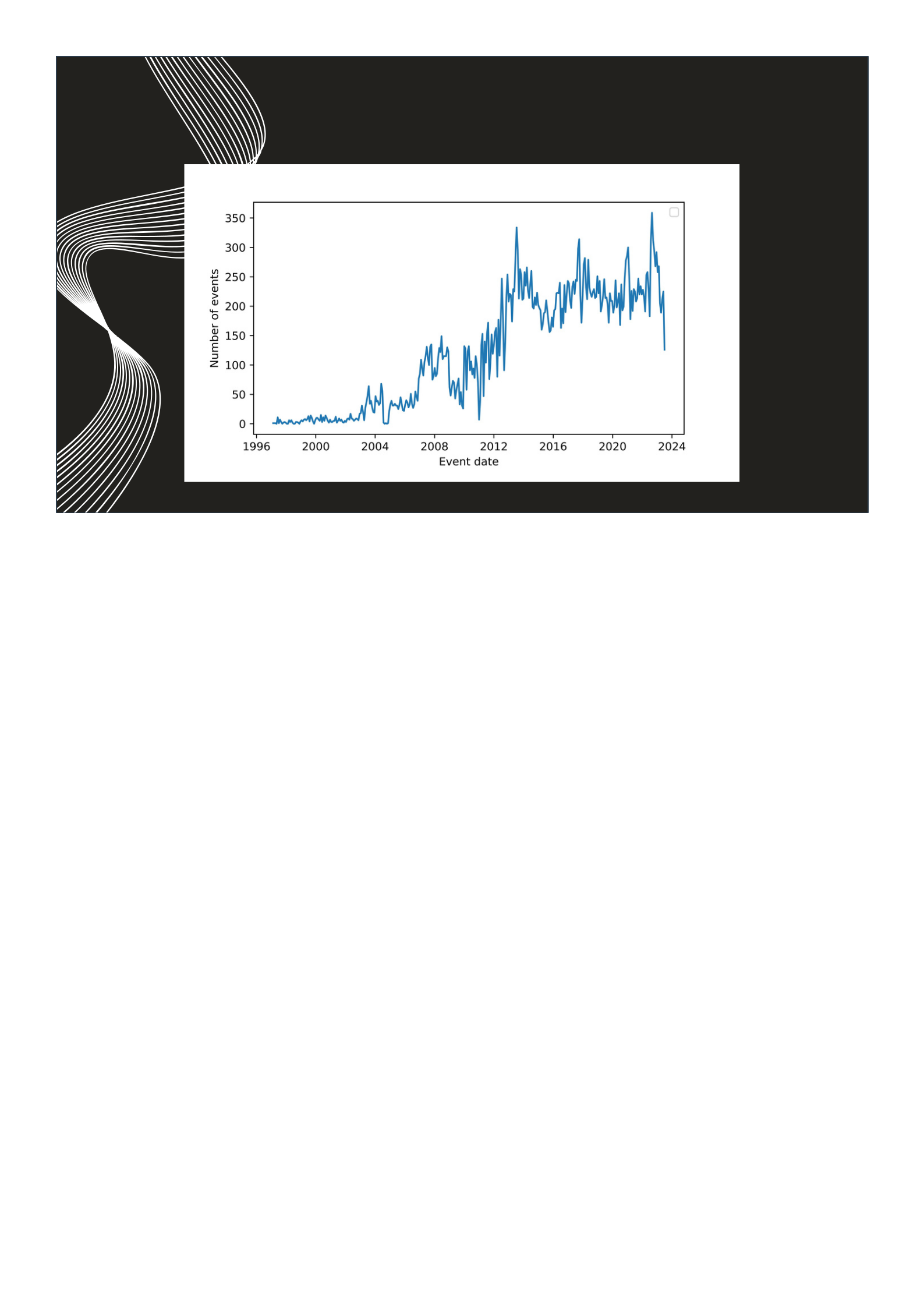
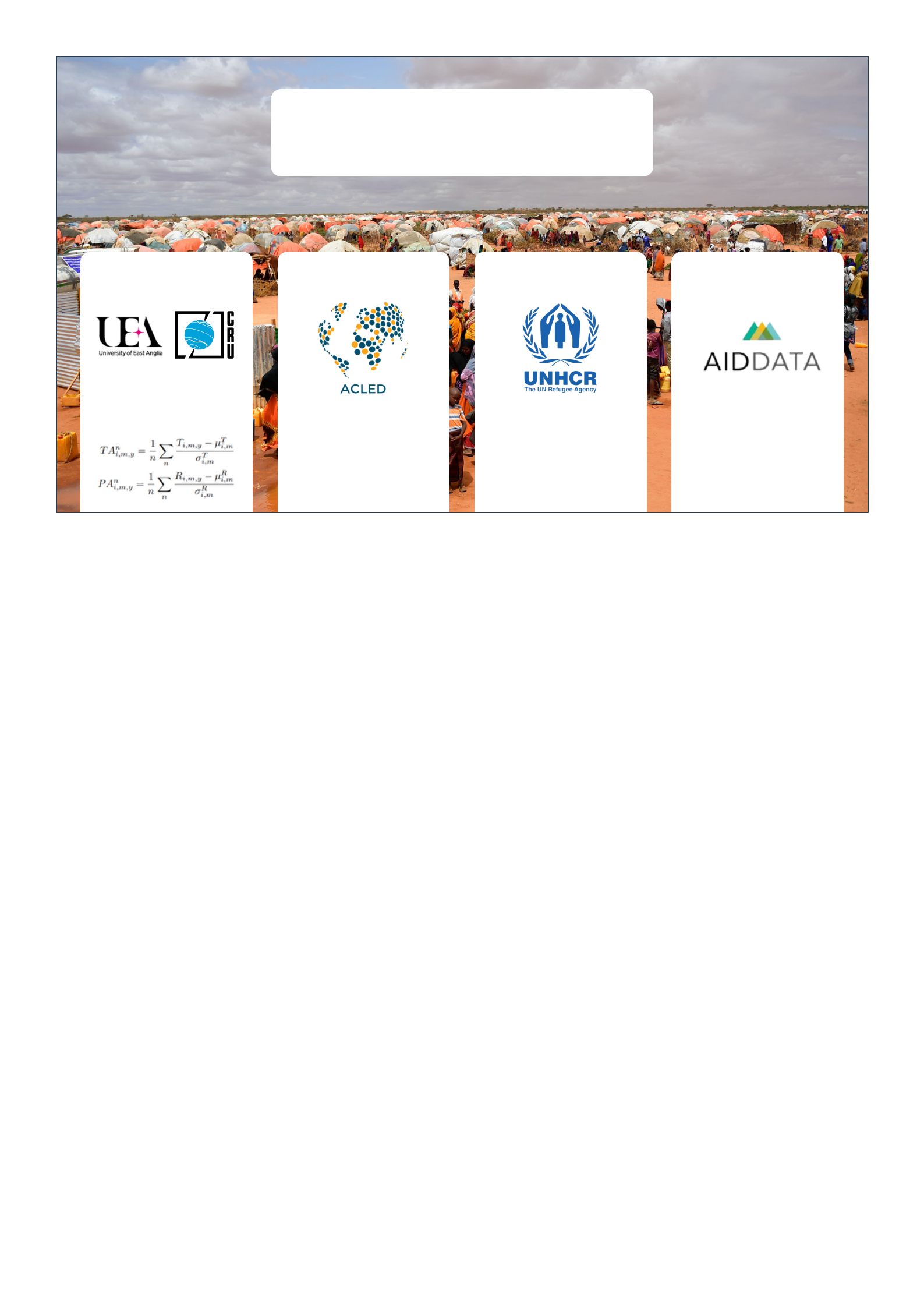


Sara Ghivarello

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PROTESTS AND VIOLENT EVENTS

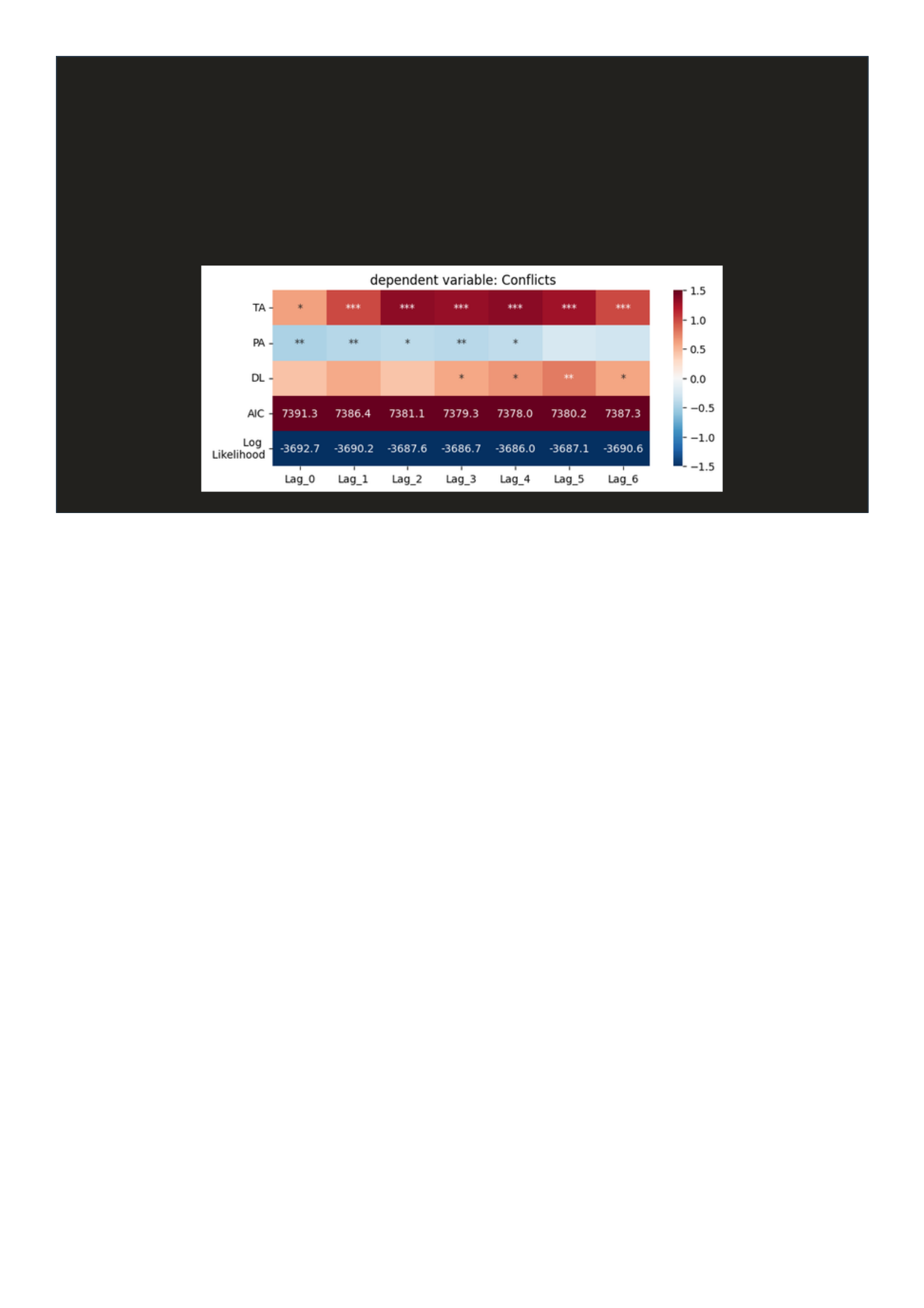
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**DATA**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Climate | Conflicts | Displacements | Control |  |
| Timeseries dataset of |  |  |  |  |
| gridded temperature |  |  |  |  |
| and precipitation | Protests and violent | Protection and | GDP and |  |
|  | events at a sub- | Return Monitoring |  |
|  | population density |  |
|  | national level, | Network (PRMN) |  |
|  |  |  |
|  | grouped per month | survey |  |  |

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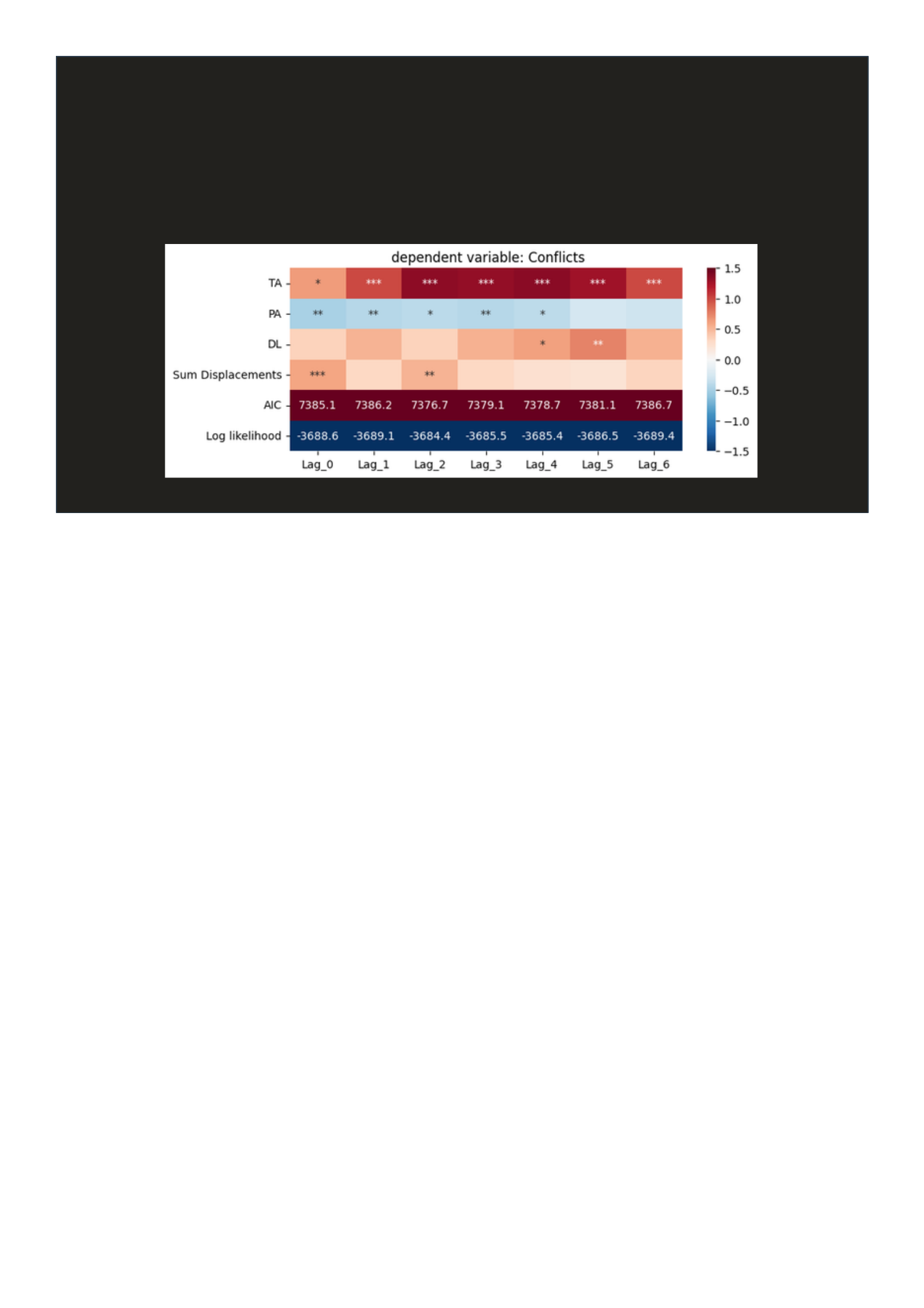
LINEAR MODEL 1a

Temperature anomalies TA

Conflicts Precipitation anomalies PA

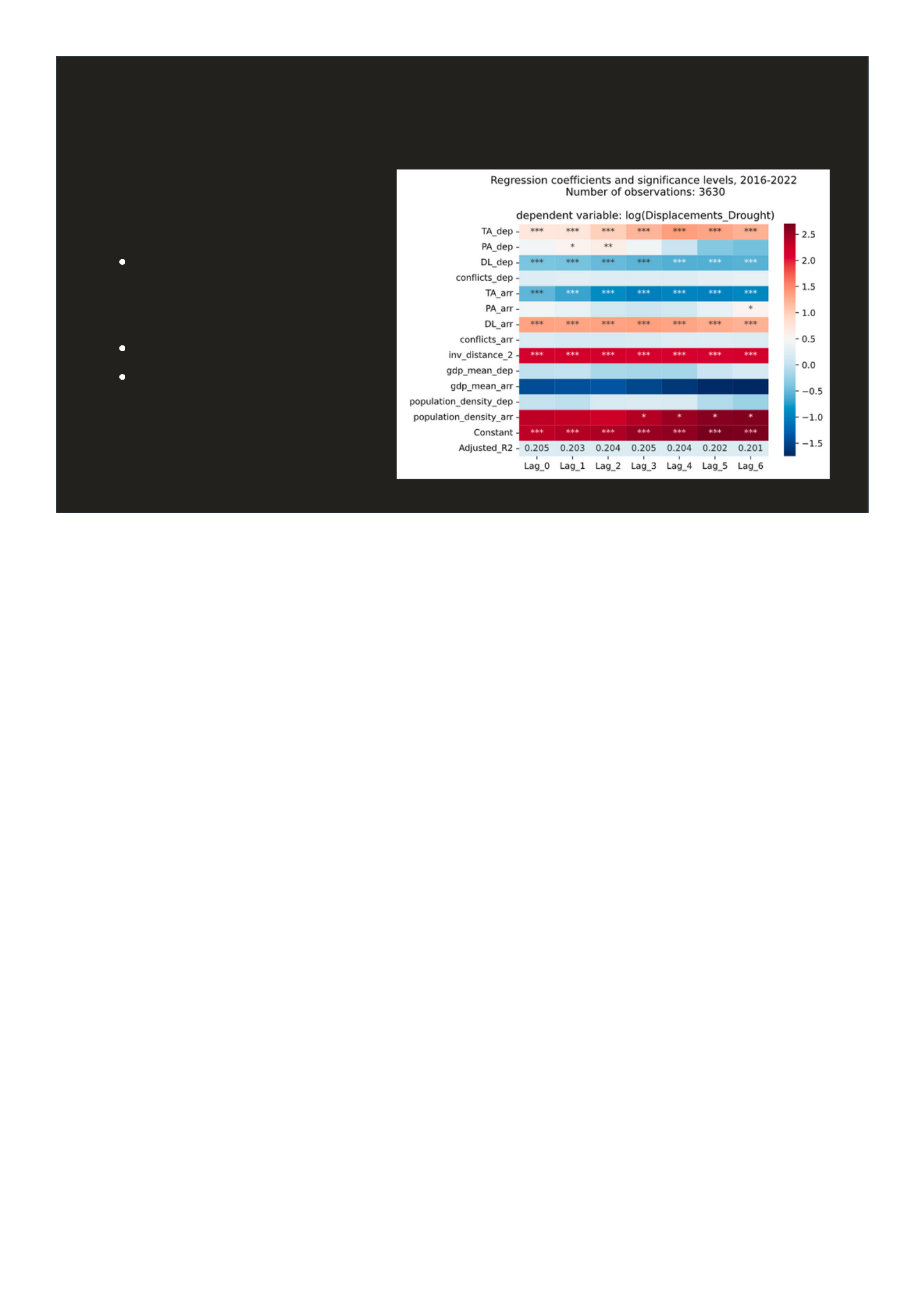
∝ Drought lenght DL

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LINEAR MODEL 1b

Add the number of displacements arriving to the region

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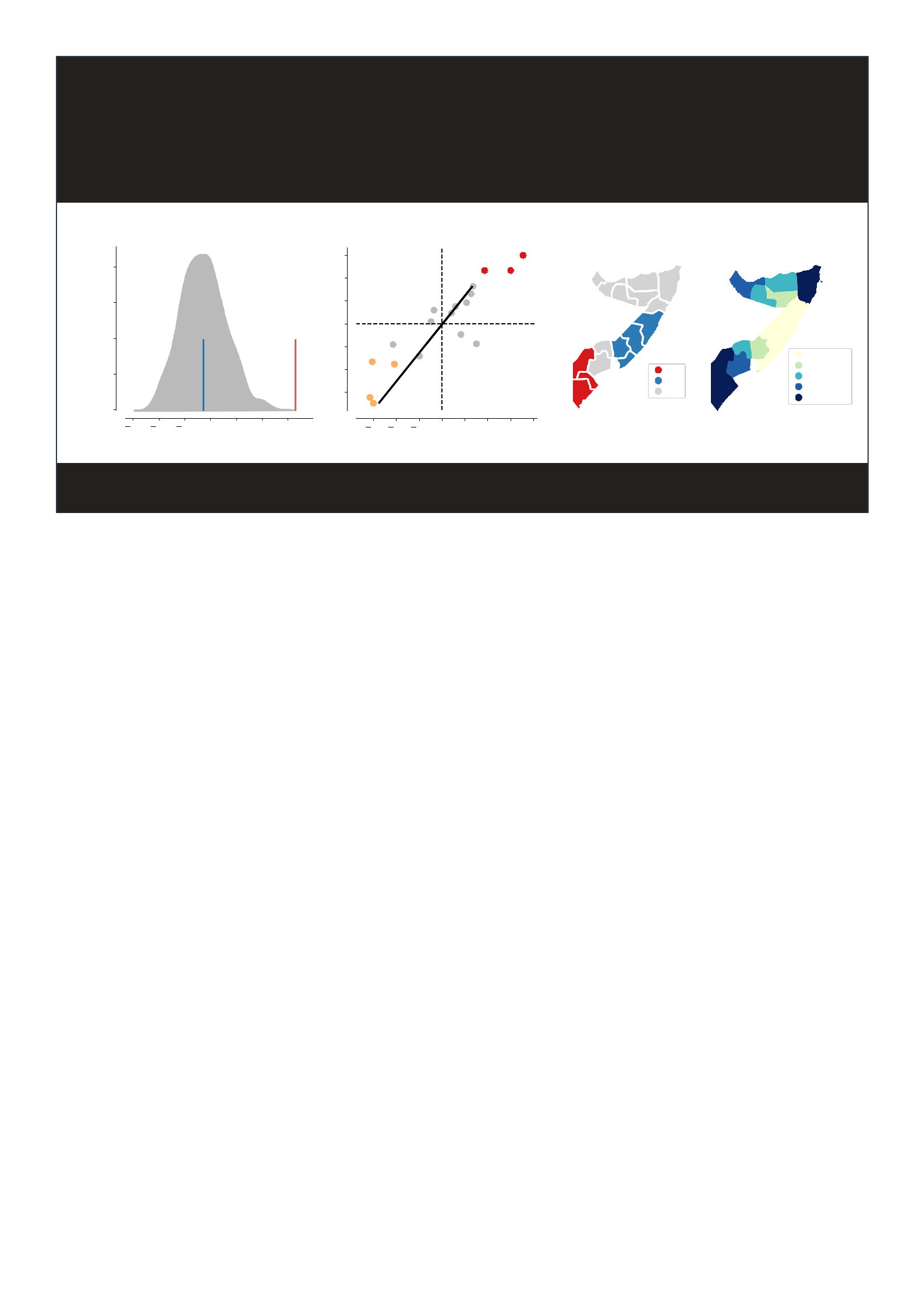
LINEAR MODEL 2

Log (Displacements)

∝

Climate and conflict variables in the departure and arrival regions, inverse distance^2, control variables

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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | SPATIAL AUTOCORRELATION | | | | | | | | | | | |  |  |
|  |  | Reference Distribution | | | | | |  | Moran Local scatterplot | | | | | | |  |  |
|  | 2.0 |  |  |  |  |  |  |  | 1.5 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | 1.0 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 1.5 |  |  |  |  |  |  | Spatial Lag | 0.5 |  |  |  |  |  |  |  |  |
| Density | 1.0 |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 0.5 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 0.32, 0.36 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.5 |  |  |  |  |  |  | 1.0 |  |  |  |  |  | HH | 0.36, 0.43 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.43, 0.48 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | LL |  |
|  |  |  |  |  |  |  |  |  | 1.5 |  |  |  |  |  | 0.48, 0.50 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | ns |  |
|  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.50, 0.58 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 0.6 | 0.4 | 0.2 | 0.0 | 0.2 | 0.4 | 0.6 |  | 1.5 | 1.0 | 0.5 | 0.0 | 0.5 | 1.0 | 1.5 |  |  |

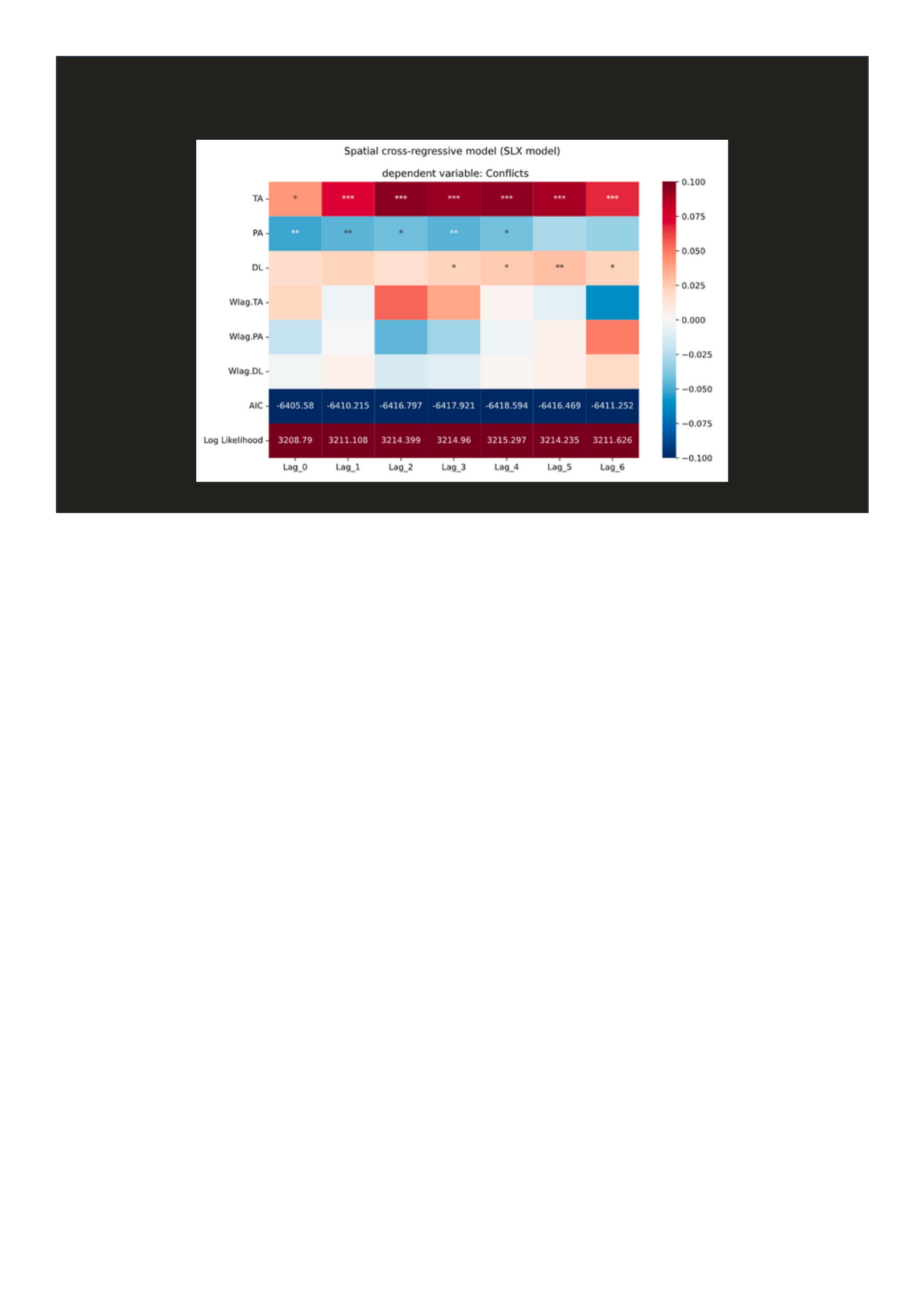
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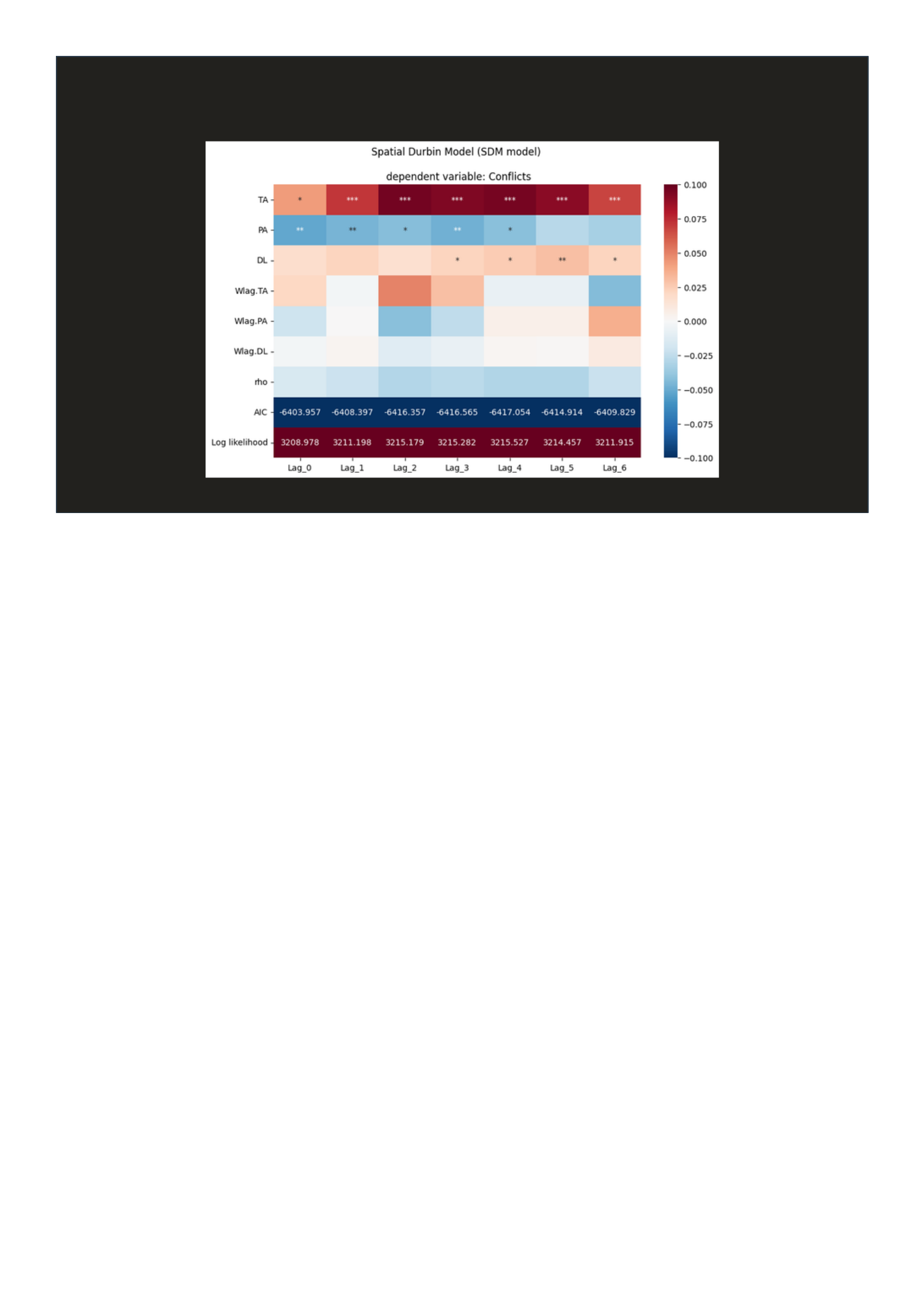
**MODELS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **y = X** |  | **y = WX + X** |  | **y = WY + WX + X** |
|  |  |  |  |  |
| Linear |  | SLX |  | SDM |
|  |  |  |  |  |

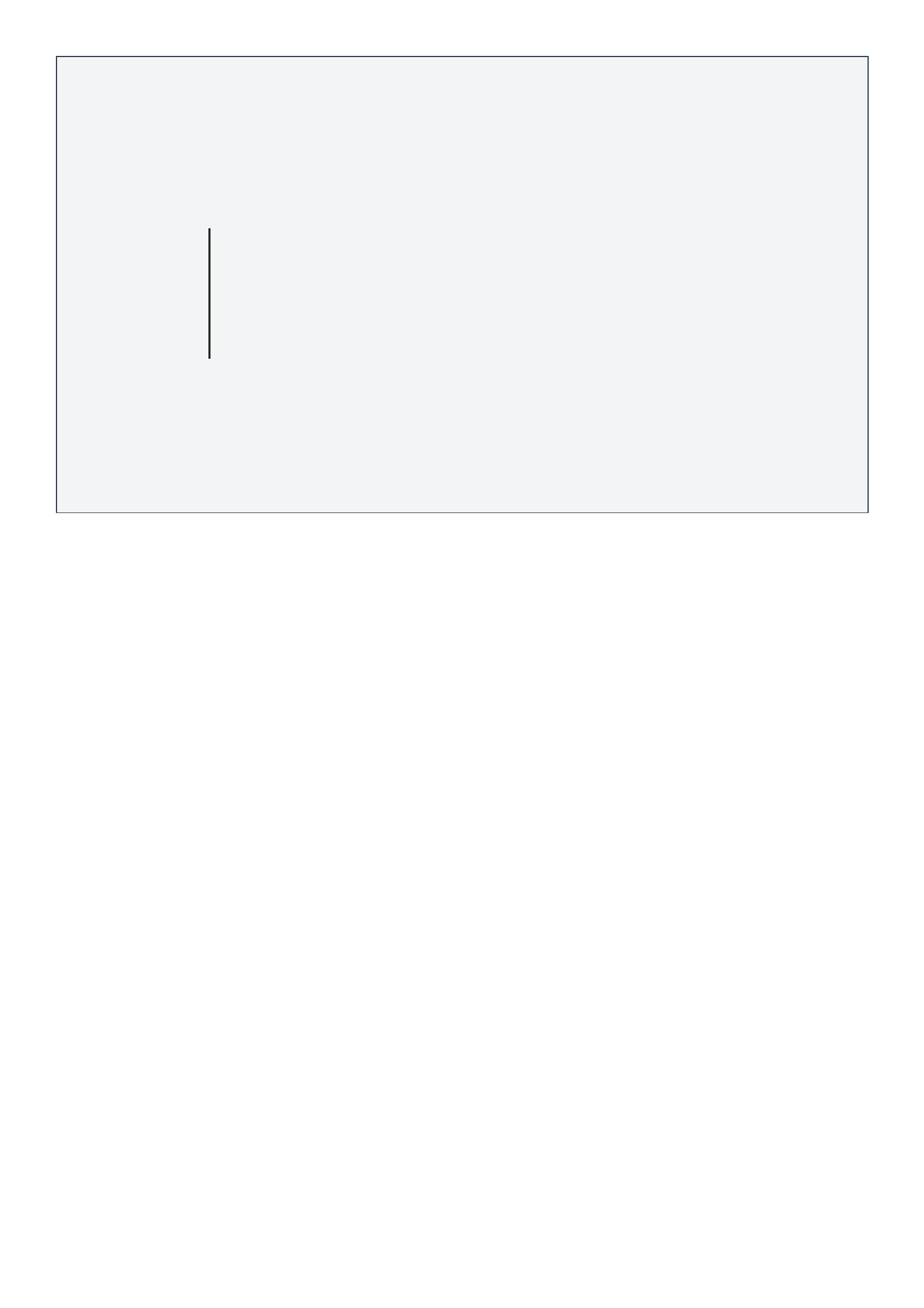
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**y = βX + Wlag.β WX**

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**y = βX + Wlag.β WX + ρ WY**

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Thanks to the team

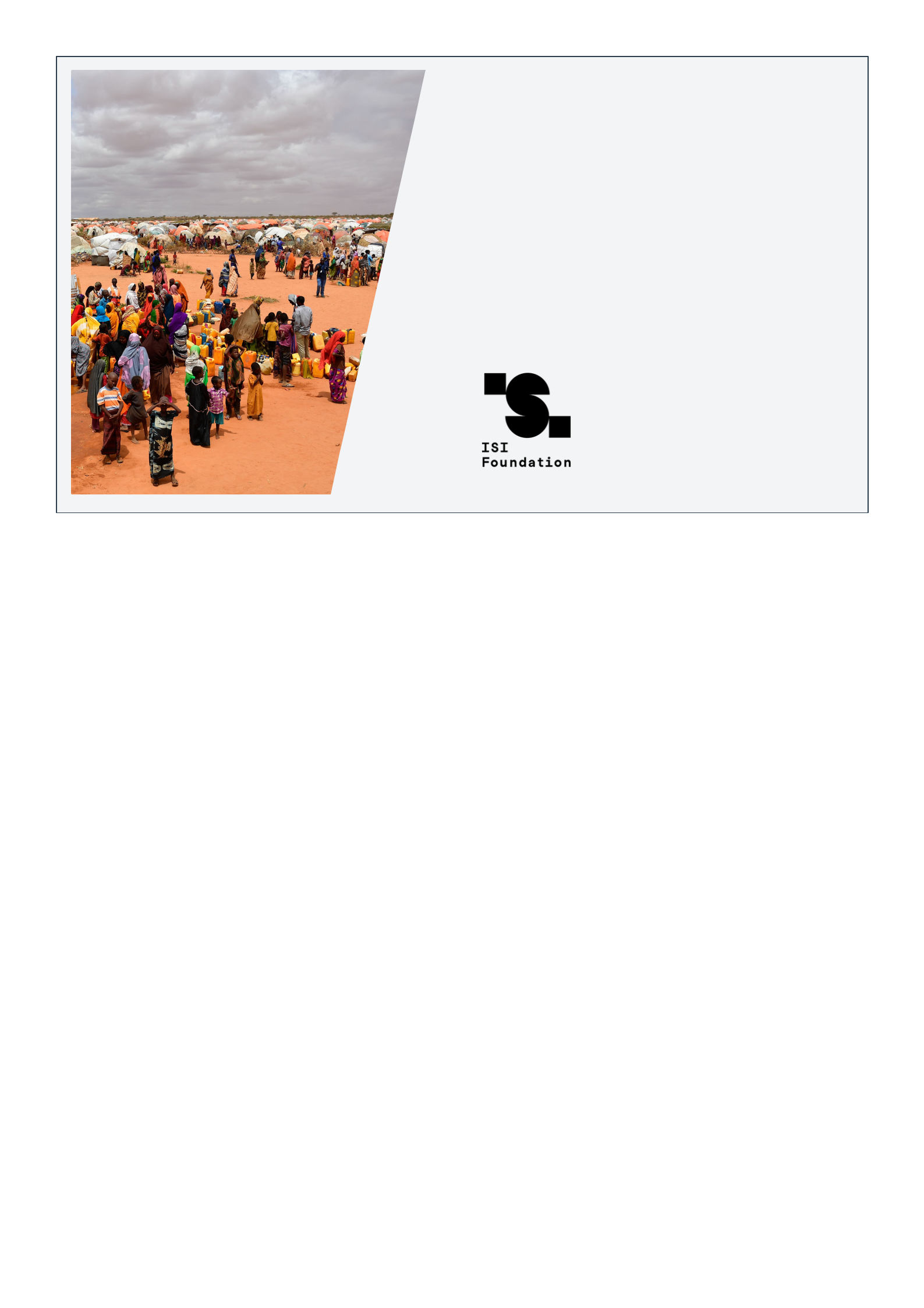
Elisa Omodei, Eugenio Valdano,

Alberto Antonioni, Daniela Paolotti,

Kyriaki Kalimeri, Lorenzo Dall’Amico,

Rossano Schifanella

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Thank you for

your attention

Sara Ghivarello

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