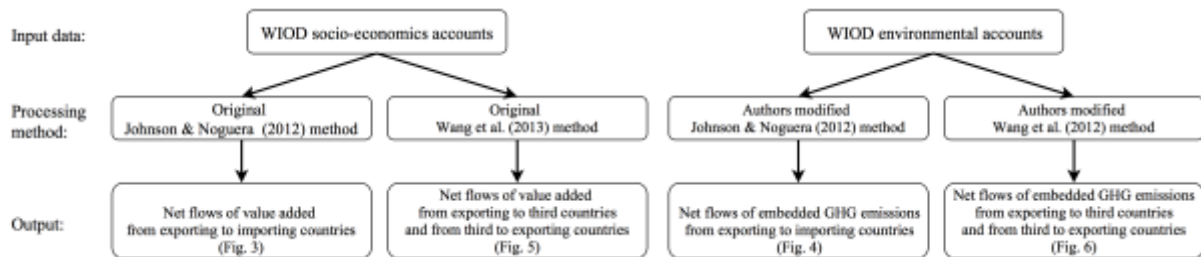


## Appendix 2. Steps analysing the WIOD data

A summary of the steps analysing the WIOD data are presented in Fig. A2.1. On one hand, we used the original method presented in Johnson and Noguera (2012) to calculate the net flows of value added (i.e. the flows of VAX) from exporting to importing countries with socio-economic accounts of the WIOD, and then modified this method to calculate the net flows of embedded GHG emissions with environmental accounts. The results are shown in Fig. 5 and 6, respectively. On the other hand, we used the original method presented in Wang et al. (2013) to calculate the net flows of value added from exporting to third countries (i.e. downstream spillovers) and from third to exporting countries (i.e. upstream spillovers) with socio-economic account, and then modified this method to calculate corresponding net flows of embedded GHG emissions with environmental accounts. The results are shown in Fig. 7 and 8, respectively. Analyses were performed in R 3.2.2, utilising the ‘decompr’ package (Quast et al. 2016) for flow decompositions and the ‘circlize’ package (Gu et al. 2014) for flow diagrams.



**Fig. A2.1.** Steps analysing the WIOD data