

[< Back to results](#) | 1 of 1

[CSV export](#) [Download](#) [Print](#) [E-mail](#) [Save to PDF](#) [Add to List](#) [More...](#)
[Full Text](#) | [View at Publisher](#)
**Document type**

Article

**Source type**

Journal

**ISSN**

09596526

**DOI**

10.1016/j.jclepro.2021.128042

[View more](#)
[Journal of Cleaner Production](#) • Volume 315 • 15 September 2021 • Article number 128042

# Magnitudes of households' carbon footprint in Iskandar Malaysia: Policy implications for sustainable development

 Zen I.S.<sup>a</sup> [✉](#), Al-Amin A.Q.<sup>b,c,e</sup> [✉](#), Alam M.M.<sup>d</sup> [✉](#), Doberstein B.<sup>b</sup> [✉](#)
[Save all to author list](#)
<sup>a</sup> Dept. of Urban Regional Planning (URP), Kulliyah of Architecture and Environmental Design, International Islamic University Malaysia (IIUM), Malaysia

<sup>b</sup> Department of Geography and Environmental Management, University of Waterloo, ON, Canada

<sup>c</sup> Department of Urban Studies & Planning, Massachusetts Institute of Technology, Cambridge, MA, United States

<sup>d</sup> Economic and Financial Policy Institute, School of Economics, Finance & Banking (SEFB), Universiti Utara Malaysia (UUM), Malaysia

[View additional affiliations](#)
[Abstract](#)
[Author keywords](#)
[Indexed keywords](#)
[SciVal Topics](#)
[Metrics](#)
[Funding details](#)
**Abstract**

The carbon footprint of households is a significant contribution to global greenhouse gas emissions, accounting for 24% of total emissions. As a result, it is critical to quantify a household's carbon footprint in order to reduce it over time. One of the best ways to measure carbon emitted from various sectors of the economy, including household daily activities, is to calculate a country's carbon footprint (CF). This study statistically examined the magnitude of households' carbon footprints and their relationships with household daily activities and certain socio-economic demographic variables in Malaysia. Results revealed that the average household carbon footprint amounted to 11.76 t-CO<sub>2</sub>. The average also showed that the primary carbon footprint, 7.02 t-CO<sub>2</sub> or 59.69% was higher compared to the secondary carbon footprint which was 4.73 t-CO<sub>2</sub> or 40.22% and assessment revealed significant differences among household types. The largest carbon footprint was evident in a medium-high cost urban area, estimated at 20.14 t-CO<sub>2</sub>, while the carbon footprint found in a rural area was 9.58 t-CO<sub>2</sub>. In the latter, the primary carbon footprint was almost double the figure of 5.84 t-CO<sub>2</sub> (61%) than the secondary carbon footprint of 3.73 t-CO<sub>2</sub> (39%). The study reveals a higher carbon footprint in urban areas compared to rural ones depicting the effects of urbanisation and urban sprawl on household lifestyles and carbon footprints. Despite some limitations, the findings of this study will help policymakers design and implement stronger policies that enforce low-carbon activities and energy-saving goods and services in order to reduce urban Malaysia's carbon footprint dramatically. © 2021 Elsevier Ltd

Cited by 0 documents

Inform me when this document is cited in Scopus:

[Set citation alert](#)
**Related documents**

Estimation and determinants of the Philippines' household carbon footprint

 Serião, M.N.V., Klasen, S. (2015) *Developing Economies*

Research on the carbon emissions of Beijing residents based on the input-output model

 Zhang, Y., Lei, Y. (2017) *Polish Journal of Environmental Studies*

Income inequality and carbon dioxide emissions: The case of Chinese urban households

 Golley, J., Meng, X. (2012) *Energy Economics*
[View all related documents based on references](#)

Find more related documents in Scopus based on:

[Authors](#) > [Keywords](#) >

---

Indexed keywords 


---

SciVal Topics  

---

Metrics 

---

Funding details 

---

## References (68)

[View in search results format >](#) AllCSV export   Print  E-mail  Save to PDF [Create bibliography](#)

- 
- 1 Chik, N.A., Rahim, K.A., Radam, A., Shamsudin, M.N.  
**CO<sub>2</sub> emissions induced by households lifestyle in Malaysia**  
  
(2013) *International Journal of Business and Society*, 14 (3), pp. 344-357. Cited 6 times.  
[http://www.feb.unimas.my/index.php?option=com\\_content&task=section&id=10&Itemid=51](http://www.feb.unimas.my/index.php?option=com_content&task=section&id=10&Itemid=51)
- 
- 2 ADB  
Low-Carbon Green Growth in Asia: Policies and Practices  
(2013) . Cited 39 times.  
Asian Development Bank Institute Japan
- 
- 3 Akil, A.M., Ho, C.S.  
**Towards sustainable solid waste management: Investigating household participation in solid waste management** ([Open Access](#))  
  
(2014) *IOP Conference Series: Earth and Environmental Science*, 18 (1), art. no. 012163. Cited 7 times.  
<http://www.iop.org/EJ/volume/1755-1315>  
doi: 10.1088/1755-1315/18/1/012163  
  
[View at Publisher](#)
- 
- 4 Alfredsson, E.  
Green Consumption Energy Use and Carbon Dioxide Emission  
(2002) . Cited 18 times.  
Umeå University Retrieved from  
<http://www.diva-portal.org/smash/get/diva2:144590/FULLTEXT01.pdf>
- 
- 5 Allison, E.H., Perry, A.L., Badjeck, M.-C., Neil Adger, W., Brown, K., Conway, D., Halls, A.S., (...), Dulvy, N.K.  
**Vulnerability of national economies to the impacts of climate change on fisheries** ([Open Access](#))  
  
(2009) *Fish and Fisheries*, 10 (2), pp. 173-196. Cited 687 times.  
doi: 10.1111/j.1467-2979.2008.00310.x  
  
[View at Publisher](#)
- 
- 6 Baiocchi, G., Minx, J.C., Hubacek, K.  
The Impact of Social Factors and Consumer Behavior on CO2 Emissions in the UK: A Panel Regression Based on Input-Output and Geo-Demographic Consumer Segmentation Data  
(2010)  
Retrieved from  
<https://opus4.kobv.de/opus4-hsog/frontdoor/index/index/docId/1886>
-

- 7 Bajželj, B., Richards, K.S., Allwood, J.M., Smith, P., Dennis, J.S., Curmi, E., Gilligan, C.A.  
**Importance of food-demand management for climate mitigation** (Open Access)  
  
(2014) *Nature Climate Change*, 4 (10), pp. 924-929. Cited 361 times.  
<http://www.nature.com/nclimate/index.html>  
doi: 10.1038/nclimate2353  
  
View at Publisher
- 
- 8 Barau, A.S.  
**Tension in the periphery: An analysis of spatial, public and corporate views on landscape change in Iskandar Malaysia**  
  
(2017) *Landscape and Urban Planning*, 165, pp. 256-266. Cited 10 times.  
[www.elsevier.com/locate/publications/store/5/0/3/3/4/7](http://www.elsevier.com/locate/publications/store/5/0/3/3/4/7)  
doi: 10.1016/j.landurbplan.2016.04.007  
  
View at Publisher
- 
- 9 Bin, S., Dowlatabadi, H.  
**Consumer lifestyle approach: a Paradigm for understanding the role of consumers in energy US and environmental impacts**  
(2002)  
Doctoral Dissertation Carnegie Mellon University USA
- 
- 10 Bin, S., Dowlatabadi, H.  
**Consumer lifestyle approach to US energy use and the related CO<sub>2</sub> emissions**  
  
(2005) *Energy Policy*, 33 (2), pp. 197-208. Cited 412 times.  
<http://www.journals.elsevier.com/energy-policy/>  
doi: 10.1016/S0301-4215(03)00210-6  
  
View at Publisher
- 
- 11 Borrion, A., Matsushita, J., Austen, K., Johnson, C., Bell, S.  
**Development of LCA Calculator to support community infrastructure co-design** (Open Access)  
  
(2019) *International Journal of Life Cycle Assessment*, 24 (7), pp. 1209-1221. Cited 4 times.  
<http://www.springerlink.com/content/0948-3349>  
doi: 10.1007/s11367-018-1492-2  
  
View at Publisher
- 
- 12 Christis, M., Breemersch, K., Vercauteren, A., Dils, E.  
**A detailed household carbon footprint analysis using expenditure accounts – Case of Flanders (Belgium)**  
  
(2019) *Journal of Cleaner Production*, 228, pp. 1167-1175. Cited 9 times.  
<https://www.journals.elsevier.com/journal-of-cleaner-production>  
doi: 10.1016/j.jclepro.2019.04.160  
  
View at Publisher
- 
- 13 Cohen, L., Manion, L., Morrison, K.  
**Research Methods in Education**  
(2007). Cited 10872 times.  
sixth ed. Routledge Falmer New York
- 
- 14 Crenna, E., Secchi, M., Benini, L., Sala, S.  
**Global environmental impacts: data sources and methodological choices for calculating normalization factors for LCA** (Open Access)  
  
(2019) *International Journal of Life Cycle Assessment*, 24 (10), pp. 1851-1877. Cited 22 times.  
<http://www.springerlink.com/content/0948-3349>  
doi: 10.1007/s11367-019-01604-y  
  
View at Publisher

- 15 Climate Change Communication: Tomorrow's Climate, Today's Challenge (2007) . Cited 2 times.  
DEFRA, UK Department for Environment London Food and Rural Affairs
- 
- 16 Druckman, A., Jackson, T.  
The carbon footprint of UK households 1990-2004: A socio-economically disaggregated, quasi-multi-regional input-output model  
(2009) *Ecological Economics*, 68 (7), pp. 2066-2077. Cited 378 times.  
doi: 10.1016/j.ecolecon.2009.01.013  
[View at Publisher](#)
- 
- 17 Farabi, A., Abdullah, A., Setianto, R.H.  
Energy consumption, carbon emissions and economic growth in Indonesia and Malaysia ([Open Access](#))  
(2019) *International Journal of Energy Economics and Policy*, 9 (3), pp. 338-345. Cited 13 times.  
<http://www.econjournals.com/index.php/ijeep/article/download/6573/4345>  
doi: 10.32479/ijeep.6573  
[View at Publisher](#)
- 
- 18 Feng, Z.H., Zou, L.L., Wei, Y.M.  
The impact of residents' lifestyle on CO2 emissions in China  
(2010) *Energy J. China*, 32, pp. 37-40. Cited 9 times.
- 
- 19 Fong, W.K.  
Lessons Learned from Low-Carbon City Planning in Malaysia  
(2013)  
World Resources Institute April 29  
<http://www.wri.org/blog/2013/04/lessons-learned-low-carbon-cityplanning-malaysia>
- 
- 20 Grunewald, N., Harteisen, M., Lay, J., Minx, J., Renner, S.  
The carbon footprint of Indian Households  
(2012) . Cited 8 times.  
General Conference of The International Association for Research in Income and Wealth. Boston. Retrieved from  
<http://www.iaiiw.org/papers/2012/GrunewaldPaper.pdf>
- 
- 21 Guerin, D.A., Yust, B.L., Coopet, J.G.  
Occupant predictors of household energy behavior and consumption change as found in energy studies since 1975  
(2000) *Family and Consumer Sciences Research Journal*, 29 (1), pp. 48-80. Cited 50 times.  
doi: 10.1177/1077727X00291003  
[View at Publisher](#)
- 
- 22 Gujba, H., Thorne, S., Mulugetta, Y., Rai, K., Sokona, Y.  
Financing Low Carbon  
(2012)
- 
- 23 Heinonen, J., Junnila, S.  
A carbon consumption comparison of rural and urban lifestyles  
([Open Access](#))  
(2011) *Sustainability*, 3 (8), pp. 1234-1249. Cited 52 times.  
<http://www.mdpi.com/2071-1050/3/8/1234/pdf>  
doi: 10.3390/su3081234  
[View at Publisher](#)
-

- 24 Isaksen, E.T., Narbel, P.A.  
A carbon footprint proportional to expenditure - A case for Norway?  
([Open Access](#))  
  
(2017) *Ecological Economics*, 131, pp. 152-165. Cited 23 times.  
[www.elsevier.com/locate/jecolecon](http://www.elsevier.com/locate/jecolecon)  
doi: 10.1016/j.jecolecon.2016.08.027  
  
View at Publisher
- 
- 25 Rejuvenating Potential, Continuous Growth: Annual Report 2018  
(2018)  
Iskandar Malaysia Development Authority Malaysia
- 
- 26 Jia, J., Fan, Y., Guo, X.  
The low carbon development (LCD) levels' evaluation of the world's 47 countries (areas) by combining the FAHP with the TOPSIS method  
  
(2012) *Expert Systems with Applications*, 39 (7), pp. 6628-6640. Cited 21 times.  
doi: 10.1016/j.eswa.2011.12.039  
  
View at Publisher
- 
- 27 Jones, C.M., Kammen, D.M.  
Quantifying carbon footprint reduction opportunities for U.S. households and communities  
  
(2011) *Environmental Science and Technology*, 45 (9), pp. 4088-4095. Cited 243 times.  
doi: 10.1021/es102221h  
  
View at Publisher
- 
- 28 Kenny, T., Gray, N.F.  
A preliminary survey of household and personal carbon dioxide emissions in Ireland ([Open Access](#))  
  
(2009) *Environment International*, 35 (2), pp. 259-272. Cited 44 times.  
[www.elsevier.com/locate/envint](http://www.elsevier.com/locate/envint)  
doi: 10.1016/j.envint.2008.06.008  
  
View at Publisher
- 
- 29 Kerkhof, A.C., Benders, R.M.J., Moll, H.C.  
Determinants of variation in household CO<sub>2</sub> emissions between and within countries  
  
(2009) *Energy Policy*, 37 (4), pp. 1509-1517. Cited 72 times.  
doi: 10.1016/j.enpol.2008.12.013  
  
View at Publisher
- 
- 30 Koide, R., Lettenmeier, M., Kojima, S., Toivio, V., Amellina, A., Akenji, L.  
Carbon footprints and consumer lifestyles: An analysis of lifestyle factors and gap analysis by consumer segment in Japan ([Open Access](#))  
  
(2019) *Sustainability (Switzerland)*, 11 (21), art. no. 5983. Cited 13 times.  
[https://res.mdpi.com/d\\_attachment/sustainability/sustainability-11-05983/article\\_deploy/sustainability-11-05983-v3.pdf](https://res.mdpi.com/d_attachment/sustainability/sustainability-11-05983/article_deploy/sustainability-11-05983-v3.pdf)  
doi: 10.3390/su11215983  
  
View at Publisher
- 
- 31 Krejcie, R.V., Morgan, D.W.  
Determining sample size for research activities  
(1970) *Educ. Psychol. Meas.*, 30, pp. 607-610. Cited 4250 times.  
Retrieved from  
<http://journals.sagepub.com/doi/pdf/10.1177/001316447003000308>
-

- 32 Larsen, H.N., Hertwich, E.G.  
**Identifying important characteristics of municipal carbon footprints**  
  
(2010) *Ecological Economics*, 70 (1), pp. 60-66. Cited 50 times.  
doi: 10.1016/j.ecolecon.2010.05.001  
  
View at Publisher
- 
- 33 (2019)  
LCS (2025). Low Carbon Society Blueprint for Iskandar Malaysia 2025. third ed. Access date Dec 12.  
[http://iskandarmalaysia.com.my/green/download/Low%20Carbon%20Society%20Blueprint%20for%20Iskandar%20Malaysia%202025\\_%20SPM%203rd%20Edition.pdf](http://iskandarmalaysia.com.my/green/download/Low%20Carbon%20Society%20Blueprint%20for%20Iskandar%20Malaysia%202025_%20SPM%203rd%20Edition.pdf)
- 
- 34 Leaman, A., Stevenson, F., Bordass, B.  
**Building evaluation: Practice and principles (Open Access)**  
  
(2010) *Building Research and Information*, 38 (5), pp. 564-577. Cited 160 times.  
doi: 10.1080/09613218.2010.495217  
  
View at Publisher
- 
- 35 Lenzen, M.  
**Primary energy and greenhouse gases embodied in Australian final consumption: an input-output analysis**  
  
(1998) *Energy Policy*, 26 (6), pp. 495-506. Cited 351 times.  
doi: 10.1016/S0301-4215(98)00012-3  
  
View at Publisher
- 
- 36 Lenzen, M., Peters, G.M.  
**How City dwellers affect their resource Hinterland**  
  
(2010) *Journal of Industrial Ecology*, 14 (1), pp. 73-90. Cited 131 times.  
doi: 10.1111/j.1530-9290.2009.00190.x  
  
View at Publisher
- 
- 37 Li, G.Z., Niu, S.W., Yang, Z., Zhang, X.  
The analysis on environmental and economic cost of rural household energy consumption in loess hilly region of Gansu Province  
(2008) *J. Nat. Resour.*, 1. Cited 15 times.
- 
- 38 Long, Y., Yoshida, Y., Dong, L.  
**Exploring the indirect household carbon emissions by source: Analysis on 49 Japanese cities**  
  
(2017) *Journal of Cleaner Production*, 167, pp. 571-581. Cited 33 times.  
<https://www.journals.elsevier.com/journal-of-cleaner-production>  
doi: 10.1016/j.jclepro.2017.08.159  
  
View at Publisher
- 
- 39 Maji, I.K., Habibullah, M.S., Saari, M.Y.  
**Financial development and sectoral CO<sub>2</sub> emissions in Malaysia**  
  
(2017) *Environmental Science and Pollution Research*, 24 (8), pp. 7160-7176. Cited 30 times.  
<http://www.springerlink.com/content/0944-1344>  
doi: 10.1007/s11356-016-8326-1  
  
View at Publisher
- 
- 40 Majid, M.R., Nordin, A.N., Johar, F., Tifwa, H.Y.  
**Travel Emission Profile of Iskandar Malaysia Neighbourhoods from Pre-1980s to 2000s (Open Access)**  
  
(2014) *IOP Conference Series: Earth and Environmental Science*, 18 (1), art. no. 012161.  
<http://www.iop.org/EJ/volume/1755-1315>  
doi: 10.1088/1755-1315/18/1/012161  
  
View at Publisher

- 41 Minx, J.C., Wiedmann, T., Wood, R., Peters, G.P., Lenzen, M., Owen, A., Scott, K., (...), Ackerman, F.  
**Input-output analysis and carbon footprinting: An overview of applications**  
(2009) *Economic Systems Research*, 21 (3), pp. 187-216. Cited 309 times.  
doi: 10.1080/09535310903541298  
View at Publisher
- 
- 42 Minx, J., Baiocchi, G., Wiedmann, T., Barrett, J., Creutzig, F., Feng, K., Förster, M., (...), Hubacek, K.  
**Carbon footprints of cities and other human settlements in the UK**  
(Open Access)  
(2013) *Environmental Research Letters*, 8 (3), art. no. 035039. Cited 195 times.  
[http://iopscience.iop.org/1748-9326/8/3/035039/pdf/1748-9326\\_8\\_3\\_035039.pdf](http://iopscience.iop.org/1748-9326/8/3/035039/pdf/1748-9326_8_3_035039.pdf)  
doi: 10.1088/1748-9326/8/3/035039  
View at Publisher
- 
- 43 Mulrow, J., Machaj, K., Deanes, J., Derrible, S.  
**The state of carbon footprint calculators: An evaluation of calculator design and user interaction features**  
(2019) *Sustainable Production and Consumption*, 18, pp. 33-40. Cited 19 times.  
<http://www.journals.elsevier.com/sustainable-production-and-consumption/>  
doi: 10.1016/j.spc.2018.12.001  
View at Publisher
- 
- 44 Muñiz, I., Dominguez, A.  
**The impact of urban form and spatial structure on per capita carbon footprint in u.S. larger metropolitan areas** (Open Access)  
(2020) *Sustainability (Switzerland)*, 12 (1), art. no. 389, pp. 1-19. Cited 6 times.  
<https://www.mdpi.com/2071-1050/12/1/389/pdf>  
doi: 10.3390/su12010389  
View at Publisher
- 
- 45 Ottelin, J., Heinonen, J., Junnila, S.  
**Carbon footprint trends of metropolitan residents in Finland: How strong mitigation policies affect different urban zones**  
(2018) *Journal of Cleaner Production*, 170, pp. 1523-1535. Cited 36 times.  
doi: 10.1016/j.jclepro.2017.09.204  
View at Publisher
- 
- 46 Phang, F.A., Yoke, W.W., Siong, H.C., Musa, A.N.  
**Achieving low carbon society through primary school ecolife challenge in Iskandar Malaysia**  
(2017) *Chemical Engineering Transactions*, 56, pp. 415-420. Cited 7 times.  
<http://www.aidic.it/cet/17/56/070.pdf>  
ISBN: 978-889560847-1  
doi: 10.3303/CET1756070  
View at Publisher
- 
- 47 Poortinga, W., Pidgeon, N.  
**Public Perceptions of Risk, Science and Governance: Main Findings of a British Survey of Five Risk Cases**  
(2003) . Cited 106 times.  
[psych.cf.ac.uk/understandingrisk/docs/survey\\_2002.pdf](http://psych.cf.ac.uk/understandingrisk/docs/survey_2002.pdf) UEA/MORI Norwich Retrieved from  
<https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>
- 
- 48 Rizzo, A., Glasson, J.  
**Iskandar Malaysia**  
(2012) *Cities*, 29 (6), pp. 417-427. Cited 44 times.  
doi: 10.1016/j.cities.2011.03.003  
View at Publisher

- 49 Saboori, B., Rasoulinezhad, E., Sung, J.  
The nexus of oil consumption, CO<sub>2</sub> emissions and economic growth in China, Japan and South Korea  
(2017) *Environmental Science and Pollution Research*, 24 (8), pp. 7436-7455. Cited 37 times.  
<http://www.springerlink.com/content/0944-1344>  
doi: 10.1007/s11356-017-8428-4  
View at Publisher
- 
- 50 Salo, M., Savolainen, H., Karhinen, S., Nissinen, A.  
Drivers of household consumption expenditure and carbon footprints in Finland ([Open Access](#))  
(2021) *Journal of Cleaner Production*, 289, art. no. 125607. Cited 2 times.  
<https://www.journals.elsevier.com/journal-of-cleaner-production>  
doi: 10.1016/j.jclepro.2020.125607  
View at Publisher
- 
- 51 Sarker, M.N.I., Hossin, M.A., Hua, Y.X., Anusara, J., Warunyu, S., Chanthamith, B.  
Low carbon city development in China in the context of new type of urbanization (2018) *Low Carbon Econ.*, 9 (1), pp. 45-61. Cited 4 times.
- 
- 52 Shan, S., Bi, X.  
Low Carbon Development of China's Yangtze River Delta Region  
(2012) *Problemy Ekorożwoju*, 7 (2), pp. 33-41. Cited 26 times.  
<http://ekorożwoj.pol.lublin.pl/no14/e.pdf>
- 
- 53 Siong, H.C., Matsuoka, Y.  
Low Carbon Society Blueprint for Iskandar Malaysia 2025 (2013) . Cited 15 times.  
UTM-Low Carbon Asia Research Center, Universiti Teknologi Malaysia Johor, Malaysia
- 
- 54 Song, K., Qu, S., Taiebat, M., Liang, S., Xu, M.  
Scale, distribution and variations of global greenhouse gas emissions driven by U.S. households ([Open Access](#))  
(2019) *Environment International*, Part A 133, art. no. 105137. Cited 11 times.  
[www.elsevier.com/locate/envint](http://www.elsevier.com/locate/envint)  
doi: 10.1016/j.envint.2019.105137  
View at Publisher
- 
- 55 Tan, S., Yang, J., Yan, J., Lee, C., Hashim, H., Chen, B.  
A holistic low carbon city indicator framework for sustainable development  
(2017) *Applied Energy*, Part 2 185, pp. 1919-1930. Cited 104 times.  
<http://www.elsevier.com/inca/publications/store/4/0/5/8/9/1/index.htm>  
doi: 10.1016/j.apenergy.2016.03.041  
View at Publisher
- 
- 56 Wang, C., Zhan, J., Li, Z., Zhang, F., Zhang, Y.  
Structural decomposition analysis of carbon emissions from residential consumption in the Beijing-Tianjin-Hebei region, China  
(2019) *Journal of Cleaner Production*, 208, pp. 1357-1364. Cited 25 times.  
<https://www.journals.elsevier.com/journal-of-cleaner-production>  
doi: 10.1016/j.jclepro.2018.09.257  
View at Publisher



- 57 Wang, L., Zhang, F., Pilot, E., Yu, J., Nie, C., Holdaway, J., Yang, L., (...), Krafft, T.  
Taking action on air pollution control in the Beijing-Tianjin-Hebei (BTH) region: Progress, challenges and opportunities ([Open Access](#))  
  
(2018) *International Journal of Environmental Research and Public Health*, 15 (2), art. no. 306. Cited 57 times.  
<http://www.mdpi.com/1660-4601/15/2/306/pdf>  
doi: 10.3390/ijerph15020306  
  
View at Publisher
- 
- 58 Ward, J.D., Sutton, P.C., Werner, A.D., Costanza, R., Mohr, S.H., Simmons, C.T.  
Is decoupling GDP growth from environmental impact possible?  
([Open Access](#))  
  
(2016) *PLoS ONE*, 11 (10), art. no. 0164733. Cited 156 times.  
<http://journals.plos.org/plosone/article/asset?id=10.1371/journal.pone.0164733.PDF>  
doi: 10.1371/journal.pone.0164733  
  
View at Publisher
- 
- 59 Weber, C.L., Matthews, H.S.  
Quantifying the global and distributional aspects of American household carbon footprint  
  
(2008) *Ecological Economics*, 66 (2-3), pp. 379-391. Cited 358 times.  
doi: 10.1016/j.ecolecon.2007.09.021  
  
View at Publisher
- 
- 60 Weber, C., Perrels, A.  
Modelling lifestyle effects on energy demand and related emissions  
  
(2000) *Energy Policy*, 28 (8), pp. 549-566. Cited 209 times.  
doi: 10.1016/S0301-4215(00)00040-9  
  
View at Publisher
- 
- 61 Wei, Y.-M., Liu, L.-C., Fan, Y., Wu, G.  
The impact of lifestyle on energy use and CO<sub>2</sub> emission: An empirical analysis of China's residents  
  
(2007) *Energy Policy*, 35 (1), pp. 247-257. Cited 222 times.  
doi: 10.1016/j.enpol.2005.11.020  
  
View at Publisher
- 
- 62 CO2 Emissions (Metric Tons Per Capita)  
(2014) . Cited 24 times.  
A ccessed August 28  
<https://data.worldbank.org/indicator/en.atm.co2e.pc>
- 
- 63 Xiao-ling, L., Chun-liang, X., Ping-jun, S.  
The research of pattern and mechanism of the chinese urban land use intensity under new type urbanization  
(2015) *World Reg. Stud.*, 1, pp. 60-67.
- 
- 64 Yao, L., Liu, J., Wang, R.  
Comparison and analysis of carbon emissions embodied in household consumption between urban and rural area of China  
(2011) *Chin. J. Popul. Resour. Environ.*, 24 (4), pp. 25-29. Cited 6 times.
- 
- 65 Zahari, M.A.Z., Majid, M.R., Ho, C.S., Kurata, G., Nadhirah, N., Irina, S.Z.  
Relationship between land use composition and PM<sub>10</sub> concentrations in Iskandar Malaysia  
  
(2016) *Clean Technologies and Environmental Policy*, 18 (8), pp. 2429-2439. Cited 6 times.  
<https://link.springer.com/journal/10098>  
doi: 10.1007/s10098-016-1263-3  
  
View at Publisher

□ 66 Zen, I.S., Al-Amin, A.Q., Doberstein, B.  
Mainstreaming climate adaptation and mitigation policy: Towards multi-level climate governance in Melaka, Malaysia ([Open Access](#))  
(2019) *Urban Climate*, 30, art. no. 100501. Cited 9 times.  
<http://www.journals.elsevier.com/urban-climate/>  
doi: 10.1016/j.uclim.2019.100501  
[View at Publisher](#)

□ 67 Zhao, C.-S., Niu, S.-W., Zhang, X.  
Effects of household energy consumption on environment and its influence factors in rural and urban areas ([Open Access](#))  
(2012) *Energy Procedia*, 14, pp. 805-811. Cited 39 times.  
doi: 10.1016/j.egypro.2011.12.887  
[View at Publisher](#)

□ 68 Zheng, Y.  
Socio-economic development and carbon emissions  
(2009) *IARU Int. Sci. Congr. Clim. Change*  
Copenhagen, Denmark 10-12, March 2009

🔍 Al-Amin, A.Q.; Department of Geography and Environmental Management, University of Waterloo, ON, Canada; email:qalamin@uwaterloo.ca  
© Copyright 2021 Elsevier B.V., All rights reserved.

[← Back to results](#) | 1 of 1

[^ Top of page](#)

## About Scopus

[What is Scopus](#)  
[Content coverage](#)  
[Scopus blog](#)  
[Scopus API](#)  
[Privacy matters](#)

## Language

[日本語に切り替える](#)  
[切换到简体中文](#)  
[切换到繁體中文](#)  
[Русский язык](#)

## Customer Service

[Help](#)  
[Contact us](#)

ELSEVIER

[Terms and conditions](#) ↗ [Privacy policy](#) ↗

Copyright © Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

We use cookies to help provide and enhance our service and tailor content. By continuing, you agree to the use of cookies.

 RELX