



University of Dayton

Environmental Impact of: Freshwater Fish vs Chicken Farming

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Motivation:



CONSERVE AND SUSTAINABLY USE THE OCEANS, SEA AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

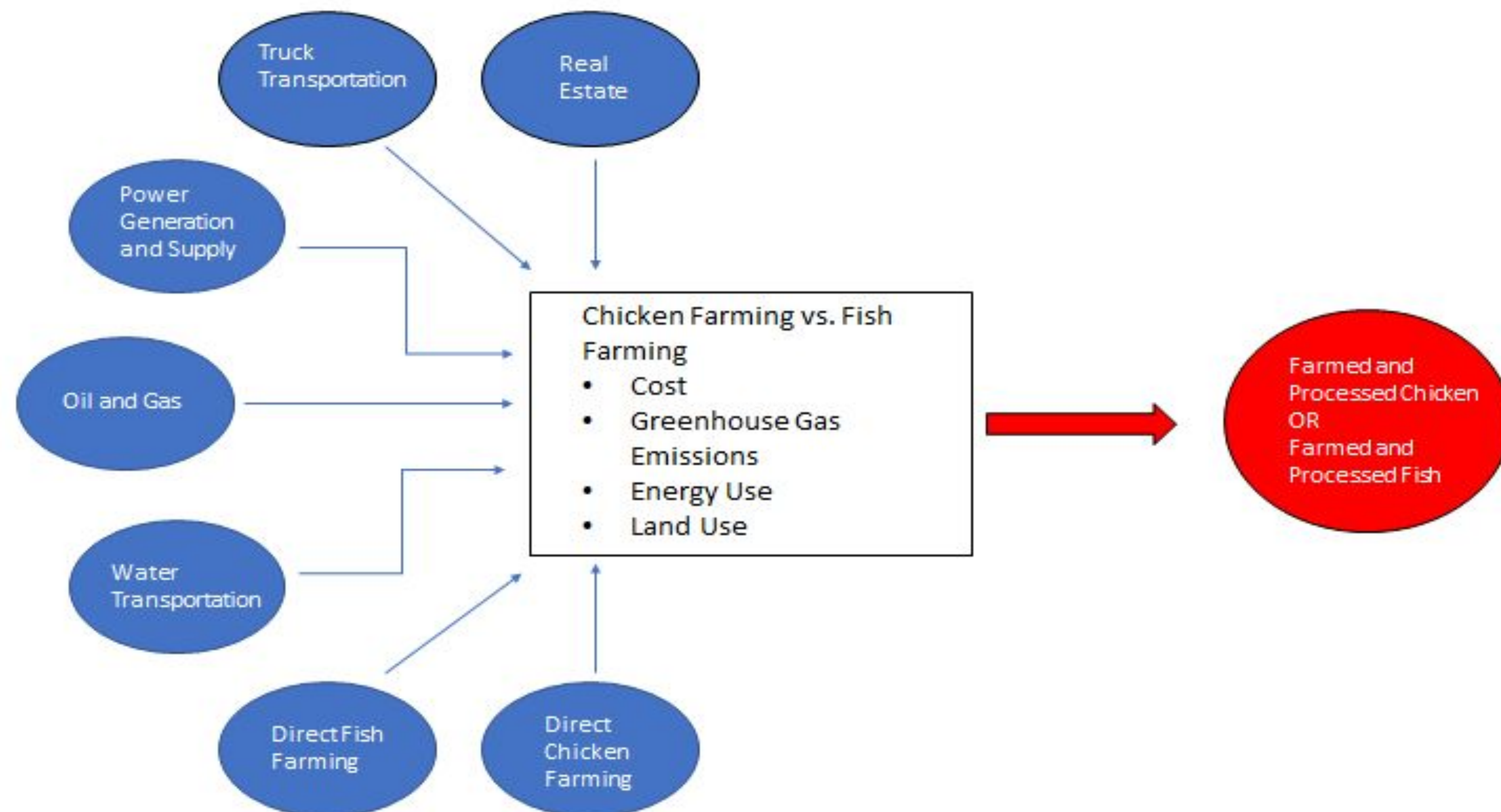
Abstract:

Using a life Cycle Assessment (LCA), we're able to evaluate the production and farming of freshwater fish on energy requirements, greenhouse gas emissions, and other environmental indicators. We will compare these results to analysis of the farming and production of chicken to see if our system represents an improvement.

Background:

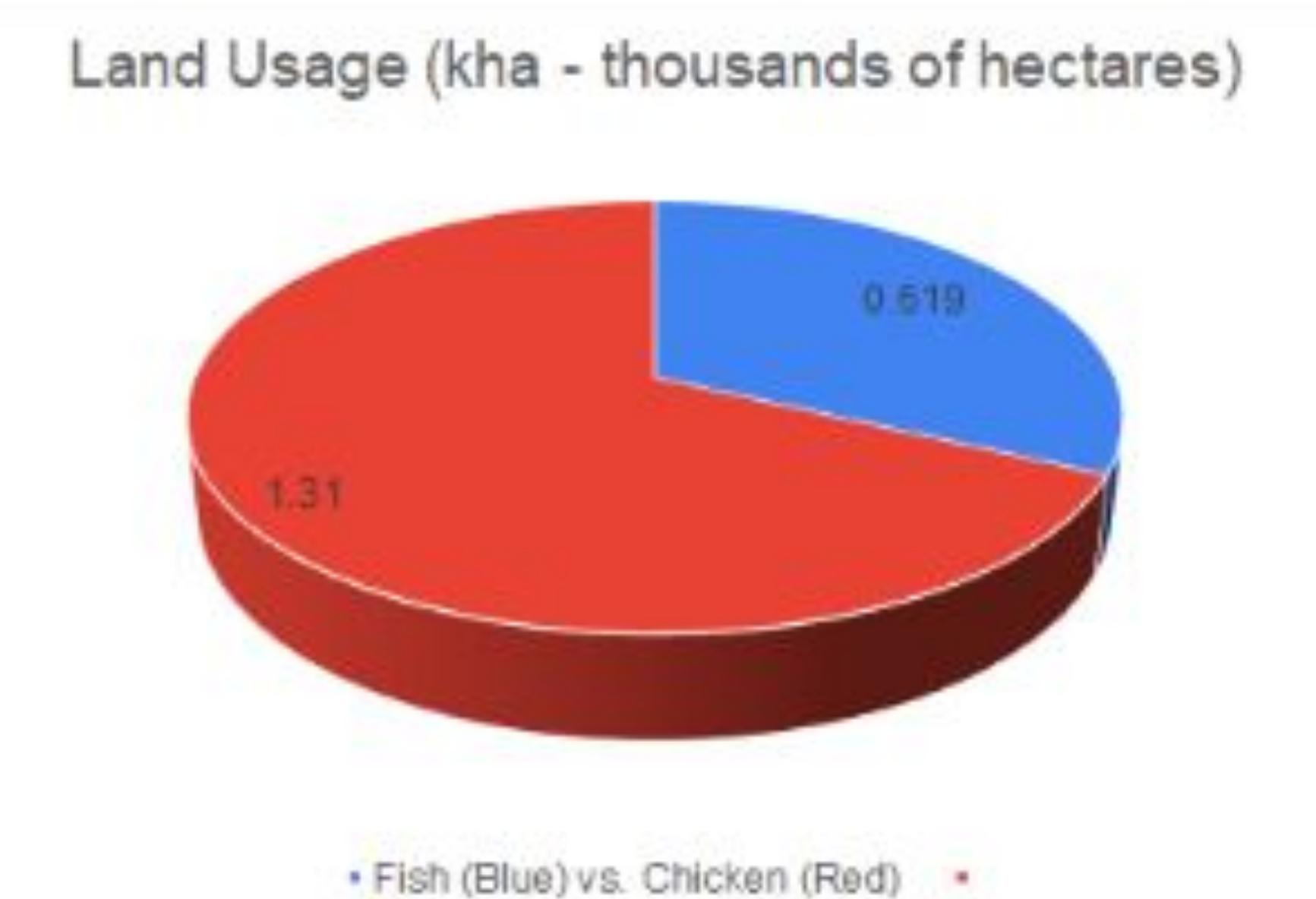
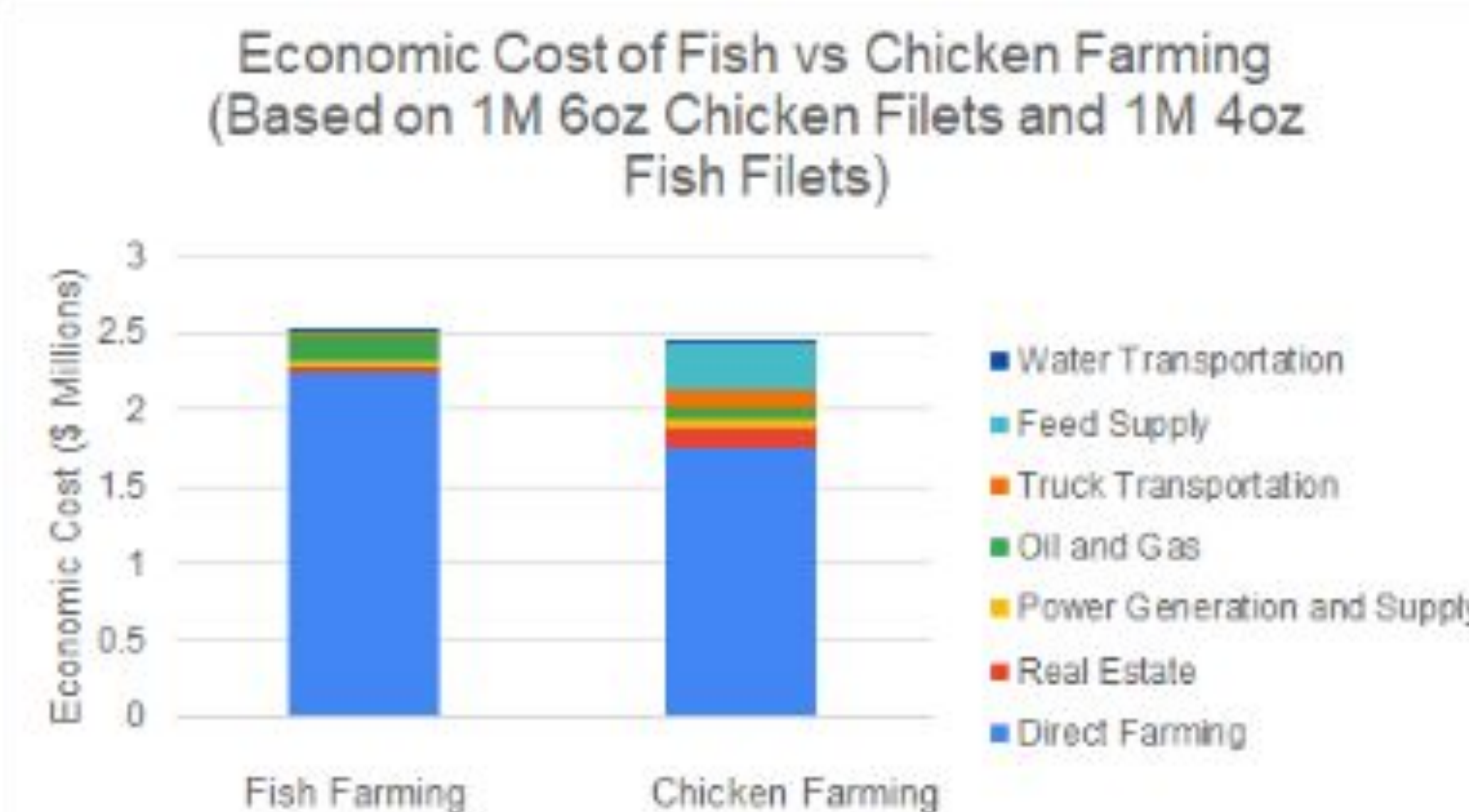
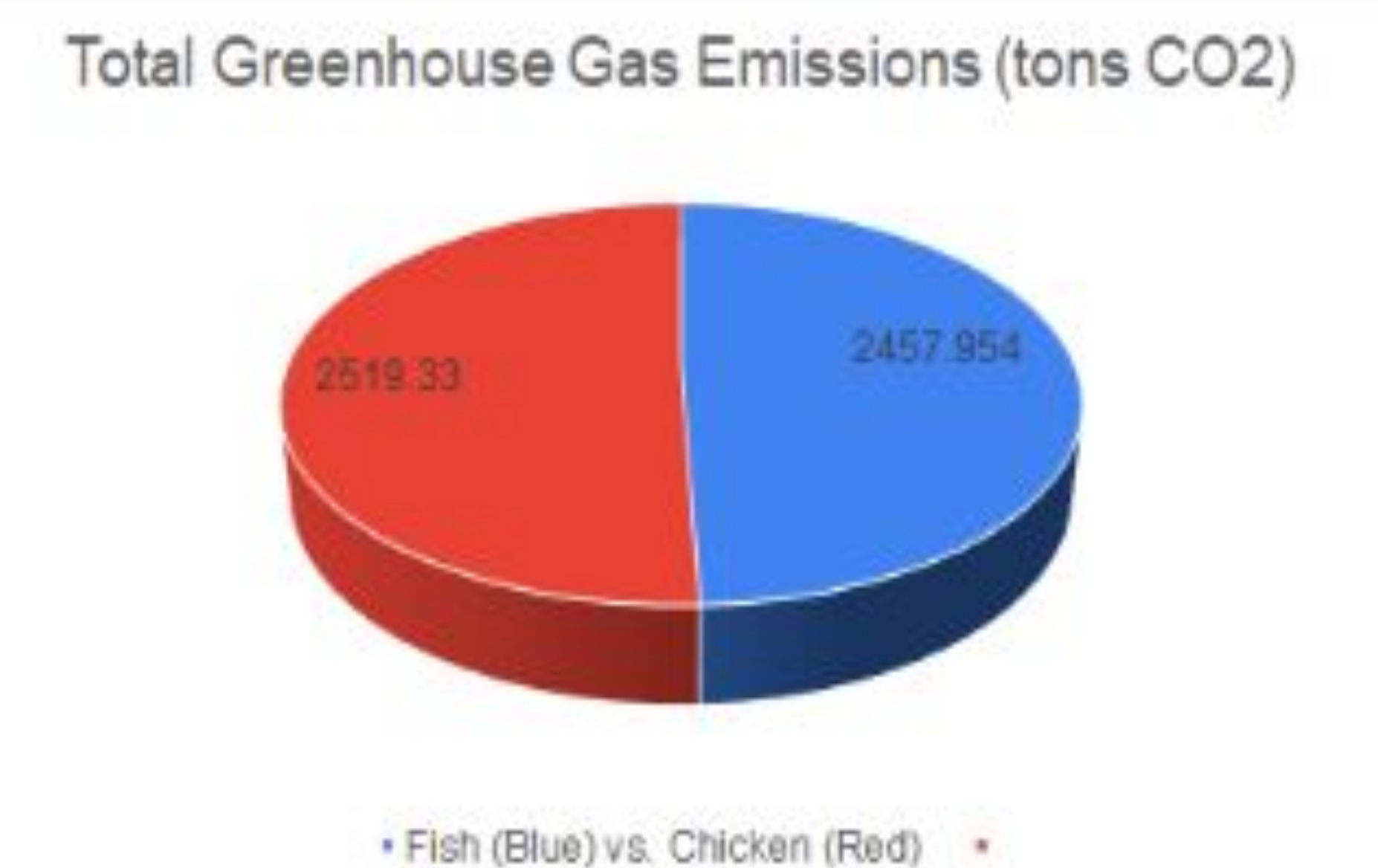
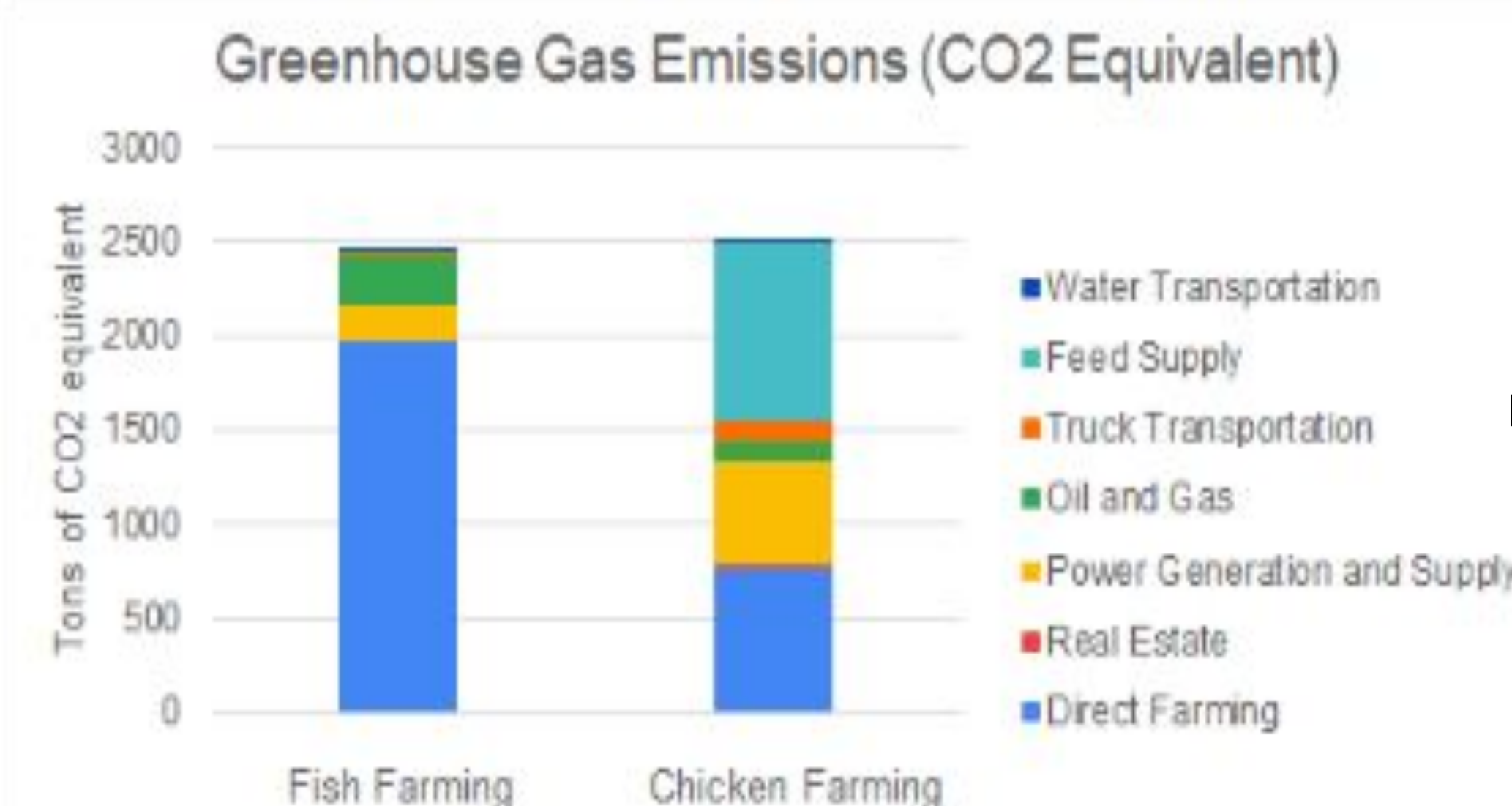
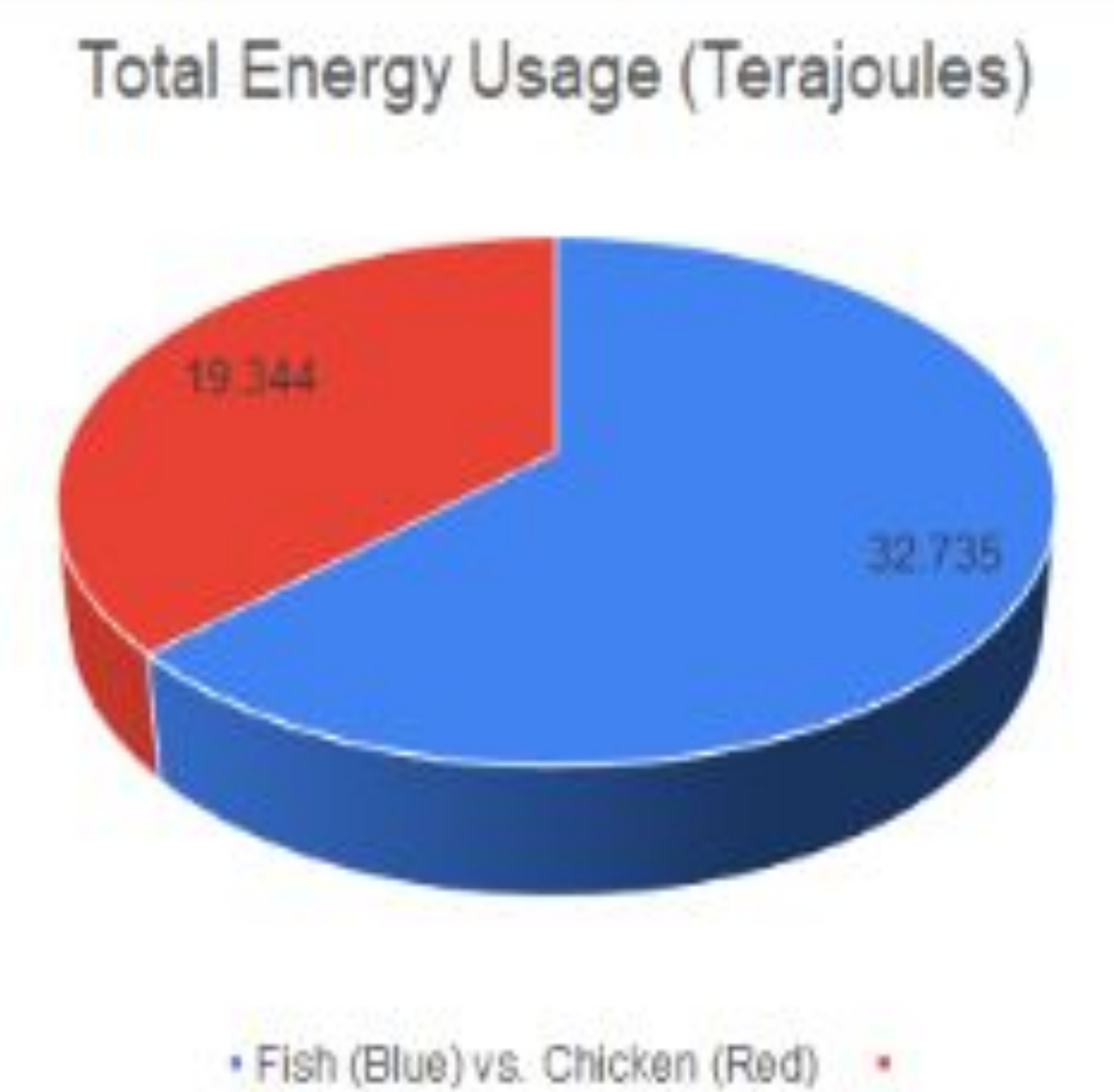
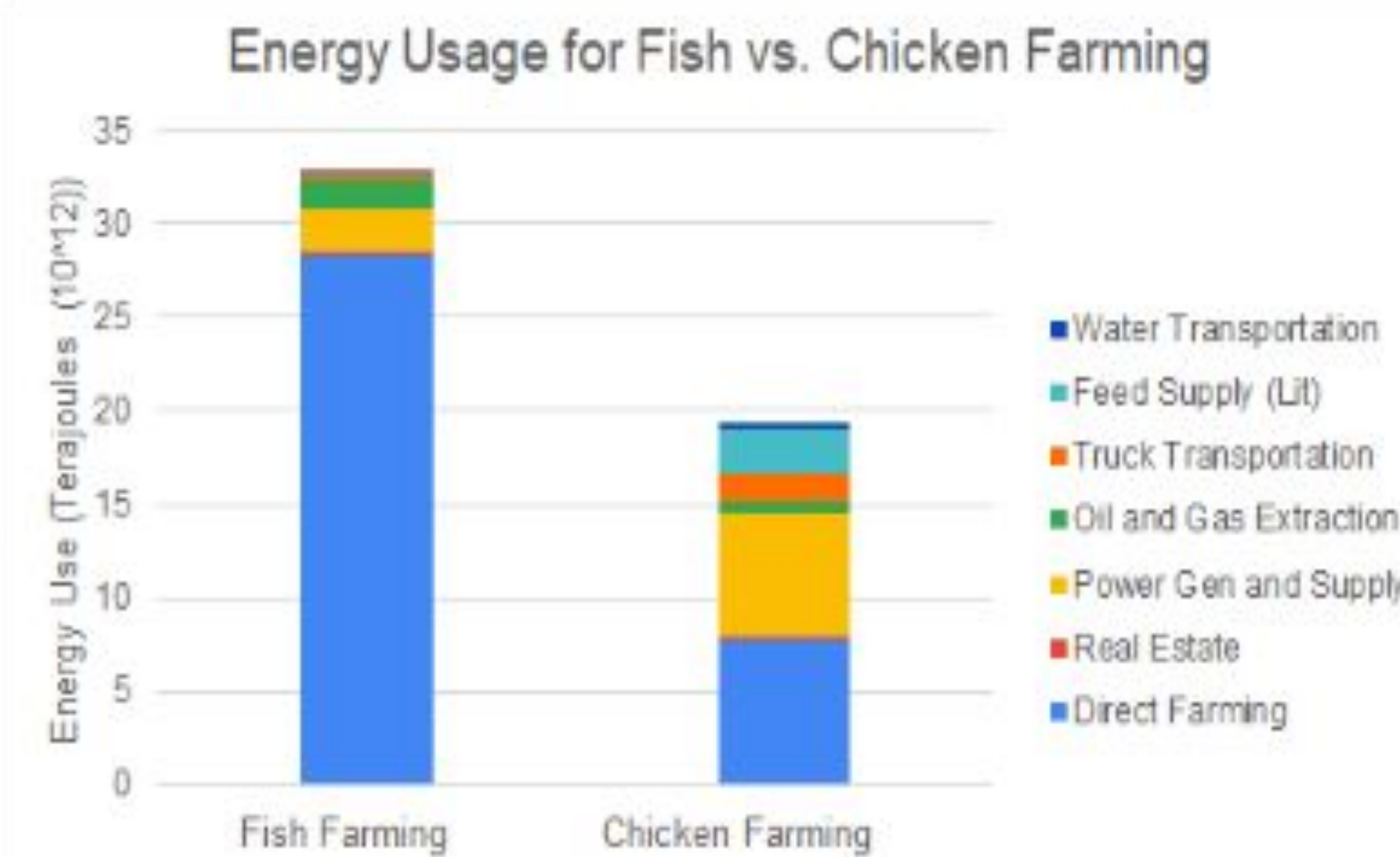
- Initial thoughts were that Salmon fishing would be better for the environment due to less land use
- Articles showed us that the environmental effects of both Salmon and Chicken farming were actually quite similar
- Differing LCA results could be attributed to differing input and output information

Methodology:



Results:

(Based off EIOLCA.net information for 1M 6oz chicken filets vs. 1M 4oz Fish filets)



Conclusions:

- With this basis for collecting data, chicken and fish farming both have very similar emission levels with fish being slightly lower overall. Fish farming also uses much less land than chicken farming which can be seen as a positive to making it a more environmentally friendly alternative to chicken.
 - Future innovations in the energy sector (recirculating systems, integrating rice and fish farms) can improve its potential to be an even cleaner option.