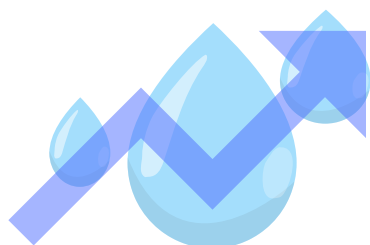


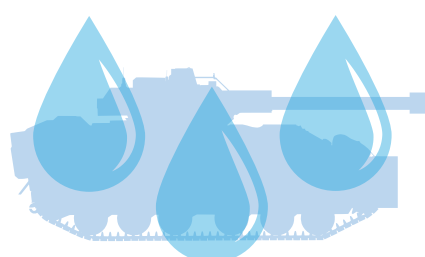
SRI FOR WATER-EFFICIENT RICE PRODUCTION

How the **System of Rice Intensification (SRI)** can improve rice productivity using less water



Water use has been growing globally at more than twice the rate of population increase in the last century

Today access to clean water is an issue for a large part of humanity. **Control of water resources** is a **cause for 127 conflicts** around the globe



2.3 billion

people live in **water-stressed countries** of which

733 million

live in **critically** water-stressed countries

700 million

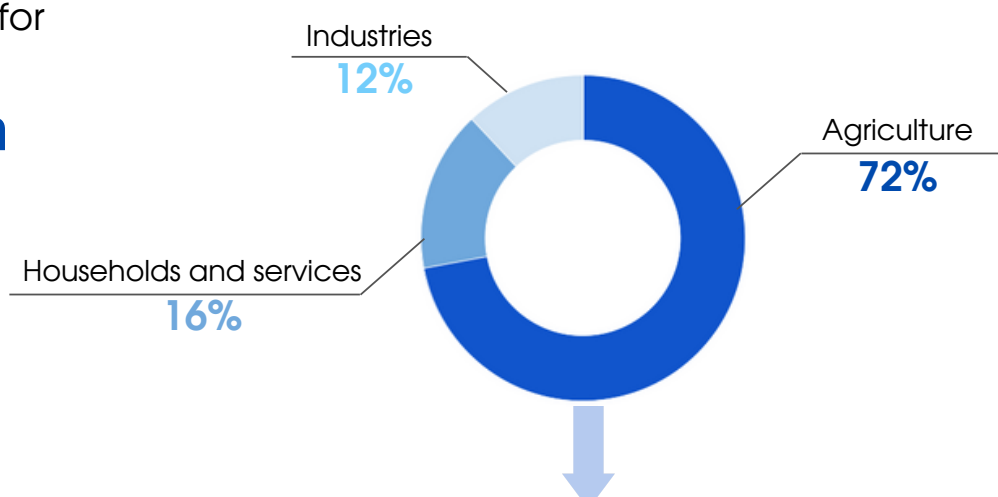
people worldwide could be **displaced** by intense water scarcity by 2030

3.2 billion

people live in **agricultural areas with high water shortages**

Agriculture is by far the sector which consumes the largest amount of fresh water and rice is the first crop for water utilization.

By 2025, **20 million hectares** of irrigated rice fields may suffer from water scarcity.



Rice uses **34-43%** of the world's irrigation water for production.

On average, about **2,500 liters of water** are needed to produce **1 kg of rice** (2–3 times those of other major cereals).



Rice cultivation covers around **167 million hectares** globally and **feeds 3.5 billion people** while providing the livelihood to **1 billion farmers**, mainly small-holders. In order to feed the growing world population which is estimated to reach **9.6 billion** by 2050, rice production needs to **grow by 25%** over the next 25 years.


Increasing rice production while following the current mainstream methods will cause intense pressure on the already scarce water resources.

The **System of Rice Intensification (SRI)** provides an answer for **increasing rice production and preserving water resources**.

WHAT IS SRI?

SRI is an agroecological approach to growing rice that allows farmers to **increase yields** while **decreasing water consumption** along with the reduction of other inputs such as seeds and synthetic amendments.

SRI is based on the following four principles:

- 
1. START WITH YOUNG HEALTHY PLANTS
 2. OPTIMISE SPACING TO MINIMISE COMPETITION BETWEEN PLANTS
 3. BUILD UP HEALTHY FERTILE SOIL
 4. APPLY ONLY THE MINIMUM AMOUNT OF WATER NEEDED

Under SRI the **Alternate Wetting and Drying (AWD)** water-management is followed. AWD is defined by periodic drying and re-flooding of the rice field. AWD **reduces water use by** up to while **25-50%** also **reducing greenhouse-gas emissions (GHG) by** up to **50%**

Each SRI principle contributes to enhancing water-efficiency:

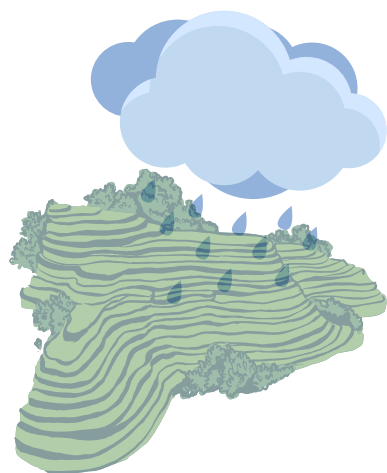
- By starting with young healthy seedlings **the crop cycle duration is reduced**
- Optimised spacing **enhances root systems** development and the photosynthetic process while **reducing competition** for resources between plants
- Healthy fertile soil **retains more water**



SRI improves total **water use efficiency** by **52%** and irrigation **water use efficiency** by **78%**

SRI reduces irrigation water applications by **3.9 million litres per hectare**

Rain-fed rice



SRI methods result in **stronger** and **more robust plants** with larger and longer-living root systems. **Water dependency is reduced** meaning unirrigated or upland **SRI rice plants** also **require less rainfall** therefore **increasing resilience** against drought events.

SRI-2030'S GOAL IS TO ACHIEVE 50 MILLION HECTARES OF SRI BY 2030
BY 2050 THIS WILL

PRODUCE AN
EXTRA



1 BILLION TONS RICE

REDUCE
EMISSIONS BY



8.5 BILLION TONS CO₂e

HIGHLY REDUCE PRESSURE
ON WATER RESOURCES



3.9 MILLION l/ha SAVED

INCREASE FARMER
PROFITS BY



\$ 1.6 TRILLION

FIND OUT MORE AT [SRI-2030.ORG](https://sri-2030.org)