

**Table 7.4: OLS regression results summary for Agricultural Yield Anomaly (AYA) indices. Acronyms are defined in Table 3.3 and 6.1. Asterisks indicate variables lagged from the previous year. Statistics are: R (Chapter 3.3.5); RMSE, regression root mean squared error; CONST, regression constant  $a_0$ ; [Season][Index], statistically significant predictor coefficients  $a_x$ ; STATIONS, locations (Table 3.1.) for which (n) model results have been averaged, a value of ALL indicates that all available locations (e.g. all French stations) produce models with the same statistically significant predictors. Where results are given for A and B, it has been found that two different kinds of model can be applied, one which is applicable for a large number of sites, and one which is applicable for only one site.**

	France	Greece	Italy	Portugal	Spain
AYA <sub>C</sub>					<b>R</b> <b>0.37</b> RMSE        0.94 STATIONS   59
AYA <sub>G</sub>					
AYA <sub>M</sub>	<b>R</b> <b>0.40</b> RMSE        0.88 STATIONS   9, 10, 13	<b>R</b> <b>0.40</b> RMSE        0.74 STATIONS   16, 18, 19, 20, 21, 22 23, 24, 25			
AYA <sub>p</sub>	<b>R</b> <b>0.49</b> RMSE        0.84 STATIONS   ALL	<b>R</b> <b>0.60</b> RMSE        0.72 STATIONS   17, 18, 19, 20, 21, 22, 23, 26, 28, 29, 30		<b>R2</b> <b>0.37</b> RMSE        0.98 STATIONS   53	
AYA <sub>w</sub>		<b>R</b> <b>0.46</b> RMSE        0.87 STATIONS   ALL	<b>R</b> <b>0.42</b> RMSE        0.91 STATIONS   44	<b>R</b> <b>0.47</b> RMSE        0.83 STATIONS   50, 51, 52, 53	<b>R</b> <b>0.47</b> RMSE        1.08 STATIONS   79
		<b>R</b> <b>0.58</b> RMSE        0.80 STATIONS   21			

**Table 7.5: OLS regression results summary for Electricity Consumption (EC) indices. Acronyms are defined in Table 3.3 and 6.1. Asterisks indicate variables lagged from the previous year. Statistics are: R (Chapter 3.3.5); RMSE, regression root mean squared error; CONST, regression constant  $a_0$ ; [Season][Index], statistically significant predictor coefficients  $a_x$ ; STATIONS, locations (Table 3.1.) for which (n) model results have been averaged, a value of ALL indicates that all available locations (e.g. all French stations) produce models with the same statistically significant predictors. Where results are given for A and B, it has been found that two different kinds of model can be applied, one which is applicable for a large number of sites, and one which is applicable for only one site.**

	France	Greece	Italy	Portugal	Spain
ECC <sub>DJF</sub>			R <b>0.44</b> RMSE       0.06 STATIONS: 49	R <b>0.55</b> RMSE       0.08 STATIONS: 49,50,51,52	R <b>0.69</b> RMSE       0.07 STATIONS: ALL
ERC <sub>DJF</sub>	R <b>0.85</b> RMSE       0.12 STATIONS: 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15		R <b>0.73</b> RMSE       0.09 STATIONS: 39		A
					B
ECC <sub>JJA</sub>	R <b>0.78</b> RMSE       0.60 STATIONS: 5, 6, 7, 9, 10, 11, 12, 13, 14, 15				
ERC <sub>JJA</sub>	A				
	B				
	R <b>0.42</b> RMSE       0.86 STATIONS: ALL			R <b>0.66</b> RMSE       0.67 STATIONS: ALL	
	R <b>0.85</b> RMSE       0.52 STATIONS: 7, 10, 13				

**Table 7.6: OLS regression results summary for Excess Mortality (EM) indices. Acronyms are defined in Table 3.3 and 6.1. Asterisks indicate variables lagged from the previous year. Statistics are: R (Chapter 3.3.5); RMSE, regression root mean squared error; CONST, regression constant  $a_0$ ; [Season][Index], statistically significant predictor coefficients  $a_x$ ; STATIONS, locations (Table 3.1.) for which (n) model results have been averaged, a value of ALL indicates that all available locations (e.g. all French stations) produce models with the same statistically significant predictors. Where results are given for A and B, it has been found that two different kinds of model can be applied, one which is applicable for a large number of sites, and one which is applicable for only one site.**

	France	Greece	Italy	Portugal	Spain
EMI <sub>DJF</sub>				<b>R</b> <b>0.44</b> RMSE     0.84 STATIONS: 50, 51, 52, 53, 54	<b>R</b> <b>0.44</b> RMSE     0.89 STATIONS: ALL
EMI <sub>MAM</sub>	<b>R</b> <b>0.46</b> RMSE     0.93 STATIONS: 4, 7, 8, 10,12	<b>R</b> <b>0.51</b> RMSE     0.84 STATIONS: 17, 18, 19, 20, 21, 23 25, 27, 28, 29	<b>R</b> <b>0.37</b> RMSE     0.93 STATIONS: ALL		
EMI <sub>JJA</sub>		<b>R</b> <b>0.44</b> RMSE     0.85 STATIONS: ALL			
EMI <sub>SON</sub>		<b>R</b> <b>0.44</b> RMSE     0.88 STATIONS: ALL		<b>R</b> <b>0.56</b> RMSE     0.87 STATIONS: ALL	
EMI <sub>65</sub>		<b>R</b> <b>0.39</b> RMSE     0.96 STATIONS: 17, 18, 19, 20, 22, 24, 27, 28, 29, 30			

**Table 7.7: Neural network predictor weights for Electricity Consumption indices. Weights are given either for models derived from individual stations, or as averages of all regional results, as appropriate (Section 7.4.1).**

	ECC <sub>DJF</sub>			ERC <sub>DJF</sub>			ECC <sub>IIA</sub>		ERC <sub>IIA</sub>	
		TAVG	TNFD		TAVG	TNFD		TN10		TMIN
France	LBFNN Montelimar Agen	-22.12 -20.92	1.54 1.74	LBFNN Average	-15.53	1.06	OLS Average	-5.77	OLS Average	-9.79
Greece	LBFNN Thessaloniki Tripoli	-6.62 -8.10		LBFNN Average	-8.97					
Italy	OLS Poretta Terme	-11.02		LBFNN Average	-8.44					
Portugal	OLS Average	-8.05		LBFNN Average	-8.57					
Spain	OLS Average	-10.68	0.51	LBFNN Average	-9.57	0.91				