Modelling European Agriculture with Climate Change for Food Security
— a FACCE JPI knowledge hub —

ICC-FAR

Linking Long Term Observatories with Crop Systems Modeling For a better understanding of Climate Change Impact, and Adaptation Strategies for Italian Cropping Systems

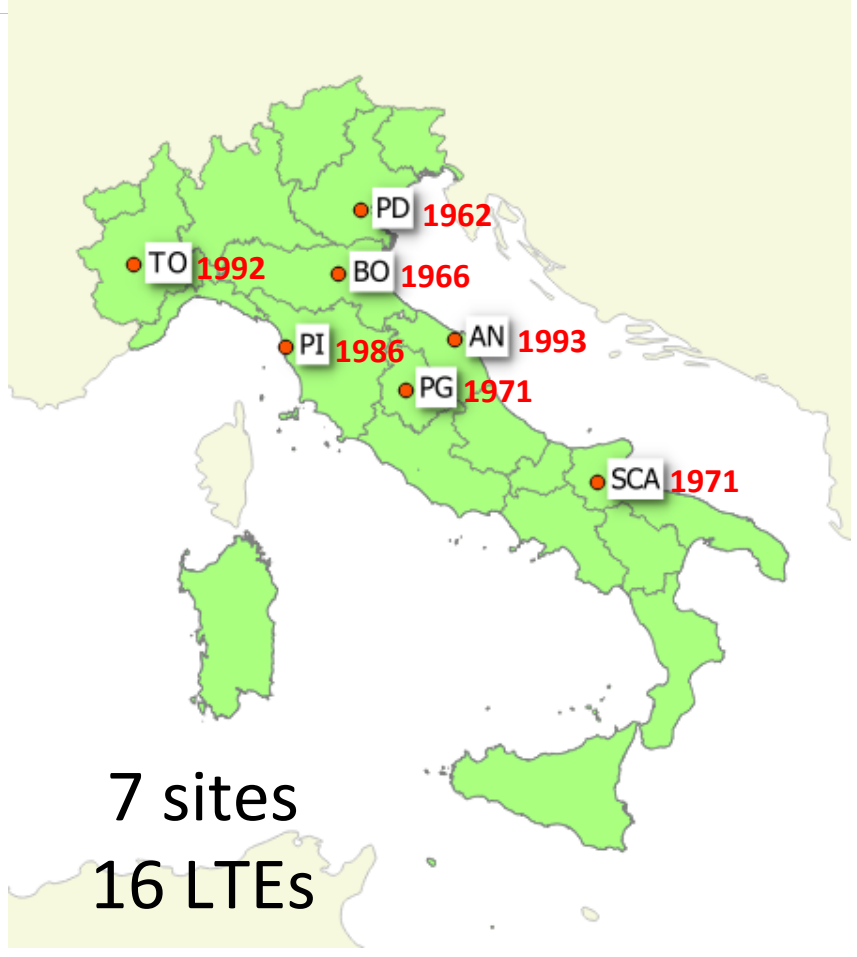
www.icfar.it

Modelling European Agriculture with Climate Change for Food Security
— a FACCE JPI knowledge hub —

IC-FAR

LInking Long Term Observatories with Crop Systems Modeling For a better understanding of Climate Change Impact and Adaptation StRategies for Italian Cropping Systems

- Funded by the Italian ministry of Research University and Education (2013-2016)
- Italian Long Term Experiments (LTEs)
- Assess reliability of cropping system models under Mediterranean cropping systems and conditions
- Linked Projects
  - MACSUR
  - ANAEE
  - AgMIP
  - ESFRI
  - GRA networks



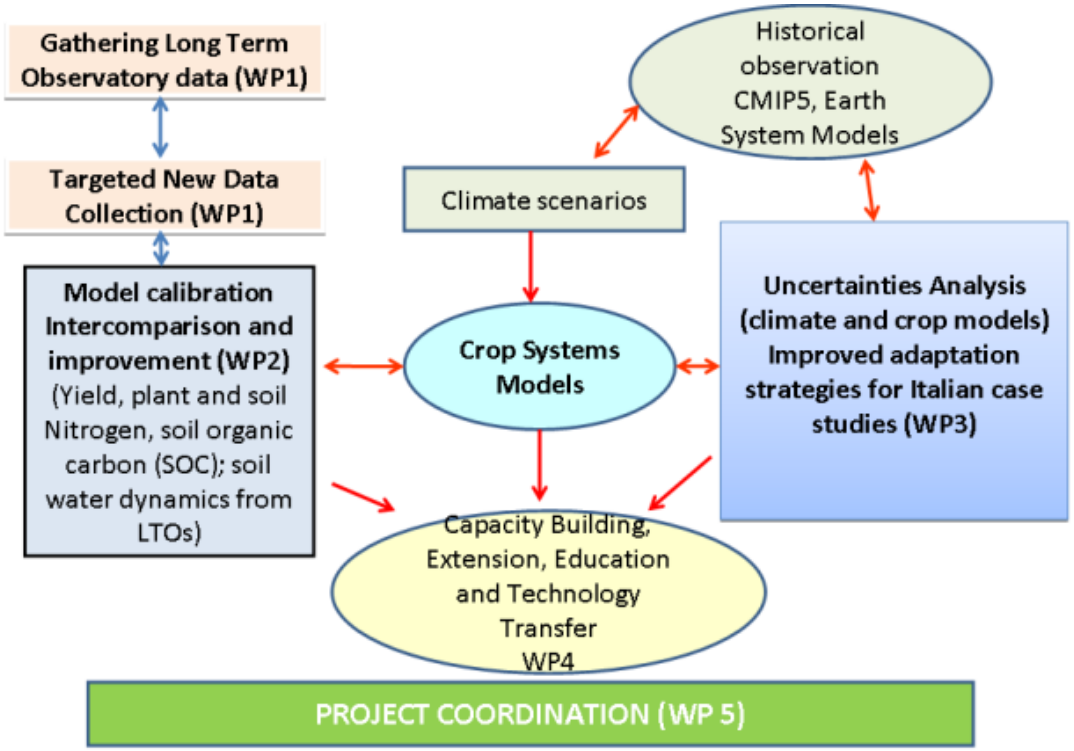
7 sites

16 LTEs

Modelling European Agriculture with Climate Change for Food Security
— a FACCE JPI knowledge hub —

LICIC-FAR

LInking Long Term Observatories with Crop Systems Modeling For a better understanding of Climate Change Impact and Adaptation StRategies for Italian Cropping Systems







		Experiment															
	type of variable	AN1	BO1	BO2	BO3	SCA1	SCA2	PD1	PD2	PD3	PD4	PG1	PG2	PI1	PI2	PI3	TO
	start year	1994	1966	1966	1985	1977	1990	1962	1964	1970	1966	1971	1998	1986	1993	2001	1992
Stored samples	Crops	(x)	x	x	x	(x)	(x)	(x)							x		x
	Soil	(x)	x	x	x	(x)	(x)	(x)	(x)								x
Weather dataset	PAR		x	x	x	x	x	x	x	x	x	x	x	x			
	wind direction	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	wind speed	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	RH	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	air T	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	rainfall	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	rain chemistry																x
	global radiation	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	net radiation					x	x					x	x	x			x
soil characteristics (systematic or periodic sampling)	basic chemical analyses	(x)	x	x	x	x	x	x	x	x	x	(x)	(x)	x	x	x	x
	Isotopes		x	x	x			(x)	x								
	bulk density	(x)	x	x	x	x	x	x	x	x	x	(x)	(x)	x	x	x	x
	physical characteristics		x	x	x	x	x	x	x	x	x	(x)	(x)	x	x	x	x
	hydraulic properties	(x)	x	x	x	x	x	x	x	x	x	(x)	(x)	x	x	x	x
	contamination																
measurements (continuous)	humidity	(x)				(x)	(x)					x	x	(x)			x
	temperature																x
	CO2 efflux								(x)			(x)					x
	N2O efflux																x
	water chemistry												(x)				x
Annual measurements on crops	LAI	(x)				(x)	(x)										(x)
	aboveground biomass	x	x	x	x	(x)	(x)	x	x	x	x	x	x	x	x	x	x
	yield	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	biomass nutrient content	(x)	(x)	(x)	(x)			(x)	(x)	(x)	(x)		x	x	x	x	x
	residual nutrient content		(x)	(x)	(x)			(x)	(x)	(x)	(x)		x	x	x	x	x

X systematic sampling/measurement (x) occasional sampling/measurement

IC-FAR

LInking Long Term Observatories with Crop Systems Modeling For a better understanding of Climate Change Impact and Adaptation StRategies for Italian Cropping Systems

- **IC-FAR** attempts to connect and coordinate LTEs with research teams specialized in model development and testing.

- **IC-FAR** has the potential to provide new insights on the future of Italian cropping systems and represents a first step towards an integration of available data and to enhance their access to the scientific community.