn trigger new/increased demand for financial services, which will have to be more accessible. The process will have to be transparent so as to increase the confidence in the system and its potential for inclusion of the poorer population. This would be achieved through enhancing the warehouse information system in order to provide all parties with the necessary information for decision making while improving their accountability.

Component 1: Grain Marketing and Food Security (50% of total investment)

The objectives of this component are to: (i) promote storage of grains for commercialization and food security by financing the rehabilitation/construction of off farm collection centers^[1] (centros de acopio de cosecha) located near grain production areas and trade centers^[2] (bodegas) in areas strategically located to access markets; (ii) to establish storage requirements for each crop (maize, wheat, sorghum, beans) to meet preservation requirements and quality standards, (iii) to develop minimal standards requirements for storage facilities operations including on handling, safe keeping and information processing, and iv) to support provision of services to collection centers and trade centers to strengthen capacities to become sustainable businesses providing the required services, aggregating surplus and helping members overcome market constraints.

The main activities that will be financed under this component include: a) the physical rehabilitation of existing storage infrastructure including refurbishing of buildings and related equipment (scales, lab quality diagnostic, grain driers, grain cleaners, aeration/ventilation, etc.) to ensure that services provide adequate conservation to meet the grain quality standards for marketing; b) the construction of new storage infrastructure in places where there is surplus grain but volumes are not met to attract private sector operators and farmer organizations can operate them; c) preparation and dissemination of storage requirements for each crop; e) training of storage facility operators to meet requirements on operations i.e. handling, safe keeping and information processing, e) provision of training to farmers associations operating collection centers and trader centers on organizational, financial, administrative and management aspects.

Current stock of warehousing services is different by region and constrained by lack of physical storage facilities and where they do exist, lack of efficiency in their operations. The 2013 IDB study found that in the northern part of the country while there is sufficient grain storage capacity the operations are not efficient due to the low level of mechanization and modernization of the facilities. The center part of the country has significant production and surpluses are generated but there is insufficient storage facilities operating to meet the demand with a high number of inactive storage facilities, which can potentially be rehabilitated. The southern states have the lowest storage capacity and a good number of inactive facilities that can be rehabilitated to meet the storage needs.

^[1] Centros de Acopio are defined as grain storage units found near the areas of production with rather low storage capacities.

^[2] Bodegas or centros de concentracion are defined as grain storage facilities located in areas with easy access to markets and with medium to large storage capacities which may be qualified to issue warehouse certificates. Almacenes are defined as warehouses located near consumer centers, with large capacities with are authorized to warehouse certificates and



According to the IDB study, many of the inactive facilities are property of “ejidos” which stopped using them due to lack of financial means to support collection of surpluses to consolidate the volume needed to meet economies of scale for commercialization. The infrastructure has deteriorated and will need to be brought up to date to meet conservation standards and capital will need to be provided to “ejidos”, farmer associations or private operators/traders to reinstate operations and be able to provide these services to farmers. Moreover, associations of producers with limited access to financial services have also expressed the need to upgrade or expand their own storage facilities to meet commercialization requirements. Finally, the private sector has indicated that the lack of economies of scale prevent their interest in building storage infrastructure in particular in the southern states where small scale agriculture prevails. Thus, alternative options such as working with small farmers associations to develop a network of small scale collection centers which can then be linked to trader operators to commercialize their products. For example, in Oaxaca traders have expressed interest in working in partnership with farmers associations to strengthen their capacity to manage collection centers as to ensure upstream conservation and quality standards are met to guarantee commercialization.

Most of the storage facilities certified to issue warehouse certificates in the country is located in the northern and central states and a lesser number in the southern state. The ADGs have indicated that constraints faced by storage facilities to obtain certification include their inability to meet economies of scale (storage capacity greater than 8000), infrastructure requirements on physical infrastructure that ensure the proper conservation and quality of grains and lack of solid administrative and management processes. The ADGs have expressed interest in working with the project to support facilities that do not meet current standards to strengthen management and operating conditions to meet requirements for certification for CD issuance. In this context, the infrastructure investment is also aimed to support storage facilities meet the warehouse certification requirements.

Component 2: Improving the Access to Financial Mechanisms (30% of total investment)

The objective of this component is to support and improve the access of project’s beneficiaries to formal financial mechanisms. Main activities that will be financed under this component include: (i) technical assistance and training of financial service providers participating in the warehouse receipt system; (ii) awareness raising and promotion of the warehouse receipt system among private and public sector stakeholders; (iii) provision of financial management and literacy training to inform and facilitate the access of eligible beneficiaries to the available financing instruments and agricultural commodity contracts; (iv) the creation of a guarantee scheme that will allow eligible beneficiaries access to the CD instrument issued by AGDs ensuring fees are more accessible to them; (v) and the financing of agricultural commodity contracts for eligible beneficiaries.

The formal rural finance sector in Mexico is considerably underdeveloped, with only a small portion of the total portfolio of financial services reaching small- and medium-sized producers. In particular, small producers have traditionally lacked access to the formal financial sector due to a lack of assets that can be used as collateral, among others. One of the key players in the credit market are the General Deposit Warehouses (*Almacenes Generales de Deposito - AGD*). They are responsible for issuing a legal certificate known as Certificate of Deposit (*CD - Certificado de Deposito*) against the value of the inventories deposited by the producers in the AGD’s warehouses.

The CD functions as a widely accepted, liquid collateral guarantee in the banking sector for granting loans to the CD owner. However, due to the limited number of AGDs, only a few large-scale rural producers, who have tangible assets to use as collateral, have traditionally been able to access this instrument. There are only four AGDs active in the rural market in the country. Associated consequences of this highly concentrated market with only a few players include prices that may be inaccessible to small producers and limited geographical outreach throughout the country.



Moreover, the lack of financial management and literacy education in many small producers is a significant barrier for appropriately using the CD instrument.

Another relevant instrument for the rural producers to mitigate the risk of price movement are the agricultural commodity contracts (options contracts), which are subsidized by ASERCA. These contracts are pervasively with larger farmers in the north of the country and support “wrong way hedging”, meaning that the buyer and seller only engage in these options contracts after having set a price. The component will reform this program to enable access to small producers.

This project will seek for areas of collaboration and coordination with FND who is being financed by an existing loan Expanding Rural Finance Project (P153338), which became effective in July in 2016, and which PDO is to expand the availability of finance to the rural economy.

Component 3: Development of Storage Information System (20% of total investment)

The objective of this component is to develop a Comprehensive Warehouse Information System that improves and standardizes current information systems in order to integrate: a) real-time price information of commodities through the registration of futures contracts and point-of sale transactions; and b) warehousing information, based on a warehousing receipt system, aggregate it on a single platform, analyze it into useful and digestible indicators and make it publically available.

This Component will be divided into two sub-components, and the main activities to be financed under each include:

3.1 Development of an Online Platform. This sub-component will include investments in a) the development of an online platform hosted and administered by ASERCA to consolidate, store, analyze and present data; b) hardware, including computers and servers, for the operation of the platform; c) capacity to operate and maintain the platform and databases; and d) a field level system collection of reference prices and inventory monitoring.

3.2 Use and dissemination of the Online Platform. This sub-component will follow sub-component 3.1, and include investments in: a) piloted use cases of the platform’s aggregated information; b) resources for collection centers, bodegas and warehouses in the use of the platform; and c) investments in information communication technology (ICT) dissemination infrastructure, possibly including applications for smartphones, targeted text messages including price updates, early warning systems and others.

Although information systems currently exist to track warehousing, storage, financial mechanisms and price information, the sources are not uniform and are held by multiple institutions across various sectors. Currently, information on warehousing deposits and prices are collected across multiple institutions in the public and private sectors¹, without any standardization of when information is collected or unit of collection, and without aggregation procedures, or publication in easily usable formats. Data that is made available is provided in raw form, across websites of multiple institutions, and with large time lags, making it difficult to access and use. The lack of real-time inventory information makes it impossible to assess total warehoused grain in any given moment, and this specifically impacts urban warehouses that lack transparent information from rural silos. The lack of real-time price information creates information asymmetries in the market, which particularly impacts smaller farmers. In some comparator systems, for example India and Tanzania, as detailed in the World Bank storage study, pricing information is needed

¹ The variety of systems include RUCAM, a database held in the Ministry of Economy for negotiable deposit certificates; CNBV, a database held in the *Comision Nacional Bancaria* for non-negotiable deposit certificates; the National System for Integration and Market (SNIM) held by the Ministry of Governance (SEGOB) that manages aggregate prices; and SIAP, a system that collects aggregate prices twice per year and produces monthly reports on volumes, held by SAGARPA.



assist financial institutions in assessing the market value of the collateral for risk management purposes that help to make finance more accessible to small and medium producers.

Existing information systems will provide a good basis for the creation of a consolidated information system. Unlike in many other countries, Mexico already has a base of information collection that creates many opportunities to build on and improve the current system. Currently, under the General Law of Organizations and Auxiliary Activities of Credit, warehouses that receive agricultural products for deposit are required to subsequently provide the Integrated Information System for the Storage of Agricultural Products relevant information, including a general report on the current inventories; in- and outflows of stored goods; transactions with the deposited goods; a report indicating certificates of deposit and pledges issued, cancelled or traded; and in certain cases, phytosanitary or animal health related information. ASERCA is currently offering agriculture support in some product type to nearly 260,000 farmers per year. The registration and publication of the ASERCA-traded futures contracts alone will already provide greater transparency in the market. Adding to this the standardization of information, and the consolidation of the multiple existing information systems, Mexico will have an internationally competitive system for information collection and dissemination.

The proposed information system will play a crucial role in the further development and expansion of the *certificados de deposito*, allowing for the careful tracking of grain quantities stored and support the project's objectives under Component 2. According to the World Bank storage study, among the limitations inhibiting uptake of the warehouse receipts system in Mexico is the insufficient price information to establish the value of commodities in storage. Within a warehouse receipts system, the receipt itself has to be functionally equivalent to the actually stored commodity, with pre-specified quality and quantity of the goods stored. Furthermore, in a warehousing receipt system the rights and responsibilities of each party must be clearly defined, transparent and understandable, with a clear mechanism of timely enforcement in case of breaches of contract or duty. A centralized information system with consolidated, real-time data facilitates the monitoring of these crucial aspects of a warehousing system.

Overall, the consolidation of the current information systems will make transparent information available to many users at all levels of the sector that can be used to improve decision-making, reduce transaction costs and improve food security. It will help make commodity prices and national inventories transparent, contributing data to the public and private sectors with the objectives of providing information for better decision-making and reducing transaction costs. It will also allow for a system that builds intelligence over time on the performance of agricultural markets, which can be analyzed and contribute to building confidence in the market.

Beneficiaries: The primary beneficiaries of this project will be small and medium farmers that have the capacity to generate marketable surpluses and can benefit by storing excess production. Although large producers will not be directly targeted, the project will also benefit them with the enabling environment it will create through the public information system and the financial services created.

Gender Considerations: Assisting farmers with proper storage not only improves product quality, but also enables products to be marketed at times other than directly after harvest. The farmer can receive a higher price, the price-depressing effects of a glut can be prevented, and the cash flow delay and costs of storage can be recouped. These benefits will accrue to women farmers as well as to men farmers. This project acknowledges the important relationship between women and agriculture in the country, which has become more important in recent years in many areas of the country as men have migrated out of rural areas and women have been left behind taking on additional responsibility for farming. Women maintain the dual responsibility of farming and household production. Their role in grain preservation and processing operations in traditional productions systems is particularly important. Women are often involved in the drying, grading, shelling, inspecting of grains. These activities are essential precursor steps needed to ensure effective grain storage. If these activities are not carried out appropriately and access to adequate storage is not



available, major losses are likely to occur. The introduction of better technologies in drying, shelling and inspecting that accompany storage can help prevent losses and have the potential to relieve the work load of women. Women in general also have limited access to credit.

The project will ensure that women take advantage of the new storage technologies; participate in inventory-based credit schemes; and are aware of information available to increase their market opportunities. The design of the project builds on successful experiences elsewhere in the developing world. For example, women in Niger, participating in “warrantage” (a type of inventory credit system adapted to the context of rural areas and smallholder families) are using the credit to finance income generating activities to complement their household income and to buy seeds and fertilizer for the next planting season. The project will have an inclusive approach where both women and men complement each other to achieve the set objectives.

Note to Task Teams: The following sections are system generated and can only be edited online in the Portal.

SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The Project will support the productivity of grain for commercialization and food security through targeted support to Mexico’s National Grain Storage System (NGSS). The project will target small and medium producers in selected states, and support the rehabilitation and, where needed, construction, of small scale grain storage infrastructure and enabling services. A methodology has been developed to select project intervention states, prioritizing those with gaps in storage capacity and productivity. It is envisioned that 6 states will be selected, representing different agro-ecological conditions, structural characteristics of agricultural production and its potential for storage and commercialization.

B. Borrower’s Institutional Capacity for Safeguard Policies

The Government of Mexico (GoM), including SAGARPA, has many years of experience working with projects funded by multilateral agencies and bilateral donors and has built capacity in implementing World Bank safeguards. In addition, the GoM has significant experience in the management of natural resources, including not only the technical and scientific approaches, but also consultation and participation processes, land use evaluations, public policy and governance, social and environmental impact assessments, reference level development and monitoring reporting and verification (MRV) methodologies. Since 2012, ASERCA (Service Agency for Commercialization and Development of Agricultural Markets for its Spanish acronym) has been a decentralized administrative institution of SAGARPA. As the implementing agency, ASERCA will be responsible for monitoring the project’s application of safeguards, closely coordinated with the World Bank’s safeguard team. During project preparation, different instruments will be developed to transfer the safeguard implementation capacity of the GoM, through SAGARPA, to ASERCA. For example, collaboration with another SAGARPA program – MasAgro - is likely. MasAgro is implemented by CIMMYT (International Maize and Wheat Improvement Center, based in Mexico) and as a program generates and manages information pertinent to the monitoring and evaluation of the project’s social and environmental indicators. During project preparation, the role of MasAgro can be better defined to play a role in the on-farm information collection and monitoring of safeguards. In addition, the project will develop a comprehensive system for grain prices and inventory with the capacity to facilitate information collection and storage. Once operational, this system can facilitate information for the monitoring and evaluation of safeguards as well. ASERCA’s current limited capacity to manage social and environmental issues, including IP aspects, and related capacity building activities, is greatly compensated by the institutional willingness to work in cooperation with other institutions,



such as other SAGARPA units with Bank project experience and other agencies such as CIMMYT. The World Bank’s team will work closely with, train and advise ASERCA’s team on issues related to compliance and reporting of safeguard policies.

C. Environmental and Social Safeguards Specialists on the Team

Angel Alberto Yanosky, Arelia Jacive Lopez Castaneda

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	This project’s primary activities will be to a) increase the storage capacity and stored volume in certified collection centers, b) improve the quality of these centers integrated into the NGSS, and c) reduce post-harvest losses through improved infrastructure, information and commercialization. The project will not directly support agricultural production decisions, but may influence them through their integration to value-chains. Improvements in volumes will be achieved through use of better management practices, such as conservation tillage, more suitable to agro-biodiversity, and post-harvest management, reducing grain losses, rather than on expanding production, and hence volumes, through frontier expansion. No land use change activities will be supported by the project. No native areas (including primary forests) will be degraded, traditional crops will not be replaced by high yielding or GMO varieties, and no actions will be taken in Protected Areas or their buffer zones. The activities related to the physical rehabilitation of existing and/or construction of small storage infrastructure may have some environmental and social implications. The the Environmental and Social Assessments and Management Frameworks (ESMF) (to be developed by ASERCA) will identify key project threats and will produce a series of recommendations regarding the impact of grain storage. The ESMF will also analyze the potential impact of the improvement of competitiveness on increasing the pressure on ecosystems through a potential expansion of the agricultural frontier or by incorporating lands that are currently not producing and potentially in the process of regeneration. The ESMF will also assess the potential loss of agro-



		<p>biodiversity due to the increase of the number or percentage of producers that might focus more on commercial grains in lieu of traditional crops, and it will also analyze potential linkages of agricultural activities with organized crime and potential safety implications. Project design will integrate experiences from the MasAgro program, and specifically CIMMYT's close monitoring of environmental variables for successful project implementation. The E&S risks are rated "moderate". Before appraisal, the ESMF will be discussed with experts and stakeholder focus groups, and disclosed for broader consultation. The ESMF will include references to the World Bank Group General Environmental, Health and Safety Guidelines. These instruments will allow the project to identify risks, impacts and develop strategies to address and mitigate these during project implementation by the client. Any resulting recommendations derived from consultations will be incorporated in project design. Although not foreseen during preparation, project activities may require the preparation of ESIA's or ESMPs during project implementation of site-specific activities.</p>
Natural Habitats OP/BP 4.04	Yes	<p>This project will not support activities that lead to loss, conversion or degradation of natural habitats. The project focuses on areas currently under cultivation and with varying capacities of grain storage and value-chain integration. All institutions involved have agreed that no project action would promote expansion that could directly or indirectly induce land use change and hence affect natural habitats. This safeguard is triggered to ensure that these commitments are honored during project implementation, considering that project activities will likely take place in highly biodiverse parts of the country. Key actions for project compliance with this safeguard will be identified in the ESMF and recommendations made for follow up during implementation.</p>
Forests OP/BP 4.36	Yes	<p>This project will not involve actions related to conversion or degradation of forest areas or other natural habitats associated with forests, including adjacent or downstream critical natural habitats. This OP is activated to safeguard native forests that co-exist with rural areas where agricultural production takes place and where collection centers will be constructed or rehabilitated. The ESMF will explain</p>



		which activities are to be followed to secure protection of native forests that coexist with agricultural lands.
Pest Management OP 4.09	Yes	In general terms, the impact of this project is expected to be positive. The ESMF will consider the use of agrochemicals, including other pest management practices, as they relate to grain storage supported by the project. At project appraisal, the project will provide evidence, including an action plan, for supporting the adoption of best environmental practices and standards, complying with environmental/legal requirements, evaluations or permits applicable, as related to grain storage. During preparation an Integrated Pest Management (IPM) approach will be pursued and a Pest Management Plan (as part of the ESMF) will be prepared in case agrochemicals are considered during project implementation. Information derived from MasAgro will enrich the information and strategies for this safeguard's application. Project monitoring on the adoption of best practices will confirm the extent of achieved benefits.
Physical Cultural Resources OP/BP 4.11	Yes	The project is expected to finance the upgrade of existing grain storage centers, and in few cases, new construction. The initial assessment of this project indicates that it is highly unlikely that any activity will have an impact on objects, sites, structures, natural features or landscapes with archeological, paleontological, historical or any other aspect of cultural significance. Based on this, in the unlikely event that project activities were to have a potential impact on features of cultural significance, all bidding documents, contracts, and work-orders for civil works would follow standard environmental rules for contractors, including chance find procedures for cultural property. During project preparation, landscapes potentially involving historical or cultural significance will be identified and the ESMF will include procedures to address chance findings of archeological and cultural resources during construction works, if any. This is proposed to be included in the OM and it will be recommended that any chance finding is immediately communicated to the INAH.
Indigenous Peoples OP/BP 4.10	Yes	This policy is triggered given that indigenous peoples are present in the project's area of influence, and



could benefit from project activities. The project seeks to increase the participation of small agricultural producers. During project preparation, several activities will be carried out to assess potential impacts and strengthen the program's performance under the modalities that are more likely to affect indigenous peoples, such as a Indigenous Peoples Planning Framework (IPPF), based on a Social Assessment (SA), and will also provide guidelines to improve outreach and consultation with indigenous beneficiaries, (e.g. language provisions, participatory approaches, design and construction techniques). During project implementation, site specific IPPs will be developed once the project areas are known and determine that IPs are present. The IPPF will elaborate on information and consultation mechanisms to ensure that IPs are consulted, its potential impacts and have the opportunity to equitably share in the project benefits. The Consejo Consultativo from the CDI will be the initial point of contact with indigenous leaders and IPOs to prepare the IPPF. Additional consultations at the regional or local level will be planned as the areas are identified. The SA will be conducted and informed by a series of regionally based consultation workshops with indigenous people's representatives. This SA will inform the IPPF. The IPPF will review the eligibility rules, and identify eventual possible barriers of access to the program by indigenous people, and propose corrective measures. The SA will identify information and awareness-raising as well as consultation mechanisms targeting expected project beneficiaries, particularly small farmers. Also, the SA will propose a grievance handling mechanisms to provide an avenue for communities to provide feedback and raise concerns about project activities. The GRM will be part of the IPPF. The SA will be broader than IPs and will also consider other vulnerable groups such as women, youth, elderly. The Project will collaborate with the program MasAgro and use many of the variables that MasAgro is collecting, including: gender inclusion, cultural relevance, participation, technologies to improve maize production, monitoring and farmer empowerment. To address gender issues, specific consultation and participation mechanisms will be implemented to ensure women are aware of the project, and



		contribute with their input in the design.
Involuntary Resettlement OP/BP 4.12	No	All of the sub-projects to be financed under this operation will be carried out on private land, owned or leased by the ultimate beneficiaries. Even if the project would finance rehabilitation/construction of new storage infrastructure (which farmers organizations can operate), there will not be any land acquisition/resettlement, and this will be clearly specified in the restrictive list of funding activities in the OM. Such eligibility criteria will be included in the ESMF. Farmers' organizations or other potential beneficiaries or PAPs by customary right of collective landowners are not allowed to donate land. Voluntary land donation does not apply in Mexico. In the ESMF, it will be referenced to Actas Comunitarias or Community Assemblies to develop activities in communal lands.
Safety of Dams OP/BP 4.37	No	No dams will be constructed or rehabilitated in this project. Project interventions will not rely on the performance of existing dams as smallholder agriculture is generally rain fed. This safeguard is therefore not triggered.
Projects on International Waterways OP/BP 7.50	No	There are no actions in international waterways. This safeguard is therefore not triggered.
Projects in Disputed Areas OP/BP 7.60	No	There are no areas in dispute in the territory proposed for project interventions. This safeguard is therefore not triggered.

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Jan 16, 2017

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

Given the short preparation period for this project, the period for completion of the safeguards studies is mid-September to end of November 2016. The client has been made aware of this and the Bank team will work closely with the ASERCA team to ensure compliance.



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Note to Task Teams: End of system generated content, document is editable from here.