



## Research Tool Brief:

# CIRCULAR FLOW DIAGRAMS

### Description:

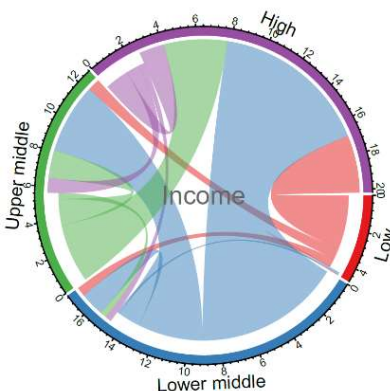
Circular diagrams facilitate the visualization of flow data and the analysis of patterns among entities. The basic idea of the diagram is to show simultaneously the relative size of estimated flows between different groups. The origins and destinations of flows are represented by the circle's segments, where nearby groups are typically positioned close to each other. The size of the estimated flow is indicated by the width of the link at its bases and can be read using the tick marks on the outside of the circle's segments. The direction of the flow is encoded both by the origin color and by the gap between link and circle segment at the destination (Abel & Sander, 2014).

Abel, G. J., & Sander, N. (2014). Quantifying Global International Migration Flows. *Science*, 343(6178), 1520–1522. <https://doi.org/10.1126/science.1248676>

### Applicability:

This tool can be used to study bilateral relationships in a network. For example, in the case of REDD+, researchers can use flow diagrams to visualize the amount of investment from investor countries and host countries. In the case of global timber trade, researchers can use this tool to investigate which countries are buying timber from where.

### Example:



This circular diagram illustrates the land flow from global land transactions across countries with different income levels. For example, high income countries are predominantly investors, while low and lower middle income countries are largely hosts. Among 27 (million ha) of transacted land, about 4.4 are from low income countries, 14.6 from lower middle income countries, 5.6 from upper middle income countries, and 2.4 from high income countries.

### More information:

For example data and code, please contact FLARE at [flare@nd.edu](mailto:flare@nd.edu)

**Credit:** Chuan Liao October 2017