

# The Reproductive Platform to Deliver Genetic Gain in Sheep and Goats



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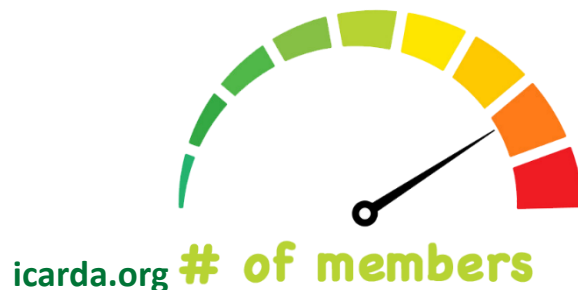


# Responding to a need “Scaling out/up CBBP’s” and facilitate access to genetic gain

**N**ew suggested approach as an alternative to the conventional centrally managed and top-down breeding programs (Haile et al., 2019; Mueller et al., 2015).

**P**rograms that adopt this strategy take into account farmers’ needs, views, decisions, and active participation, from inception to implementation.

**C**BBP’s have now reached a stage of maturity and are being adopted by Ethiopia government as the main strategy for genetic improvement (  +  )



1. Establishing new CBBP’s in new villages of the different project target areas

2. Expanding the number of household members in current CBBP’s

3. Reproductive platform for the delivery of improved genetics

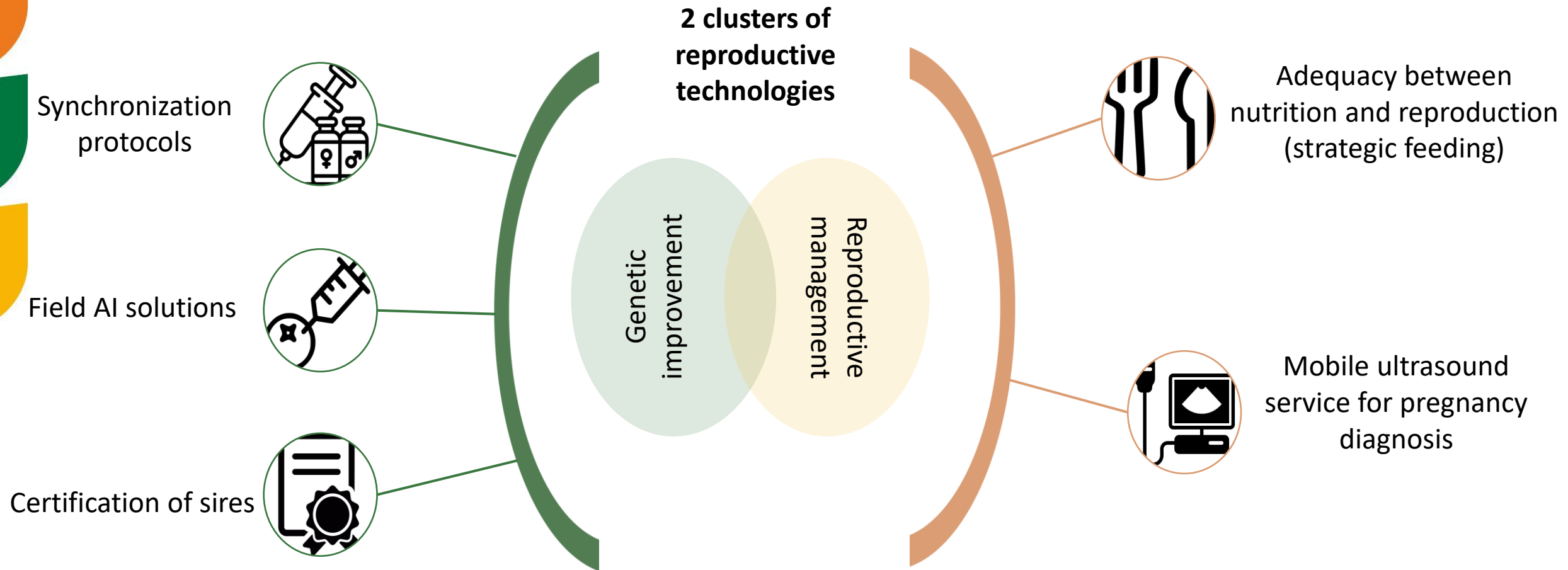


## **Review of the reproductive performances of sheep breeds in Ethiopia**

Documenting existing knowledge and identifying priority research needs

Building on existing  
scientific evidence

# Panel of reproductive technologies





# Co-designing research gap filling

## ORIGINAL ARTICLE

WILEY **Reproduction in Domestic Animals**

### GnRH and prostaglandin-based synchronization protocols as alternatives to progestogen-based treatments in sheep

M Rekik<sup>1</sup> | A Haile<sup>2</sup> | A Abebe<sup>3</sup> | D Muluneh<sup>4</sup> | S Goshme<sup>3</sup> | I Ben Salem<sup>5</sup> |  
M El-Dine Hilali<sup>1</sup> | N Lassoued<sup>6</sup> | Y Chanyalew<sup>3</sup> | B Rischkowsky<sup>2</sup>

The efficiency of estrus synchronization protocols and artificial insemination in the Abergelle goat on-station and on-farm conditions of Northern Ethiopia

Bekahegn Wondim, Mengistie Taye, Kefyalew Alemayehu, Mariem Rouatbi, Tesfaye Getachew, Aynalem Haile & Mourad Rekik



Journal of Applied Animal Research



ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/taar20>

Field synchronization of Ethiopian Highland sheep for fixed time artificial insemination: improvement of conception rate with a double injection of prostaglandin at 11 days

Shanbel Besufkad, Simret Betsha, Chekol Demis, Tesfaye Zewude, Mariem Rouatbi, Tesfaye Getachew, Aynalem Haile, Barbara Rischkowsky & Mourad Rekik

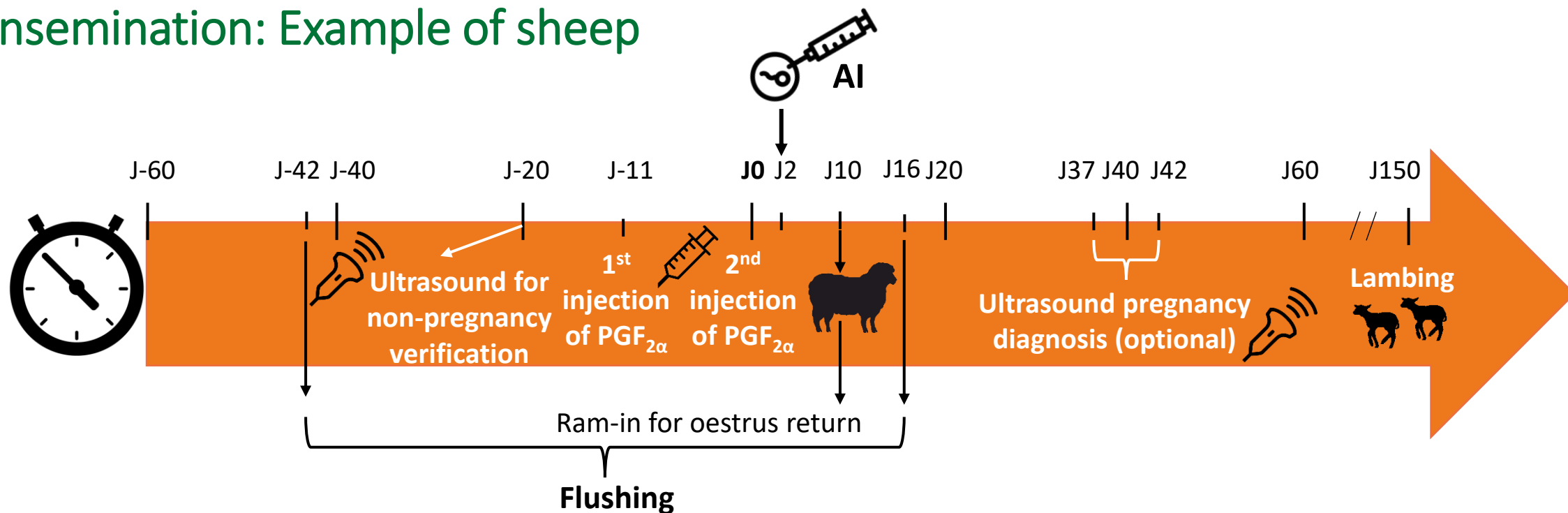
## ORIGINAL ARTICLE

**Animal Science Journal** WILEY



### Increased number of large non-atretic follicles and co-dominance effects account for high litter sizes in Bonga sheep

Asrat Tera Dolebo<sup>1</sup> | Aberra Melesse<sup>1</sup> | Cristian Porcu<sup>2</sup> | Tesfaye Getachew<sup>3</sup> |  
Aynalem Haile<sup>3</sup> | Mariem Rouatbi<sup>4</sup> | Zelalem Abate<sup>5</sup> | Muluken Zeleke<sup>5</sup> |  
Barbara Rischkowsky<sup>3</sup> | Joram M. Mwacharo<sup>3</sup> | Mourad Rekik<sup>6</sup>

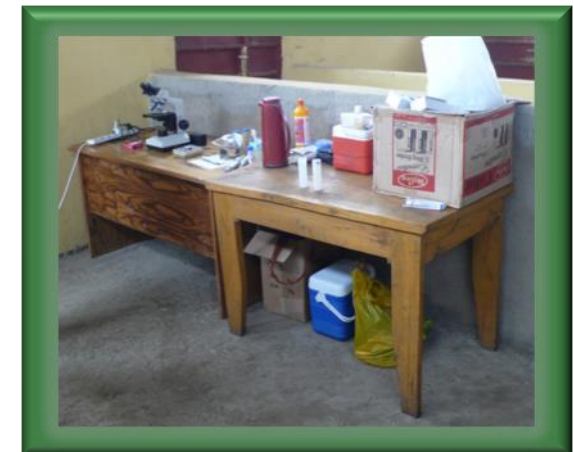
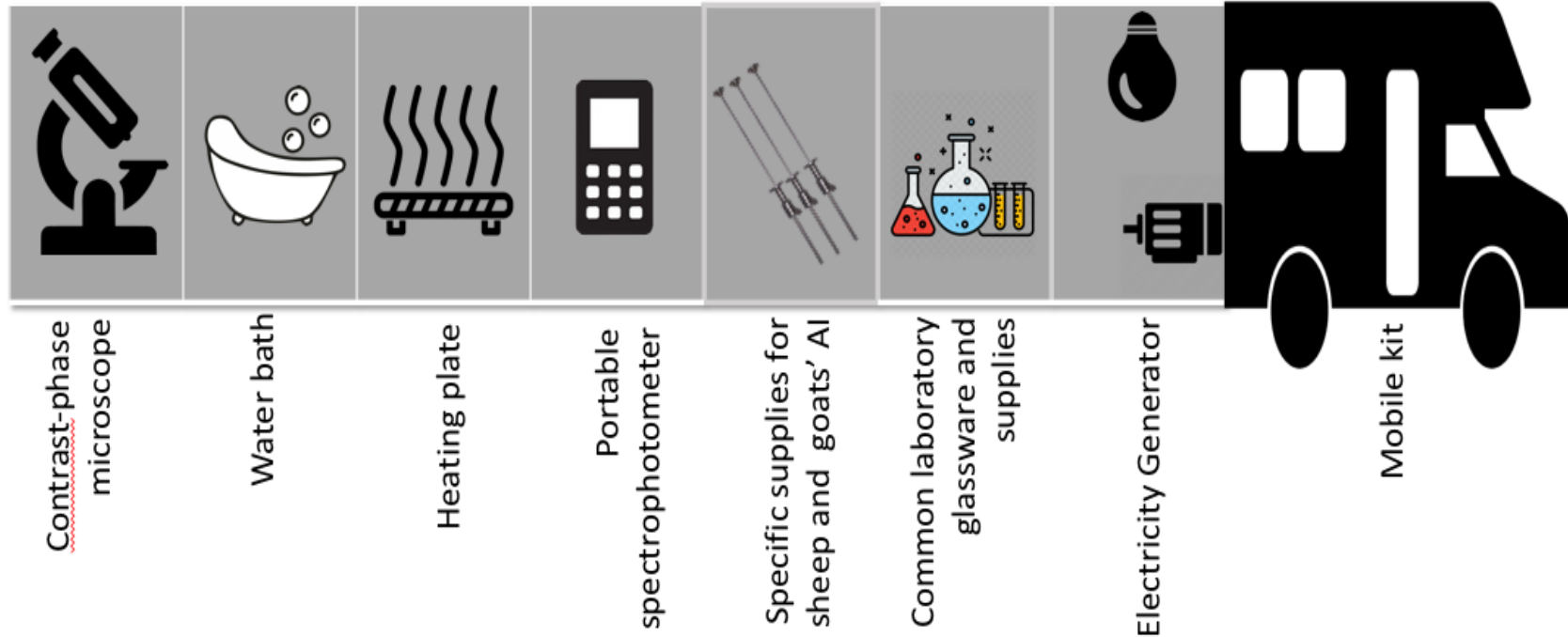
# Validating innovative, simple, affordable and accessible artificial insemination: Example of sheep



Using a synchronization protocol of 2 injections of prostaglandin 11 days apart:

- Increases fertility up to 89% in natural mating,
- Allows fixed time artificial insemination with a conception rate of 61% in  and > 65% in ,
- Saves on the cost: US\$ 1.3 vs. US\$ 8.5 for the conventional protocol,
- Locally available products to support delivery system.

# Co-investment in low-cost, low-infrastructure AI, mobile labs (7 laboratories in Ethiopia)







# Certification of all pre-selected yearling rams and bucks in Menz, Bonga, Doyogena and Konso

## Ram Pre-Breeding Examination: On-farm Data Collection Form (Doyogena CBPP)

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There should be a tick, measurement, comment, or 'NE' (not-examined) in each white box.

Date of birth/Age (months)				
BCS (out of 5)				
If normal, then write N. If abnormal then describe e.g small, enlarged, soft, hard, lumpy, swollen...	Teeth			
	Feet			
	Rest of body			
	Brisket			
	Prepuce			
	Penis			
	Scrotum			
	Testicles size	L	R	
	Epididymis head	L	R	
Epididymis tail	L	R		
Scrotal circumference (cm)				
Semen collection method	1st collection		2nd collection	
	AV	EEJ	AV	EEJ
Volume (ml)				
Gross density				
0 (clear) -5 (double creamy)				
Gross motility/ wave motion (0-5)				
Mating ability				

Vaccination	Date
Brucellosis	
Sheep pox	
Peste des Petits Ruminants	
Foot and mouth disease	
Enterotoxaemia	

	500371
	AGE
	Estimated breeding value

## Ram Pre-Breeding Examination Certificate (Doyogena CBBP)

Date of Examination: \_\_\_\_\_

### 1. Physical examination

Body condition score (1-5)	NAD	Abnormal
Eyes, nose and mouth		
Conformation and limb soundness		
Feet		
External genitalia		
Scrotal circumference	cm	
Overall results: SATISFACTORY* / UNSATISFACTORY*		

NAD = No Abnormality detected, \*delete as required  
Tick as appropriate

### 2. Semen examination

Collection method	AV*	EEJ **
Appearance/density	/5	
Gross motility	/5	
Overall results: SATISFACTORY* / UNSATISFACTORY*		

\*AV: Artificial vagina; \*\* EEJ: Electro-ejaculator

### 3. Assessment of mating ability and libido

This ram has been observed exhibiting normal service behavior and mating ability	
This ram has not been observed exhibiting normal service behavior and mating ability	

Tick as appropriate

### 4. Classification

SUITABLE FOR BREEDING	based on meeting the requirements of section 1 only
SUITABLE FOR BREEDING	based on meeting the requirements of section 1 and 2 only
SUITABLE FOR BREEDING	based on meeting the requirements of section 1, 2 and 3
UNSUITABLE FOR BREEDING	

Name of District-Head Animal Production Office	
Date	
Certificate No	

Signature and stamp

Doyogena



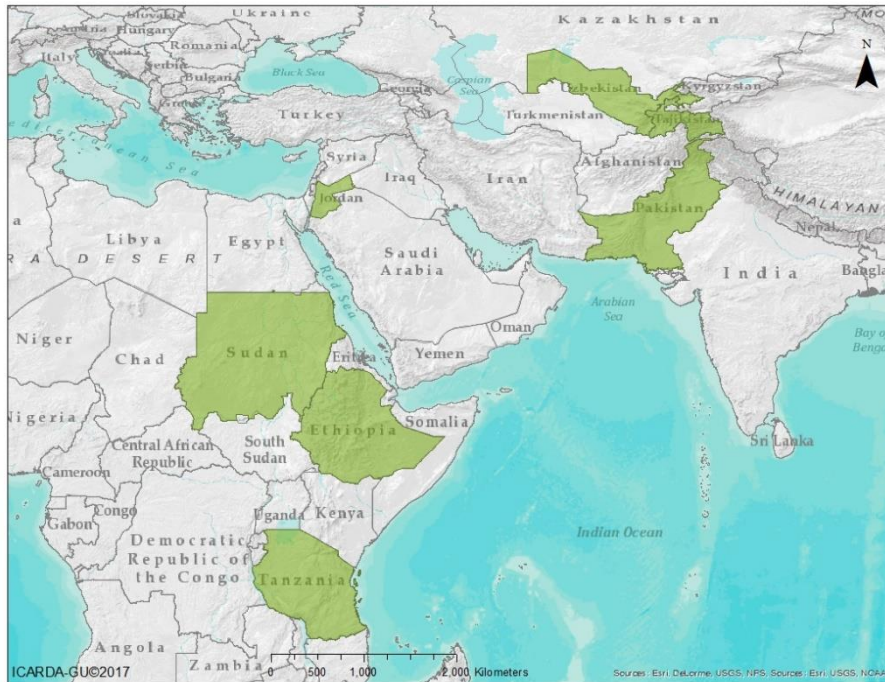
# Showing the road to business opportunity and youth employment



Mobile ultrasound pregnancy unit in the Badia - Jordan



The goat obstetric and gynecology clinic in Kordofan - Sudan



icarda.org

Check on females with recent reproductive pathologies

Culling of Sterile Animals

Screening for pregnant females

Discard pregnant females prior to synchronization and AI

Ultrasound Pregnancy Diagnosis Service

Calculation of the age of the fetuses

Check on repeat breeders

Screening for litter size



## ***Help us take care of your animals***

*Think about pregnancy diagnosis with ultrasonography*

*It is fast, non invasive and reliable*



*Fetal number*



*Pregnancy status  
before selling*



*Artificial  
Insemination*




*Repeat breeder*



*Pathologies*

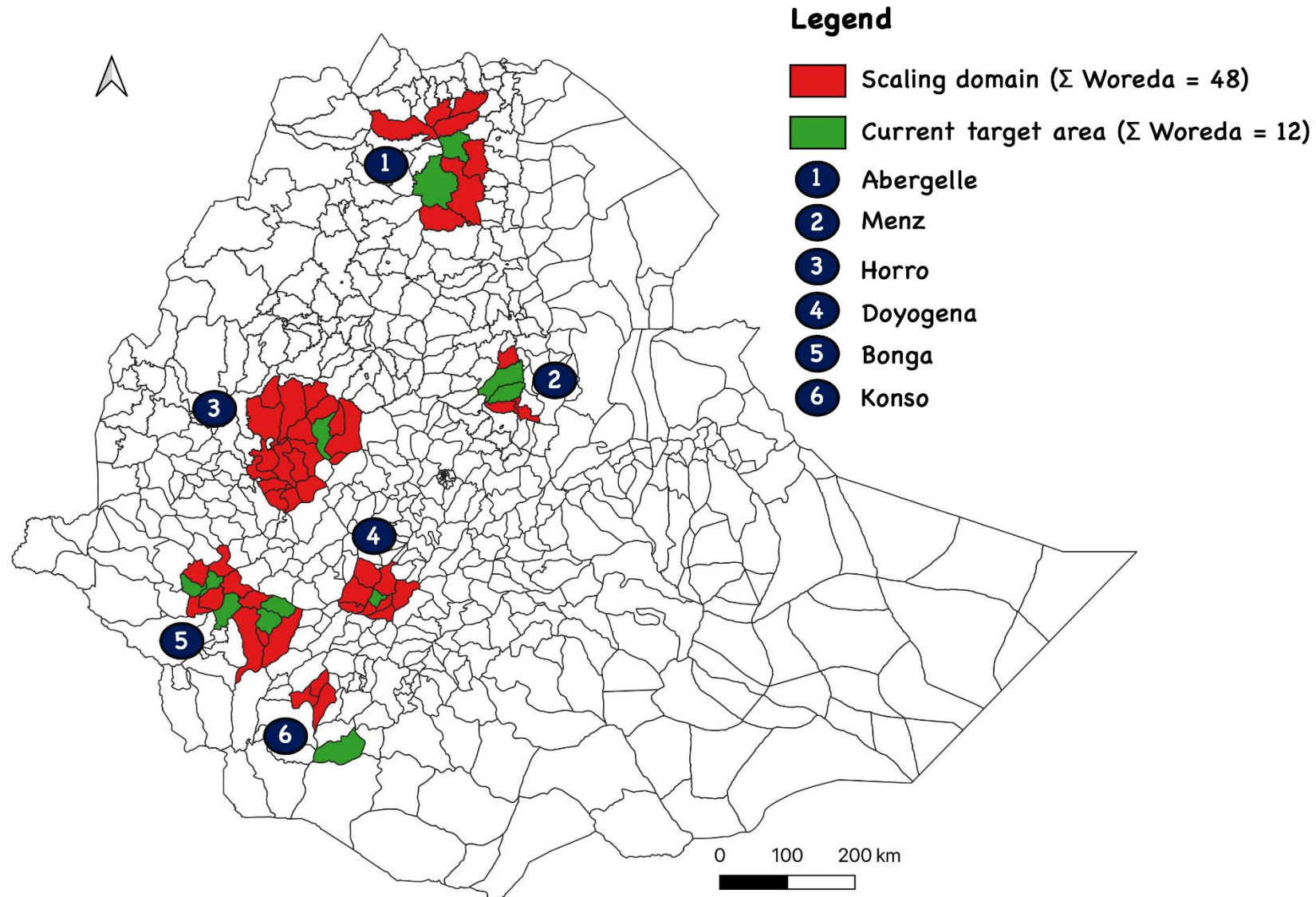


 **Call us at**

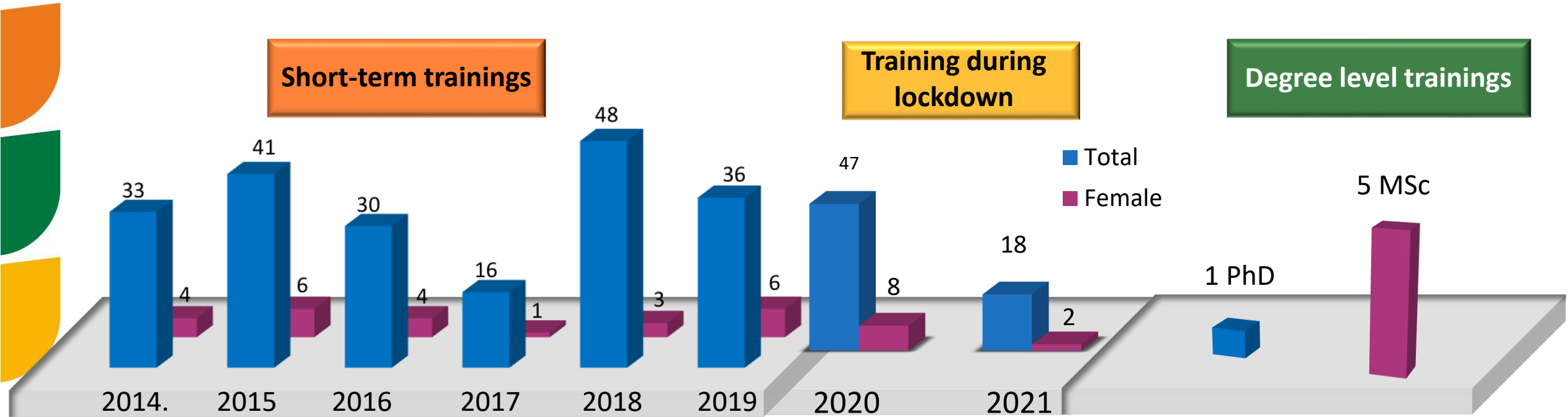
 **Come and meet us at**

**Bringing the service close to the  
communities and markets place**

# Delivering to new CBBPs, new villages, partnering with other programs



# Train, train and train...



*The team of experts*



# Communicating globally

