

EX-ACT tools

Presenter: Bat-Ulzii Chultem

Mongolian Forest Research Association

Content

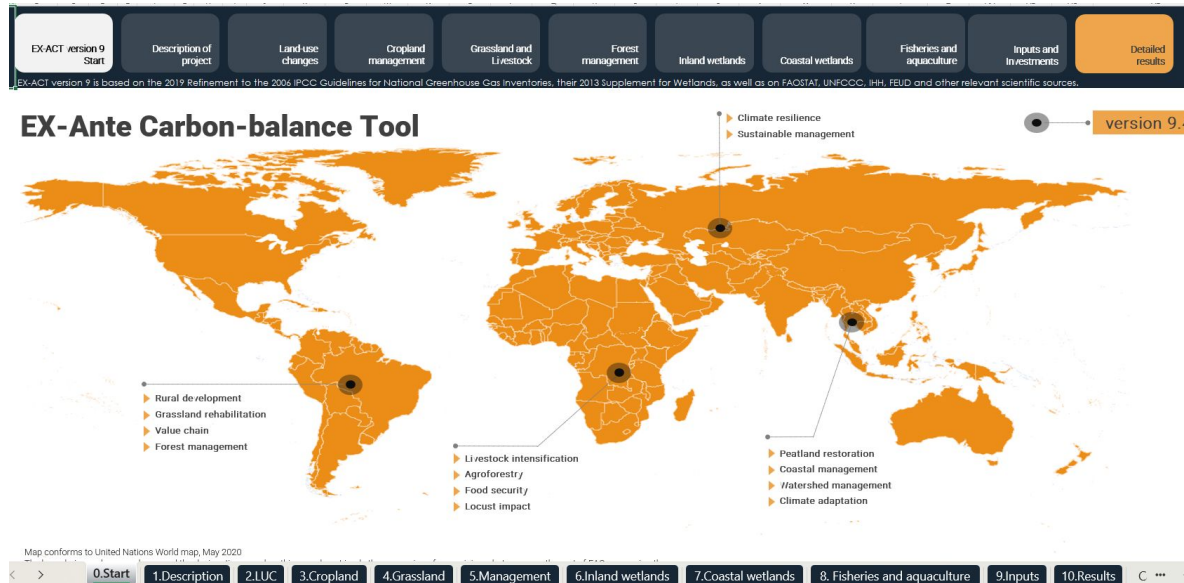
- What is EX-ACT?
- Why was the EX-ACT tool chosen?
- Exercises
 - Afforestation and Reforestation
 - Agroforestry
 - Riparian restoration
 - Livestock

What is EX-ACT?

- Why is the EX-ACT tool important?
- Principle, Structure, logical framework



What is EX-ACT?



It is a simplified tool that allows all stakeholders of a carbon sequestration project to understand and assess it with a common perspective, regardless of their technical knowledge or skills.

Partnership

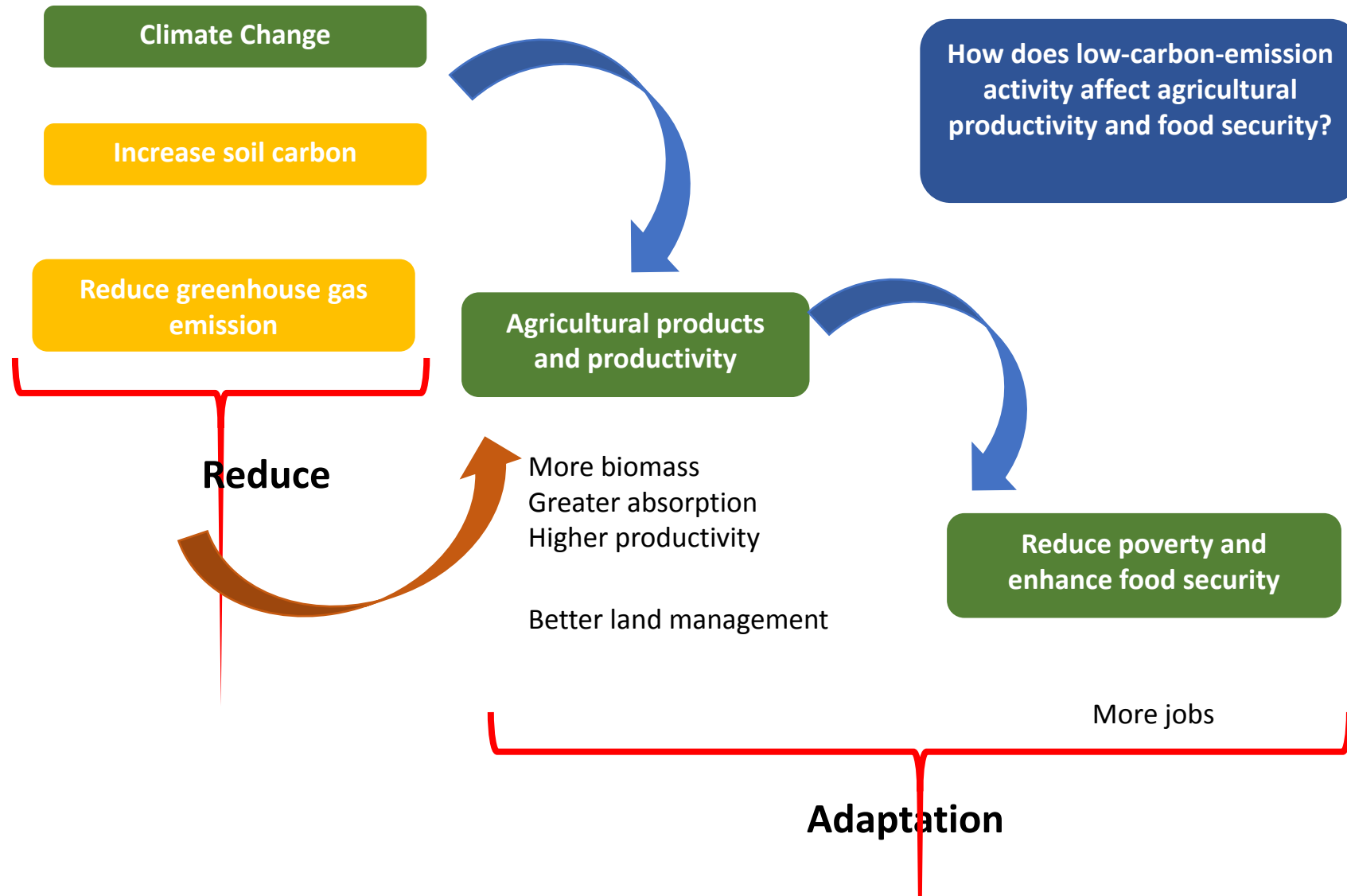
Food and Agriculture
Organization of the United
Nations
Investment center
Policy Development
Department
Agricultural Economics Service

Foreign partner

IRD French Development
Research Center
World Bank
GIZ, IFAD, AFD (French), ADB, SEI
(Sweden), ADEME (French)

👉 **EX-ACT** is the primary tool of the FAO for estimating the outcomes of agricultural and forestry interventions.

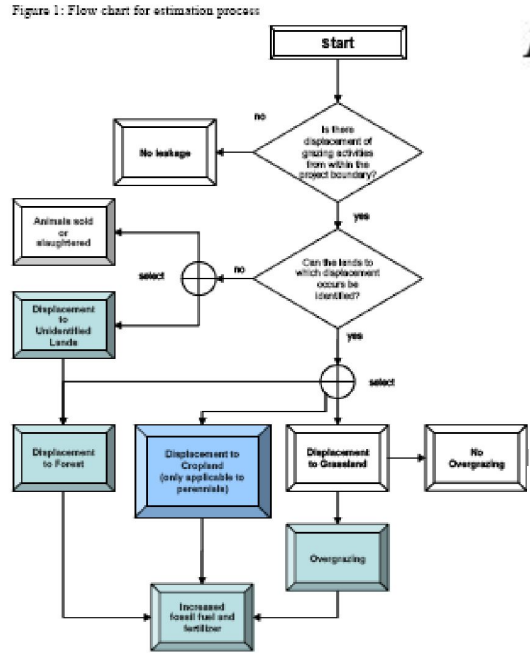
Carbon accounting and its principles



Structure of EX-ACT

Tools under UNFCCC/KP

UNFCCC/KP* Tools
 =
 үйлдлийн
 диаграм
 +
 Тэгшитгэл
 +
 Суурь утга



UNFCCC/CCNUCC
 CDM – Executive Board
 A/R methodological tool
 “Estimation of GHG emissions related to displacement of grazing activities in A/R CDM project activity”
 EB 39
 Report Annex 12
 Page 1

$$LK_{Perennial,t} = \sum_k Area_{Perennial,k,t} * B_{Perennial,k} * (1 + R_{Perennial,k}) * 0.5 * \frac{44}{12}$$

DEFAULT ESTIMATES FOR STANDING BIOMASS GRASSLAND (AS DRY MATTER) AND ABOVEGROUND NET PRIMARY PRODUCTION, CLASSIFIED BY IPCC CLIMATE ZONES.

IPCC Climate Zone	Peak above- ground live biomass Tonnes d.m. ha ⁻¹			Above-ground net primary production (ANPP) Tonnes d.m. ha ⁻¹		
	Average	No. of studies	Error [#]	Average	No. of studies	Error ¹
Boreal-Dry & Wet ²	1.7	3	±75%	1.8	5	±75%
Cold Temperate-Dry	1.7	10	±75%	2.2	18	±75%

Table 2: Data for typical cattle herds for the calculation of daily gross energy requirement

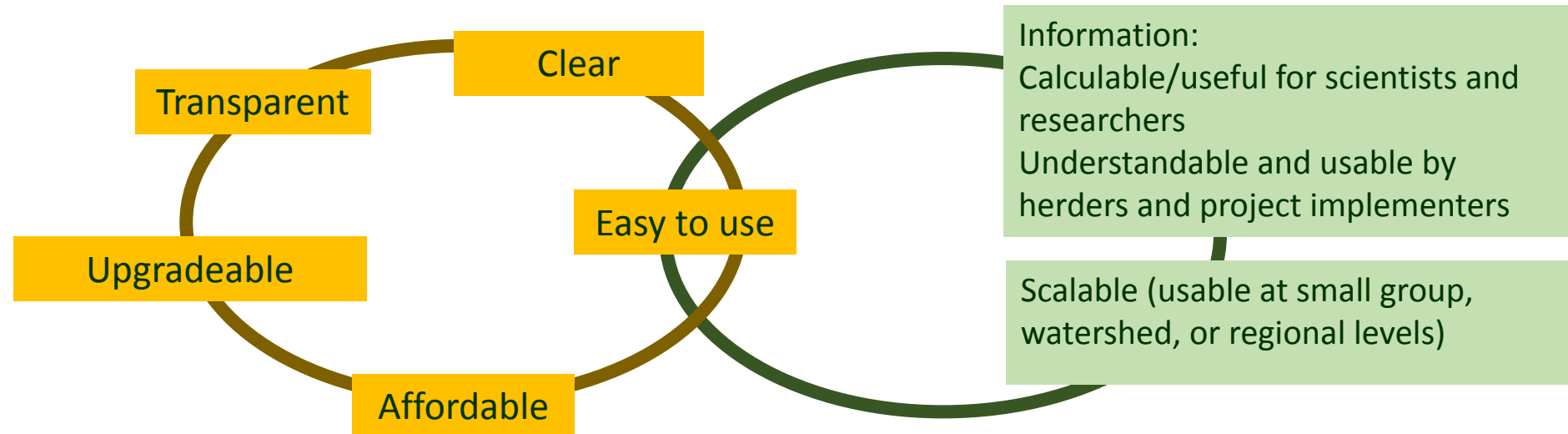
Cattle - Africa		Weight (kg)	Weight Gain (kg/day)	Milk (kg/day)	Work (hrs/day)	Pregnant	DE	Cc
Mature Females		200	0.00	0.30	0	33%	55%	
Mature Males		275	0.00	0.00	0	0%	55%	
Young		75	0.10	0.00	0	0%	60%	
Weighted Average		152	0.06	0.02	0	3%	58%	
Cattle - Asia								

*KP Киотогийн протокол

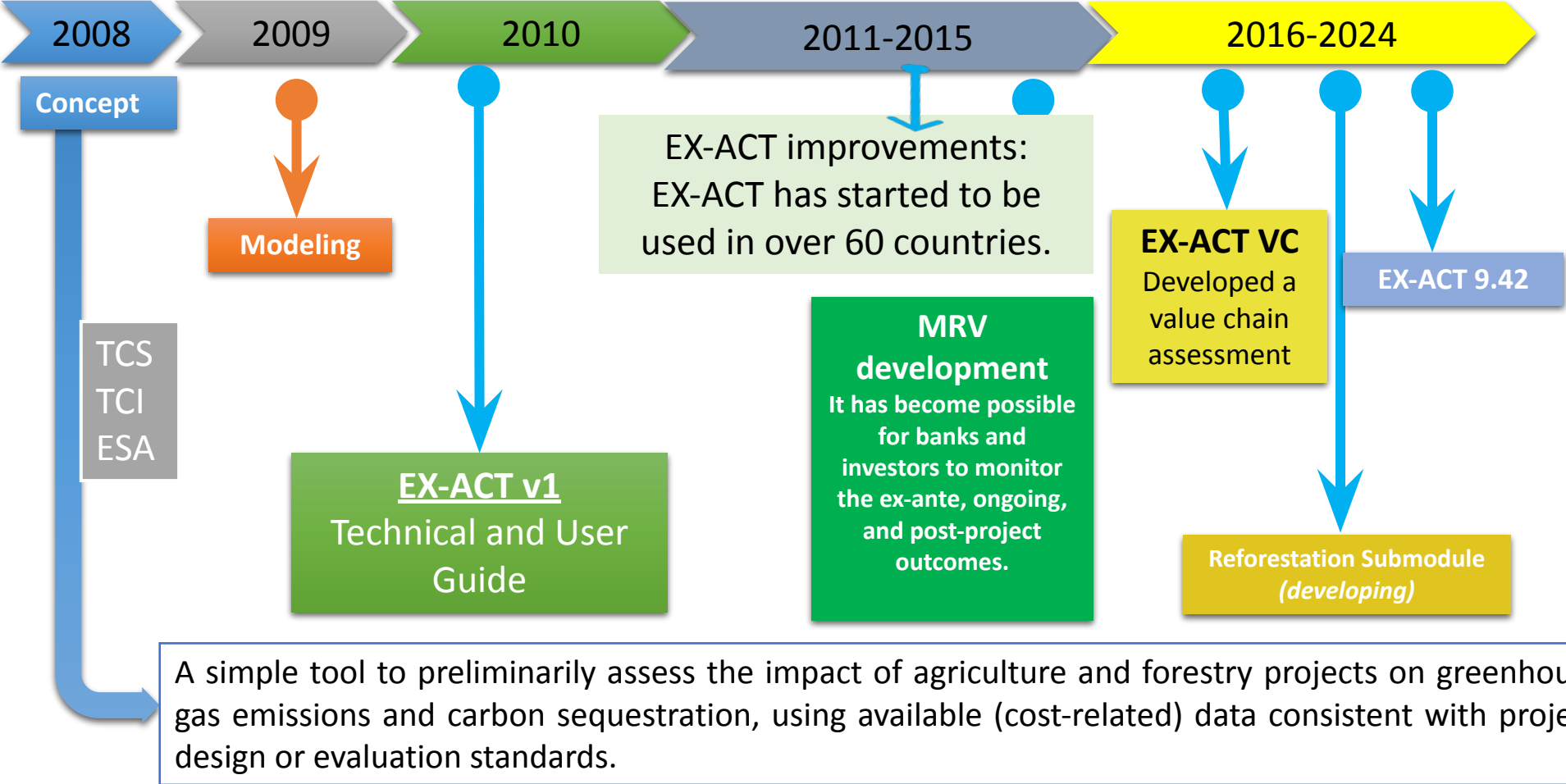
Needs for a new tool

👉 The following approvals are required:

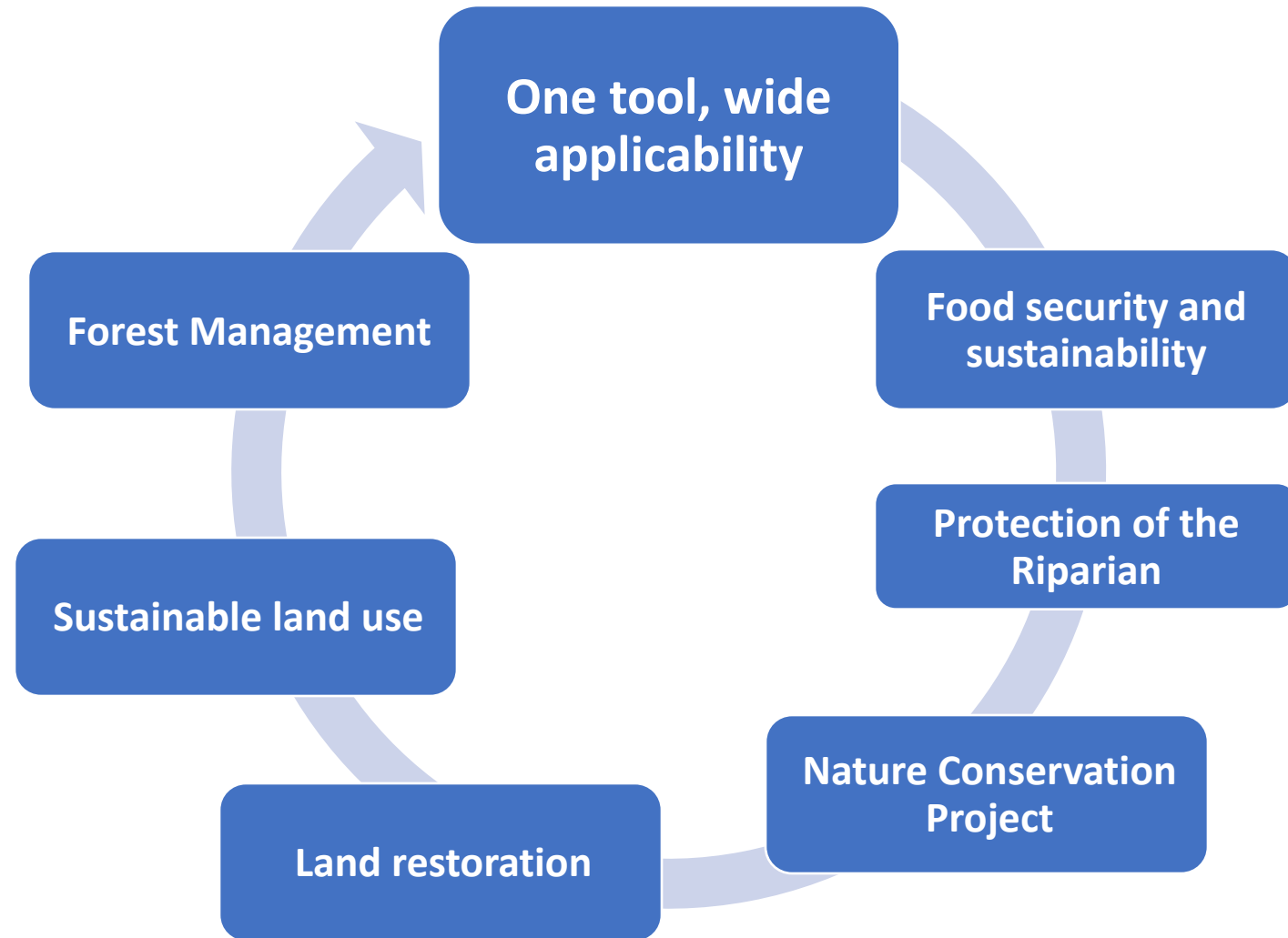
- 👉 Include the carbon balance in the ex-ante assessment of the intervention,
- 👉 Complement the general economic analysis,
- 👉 Incorporate the temporal effects of the intervention.



Development of the EX-ACT tool



Calculation capabilities of the EX-ACT tool



Exercise #1a. Afforestation

Afforestation:

A site in Mongolia's boreal forest, which was burned and deforested by fire in 1996, has been planned for afforestation activities. Within the project, the afforestation work is planned to be integrated with a carbon sequestration project. The total planned area for afforestation is 300 hectares. This area consists of forested wetlands with dark soils. The climatic conditions are dry and cool. The project is scheduled to be implemented over a total of 15 years, with the first 5 years dedicated to afforestation activities.

Exercise #1b. Forest Restoration

Forest Restoration:

- The project plans to restore degraded coniferous forests. The total planned restoration area is 900 hectares. The site consists of forested wetlands with dark soils. The climatic conditions are dry and cool. The project activities are financed under a carbon project, and the project is scheduled to be implemented over a total of 15 years, with the first 5 years dedicated to afforestation/restoration activities.
- During the project, approximately 60% of the forest stock, which is composed of dead or dying trees, will be protected to create conditions for natural regeneration of the forest.

Exercise #2. Agroforestry

- The project plans to restore degraded land by converting it into fruit orchards. The selected site is located in a dry and cool climate and consists of soils with low organic matter and clay content. The total area is 500 hectares. Soil preparation will be carried out only along afforestation strips at a low intensity. During soil preparation, compost will be incorporated into the soil to provide additional carbon. However, the compost is well-aged, resulting in a relatively low carbon content.

Exercise #3. Livestock

Project Activities – Rangeland Improvement:

During the project, a total of 3,185 hectares of rangeland degraded due to overgrazing will be improved as follows:

500 hectares will be irrigated and planted with fodder crops such as barley.

2,000 hectares will be rotationally grazed to enhance pasture quality.

The remaining 685 hectares will be left unchanged.

The 3,185-hectare area currently supports traditional livestock grazing with 1,378 sheep, 786 goats, 37 cattle, and 89 horses. The project also aims to optimize livestock numbers to improve pasture sustainability.