# Sustainable Freight Transportation:Paper Review, Discussion, and Paper Assignment

The sustainability of the freight transportation system is an important topic, with many open research questions. In this project, you will review one paper that addresses some aspect of sustainable freight transportation. You will then discuss this paper with your peers, and present a synthesis of the group’s papers. After a class-wide discussion, you will be asked to articulate one important and unresolved question you recommend for future research.

Task 1:

Read the paper assigned to you and write a 1 page summary of the following format:

Article title

Author(s)

Publication type (report, book, article)

Is the publication peer reviewed?

What is the author’s financial interest in writing the article?

Do you believe the article contributes to the development of a more sustainable freight transportation system? If so, how? Be sure to clearly define sustainability in this context, and consider primary and secondary effects of any change.

Does the article propose any metrics for evaluating the sustainability of the freight transportation system? If so, do you believe these are useful metrics? Can you make any suggestions for improvements?

Task 2:

Share your summary with the other members of your class group and together, prepare a 5 minute summary of these articles. This should not just summarize the individual articles, but compare and contrast the articles. How are they similar, how are they different?

Task 3:

As a group, present your 5 minute summary to the class and listen to the summaries from the other groups. As a class we will summarize the state of knowledge on sustainability of the freight transportation system, agree upon useful metrics, and identify outstanding research needs.

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| Group | Name | Paper |
| 1 | Abdalla, Salam A | Delivering Goods in Urban Areas: How to Deal with Urban Policy Restrictions and the Environment (2009) H.J. Quak, M. B. M. de Koster, Transportation Science, volume 43 (2) pp. 211-227 |
| 1 | Baronina, Indre | McKinnon, A.C. ‘The Economic and Environmental Benefits of Increasing Maximum Truck Weight: The British Experience’  *Transportation Research part D*, vol. 10. no. 1, 2005 pp.77-95. |
| 1 | Bell, John L | McKinnon, A.C. and Ge, Y. ‘Use of a Synchronised Vehicle Audit to Determine Opportunities for Improving Transport Efficiency in a Supply Chain’ *International Journal of Logistics: Research and Applications*, vol. 7, no.3, 2004, pp 219-238  |
| 2 | Booth, Christian | Braithwaite, A. and McKinnon, A.C. ‘Retail Trends Affecting Sustainable Distribution’ *Logistics and Transport Focus*, 5, 3, 2003  |
| 2 | Bradbury, Kate Elise | Fernie, J. and McKinnon, A.C. ‘The Grocery Supply Chain in the UK: Improving Efficiency in the Logistics Network. ‘ *International Review of Retail, Distribution and Consumer Research,* 13, 2, 2003  |
| 2 | Dershowitz, Benjamin Charles | McKinnon, A.C. and Woodburn, A. "The Consolidation of Retail Deliveries: Its Effect on CO2 Emissions", *Transport  Policy*, 1, 2, 1994. |
| 3 | Evenson, Jeff | McKinnon, A.C., Stirling, I. and Kirkhope, J. "Improving the Fuel Efficiency of Road Freight Operations." *International  Journal  of  Physical Distribution and Logistics Management*, 23, 9, 1993, 3-11.  |
| 3 | Ghanem, Mohamed A | The Myth of Sustainable Development: Personal Reflections on Energy, its Relation to Neoclassical Economics, and Stanley Jevons. Charles Hall, Journal of Energy Resources Technology Volume 126 pp. 85 – 89 (2004) |
| 3 | Graunke, Adam A | McKinnon, A.C. and Piecyk, M.I. ‘Measurement of CO2 Emissions from Road Freight Transport: A Review of UK Experience.’ *Energy Policy,* Vol.37, no.10 2009. |
| 4 | Henriksen, Simon S | McKinnon, A.C., Piecyk, M.I. and Somerville, A. (2008) ‘Decoupling, Recoupling and the Future Growth of Road Freight’  *Logistics and Transport Focus*, Vol.10, no. 12, pp. 40-46, 2008.  (journal of the Chartered Institute of Logistics and Transport) |
| 4 | Houston, Michael | Edwards, J.B. and McKinnon, A.C. (2009) ‘Shopping Trip or Home Delivery: which has the smaller carbon footprint’ *Logistics and Transport Focus*, vol.11, no. 7. pp.20-24, 2009. |
| 4 | Huang, Shiang-Ping | McKinnon, A.C. ‘The Decoupling of Road Freight Transport and Economic Growth Trends in the UK: An Exploratory Analysis’  *Transport Reviews, vol. 27, no.1*  2007   |
| 5 | Mahoney, Seth R | McKinnon, A.C. and Ge, Y. ‘The Potential for Reducing Empty Running by Trucks: A Retrospective Analysis’  *International Journal of Physical Distribution and Logistics Management,* vol. 36, 5, 2006 pp. 391-410 |
| 5 | Marsters, Andrew T | Defining Sustainable Transportation. The Centre for Sustainable Transportation |
| 5 | Ogg, Anderson J | OnTrack Pennsylvania Freight System Action Plan |
| 6 | Piller, Andreas | Sustainable Transportation Indicator Data Quality and Availability, VTPI |
| 6 | Ren, Yan | Anderson, S., J. Allen, M. Browne. 2005. Urban logistics—How can it meet policy makers' sustainability objectives? *J. Transport Geography* **13** 71–81 |
| 6 | Rowell, Maureen K | Nicolas, J. P., P. Pocheta, H. Poimboeuf. 2003. Towards sustainable mobility indicators: Application to the Lyons conurbation. *Transport Policy* **10** 197–208 |
| 7 | Thompson, James | Quak, H. J., M. B. M. De Koster. 2007. Exploring retailers' sensitivity to local sustainability policies. J. Oper. Management 25 1103–1122. |
| 7 | Wall, Alexander P | Richardson, B. C. 2005. Sustainable transport: Analysis frameworks. J. Transport Geography 13 29–39. |
| 7 | Wang, Yihong | Mellios, G., R. van Aalst, Z. Samaras. 2006. Validation of road traffic urban emission inventories by means of concentration data measured at air quality monitoring stations in Europe. Atmospheric Environment 40 7362–7377. |
| 7 | Ye, Jin | Nicolas, J. P., P. Pocheta, H. Poimboeuf. 2003. Towards sustainable mobility indicators: Application to the Lyons conurbation. Transport Policy 10 197–208. |