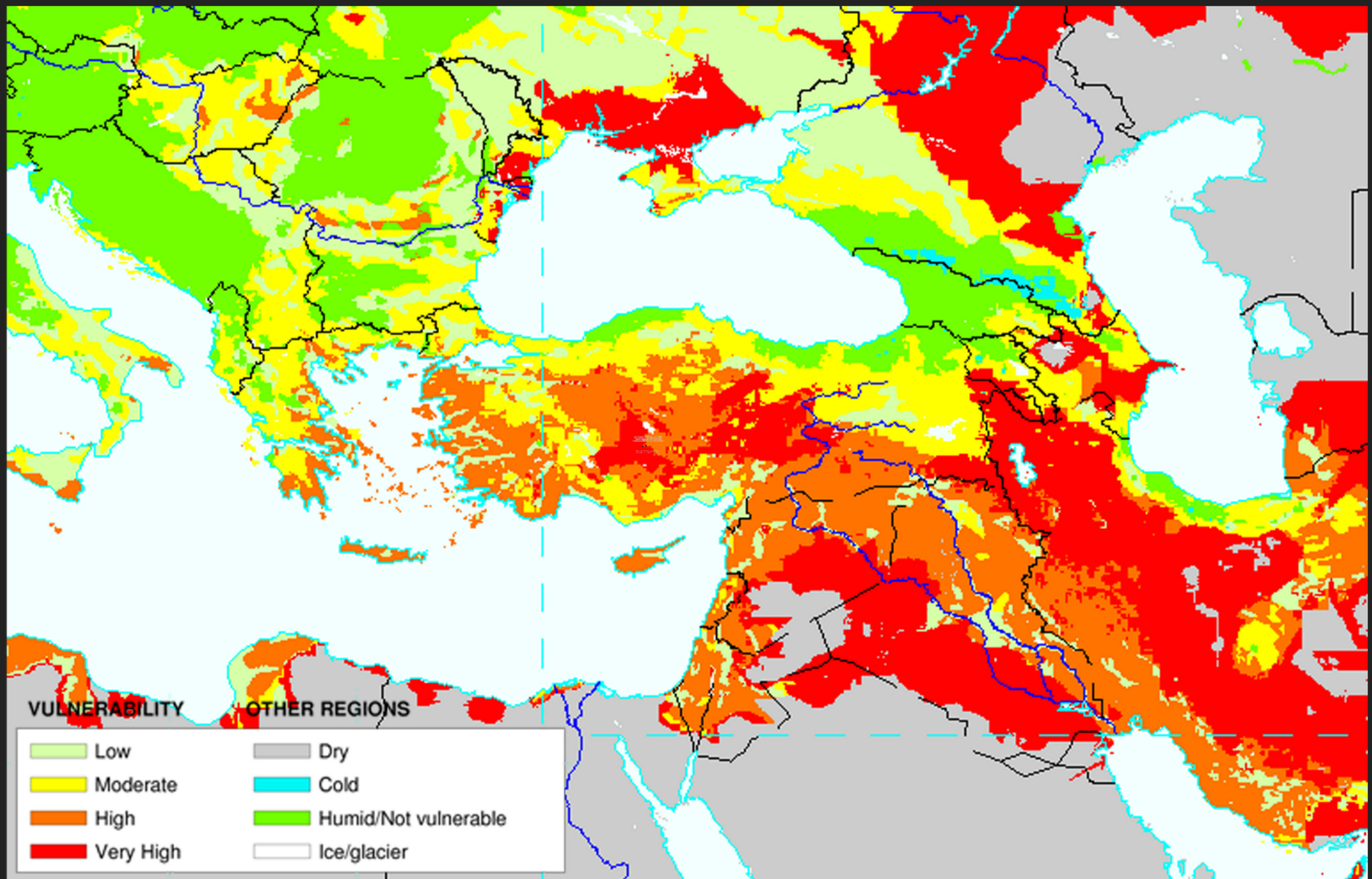


Using Ecosystem Approach as a Template Towards Adaptation to Climate Change in Arid Agricultural Lands of Central Anatolia

DOĞA KORUMA MERKEZİ
NATURE CONSERVATION CENTRE

Özge Balkız, Semiha Demirbaş Çağlayan, Melike Kuş,
Aydan Özkil, Deniz Özüt, Ayşe Turak, Uğur Zeydanlı.

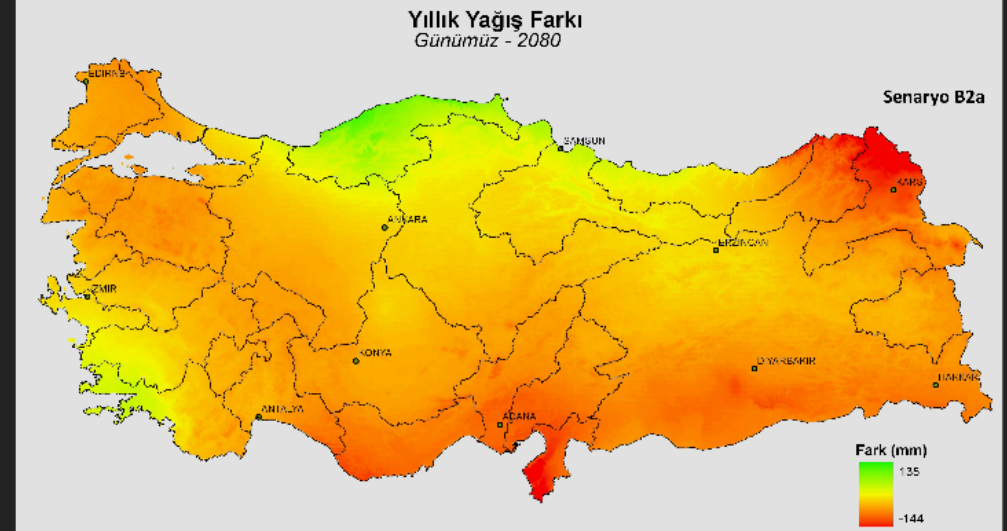
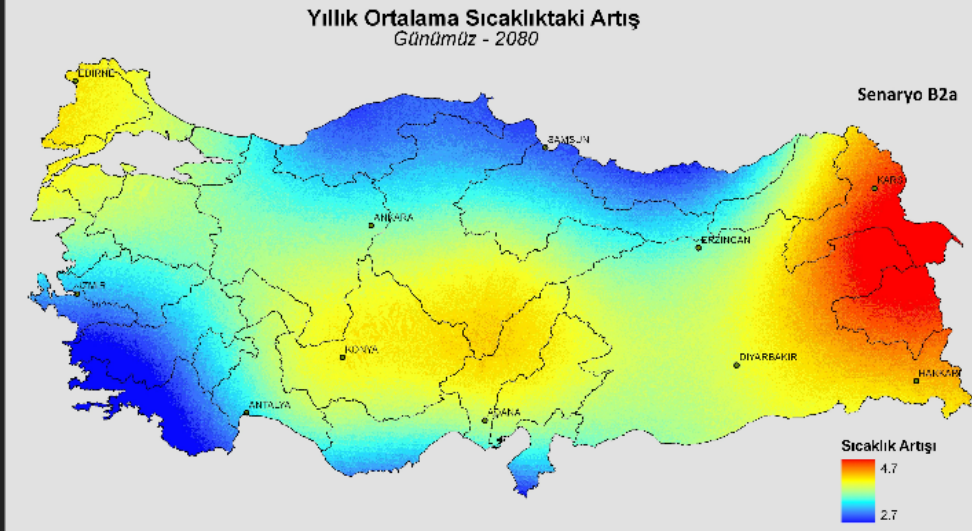
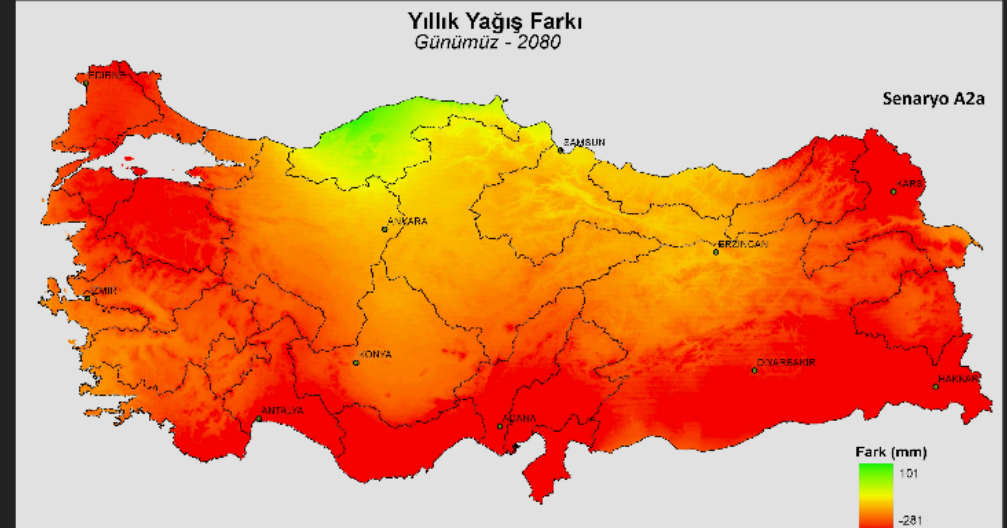
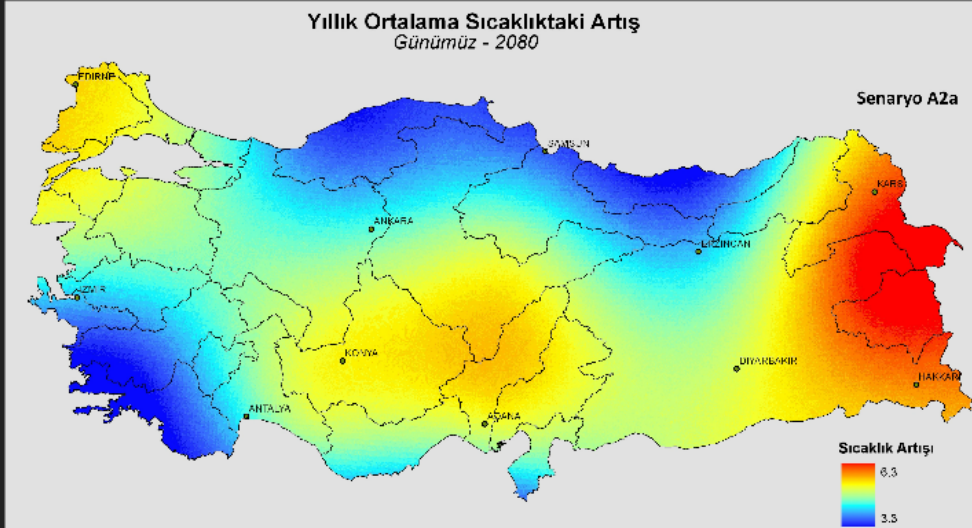
Desertification Vulnerability of Central Anatolia



Erosion

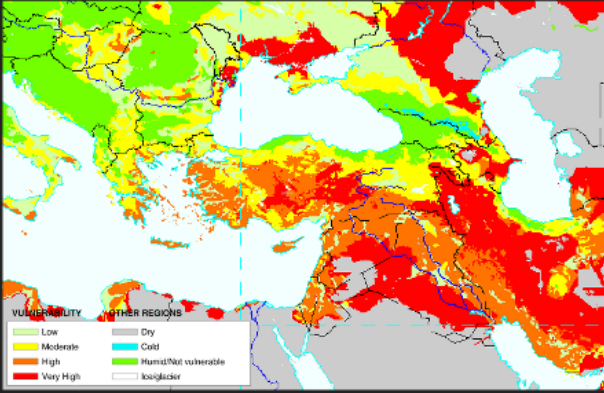


Climate Change Impacts



Projected changes in annual average temperatures and precipitation according to two CC scenarios (DKM, 2013)

Desertification Vulnerability of Central Anatolia



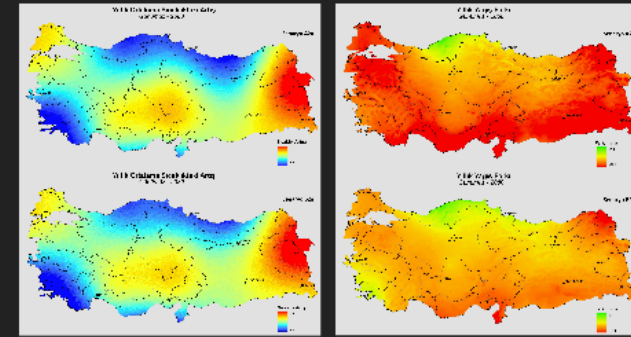
Derived from Global Desertification Vulnerability Map of USDA <http://www.nrc.usda.gov/wps/portal/nrc/detail/soils/areas/1dd1c0c0-42d2-034003>

Erosion



Karapınar, Konya

Climate Change Impacts



Focus Area: Konya Closed Basin

Güncel
YEREL

"Tahıl ambarı" su bekliyor

Türkiye'nin "tahıl ambarı" olarak bilinen Konya Ovası'ndaki tarım arazileri, yapımı süren baraj ve derivasyon tüneli inşaatlarının tamamlanmasıyla suyla buluşacak.

24 Eylül - Konya Ovası Projesi (KOP) kapsamında yer alan Derebucak Barajı ile Gembos Derivasyon Tüneli inşaatları, yerleri ödenek sağlandığı takdirde 2003 yılında tamamlanacak.

Türkiye'nin tahıl ambarı Konya Ovası'nda, yer altı suyunun hızla azalması ve bu yıl etkili olan kuraklık etkilerini endişelendiriyor

Türkiye'nin "tahıl ambarı"nda son durum

KONYA OVASI'NDAKİ KURAKLIK ENDIŞELENDİRİYOR

Focus Area: Konya Closed Basin

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Konya AA

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NTV
M
NBC

Güncel
Dünya
Ekonomi
Sağlık
Yaşam
Teknoloji
Kültür Sanat
Spor
Hava/Yol
News in English
Detaylı Arama

Türkiye

Türkiye'nin "tahıl ambarı"nda son durum



CNN
TÜRK

Türkiye'nin tahıl ambarı Konya Ovası'nda, yer altı sularının hızla azalması ve bu yıl etkili olan kuraklık çiftçileri endişelendiriyor

KONYA OVASI'NDAKİ KURAKLIK ENĐİŐELENDİRİYOR



Key Concept:

Conservation Agriculture

*a concept for resource-saving agricultural crop production that strives to achieve **acceptable profits** together with **high and sustained production levels** while concurrently **conserving the environment** (FAO 2007).*



Life Plus Environment Programme



Future's Agriculture Project



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Coca-Cola

**HAYATA ARTI
VAKFI**



DOĐA KORUMA MERKEZİ
NATURE CONSERVATION CENTRE

Project Purpose

To promote the use of Ecosystem Approach and improve climate change adaptation in agriculture.



Project Objectives

- To improve water holding capacity of soil; ensure the efficient use of land and water.
- To increase the capacity to use the ecosystem services in agriculture.

Expected Impacts of the Project



Climate Change
Adaptation



Erosion Control



Climate Change
Mitigation



Environmental
Protection



Water
Protection



Soil Protection



Food Security



Economic Benefit
to Farmers

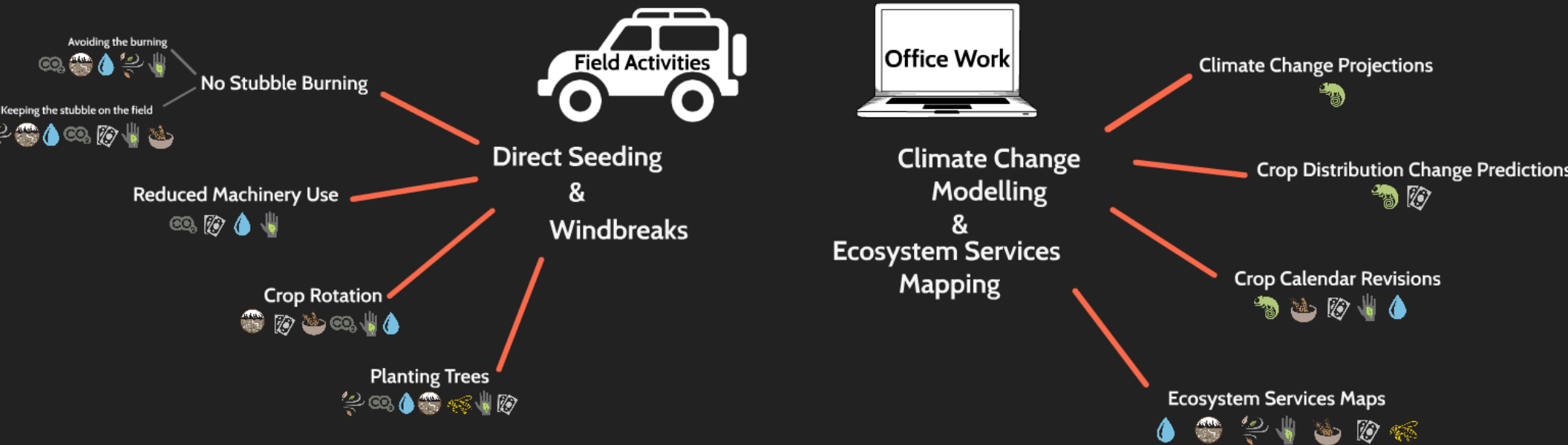


Pollination

Expected Impacts of the Project

Climate Change Adaptation Erosion Control Climate Change Mitigation Environmental Protection Water Protection

Soil Protection Food Security Economic Benefit to Farmers Pollination





Field Activities

Direct Seeding
&
Windbreaks

No Stubble Burning

Avoiding the burning



Keeping the stubble on the field



Reduced Machinery Use



Crop Rotation



Planting Trees





Office Work

Climate Change Modelling & Ecosystem Services Mapping

Climate Change Projections



Crop Distribution Change Predictions



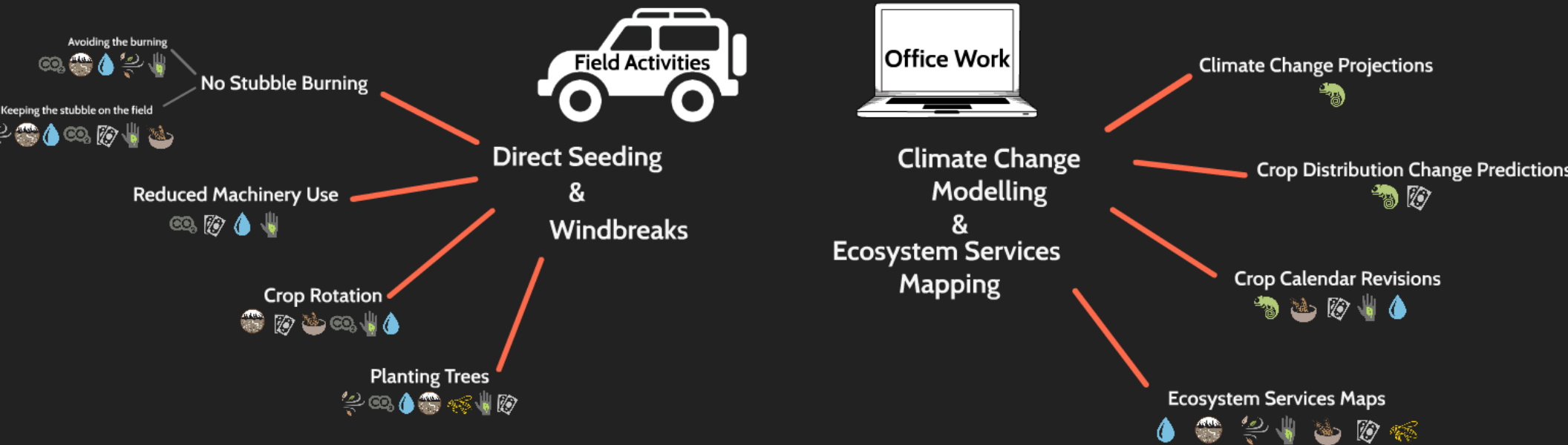
Crop Calendar Revisions



Ecosystem Services Maps



Expected Impacts of the Project



Lessons Learned:

Strengths and Opportunities



- Direct machinery support to farmers via local institutions and NGOs
- Long term sustainability through planned governmental aids

Strengths and Opportunities



- Presence of previous positive windbreak examples in the region
- Positive perception of planting trees

Strengths and Opportunities



- Partnerships between NGOs, academia, private sector and the government
- Cutting edge scientific approaches
- Establishing the bridge between research and on the ground action

Strengths and Opportunities



- Focusing on the primary threats on agriculture in the region (water scarcity, erosion, climate change)

Obstacles and Solutions



- Resistance to adopting new agricultural techniques

- Collaborations with local institutions, NGOs and academicians for better communication and knowledge transfer
- Collaboration with pioneer farmers



Obstacles and Solutions



- Reluctance to allocating land for windbreaks

- Presence of established windbreaks in the region and their known contribution to erosion control
- Recognition of the urgency of erosion threat



Dissemination of the project as a model



- Integrated approach to climate change adaptation, biodiversity conservation, soil and water protection in arid landscapes
- Adapting ecosystem approach to agricultural practices
- Integrating ecosystem services into spatial management tools
- First example of promoting planting windbreaks in agricultural lands in Turkey



Thank you for your attention

GELECEĞİN

TARIMI