<table>
<thead>
<tr>
<th>Project Title:</th>
<th>Piloting an Improved Animal Identification and Registration System In Mongolia (STDF/PG/534)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project symbol:</td>
<td>MTF/MON/018/STF</td>
</tr>
<tr>
<td>Recipient Country(ies):</td>
<td>Mongolia</td>
</tr>
<tr>
<td>Government(s)/other counterpart(s):</td>
<td>Ministry of Food, Agriculture and Light Industry of Mongolia</td>
</tr>
<tr>
<td>Expected EOD (Starting Date):</td>
<td>May 2019</td>
</tr>
<tr>
<td>Expected NTE (End Date):</td>
<td>April 2021</td>
</tr>
<tr>
<td>Contribution to FAO’s Strategic Framework:</td>
<td>• Strategic Objective/Organizational Outcome:</td>
</tr>
<tr>
<td></td>
<td>SO2: Make agriculture, forestry and fisheries more productive and sustainable</td>
</tr>
<tr>
<td></td>
<td>SO4: Enable inclusive and efficient agricultural food systems</td>
</tr>
<tr>
<td></td>
<td>OOs: 20103, 40103 and 40104</td>
</tr>
<tr>
<td></td>
<td>• Country Programming Framework Output:</td>
</tr>
<tr>
<td></td>
<td>Priority Area 1: Promotion of sustainable livestock development through improved herd quality, health, feed, fodder and grazing/pasture management</td>
</tr>
<tr>
<td></td>
<td>Output 1.1.1: Service delivery capacity of local health and breeding units in target areas strengthened.</td>
</tr>
<tr>
<td></td>
<td>• Regional Initiative/Priority Area: One Health</td>
</tr>
<tr>
<td>Environmental and Social Risk Classification</td>
<td>low risk X   moderate risk □   high risk □</td>
</tr>
<tr>
<td>Gender Marker</td>
<td>G0 □   G1 □   G2a □   G2b X</td>
</tr>
<tr>
<td>Total Budget:</td>
<td>USD 384 783</td>
</tr>
</tbody>
</table>
ACRONYMS

AHLM       Animal Health and Livestock Marketing (EU Project)
AIRS       Animal Identification and Registration System
AV         Abattoirs' veterinarians
AVSF       Agronomes et Vétérinaires sans Frontières (NGO)
EU         European Union
EU-TRAM    Trade-related Assistance in Mongolia (EU Project)
GASI       (Mongolian) General Agency for Specialized Investigation
HR         Human resources
ID         Identifiers
IDELE      Institut de l'Élevage (French Livestock Institute)
IFO        Identification Field Operator
ITC        IT company
MAA        (French) Ministry for Agriculture and Food
MFA        Ministry of Foreign Affairs of Mongolia
MNCCI      Mongolian National Chamber of Commerce and Industry
MoFALI     (Mongolian) Ministry of Food, Agriculture and Light Industry
NC         National Coordinator
OIE        World Organization for Animal Health
PGA        Project Grant Application
PPG        Project preparation grant
RA         Regional Administration
RC         Regional Coordinator
SA         Soum Administration
SC         Steering Committee
SDC        Swiss Agency for Development and Cooperation
SPS        Sanitary and Phytosanitary
SOC        Standard Operating Procedures.
STDF       Standard and Trade Development Facility
TWG        Technical Working Group
UB         Ulaanbaatar
VABA       Veterinary and Animal Breeding Agency
WTO        World Trade Organization

MONGOLIAN WORDS

Aimag       Province
Soum        District
Contents

ACRONYMS ............................................................................................................................... 3

SECTION 1 – RELEVANCE ........................................................................................................ 7

1.1 Alignment and Strategic Fit .............................................................................................. 7
  1.1.1 Alignment to FAO’s Strategic Framework .................................................................... 7
  1.1.2 Alignment to Country Programming Framework (CPF) ............................................ 7
  1.1.2.1 Contribution to CPF Output .................................................................................. 7
  1.1.3 Expected Results .......................................................................................................... 8
    1.1.3.1 Impact .................................................................................................................... 8
    1.1.3.2 Outcome ................................................................................................................ 8
    1.1.3.3 Outputs .................................................................................................................. 9

Output 1: the SOP and the numbering scheme are modified, the tag specifications are available. ................................................................................................................................. 9
Output 2: the information system is available ........................................................................ 9
Output 3: the equipment and the software are broken down among the actors. .................... 9
Output 4: actors are trained ..................................................................................................... 9
Output 5: the pilot AIRS is implemented ............................................................................... 9
Output 6: evaluation of the pilot and recommendations for scaling-up in Mongolia. .......... 9
  1.1.3.4 Activities .................................................................................................................. 9

Output 1: the SOP and the numbering scheme are modified, the tag specifications are available. ................................................................................................................................. 9
Output 2: the information system is available ........................................................................ 10
Output 3: the equipment and the software are broken down among the actors. .................... 10
Output 4: actors are trained ..................................................................................................... 10
Output 5: the pilot AIRS is implemented ............................................................................... 10
Output 6: evaluation of the pilot and recommendations for scaling-up in Mongolia. .......... 10

1.2 Comparative Advantages ................................................................................................. 11

1.3 Context Analysis .............................................................................................................. 12
  1.3.1 Stakeholder Engagement ............................................................................................. 13
  1.3.2 Grievance Mechanism ............................................................................................... 13
  1.3.3 Problems to be addressed .......................................................................................... 14
  1.3.4 Partnerships ............................................................................................................... 15
  1.3.5 Knowledge Management and Communication ......................................................... 15

SECTION 2 – FEASIBILITY ......................................................................................................... 16

2.1 Implementation Arrangements ......................................................................................... 16
  2.1.1 Strategy/Methodology ............................................................................................... 18
Technical architecture of the information system for the pilot implementation .......... 19
2.1.2 Technical Oversight and Support Arrangements.............................................. 19
2.1.3 Management and Operational Support Arrangements ................................... 20
2.2 Operational Modalities..................................................................................... 21
2.3 Statistics ............................................................................................................. 21
2.4 Risk Management ............................................................................................. 21
2.4.1 Potential risks to the project .......................................................................... 21
2.4.2 Environmental and social risks from the project ............................................ 21
2.5 Monitoring, Performance Assessment and Reporting ......................................... 21
2.5.1 Monitoring Arrangements ............................................................................. 21
2.5.2 Performance Assessment .............................................................................. 22
2.5.3 Reporting ......................................................................................................... 22
2.6 Evaluation Provisions ........................................................................................ 23

SECTION 3 - SUSTAINABILITY ............................................................................... 23

3.1 Capacity Development ....................................................................................... 23
3.2 Decent Rural Employment ................................................................................. 23
3.3 Environmental Sustainability ............................................................................. 24
3.4 Gender Equality .................................................................................................. 24
3.5 Indigenous Peoples ............................................................................................ 24

Annex I ....................................................................................................................... 25
Logical Framework Matrix ....................................................................................... 25
Annex II ....................................................................................................................... 29
Stakeholder Engagement Matrix .............................................................................. 29
Annex III ..................................................................................................................... 31
Work plan ................................................................................................................ 31
Annex IV Budget ........................................................................................................ 33
Annex V Risk Management ...................................................................................... 36
Section A: Risks to the project ................................................................................. 36
Section B: Environmental and Social risks from the project .................................. 38
SECTION 1 – RELEVANCE

1.1 Alignment and Strategic Fit

At the level of the Sustainable Development Goals (SDGs), this project will contribute towards Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture; and more specifically to the fulfilment of:

- Goal 2.3: By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

- Goal 2.a: Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, particularly least developed countries.

1.1.1 Alignment to FAO’s Strategic Framework

This project initiative falls under FAO Strategic Objective 2: Make agriculture, forestry and fisheries more productive and sustainable and Strategic Objective 4: Enable inclusive and efficient agricultural food systems; and Regional Initiative for Asia and the Pacific “One health”.

1.1.2 Alignment to Country Programming Framework (CPF)

Contribution to Country Outcome

The project is fully compliant with the national priorities as follows:

- The State Policy on the Food and Agriculture (2016-2025): Output 2.1.1 “to increase productivity and efficiency of livestock production and improve the economic circulation and develop intensified cattle, sheep farming for meat production and increase export resource of meat”; and Output 2.1.6 “to prevent from animal infectious and endemic diseases, to implement regional based strategies to control and recover of diseases, to improve capacity for early warning and early; and certify disease free zones for specific regions”.

- The Action program of the Government of Mongolia (2016-2020) of which, objective is to “Increase the competitiveness of the food production and create the opportunity to export value added products”, which is expected to be achieved Output 2 “bring the current veterinary structure to the international standards, ensure its expeditious and integrated action, take actions to prevent from contagious and high-risk zoonotic diseases and implement strategy to control and fight these risks along the border points, and enhance the possibility to export raw materials and products originating from livestock”.

This project proposal is aligned with the priorities of the United Nations Development Assistance Framework (UNDAF) for Mongolia 2017-2021, which summarizes the Government of Mongolia and UN partnership to support national priorities articulated in Mongolia Sustainable Development Vision 2030 and the Sustainable Development Goals. The project will contribute to UNDAF Outcome Area 1: Promoting inclusive growth and sustainable management of natural resources. Outcome statement: By 2021, poor and vulnerable people are more resilient to shocks, and benefit from inclusive growth and a healthy ecosystem.

1.1.2.1 Contribution to CPF Output

The project is in line with the Priority Area 1: “Promotion of sustainable livestock development through improved herd quality, health, feed, fodder and grazing/pasture management” and Output 1.1.1 “Service delivery capacity of local health and breeding units in target areas strengthened” of the Country Framework Programming (CPF) for Mongolia for the period 2017-2021.
1.1.3 Expected Results

This pilot project aims to test the feasibility of an amended “Animal Identification and Registration System” (AIRS), which if demonstrated to be successful may be scaled up in Mongolia with the support of the World Bank. This pilot project would "road-test" an improved AIRS system in Mongolia, which is essential to promote exports of livestock and livestock products. Animal identification and registration is also the basis for addressing and managing animal health. When well-designed and implemented, AIRS can significantly improve veterinary capacity in several areas such as management of disease outbreaks and food safety, vaccination programs, livestock husbandry, disease free zoning, surveillance, early response and notification systems, animal movement controls, inspection, certification etc. Investing in an improved AIRS is therefore expected to have important impacts on economic development in Mongolia, and also to help address environmental challenges linked to over-grazing. Improvement of the Sanitary and Phytosanitary Measures (SPS Agreement) situation in Mongolia, dissemination of good practices and replicability are thus underlying principles of the project.

1.1.3.1 Impact

**Impact**: The AIRS will facilitate animal disease control and support the export certification procedure by automated data exchange with the users involved is strengthened. It will also contribute to i) increase food safety for the domestic market; ii) improve breeding programs with life time animal marks and a permanent animal identifier and iii) fight against animal theft through an insert of Radio Frequency Identification Device.

It is foreseen that implementation of an amended AIRS at national level would require at least three and half year. This would include the pilot phase to test the amended AIRS (i.e. this project) followed by extension (assuming a successful pilot). In between, other aspects such as legislation, communication, funding plan will need to be reviewed and readjusted.

In the long term perspective (extension stage), the amended AIRS will also benefit breeding organizations via support for performance recording and herd book keeping.

In the short term, the impact on the herders will be found on animal theft reduction. However, before obtaining the first benefits from the export markets, the overall benefit for the herders would not be enough in term of the financial benefit to herders. Thus, other provisions should be foreseen to increase the benefits for the herders before the end of implementation, such as price difference for traced animals, public subsidies to any identified animals, public or private animal insurance, bank security, etc. In other word, the impact on herders will be over the longer term, when the price of sold animals and the quantity of sold animals begins to increase sustainably.

1.1.3.2 Outcome

The technical feasibility, cost-effectiveness and sustainability of an amended animal identification and registration scheme (AIRS) demonstrated. It will support the development of an export market for Mongolian animal products and improve control of animal infectious disease.

The AIRS will be piloted on a small-scale for the project duration for its technical and financial feasibility, and key improvements will be identified prior to scaling-up nationwide.
The selected organization and technology options will be tested. Opportunities to adjust and fine-tune the system (as necessary) will be specified and recommendations developed for its future roll-out and upscaling across the country.

To this effect, the pilot project will focus on a single product (meat) and on limited areas. As the main point is to test the overall identification system, the main animal species (cattle, small ruminants and horses) will be included in the pilot stage.

1.1.3.3 Outputs

Output 1: the SOP and the numbering scheme are modified, the tag specifications are available.

For the first AIR implementation in 2012, Standard Operating Procedures (SOP), an animal identification code numbering scheme and tag specifications were set up. The amended AIRS needs the National coordinator to update them.

Output 2: the information system is available

For the first AIR implementation in 2012, a software was developed and a database was set up. This existing IT system will be used for the pilot implementation, with a minimum of adaptations.

Output 3: the equipment and the software are broken down among the actors.

The tags and the mobile devices are distributed to the actors who download the application and set it on their mobile device in order to start using it with the login they have received previously.

Output 4: actors are trained.

To make the actors able to implement the new Standard Operating Procedures and to use the mobile device with it application.

Output 5: the pilot AIRS is implemented.

During the slaughter campaign which takes place from September to December:

Output 6: evaluation of the pilot and recommendations for scaling-up in Mongolia.

The EU-TRAM project will contract an external evaluation of the pilot to assess the project implementation (technical feasibility of the AIRS, financial evaluation and legal assessment) and develop recommendations for the planned next stage, i.e. to scale-up the AIRS.

1.1.3.4 Activities

Output 1: the SOP and the numbering scheme are modified, the tag specifications are available.

1. Review of the legislation to analyse the prevailing legislation and to formulate proposals of the temporary amendments which may be required for the pilot phase

2. Update of the numbering scheme for the animal identification code to take into account:
   - the animal identification code for the transponders used for the electronic identification;
   - the code to identify the origin of the small ruminants;

3. Update of the Standard Operating Procedures: the procedures implemented by the field officers in the soum and by the abattoir veterinarians should be simplified and updated to include new procedures for small ruminants and equine tagging, as well as for the registration of animals tagged by inserts and by transport tags;
4. Update of the tag specifications which should be completed with the specifications for the electronic insert. These specifications should become a part of the call for tender for tag procurement.

**Output 2: the information system is available**

1. Business Requirement Specification adaptations of the existing IT system is needed mainly to be connected with mobile devices and to develop mobile device application;
2. Development of the application for mobile device through the Mongolian software company which developed the previous system.
3. The above company will also adapt the database;
4. Tests of the mobile application and of the modified database.
5. Implementation of the modified database system by the MoFALI data center.

**Output 3: the equipment and the software are broken down among the actors.**

1. Tag, insert and applicator procurement (call for tender).
2. Mobile device procurement (call for tender).
3. Equipment distribution: tags and mobile devices are distributed to the actors who are registered to monitor the equipment and to allocate them the login for the mobile application.

**Output 4: actors are trained.**

1. Training plan specification: the national coordinator in close collaboration with the regional coordinators and the IT company sets up the training program and develops the training material.
2. Training session implementation: the training sessions are implemented by the regional coordinators at the soul level, the national coordinator being responsible for the national training.

**Output 5: the pilot AIRS is implemented.**

1. The Identification Field Officers tag the animals and register them and their departure using the mobile application connected to the data base implementing the amended Standard Operating Procedures.
2. The abattoir veterinarians use the mobile application to connect to the database and register the aggregation of the carcass identification code with the herder code implementing the amended Standard Operating Procedures.

**Output 6: evaluation of the pilot and recommendations for scaling-up in Mongolia.**

1. The external evaluation will assess the technical feasibility of the amended AIRS, as well as its financial viability and legal aspects. The assessment of the technical feasibility will include consultations with relevant stakeholders using the system (ranging from herders to veterinarians in charge of meat export certificate) to assess technical aspects, mobile device use and the data registered by the database. The financial evaluation will compare the real costs and expected costs. A legal evaluation will be conducted to assess the provisions to be taken to amend the legislation.
2. Recommendations to fine-tune the AIRS and to modify legal aspects will be made and discussed by the Steering Committee.
1.2 Comparative Advantages

FAO has developed successful projects for the establishment of National Animal Identification and Traceability Systems (NAITS) worldwide, which makes of it one of the leading organisations in this particular topic. The division of Animal Health and Production (AGA) in FAO Headquarters in Rome is fully responsible for this area.

FAO has supported the drafting of animal identification and recording legislation, and the design of national identification systems, in several countries.

Animal identification, registration and traceability have been components of technical cooperation projects in the fields of veterinary public health and food safety. This is the case of the Programme on Food Quality Linked to Geographical Origin and Traditions that developed regional seminars (Chile, Morocco, Serbia and Thailand), technical cooperation projects (Bhutan, Morocco, Tunisia and the Latin America and the Caribbean region) as well as ten case studies in Latin America and Asia.

FAO actively works in partnership with relevant players to strengthen the national capacities of its members and of a broad spectrum of actors.

In 1998, FAO developed the first guidelines on animal recording for medium-input production environments and in 2016 published the ‘Development of Integrated Multipurpose Animal Recording Systems Guidelines (FAO Animal Production and Health Guidelines, No 19, Rome), which includes existing standards and guidelines and draws on lessons learnt from current and past experiences.

The FAO has included animal identification, registration and traceability considerations among its activities in support of the implementation of Codex Alimentarius standards and guidelines, such as manuals and training workshops related to the Codex Alimentarius Code of Hygienic Practice for Meat, Code of Hygienic Practice for Milk and Milk Products and Code of Practice on Good Animal Feeding. One example is the FAO manual of Good practices for the meat industry.

The Joint FAO/International Atomic Energy Agency programme on nuclear techniques in food and agriculture also addresses animal identification, registration and traceability through technical cooperation programmes, research networks, coordinated research projects, and agriculture and biotechnology laboratory training courses.

Moreover, the FAO Legal Office, in close collaboration with the FAO technical units, provides relevant assistance to member countries wishing to develop or upgrade specific legislation addressing animal identification and traceability, and gathers information on existing legislation worldwide in its database FAOLEX.

FAO has been providing its technical expertise to Mongolia since 1973 in the areas of animal disease surveillance, emergency response and capacity building in animal production and health, along with the expertise in the livestock policy and legislation, related socio-economic issues, markets and trade, data management and analysis to provide a unique multidisciplinary/ multispectral perspective and approach in response to animal diseases. FAO, with its Animal Health Service (AGAH), has been substantially involved with the control of TADs through the Emergency Prevention System (EMPRES) program and in partnership with OIE under the umbrella of the Global Framework for the control of TADs (GF-TADs). Through EMPRES, FAO gained a considerable and unique experience in building and training surveillance teams in the field, and establishing monitoring and early warning systems.

Building on this experience, FAO technical officers based at the Regional Office for Asia and Pacific as well as in FAO headquarters, its Animal Health Unit (AGAH) will provide technical support in the implementation of this project. Additionally, FAO also supported Mongolia to establish a transboundary disease control action plan with neighbouring countries - China and Russia. In 2015
Mongolia hosted the 5th TADs meeting and the Regional Workshop on Transboundary Animal Disease (TADs) control in August 2018. Similarly, in 2016 Mongolia hosted a regional meeting with the participation of China, Russia and Kazakhstan to discuss common strategies to control sheep and goat pox. A meeting is planned in Mongolia in 2019 to discuss the regional needs for the control of Foot and Mouth Disease.

FAO also plays a facilitation role in the extensive communications amongst the interested stakeholders including the government/MoFALI, to discuss and learn from previous experiences, and endurances of coordinated and coherent approach to build capacity for animal identification.

1.3 Context Analysis

The pilot project will be implemented in four soums in Arkhangai and Uvurkhangaï (two provinces located in the FMD-buffer zone) and two slaughterhouses in Ulaanbaatar (Makh Market LLC and Makh Impex LLC). The main characteristic of Uvurkhangaï is to be on the way of meat transport from the south-western part to Ulaanbaatar. Arkhangai is a province covered by international donors working on livestock thematic allowing links with the AIRS project.

The pilot is limited to:

- **Product:** meat as the main animal product in Mongolia.
- **Locations:** Uvurkhangaï and Arkhangai and Ulaanbaatar.

The health status of the zone should be considered with respect of the main objectives of the pilot phase, which is not to promote increased export of meat but to check the feasibility of the amended AIRS.

Mongolia is a wide and sparsely populated country, suffering from a harsh climate for most of the year. The dependence of the economy on mining led to an economic crisis in the last few years, culminating in the implementation of an IMF plan in 2017 and to the willingness of the government to diversify the economy, mainly taking the opportunity of the livestock sector.

Key performance indicators to measure the success of the pilot will be as follows:

1. The origins and the slaughter data of all the animals coming from the pilot area are retrieved through a mobile device.
2. The origins and the slaughter data of all the animals coming from the pilot area and slaughtered by the two pilot abattoirs are retrieved everywhere through a mobile device.
3. The investment and the operational costs are assessed.
4. The key stakeholder attitudes are evaluated.

Veterinary preventive measures combating infectious diseases and zoonosis comprise traditional diseases such as anthrax, brucellosis, tuberculosis, leucosia, bovine virus diarrhoea and rabies. In accordance with their disastrous impact, there is a major focus on Foot and Mouth Disease (FMD), Sheep Pox (SPV) and – only recently – on Small Ruminant Pest (PPR). The geographical distribution of infectious animal diseases (e.g. FMD), which is shown below underlines the necessity for a functional and reliable registration scheme, which is capable of revealing the animals’ origin and/or possible contacts with other animals from the risky zone.
It should be mentioned that this application aims to raise funds for the pilot stage of the project, aiming to verify the technical feasibility of the amended AIRS by testing it on a small-scale.

1.3.1 Stakeholder Engagement

The project has been developed through a highly collaborative process, involving different STDF partners (FAO, World Bank), donors (France), the Mongolian Government and private sector. The pilot project would take forward this collaborative approach, and would play an important role in strengthening coordination between the government, donors and development partners, in addition to public-private sector collaboration.

This application is the result of considerable work and extensive collaboration across a number of international development partners, donors and the Mongolian government. In particular, the pilot project is a result of work carried out by:

- the Institute de l’Elevage (French Livestock Institute, IDELE) in collaboration with the World Bank and Mongolian Government to carry out a review and GAP analysis of the existing AIRS; and
- an STDF PPG in Mongolia (STDF/PPG/534), which studied how to apply AIRS in an export corridor.

In December 2016, the Government endorsed the recommendation of a joint mission (IDELE, World Bank, FAO and STDF) to develop one pilot project focused on AIRS. In follow-up, representatives of several international organizations and bilateral donors (ADB, French Embassy, Swiss Cooperation, Czech Embassy, European Commission, FAO, Asian Foundation, the World Bank, United States, etc.) with an interest in AIT related initiatives were consulted to ensure that the pilot is coherent and complementary to their activities. This project document is therefore a collaborative effort. The final design of this pilot project has gathered the interest and commitment of actors across the whole meat sector in Mongolia, as well as international organizations and donors working in Mongolia.

1.3.2 Grievance Mechanism

Formulators must inform stakeholders about the existence of the grievance mechanism and how they may access it if needed. Describe how stakeholders have been (or will be) informed about filing grievances. Refer to FAO’s Operational Guidelines on Stakeholder Engagement for further guidance.
1.3.3 Problems to be addressed

The dependence of the economy on mining has led Mongolia to an economic crisis in the last few years, and while the government requested the International Monetary Fund (IMF) support, it was looking for possibilities to diversify the economy. Despite its many challenges, the livestock sector is identified as one of the potential sectors to contribute to the economy growth. The livestock sector engages nearly half of the Mongolian population and represents more than 15 percent of the GDP. However, revenues from livestock production are low and over 50 percent of herding households live in poverty. Official livestock figures of 2017 amount to 66 mln, owned by 164 000 herders. Moreover, the Mongolian meat quality is uniquely characterized by grass fed animals, and this opens opportunities to expand exports of animal products as a means to reduce poverty among herders. Since the transition from the centrally planned to a market economy, the livestock sector faces a great deal of disorganization including lack of both technical and human capacities within the animal health care system, developments of animal infectious diseases outbreaks and unsustainable pastureland management leading to overgrazing and undernourishment. The main challenges are:

i) Access to international market:
Repeated disease outbreaks in particular regions of the country in combination with a lack of traceability system limits greatly export of meat (China) or the meat price fall (Russia). In addition, as Mongolia is landlocked country, any export to third countries—apart from air transportation—requires transit permission from either Russia or China. Export of Mongolian animals and animal products has drastically declined since 2010. The most important constraints for exports are: lack of quality livestock, seasonal effects on supply, inadequate slaughterhouse structure, poor exploitation of slaughter capacity, price control/subsidies for domestic consumption, export quota, lack of efficiency in export certification, currency disparities and tariffs set by importing countries, animal health issues and lack of animal identification and traceability.

ii) Animal Identification and Registration System (AIRS):
During the centrally planned economy period, Mongolia’s livestock sector used to apply a metallic tag for animals for performance recording, which discontinued in 1990’s. The national program for Mongolian livestock, launched in 2009, was a starting point for introducing animal identification system. However, due to various complications including lack of better practices in restraining animals (semi-wild and adults animals), insufficient provision of ear tags, lack of procedures and human and financial capacities the system has not been developed successfully. Triggered by the BSE crisis, many OIE member countries have implemented functional animal identification and registration schemes. Increasingly, these systems are becoming essential to enable countries to demonstrate the safety of their live animals and/or animal products in order to gain and maintain access to export markets. EEC has developed and agreed upon approaches for the identification, registration and traceability of animals and animal products. It is becoming more likely that without a functional AIRS exports of livestock and livestock products will be very challenging.

The absence of a functional AIRS in Mongolia means that information does not exist on whether exported animals or animal products originate from an area, which is known to be disease free or from an area with animal disease outbreaks. Some meat processing companies have tried to establish traceability records based on the Animal Health Certificate However, as many animals are not identified, these certificates are only partially reliable.

Therefore, strengthening AIRS is the building block to improve animal health facilitate exports. Having an improved access to these markets should be the first aim establishing the AIRS, before entering new markets.

The target beneficiaries would be:
- Meat industry (slaughterhouses and exporting companies). Effective animal identification and registration is the key for maintaining traditional markets and accessing new and more remunerative
markets. Meat companies recognize the potential of this pilot to help them to demonstrate the safety, the quality and the origin of their meat, which adds value to their products.

- Public veterinary services. The amended AIRS will improve the reliability of the health certificate for animal movement and reduce the administrative burden to edit and control certificates. It will also reduce the cost of veterinary analysis in laboratory with tracing back easily the herder when a problem is detected during a carcass inspection and with improving the link between blood sample, test results and animals. Veterinary services will have more facilities to collect data on the animals, to carry out preventive measures and the monitor the animal diseases;
- Ministry of Food, Agriculture and Light Industry. Implementation of a functional AIRS, including a reliable AIRS database, will allow MoFALI to steer the whole sector in an efficient way. That is expected to also have an impact of the livestock management and the pasture management, which is currently a very sensitive point because of the overgrazing.

### 1.3.4 Partnerships

This pilot project is based on a public-private-partnership (PPP) approach as illustrated below. Herders, meat companies, slaughterhouses and private and state veterinarians would all be engaged, alongside local authorities and government at the national level.

The project promotes cooperation by building a standardized interface between the actors involved in the meat export, and more widely in the livestock sector.

Field operations will be performed by skilled and qualified persons approved by the local authority. This includes private veterinarians and technicians, and as much as possible the herders. The data base should be available to the different actors of the industry and to herders, according to their access rights to data to optimize their activities.

### 1.3.5 Knowledge Management and Communication

The project will ensure a sound knowledge management practices by following the FAQ’s 10 Principles for knowledge strategy, which cover 4 basic areas: i) Policy and Programme; ii) People; iii) Technology; and iv) Implementation and Support.

The scope of support activities associated with the Knowledge Strategy may include coordination, provision of an enabling environment, specific services to technical programmes, and direct services to beneficiaries.

There will be a Communication plan that comprises of two parts:
I) Communication to raise awareness of the projects’ activities in order to facilitate its implementation. Since the collaboration of farmers will be fundamental for the success of the project, this component of the communication plan will be aimed at raising awareness amongst farmers of the need of identifying their animals.

II) Communication to raise awareness of the results achieved by the project, covering inception of the project, human interest stories, success stories, tracking improvements events, milestones, meetings, trainings, workshops, etc.

SECTION 2 – FEASIBILITY

2.1 Implementation Arrangements

The project will be implemented by FAO representation in Mongolia in close cooperation and collaboration with MOFALI. An FAO HQ Technical Officer will be assigned to be part of the Project Task Force. FAO Regional Office for Asia and the Pacific (RAP) will also provide technical support. An officer of FAO RAP will serve as Lead Technical Officer (LTO). During project implementation, the LTO shall be responsible for the overall technical guidance and technical quality assurance/quality control of the Project. The LTO will provide guidance during implementation and will ensure technical clearance of work plans, services, products and deliverables.

The MoFALI will facilitate collaboration with local authorities and other partners. The Ministry will also be, through its legal department, the resource agency for activities linked to legislation (legal support to the project, update on law revision if need be). Moreover, the MoFALI will be responsible for arrangements and logistics for the project steering committee meetings.

Local authorities of pilot zones (aimag and soum level), as well as local veterinary services, will be consulted and engaged about the pilot project so that the work carried out is in line with the local policies linked to animal health, exports or livestock at a general level. This information exchange will take in the form of regular meeting with the regional coordinators and the national coordinator and, if needed, with the international experts. Local activities will also act as facilitators for on-field activities deployment (logistical support to distribution of equipment, implementation of training sessions, etc.).

Past, ongoing or planned programs and projects

Animal identification is not new in Mongolia. For more than ten years, different international partners have provided various types of support to design and implement various aspects of animal identification and registration, together with the MoFALI. For instance, EU-AHLM project (2008-2012) focused on establishing a reliable animal disease control and surveillance system in order to build a market-oriented livestock sector. At the same period, the Czech Embassy supported the Gene Bank to develop an animal identification system in central Mongolia and an ear tagging factory.

These initiatives identified a number of important experiences and lessons, which have been taken on board in this pilot project in order to build a functional and sustainable system. Relevant experiences and lessons from previous initiatives highlighted the importance to:

- ensure a truly collaborative approach based on public-private collaboration, as well as clear communications and coordination among international partners and donors;
- Avoid an over-complex and cumbersome system which is challenging and resource-intensive to maintain.

To avoid repeating past errors, the present project has been developed with involvement of all the interested stakeholders, including the Government. Extensive communication efforts were carried out (with the contribution of FAO, the World Bank Group and the French Embassy in Mongolia) to discuss and learn from previous experiences, and how to ensure a more coordinated and coherent approach to build capacity for animal identification.

The project has also been developed to ensure synergies with recent legal reform in Mongolia:
• The Animal Health Law reform, supported by the Swiss Development Cooperation (SDC), aims to clarify the structure of Veterinarian services, by stating clearly the function and funding source of veterinarian entities at each level (department, province and national), and to build integrated veterinary services, by merging current VABA and GASI responsibilities within the MoFALI (NB: responsibilities of VABA and GASI are currently overlapping). This reform is based on OIE recommendations (OIE PVS evaluation report from 2015; OIE Legislative Development Mission from 2012).

• The Animal Gene Pool Law reform, supported by the MoFALI, aims, among others, to redefine the objective and means of the national animal identification system.

Both the Animal Health Law reform and the Animal Gene Pool Law were adopted by the Mongolian parliament in December 2017.

Moreover, it has been chosen to base the amended AIRS as much as possible on the existing system: the proposed system is an improvement of the existing current AIRS in Mongolia.

This project will be led in close coordination with the EU-funded Trade Related Assistance for Mongolia (EU-TRAM) project, whose aim is to increase export of animal products. EU-TRAM will finance the external assessment of the pilot AIRS project, in the framework of a sectorial study. This is aimed to be a first step for a further involvement of the EU during the extension stage.

The project will also work in coordination with the Swiss Development Cooperation (SDC) to ensure that activities under the pilot project are linked to ongoing work supported by SDC on animal health (Green Gold – Animal Health project) and to share experience on animal identification topics.

The Green Gold – Animal Health Project (GGAHP) is working with the VABA, MoFALI and Digital Medic LLC to introduce traceability in the meat sector in 15 selected soums of 5 aimags since early 2017. This initiative was piloted in two soums of Arkhangai aimag in December 2017. GGAHP is aiming to develop an innovative and efficient traceability system in line with international standards that enables tracing back the origin of animals from herders and serves as assurance of animal health and quality. It builds on the "National livestock registration and information database"1 (i.e. the central government database on animal identification) to create an additional web-based layer to it. Digital veterinary certificates are created for animals that are marketed. Challenges observed in the GGAHP pilot include poor records available on animal health at soum level and not enough cold resistance of the RFID tags.

SDC plans to further improve the traceability system and upscale it in other targeted soums, cooperate with MoFALI to develop secondary legislation of new Animal Health Law to make veterinary certificate more valid and reliable, and train relevant staff at VABA in target soums about the new system. MoFALI and SDC recognize that an improved and functional central database – to be developed under the STDF pilot – would benefit work supported by SDC in Mongolia. By focusing on improvements to the core foundations of the existing animal identification and registration system, including required IT changes to the central government database, the STDF-funded pilot would also add value to and benefit the ongoing/planned work by SDC – particularly given IT problems that are expected to affect the existing central database after 2020.

SDC has expressed interest in collaborating in this pilot project to coordinate activities in the animal health sector and specifically, to further develop the animal health system together that inserts animal health data in the system before issuance of veterinary certificate.

1 Different names have been used for the VABA database: AIRS - Animal Identification and Registration System; AHRS - Animal Health and Registration System; NLIS - National Livestock Identification System; NLRS - National Livestock Registration System. The following name as approved in the Minister’s decree A-74 2011, “National livestock registration and information database” is used in this project document. The Mongolian name is: Малын бүртгэл, мэдээллийн нэгдсэн сан, Малын бүртгэл, мэдээллийн нэгдсэн систем).
### 2.1.1 Strategy/Methodology

At the field level, AIRS tasks will be performed by an “Identification Field Operator (IFO)” who is not necessarily a veterinarian but someone who has the required skills and who has been mandated by the competent authority for one or several herders.

As such, the issue of limited human resources will be alleviated, allowing the technicians to cover larger distances and the veterinarians to concentrate on medical tasks.

Respective training plans will be developed and training sessions will be delivered.

Time and of GPS coordinates for any event will be registered from field data capture through the application on mobile devices. The mandatory data will be limited to the strict minimum. Data entry will be speeded up, improved and eased by utilization of barcodes and electronic recording device.

The main data registered in the AIRS will be:

- Herd and herder
- Animal: identification code, dam code, date of birth, type, etc.
- Animal individual/batch movements (departure and arrival)
- Health data
- Restriction for movements whatever reason
- Slaughter records
- Exportation records

The final system, beyond the pilot phase, will include preventive measures and health status of the herd for contagious diseases. A standardized data interface to support export procedure will be designed. Different IT platforms between users obstruct data exchange through direct system connection. Therefore data will be exchanged between users and the AIRS database through a standardized interface. Animal and health data will be combined in order to form the health certificate. Health certificate will then be combined to movements and slaughter records to form the export certificate. At any time, it will be possible to print a paper version of the certificates to ensure data sharing in case there is lack of equipment or poor internet connection.

---

**Main concept of National Livestock Data Model**

*(high level ERD with core tables)*

- **Data included in the AIRS Scope**
  - **Herder**
  - **Household**
  - **Breed**
  - **Animal**
  - **AnimalType**
  - **IdentityType**

- **Activity 1. MovementBook**
- **Activity 2. VaccineBook**
- **Activity 3. LostBook**
- **Activity N. AnyActivityBook**

- **VaccineCode**
- **Veterinary**

*Each animal with ear tag recorded as single record*

*All type of activities/transactions with historical data are designed as this way*

---

**Figure 1 Future data model of the information system**

---

18
Technical architecture of the information system for the pilot implementation

For the pilot implementation the existing technical architecture will be changed very little.

- There will be no change at the soum level where users will continue to use a local PC supporting a software and a local database which is periodically re-synchronized with the national one in different ways as appropriate (sometimes by internet connection but more often by physical file transfers)
- Aimag will continue to have an online access to the national database.
- Limited modifications will be introduced to the national database.

The main change will be the addition of a mobile application connected through internet to the national database.

### 2.1.2 Technical Oversight and Support Arrangements

As one of the aims of the pilot is to test the software and the database, it appeared important not to limit the system to one single species. Thus, during the pilot phase, the system will be tested on the main animal species (cattle, small ruminants and horses).

All bovines will be identified by plastic tags carrying a unique individual animal identification code. The tagging of adults animal will occur when the animals move from one soum to another. For small ruminants, individual animal identification and registration should be limited to breeding animals. Animals intended for slaughter should simply be group-wise identified by applying transportation tags which show an official ID code of the relevant herder family. Tagging should be done immediately before sending the animals to the abattoir. Given their high costs and incompatibility in Mongolia's harsh winter environment, use of RFID tags and their readers should be carefully considered.

The National Livestock Registration and Information Database will be updated and manual data entry will be reduced through an extensive use of bar codes. The renewed AIRS should also include an
extensive use of geographical coordinates to improve the animal movement tracking through the use of mobile devices. For better control of animal movements for contagious disease control, the registration of movements between soums should be kept and included in the renewed AIRS.

The herders will be identified through their family identifier. The localization of a herder and her/his animals should be based at least on the existing territorial breakdown based on bags and/or soums. Only a certain part of animal population will be identified.

An application for mobile devices will be developed and adapted to the existing database. A standardized interface will be implemented.

The current AIRS organization, based on a central level with an aimag and a soum level, will be maintained, but the roles will be redefined in order to optimize the cost and the efficiency of the very limited human resources for AIRS.

2.1.3 Management and Operational Support Arrangements

A Steering Committee (SC), gathering the key organizations involved in the project, will be the highest body governing the project. It will be chaired by MoFALI. It will hold meetings at the beginning of the project, after every 3 months and at the end of the project. In addition, the SC will meet if upcoming questions or implementation obstacles should require immediate response. Donors providing related support to the livestock sector in Mongolia will be invited to participate in the SC. Other relevant stakeholders may be invited, as considered appropriate, to ensure coordination, communications and synergies to other ongoing work in the livestock sector.

Members of the Steering Committee will include:

- MoFALI;
- FAO;
- World Bank Group;
- IDELE;
- European Union;
- Swiss Agency for Development and Cooperation in Mongolia;
- Mongolian Veterinary Medical Association;
- Mongolian Meat Association; and
- herders associations.

The SC will provide a mechanism for dialogue and collaboration with other organizations providing support to the Project, or involved in other relevant activities. This includes IDELE, the EU-TRAM project, as well as the WBG and SDC.

FAO will ensure close coordination between this project and other stakeholders (public, private, donors, etc.) involved in work and projects related to animal health and meat exports in order to build understanding about the revised AIRS, create synergies to support the expected project results, and facilitate wider dissemination and scaling-up. At the end of the pilot project, these organizations will be key to assure the transition to the extension stage.

FAO will provide support to MoFALI to document the discussions and decisions made during SC meetings. Written reports from the SC meetings will be shared with the STDF Secretariat.
2.2 Operational Modalities

The project will be implemented by FAO, in close collaboration with the Ministry of Food, Agriculture and Light Industry (MoFALI) of Mongolia. FAO will sub-contract IDELE to provide technical services to support the project implementation.

MoFALI is expected to ensure adequate and timely communication and transparency with FAO on relevant activities so that FAO can carry out its project implementation, advisory and support functions efficiently. This will include close consultation on the tender and procurement of tags to be used in the pilot.

A national project coordinator, appointed by the MoFALI, will be responsible for implementation of the project on a day to day basis. He will manage the activities of:

- two regional coordinators; and
- one system administrator.

2.3 Statistics

To significant extent, the project will depend on Information technology services. Details are given in 2.1.2.

2.4 Risk Management

2.4.1 Potential risks to the project

The purpose of this pilot is to test the technical and financial feasibility linked to the deployment of an amended, functional AIRS throughout Mongolia. Beyond this, the main risks for this pilot project are linked to the political situation and human resources on one side, and to other restraining factors for exportation on the other side.

The potential risks to the project in the broader contextual environment governing the operations of the activity, as well as factors within FAO that influence how the activity being assessed, have been identified and attached as Annex V (Risk Management Plan) to this Project Document.

2.4.2 Environmental and social risks from the project

As there are no environmental and social risks associated with this project, it is classified as low risk project. Low environmental risks may be associated with incorrect quarantine procedures or late detection and action to stamp out a disease following an outbreak and prevent for a larger spread of a disease.

2.5 Monitoring, Performance Assessment and Reporting

2.5.1 Monitoring Arrangements

FAO will monitor the project based on the project's logical framework.

The technical services of FAO will provide guidance for the monitoring and assessment of the project. On the basis of this information, FAO staff will regularly review project progress and alert to eventual problems encountered and recommend solutions to these.

During the inception period and subsequent project implementation, FAO, MoFALI and other concerned stakeholders will identify any related needs (e.g. revisions to legislation, re-programming of the database application, training and capacity building for herders and other stakeholders,
sustainable financing of the AIRS) that may require additional attention in order to ensure the effectiveness of the pilot and facilitate wider scaling-up. FAO will collaborate with the concerned stakeholders to encourage the necessary follow-up on these issues.

Regional coordinators and system administrator will provide monthly reports to the national coordinator, who in return will provide monthly monitoring reports to FAO, which will provide feedback and advice, and take action as required. A synthesis will be shared with the SC and the MoFALI when they need to take a decision or every three months.

The experiences and results of the pilot project will be clearly documented and discussed with relevant government and private sector stakeholders, as well as donors and development partners in Mongolia. FAO and other project partners will identify other opportunities to further disseminate the experiences and results, including the STDF website.

2.5.2 Performance Assessment

Monitoring and evaluation of the project will be the responsibility of FAO, carried out based on relevant FAO procedures. FAO will report to the SC on M&E activities. This will help identify the most effective activities and interventions, the nature of analysis and research and the institutions that may be supported in the future.

Assessment of the performance of the project will be carried out as follows:

a. The project will ensure participatory monitoring, performance assessment process and the project Budget Holder’s office will coordinate the preparation of progress reports, mid-term assessments and Terminal Reports that are technically cleared by the Lead Technical Officer (LTO).

b. A mid-term review is proposed half way through the project. Need for the revision in the scope of the project as well as that for the training and/or technical assistance would be decided upon the mid-term review results.

c. An independent external evaluation of the pilot project – contracted and funded by the EU-TRAM Project in Mongolia – to evaluate the technical and financial feasibility of the pilot, as well as relevant legal aspects. Performance indicators for the external evaluation will be discussed and agreed during the inception phase, and documented in the inception report.

2.5.3 Reporting

FAO will report on progress in implementation of the project to STDF through six-monthly reports in accordance with STDF reporting requirements. In addition, FAO will deliver an inception report to the STDF within three months of the start of the project, as well as a final/terminal report at the conclusion of the project, which will attach the external evaluation funded by the EU-TRAM project.

Reports will be prepared in accordance with established FAO guidelines and using the STDF templates for project reporting. Reports will be submitted as per the dates agreed in the signed Implementation Assignment between WTO and FAO.

The national experts/consultants/coordinator, as well as the sub-contracted technical service provider (IDELE), will provide periodic progress reports to FAO that describe the achievements and results of their activities, outlining success stories and challenges faced in project implementation. The reporting will be in accordance with the procedures and harmonized with UN agencies as much as possible.

All subcontractors will submit periodical financial/expenditure statement along with the work progress reports. The reports and quality of the work carried out by the subcontractors and consultants will be evaluated by the LTO before releasing the budget. The project will follow a results-based monitoring
and will be systematically integrated into the overall evaluation plan. The project will be managed and monitored on the basis of qualitative and quantitative indicators and delivery of outputs.

2.6 Evaluation Provisions

Monitoring and evaluation of progress in achieving project objectives will be done based on the targets and indicators established in the Project Results Framework by following FAO evaluation guidelines. A Mid-Term Evaluation (MTE) will be undertaken to review progress and effectiveness of implementation in terms of achieving project goal. Findings, recommendations and any proposal for corrective actions or adjustments of the MTE should be used as an instrument for the remaining period.

A Final Evaluation (FE) will be carried out with the aim to identify the project impacts and future actions needed for the extension phase, mainstream and up-scale its practices. Special attention to paid on outcome indicators during both mid-term and final evaluation.

The external evaluation – contracted by the EU-TRAM project – at the end of the pilot stage will evaluate the technical and financial feasibility of the pilot, as well as relevant legal aspects. Performance indicators will be discussed and agreed during the inception phase.

It is expected that after the pilot is completed – based on the experiences and lessons learned and recommendations of the external evaluation – some issues (e.g. changes in legislation, re-programming of the database application, stakeholder and herder implication, training and capacity building, economic model to finance AIRS in a sustainable manner) may require further attention during the scaling-up phase.

SECTION 3 - SUSTAINABILITY

3.1 Capacity Development

This pilot will demonstrate proof of concept, which is essential if longer-term efforts to strengthen animal identification and registration in Mongolia are to be successful and sustainable. Beginning with a pilot is necessary to allow on-field adjustments, which is a necessary precondition for the sustainability of the expected follow-up larger project to roll out a functioning, reliable and sustainable system.

The failing of the previous trials aimed at implementing an AIRS was mainly linked to the unsustainability of the financial model (ear tags’ cost at the expense of the MoFALI). This pilot will therefore pay special attention to key aspects that are important for sustainability including on maintenance costs and financing. The pilot will also ensure collaboration with ongoing work focused on legislative reform and development (e.g. Swiss Development Cooperation support for Animal Health Law) to ensure relevant legal aspects are fully considered.

3.2 Decent Rural Employment

Functional AIRS will eventually support creation of productive employment in the rural areas as the system will promote strengthening of animal disease control and export certification procedure that lead to open way of provision of safer food to the domestic market and an export market for Mongolian animal products.

The project will be implemented through participatory approach ensuring user involvement at all phases of project; and the project will build capacity and provide necessary inputs for the implementation. With the above, the project will contribute to the Decent Work Agenda.
3.3 Environmental Sustainability

In the field of environment, Mongolia suffers from desertification, a phenomenon that can be explained by global warming, but which is also directly linked to overgrazing caused by increasingly excessive livestock density.

By creating the conditions to promote livestock exports, an amended AIRS is expected to have a positive impact on the environment by helping to reduce livestock density. This will decrease the pressure on pasturelands, which are currently severely overgrazed, not allowing sustainable farming. In the longer-term, an increase in the value of animals will allow herders to reduce their herds and to focus on quality, without losing money. Animal registration is also a tool for pastureland steering for rehabilitation of damaged lands, or in the framework of certifications based on “sustainable pasturelands”.

In the longer-term, AIRS will also allow the follow-up of vaccination and antibiotic treatment, with a direct effect on herd health, animal health, animal welfare and enabling the producer to verify the value of the animal (organic, etc.).

3.4 Gender Equality

For FAO, gender equality is equal participation of women and men in decision-making, equal ability to exercise their human rights, equal access to and control over resources and the benefits of development, and equal opportunities in employment and in all other aspects of their livelihoods. The FAO ensures in all projects that no-harm is caused to women, vulnerable groups, indigenous peoples and the environment, and takes advantage of any action to contribute to closing the gender gap.

The project would pay adequate attention to the equal participation, constraints, and potential opportunities that the project could bring to both men and women.

During the implementation phase it will:

- Ensure that registration of livestock is done in the name of all owners, and that women’s ownership rights over livestock are recognized, identified and not overlooked.
- Ensure that both women and men, and those most vulnerable are actively engaged in the project, especially during the testing of the registration system, so both women and men can raise their needs and interests in the configuration of the system.
- Ensure that during the training and publicity plan both women and men farmers are reached and mobilized, and that both women and men local leaders are engaged.

3.5 Indigenous Peoples

There are no issues foreseen associated with indigenous peoples in this project. If any situation arises, FAO will respect and prioritize the needs expressed by the indigenous communities involved and try to build upon their knowledge and culture in the consultative manner.
# Logical Framework Matrix

| Results Chain                                                                 | Indicators                                                                                                                                                                                                                                                                                                                                 | Assumptions                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Impact                                                                       | • Recommendation of the steering committee to scale-up the AIRS in Mongolia  
  Support and funding from key international bodies (World bank, OIE, SDC, etc.) to support scaling-up                                                                                                     | • Minutes of the steering committee.                                                                                                                                                                                                                                                                                                                   |
| Support the development of a national AIRS that facilitates animal disease control and development of meat exports |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Impact                                                                       | • The origin herder, the movement and the slaughter of all the animals coming from the pilot area and slaughtered by the two pilot abattoirs are retrieved from the data base in the pilot area through a mobile device.  
  The investment and operational costs are assessed.  
  The key stakeholder attitudes are evaluated.  
  Improvements are specified.                                                                 | • Random field survey.  
  • Cost assessment.  
  • AIRS improvement specification.  
  External evaluation of the pilot AIRS.                                                                                                                                                                                                                                                                                                                   |
| Outcome                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Implementation of a pilot AIRS (on a small-scale for a limited period of time) to test its technical and financial feasibility and use, and identify key improvements needed, prior to scaling-up nationwide. | • National coordinator is hired.  
  • Kick off meeting of the steering committee.                                                                                                                                                                                                                                                                                                                                                                     |
| Inception                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| • No major animal disease outbreak that takes attention and priority away from the pilot.  
  • Strong support of the MoFALI to the implementation of the amended Standard Operating Procedures (SOP) at the soum level and in the pilot abattoirs.  
  • Availability of necessary staff and national consultants.  
  • Good coordination between MoFALI, the national coordinator and his team, and other stakeholders. | • Inception report.  
  • Minutes of the kick off meeting of the steering committee.  
  • Mission reports of the international AIRS consultant.  
  • Steering committee is established and operates effectively                                                                                                                                                                                                                                                                                          |
<table>
<thead>
<tr>
<th>Outputs</th>
<th>Output 1: the SOC and the numbering scheme are modified, the tag specifications are available.</th>
<th>Output 2: the information system is available</th>
<th>Output 3: Tags and equipment are provided</th>
<th>Output 4: actors are trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review of the legislation.</td>
<td>• Modified SOP.</td>
<td>• Contract with an IT company.</td>
<td>Tag and equipment are delivered to the actors.</td>
<td>• Training plan.</td>
</tr>
<tr>
<td>Modified numbering scheme.</td>
<td>• Tag specification.</td>
<td>• Business requirement specification</td>
<td></td>
<td>• List of trainees</td>
</tr>
<tr>
<td>Tag specification.</td>
<td>• Progress report.</td>
<td>• Test report.</td>
<td></td>
<td>participating in the</td>
</tr>
<tr>
<td></td>
<td>• Minutes of the steering committee.</td>
<td></td>
<td></td>
<td>training sessions.</td>
</tr>
<tr>
<td></td>
<td>• Mission reports of the international consultants.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Deliverable of the output.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Required changes in legislation implemented in a timely manner.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Requirement Specification are not overly complex to avoid cost increases and difficulties in use by field actors.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhaustive and proper tests are carried out to avoid subsequent problems in use of the the application.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Call for tender is implemented in a proper and timely manner.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Output 5: pilot AIRS is implemented | • Number of active users of the mobile application.  
• Number of registered data. | • Progress report.  
• Minutes of the steering committee.  
• Mission reports of the international consultants.  
• Request on the data base. | • Adequate network performance.  
• Stakeholder commitment and engagement. |
|------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Output 6 : External evaluation and development of recommendations | Evaluation report. | • Progress report.  
• Minutes of the steering committee.  
• Mission reports of the international consultants.  
• Deliverable of the output. | |
| Activities | Output 1  
Activity 1.1. : review of the legislation  
Activity 1.2. : update of the numbering scheme.  
Activity 1.3. : update the SOC  
Activity 1.4. : tag specification | | |
| Output 2 | Activity 2.1. Business Requirement Specification  
Activity 2.2. development of mobile application  
Activity 2.3. data base adaptation  
Activity 2.4. test  
Activity 2.5. implementation | | |
| Output 3 | Activity 3.1. tag and applicator procurement (call for tender)  
Activity 3.2. mobile device procurement (call for tender)  
Activity 3.3 equipment distribution | | |
| Output 4 | Activity 4.1. training plan specification  
Activity 4.2. training session implementation. | | |
Output 5
Activity 5.1: soum implementation
Activity 5.2: abattoir implementation

Output 6
Activity 6.1: external evaluation contracted by EU-TRAM project
Activity 6.2: development of recommendations to scale-up the pilot.

*(activities inserted in the FPMIS logframe will be exported by the system in the FPMIS work plan)*
## Annex II

### Stakeholder Engagement Matrix

#### 1) Stakeholder Consultation

<table>
<thead>
<tr>
<th>Stakeholder Name</th>
<th>Stakeholder Type</th>
<th>Stakeholder profile</th>
<th>Consultation Methodology</th>
<th>Consultation Findings</th>
<th>Expected timing (for Stakeholder Engagement Plans Only)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat sector</td>
<td>Direct beneficiary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veterinary service sector</td>
<td>Indirect Beneficiary</td>
<td>Local Government Institution/body</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herders at pilot area</td>
<td>Direct beneficiary</td>
<td>Farmers/Fishers/Herders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local authority</td>
<td>Indirect beneficiary</td>
<td>Government Institution/body</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meat producers' association</td>
<td>Direct beneficiary</td>
<td>Non-Governmental Organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ministry of Food, agriculture and light industry</td>
<td>Direct beneficiary</td>
<td>Government Institution/body</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(+) Add stakeholders as necessary

#### 2) Grievance Mechanism

- **Focal Point Information**
- **Contact Details**
- **Explain how the grievance mechanism has been communicated to stakeholders**
3) **Disclosure** (For moderate and high risk projects only)

<table>
<thead>
<tr>
<th>Disclosure Means</th>
<th>Disclosure information/document shared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disclosure dates</td>
<td>From: Click here to enter a date. To: Click here to enter a date.</td>
</tr>
<tr>
<td>Location</td>
<td></td>
</tr>
<tr>
<td>Language(s)</td>
<td></td>
</tr>
<tr>
<td>Other Info</td>
<td></td>
</tr>
</tbody>
</table>

(+) *Add disclosure as necessary*
### Work plan

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>R0</strong> The project is governed</td>
<td></td>
</tr>
<tr>
<td>A0.1 Appointment of the steering committee</td>
<td>MoFALI + donors</td>
</tr>
<tr>
<td>A0.2 Appointment of the coordinators</td>
<td>MoFALI</td>
</tr>
<tr>
<td>A0.3 Project planning and monitoring</td>
<td>NC + SC</td>
</tr>
<tr>
<td>A0.4 Project management</td>
<td>NC</td>
</tr>
<tr>
<td>A0.5 Communication and awareness</td>
<td>NC</td>
</tr>
<tr>
<td><strong>R1</strong> Field operations are in compliance with legislation</td>
<td></td>
</tr>
<tr>
<td>A1.1 Review of the legislation</td>
<td>NC</td>
</tr>
<tr>
<td><strong>R2</strong> Business rules and procedures are modified</td>
<td></td>
</tr>
<tr>
<td>A2.1 Update of numbering scheme</td>
<td>NC + RC</td>
</tr>
<tr>
<td>A2.2 Update of field procedures</td>
<td>NC + RC</td>
</tr>
<tr>
<td>A2.3 Update of tag specifications</td>
<td>NC + RC</td>
</tr>
<tr>
<td>A2.4 Specification of mobile application</td>
<td>NC + ITC</td>
</tr>
<tr>
<td>A2.5 Specification of adaptation of the data base</td>
<td>NC + ITC</td>
</tr>
<tr>
<td><strong>R3</strong> The information system is available</td>
<td></td>
</tr>
<tr>
<td>A3.1 Development of the application for mobile device</td>
<td>ITC</td>
</tr>
<tr>
<td>A3.2 Adaptation of the existing data base</td>
<td>ITC</td>
</tr>
<tr>
<td>A3.3</td>
<td>Implementation of the system</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>A3.4</td>
<td>User registration</td>
</tr>
</tbody>
</table>

**Tags and equipment are procured and distributed**

<table>
<thead>
<tr>
<th>R4</th>
<th>Tag, insert and applicator procurement (call for tender)</th>
<th>NC + MoFALI</th>
</tr>
</thead>
<tbody>
<tr>
<td>A4.1</td>
<td>Mobile device procurement (call for tender)</td>
<td>NC + MoFALI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NC + RC +</td>
</tr>
<tr>
<td>A4.2</td>
<td></td>
<td>MoFALI</td>
</tr>
<tr>
<td>A4.3</td>
<td>Equipment distribution</td>
<td></td>
</tr>
</tbody>
</table>

**Actors are trained**

<table>
<thead>
<tr>
<th>R5</th>
<th>Training plan specification</th>
<th>NC + RC</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5.1</td>
<td>Training session implementation</td>
<td>NC</td>
</tr>
</tbody>
</table>

**The renewed AIRS is working in the pilot area**

<table>
<thead>
<tr>
<th>R6</th>
<th>AIRS development in the 4 pilot soums</th>
<th>RC + ID + SA + RA</th>
</tr>
</thead>
<tbody>
<tr>
<td>A6.1</td>
<td>AIRS development at Makh Impex and Makh</td>
<td></td>
</tr>
<tr>
<td>A6.2</td>
<td>Market slaughterhouses</td>
<td>NC + AV</td>
</tr>
</tbody>
</table>

**Monitoring, assessment and results dissemination**

<table>
<thead>
<tr>
<th>R7</th>
<th>Monthly skype monitoring</th>
<th>IDELE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A7.1</td>
<td>Field missions: animal identification support</td>
<td>IDELE</td>
</tr>
<tr>
<td>A7.2.1</td>
<td>Field missions: IT support</td>
<td>IDELE</td>
</tr>
<tr>
<td>A7.3</td>
<td>External assessment</td>
<td>NC + EU-TRAM</td>
</tr>
<tr>
<td>A7.3</td>
<td>Results dissemination</td>
<td>NC + MoFALI</td>
</tr>
</tbody>
</table>
Annex IV

Budget

The total budget of the pilot project is USD 384,783 requested from the STDF. In addition, MOFALI has committed to provide equipment which is valued at USD 105,000. The EU-TRAM project has agreed to fund the external evaluation of the pilot.

Animal identification and registration is the corner stone of improving animal health. Despite being still pending in Mongolia’s immediately adjacent countries, in the Russian Federation and in the People’s Republic of China, there is already a draft regulation of the Eurasian Economic Commission on agreed approaches to the identification, registration and traceability of animals and of animal products. It is assumed that China will develop comparable approaches soon. As a consequence Mongolia will soon be surrounded by countries requesting a functioning AIRS in case of exportation. It might not be possible then to export Mongolian meat without a functioning AIRS, despite its organic and tasty properties. The monetary losses caused by SPS-induced export ban will exceed the maintenance costs of the Mongolian AIRS by far.

Moreover, beyond dealing with meat export and SPS-issue, the AIRS contribute to achieve several other goals.

Figure 3 Beyond meat export, AIRS contributes to several goals
### Results-Based Budget

<table>
<thead>
<tr>
<th>Account</th>
<th>Item</th>
<th>Unit</th>
<th>Q'ty</th>
<th>Unit cost (USD)</th>
<th>Total Cost (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5013</td>
<td>Consultant</td>
<td>Personnel months</td>
<td>15</td>
<td>2,500</td>
<td>37,500</td>
</tr>
<tr>
<td></td>
<td>Consultants - National Coordinator (100%)</td>
<td>Personnel months</td>
<td>15</td>
<td>2,500</td>
<td>37,500</td>
</tr>
<tr>
<td></td>
<td>Consultants - Regional Coordinator (30%)</td>
<td>Personnel months</td>
<td>5.0</td>
<td>2,500</td>
<td>12,500</td>
</tr>
<tr>
<td></td>
<td>Consultants - Regional Coordinator (30%)</td>
<td>Personnel months</td>
<td>5.0</td>
<td>2,500</td>
<td>12,500</td>
</tr>
<tr>
<td></td>
<td>Database officer’s salary (1 full-time officer) 100%</td>
<td>Personnel months</td>
<td>11</td>
<td>1,250</td>
<td>13,750</td>
</tr>
<tr>
<td></td>
<td>Professional Salaries- Human Resource Services</td>
<td>Direct Support Cost</td>
<td>36</td>
<td>27</td>
<td>972</td>
</tr>
<tr>
<td>5014</td>
<td>Contracts budget</td>
<td>LS</td>
<td>5</td>
<td>2,500</td>
<td>12,500</td>
</tr>
<tr>
<td></td>
<td>Development of the database application</td>
<td>LS</td>
<td>5</td>
<td>2,500</td>
<td>12,500</td>
</tr>
<tr>
<td></td>
<td>Data base creation and development</td>
<td>LS</td>
<td>5</td>
<td>2,500</td>
<td>12,500</td>
</tr>
<tr>
<td></td>
<td>Contract with IDELE</td>
<td>LS</td>
<td>5</td>
<td>65,189</td>
<td>65,189</td>
</tr>
<tr>
<td></td>
<td>Contracts - Procurement Services (3)</td>
<td>Direct Support Cost</td>
<td>3</td>
<td>100</td>
<td>300</td>
</tr>
<tr>
<td>5021</td>
<td>Travel</td>
<td>day</td>
<td>50</td>
<td>242</td>
<td>12,100</td>
</tr>
<tr>
<td></td>
<td>International travel/ DSA, travel cost/</td>
<td>day</td>
<td>50</td>
<td>242</td>
<td>12,100</td>
</tr>
<tr>
<td></td>
<td>Travel international</td>
<td>round-trip</td>
<td>5</td>
<td>5760</td>
<td>28,800</td>
</tr>
<tr>
<td></td>
<td>National travel/DSA, travel cost/</td>
<td>LS</td>
<td>465.34</td>
<td>120</td>
<td>55,841</td>
</tr>
<tr>
<td></td>
<td>Travel -Procurement Services</td>
<td>Direct Support Cost</td>
<td>13</td>
<td>44</td>
<td>572</td>
</tr>
<tr>
<td>5023</td>
<td>Training Budget</td>
<td>LM</td>
<td>13</td>
<td>13,810</td>
<td>13,810</td>
</tr>
<tr>
<td></td>
<td>Workshop/ training, meeting/</td>
<td>LM</td>
<td>13</td>
<td>13,810</td>
<td>13,810</td>
</tr>
<tr>
<td></td>
<td>Training /Transportation and hosting expenses/</td>
<td>LM</td>
<td>2,302</td>
<td>2,302</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Training - Procurement Services</td>
<td>Direct Support Cost</td>
<td>8</td>
<td>44</td>
<td>352</td>
</tr>
<tr>
<td>5024</td>
<td>Expendable equipment budget</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tag, insert and applicator procurement</td>
<td></td>
<td></td>
<td>6,231</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mobile device procurement</td>
<td></td>
<td></td>
<td>23,335</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communication media</td>
<td></td>
<td></td>
<td>5,754</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expendable Equipment - Procurement Services</td>
<td>Direct Support Cost</td>
<td>5</td>
<td>44</td>
<td>220</td>
</tr>
<tr>
<td>Account</td>
<td>Item</td>
<td>Unit</td>
<td>Q’ty</td>
<td>Unit cost (USD)</td>
<td>Total Cost (USD)</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>5025</td>
<td>Non-expendable equipment budget</td>
<td></td>
<td></td>
<td></td>
<td>26,497</td>
</tr>
<tr>
<td></td>
<td>Development of the application for mobile device and for the server</td>
<td>LS</td>
<td></td>
<td></td>
<td>26,453</td>
</tr>
<tr>
<td></td>
<td>Non-ExpendableProcurement - Procurement Services</td>
<td>Direct Support Cost</td>
<td>1</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>5027</td>
<td>Technical Support Service</td>
<td></td>
<td></td>
<td></td>
<td>5,670</td>
</tr>
<tr>
<td></td>
<td>Technical Support Service Cost (8 days, P-5)</td>
<td>Personnel day</td>
<td>5</td>
<td>1,134</td>
<td>5,670</td>
</tr>
<tr>
<td>5028</td>
<td>General Operating Cost</td>
<td></td>
<td></td>
<td></td>
<td>540</td>
</tr>
<tr>
<td></td>
<td>Security Expenses in Country of operations (Group A)</td>
<td>Personnel months</td>
<td>36</td>
<td>15</td>
<td>540</td>
</tr>
<tr>
<td>5050</td>
<td>GOE Common Services- (Other Central Support Services)</td>
<td></td>
<td></td>
<td></td>
<td>9,743</td>
</tr>
<tr>
<td></td>
<td>IT Services</td>
<td>Personnel months</td>
<td>36</td>
<td>137</td>
<td>4,932</td>
</tr>
<tr>
<td></td>
<td>Financial Services</td>
<td>LS</td>
<td></td>
<td></td>
<td>4,811</td>
</tr>
<tr>
<td></td>
<td>Subtotal (A)</td>
<td></td>
<td></td>
<td></td>
<td>359,610</td>
</tr>
<tr>
<td>5029</td>
<td>Support cost (B)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>In-Direct Operating Cost @ 7% of Direct Project Cost</td>
<td>LS</td>
<td></td>
<td></td>
<td>25,173</td>
</tr>
<tr>
<td></td>
<td>Grand TOTAL (A+B)</td>
<td></td>
<td></td>
<td></td>
<td>384,783</td>
</tr>
</tbody>
</table>
Risk Management

Risk management is a coordinated set of activities to direct and control an organization with regard to risks. It comprises a structured, methodical approach to identifying and managing risks for the achievement of objectives.

The risk management plan will allow to manage risks by monitoring mitigation actions throughout implementation. Part A focuses on external risks to the project and Part B on the identified environmental and social risks from the project.

Section A: Risks to the project

This section will identify external risks to the project:

<table>
<thead>
<tr>
<th>Risk statement</th>
<th>Impact</th>
<th>Likelihood</th>
<th>Mitigating action</th>
<th>Action owner</th>
<th>Target date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Limited involvement of relevant stakeholders</td>
<td>Reduce number of beneficiaries for the project</td>
<td>Low</td>
<td>This should be avoided by demonstrating and clarifying the benefits and value-added of tagging animals to different stakeholders involved in the meat sector.</td>
<td>MoFALI, FAO and IDELE</td>
<td>During the entire period of the project</td>
</tr>
<tr>
<td>2. Persistence of other challenges that affect livestock/meat exports</td>
<td></td>
<td>Low to Medium</td>
<td>AIRS will not, on its own, solve animal health problems, poor capacities of the slaughterhouses and price control on domestic consumption. Therefore, it is important to maintain the link between AIRS project and other projects related to animal health system improvement and slaughterhouses’ capacities building.</td>
<td>MoFALI, FAO and IDELE</td>
<td>During the entire period of the project</td>
</tr>
<tr>
<td>3. Inadequate coordination with other projects in the livestock sector</td>
<td></td>
<td>Low to Medium</td>
<td>A large number of projects in Mongolia are proving different types of support to strengthen the veterinarian services. The successful implementation of this pilot will depend on good coordination and transparency among all the concerned stakeholders particularly MoFALI, other key donors and development partners. Substantial efforts will be made (through the steering committee) to share</td>
<td>MoFALI, FAO and IDELE</td>
<td>During the entire period of the project</td>
</tr>
</tbody>
</table>
information on the pilot project with other concerned stakeholders and to ensure transparent communication and good coordination in order to ensure complementarities and synergies with other activities supported by donors and development partners in Mongolia, as well as their support and commitment to help scale-up the pilot.
Section B: Environmental and Social risks from the project

Based on information collected during the preliminary survey, the environmental and social risks from the project is very less. Hence, this project falls under low risk project and therefore, environmental and social risk management plan is not required.