

**TERAMO**

DELIBERAZIONE DEL DIRETTORE GENERALE F. F.

Allegati ☒ 2

☒ Immediatamente eseguibile

DELIBERAZIONE N. 288 AVENTE AD OGGETTO: **Progetto Twinning OIE in**

**Epidemiologia e Analisi del Rischio tra l'Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise e il Department of Animal Resources Risk Assessment (KSA ARRAD)**

**dell'Arabia Saudita. Esame e provvedimenti.**

L'anno duemiladiciannove addì due del  
mese di luglio presso la sede dell'Ente, il Direttore Generale dell'Istituto F.F.,  
Dott. Nicola D'Alterio

**VISTO** il D.Lgs. 270/1993 concernente il "Riordino degli Istituto Zooprofilattici Sperimentali a norma dell'articolo 1, comma 1, lettera h) della legge 23.10.1992 n. 421";

**VISTO** il D.Lgs. 106/2012 concernente la "Riorganizzazione degli enti vigilati dal Ministero della salute, a norma dell'articolo 2 della legge 4 novembre 2010, n. 183";

**VISTA** la L.R. Abruzzo 21 novembre 2014, n. 41 e la L.R. Molise 4 marzo 2015, n. 2, di attuazione del richiamato D.Lgs. 106/2012;

**CONSIDERATO** che:

- l'Istituto, in quanto incluso nella rete dei Centri di Collaborazione (CC) e Laboratori di Riferimento (RL) dell'OIE, ha come compito fondamentale quello di fornire un supporto permanente all'OIE per il raggiungimento dei suoi obiettivi attraverso la standardizzazione delle più importanti tecniche diagnostiche impiegate e la diffusione delle metodologie applicabili al proprio settore di competenza anche, e soprattutto, mettendo a disposizione consulenti ed esperti per la formazione scientifica e tecnica del personale dei Paesi membri dell'OIE;
- l'OIE ha espresso la volontà di implementare progetti di gemellaggio (*twinning project*) tra i propri CC/LR ed i laboratori di paesi in via di sviluppo o in transizione per permettere a questi ultimi di acquisire le necessarie competenze scientifiche per discutere a pari livello con i Paesi membri e giustificare e formulare le strategie di controllo di salute degli animali nel rispetto degli standard dell'OIE, questo soprattutto in considerazione del potenziale aumento della velocità di diffusione globale delle malattie degli animali ed agenti patogeni;

**DATO ATTO** che l'Istituto, nell'adempimento del ruolo sopra specificato, partecipa in qualità di *Parent Institute* al progetto di gemellaggio OIE nel campo dell'Epidemiologia ed Analisi del Rischio con il Department of Animal Resources Risk Assessment (KSA ARRAD) di Riyadh (Arabia Saudita) nel ruolo di *Candidate Institute*;

**VISTO** il progetto di gemellaggio, allegato al presente provvedimento in parte integrante e sostanziale, e vista, altresì, la nota AD/ICA/2019/84 del 27/03/2019 (prot. interno 6668 del 18/04/2019), anch'essa allegata, con la quale l'OIE comunica all'Istituto l'importo complessivo assegnato alla realizzazione delle attività progettuali, corrispondente a € 219.320,00, nonché gli importi delle rate e le relative condizioni di pagamento, che di seguito si riportano:

<b>Budget Totale Approvato</b>	<b>€ 219.320,00</b>	
Acconto	Al ricevimento dei fondi da parte delle Autorità Saudite	40%
Primo pagamento intermedio	Al ricevimento del primo report annuale	30%
Secondo pagamento intermedio	Al ricevimento del secondo report annuale	20%
Saldo	All'approvazione del report finale	10%

**PRECISATO** che il ruolo di responsabile del progetto è ricoperto dal Dott. Paolo Calistri;

**PRECISATO** che, fatte salve eventuali estensioni, la durata del progetto è di 36 mesi decorrenti dalla data della riunione di avvio del progetto, che presumibilmente si terrà nel mese di luglio 2019 a Riyadh (Arabia Saudita);

**RITENUTO** di procedere all'adozione dei relativi adempimenti contabili e, pertanto:

- prevedere nel bilancio 2019 la somma complessiva di € 219.320,00 che movimenterà il conto di ricavo R23007, con riserva di rettifiche, in diminuzione o aumento, in esito alle attività effettivamente svolte;
- imputare le spese necessarie alla realizzazione delle attività progettuali come da previsioni, condivise con il Controllo di Gestione, riportate nella seguente tabella:

<b>VOCI DI SPESA</b>	<b>IMPORTO IN €</b>
Missioni del personale IZSAM	46.250,00
Altre spese – <i>per diem</i> personale esterno	76.850,00
Altre spese – viaggi personale esterno	92.500,00
Altre spese – altri costi organizzativi e gestionali	3.720,00
<b>TOTALE</b>	<b>219.320,00</b>

**RITENUTO**, altresì, di autorizzare il Reparto Contabilità e Bilancio a procedere alla variazione delle voci di spesa dietro presentazione di apposita richiesta motivata in tal senso da parte del Responsabile del progetto e validata dal Controllo di Gestione;

**CONSIDERATO**, inoltre, che tra le finalità principali del progetto di cui trattasi rientra la formazione del personale del *Candidate Institute* attraverso periodi e visite di studio in Italia e precisato, altresì, che i fondi di progetto garantiscono la copertura, per ciascun partecipante, delle spese di viaggio e l'erogazione di *per diem* da corrispondere a titolo di indennità per ogni notte trascorsa in Italia;

**CONSIDERATO** che, nelle numerose pregresse esperienze di progetti di gemellaggio, si è constatato che nella quasi totalità dei casi intercorre un lasso di tempo brevissimo tra il momento in cui l'Istituto viene a conoscenza dello svolgimento della visita di studio e l'effettivo avvio della stessa, rendendo spesso impossibile la predisposizione in tempo utile delle procedure di acquisto dei titoli di viaggio e di liquidazione e versamento dei *per diem* ai partecipanti;

**RITENUTO**, pertanto, sulla base delle considerazioni sopra esposte, di autorizzare sin d'ora, in via generale, l'organizzazione dei periodi di formazione in Italia previsti dal progetto e le relative spese, consistenti essenzialmente nell'erogazione dei *per diem* e nel pagamento dei costi di viaggio ai partecipanti che di volta in volta arriveranno in Istituto, evitando di provvedere ogni

volta all'adozione di uno specifico atto, con conseguente snellimento e semplificazione delle relative procedure amministrative;

**RITENUTO**, infine, di autorizzare, nel rispetto delle procedure di legge, tutte le spese necessarie alla realizzazione delle attività progettuali ed altresì autorizzarne la liquidazione ed il pagamento nel rispetto delle procedure vigenti e previo riscontro di legittimità della spesa;

**RITENUTO** di dare immediata eseguibilità al presente provvedimento dato l'inizio imminente del progetto;

### **DELIBERA**

- 1) Dare atto di tutto quanto riportato in premessa e che si intende qui integralmente richiamato.
- 2) Dare atto che l'Istituto partecipa in qualità di *Parent Institute* al progetto di gemellaggio OIE nel campo dell'Epidemiologia ed Analisi del Rischio con il Department of Animal Resources Risk Assessment (KSA ARRAD) di Riyadh (Arabia Saudita) nel ruolo di *Candidate Institute* del valore complessivo pari ad € 219.320,00.
- 3) Precisare che, fatte salve eventuali estensioni, la durata del progetto è di 36 mesi decorrenti dalla data della riunione di avvio del progetto, che presumibilmente si terrà nel mese di luglio 2019 a Riyadh (Arabia Saudita).
- 4) Procedere all'adozione dei relativi adempimenti contabili e, pertanto:
  - prevedere nel bilancio 2019 la somma complessiva di € 219.320,00 che movimenterà il conto di ricavo R23007, con riserva di rettifiche, in diminuzione o aumento, in esito alle attività effettivamente svolte;
  - imputare le spese necessarie alla realizzazione delle attività progettuali come da previsioni condivise con il Controllo di Gestione e riportate in premessa.
- 5) Autorizzare il Reparto Contabilità e Bilancio a procedere alla variazione delle voci di spesa dietro presentazione di apposita richiesta motivata in tal senso da parte del responsabile del progetto e validata dal Controllo di Gestione.
- 6) Autorizzare sin d'ora, in via generale, sulla base delle considerazioni esposte in premessa, l'organizzazione dei periodi di formazione in Italia previsti dal progetto e le relative spese, consistenti essenzialmente nell'erogazione dei *per diem* e nel pagamento dei costi di viaggio ai partecipanti che di volta in volta arriveranno in Istituto, evitando di provvedere ogni volta all'adozione di uno specifico atto, con conseguente snellimento e semplificazione delle relative procedure amministrative.
- 7) Autorizzare, nel rispetto delle procedure di legge, tutte le spese necessarie per la realizzazione delle attività progettuali ed altresì autorizzarne la liquidazione ed il pagamento nel rispetto delle procedure vigenti e previo riscontro di legittimità della spesa.
- 8) Dare immediata eseguibilità al presente provvedimento per le motivazioni esposte in premessa.
- 9) Precisare che al progetto di cui trattasi sono stati assegnati i seguenti codici:
  - codice interno OIETWAS119;
  - codice CUP B21G19000360005.

Istruttore del procedimento	Si attesta la regolarità del procedimento svolto e la correttezza del presente atto.	Si attesta che la spesa risulta regolarmente imputata alla voce di conto n. VARI del bilancio anno corrente
Nome e cognome	IL DIRIGENTE PROPONENTE	IL RESPONSABILE DELLA S.S. CONTABILITA' E BILANCIO
F.to Ersilia Di Pancrazio	F.to Barbara Alessandrini	F.to Paola De Flaviis

PARERE DEL DIRETTORE SANITARIO:	PARERE DEL DIRETTORE AMMINISTRATIVO:
FAVOREVOLE <input checked="" type="checkbox"/>	FAVOREVOLE <input checked="" type="checkbox"/>
NON FAVOREVOLE (con motivazioni allegate) <input type="checkbox"/>	NON FAVOREVOLE <input type="checkbox"/> (con motivazioni allegate)
F.to Nicola D'alterio	F.to. Lucio Ambrosj

**IL DIRETTORE GENERALE F.F.**

**F.to Nicola D'Alterio**

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**ATTESTATO DI PUBBLICAZIONE**

Si attesta che la presente deliberazione viene pubblicata all'Albo di questo Istituto in data odierna e vi rimarrà affissa per giorni .....15...consecutivi.

Data 17.07.2019

**IL DIRIGENTE RESPONSABILE**

**F.to Claudia Rasola**

**La presente delibera è immediatamente eseguibile**

# Twinning Project

## Epidemiology and risk assessment

**Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise  
"G. Caporale" (IZSAM), Teramo, Italy**

**Department of Animal Resources Risk Assessment (KSA ARRAD),  
Riyadh, Kingdom of Saudi Arabia**

<b>Parent Laboratory</b> IZSAM, Italy	<b>OIE Delegate of Italy</b>	<b>Candidate Laboratory</b> KSA, ARRAD	<b>OIE Delegate of Saudi Arabia</b>
Signature	<i>Signature</i>	Signature	Signature
Date:	Date:	Date:	Date:

Date:

## 1.1 Overall project plan description

*Please specify here: Parent Institute, Candidate Institute, Animal Disease(s) or Topic covered, length of project and main activities*

Parent Institute: Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale", Teramo, Italy (IZSAM).

Candidate Institute: Department of Animal Resources Risk Assessment, Riyadh, Kingdom of Saudi Arabia (KSA ARRAD).

Topic of the project: Epidemiology and risk assessment.

Duration: 36 months

The general objective is to strengthen the skills and capacities of KSA ARRAD's personnel in performing relevant epidemiological data analysis and risk assessment studies.

Main activities:

The project is based on a 36-month long in-service learning process of the KSA ARRAD's personnel in the fields of data analysis and risk assessment.

Three sessions of training on-the-job stages will be carried out at IZSAM for each of the following topics: (i) infectious disease modelling and social network analysis, (ii) spatial analysis of infectious diseases, (iii) simulation models. For each topic a 3-person team will be trained.

Three intermediate meetings will be held in Riyadh to assure the coordination of the project, and for further training of the whole KSA ARRAD's personnel on basic epidemiology.

A workshop for KSA Regional Officers will be carried out to facilitate an at cascade approach, in which the already trained personnel will act as facilitators for further training activities.

At the end of the project the following deliverables will be produced:

- Preparation of at least two scientific papers, ready to be submitted to an international peer-reviewed journal,
- The translation into Arabic of the contents of the modules of an e-learning training course on basic epidemiology, already developed by IZSAM in English language,
- Document describing a mid-term strategic plan for the development of the competencies and capacities of the KSA ARRAD personnel in performing risk assessment studies, including the definition of basic principles and internal guidelines for performing a risk assessment study and the development of key indicators for performance measurement and evaluation.

## 1.2 Background/Introduction

This should include:

Reference to the current activities of the Parent OIE Reference Laboratory and the Candidate Laboratory; the importance of the project in relation to the disease situation in the region; how the project will meet the objectives of the OIE Twinning concept and how it will provide regional support; any previous collaboration between the two laboratories; the intended outcome (i.e. the expected final level of competence of the Candidate Laboratory) and sustainability of expertise/capacity after the project has finished.

**Parent Institute:** Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale", Teramo, Italy (IZSAM).

Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale" (IZSAM), founded in 1941, is a public institution belonging to the Italian National Health System. IZSAM provides scientific and technical support in the fields of public health, animal health, food hygiene and food safety to national and sub-national Italian veterinary and public health authorities, promoting the "One Health approach". IZSAM is one of the ten official veterinary laboratories operating within the network of the Italian Ministry of Health, which appointed the IZSAM as National Reference Centre for different topics and National Reference Laboratory for some animal diseases and food contaminations.

At national level, IZSAM is:

- National Reference Centre for Veterinary Epidemiology, Programming, Information and Risk Analysis (COVEPI),
- National Reference Centre for Whole Genome Sequencing of microbial pathogens: database and bioinformatic analysis,
- National Reference Laboratory for *Listeria monocytogenes*,
- National Reference Laboratory for *Campylobacter*,
- National Reference Laboratory for Dioxins (PCDDs/PCFFs) and Polychlorobiphenyls (PCBs),
- National Reference Laboratory for Peste des Petits Ruminants (PPR),
- National Reference Laboratory for Capripox viruses (Sheep & Goat Pox and Lumpy Skin Disease),
- National Reference Laboratory for African Horse sickness (AHS),
- National Reference Centre for the study and verification of Foreign Animal Diseases (CESME),
- National Reference Centre for Brucellosis,
- National Reference Centre for Urban Hygiene and Non-Epidemic Emergencies (IUVENE),
- National Services Centre for the National Database for the Animal Identification and Registration System.

At international level, IZSAM is:

- OIE Collaborating Centre for Veterinary Training, Epidemiology, Food Safety and Animal Welfare,
- FAO Reference Centre for Veterinary Epidemiology,
- OIE Reference Laboratory for Brucellosis,
- OIE Reference Laboratory for Contagious Bovine Pleuropneumonia (CBPP),
- OIE Reference Laboratory for Bluetongue,
- OIE Reference Laboratory for West Nile Disease.

In particular, in relation to the fields of interest of this project, IZSAM has a long a consolidated experience in epidemiology and risk analysis fields and in training veterinary services.

Epidemiology and risk analysis: COVEPI provides a high level technical assistance and capacity building in the fields of epidemiology and risk analysis. Among its tasks, COVEPI prepares emergency plans, surveillance plans and operating protocols, performs risk assessment studies in animal health, food safety and animal welfare sectors, and develops procedures and protocols for epidemiological analysis and surveillance activities in the fields of animal health, livestock production and foods of animal origin. It supports the design and development of national and international information systems for the collection of data of epidemiological relevance.

Training: Knowledge management and capacity building are considered of paramount importance at IZSAM since 1991, when a Training Unit was established for the first time in a veterinary research institute in Italy. In 2009, IZSAM inaugurated the International Centre for Veterinary Training and Information (CIFIV), a training structure of excellence founded to strengthen the centres of expertise of IZSAM, to enable knowledge generation, knowledge sharing, and capacity building within OIE, FAO and the EU Member States

**Candidate Institute:** Department of Animal Resources Risk Assessment, Kingdom of Saudi Arabia, Riyadh (KSA ARRAD).

The Department of Animal Resources Risk Assessment (KSA ARRAD) is a part of the Directorate of Agriculture (Ministry of Environment, Water and Agriculture in KSA). The Department was established in 22/12/2016.

The aim of the KSA ARRAD is to monitor and analyse the risks for animal resources, including infectious diseases (transboundary, endemic, zoonotic and vector-borne diseases), environmental hazards and other risks potentially causing damage to animals and animal products, or affecting human health in the Kingdom.

The KSA ARRAD also conducts epidemiological monitoring of outbreaks of various infectious diseases inside and outside the Kingdom, supervising the implementation of contingency plans, assessing the application of control measures for infectious diseases and implementing early warning systems. It also collects and analyses all periodic data reports received from all clinics, laboratories, veterinary quarantine stations and results of active epidemiological surveys.



KSA ARRAD also works on collecting data and notifications from the OIE, citizens and veterinarians through the Emergency and Information Center.

The training activities foreseen in this project are in the framework of a broader multiannual plan for the development of human resources within the Directorate of Animal Resources, with particular focus on strengthening the capacities and the efficiency of the KSA ARRAD.

The objectives of this project are fully in compliance with the objectives of the OIE Twinning initiatives, aiming at improving the knowledge and capacity in the proper application of surveillance and risk analysis methods in the framework of the Terrestrial Animal Health Code (TAHC). The improvement of the capacities of the KSA ARRAD will lead to a better application of the principles and recommendations of the TAHC for KSA and the whole Region.

## 1.3 Objectives

*Please provide a short and concise list of the objectives:*

- To strengthen the capacities of the KSA ARRAD in:
  - performing epidemiological and risk assessment studies,
  - evaluating the epidemiological situation of endemic diseases in KSA and control measures in place,
  - receiving and analysing relevant data on international epidemiological situation and making decisions on risks deriving from the international situation,
  - designing and implementing data collection and analysis systems, surveillance systems and early warning systems, especially those for priority animal diseases, zoonoses and vector borne diseases,
  - disseminating the outcomes of its activities by regular reports and publications, producing valuable scientific papers and publishing scientific information,
  - designing and developing animal identification and traceability systems,
  - planning and assessing possible quarantine measures, to reduce the risk of animal diseases introduction.
- To reinforce the skills and the capacities of KSA ARRAD personnel in the proper application of epidemiological and risk assessment methods, including GIS (Geographic Information Systems), analysis of remote sensing data and infectious diseases modelling.
- To support the KSA ARRAD in the preparation of a mid-term strategic plan for the development of the competencies and capacities of the KSA ARRAD personnel in performing risk assessment studies, including the definition of basic principles and internal guidelines for performing a risk assessment study and the development of key indicators for performances measurement and evaluation.

## 1.4 Description of how objectives will be met

Provide a brief description of the planned activities that will be required to meet each of the objectives listed in 2.3.

The draft of the project has been preceded by the assessment of the training needs, which was performed through the submission of two types of questionnaires (at service and individual levels) and a preliminary visit to KSA ARRAD in Riyadh of IZSAM's personnel on February 2018. These preliminary activities allowed at assessing the skills and competencies already in place at KSA ARRAD, the service's tasks and the related gaps and needs to be covered through the project.

It is noteworthy that the training activities foreseen in this project are in the framework of a broader multiannual plan for the development of human resources within the Directorate of Animal Resources, with particular focus on strengthening the capacities and the efficiency of the KSA ARRAD. For this reason, the project is primarily focussed on strengthening the competencies and capacities of the KSA ARRAD's personnel at central level, in Riyadh, but it includes also the involvement of the rest of the personnel at central and regional levels following at cascade approach, in which the already trained personnel will act as facilitators for further training activities. This aspect is particularly important and represents a significant strengths for the project, due to the strong commitment and engagement of KSA Directorate of Animal Resources directorate at highest levels.

Since the main project's objectives are those focussed on improving the capacities of the KSA ARRAD's personnel, a "learning by doing" approach is followed. The trainees will learn the proper use of the main epidemiological analysis techniques through the practical application of these methods on real data, collected by the KSA ARRAD and related to priority diseases for KSA. The IZSAM's experts will act as facilitators of this learning process, supporting the KSA ARRAD's personnel in all steps of epidemiological and risk assessment studies, suggesting those data analysis techniques more appropriate, helping them in the application of those epidemiological methods and interpretation of results.

This in-service training approach requires more time and a greater level of flexibility in comparison to a traditional "academic" approach, but it permits to better integrate the training for the improvement of "technical" (knowledge) and "functional" (ability of doing) capacities.

From this reason some tangible deliverables have been considered to be produced at the end of the project, as significant indicators of the success of the project and objectives achievement:

- At least the preparation of two scientific papers, ready to be submitted to an international peer-reviewed journal,
- The translation into Arabic of the contents of the modules of an e-learning training course on basic epidemiology, already develop by IZSAM in English language.

## 1.5 Technical reporting schedule

Annual project report(s) due to the OIE on:	At the end of every year
A final project report due to the OIE on:	After one month of close of the project
Post-project review due to the OIE on:	As and when needed

## 1.6 Work plan

Concise description of the activities that will take place during each stage of the project.

### 1- KICK-OFF MEETING

Place: KSA ARRAD, Riyadh, KSA

Duration: 5 days

Participants from KSA ARRAD and 3 experts from IZSAM

#### Description of activities

The meeting will be held in Riyadh, KSA, with the participation of the Directors of both Institutes, the relevant personnel of IZSAM and KSA ARRAD. A first day will be dedicated to the project presentation and discussion, with the definition of all the organizational details for the following agreed activities. At the end of the first day meeting, a detailed plan of action will be prepared.

The other four days will be dedicated to a training course for KSA ARRAD personnel. Topics of the course will be: Surveillance and surveillance systems, Surveillance in wildlife, Early warning systems, Strategies for disease control, prevention and eradication, Concepts of diseases and transmission patterns, Descriptive epidemiology, Characteristics of diagnostic tests, Statistical sampling, Transversal, case-control and cohort studies (association studies), Methods for testing statistical associations, Outbreak investigations, Introduction to risk analysis.

### 2- WP 1: Training session on general/trasversal

Place: IZSAM, Teramo, Italy

Duration: 42 days

Participants: 9 personnel from KSA ARRAD divided into 3 teams of 3 person each attending a 2 week-long training.

#### Description of activities

A 2 weeks training focused on the following topics: Field epidemiology aspects, risk analysis and international organizations, probability definitions and probability distributions, risk concept, risk analysis framework, main risk assessment approaches in animal health. A specific session will be devoted to the GIS

and the use of QGIS sw. Visit to the IZSAM Institute, the Information Systems managed by IZSAM and risk assessment centre.

### 3- 1<sup>st</sup> INTERMEDIATE MEETING

Place: KSA ARRAD, Riyadh, KSA

Duration: 5 days

Participants from KSA ARRAD and 2 experts from IZSAM

#### Description of activities

The meeting will be held in Riyadh, KSA, with the participation of the personnel of IZSAM and KSA Livestock risk assessment centre. Three days will be dedicated to a training course for KSA ARRAD personnel. Topics of the course will be: Introduction to probability theories, probability definition and algebra of events, frequency/probability distributions, probability density, Uncertainty and variability, Using Excel functions for risk assessments and @Risk, Simulation models. Monte Carlo sampling, stochastic processes.

In the other days it will be discussed the possible case-studies to be considered for the following training on-the-job sessions. In particular, at least three different case-studies must be identified to be utilised in the training sessions on (i) infectious disease modelling and social network analysis, (ii) spatial analysis of infectious diseases, (iii) simulation models. A detailed analysis of the chosen case-studies will be performed. At the end of the mission a detailed data analysis plan have to be agreed and prepared for each case-study.

### 4- WP 2: 1<sup>st</sup> round of training sessions (stage on modelling)

Place: IZSAM, Teramo, Italy

Duration: 14 days

Participants: team of 3 experts from KSA ARRAD

#### Description of activities

A two week stage with training on-the-job and meetings. The training will be focussed on modelling approaches for infectious diseases, included social network analysis approaches.

### WP 2: 1<sup>st</sup> round of training sessions (stage on spatial analysis)

Place: IZSAM, Teramo, Italy

Duration: 14 days

Participants: team of 3 experts from KSA ARRAD

#### Description of activities

A two week stage with training on-the-job and meetings. The training will be focussed on spatial data analysis, including the data preparation and analysis of satellite data.

WP 2: 1<sup>st</sup> round of training sessions (stage on simulation modelling)

Place: IZSAM, Teramo, Italy

Duration: 14 days

Participants: team of 3 experts from KSA ARRAD

Description of activities

A two week stage with training on-the-job and meetings. The training will be focussed on different approaches for building a simulation model.

5- 2nd INTERMEDIATE MEETING

Place: KSA ARRAD, Riyadh, KSA

Duration: 5 days

Participants from KSA ARRAD and 2 experts from IZSAM

Description of activities

The meeting will be held in Riyadh, KSA, with the participation of the personnel of IZSAM and KSA ARRAD. Two days will be dedicated to the presentation of work done by the KSA ARRAD personnel, discussion, possible re-planning of activities. Three days will be dedicated to a training course on the following topics: training methodologies, risk communication, dealing with uncertainty, interaction between risk assessors and risk managers. During this mission the possible preparation of risk assessment internal guidelines and a strategic plan for KSA ARRAD will be discussed and evaluated. The contents of the already developed e-learning course on basic epidemiology will be also jointly evaluated and a plan for their translation into Arabic will be prepared.

6- WP 3: 2nd round of training sessions (stage on modelling)

Place: IZSAM, Teramo, Italy

Duration: 14 days

Participants: team of 3 experts from KSA ARRAD

#### Description of activities

A two-week stage with training on-the-job and meetings. The work will be focussed on the prosecution of the data analysis work according to the plan.

WP 3: 2nd round of training sessions (stage on spatial analysis)

Place: IZSAM, Teramo, Italy

Duration: 14 days

Participants: team of 3 experts from KSA ARRAD

#### Description of activities

A two week stage with training on-the-job and meetings. The work will be focussed on the prosecution of the data analysis work according to the plan.

WP 3: 2nd round of training sessions (stage on simulation modelling)

Place: IZSAM, Teramo, Italy

Duration: 14 days

Participants: team of 3 experts from KSA ARRAD

#### Description of activities

A two week stage with training on-the-job and meetings. The work will be focussed on the prosecution of the data analysis work according to the plan.

#### 7- 3rd INTERMEDIATE MEETING

Place: KSA ARRAD, Riyadh, KSA

Duration: 3 days

Participants from KSA ARRAD and 2 experts from IZSAM

#### Description of activities

The meeting will be held in Riyadh, KSA, with the participation of the personnel of IZSAM and KSA ARRAD. The three days will be dedicated to the presentation of work done by the KSA ARRAD personnel, discussion, possible re-planning of activities. During this mission the preparation of risk assessment internal guidelines

and the strategic plan for KSA ARRAD will be finalised. In addition, the progresses in the translation into Arabic of the contents of the e-learning course will be assessed.

#### 8- WP 4: 3rd round of training sessions (stage on modelling)

Place: IZSAM, Teramo, Italy

Duration: 14 days

Participants: team of 3 experts from KSA ARRAD

##### Description of activities

A two week stage with training on-the-job and meetings. The work will be focussed on the finalisation of the data analysis work and the preparation of a draft of a paper to be submitted to a scientific journal.

#### WP 4: 3rd round of training sessions (stage on spatial analysis)

Place: IZSAM, Teramo, Italy

Duration: 14 days

Participants: team of 3 experts from KSA ARRAD

##### Description of activities

A two week stage with training on-the-job and meetings. The work will be focussed on the finalisation of the data analysis work and the preparation of a draft of a paper to be submitted to a scientific journal.

#### WP 4: 3rd round of training sessions (stage on simulation modelling)

Place: IZSAM, Teramo, Italy

Duration: 14 days

Participants: team of 3 experts from KSA ARRAD

##### Description of activities

A two week stage with training on-the-job and meetings. The work will be focussed on the finalisation of the data analysis work and the preparation of a draft of a paper to be submitted to a scientific journal.

#### 9- WORKSHOP for KSA Regional Officers

Place: KSA ARRAD, Riyadh, KSA

Duration: 5 days

Participants from KSA Regional Offices, KSA ARRAD and 2 experts from IZSAM

##### Description of activities

Training course dedicated to the KSA Regional Officers in the following topics: Field Epidemiology, Outbreak investigations, data collection and reporting. The contents of the e-learning modules on basic epidemiology, translated into Arabic, will be presented and used for the training of KSA Regional Officers.

#### 10- FINAL MEETING

Place: KSA ARRAD, Riyadh, KSA

Duration: 3 days

Participants from KSA authorities, KSA ARRAD, and 3 experts from IZSAM

##### Description of activities

The meeting will be held in Riyadh, KSA, with the participation of the personnel of IZSAM, KSA authorities and KSA ARRAD. During the meeting the final products and deliverables obtained during the project will be presented and discussed. Discussions on further collaboration activities. A session for the post training evaluation will be performed.

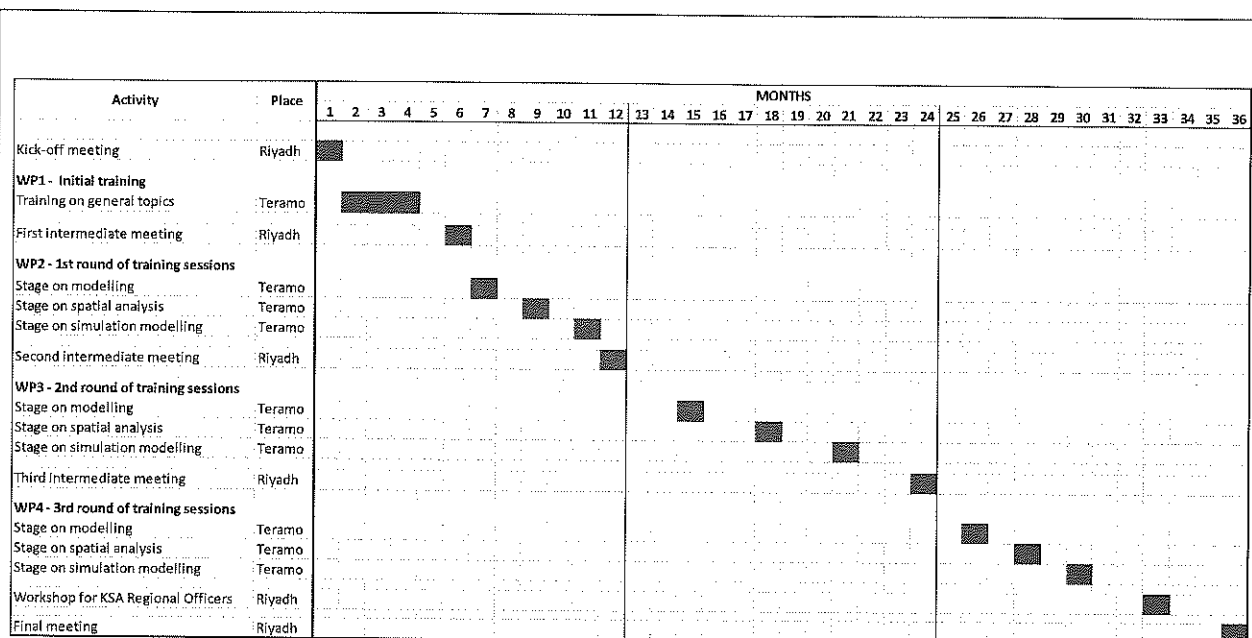
## 1.7 Training plan (if appropriate)

The whole project is based on a comprehensive and in-service training process to strengthen the skills and capacities of KSA ARRAD's personnel in epidemiological data analysis and risk assessment. The specific activities are fully describes in the work plan.



## 1.8 Timetables and measurable outputs (with reference to 1.6 'the work plan')

To include a proposed start date, length of the project and proposed dates for major activities such as workshops, secondments, ring trials, etc.



### Outputs

At the end of the project the following deliverables must be produced:

- At least the preparation of two scientific papers, ready to be submitted to an international peer-reviewed journal,
- The translation into Arabic of the contents of the modules of an e-learning training course on basic epidemiology, already develop by IZSAM in English language,
- Document describing a mid-term strategic plan for the development of the competencies and capacities of the KSA ARRAD personnel in performing risk assessment studies, including the definition of basic principles and internal guidelines for performing a risk assessment study and the development of key indicators for performances measurement and evaluation.

## 1.9 Foreseeable Risk

Any foreseeable risk to the project

The main risk is represented by any factor that could hamper the continuity of the learning process, such as the change of KSA ARRAD's personnel during the project or emergencies or other external factors causing significant delays to the project. In fact, it is crucial to assure the continuity of the learning process to maximise the positive effects on capacities development.

The existence of three intermediate meetings will assure a prompt recognition of any delay or risk for the learning process and the immediate application of the appropriate countermeasures.

## 1.10 Communication plan

This should include methods of communication between the two laboratories and OIE, contact details for focus points at both laboratories and OIE, and a schedule for project updates and reviews.

Two Scientific Coordinators of the project will be appointed respectively by KAS ARRAD and IZSAM. Project's internal communication will be assured by the periodical intermediate meetings and a monthly meeting at distance between the two scientific coordinators. During these meetings the progresses of the project will be discussed and assessed.

## 1.11 Provisions for shipment of samples (if appropriate)

In accordance with the requirements for postage and packaging of biological materials described in of the OIE Terrestrial Animal Health Code and Manual of Diagnostic Tests and Vaccines for Terrestrial Animals

## 1.12 Estimate of budget

• Parent	
• Candidate	
• Animal Disease	
• Travel	125 000 €
• Per diems	90 600 €
• Laboratory consumables	
• Other	3 720 €
• Total budget estimate	219 320 €

**Note: All expenses relating to this project shall be covered by KSA ARRAD. No financial contribution will be requested from the OIE.**

## 1.13 Complementary activities

Provide a brief description of any planned activities that fall outside the scope of twinning and are complementary to the overall initiative to build capacity in the Candidate Laboratory

## Budget details

Activity	Place	Unit cost	Number of units	Total
Kick-off meeting	Riyadh			
Travel costs	€	2 500.00	3 €	7 500.00
Per diem	€	250.00	15 €	3 750.00
Other costs	€	-	0 €	-
Subtotal activity			€	11 250.00
<b>WP1 - Initial training</b>				
Training on general topics	Teramo			
Travel costs	€	2 500.00	9 €	22 500.00
Per diem	€	150.00	126 €	18 900.00
Other costs (Transfer from/to Rome FCO)	€	310.00	3 €	930.00
Subtotal activity			€	42 330.00
First intermediate meeting	Riyadh			
Travel costs	€	2 500.00	2 €	5 000.00
Per diem	€	250.00	10 €	2 500.00
Other costs	€	-	0 €	-
Subtotal activity			€	7 500.00
<b>WP2 - 1st round of training sessions</b>				
Stage on modelling	Teramo			
Travel costs	€	2 500.00	3 €	7 500.00
Per diem	€	150.00	42 €	6 300.00
Other costs (Transfer from/to Rome FCO)	€	310.00	1 €	310.00
Subtotal activity			€	14 110.00
Stage on spatial analysis	Teramo			
Travel costs	€	2 500.00	3 €	7 500.00
Per diem	€	150.00	42 €	6 300.00
Other costs (Transfer from/to Rome FCO)	€	310.00	1 €	310.00
Subtotal activity			€	14 110.00
Stage on simulation modelling	Teramo			
Travel costs	€	2 500.00	3 €	7 500.00
Per diem	€	150.00	42 €	6 300.00
Other costs (Transfer from/to Rome FCO)	€	310.00	1 €	310.00
Subtotal activity			€	14 110.00
Second intermediate meeting	Riyadh			
Travel costs	€	2 500.00	2 €	5 000.00
Per diem	€	250.00	10 €	2 500.00
Other costs	€	-	0 €	-
Subtotal activity			€	7 500.00
<b>WP3 - 2nd round of training sessions</b>				
Stage on modelling	Teramo			
Travel costs	€	2 500.00	3 €	7 500.00
Per diem	€	150.00	42 €	6 300.00
Other costs (Transfer from/to Rome FCO)	€	310.00	1 €	310.00
Subtotal activity			€	14 110.00
Stage on spatial analysis	Teramo			
Travel costs	€	2 500.00	3 €	7 500.00
Per diem	€	150.00	42 €	6 300.00
Other costs (Transfer from/to Rome FCO)	€	310.00	1 €	310.00
Subtotal activity			€	14 110.00
Stage on simulation modelling	Teramo			
Travel costs	€	2 500.00	3 €	7 500.00
Per diem	€	150.00	42 €	6 300.00
Other costs (Transfer from/to Rome FCO)	€	310.00	1 €	310.00
Subtotal activity			€	14 110.00
Third intermediate meeting	Riyadh			
Travel costs	€	2 500.00	2 €	5 000.00
Per diem	€	250.00	6 €	1 500.00
Other costs	€	-	0 €	-
Subtotal activity			€	6 500.00

<b>WP4 - 3rd round of training sessions</b>				
Stage on modelling	Teramo			
Travel costs	€	2 500.00	3 €	7 500.00
Per diem	€	150.00	42 €	6 300.00
Other costs (Transfer from/to Rome FCO)	€	310.00	1 €	310.00
Subtotal activity			€	14 110.00
Stage on spatial analysis	Teramo			
Travel costs	€	2 500.00	3 €	7 500.00
Per diem	€	150.00	42 €	6 300.00
Other costs (Transfer from/to Rome FCO)	€	310.00	1 €	310.00
Subtotal activity			€	14 110.00
Stage on simulation modelling	Teramo			
Travel costs	€	2 500.00	3 €	7 500.00
Per diem	€	150.00	42 €	6 300.00
Other costs (Transfer from/to Rome FCO)	€	310.00	1 €	310.00
Subtotal activity			€	14 110.00
Workshop for KSA Regional Officers	Riyadh			
Travel costs	€	2 500.00	2 €	5 000.00
Per diem	€	250.00	10 €	2 500.00
Other costs	€	-	0 €	-
Subtotal activity			€	7 500.00
Final meeting	Riyadh			
Travel costs	€	2 500.00	3 €	7 500.00
Per diem	€	250.00	9 €	2 250.00
Other costs	€	-	0 €	-
Subtotal activity			€	9 750.00
<b>OVERALL PROJECT</b>				
Travel costs	€			125 000.00
Per diem	€			90 600.00
Other costs	€			3 720.00
<b>OVERALL</b>	<b>€</b>			<b>219 320.00</b>