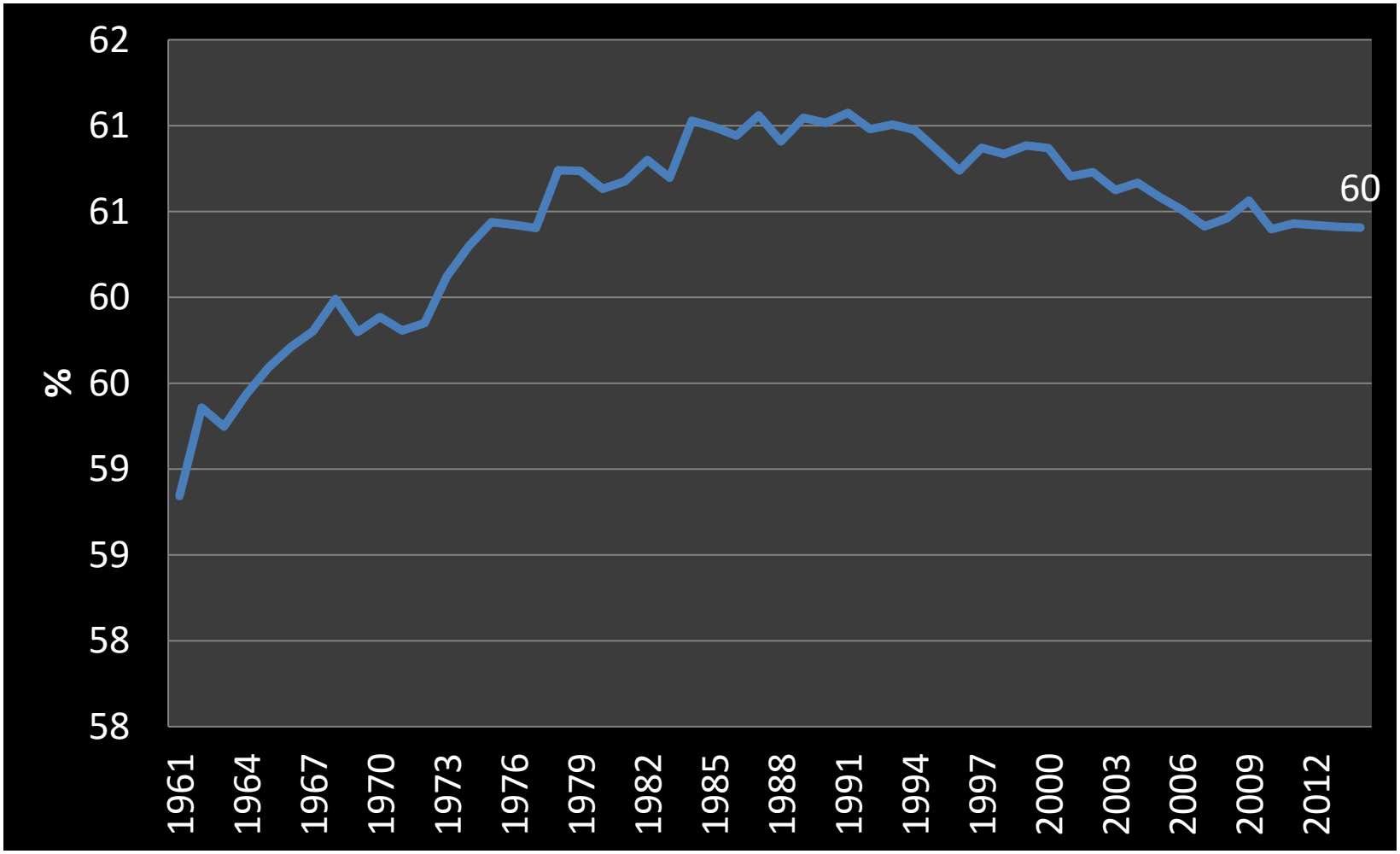
Rivulis Irrigation

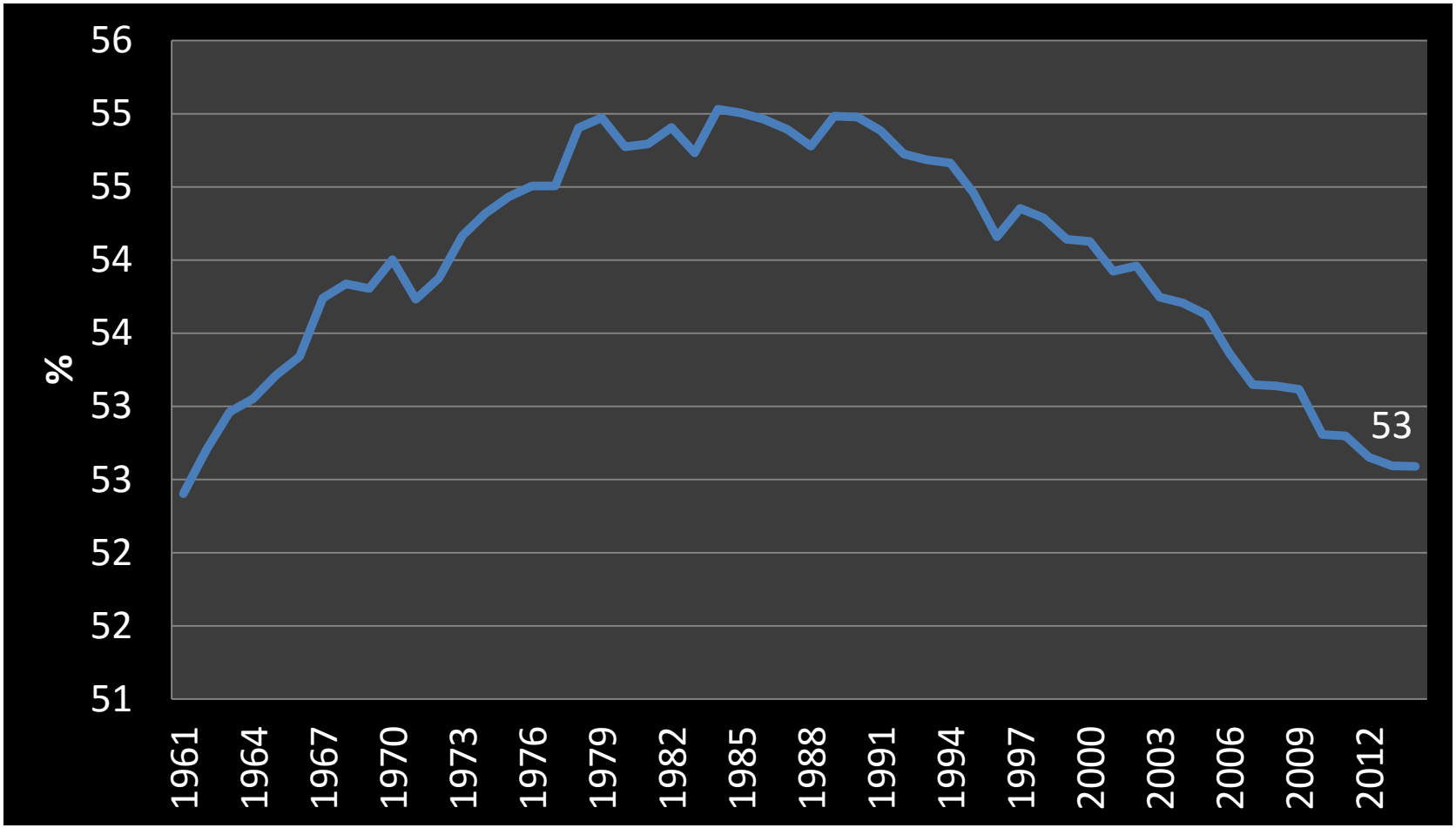
Your Growth Partner

Agricultural Land (% of land area)



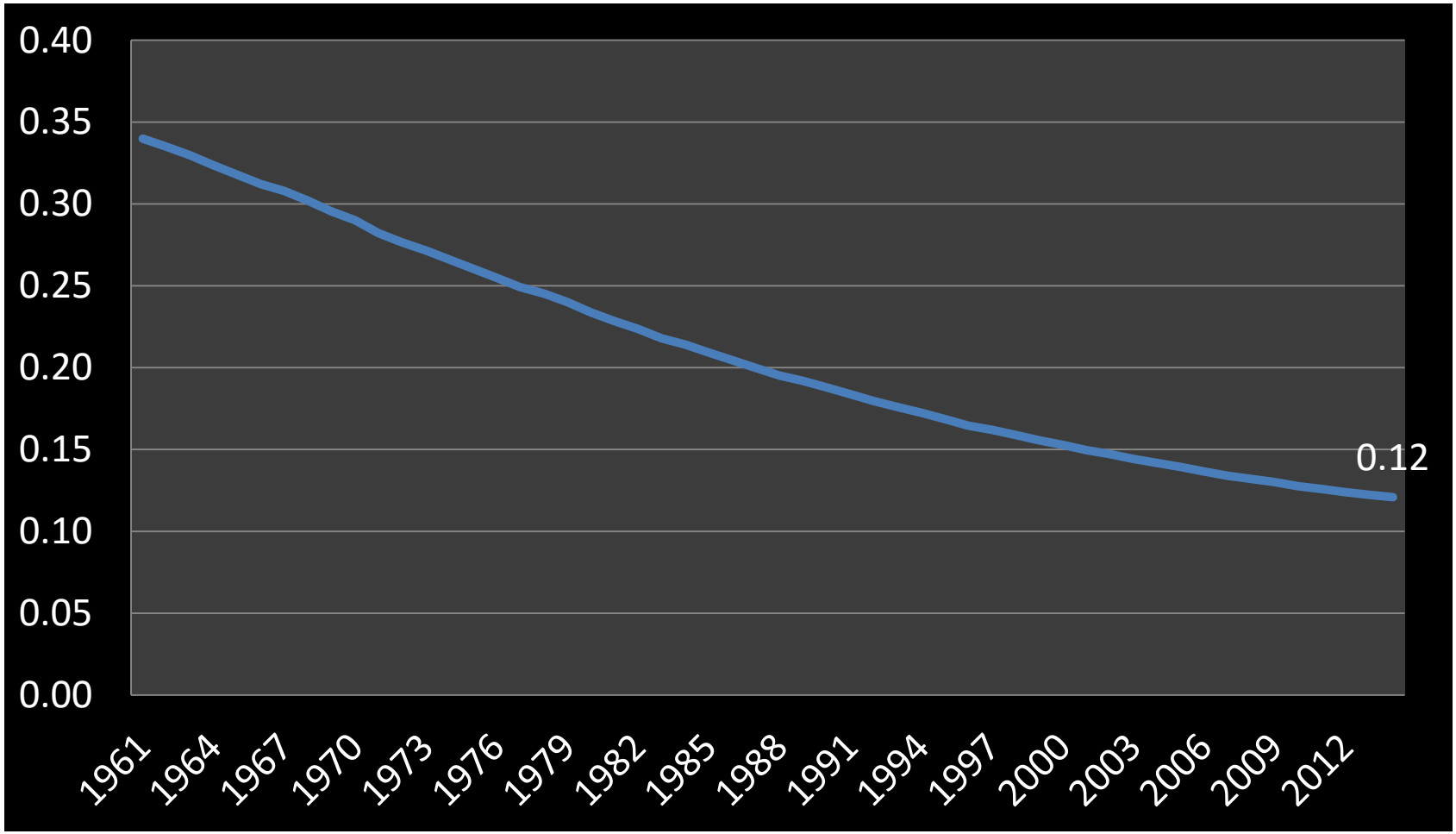
Rivulis

Arable Land (% of land area)



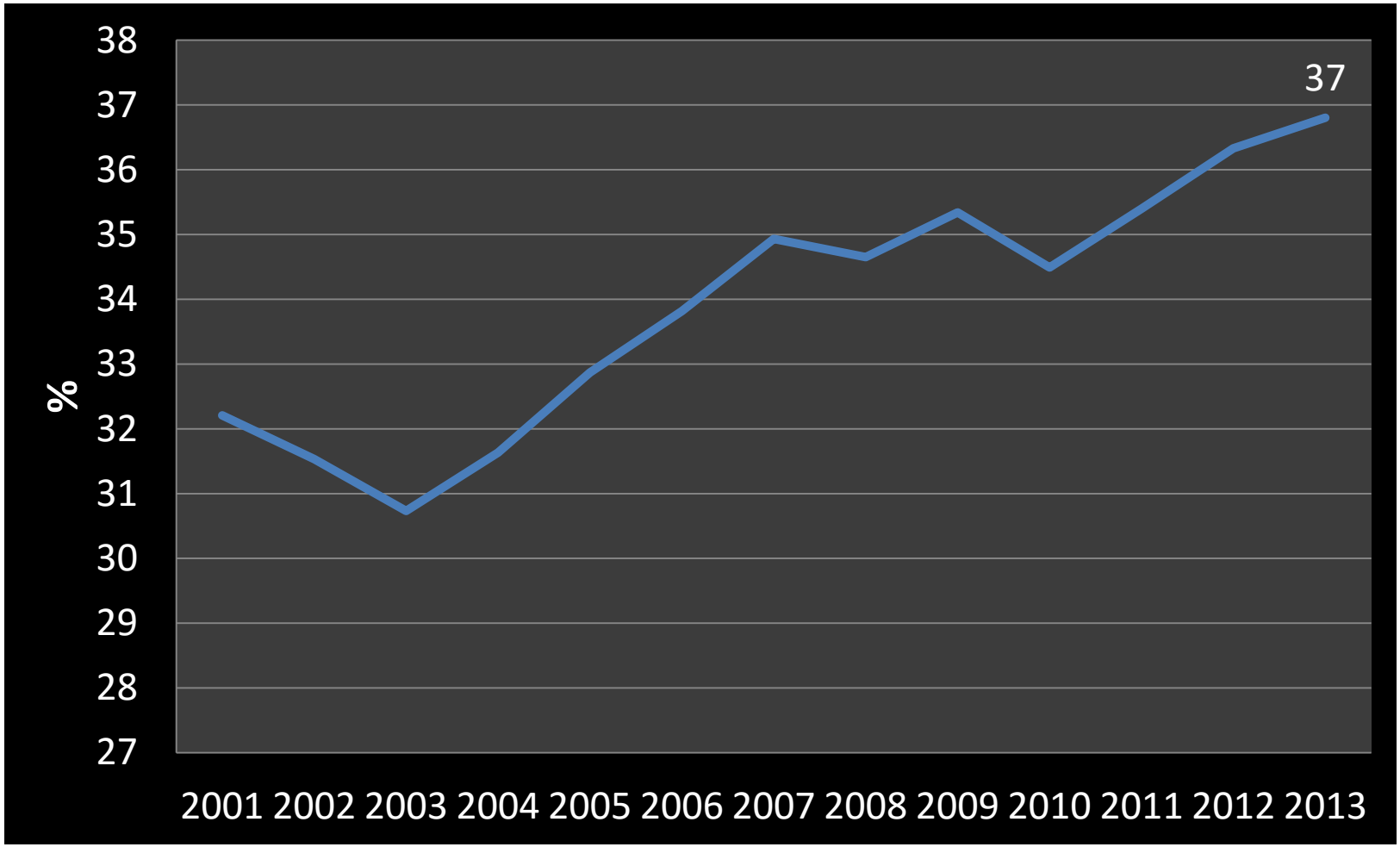
Rivulis

Arable Land (hectares per person)



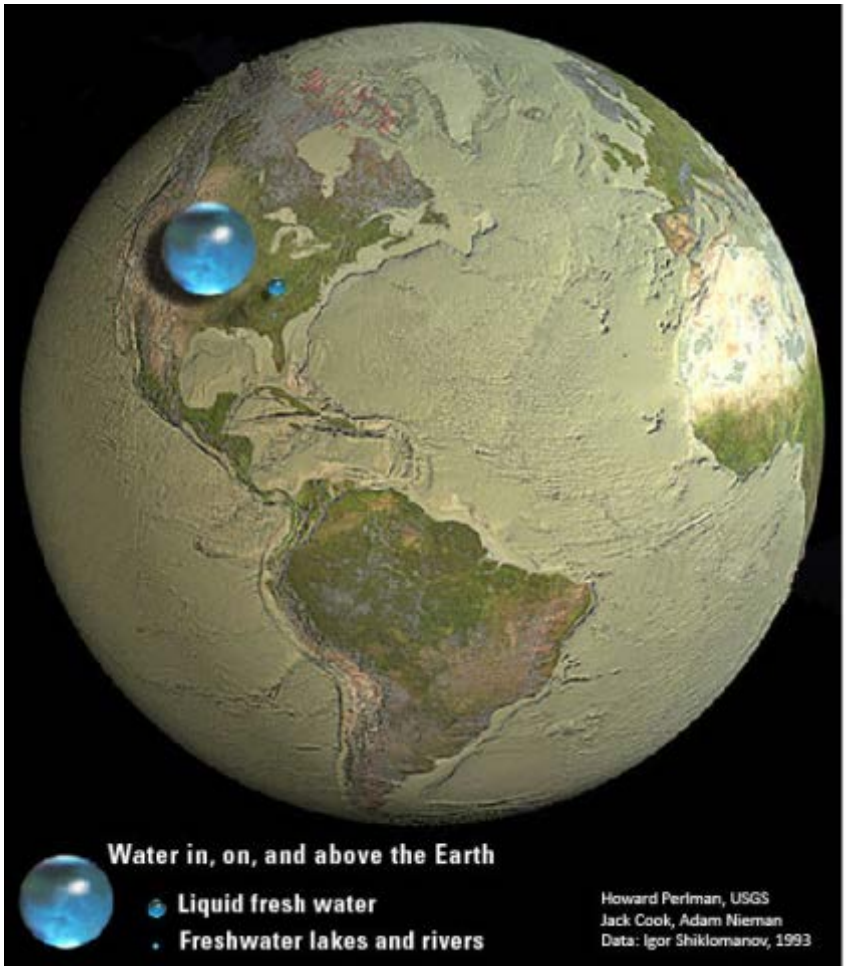
Rivulis

Agriculture Irrigated Land (% of total agriculture land)



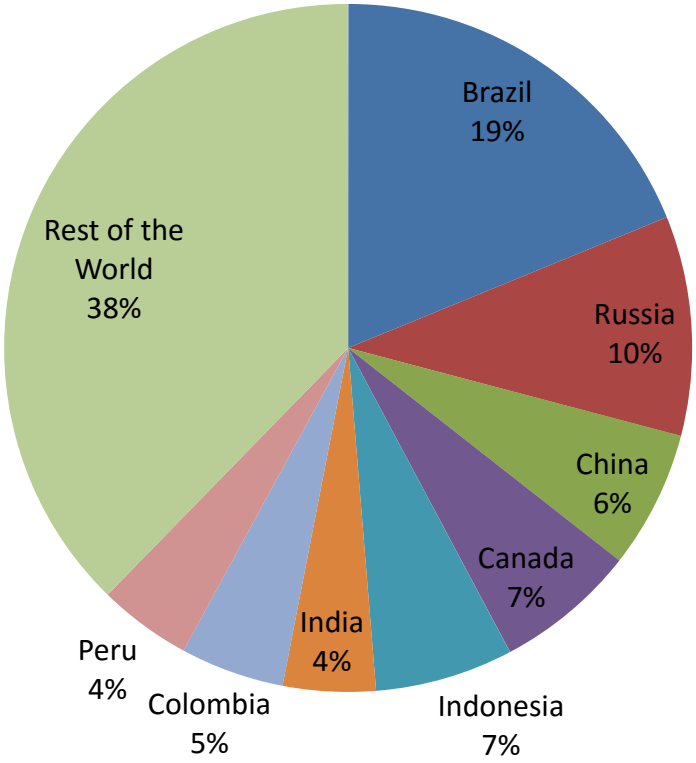
Rivulis

Water Resource Availability: Global



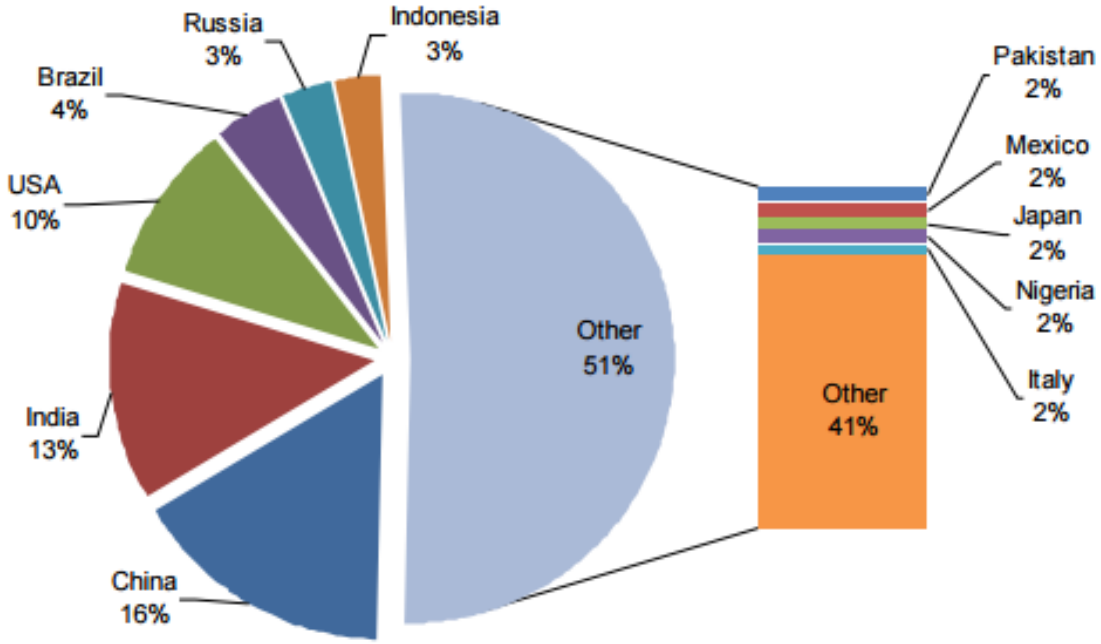
Usable Fresh water is a small fraction of the Total water on the Planet: **0.56%**

Global Water Distribution and Consumption



Top Water Rich Countries

Total Available Fresh water/ Year



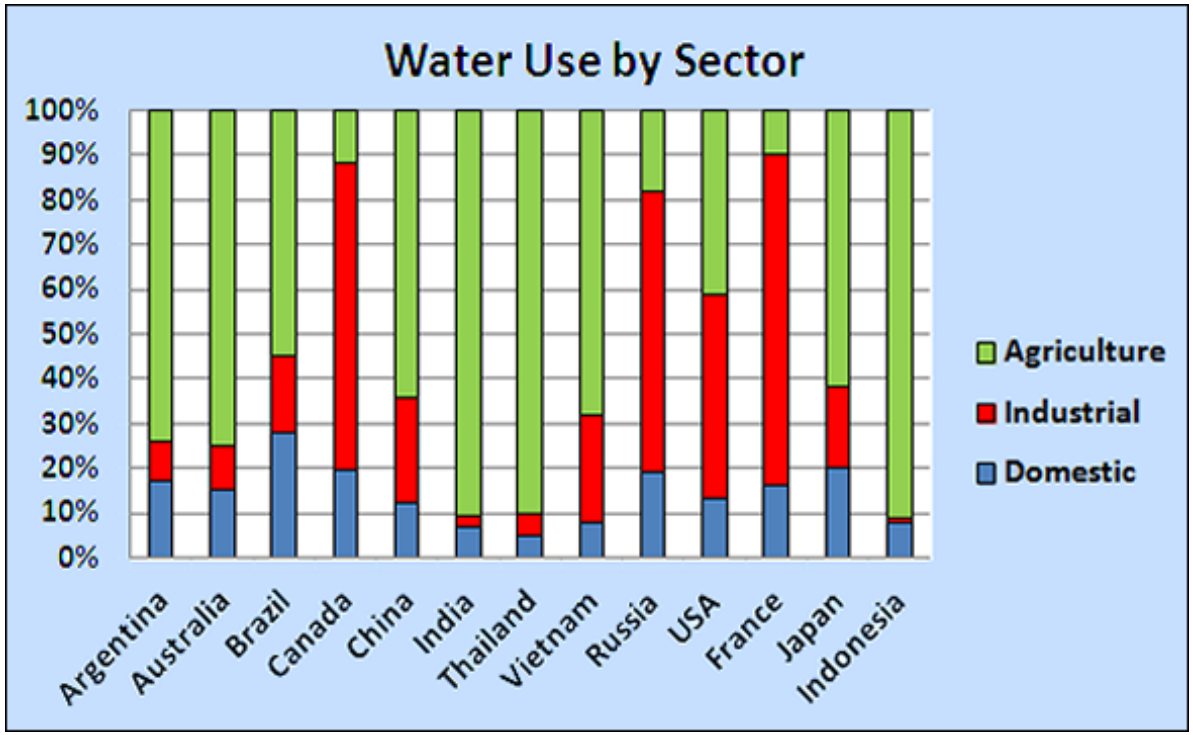
Top Water Consuming Countries

National Water Footprint/ Year

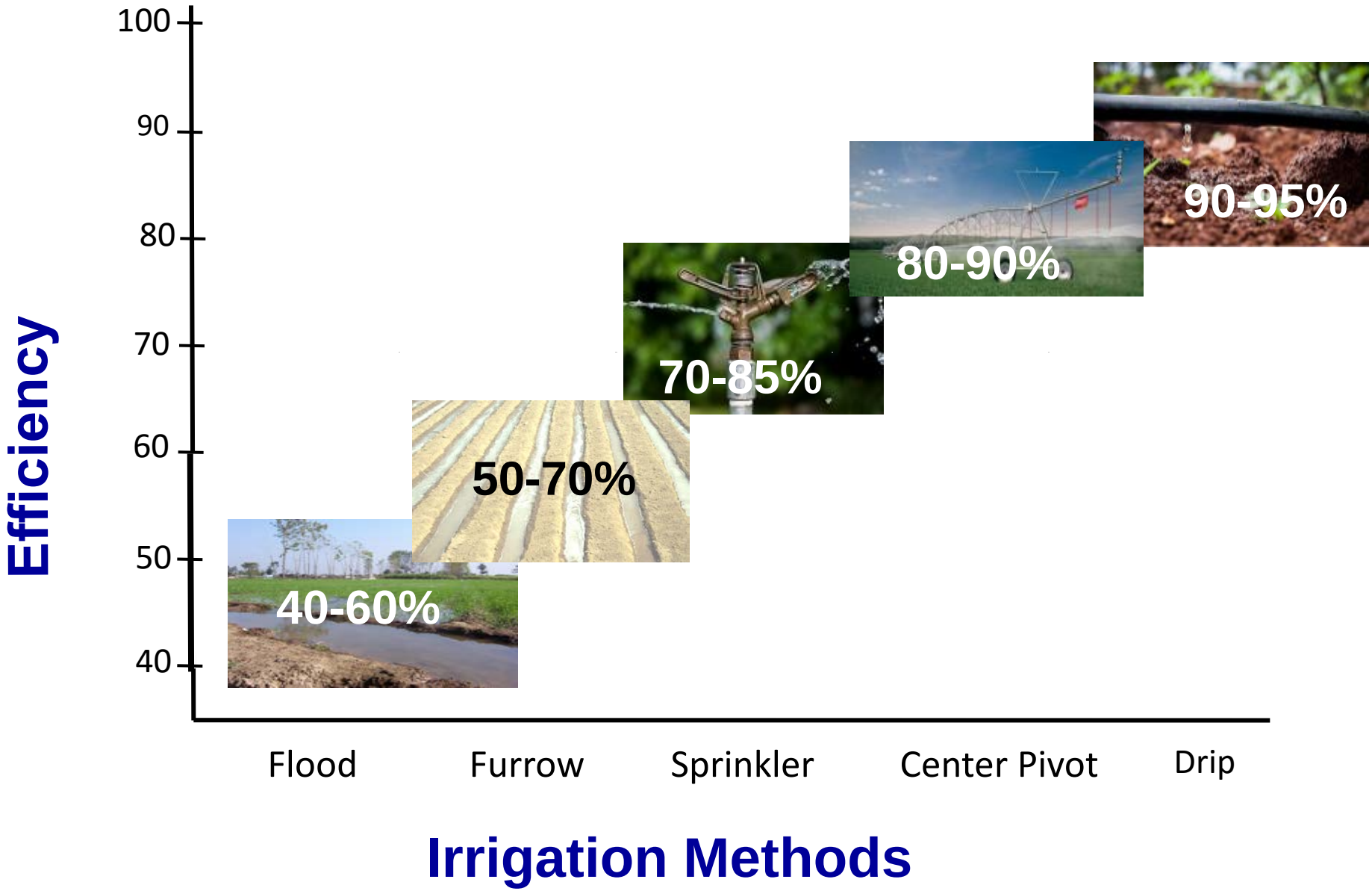
Consumption Patterns

- Developed Nations (US, Canada, , Russia, France): **>70% Consumption by Industry**

- Developing Nations (Argentina, India, Indonesia, China): **>80% Consumption by Agriculture**

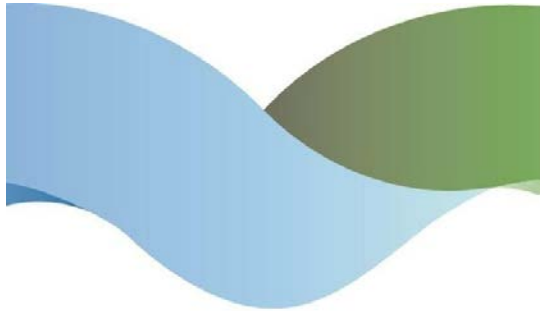


Irrigation Efficiency



Rivulis Introduces: Manna Irrigation

Rivulis Irrigation

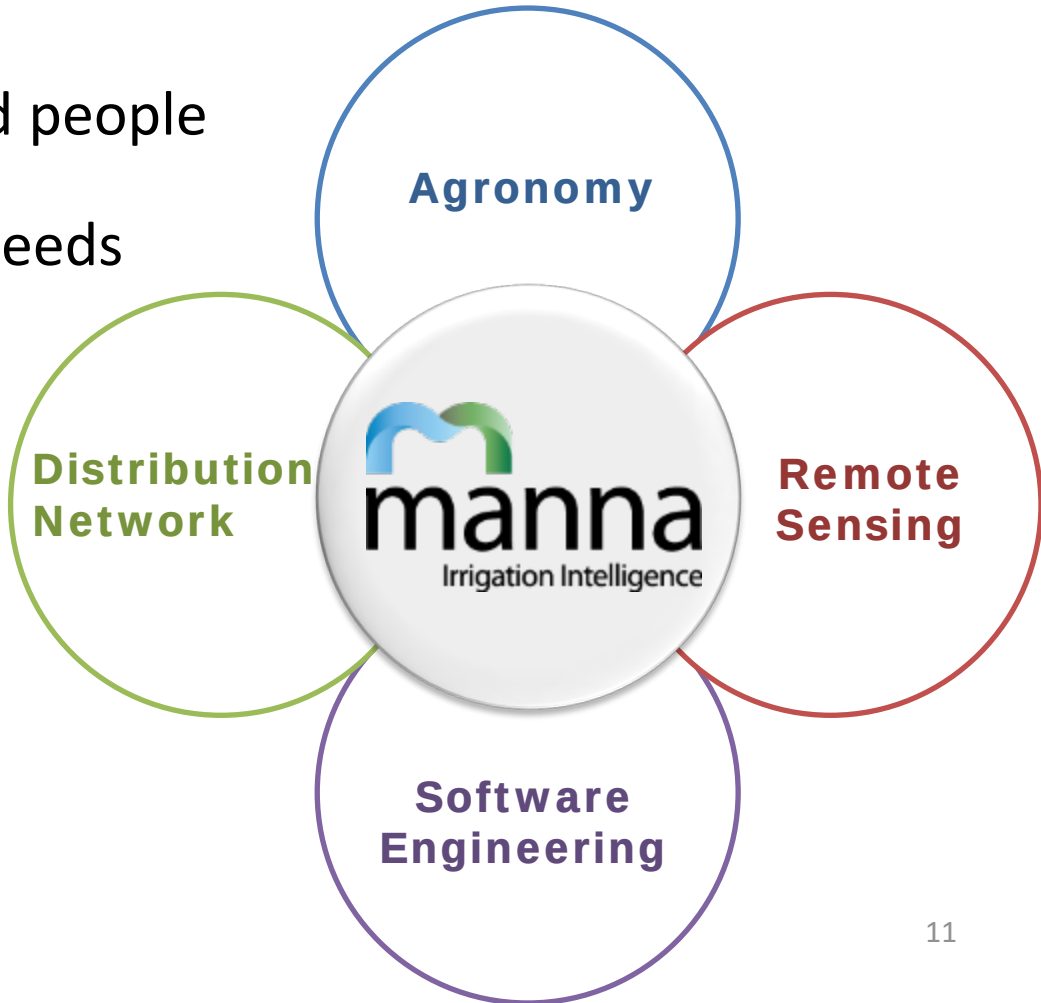


manna
Irrigation Intelligence

A leading provider of irrigation intelligence software solutions: proprietary satellite models and sensor-free cloud-based software, that provide growers with a high-resolution, integrated view of the entire field

Who we are

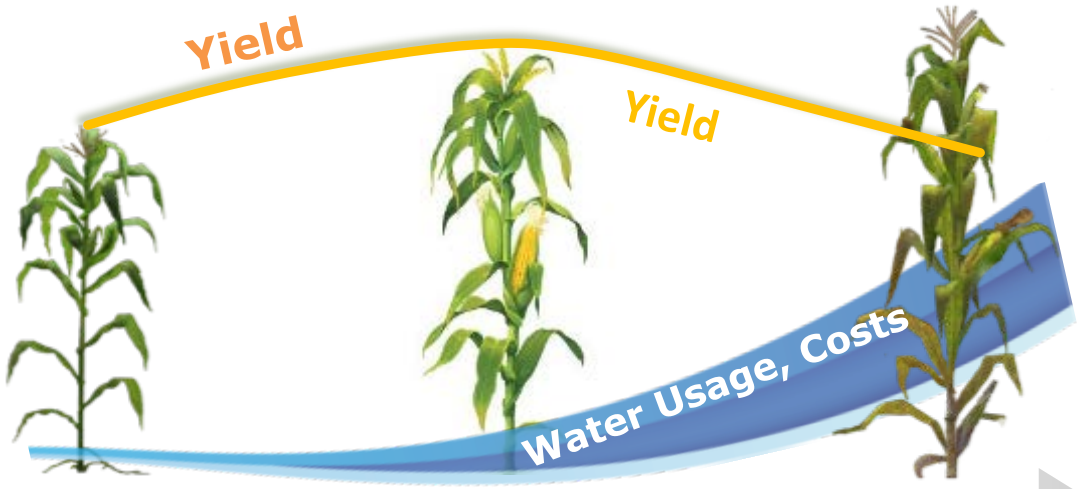
- Unique combination of skills
- Young company, experienced people
- Closely attuned to growers needs
- Powered by Rivulis irrigation



We learned how to bring water to the plant…

manna Irrigation Intelligence

Manna Irrigation Takes Up The Challenge:
How Much And When To Irrigate, For Maximum Yield?



Tradition, "father to son"

Irrigation Protocols

Soil and Plant Sensors

Remote Sensing

manna Irrigation Intelligence

Manna: Irrigation Recommendation System

Sensor-free, site specific, dynamic irrigation recommendations:

- **Reliable** – based on deep agronomic knowledge with irrigation specialty
- **Simple** – no equipment, accessible and easy to use
- **Affordable** – no CAPEX, low-cost subscription
- **Global**

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Methodology

Remote Sensing

Weather Services

Knowledge Base (Standard Protocols)

User Inputs

Manna Ag-models Cloud Engine

Irrigation Prescription

Crop Monitoring

Water Budget Monitoring

Why Satellites?

Why Satellites? The Whole Field In One Shot

Satellite data used to be…

- **Very expensive** – Government budgets
- **Low resolution** – Wide area study
- **Low frequency** – Revisit twice a month
- **Visual spectrum** – Nice images for the wall…

But today it is…

- **Almost Free Data –** Data is becoming more accessible
- **High resolution** - Suitable for intra-field variability detection
- **High frequency** – Revisit every 5 days and soon every day
- **Multi-spectral** Data allows for advanced agronomy modeling

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Why Hyper-local Weather?

Because weather, specifically precipitation is very local. And you only care for YOUR field, not the entire valley…

Standard Solutions

- Government-provided service – resolution of 10-25 KM
- Weather station – no forecast, and requires maintenance

Manna's Service

- Resolution of 5km, worldwide
- 14 days forecast
- 10 years historical data
- Accessible in a click of a button

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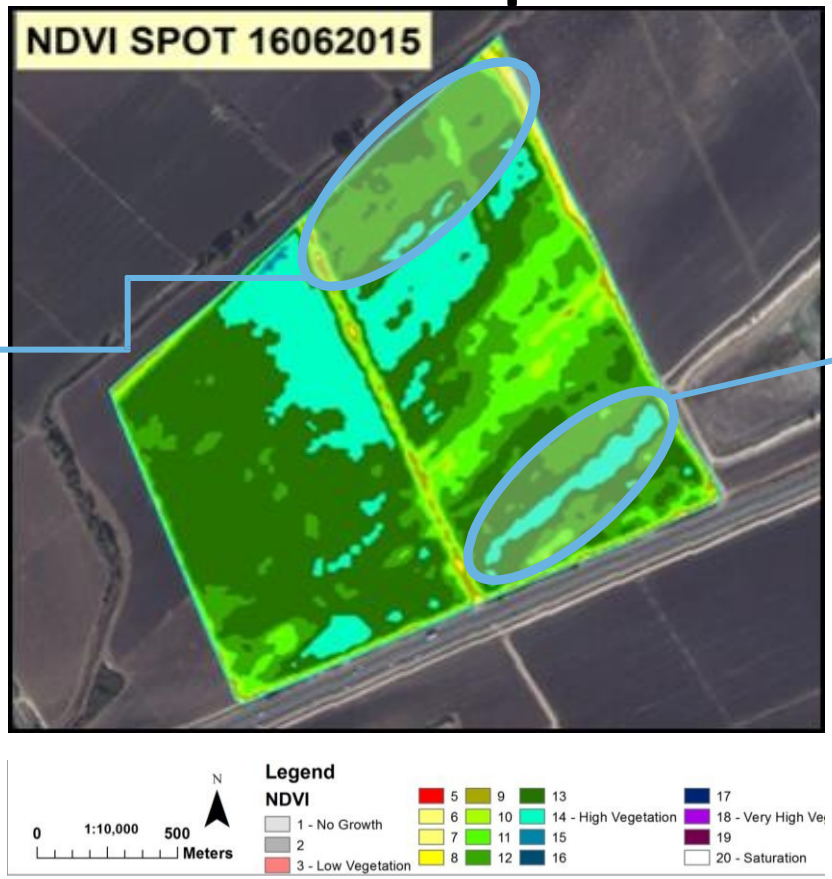
Crop Monitoring – Vegetation Maps

Auto-detected Low-vegetation area

Potential problems:

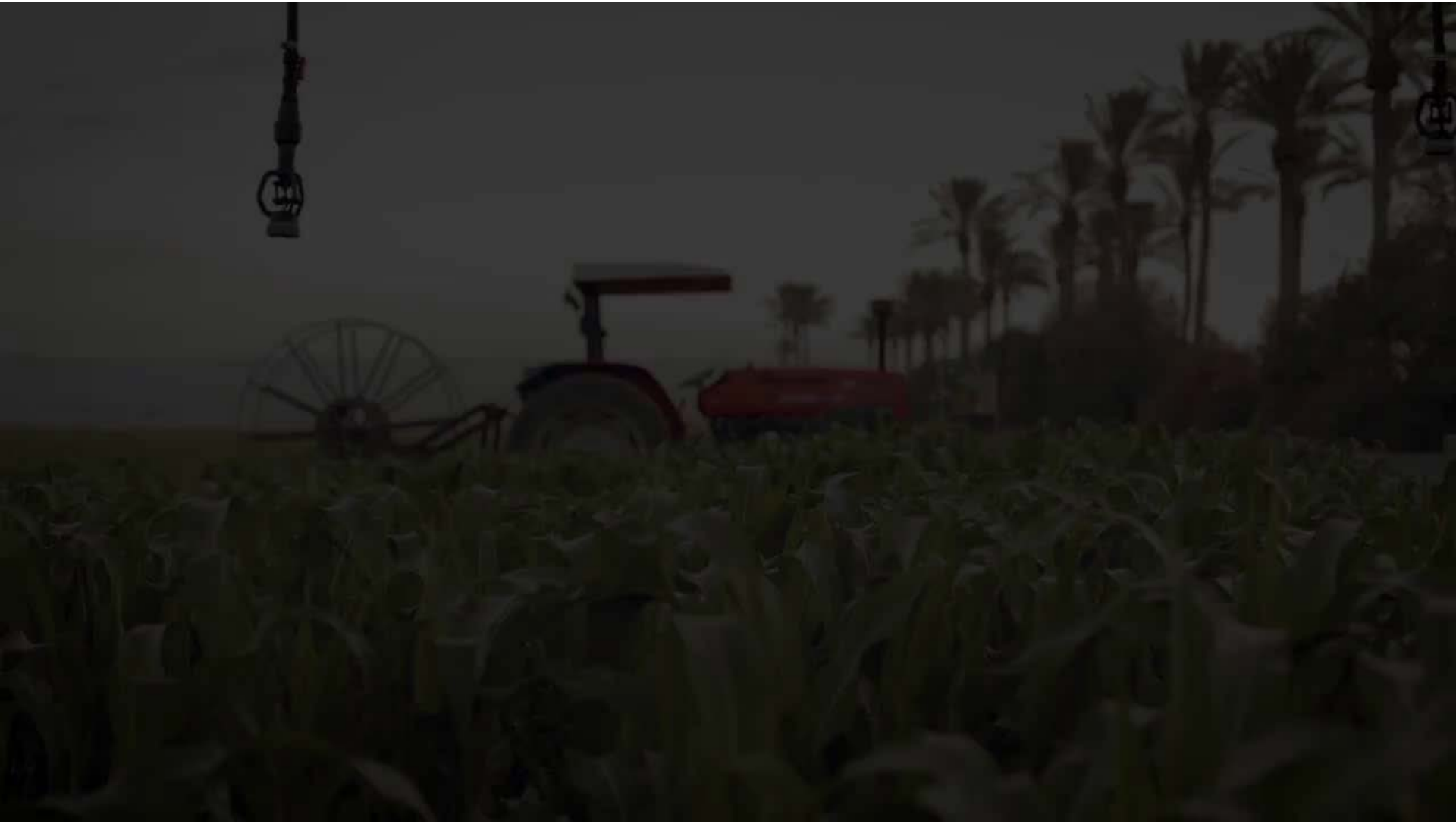
- Irrigation
- Disease
- Soil variability
- Fertilizer application issue



Auto-detected Excessive-Vegetation area

Potential problems:

- Water leakage
- Weeds spots
- Topography / drainage



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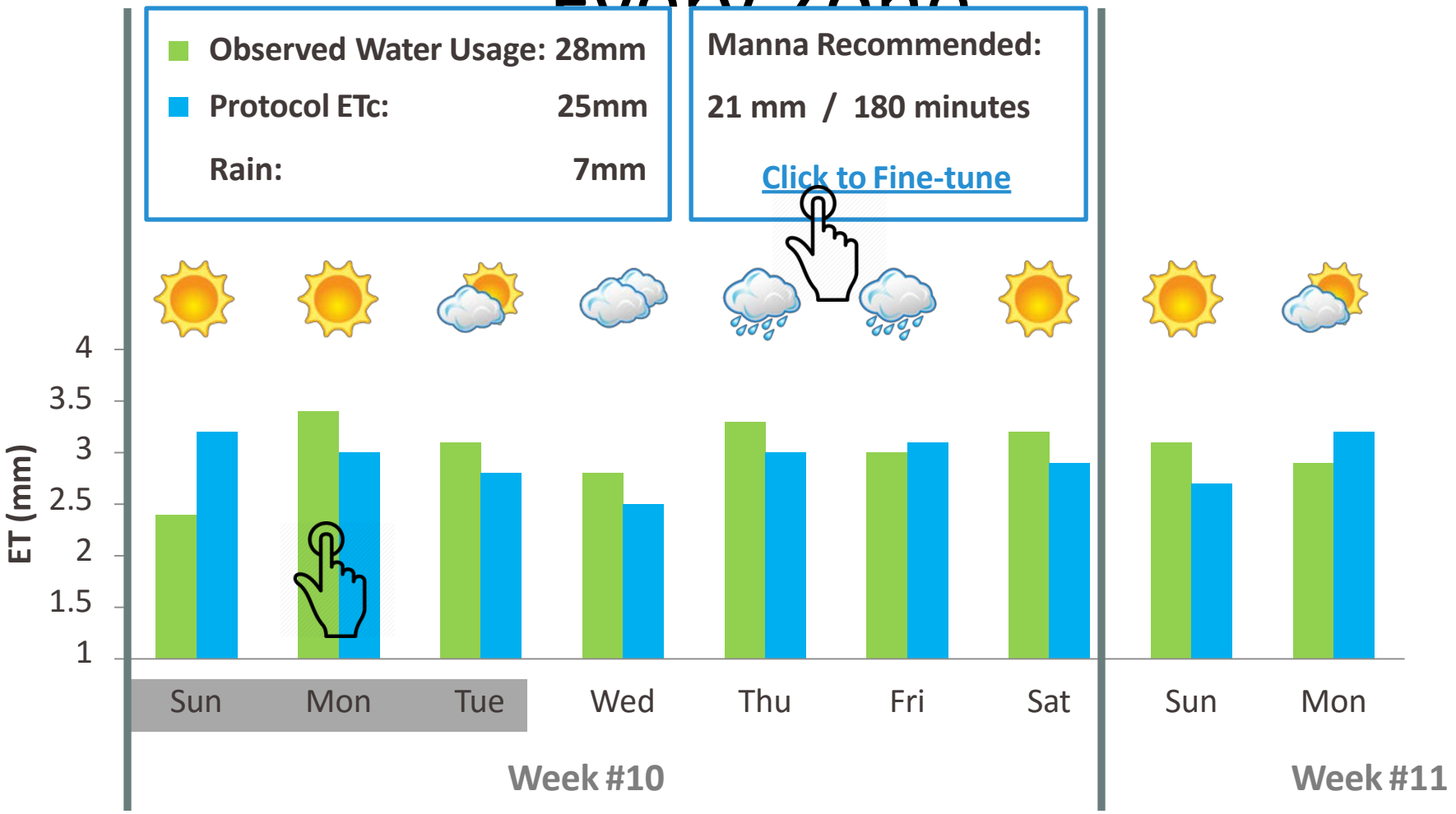
Irrigation Recommendations For Every Zone