

APPENDIX C – Inflow bias correction

A bias correct was applied to the inflow data generated for future BESMM simulations in order to reduce uncertainties. To bias-correct future data the inflow generated from CORDEX data was compared with historical data from ONS (from years 2006 up to 2021) and a correction factor was applied for each one of the EER. As there is no historical inflow data for EERs in this approach it was compared the inflow from the last reservoir of each EER with the generated inflow of the EER. The assumption made was that no matter how many hydropower units are installed in the EER, the EER's inflow will be the same as the last reservoir. Table C-1 summarizes the last reservoir of each EER. Some EER has more than one last hydropower unit, thus the inflows were summed and in other cases, it was needed to subtract inflow from other river as the inflow is being considered in more than one EER.

Table C-1 – Last reservoir of each EER considered for the comparison with the generated inflow using Cordex data

EER		Last reservoir in the EER
1	Southwest	Ilha dos Pombos Mascarenhas Itapebi Jauru Lajeado Ponte de Pedra Itiquira II Manso
2	South	Foz Chapeco Quebra queixo Dona_Francisca 14 de Julho
3	Northeast	Xingó
4	North	Tucuruí minus Lajeado
5	Itaipu	Itapu minus Porto Primavera, and Rosana
6	Madeira	Santo Antônio Dardanelos Rondon II Samuel
7	Teles Pires	São Manoel
8	Belo Monte	Pimental
9	Amazonas	Santo Antônio Jari Curuá-una Balbina

		Fernando Gomes
10	Paraná	Porto Primavera
11	Iguaçu	Baixo Iguaçu
12	Paranapanema	Rosana

Figure C-1 shows the comparison between historical inflow of last reservoir of the EER Southeast and Cordex 2.6 inflow data after the bias correct.

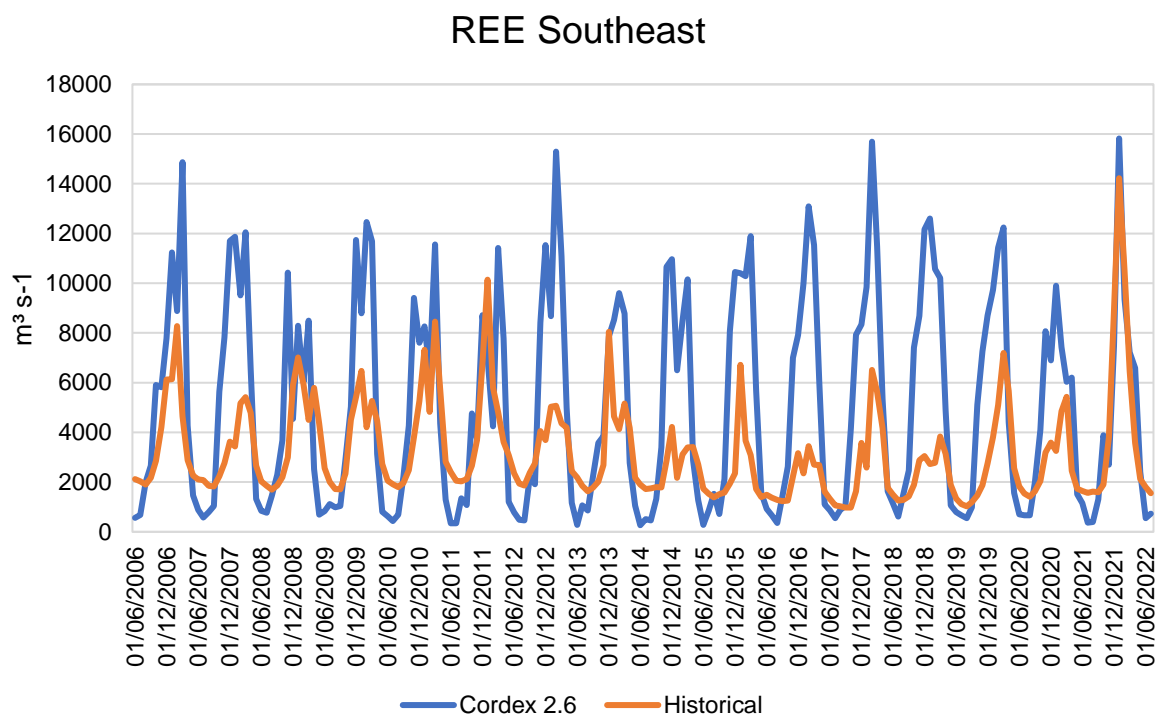


Figure C-1 – Comparison between historical inflow of last rivers in the EER Southeast and Cordex 2.6 inflow data.

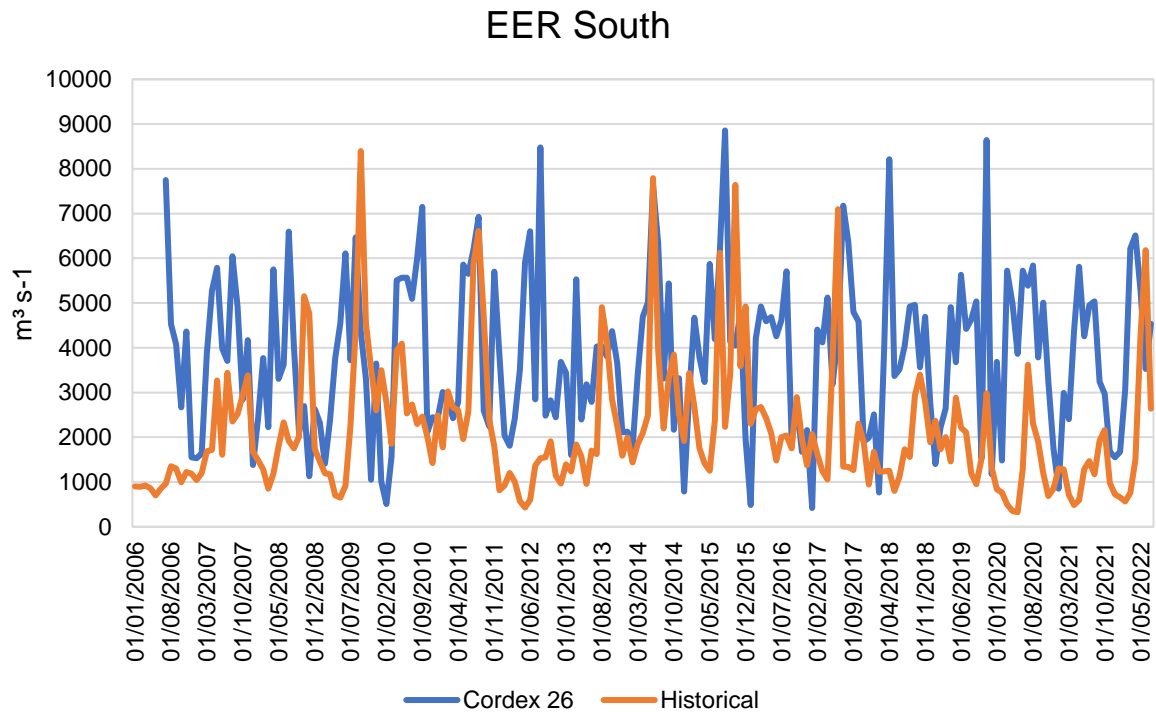


Figure C-2 - Comparison between historical inflow of last rivers in the EER South and Cordex 2.6 inflow data.

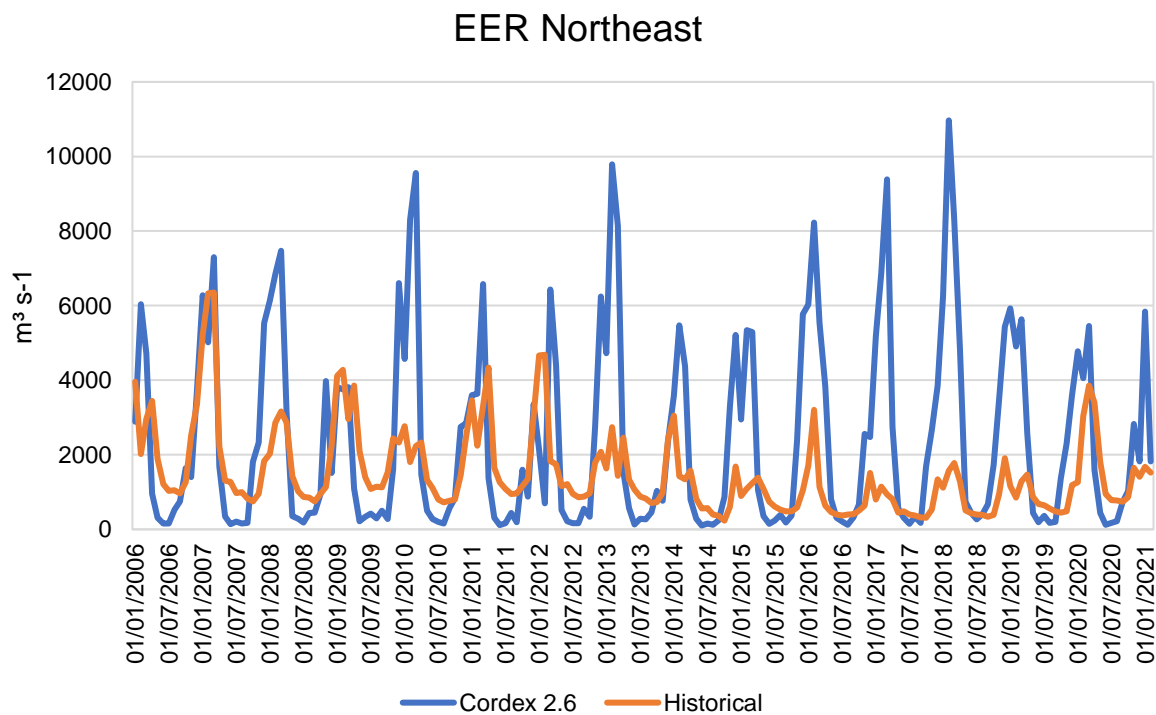


Figure C-3 - Comparison between historical inflow of last rivers in the EER Northeast and Cordex 2.6 inflow data.

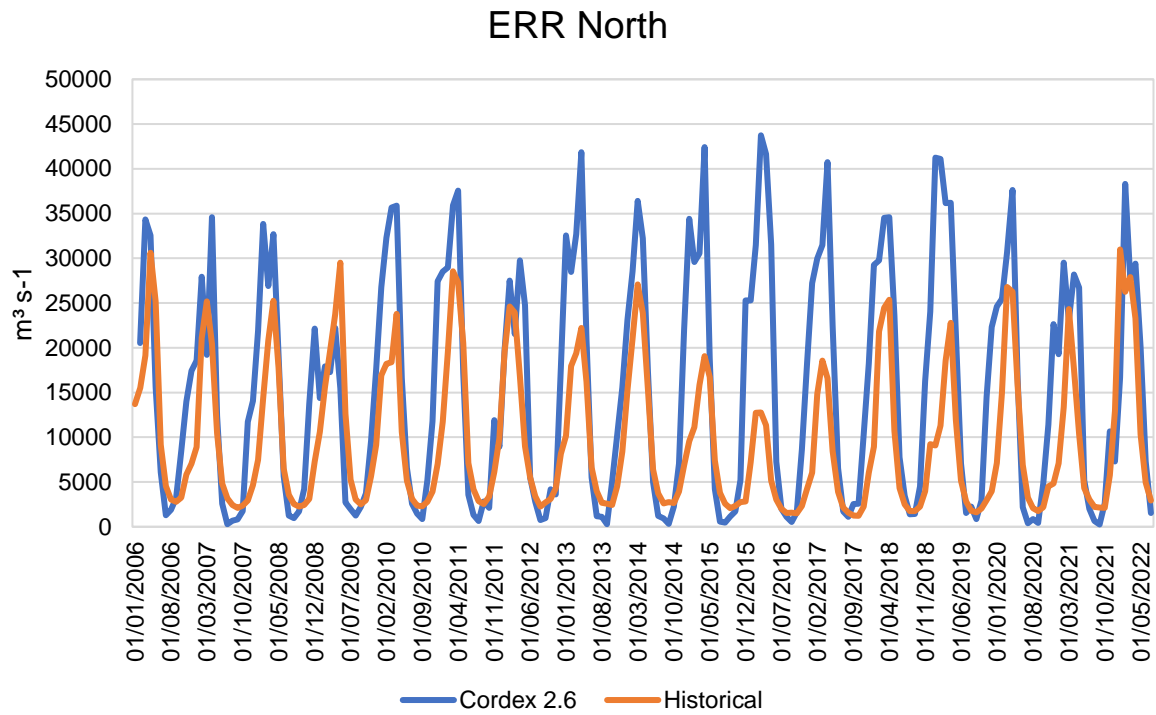


Figure C-4 - Comparison between historical inflow of last rivers in the EER North and Cordex 2.6 inflow data.

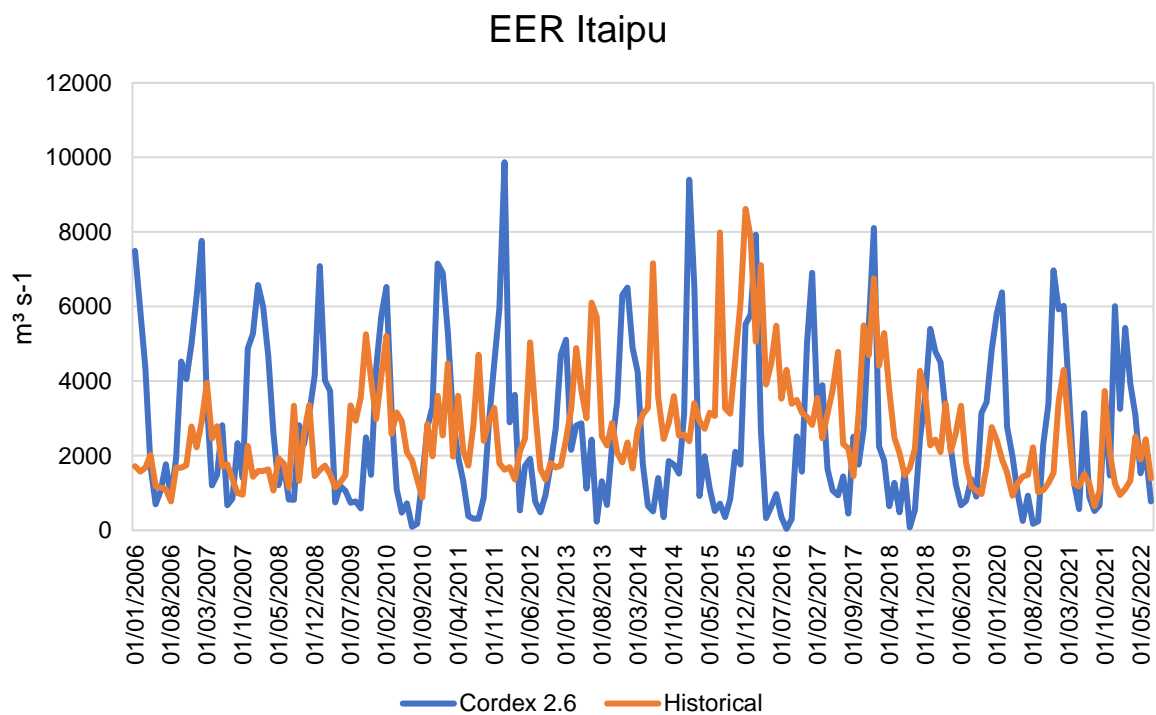


Figure C-5 - Comparison between historical inflow of last rivers in the EER Itaipu and Cordex 2.6 inflow data.

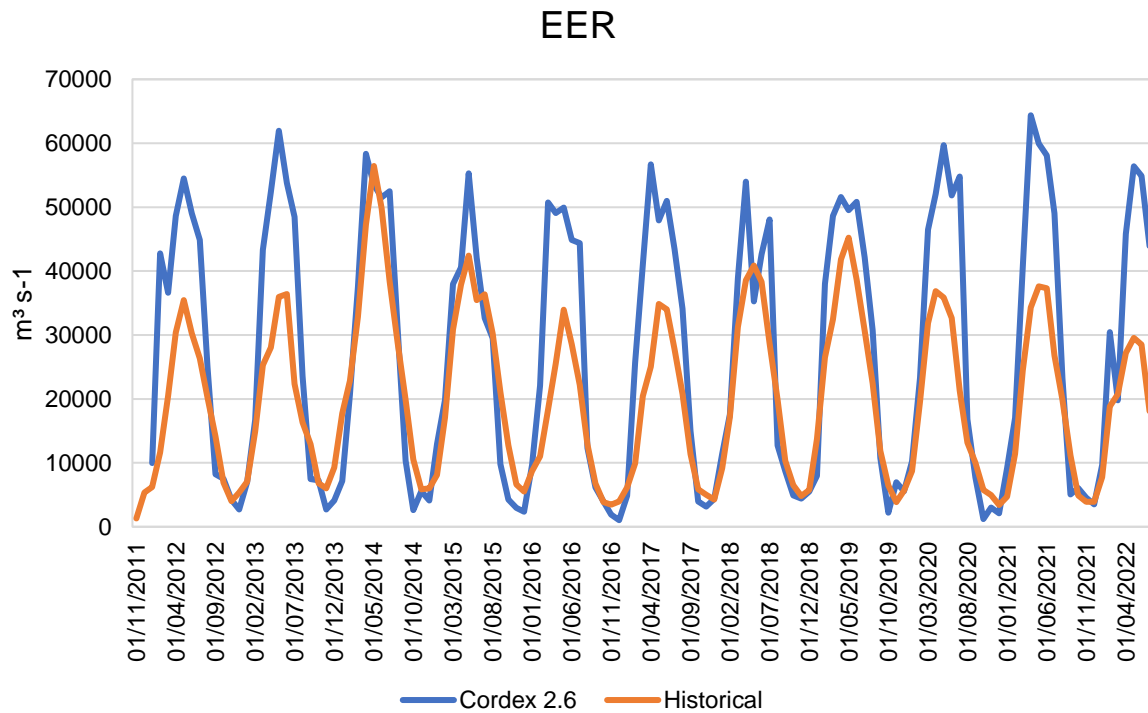


Figure C-6 - Comparison between historical inflow of last rivers in the EER Madeira and Cordex 2.6 inflow data.

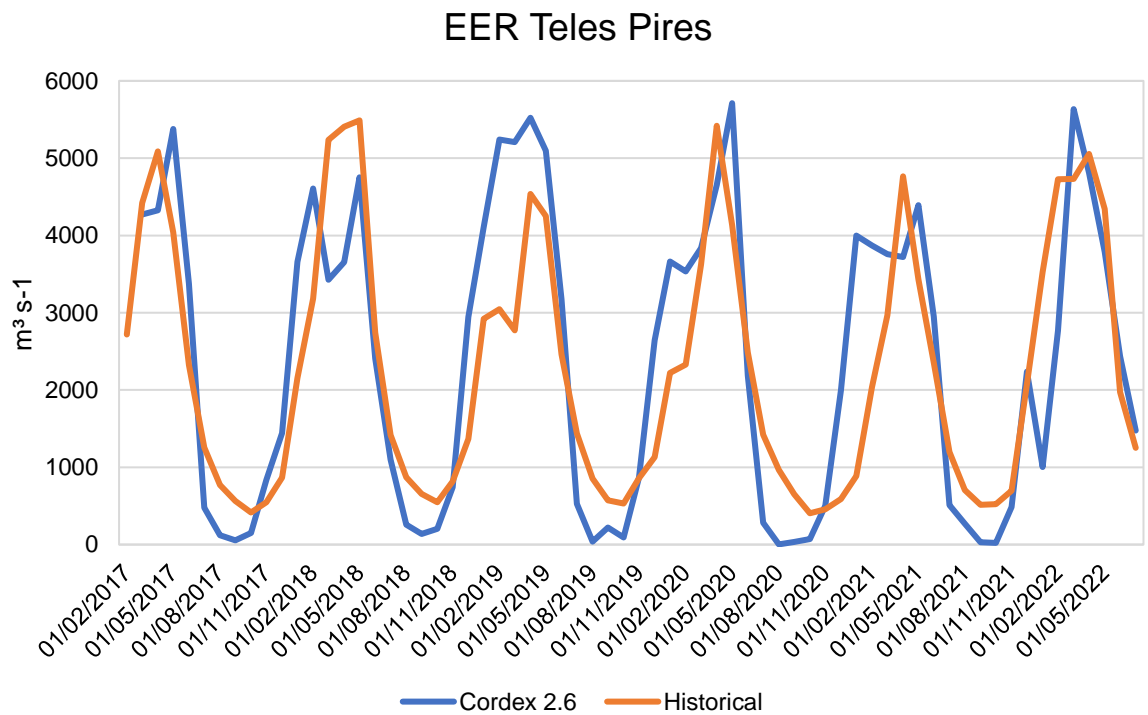


Figure C-7 - Comparison between historical inflow of last rivers in the EER Teles Pires and Cordex 2.6 inflow data.

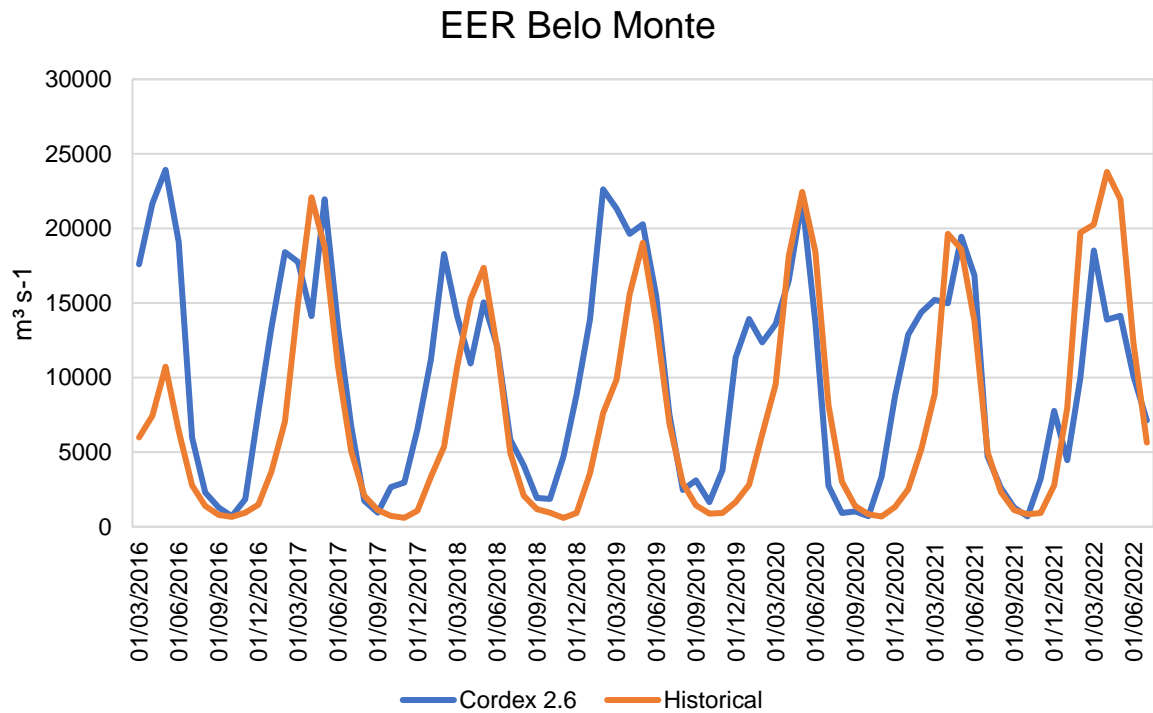


Figure C-8 - Comparison between historical inflow of last rivers in the EER Belo Monte and Cordex 2.6 inflow data.

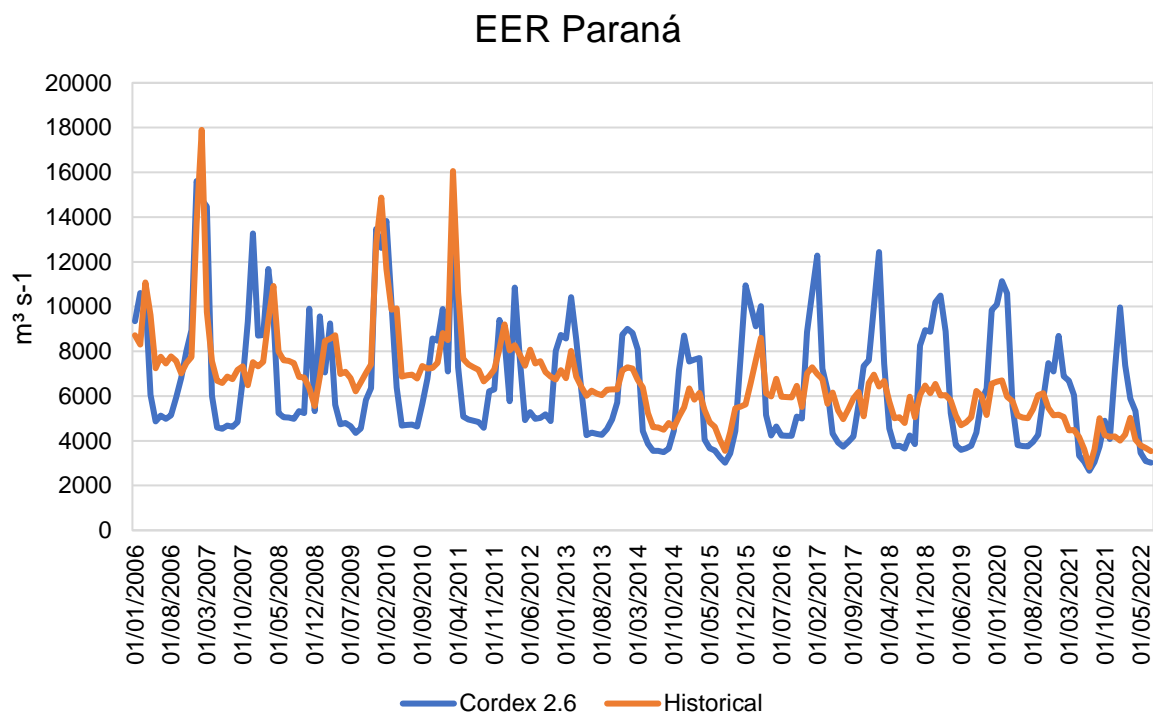


Figure C-9 - Comparison between historical inflow of last rivers in the EER Paraná and Cordex 2.6 inflow data.

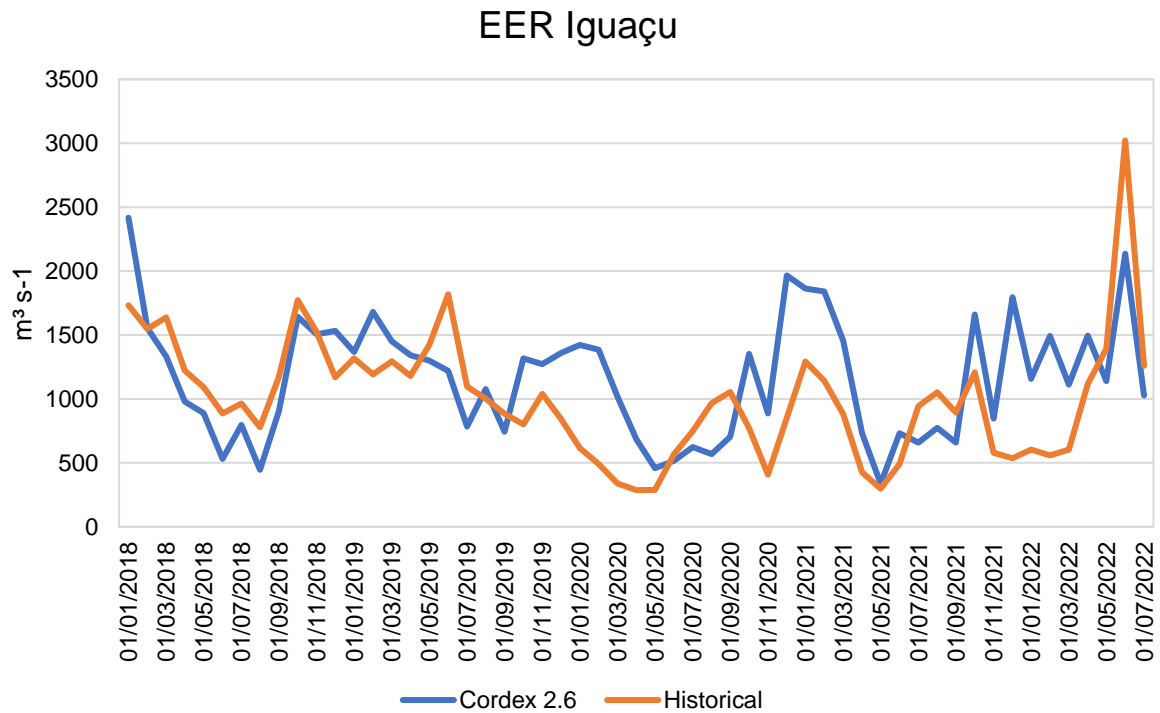


Figure C-10 - Comparison between historical inflow of last rivers in the EER Iguaçu and Cordex 2.6 inflow data.

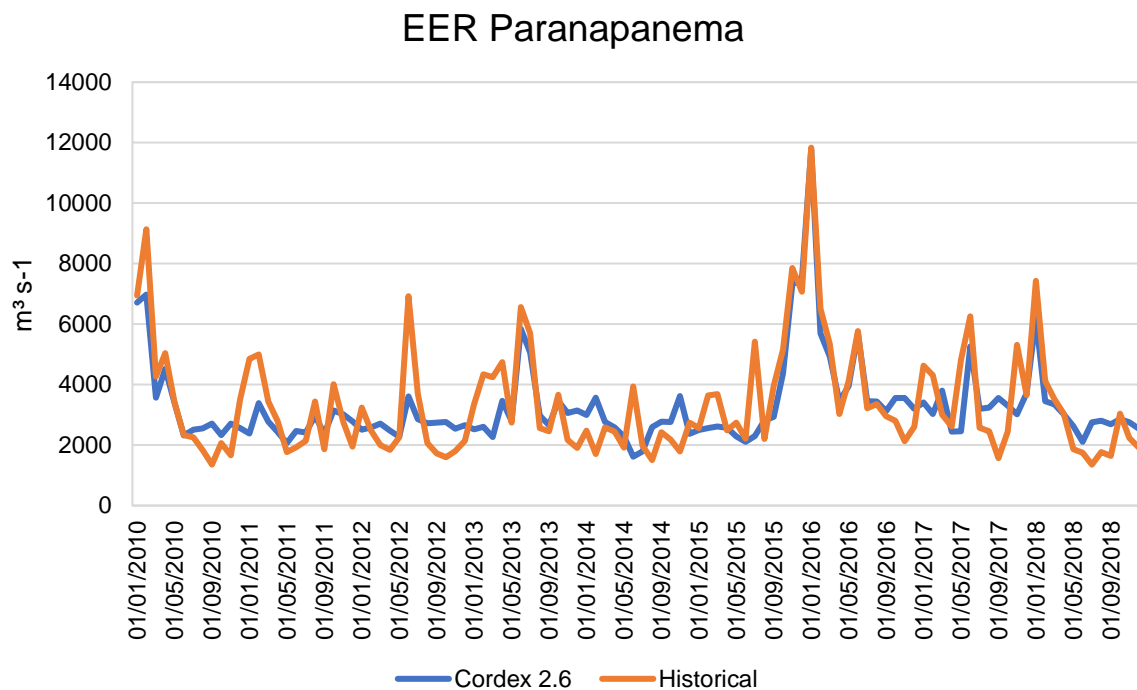


Figure C-11 - Comparison between historical inflow of last rivers in the EER Paranapanema and Cordex 2.6 inflow data.