1. Overview and Perspectives on the Scope of IDB Invest's Environmental and Social Review

Grupo Kowi ("KOWI") is a group that has been producing, processing and marketing pork for more than 40 years through its subsidiaries (its pig farms are Genetikowi, S.A. de C.V. and Porcikowi S.A. de C.V.), while Alimentos Kowi S.A. de C.V. is the marketer through which all KOWI sales pass. It is a company located in the south of the state of Sonora, one of the main pig producing states, from where more than 70% of the country's pork volume is exported. The most important markets for KOWI are Japan and the United States; highlights include a market share of close to 28% of all Mexican pork exports abroad, 26% of the export market to Japan, and approximately 23% of the national market in branded pork products. KOWI is one of the three most important companies in the pork sector in Mexico in terms of sales and amounts exported to Japan.

Kowi is committed to offering its customers the highest quality; therefore, it has a platform to guarantee quality and compliance with national and international health and hygiene standards, backed by the following certifications: TIF Certification (specific to its Processing Plants, granted by the SENASICA - SAGARPA[1]), Mexico Calidad Suprema, and SQF (Safe Quality Food). For these certifications, Kowi has a Quality Assurance organizational structure with a Farming Improvement Coordinator and a Farm Quality Supervisor who ensure compliance with the quality and safety protocols that apply to live pig suppliers for Frigorifico Kowi; i.e.: (a) They review the Standard Farm Operation procedure using the F3 Format, which prescribes staff training; (b) They carry out the inspection of live pig supplier farms on a plant by plant basis, where the following aspects, among others, are reviewed: (i) the SSOP (Standard Sanitation Operation Program) formats, which prescribe farm cleaning schedules; (ii) the Harmful Fauna format, which states whether pest control exists; (iii) the Flora format (weed control), which consists of the farm's weeding log and which chemicals are used; (iv) the bacteriological and physicochemical analysis of the pigs' drinking water; (c) Training and instruction of pen and slaughter personnel, pig farm and live pig transportation personnel, on any strategy, information, or special procedure involved in pig welfare and guality; (d) Training and instruction of farm doctors and owners on matters related to the plant (improvements made to the plant, biosecurity measures taken in plants, training and awareness on the use of needles and medicines, etc.); (e) Coordination of annual visits to farms for the MEXICO CALIDAD SUPREMA certification, with inspectors from OCETIF - Certification Body for the Food Industry; (f) Cooperating and/or advising farms on the Good Livestock Practices certification[2]; (g) Coordination and monitoring the approval of laboratories and/or allowed chemical substances for the catalog of chemical substances used by the plant; and (h) Internal Inspector for the SQF System.

The scope of this environmental and social review included the analysis of the Project's environmental permits and sanitary licenses, meetings and conference calls with representatives of the borrower, as well as an environmental and social due diligence (ESDD) visit on June 19, 20 and 21, 2018, where staff responsible for IDB Invest's Social, Environmental, and Governance Division (SEG) held meetings with staff responsible for the KOWI company at its headquarters located in Navojoa, Sonora and carried out the inspection visit to Type II and III model farms, located in the Batacosa area, Municipality of Navojoa, Sonora. During the visit to the KOWI Type II and III farms, through a visual assessment, the environmental and health and safety conditions of these facilities were evaluated; as well as the welfare of the animals. Finally, during this ESDD, a visit was made to the Processing Plant (Alimentos Kowi, S.A. de C.V.) located in Navojoa, Sonora, and the Slaughter Byproducts and Offal Processing Plant (Kofanor de México, S. de R.L. de C.V.) located in Esperanza, Sonora, which are both associated with the production cycle and management of process residues (including farm carcasses) of the KOWI value chain. It is important to clarify that neither the Processing Plant nor the Offal Processing Plant will be part of the Project. At the end of this ESDD visit, the documents associated with manuals, procedures, internal and external audit reports,

among others, were reviewed.

2. Environmental and Social Categorization, and its Foundations

This is a **Category B** Project, in accordance with IDB Invest's Environmental and Social Sustainability Policy, since overall its environmental and social risks are expected to be reversible and capable of being mitigated through currently available technologies. The key environmental and social impacts related to the Project's construction of this type of pig farms include: (i) the production of hazardous and non-hazardous waste; (ii) polluting atmospheric emissions (mainly combustion gases from machinery and equipment); (iii) noise pollution; (iv) wastewater generation; (v) earthworks; (vi) removal of natural vegetation; (vii) ground vibrations; (viii) occupational health and safety, and (ix) health and safety concerns of the community in relation to the increase of vehicular traffic on the access roads to the construction site. During the operation and maintenance phase (O&M), the risks are mainly related to: (i) worker health and safety; (ii) generation of solid waste (hazardous and non-hazardous) and liquid waste (wastewater), (iii) atmospheric greenhouse gas (GHG) emissions and bad odors, produced by the microbial activity in manure and wastewater treatment processes; and (iv) use of resources, such as energy and water sources (surface or groundwater). Natural disasters, such as earthquakes, fires, floods and hurricanes, also present potential risks for KOWI due to the potential risks to workers and animals (in this case, pigs of any age), but also with regard to structural and environmental damage to the physical infrastructure, and a possible loss of business.

Based on the ESDD visit and the information provided in the Environmental and Social Questionnaire, it is expected that this business unit will have an impact on the following IFC Performance Standards (PS):

- PS-1. Evaluation and Management of Environmental and Social Risks and Impacts
- PS-2. Work and Labor Conditions
- PS-3. Resource Efficiency and Pollution Prevention
- PS-4. Community Health and Safety

The following IFC Performance Standards are not envisaged: PS-5, Land Acquisition and Involuntary Resettlement, since both the Project's farms will be developed within owned land, previously acquired through a commercial purchase transaction within the law; PS-6, Conservation of Biodiversity and Sustainable Management of Living Natural Resources, because the project's farms will be developed on owned land which has been previously used for agricultural and livestock activities (farming and grazing); PS-7, Indigenous Peoples do not exist in the Project's development area; and PS-8, Cultural Heritage, since, as mentioned above, it is owned land, previously used for agricultural and livestock activities (farming and grazing).

3. Environmental and Social Context

The development of farms for Site I will be located in Altar (Municipality of Altar, State of Sonora, Mexico), while the farms for Sites II and III will be located in Batacosa (Municipality of Navojoa, State of Sonora, Mexico). Both are strategic agricultural development hubs with sufficient water resources and ideal sanitary and climatic conditions to develop pig farming activities. Among these conditions, the main one is that the farms are located in areas of easy access, with separation distances of between 10 and 15 km from any neighboring community, to achieve the greatest possible safety and comply with the required surface to carry out the Project.

The State of Sonora has a semi-arid, semi-warm climate, with an annual average temperature greater than 18° C, a temperature in the coldest month of less than 18° C, and a temperature in the

hottest month of over 22° C. In terms of precipitation, the annual average is 665 mm, with the months of July, August and September being the rainiest (180, 190 and 105 mm, respectively). The territory is mountainous in the northeast and northwest; the middle and western parts form the valley region that dominate the territory. The predominant vegetation is low thorny forest, deciduous. The typical fauna in the districts where the farms are located belongs to species such as: toad, bull toad, rattlesnake, chameleon, cachoron, huico, axolotl, chirrionera, snake, buro, pronghorn, puma, boar, gray fox, squirrel, spotted skunk, turtle dove, purple pigeon, tecolotito, chupamirto prieto, etc.; several of these species fall under certain protection categories in accordance with the Official Mexican Standard of 2001 (NOM-059-SEMARNAT-2014), however, were not recorded or reported within the polygons or areas of direct influence of the Project farms.

The location of both farms, Porcikowi Site I and Genetikowi Sites II and III, exhibit an environmental scenario disturbed by agricultural activities, livestock and dirt roads; they lack vegetation and vulnerable and/or endemic fauna. Considering this environmental scenario, the execution of the project will not affect populations of vulnerable flora and fauna, given that a previously disturbed area will be used. The ecosystem's biodiversity will not be altered, and its conservation and continuity will be enabled since it will not obstruct the movement of local fauna. Furthermore, the farms will not affect the course of rivers and streams. In this scenario, it is considered feasible to operate and maintain the farms without compromising the ecosystem by having to clear vegetation.

The production process of a 120 kg pig takes approximately 290 days from gestation to slaughter, with approximately 115 days for gestation, 24 days for weaning, and in the last 150 days the fattening process is carried out to reach the final weight of 120 kgs. In the Site I maternity farms, the process is divided into 3 different areas: (i) the gestation area, where pregnant sows are kept for approximately 113 days of gestation; (ii) the maternity area, where delivery takes place and the sow nurses the piglets for a period of 24 days; the piglets are then weaned and transported to their respective development and fattening sites (Sites II and III); and (iii) Gilt Development Units (GDUs) area, where selected females are housed for the self-replacement of the farm. On the other hand, the Genetikowi Site II and III farms receive approximately 76,600 piglets per year, in batches of 12,350 piglets every 8.5 weeks, and they remain in their pens between 156 and 161 days until reaching their shipping weight of 120 kg.

Based on the environmental legislation of Mexico (General Law of Ecological Equilibrium and Environmental Protection - GLEBEP)[3], pig farms require for their construction and/or operation and maintenance (O&M), a valid integral environmental permit ("LAI", for its acronym in Spanish) granted by the Ecology and Sustainable Development commission ("CEDES", for its acronym in Spanish) of the State of Sonora. In this case, the Genetikowi fattening farm already has a LAI (DGGA-LAI-216/18) which must be modified/updated[4] in view of the construction of the new farm, to increase its production capacity; on the other hand, the Porcikowi maternity farm, which will be built in the Municipality of Altar, State of Sonora, Mexico, does not have its LAI and must apply to the CEDES prior to starting construction.

Likewise, each pig farm must have its Notice of Initiation of Operation under the modality of primary production unit (PPU) [5] and a Certification of Good Livestock Practices in PPU for local consumption or export[6], issued by SENASICA, and comply with the provisions of animal health and good animal husbandry practices of the Federal Animal Health Law[7] and its Regulation[8].

During the inspection tour of the Site II and III pig farms in Batacosa, general compliance and the intention of improving compliance (through investment in physical improvements to the farms) with the general principles of animal welfare in Livestock Production Systems of the World Organization of Animal Health (OIE, for its international acronym) were observed, including: (i) the physical environment, including the substrate (surface for walking, rest, etc.), is adequate for minimizing the

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risk of injury and the transmission of diseases or parasites to animals, and said physical environment allows for a comfortable rest, safe and comfortable movements including normal changes in position, and the possibility to perform all kinds of natural behavior; (ii) the social grouping of animals allows for positive social behavior and minimizes injuries, anxiety and chronic fear; (iii) where the animals are housed in booths, the quality, temperature and moisture of the air supports the good health of the animals and are not aversive; (iv) animals have access to enough food[9] and water, appropriate to their age and needs, to maintain normal health and productivity and prevent extended hunger, thirst, malnutrition or dehydration; (v) there are good management practices, for the prevention and control of diseases and pests, and animals with serious health problems are isolated and treated promptly, or slaughtered humanely if treatment is not feasible or if recovery is unlikely, or sent to a TIF establishment as set forth in NOM-033-SAG/ZOO-2014[10]; finally, (vi) the handling of these animals fosters a positive relationship between humans and animals and does not cause injury, panic, lasting fear, or avoidable stress.

The electric power source for both Site I and Sites II and III farms will be provided by the national network, with a contract from the Federal Electricity Commission ("CFE" for its acronym in Spanish) and the facilities (substation, alternators, power lines, etc.) are in compliance with NOM-001-SEDE-2012. Likewise, it was documented that the installation of low-consumption LED lights is planned for lighting the farms.

Regarding solid waste, during the tour of the farms, an adequate management of excrement (produced through the process of food intake, resulting in feces and urine) and food, and the different types of containers used during the operation of said farms (for example: medicine containers, herbicides, pesticides, etc.) was generally observed, and it was verified that the trucks transporting waste that requires special management have a license issued by the competent authority[11]. Likewise, regarding the handling of carcasses, they are removed and deposited in special containers, specially designed for this purpose, located within the perimeter of the farm and collected daily by specialized and authorized transport units[12], to be sent to the slaughter byproducts and offal processing plant of the KOFANOR company of Mexico. Finally, regarding the wastewater treatment sludge, this is disposed of as a soil improver (fertilizer); however, it must comply with NOM-004-SEMARNAT-2002 specifications[13].

These farms at Site I and Sites II and III will obtain their water resource from the subsoil through extraction, with wells duly authorized for consumption either by CONAGUA or the State Water Commission for the inherent state properties. Both farms already have water feasibility studies, submitted to the CEDES, and according to the information available for Genetikowi there are 3 wells with an extraction capacity of up to 300,000 m3/ year, together with a storage system of 4 tanks with a capacity of 10,000 l each; for Porcikowi, there is a concession to transfer a volume of up to 397,650 m3/ year for livestock use.

Regarding wastewater, it has been observed that the swine production process inside the farms is semi-dry; however, the excrement and urine that accumulate and the process of washing and disinfecting the booths are what generate waste water. The main difference between both types of farms, Site I and Sites II and III, is the volume and concentration of their pollutants; in this regard, according to a publication in Mexico (Garzón Zúñiga, 2013), it was observed that for medium-sized farms (with 2,500 to 8,000 pigs) the COD concentration increases as follows: maternity 3,500 mg COD/L; mixed waters between 19,365 and 25,205 mg COD/L; weaning 37,498 mg COD/L, and fattening between 19,334 and 38,544 mg COD/L. During the inspection tour, a good management of runoff water was observed, which did not come into contact with the cages or penetrate the booths, thus avoiding the displacement of sediments, nutrients, etc., that could contaminate the soil or surface bodies. However, water is used for cleaning and disinfecting the booths and is then channeled to a wastewater treatment plant ("WWTP"), where it receives biological treatment to

reduce organic matter and nutrients to acceptable levels under NOM-001-SEMARNAT-1996,[14]. If it is needed for reuse in agricultural irrigation, it must comply with NOM-003-SEMARNAT-1997[15]. According to the information provided by KOWI for Sites II and III of Genetikowi, the WWTP consists of a series of facultative ponds (primary and secondary), constructed with compacted excavation material and sealed to avoid leaks and protect the soil and the aquifer. This series of ponds aims to improve water guality through its retention time in facultative ponds, where an anaerobic and aerobic treatment process takes place, contributing to the degradation of organic matter and the reduction of solid content in the water, and also simultaneously reducing the volume of water through a process of "natural evaporation". In places with high temperatures and high solar radiation such as the State of Sonora, this type of process exposes the wastewater to sunlight, high temperatures and air currents to induce its evaporation. However, for Porcikowi Site I, the WWTP consists of a biodigester coupled with a pond system, which in turn will have a facultative pond and a polish pond to ensure that the final effluent of the treatment plant will have a suitable quality throughout the year. Within the biodigester or anaerobic treatment pond, organic material (pig excrement produced in the farm) will be deposited to ferment it in a certain dilution of water in order to decompose it, producing methane gas (biogas) and organic fertilizers rich in nitrogen, phosphorus and potassium. The biogas will be captured by a floating membrane over the pond and subsequently conducted to a burner; the effluent will pass on to a facultative pond or aerobic treatment, whose objective will be to obtain an effluent of the highest possible quality in which a high stabilization of organic matter has been achieved, and a reduction in the nutrient and coliform bacterial content. Finally, the effluent from the facultative lagoon will pass on to the polish or maturation pond, in order to achieve the desired level of fecal coliform removal and, in extreme cases, act as a buffer if the previous process fails (facultative pond).

During the tour of the farms, it was found that the air emissions, such as ammonia and manure and dust odors from food handling and waste management activities, are controlled on the one hand by the air conditioning processes of the booths, the food supply processes and the management of litters, and on the other, by the location of the farms, away from sensitive receptors (villages or neighboring houses), complying with the recommendations of the national health regulation.

Regarding the use, handling and storage of dangerous products, such as pesticides and herbicides, cleaning and disinfection agents, fuels (LP gas in tanks of 5,000 liters) and even medicines, KOWI has specific procedures in the Accident Prevention Program and Safety Sheets, in compliance with the national health and safety regulations, and conducts training for authorized personnel for its application, either by previously trained personnel (instructors) or by qualified personnel of the supplier. Regarding the handling and storage of products with dangerous characteristics, LPG is used in the farms, in compliance with NOM-004-SEDG-2004[16], and the disinfectants Biogel and Virkon S., which have a Safety Sheet in compliance with NOM-018-STPS-2000[17].

Finally, regarding the issue of occupational health and safety, during the inspection visit of the farms it was possible to observe the use of personal protective equipment (PPE) suitable for each activity indicated in the Safety and Hygiene PPE Matrix, according to the National Occupational Health and Safety regulations, such as[18]: (i) NOM-001-STPS-1999; (ii) NOM-002-STPS-2000; (iii) NOM-005-STPS-1998; (iv) NOM-026-STPS-1998; (v) NOM-114-STPS-1994; (vi) NOM-017-STPS-2001; (vii) NOM-025-STPS-1999. Likewise, during this visit the implementation of biosecurity measures was observed, in compliance with the Good Livestock Practices of the National Health Legislation2. These measures included: (i) visitor logbook; (ii) vehicle entry record and inspection; and (iii) for all personnel entering the facility: mandatory baths, removal of personal items, use of clothing and footwear provided by the production unit (previously washed), shoe cleaning, prohibition of contact with other backyard or wild pigs, medical certificates and health cards (only for workers).

Finally, based on the information provided by KOWI, it was observed that to avoid causing any

impact on the health and safety of communities, strict control of animal diseases and proper use of veterinary medicines is maintained, avoiding their mishandling.

4. Environmental Risks and Impacts, and Proposed Mitigation and Compensation Measures

4.1 Evaluation and Management of Environmental and Social Risks and Impacts

4.1. a Environmental and Social Management System

According to the information provided by KOWI, there is no Environmental and Social Management System ("ESMS") in place; however, there is an Industrial Safety and Occupational Health Management System ("OHS") and specific procedures associated with the operation of pig farms or PPUs, as well as processes that are carried out within Pig Processing Plants or slaughterhouses. In order to comply with PS-1, KOWI will develop a specific ESMS for the Project in compliance with the national laws and regulations of Guatemala, which should include: (i) policies (see Section 4.1.b); (ii) proper procedures for identifying, assessing, and managing potential environmental, social, OHS, and labor risks and impacts associated with each Project activity, as well as for its contractors and subcontractors; (iii) internal procedures for compliance with the Environmental and Social Management Plan (ESMP); (iv) organizational capacity and competence, with the definition of roles and assignment of responsibilities for the implementation of said ESMS; (v) protocols for emergency preparedness and response (see Section 4.1.f); (vi) methods or plans for the participation of key stakeholders (see Section 4.1.h); (vii) mechanisms for external communication and receipt of complaints (see Section 4.1.i); (ix) protocols for the dissemination of information to communities, decision-making and training; (x) protocols for the evaluation and continuous improvement of the ESMS; and (xi) periodic audits and inspections with respect to environmental, social, and OHS requirements, applicable under GLEBPE3 (Action 1.1 of the ESAP[19])

4.1.b. Policies

KOWI has an Environmental and Social Policy (Comprehensive Environmental Policy), as well as an Occupational Health and Safety Policy (Safety Policy), which indicate the objectives and responsibilities of each player (from the heads to the collaborators, in all levels of the organization). However, KOWI, as part of the ESMS, must: (i) establish who, within its organization, will guarantee compliance with the policy and be responsible for its execution; and (ii) create a mechanism to communicate the policy at all levels of the organization, and a program to measure continuous improvement in its implementation (Action 1.2 of the ESAP).

4.1.c Identification of risks and impacts

All new construction, expansion, modification and/or improvement to increase the efficiency of any existing process, in addition to complying with the Mexican environmental impact regulation [20], must identify and assess environmental and social risks and impacts. In this sense, for Genetikowi farm Sites II and III, as part of the application of LAI number DGGA-LAI-216/18, there is the identification and evaluation of the impacts and risks, both for the construction and the O&M stages. However, for Porcikowi farm Site I, it will still be necessary to obtain the LAI issued by CEDES. Based on the above, KOWI, in the process of identifying and assessing environmental and social risks and impacts in order to obtain the LAI, will perform an alternatives analysis and an assessment of cumulative impacts (in addition to the legal methodological requirements regarding the evaluation of environmental impacts), for each building of the new farm Site I of the Project (Action 1.3 of the ESAP)

Finally, given that the execution and operation of the Project is dynamic, KOWI, in compliance with PS-1, will perform a continuous update of the environmental, social, health and occupational safety risk matrix for each phase of the Project (Design, Construction, O&M and/or Closure/Shutdown), of all its operations in any of the countries in which it operates, in order to obtain, monitor and control the operating/performance permits or licenses (see Section 4.1.g).

4.1.d Management Program

In accordance with the provisions of the regulations on environmental impact assessment in Mexico, any activity within each of the Project farms (Site I, II or III) must have an Environmental and Social Management Plan ("ESMP") specific to the construction stage and its adaptation for the O&M stage. In this regard, to obtain the LAI for Genetikowi, the corresponding ESMP was submitted; however, for the new Porcikowi farm Site I, the LAI process has not yet been carried out and therefore there is still no ESMP for such farm.

In view of the above, for the new farm Site I, KOWI will develop a specific ESMP for each Project activity, with mitigation and compensation measures to address each environmental impact, both negative and positive, of major importance during the construction phase (Action 1.4 of the ESAP). This specific ESMP will include the following measures: (i) an Impact Management Program for the physical, biological and visual environment, which will include mitigation measures for the impact on the terrain relief (in the case of land removal or displacement); compensation for the removal of vegetation and disturbance of fauna; management of solid waste (hazardous and non-hazardous); emission controls of polluting gases from machinery and construction equipment, environmental disturbance due to an increase in the generation of dust and noise; control of liquid effluents, both industrial and domestic; (ii) an Impact Management Program for the socioeconomic environment, which will include social compensation measures for the communities within the area of indirect influence of the Project; training for managers and construction workers; inter-institutional coordination measures; and measures to guarantee safe and hygienic-sanitary conditions for workers during construction. On the other hand, the O&M ESMP will include the following measures: (i) an Environmental Monitoring and Surveillance Program, including compliance with wastewater discharge regulations (NOM-001-SEMARNAT-199614), as well as compliance with IFC's most rigorous emissions and effluent guidelines for its WWTPs; (ii) a Comprehensive Solid and Liquid Waste Management Program, which emphasizes measures to reduce, reuse and recycle inert materials such as metal, paper, plastic, etc., and also provide special management measures for hazardous waste, such as oils, greases, paints, solvents, medicines, disinfectants, herbicides, pesticides, or any other product that requires special handling used during the O&M activities of the farms, based on local environmental and health standards; and (iii) an OSH Work Management Plan (see Section 4.2.c).

4.1.e Organizational Capacity and Competence

According to the information provided by KOWI, its environmental and social organizational structure is led by the Administration and Finance Division, which in turn has an Industrial Safety and Environment Coordinator, responsible for environmental, social and SST issues in the Animals, Offal and Food Divisions (see Section 4.2.c) and an Industrial and Environmental Safety position in each Division mentioned above. However, within the ESMS it will be necessary to establish an Organizational Structure with the functions, responsibilities and faculties of each actor in the application of the ESMS. Likewise, an introductory and refresher training program will be required at least once a year for all personnel responsible for environmental, social, labor and OSH matters.

In this sense, KOWI will update its Organizational Structure, where it will define within the ESMS: (i) the functions, responsibilities and faculties of each actor of its organizational structure; (ii) the

means and channels of communication between the different levels of the organizational structure; (iii) mechanisms to ensure adequate human and financial resources within each division; and (iv) an introductory and refresher training program, at least once a year, for all personnel in charge of environmental, social, labor and OSH matters (Action 1.5 of the ESAP).

4.1.f Emergency Preparedness and Response

For each new Project farm (both in Site I and Sites II and III), the development or update of an Emergency Response Program is required for the construction and O&M phases. This Farm-specific Contingency Plan for each new Project farm is a set of pre-established procedures for coordination, alert, mobilization and response in the event or imminent occurrence of a particular event, such as: i) natural hazards, such as earthquakes, hurricanes and tropical storms, floods, subsidence or landslides, etc.; and ii) emergencies, such as fires, fuel spills, and worker accidents. KOWI has experience in the elaboration of Emergency Response Plans, mainly focused on emergency responses to fires and explosions due to the storage and handling of LP Gas, since the other O&M activities of the farms are not considered risky. These Emergency Response Plans contain: (i) the safety policy (see Section 4.1.b); (ii) an organizational structure composed of the Plant Manager, an Industrial Safety Coordinator, and First Aid and Firefighting Brigadiers; (iii) a description of functions; (iv) a directory of contacts in case of emergency; (v) a resource inventory for emergency care (equipment and services); (vi) procedures for: search and rescue, damages due to natural phenomena, declaring the end of the emergency, and post-emergency; (vi) conditions for resumption of activities; and (vii) an annual training and drills program.

However, because the construction of new Project farms is planned (regardless of the type of farm), KOWI will develop an Emergency Response Plan based on the conditions and infrastructure of the Project's new farms, in order to minimize the risks for employees and animals in the event of natural disasters or emergencies (Action 1.6 of the ESAP). Likewise, within the LAI application, KOWI will conduct an Environmental Risk Study based on the requirements of the GLEBEP[21], specifically for risks linked to storage, use, and management of LP Gas in their farms.

This Emergency Response Plan will address the following aspects: (i) specific emergency response procedures; (ii) trained emergency response teams; (iii) emergency contacts and communication systems/protocols; (iv) procedures for interaction with local and regional emergency and health authorities; (v) permanent equipment and emergency facilities (e.g. first aid stations, fire extinguishers/hoses, sprinkler systems); (vi) protocols for firefighters, ambulances and other emergency vehicle services; (vii) evacuation routes and meeting points; (viii) training exercises such as annual drills or more frequent drills if necessary, or actual events in which KOWI should include owners of nearby properties and other interested key stakeholders to familiarize them with the proper procedures in the event of an emergency.

4.1.g Monitoring and Evaluation

KOWI, together with Porcikowi and Genetikowi, are responsible for ensuring the implementation of the follow-up, monitoring and control plans described in each Project's ESMP (see previous paragraph). In this sense, KOWI will develop a compliance matrix with its set of key performance indicators to measure the effectiveness of the ESMA and compliance with all the legal and contractual obligations of its new and existing Project works, during the construction and O&M phases (Action 1.7 of the ESAP).

Likewise, as part of the fulfillment of all legal obligations and regulatory requirements in Mexico, through the implementation of a compliance matrix, the status/validity of all necessary Permits and/or Licenses for the execution of the Project will be reviewed/updated, the main ones being:

- Integral Environmental License ("LAI"), issued by the CEDES of the State of Sonora;
- Notice of Operation, under the Primary Production Unit modality, issued by SENASICA;
- Registration as a producer of waste requiring special management11, issued by the CEDES of the State of Sonora.
- Water use concession (procedure CNA-01-003 for surface water and procedure CNA-01-004 for groundwater), issued by CONAGUA;
- Wastewater discharge permit (procedure CNA-01-001), issued by CONAGUA;
- Land use Authorization and Construction Permit (or similar), issued by the Municipalities;
- Annual Operating Certificate ("COA"), issued by the CEDES of the State of Sonora.

This compliance matrix for permits and legal certifications associated with environmental, social, and OSH matters shall include: (i) the competent Authority that issues the authorization or issues the permit/license; (ii) dates of issuance and validity; (iii) the person in charge within KOWI and/or any of its subsidiaries, responsible for monitoring/compliance; and (iv) future communication and compliance procedures.

Finally, in compliance with the requirements of PS-1, an independent environmental and social consultant will periodically prepare a consolidated report on the performance of all environmental, social and OSH issues applicable to the Project's farms, including the progress of ESMS actions regarding the established key performance indicators; as well as compliance with IDB Invest's Environmental and Social Sustainability Policy, Mexican environmental, social and OSH legislation, and the IFC's Performance Standards (Action 1.8 of the ESAP).

4.1. h Participation of Social Actors

Social actor participation is a permanent process that, for this Project, should include: (i) stakeholder analysis and participation planning; (ii) information dissemination; (iii) grievance/complaints mechanism; and (iv) periodic reporting to the community. For every new Project farm, KOWI shall prepare a Comprehensive Plan for the Participation of Key Social Players, both for the construction and O&M stages, integrating the lessons learned during the construction stage in the latter (Action 1.9 of the ESAP). This Comprehensive Participation Plan should include the following: (i) updated identification of all stakeholders and affected communities who may be interested in the Project; (ii) differentiated measures to enable the effective participation of disadvantaged or vulnerable groups; (iii) mechanism to ensure that community representatives reflect the views of affected communities; (iv) details on how information is shared with stakeholders; (v) details on the participatory process among affected communities and how the complaints mechanism can be accessed (see Section 4.1.i).

4.1. i External Communication and Complaints Mechanism

As mentioned earlier, although KOWI has regularly consulted the community within the areas of influence of the Project's new works, there should also be an internal and external communication and complaints mechanism. According to the requirements of PS-1, KOWI is required to document internal and external communications detailing how information is received from its employees/contractors or subcontractors and/or the general public, how problems are evaluated, how responses are provided and followed up and any adjustments to the ESMP. Therefore, KOWI will provide the following:

• An internal Complaints Mechanism (for direct employees, contractors and subcontractors) and an external Complaints Mechanism (focused on the owners of neighboring lands and/or users of the roads used by KOWI within the area of indirect influence of the Project's farms, affected or interested parties) for the construction phase; and (ii) copies of the evidence of their implementation. This complaints mechanism should include details of how these complaints or grievances are recorded, investigated/evaluated, and the follow-up and closure/resolution process (Action 1.10 of the ESAP).

- A similar Complaints Mechanism, both internal and external, during the O&M of the Project's farms (Action 1.11 of the ESAP), which includes experiences and lessons learned during the construction stage.
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4.2 Work and Labor Conditions

4.2.a Human Resources Policies and Procedures

KOWI shall develop a human resources policy and its corresponding procedures in accordance with Mexican labor laws[22](Action 2.1 of the ESAP). This policy and its procedures will include, among other things, the promotion of gender equality and non-discrimination, equal opportunities, fair treatment, agreements with appropriate terms and conditions of employment, notice of dismissal and compensation, and a Code of Conduct [23] for employees. KOWI shall ensure through a review and follow-up mechanism that its contractors and subcontractors for engineering, procurement, and construction services also comply with this human resources policy and its procedures.

4.2.b Employment Terms and Labor Conditions

KOWI shall present the following, in accordance with Mexican labor law: (i) employment procedures and evidence of their implementation for in-house workers and those subcontracted by third parties, whose hiring and dismissal conditions comply with local and International Labor Organization (ILO) regulations, including, at the very least, standards to prevent child labor and forced labor; (ii) procedures for hiring and dismissal/reduction of in-house jobs and procedures employed by contractors with their workers; and (iii) procedures for managing and monitoring the performance of in-house workers and those hired by third parties (Action 2.2 of the ESAP). A coexistence handbook (regulation) will also be prepared for workers, contractors, and subcontractors (Action 2.3 of the ESAP) as well as an internal complaints mechanism (see Section 4.1.i).

4.2.c Occupational Health & Safety

Regarding occupational safety and health ("OSH"), KOWI has experience in the development of Accident Prevention Programs, which describe the risk assessment of the farm and its activities, through an analysis of vulnerabilities in the farm's physical environment (e.g. geological, hydrometeorological, etc.) and the determination and description of the affected population.

However, because the construction of new Project farms is planned (regardless of the type of farm), KOWI will develop or update the Accident Prevention Program based on the conditions and infrastructure of the Project's new farms (Action 2.4 of the ESAP).

The Accident Prevention Program, in addition to fulfilling the regulations of the Ministry of Labor and Social Welfare ("MLSW") and the Civil Protection regulations, will include: (i) its safety policy (see Section 4.1.b); (ii) procedures that integrate the measures and actions to be carried out by those performing risky activities; (iii) an organizational structure composed of a plant Director, an Industrial Safety and Brigades Coordinator; (iv) the establishment of exclusive areas where risky activities may be carried out; (v) the definition of intermediate safeguard zones; (vi) systems to address contingency events; (vii) the development and implementation of a maintenance program for systems to address contingency events; (viii) the establishment of a mutual aid agreement for accident prevention and contingency care with the Civil Protection institutions of the State of Sonora, that contains an act or charter commitment, where members clearly indicate their names or the names of the responsible persons, the conditions under which they commit to participating in the mutual aid agreement, the roles and responsibilities of each member, the organizational chart, phone directory, and signatures; and (ix) an annual work and training program.

Additionally, it will be necessary for each ESAP to contain a procedure for notifying emergency response services and local authorities of a major accident or fatality (Action 2.5 of the ESAP). This procedure should also entail the preparation of a Root Cause Analysis for each major accident or fatality, as well as a description of the corrective actions necessary to minimize the risk of a new occurrence.

4.3 Resource Efficiency and Pollution Prevention

4.3.a Greenhouse Gases

Based on the WWTP information for Site I and Sites II and III farms, similar to the new Project farms, and the inspection visit, a lack of management/use measures for biogas, mainly methane (CH4), which is generated in the WWTP, was observed, causing a polluting emission of greenhouse gases (GHG) that potentially contributes to climate change.

In this sense, to control the biogas generated by wastewater treatment within each farm's the WWTP, KOWI will implement a Comprehensive Greenhouse Gas Management Program to identify, quantify and report the GHG emissions inventory of all their O&M activities in each farm (Action 3.1 of the ESAP), including the emissions generated by the transportation of their animals and supplies. The baseline for GHG emissions will be the year 2018 and its variation will be reported annually, together with an explanation of the causes of the variation. As part of the Comprehensive GHG Management Program, a Feasibility Study will be developed for the use of biogas from the WWTPs to generate electricity.

Regardless of the above, KOWI will implement a monitoring and follow-up mechanism for compliance with wastewater discharge regulations (NOM-001-SEMARNAT-1996), as well as compliance with IFC's emissions and effluent guidelines[24] (whichever are the most rigorous[25]), coming from their WWTP (see Section 4.1.d).

4.3.a Use and Handling of Pesticides

KOWI uses pesticides on Project farms only when necessary, to achieve sanitary control within Project farms, based on a Comprehensive Pest Control ("CPC") or Comprehensive Vector Control ("CVC") strategy, and only after other pest control practices have failed or proved ineffective. In this case, KOWI will formulate and implement a CPC and CVC approach for pest management activities (Action 3.2 of the ESAP).

Likewise, KOWI will design its pesticide application regime in order to: (i) avoid or minimize damage to the natural enemies of the target pest in cases where such damage cannot be avoided, and (ii) avoid or minimize risks associated with the development of resistance in pests and vectors where this is not possible. However, KOWI will not purchase, store, use, manufacture or market products in the "Ia" (extremely hazardous) or "Ib" (highly hazardous) classes of the WHO recommended classification of pesticides according to their hazardousness. Pesticides in the "Il" class (moderately hazardous) will be permitted only if the Project has appropriate controls for the acquisition, distribution or use of those chemicals and they are difficult to access for staff without adequate training, as well as suitable equipment and facilities to handle, store, apply, and dispose of them properly. Finally, pesticides will be handled, stored, applied and disposed of in accordance with the United Nations Food and Agriculture Organization ("FAO") International Code of Conduct on the Distribution and Use of Pesticides, or other recommended international industry good practices.

4.4 Community Health and Safety

4.4.a Community Health and Safety Requirements

The new Project farms should be designed and constructed by competent and recognized contractors, experienced in the construction and O&M of each facility to be built (farms, access roads, ancillary facilities, etc.), and they must utilize recommended international industry good practices that comply with applicable national and international safety guidelines, standards and codes. Nevertheless, increased freight vehicle traffic on surrounding roads during the construction and O&M stages is an issue that requires consultation with Mexico's transit authorities[26] in terms of road and traffic capacity, timing, and road safety measures, such as signage, speed controls, etc. KOWI will therefore develop a Road Safety Management Plan with measures to mitigate potential impacts on affected communities based on vehicle composition, especially during the construction stage of the Project. It will, however, also include the O&M stage (Action 4.1 of the ESAP).

4.4. b Security Personnel

During the inspection visit it was observed that there is a general presence of security personnel in KOWI facilities, mainly in the pig farms. KOWI will therefore provide a copy of the contract with the security company or companies to verify, among other things, that conditions have been included allowing KOWI to perform: (i) reasonable investigations to ensure that security personnel do not have a criminal record and have not been involved in past cases of abuse; (ii) verify details of necessary training in relation to the use of force; (iii) verify restrictions on the use of firearms; and (iv) identify details of environmental and social awareness training, including issues of respect for human rights(Action 4.2 of the ESAP).

5. Environmental and Social Action Plan

The Environmental and Social Action Plan (ESAP) is summarized in Appendix 1.

Contact Information:

For inquiries and comments for IDB Invest, please contact: IDB Invest Communications Group. Email: <u>requestinformation@idbinvest.org</u>

For Project inquiries, including questions on environmental and social issues related to IDB Invest's investment, please contact the Client or IDB Invest using the contact information provided above.

As a last resort, communities affected by the Project have access to the IDB Invest Independent Consultation and Investigation Mechanism (<u>https://www.idbinvest.org/en/how-we-work/integrity-transparency</u>)

Telephone: +1 (202) 623-3952. Fax: +1 (202) 312-4057. Address: 1300 New York Ave. NW Washington, DC. United States. 20577. Email: mecanismo@iadb.org or MICI@iadb.org

granted by the Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Food ("SAGARPA", for its acronym in Spanish), through the National Health, Quality and Agro-Food Safety Service ("SENASICA", for its acronym in Spanish).

[2] Good Livestock Practices are a set of procedures, conditions and controls that are applied in production units of all species, which guarantee good feeding and management, health, water quality, control of waste and harmful fauna, non-use of prohibited substances, as well as hygiene and health of personnel to minimize the risk of contamination; providing the consumer with a hygienic and healthy product. The certification of Good Livestock Practices is mandatory, TIF Establishments dedicated to the slaughter of species for human consumption can only receive animals that originate from certified production units.

[3] General Law on Ecological Balance and Protection of the Environment - GLEBPE (DOF, 01-28-1988); last reform issued (DOF, 01-24-2007).

[4] Section V of the authorization regarding environmental impact of Law 171 - Law of Ecological Equilibrium and Environmental Protection of the State of Sonora

[5] SENASICA-04-038 "Notice of Start of Operations" under the primary production unit modality

[6] SENASICA-04-046-A "Request to obtain the Certificate in Good Livestock Practices in primary production units" or SENASICA-04-046-B "Request to obtain the Certificate in Good Livestock Practices in production units for export purposes"

[7] Federal Law on Animal Health (DOF, June 25, 2007); valid text, last reform issued (DOF, 02-16-2018)

[8] Regulation of the Federal Animal Health Law (DOF, 05-21-2012)

[9] Ensure the compliance and enforcement of Mexican Official Standards: NOM-061-ZOO-1999 on animal health specifications of food products for animal consumption.

[10] NOM-033-SAG / ZOO-2014, Methods to slaughter domestic and wild animals (DOF, 08-26-2015)

[11] Art. 82 of the Law of Ecological Balance and Environmental Protection of the State of Sonora.

[12] Registry of service providers for the Transport of Special Management Waste, issued by CEDES of the State of Sonora.

[13] NOM-004-SEMARNAT-2002, Environmental Protection - Sludges and biosolids - Specifications and maximum permissible limits of contaminants for their use and final disposal.

[14] The control of pollution for discharges of swine wastewater is regulated by the following laws and regulations: (i) General Law of Ecological Balance and Environmental Protection -1982; (ii) Federal Rights Law of 1991 (Parameters: DQO, SST); (iii) National Waters Law -1992- and its Regulation -1994; (iv) Official Mexican Standard NOM-001-SEMARNAT-1996, which establishes the maximum permissible limits of contaminants in wastewater discharges in national waters and properties; (v) Official Mexican Standard NOM-002-SEMARNAT-1996, which establishes the maximum permissible limits of contaminants in wastewater discharges in urban or municipal sewerage systems.

[15] NOM-003-SEMARNAT-1997, which establishes the maximum permissible limits of pollutants for treated wastewater that is reused in public services (DOF, 01-14-1998).

[16] NOM-004-SEDG-2004, on installations for the use of LP Gas. Design and Construction.

[17] NOM-018-STPS-2000, System for the identification and communication of risks from chemical substances in work centers.

[18] NOM-001-STPS-1999, Buildings, premises, facilities and areas in work centers-health and safety conditions; NOM-002-STPS-2000, Conditions for security-fire prevention, protection and firefighting in the workplace; NOM-005-STPS-1998, Conditions for health and safety in work centers for the handling, transportation and storage of dangerous chemical substances; NOM-022-STPS-1999, Static electricity in work centers-health and safety conditions; NOM-026-STPS-1998, health and safety colors and signage, and identification of risks from fluids conducted in pipes; NOM-114-STPS-1994, System for the identification and communication of risks from chemical substances in the workplace; NOM-017-STPS-2001, On personal protection equipment-selection, use and management in work centers; NOM-025-STPS-1999, On lighting conditions in work centers.

[19] Environmental and Social Action Plan (ESAP); see Section 5.

[20] Regulation of the General Law of Ecological Balance and Environmental Protection in matters of Environmental Impact Assessment (DOF, 10.31.2014)

[21] Art. 147 of the General Law of Ecological Balance and Environmental Protection - GLEBEP.

[22] Federal Labor Law (DOF, 04-01-1970); last reform issued (DOF, 11-30-2012) and the Federal Regulation of Safety and Health at Work (DOF, 11-13-2014)

[23] Kowi Group Code of Conduct - 2014 version.

[24] Handbook on Environment, Health and Safety for Livestock Production, IFC; April 2007

[25] In cases where the recipient country has regulations that differ from the levels and indicators presented in the IFC guidelines, the projects must comply with the most rigorous ones. If it is appropriate to use less rigorous levels or indicators in view of the specific circumstances of the project, a complete and detailed justification of any proposed alternative must be included, in which it must be demonstrated that the alternative performance level protects human health and the environment.

[26] State Coordination for Public Safety and Transit, of the State of Sonora, Mexico.