**Supplementary material**

# On the relationships between forest fires and weather conditions in Greece from long-term national observations (1894–2010)

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## Table S1. Generalised least squares (GLS) regression outputs

Residual autocorrelation has not been taken into account. Abbreviations as in Table 4

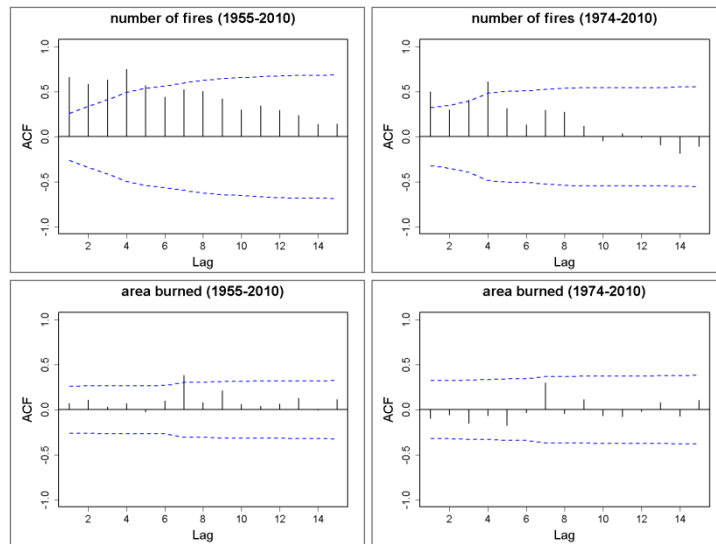| GLS regression (without residual fit) | | | |
|---|---|---|---|
| **Coefficients** | | | |
| | Value | s.e. | *t*-value | *P* |
| (Intercept) | −7.724 | 3.391 | −2.278 | 0.0269* |
| $T_{max}$ mean | 0.544 | 0.178 | 3.055 | 0.0036** |
| $T_{max}$ abs | 0.142 | 0.056 | 2.566 | 0.0133* |
| $p_{fir}$ | −0.006 | 0.002 | −2.917 | 0.0052** |
| **Model diagnostics** | | | |
| AIC | BIC | loglik | |
| 127.9201 | 137.9567 | −58.96 | |
| **Standardised residuals** | | | |
| Min. | Q1 | Med. | Q3 | Max. |
| −2.891 | −0.587 | 0.113 | 0.726 | 2.179 |
| Residual standard error: 0.7068 | | | |

**Fig. S1.** Autocorrelation function (ACF) diagrams for the historical data of fire records (number of fires and area burned) in Greece for the periods 1955–2010 (left column) and 1974–2010 (right column). Dashed lines indicate the 95% confidence intervals estimated by means of the Bartlett equation (Hipel and McLeod 1994).
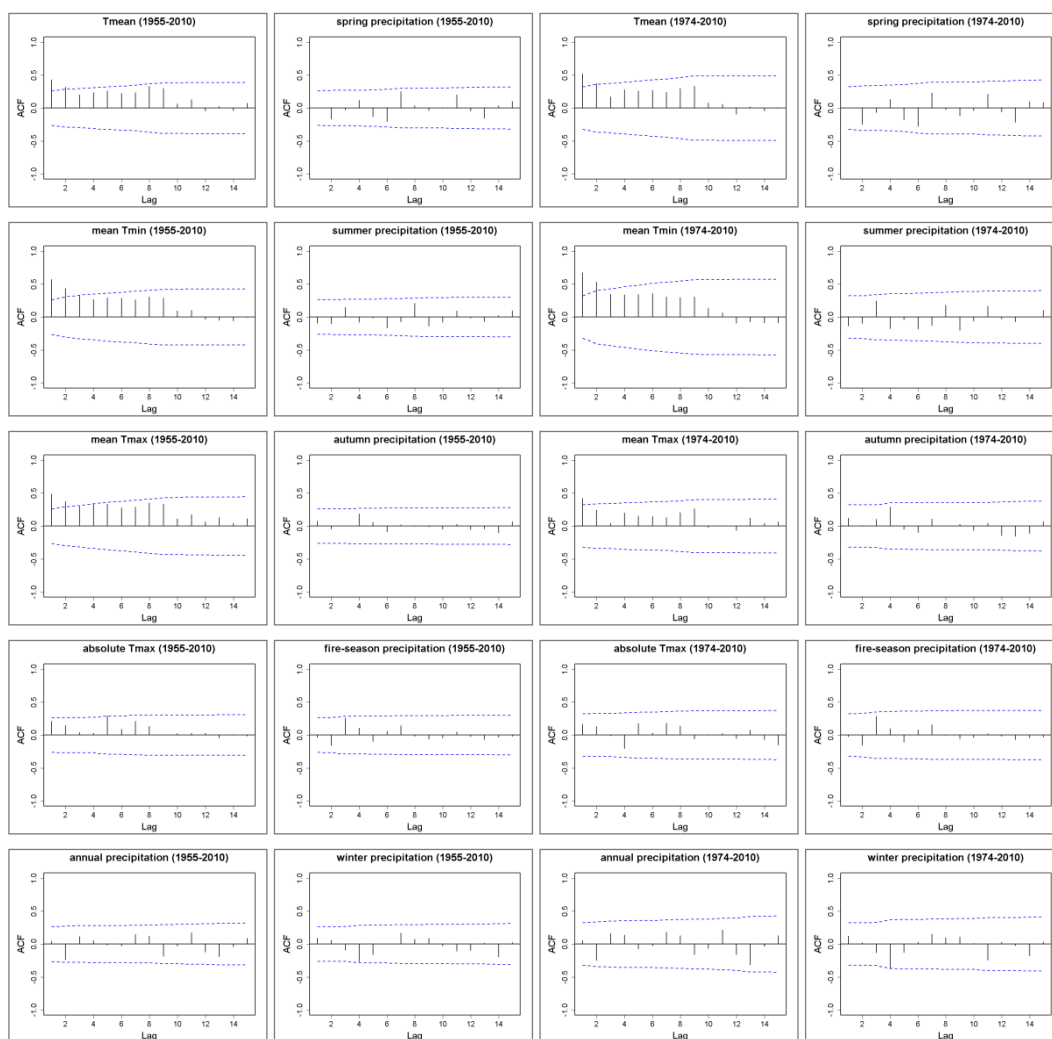
**Fig. S2.** Autocorrelation function (ACF) diagrams for the historical meteorological data in Greece for the periods 1955–2010 (first two columns) and 1974–2010 (last two columns). Dashed lines indicate the 95% confidence intervals estimated by means of the Bartlett equation (Hipel and McLeod 1994).
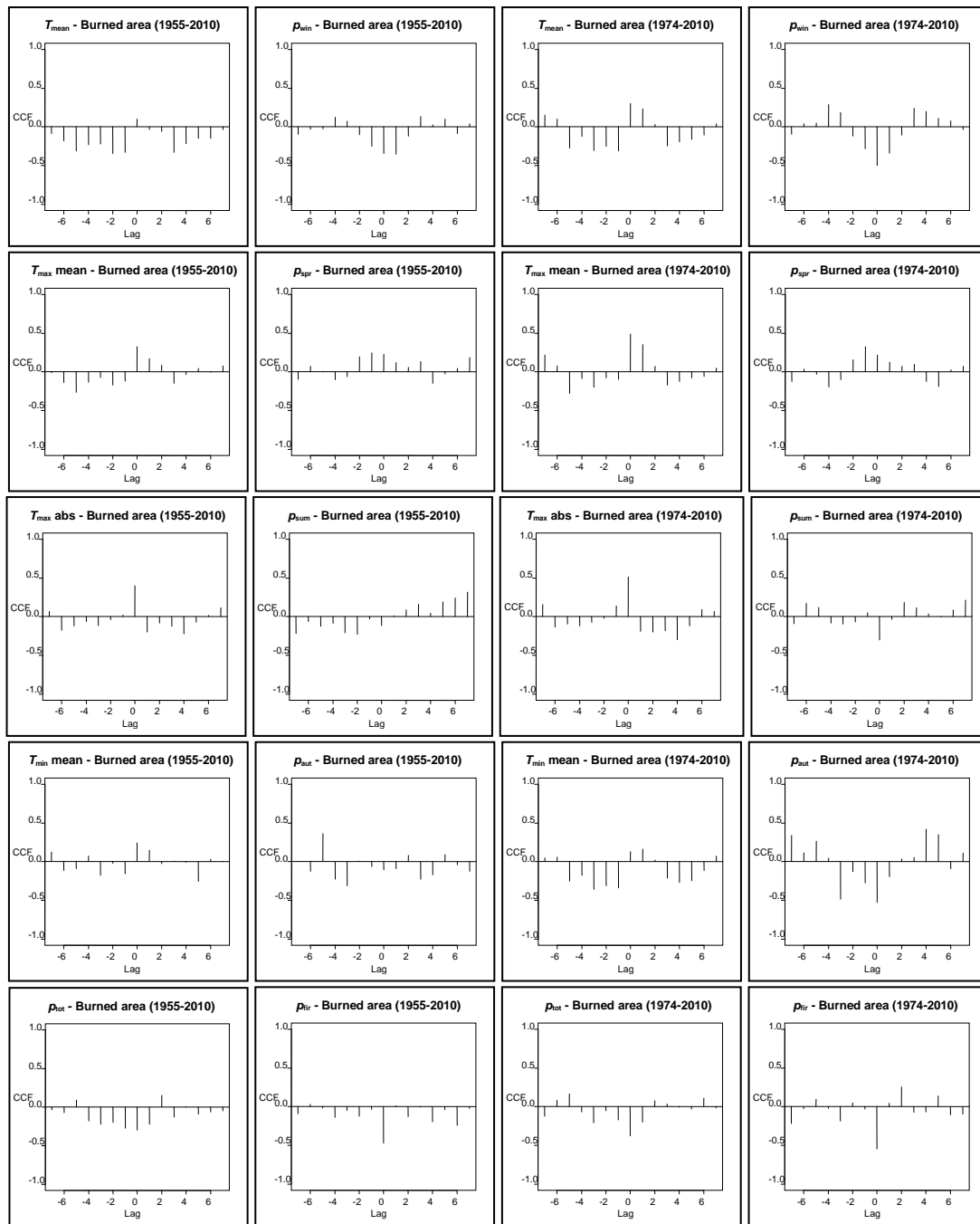
**Fig. S3.** Cross-correlation function (CCF) graphs between corrected area burned and selected temperature and precipitation parameters in Greece for the periods 1955–2010 (first two columns) and 1974–2010 (last two columns) Dashed lines indicate the 95% confidence intervals. Abbreviations: $T_{mean}$, mean annual air temperature; $T_{max}$, maximum air temperature; $T_{min}$, minimum air temperature; $p_{tot}$, total annual precipitation; $p_{win}$, winter precipitation; $p_{spr}$, spring precipitation; $p_{sum}$, summer precipitation; $p_{aut}$, autumn precipitation; $p_{fir}$, fire season precipitation.
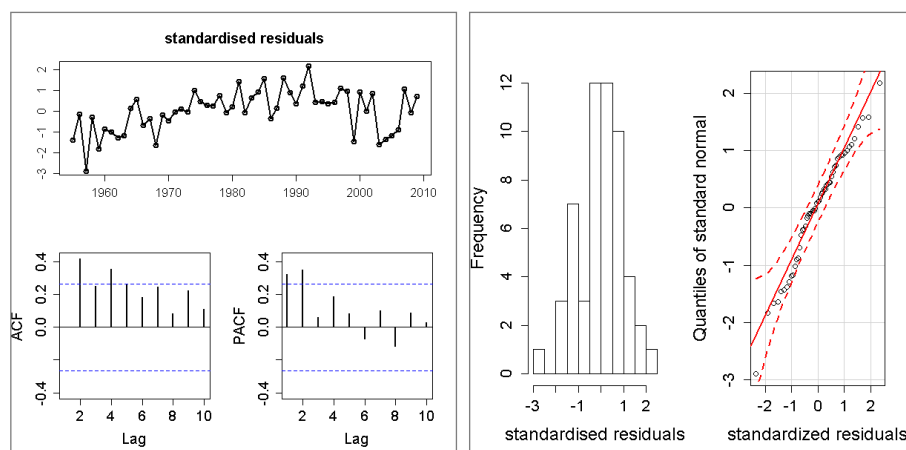
**Fig. S4.** Standardised regression residuals. Autocorrelation (ACF) and partial autocorrelation function (PACF) diagrams (left) and histogram and QQplot of standardised residuals of generalised least squares (GLS) regression without autoregressive moving average (ARMA) fit to residuals (right).

## References

Hipel KW, McLeod AI (1994) 'Time Series Modelling of Water Resources and Environmental Systems.' (Elsevier: Amsterdam, the Netherlands)