

# Water in Agriculture



## TOWARDS RESILIENT AGRICULTURE



Water in agriculture is central to feeding the planet, providing livelihoods, and building resilience to climate shocks and extremes. Yet sustainable achievement of these objectives is threatened by growing demand for food and fiber, unsustainable resource use, and ever increasing climate volatility and change.

Our objective is to support a more water-resilient food system, in line with local and global dietary needs, that boosts livelihoods, respects the environment, and promotes resilience to climate shocks.



We work to strengthen our global and local understanding of the role of water in our food systems for evidence-based decision making, to improve water productivity in rainfed and irrigated agriculture by addressing economic and absolute water scarcity in agriculture, to improve service delivery and innovation for higher performance and accountability, and to focus on building resilience and mitigating climate impacts.



### TO SUPPORT THE COVID-19 RESPONSE AND RECOVERY, WE WORK TO:

- Ensure continuity of irrigation services that sustain critical agricultural production and enable employment in light of short-term fiscal stresses and operational constraints on irrigated agriculture.
- Provide cash injections to rural communities, create job opportunities for the vulnerable, and improve the productivity of agro-environmental assets (such as irrigation channels and drainage systems) to build long-term resilience to shocks.



**WORLD BANK GROUP**  
Water



**GWSP**  
GLOBAL WATER  
SECURITY & SANITATION  
PARTNERSHIP

Over the next **30 years**,  
the world's population is expected to reach  
**10 billion people.**

To feed the world and support  
a wide range of other social  
needs, agriculture must  
become more productive,  
resource efficient, and  
environmentally sustainable.

About **3.2 billion people**

live in agricultural areas experiencing high levels of  
water stress or high drought frequency.



An estimated **78%** of the world's poor



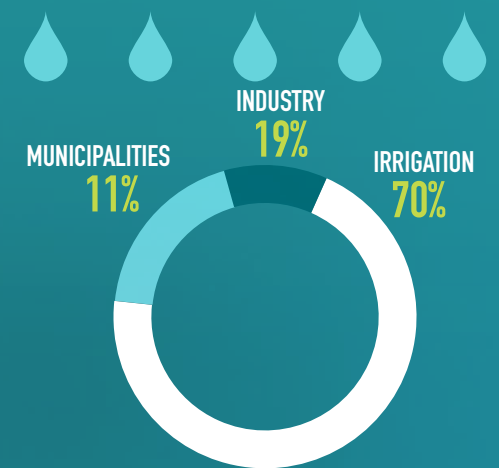
live in rural areas and depend  
primarily on agriculture for  
basic income – most of them  
on smallholder family farms.

## The Water We Eat:

irrigation covers only  
**20%**  
of the total land used  
for agriculture,

but supports  
**40%**  
of global food and  
fodder output,

and  
**55%**  
of output value.



Global abstraction  
of water  
Irrigation is responsible for using  
**70%**

of global freshwater abstracted from  
rivers, lakes, and aquifers. Irrigation  
pumping uses **6%** of global electricity  
and irrigated rice alone is responsible  
for **11%** of human methane emissions.

Sustainable agriculture  
is needed to increase  
food production, support  
profitable farms that  
create jobs, and bolster  
resilience. This requires  
**improvements in water  
service provision and  
soil water management.**



Smarter water is introducing water management  
in underserved areas without access to  
irrigation to improve resilience to weather  
shocks. It is also improving agricultural output  
and reducing real water loss in irrigated areas  
in water-stressed areas. **Hybrid and tailored  
solutions are needed to improve water  
productivity globally.**



Water-resilient food systems  
require shifts in what is produced  
where, better accounting of the  
sector's water-related footprints  
and social values, and a valuation  
of the role the sector (can) play  
in **achieving basin water  
security.**