## References

- 100cities. 2020. 100 Resilient Cities. Accessed from: https://www.100resilientcities.org/ [Accessed on 10 January 2020].
- Abbott, MC. 2017. Using statistics in the social and health science with SPSS and Excel. New Jersey: John Wiley & Sons.
- Abdel-ghany, AM. 2011. Measuring and evaluating solar radiative properties of plastic shading nets. *Solar Energy Materials and Solar Cells*, 95(2), 677–683.
- Abdel-ghany, AM, Al-helal, IM & Shady, MR. 2014. On the Emissivity and Absorptivity of Plastic Shading Nets under Natural Conditions. *Advances in Mechanical Engineering*, 1–9.
- Adegun, OB. 2014. Coping with stormwater in a Johannesburg, South Africa informal settlement. *Municipal Engineer*, 167(ME2), 89–98.
- Agostino, DD, Russo, F, de' Rossi, F, Marino, C & Minichiello, F. 2017. Energy retrofit of historic buildings in the Mediterranean area: the case of the Palaeontology Museum of Naples. *Energy Procedia*, 133, 336–348.
- Ahern, J. 2011. From fail-safe to safe-to-fail: Sustainability and resilience in the new urban world. *Landscape and Urban Planning*, 100(4), 341–343.
- Ahmed, A, Mateo-garcia, M, Mcgough, D & Gaterell, M. 2017. Methodology for Evaluating Innovative Technologies for Low-Energy Retrofitting of Public Buildings. *Energy Procedia*, 112, October, 166–175.
- Akram, F, Rasul, MG, Khan, MMK & Amir, MSII. 2014. A Review on Stormwater Harvesting and Reuse. *International Journal of Environmental, Chemical, Ecological, Geological and Geophysical Engineering*, 8(3), 188–197.
- Allen, RG, Pereira, LS, Raes, D & Smith, M. 1998. Crop evapotranspiration Guidelines for computing crop water requirements FAO Irrigation and drainage. Rome: FAO.
- Almusaed, A. 2011. Biophilic and Bioclimateic Architecture: Analytical therapy for the next generation of passive sustainable architecture. London: Springer-Verlag.
- Armitage, N, Vice, M, Fisher-jeffes, L, Winter, K, Spiegel, A & Dunstan, J. 2013. *Alternative Technology for Stormwater Management Sustainable Drainage Systems Report and South African Case Studies*, Cape Town: Water Research Commission.
- Arrhenius, S. 1896. On the influence of carbonic acid in the air upon the temperature of the ground. *The London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science*, 41(251), 237–276.
- ASHRAE, 2017. ASHRAE Handbook Fundamentals. Atlanta: ASHRAE.
- ASSAF, 2011. *Towards a Low Carbon City. Focus on Durban*. Pretoria: Academy of Science of South Africa.

- Astee, LY & Kishnani, NT. 2010. Building Integrated Agriculture: Utilising Rooftops for Sustainable Food Crop Cultivation in Singapore. *Journal of Green Building*, 5(2), 105–113.
- Barbosa, AE, Fernandes, JN & David, LM. 2012. Key issues for sustainable urban stormwater management. *Water Research*, 46(20), 6787–6798.
- Bassey, N. 2018. The Climate crises and the struggle for African Food Sovereignty. In V. Satgar (ed.), *The Climate crises South African and Global democratic exo-socialist alternatives*. Johannesburg: Wits University Press, 190–208.
- Battersby, J. 2012. Urban food security and climate change. A system of flows. In B. Frayne, C. Moser & G. Ziervogel (eds.), *Climate change, assets and food security in Southern African cities*. Oxon: Earthscan, 35–56.
- Battersby, J & Marshak, M. 2013. Growing Communities: Integrating the Social and Economic Benefits of Urban Agriculture in Cape Town. *Urban Forum*, 24, 447–461.
- Benis, K, Gomes, R, Vicente, R, Ferrão, P & Fernández, JE. 2015. *Rooftop Greenhouses:* LCA and Energy Simulation. CISBAT conference, 11-19 September 2015, Lausanne, 95–100.
- Benis, K, Reinhart, C & Ferr, P. 2017. Development of a simulation-based decision support work flow for the implementation of Building-Integrated Agriculture (BIA) in urban contexts. *Journal of Cleaner Production*, 147, 589–602.
- Bennie, A & Satgoor, A. 2018. Defining the just transition through food sovereignty and the solidarity economy. In V. Satgar (ed.), *The climate crises*. Johannesburg: Wits University Press, 293–313.
- Berge, B. 2009. The Ecology of Building Materials. 2nd Edition. Oxford: Architectural Press.
- Bernholt, H, Kehlenbeck, K, Gebauer, J & Buerkert, A. 2009. Plant species richness and diversity in urban and peri-urban gardens of Niamey, Niger. *Agroforestry Systems*, 77(3), 159–179.
- Bhaskaran, M.R. 2018. *Urban Void A 'bypassed' urban resource, International Conference on Urban Sustainability: Emerging Trends, Themes, Concepts and Practices.*
- Bloom, K. 2019. Our Burning Planet: Drought and domestic violence: Fallout from a changing climate. Accessed at Daily Maverick:

  https://www.dailymaverick.co.za/article/2019-03-19-drought-and-domestic-violence-fallout-from-a-changing-climate/ [Accessed on 19 March 2019].
- Bodle, R, Donat, L & Duwe, M. 2016. The Paris Agreement: Analysis, Assessment and Outlook. *Carbon & Climate Law Review*, 10(1), 5–22.
- Bohn, K & Viljoen, A. 2005a. More space with less space: an urban design strategy. In A. Viljoen (ed.), Continuous Productive Urban Landscapes. Designing for Sustainable

- Cities. Oxford: Architectural Press, 11-16.
- Bohn, K & Viljoen, A. 2005b. New space for old cities: Vision for landscape. In A. Viljoen (ed.), Continuous Productive Urban Landscapes. Designing for Sustainable Cities. Oxford: Architectural Press, 251–264.
- Bohn, K & Viljoen, A. 2011. The Edible City: Envisioning the Continuous Productive Urban Landscape (CPUL). *Field Journal*, 4, 149–161.
- Broersma, S, Fremouw, M & Dobbelsteen, A vd. 2013. Energy potential mapping: Visualising energy characteristics for the exergetic optimisation of the built environment. *Entropy*, 15(2), 490–506.
- Bronkhorst, S, Pengelly, C & Seyler, H. 2017. *Water Market Intelligence Report*, Cape Town: Green Cape.
- Brooker, C. 2019. Project Four. Upgrading Paterson Phase 1. *Pro Landscaper,* March 2019, 44-47.
- Bulkeley, H & Castán Broto, V. 2013. Government by experiment? Global cities and the governing of climate change. *Transactions of the Institute of British Geographers*, 38(3), 361–375.
- Bulkeley, H & Tuts, R. 2013. Understanding urban vulnerability, adaptation and resilience in the context of climate change. *Local Environment*, 6, 646–662.
- Bullen, P & Love, P. 2011. A new future for the past: a model for adaptive reuse. *Build* environment project and asset management, 1(1), 32-44.
- Bullen, PA. 2007. Adaptive reuse and sustainability of commercial buildings. *Facilities*, 25(1/2), 20–31.
- Caldwell, S. 2010. Statistics unplugged. Belmont: Wadsworth.
- Campbell, A. 2017. Lay Designers: Grassroots Innovation for Appropriate Change. *Design Issues*, 33(1), 30–47.
- Caplow, T. 2009. Building integrated agriculture: Philosophy and Practice. In Heinrich Böll Foundation (ed.), *Urban Futures 2030. Urban development and urban lifestyles of the future.* Vol 5. Berlin: Heinrich Böll Foundation, 54–58.
- Carden, K & Armitage, NP. 2013. Assessing urban water sustainability in South Africa Not just performance measurement. *Water SA*, 39(3), 345–350.
- Carnielo, E & Zinzi, M. 2013. Optical and thermal characterisation of cool asphalts to mitigate urban temperatures and building cooling demand. *Building and Environment*, 60, 56–65.
- Carter, JG. 2011. Climate change adaptation in European cities. *Current Opinion in Environmental Sustainability*, 3(3), 193–198.
- Carter, JG, Cavan, G, Connelly, A, Guy, S, Handley, J & Kazmierczak, A. 2015. Climate change and the city: Building capacity for urban adaptation. *Progress in Planning*, 95, 1–66.

- Casagrande, M. 2014. Third generation city. In N Tenkanen (ed.), *Paracity*. Taiwan: Casagrande Laboratory & CURE, 24-27.
- Castleton, HF, Stovin, V, Beck, SBM & Davison, JB. 2010. Green roofs; Building energy savings and the potential for retrofit. *Energy and Buildings*, 42(10), 1582–1591.
- CBS. 2019. Agricultural export value over 90 bn euros in 2018. Accessed at CBS: https://www.cbs.nl/en-gb/artikelen/nieuws/2019/03/agricultural-export-value-over-90-bn-euros-in-2018?query=keyword%3A%22export%22, [Accessed on 13 February 2019].
- Cheung, PK & Jim, CY. 2018. Comparing the cooling effects of a tree and a concrete shelter using PET and UTCI. *Building and Environment*, 130, 49–61.
- Chipkin, CM. 1998. Preparing for Apartheid. Pretoria and Johannesburg. In RC. Fisher, S. le Roux & E. Marè (eds.), *Architecture of the Transvaal*. Pretoria: University of South Africa Press, 149–174.
- Chobokoane, N & Horn, A. 2015. Urban Compaction and Densification in Bloemfontein, South Africa: Measuring the Current Urban Form Against Mangaung Metropolitan Municipality's Spatial Planning Proposals for Compaction. *Urban Forum*, 26, 77–93.
- Cilliers, S, Cilliers, J, Lubbe, R & Siebert, S. 2013. Ecosystem services of urban green spaces in African countries perspectives and challenges. *Urban Ecosyst*, 16, 681–702.
- City of Tshwane. no date. Development of the Tshwane Sustainable Energy and Climate Change Strategy.
- Clark, TA & Tsai, TA. 2000. The agricultural consequences of compact urban development. In M. Jenks & R. Burgess (eds.), *Compact Cities. Sustainable Urban Forms for Developing Countries*. New York: Spon Press, 63–72.
- Climate Focus. 2015. The Paris Agreement. Summary. Briefing Note III, (December), 1–6.
- CO2 Earth. 2020. CO2 Earth Homepage. Accessed at: www.co2.earth [Accessed on 25 February 2020].
- COCT. 2006. Framework for Adaptation to Climate Change in the City of Cape Town. City of Cape Town.
- COJ. 2009. Climate Change Adaptation Plan City of Johannesburg. City of Johannesburg.
- COJ. 2015. Climate Change Strategic Framework City of Johannesburg. City of Johannesburg.
- Conradie, DCU. 2021. South Africa's climate zones: Today, tomorrow. International Greenbuilding Conference and Exhibition. 25-16 July, 2012. Johannesburg.
- Conradie, DCU. 2017. Calculating solar protection for buildings in South Africa. *Green Building Handbook*, 11, 48-59.
- Conradie, DCU. 2019. Weather files van PTA, correspondence [email], 5 March 2019, Pretoria.

- Corburn, J. 2009. Cities, climate change and urban heat island mitigation: Localising global environmental science. *Urban Studies*, 46(2), 413–427.
- Corcoran, MP & Kettle, PC. 2015. Urban agriculture, civil interfaces and moving beyond difference: the experiences of plot holders in Dublin and Belfast. *Local Environment*, 20(10), 1215–1230.
- COT. 2018. Climate Response Strategy for a prosperious capital city through freedom, fairness and opportunity. City of Tshwane.
- Creswell, J & Clark, VLP. 2011. Designing and Conducting Mixed Method Research, California: Sage.
- CSIR. 2019. *Green Book: Adapting South African Settlements to climate change.* Accessed at: https://www.greenbook.co.za [Accessed on 01 April 2020].
- Davie, L. 2018. Farms in the sky over Joburg. Accessed at Johannesburg Innercity Partnership homepage: http://www.jicp.org.za/urban-agriculture-initiative/ [Accessed 20 March 2019].
- Davis, C, Engelbrecht, F, Tadross, M, Wolski, P & v Garderen, EA. 2017. Future climate change over Southern Africa. In J. Mambo & K. Faccer (eds.), *Understanding the Social and Environmental Implications of Global Change*. Stellenbosch: African Sun Media, 13-23.
- DEA. 2011. *National Climate Change Response White Paper*. Pretoria: Department of Environmental Affairs.
- DEA. 2013. Long-term Adaptation Scenarios Flagship research programme (LTAS) for South Africa. Climate Trends and Scenarious for South Africa. Pretoria: Department of Environmental Affairs.
- DEFF, 2020. South Africa's National Climate Change Adaptation Strategy approved.

  Accessed on Department of Environment, Forestry and Fisheries homepage:

  https://www.environment.gov.za/mediarelease/nationalclimatechange\_adaptationstrate
  gy\_ue10november19 [Accessed on 19 January 2021].
- De Souza, K, Kituyi, E, Harvey, B, Leone, M, Subrammanyam, K & Ford, JD. 2015. Vulnerability to climate change in three hot spots in Africa and Asia: key issues for policy-relevant adaptation and resilience-building research. *Regional Environmental Change*, 15(5), 747–753.
- Delor, M. 2011. Current state of Building-Integrated Agriculture, its energy benefits and comparison with green roofs Summary. PhD thesis. University of Sheffield: Sheffield.
- Denscombe, M. 2008. Communities of Practice. A Research Paradigm for the Mixed Methods Approach. *Journal of Mixed Methods Research*, 2(3), 270–283.
- Despommier, D. 2010. The vertical farm. Feeding the world in the 21st Century. New York:

- Picador.
- Despommier, D. 2011. The vertical farm: Controlled environment agriculture carried out in tall buildings would create greater food safety and security for large urban populations. Journal fur Verbraucherschutz und Lebensmittelsicherheit, 6(2), 233–236.
- Dewar, D. 2000. The Relevance of the Compact City Approach: The Management of Urban Growth in South African Cities. In M. Jenks & R. Burgess (eds.), *Compact Cities.*Sustainable Urban Forms for Developing Countries. New York: Spon Press, 209–218.
- DHK. 2019. Hatfield Town Centre. Urban design framework. Johannesburg.
- Diamond, J. 1997. *Guns, germs, and steel. The fates of human societies.* New York: WW Norton & Company.
- Di Leo, N, Escobedo, FJ & Dubbeling, M. 2016. The Role of urban Green infrastructure in mitigating land surface temperature in Bobo-Dioulasso, Burkina Faso. *Environ Dev Sustain*, 18(2), 373–392.
- Dirker, J. 2020. The rates COP of typical South African air-condition systems, Personal communication. 20 February 2020, Pretoria.
- Dixon, T. 2014. Commercial property retrofitting What does "retrofit" mean, and how can we scale up action in the UK sector? *Journal of Property Investment & Finance*, 32(4), 443–452.
- Dobbelsteen, A vd & Tillie, N. 2014. *The Energy Master Plan: Transition to self-sufficient city regions by means of an approach to local energy potentials*. 30<sup>th</sup> *International PLEA conference*. *Ahmedabad*, India, 16-18 December, 1–8.
- Dodman, D, Leck, H, Rusca, M & Colenbrander, S. 2017. African Urbanisation and Urbanism: Implications for risk accumulation and reduction. *International Journal of Disaster Risk Reduction*, 26, 7–15.
- DOE. 2019. Market Assessment of Residential and Small Commercial Air Conditiones in South Africa. Pretoria: Department of Energy.
- Dos Santos, M. 2016. Smart cities and urban areas Aquaponics as innovative urban agriculture. *Urban Forestry & Urban Greening*, 20, 402–406.
- Dos Santos, S, Adams, EA, Neville, G, Wada, Y, de Sherbinin, A. Mullin Bernhardt, E & Adamo, SB. 2017. Urban growth and water access in sub-Saharan Africa: Progress, challenges, and emerging research directions. *Science of the Total Environment*, 607–608, 497–508.
- Douglas, I, Alam, K, Maghenda, M, Mcdonnell, Y, Mclean, L & Campbell, J. 2008. Unjust waters: Climate change, flooding and the urban poor in Africa. *Environment and Urbanization*, 20(1), 187–205.
- Dubbeling, M & Zeeuw, H d. 2011. Urban Agriculture and Climate Change Adaptation:

- Ensuring Food Security Through Adaptation. In K. Otto Zimmerman (ed.), *Resilient cities:* cities and adaptation to climate change. Proceedings of the Global Forum 2010, Dordrecht: Springer, Dordrecht, 441–449.
- du Plessis, A. 2003. *Gautrain station, Hatfield*. MArch (Prof) Dissertation. University of Pretoria, Pretoria.
- du Toit, J. 2015. Research Design. In E.A. Silva, P. Healey, N. Harris & P. Van Den Broeck (eds.), *The Routledge handbook of Planning Research Methods*. New York: Routledge, 61-73.
- Eames, M, Dixon, T, Lannon, S, Hunt, M, d Laurentis, C, Marvin, S, Hodson, M, Guthric, P & Georgiadou, MC. 2014. *Retrofit 2050: Critical Challenges for Urban Transitions*. Cardif: Cardif University.
- Eames, M, Dixon, T, May, T & Hunt, M. 2013. City futures: exploring urban retrofit and sustainable transitions. *Building Research and Information*, 41(5), 504–516.
- Eckersley, R. 2007. Ambushed: The Kyoto Protocol, the Bush Administration's Climate Policy and the Erosion of Legitimacy. *International Politics*, 44, 306–324.
- Eco-tunnels. 2019. *Plastic Covering for your eco tunnel*. Accessed on Eco-tunnels homepage: https://www.eco-tunnels.co.za/eco-tunnels-info/plastic-covering-for-your-eco-tunnels/ [Accessed on 26 August 2019].
- Eeghem, E v, Steel, R, Verschelden, G & Dekeyrel, C. 2011. Urban Cracks: Interstitial spaces in the city. *SEA2011, Instanbul.* Retrieved:
- https:/isea2011.sabanciuniv.edu/paper/urbancracks-interstitialspaces-city
- Engelbrecht, CJ & Engelbrecht, FA. 2016. Shifts in Köppen-Geiger climate zones over southern Africa in relation to key global temperature goals. *Theor Appl Climatol*, 123, 247–261.
- Engineering Toolbox. 2019. *The Heat specific Capacity of Materials*, Accessed on Engineering Toolbox homepage: https://www.engineeringtoolbox.com/specific-heat-capacity-d\_391.html [Accessed on 24 August 2019].
- ENVIMET. 2018. Accessed at *ENVIMET Homepage:* https://www.envi-met.com/intro/ [Accessed on 16 November 2018].
- Faber, M, Laurie, S, Ball, A & Andrade, M. 2013. *A crop-based approach to address vitamin A deficiency in South Africa*. Pretoria: ARC-Roodeplaat.
- Faling, W. 2012. A spatial planning perspective on climate change, asset adaptation and food security. The case of two South African cities. In B. Frayne, C. Moser & G. Ziervogel (eds.), *Climate change, assets and food security in Southern African cities.* 1st edition. Oxon: Eathscan, 163–185.
- FAO. 2012. Growing Greener Cities in Africa. First Status report on urban and peri-urban

- horticulture in Africa. Rome: FAO.
- Farthing, S. 2016. Research Design in Urban Planning. London: Sage.
- Felix, J. 2018. #Watercrises: City asks residents to cut down to 50 litres a day. Accessed on Cape Argus Home page: https://www.iol.co.za/capeargus/news/watercrisis-city-asks-residents-to-cut-down-to-50-litres-a-day-12785388 [Accessed 02 July 2018].
- Ferretti, V, Bottero, M & Mondini, G. 2014. Decision making and cultural heritage: An application of the Multi-Attribute Value Theory for the reuse of historical buildings. *Journal of Cultural Heritage*, 15(6), 644–655.
- Fisher-jeffes, L, Carden, K, Armitage, N & Winter, K. 2017. Stormwater harvesting: Improving water security in South Africa's urban areas. *South African Journal of Science*, 113(1/2), 2–5.
- Folke, C, Carpenter, SR, Walker, B, Scheffer, M, Chapin, T & Rockström, J. 2010. Resilience thinking: Integrating resilience, adaptability and transformability. *Ecology and Society*, 15(4).
- Frayne, B, Moser, C & Ziervogel, G. 2012a. Understanding the terrain. The climate change, assets and food security nexus in Southern African cities. In B. Frayne, C. Moser & G. Ziervogel (eds.), Climate change, assets and food security in Southern African cities. Oxon: Earthscan, 01–34.
- Frayne, B, Moser, C & Ziervogel, G. 2012b. Constructing the climate change asset adaptation Food security nexus for pro-poor urban development. In C. Frayne, C. Moser & G Ziervogel (eds.), *Climate change, assets and food security in Southern African cities*. Oxon: Earthscan, 186–197.
- GABC. 2016. Global Roadmap towards low GHG and Resilient Buildings. Nairobi: UNEP. Accessed at the Global Alliance for Buildings and Constructions homepage: https://globalabc.org/resources/publications/global-roadmap-towards-low-ghg-and-resilient-buildings [Accessed 14 January 2021].
- Galt, RE, Gray, LC & Hurley, P. 2014. Subversive and interstitial food spaces: transforming selves, societies, and society environment relations through urban agriculture and foraging. *Local Environment*, 19(2), 133–146.
- GCRO. 2009. GCRO 2009 Quality of Life Survey Field Map. Accessed at: https://www.gcro.ac.za/m/documents/GCRO\_GCR\_QoL\_survey\_map4\_24July09\_for\_website.pdf. [Accessed on 04 August 2020].
- GCRO. 2020. Gauteng City-region observatory GIS viewer. Accessed at: https://gcro1.wits.ac.za/gcrojsgis/. [Accessed on 06 August 2020].
- GDARD. 2011. Gauteng Climate Change Response Strategy and Action Plan. Johannesburg:

- Gauteng Province Department of agriculture and rural development.
- Georgakis, C, Zoras, S & Santamouris, M. 2014. Studying the effect of "cool" coatings in street urban canyons and its potential as a heat island mitigation technique. *Sustainable Cities and Society*, 13, 20–31.
- Gething, B. & Puckett, K. 2013. Design for Climate change. London: RIBA Publishing.
- Ghoshdastidar, PS. 2012. Heat Transfer. 2nd Edition. New Delhi: Oxford University Press.
- Gill, P, Stewart, K, Treasure, E & Chadwick, B. 2008. Methods of data collection in qualitative research: Interviews and focus groups. *British Dental Journal*, 204(6), 291–295.
- Goldstein, B, Hauschild, M, Fernandez, J & Birkved, M. 2016. Urban versus conventional agriculture, taxonomy of resource profiles: a review. *Agronomy for Sustainable Development*, 36(9), 1–19.
- Gotz, G, Wray, C & Mubiwa, B. 2014. The "thin oil of urbanisation"? Spatial change in Johannesburg and the Gauteng city-region. In P. Harrison, G. Gotz, A. Todes & C. Wray (eds.), *Changing Space, Changing City. Johannesburg after Apartheid.* Johannesburg: Wits University Press, 42–61.
- Graamans, L, Baeza, E, Dobbelsteen, A vd, Tsafaras, I & Stanghellini, C. 2018. Plant factories versus greenhouses: Comparison of resource use efficiency. *Agricultural Systems*, 160, 31–43.
- Graamans, L, Dobbelsteen, A vd, Meinen, E & Stanghellini, C. 2017. Plant factories; crop transpiration and energy balance. *Agricultural Systems*, 153, 138–147.
- Grant, G. 2012. Ecosystem Services Come to Town. Greening cities by working with nature, West Sussex: Wiley-Blackwell.
- Groat, L & Wang, D. 2013. Architectural Research Methods. Second edition. New Jersey: John Wiley & Sons.
- Haberman, D, Gillies, L, Canter, A, Rinner, V, Pancrazi, L & Matrellozzo, F. 2014. The Potential of Urban Agriculture in Montréal. *International Journal of Geo-Information*, 3, 1101–1117.
- Hamin, EM & Gurran, N. 2009 Urban form and climate change: Balancing adaptation and mitigation in the U.S. and Australia. *Habitat International*, 33(3), 238–245.
- Hanjra, MA. & Qureshi, ME. 2010. Global water crises and future food security in an era of climate change. *Food Policy*, 35, 365–377.
- Harris, H. 2012. Handbook for the application of the amendments to the national building regulations for energy usage. Cape Town: Trademax Publications.
- Harrison, P, Gotz, G, Todes, A & Wray, C. 2014. Materialities, subjectivities and spatial transformation in Johannesburg. In P. Harrison, G. Gotz, A. Todes & C. Wray (eds.), *Changing Space, Changing City. Johannesburg after Apartheid.* Johannesburg: Wits

- University Press, 2-41.
- Hatfield CID. 2016. Spatial and Institutional development and management framework for the Hatfield campus village, Tshwane: Hatfield CID & Enterprises University of Pretoria.
- Hatfield Urban Studio. 2017. Hatfield Precinct. Unpublished report.
- Hatfield Urban Studio. 2018. *Hatfield studio. Public places and productive spaces.*Unpublished report.
- Henning, E, v Rensburg, W & Smit, B. 2004. *Finding your way in qualitative research*. Pretoria: Van Schaik.
- Herrera, M, Natarajan, S, Coley, DA, Kershaw, T, Eames, M, Ramallo-gonza, AP, Fosas, D & Wood, M. 2017. A review of current and future weather data for building simulation. Building Services Engineering Research and Technology, 38(5), 602–627.
- Hoeven, F vd & Wandl, A. 2015. Amsterwarm: Mapping the land-use, health and energy-efficiency implications of the Amsterdam urban heat island. *Building Services Engineering Research and Technology*, 36(1), 67–88.
- Hofstee, E. 2006. Constructing a good Dissertation, Johannesburg: EPE.
- Holm, D. 1985. *Die termiese uitwerking van plantbedekking op buitemure.* PhD thesis, University of Pretoria, Pretoria .
- Holm, D. 1998. Kerkplaats and Capitalists. The first architects in Context. In R. Fisher, S. le Roux & E. Marè (eds.), *Architecture of the Transvaal*. Pretoria: University of South Africa Press, 55-78.
- Howe, J, Viljoen, A & Bohn, K. 2005. Food in time: The history of English open urban pace as a European example. In André Viljoen (ed.), *Continuous Productive Urban Landscapes.*Designing for Sustainable Cities. Oxford: Architectural Press, 95–107.
- Hugo, J & du Plessis, C. 2019. A quantitative analysis of interstitial spaces to improve climate change resilience in Southern African cities. *Climate and Development*, 12(7), 591–599.
- Hunt, A & Watkiss, P. 2011. Climate change impacts and adaptation in cities: A review of the literature. *Climatic Change*, 104(1), 13–49.
- IEA. 2020. CO<sub>2</sub> emissions from fuel combustion 2019 Edition. Accessed at the International Energy Agency homepage: https://www.iea.org/data-and-statistics?country=SOUTHAFRIC&fuel=CO2 emissions&indicator=CO2 emissions by sector [Accessed on 30 March 2020]
- IES. 2018. Software Validation and Approval. Accessed at Integrated Environmental Solutions Homepage: https://www.iesve.com/software/software-validation [Accessed 05 February 2020].
- IPCC. 2000. Emmisions Scenarios, Cambridge: Cambridge University Press.
- IPCC. 2014a. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II

- and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. New York: Cambridge University Press.
- IPCC. 2014b. Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. New York: Cambridge University Press.
- IPCC. 2014c. Climate Change 2014: Impacts, Adaptation and Vulnerability Contributions of the Working Group II to the Fifth Assessment Report. New York: Cambridge University Press.
- IPCC. 2018a. Global warming of 1.5 °c. Technical Summary. Geneva: IPCC.
- IPCC. 2018b. Global warming of 1.5 °C an IPCC special report on the impacts of global. Geneva: IPCC.
- Jenkins, A. 2018. *Building integrated food systems*. PhD thesis. Queens University Belfast, Belfast.
- Jim, CY & Chen, SS. 2003. Comprehensive greenspace planning based on landscape ecology principles in compact Nanjing city, China. *Landscape and Urban Planning*, 65(3), 95–116.
- Johannessen, Å & Wamsler, C. 2017. What does resilience mean for urban water services? *Ecology and Society*, 22(1).
- Johnson, RB & Onwuegbuzie, AJ. 2004. Mixed Methods Research: A Research Paradigm Whose Time Has Come. *Educational Researcher*, 33(7), 14–16.
- Johnson, RB, Onwuegbuzie, AJ & Turner, LA. 2007. Towards definition of mixed methods research. *Journal of Mixed Methods Research*, 1(2), 112–133.
- Jonsson, P. 2004. Vegetation as an urban climate control in the subtropical city of Gaborone, Botswana. *International Journal of Climatology*, 24(10), 1307–1322.
- Jorgensen, A & Tylecote, M. 2007. Ambivalent landscapes Wilderness in the urban interstices. *Landscape Research*, 32(4), 443–462.
- Kenabatho, PK, Parida, BP & Moalafhi, DB. 2012. The value of large-scale climate variables in climate change assessment: The case of Botswana's rainfall. *Physics and Chemistry of the Earth*, 50–52, 64–71.
- Kim, G, Miller, PA & Nowak, DJ. 2018. Urban vacant land typology: A tool for managing urban vacant land. *Sustainable Cities and Society*, 36, 144–156.
- Kithiia, J. 2011. Climate change risk responses in East African cities: Need, barriers and opportunities. *Current Opinion in Environmental Sustainability*, 3(3), 176–180.
- Kleerekoper, L, Dobbelsteen, A vd, Ham, E vd, Hordijk, T & Martin, C. 2015. Creating drafts in urban settings through coloured facades: Exploring a new climate adaptation measure based on thermal stratification. *Urban Climate*, 14, 290–300.

- Kleerekoper, L, Esch, M v & Baldiri, T. 2012. How to make a city climate-proof, addressing the urban heat island effect. *Resources, Conservation & Recycling*, 64, 30–38.
- Kleerekoper, L, Taleghani, M, Dobbelsteen, A vd & Hordijk, T. 2017. Urban measures for hot weather conditions in a temperate climate condition: A review study. *Renewable and Sustainable Energy Reviews*, 75, 515–533.
- Knuth, L. 2005. Legal and institutional aspects of urban and peri-urban forestry and greening. FAO Legislative Study, (88), xiii-pp.
- Kortright, R & Wakefield, S. 2011. Edible backyards: a qualitative study of household food growing and its contributions to food security. *Agric Hum Values*, 28, 39–53.
- Kotharkar, R, Ramesh, A & Bagade, A. 2018 Urban Climate Urban Heat Island studies in South Asia: A critical review. *Urban Climate*, 24, 1011–1026.
- Krikser, T, Piorr, A, Berges, R & Opitz, I. 2016. Urban Agriculture Oriented towards Self-Supply, Social and Commercial Purpose: A Typology. *Land*, 5(28), 1–19.
- Kundzewicz, ZW, Kanae, S, Seneviratne, SI, Handmer, J, Nicholls, N, Peduzzi, P, Mechler, R, Bouwer, LM, Arnell, N, Mach, K, Muir-Wood, R, Brakenridge, GR, Kron, W, Benito, G, Honda, Y, Takahashi, K & Sherstyukov, B. 2014. Flood risk and climate change: global and regional perspectives. *Hydrological Sciences Journal*, 59(1), 1–28.
- Landman, K. 2006. Privatising public space in post-apartheid South African cities through neighbourhood enclosures. *GeoJournal*, 66, 133–146.
- Landman, K. 2016. The Transformation of Public Space in South Africa and the role of urban design. *Urban Design International*, 21(1), 78–92.
- Leech, NL & Onwuegbuzie, AJ. 2009 A typology of mixed methods research designs. *Quality* and *Quantity*, 43(2), 265–275.
- Leichenko, R. 2011. Climate change and urban resilience. *Current Opinion in Environmental Sustainability*, 3(3), 164–168.
- Leivo, V, Prasauskas, T, Turunen, M, Kiviste, M, Aaltonen, A, Martuzevicius, D & Haverinen-shaughnessy, U. 2017. Comparison of air pressure difference, air change rates, and CO<sub>2</sub> concentrations in apartment buildings before and after energy retrofits. *Building and Environment*, 120, 85–92.
- Lemanski, C. 2006. Spaces of Exclusivity or Connection? Linkages between a Gated Community and its Poorer Neighbour in a Cape Town Master Plan Development. *Urban Studies*, 43(2), 397–420.
- Lemanski, C & Landman, K. 2008. Divergent and Similar Experiences of "Gating" in South Africa: Johannesburg, Durban and Cape Town. *Urban Forum,* 19, 133–158.
- le Roux, A, Mans, G, Huyssteen, E & v Niekerk, W. 2017. Profiling the vulnerabilities and risks of South African Settlements. In J. Mambo & K. Faccer (eds.), *Understanding the Social*

- and Environmental Implications of Global Change. 2nd edition. Stellenbosch: African Sun Media, 26–35.
- Liang, H & Huang, K. 2011. Study on rooftop outdoor thermal environment and slab insulation performance of grass planted roof. *Journal of the Physical Sciences*, 6(1), 65–73.
- Liang, TC, Hien, WN & Jusuf, SK. 2014. Effects of vertical greenery on mean radiant temperature in the tropical urban environment. *Landscape and Urban Planning*, 127, 52–64.
- Lindén, J. 2011. Nocturnal Cool Island in the Sahelian city of Ouagadougou, Burkina Faso. International Journal of Climatology, 31(4), 605–620.
- Lock, J. 1977. Patrick Geddes: the conservation surgeon. *Built Environment Quarterly*, 3(4), 325–328.
- Lovell, ST. 2010. Multifunctional urban agriculture for sustainable land use planning in the United States. *Sustainability*, 2(8), 2499–2522.
- Lovell, ST & Taylor, JR. 2013. Supplying urban ecosystem services through multifunctional green infrastructure in the United States. *Landscape Ecology*, 28(8), 1447–1463.
- Lupia, F & Pulighe, G. 2015. Water Use and Urban Agriculture: Estimation and Water Saving Scenarios for Residential Kitchen Gardens. *Agriculture and Agricultural Science Procedia*, 4, 50–58.
- Lwasa, S. 2010. Adapting urban areas in Africa to climate change: The case of Kampala. *Current Opinion in Environmental Sustainability*, 2(3), 166–171.
- Lwasa, S, Mugagga, F, Wahab, B, Simon, D, Connors, J & Griffith, C. 2014. Urban and periurban agriculture and forestry: Transcending poverty alleviation to climate change mitigation and adaptation. *Urban Climate*, 7, 92–106.
- Lyon, B. 2009. Southern Africa Summer Drought and Heat Waves: Observations and Coupled Model Behavior. *American Meteorological Society*, 22, 6033–6046.
- Mabin, A. 2014. Johannesburg's northern suburbs. In P. Harrison, G. Gotz, A. Todes & C. Wray (eds.), *Changing Space, Changing City. Johannesburg after apartheid.*Johannesburg: Wits University Press, 395–417.
- Mabin, A, Butcher, S & Bloch, R. 2013. Peripheries, suburbanisms and change in sub-Saharan African cities. *Social Dynamics*, 39(2), 167-190.
- MacRae, R, Gallant, E, Patel, S, Michalak, M, Bunch, M & Schaffner, S. 2010. Could Toronto provide 10% of its fresh vegetable requirements from within its own boundaries? Matching consumption requirements with growing spaces. *Journal of Agriculture, Food Systems, and Community Development*, 1(2), 105–127.
- Malan, N. 2015. Urban farmers and urban agriculture in Johannesburg: Responding to the food resilience strategy. *Agrekon*, 54(2), 51–75.

- Mallinis, G, Karteris, M, Theodoridou, I, Tsioukas, V & Karteris, M. 2014. Development of a nationwide approach for large scale estimation of green roof retrofitting areas and roof-top solar energy potential using VHR natural colour orthoimagery and DSM data over. *Remote Sensing Letters*, 5(6), 548–557.
- Maluleke, R. 2016. *Electricity, gas and water supply industry. Report number 41-01-02*, Pretoria: Statics South Africa.
- Mambo, J & Faccer, K. 2017. *Understanding the Social & Environmental implications of Global Change*. Stellenbosch: African Sun Media.
- Mancini, F, Cecconi, M, De Sanctis, F. & Beltotto, A. 2016. Energy retrofit of a historic building using simplified dynamic energy modeling. *Energy Procedia*, 101(September), 1119–1126.
- Mapfumo, P, Onyango, M, Honkponou, SK, Mzouri, E, Githeko, A, Rabeharisoa, L, Obando, J, Omolo, N, Majule, A, Denton, F, Ayers, J & Agrawal, A. 2017. Pathways to transformational change in the face of climate impacts: an analytical framework. *Climate and Development*, 9(5), 439–451.
- Martin, A, Oudwater, N & Meadows, K. 2000. Urban agriculture and the livelihoods of the poor in Southern Africa: Case studies from Cape Town and Pretoria, South Africa and Harare, Zimbabwe. *International Symposium "Urban Agriculture and Horticulture the linkage with urban planning, 7-9 July, Berlin.*
- Mason, SJ, Waylen, PR, Mimmack, CM, Rajaratnam, B & Harrison, JM. 1999. Changes in extreme rainfall events in South Africa. *Climate Change*, 41, 249–257.
- Matos, RS & Batista, DS. 2013. Urban Agriculture: The Allotment Gardens as Structures of Urban Sustainability. *Advances in Landscape Architecture*, 457–512.
- Mattson, B. 2006. The influence of wind speed, terrain and ventilation system on the air change rate of a single-family house. *Energy*, 31, 719–731.
- May, J & Rogerson, CM. 1995. Poverty and sustainable cities in South Africa: The role of urban cultivation. *Habitat International*, 19(2), 165–181.
- McCarthy, MP, Best, MJ & Betts, RA. 2010. Climate change in cities due to global warming and urban effects. *Geophysical Research Letters*, 37(9), 1–5.
- Mcconnachie, MM & Shackleton, CM. 2010. Public green space inequality in small towns in South Africa. *Habitat International*, 34(2), 244–248.
- Meadows, ME & Hoffman, TM. 2003. Land degradation and climate change in South Africa. *Geographical Journal*, (2), 168–177.
- Meteotest. 2018. Handbook part I: Software, Bern: Meteonorm.
- MFA. 2018. *Towards a sustainable and resilient Singapore*. Accessed at the Ministery of Foreign Affiars homepage:

- https://sustainabledevelopment.un.org/content/documents/19439Singapores\_Voluntary \_National\_Review\_Report\_v2.pdf [Accessed 25 February 2019] .
- Misirlisoy, D & Gunce, K. 2016. Adaptive reuse strategies for heritage buildings: A holistic approach. *Sustainable cities and society*, 26, 91–98.
- Mitchell, VG, Mein, RG & Mcmahon, TA. 2001. Modelling the urban water cycle. *Environmental Modelling and Software*, 16, 615–629.
- Moglia, M. 2014. Urban agriculture and related water supply: Explorations and discussion. *Habitat International*, 42, 273–280.
- Monana, TE. 2012. Evaluating the urban heat island over the city of Tshwane Metropolitan Municipality using remote sensing techniques. MSc dissertation. University of Johannesburg, Johannesburg.
- Monteith, JL. 1965. Evaporation and Environmet. Symposia of the Society of Experimental Biology, 19, 205–234.
- Mubiwa, B & Annegarn, H. 2013. *Historical spatial change in the Gauteng City-Region*. Johannesburg: GCRO.
- Mukheibir, P & Ziervogel, G. 2007. Developing a Municipal Adaptation Plan (MAP) for climate change: the city of Cape Town. *Environment & Urbanization*, 19(5), 143–158.
- Nadal, A, Alamús, R, Pipia, L, Ruiz, A, Corbera, J, Cuerva, E, Rieradevall, J & Josa, A. 2017.
  Methodology for assessing rooftop greenhouse potential of non-residential areas using airborne sensors. Science of the Total Environment, 601–602, 493–507.
- Nadal, A, Llorach-massana, P, Cuerva, E, López-capel, E, Ignacio, J, Josa, A, Rieradevall, J
   & Royapoor, M. 2017. Building-integrated rooftop greenhouses: An energy and environmental assessment in the mediterranean context. *Applied Energy*, 187, 338–351.
- Nadal, A, Pons, O, Cuerva, E, Rieradevall, J & Josa, A. 2018. Rooftop greenhouses in educational centers: A sustainability assessment of urban agriculture in compact cities. *Science of the Total Environment*, 626, 1319–1331.
- Napawan, NC. 2015. Production Places: Evaluating Communally- Managed Urban Farms as Public Space. *Landscape Journal*, 34(1), 37–56.
- Napawan, NC. 2016. Complexity in urban agriculture: the role of landscape typologies in promoting urban agriculture's growth. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 9(1), 19–38.
- National Treasury. 2019. *President Cyril Ramaphosa signs 2019 Carbon Tax Act into law*. Accessed at: https://www.gov.za/speeches/publication-2019-carbon-tax-act-26-may-2019-0000 [Accessed on 20 September 2019].
- Németh, J & Langhorst, J. 2014. Rethinking urban transformation: Temporary uses for vacant land. *Cities*, 40, 143–150.

- Neuman, LW. 2014. *Social Research methods: Qualitative and quantitative approaches.*Seventh Edition. Harlow: Pearson Education Limited.
- Ngumbi, E. 2019. Africa needs its own version of the vertical farm to feed growing cities. Accessed at The Conversation homepage: https://theconversation.com/africa-needs-its-own-version-of-the-vertical-farm-to-feed-growing-cities-74929 [Accessed on 06 July 2019].
- Nierderwiese, J & du Plooy, C. 2014. *Guide to Hydroponic Vegetable Production in South Africa*. Pretoria: ARC-Roodeplaat.
- Nijskens, J, Deltour, J, Coutisse, S & Nisen, A. 1984. Heat transer through covering materials of greenhouses. *Agricultural and Forest Meteorology*, 33, 193–214.
- O' Brien, K. 2012. Global environmental change II: From adaptation to deliberate transformation. *Progress in Human Geography*, 36(5), 667–676.
- O'Brien, G & O'Keefe, P. 2014. *Managing Adaptation to Climate risk. Beyond Fragmented Responses*. Oxon: Routledge.
- O'Brien, K. 2018. Is the 1.5°C target possible? Exploring the three spheres of transformation. *Current Opinion in Environmental Sustainability*, 31, 153–160.
- Oliver, D. 2017. Cape Town's Water crises: driven by politics more than drought. Accessed on The Conversation homepage: http://theconversation.com/cape-towns-water-crisis-driven-by-politics-more-than-drought-88191 [Accessed 03 July 2018].
- Onwuegbuzie, AJ & Johnson, RB. 2006. The validity issue in mixed research. *Research in the Schools*, 13(1), 48–63.
- Orsini, F, Gasperi, D, Marchetti, L, Piovene, C, Draghetti, S, Ramazzotti, S, Bazzocchi, G & Gianquinto, G. 2014. Exploring the production capacity of rooftop gardens (RTGs) in urban agriculture: the potential impact on food and nutrition security, biodiversity and other ecosystem services in the city of Bologna. *Food Security*, 6, 781–792.
- Orsini, F. 2020. Innovation and sustainability in urban agriculture: the path forward. *Journal of Consumer Protection and Food Safety*, 10–11.
- Ottelé, M, v Bohemen, HD & Fraaij, ALA. 2010. Quantifying the deposition of particulate matter on climber vegetation on living walls. *Ecological Engineering*, 36(2), 154–162.
- Oxford dictionary, 2020, *Lexico Oxford dictionaries*. Accessed at: https://www.lexico.com/ [Accessed on 09 August 2020].
- Padgham, J, Jabbour, J & Dietrich, K. 2015. Managing change and building resilience: A multistressor analysis of urban and peri-urban agriculture in Africa and Asia. *Urban Climate*, 12, 183–204.
- Partalidou, M & Anthopoulou, T. 2017. Urban Allotment Gardens During Precarious Times: From Motives to Lived Experiences. *Sociologua Ruralis*, 57(2), 211–228.

- Paxton, A. 2005. Foodmiles. In A. Viljoen (ed.), *Continuous Productive Urban Landscapes.*Designing for Sustainable Cities. Oxford: Architectural Press, 41–47.
- Peet, MM. 1999. Greenhouse crop stress management. Acta Horticulturae, 481, 643-655.
- Pelling, M, O' Brien, K & Matyas, D. 2015. Adaptation and transformation. *Climate Change*, 133, 113–127.
- Peng, S, Piao, S, Ciais, P, Friedlingstein, P, Ottle, C, Bréon, FM, Nan, H, Zhou, L & Myneni, RB. 2011. Surface urban heat island across 419 global big cities. *Environmental Science and Technology*, 46(2), 696–703.
- Pennisi, G, Orsini, F, Gasperi, D, Mancarella, S, Sanoubar, R, Antisari, LV, Vianello, G & Gianquinto, G. 2016. Soilless system on peat reduce trace metals in urban-grown food: unexpected evidence for a soil origin of plant contamination. *Agronomy for Sustainable Development*, 36(56), 1–11.
- Pereira, LS, Oweis, T & Zairi, A. 2002. Irrigation management under water scarcity. *Agricultural Water Management*, 57, 175–206.
- Perini, K & Magliocco, A. 2014. Effects of vegetation, urban density, building height, and atmospheric conditions on local temperatures and thermal comfort. *Urban Forestry and Urban Greening*, 13(3), 495–506.
- Perrin, A, Basset-Mens, C, Huat, J & Yehouessi, W. 2015. High environmental risk and low yield of urban tomato gardens in Benin. *Agronomy for Sustainable Development*, 35, 305–315.
- Persily, BAK. 1999. Myths About Building Envelopes. ASHREA journal, (March), 39-45.
- Petković, N, Stoiljković, B & Keković, A. 2016. The possibilities for conversion and adaptive reuse of industrial facilities into residential dwellings. *Procedia Engineering*, 165, 1836–1844.
- Phillips, A. 2013. Designing urban agriculture. A complete guide to the Planning, Design, Construction, Maintenance, and Management of Edible Landscapes. New Jersey: John Wiley & Sons.
- Pieterse, E. 2019. Debunking the myths about African urbanism. In R. Keeton & M. Provoost (eds.), *To Build a City in Africa*. Rotterdam: NIA010 publishers, 48–56.
- Pieterse, E. 2013. Grasping the unknowable: Coming to grips with African urbanisms. In E Pieterse & A. Simone (eds.), *Rogue Urbanism: Emergent African Cities*. Johannesburg: Jacana Media, 19-35.
- Ploeg, JD vd & Roep, D. 2003. Multifunctionality and rural development: the actual situation in Europe. In G. van Huylenbroeck & G. Durand (eds.), *Multifunctional Agriculture; A new paradigm for European Agriculture and Rural Development*. Hampshire: Ashgate, 37–53.
- Pompeo, M. 2019. On the U.S. Withdrawal from the Paris Agreement, Accessed at US

- Department of State homepage: https://www.state.gov/on-the-u-s-withdrawal-from-the-paris-agreement/ [Accessed on 19 January 2020].
- Porritt, SM, Cropper, PC, Shao, L & Goodier, Cl. 2012. Ranking of interventions to reduce dwelling overheating during heat waves. *Energy and Buildings*, 55, 16–27.
- PP Plastics, 2019, *Greenhouse Plastics*. Accessed at: https://ppplastics.co.za/product/greenhouse-plastics [Accessed on 26 August 2019].
- Qu, SQ & Dumay, J. 2011. The qualitative research interview. *Qualitative Research in Accounting and Management*, 8(3), 238–264.
- Ragab, R & Prudhomme, C. 2002. Climate change and water resources management in arid and semi-arid regions: Prospective and challenges for the 21st century. *Biosystems Engineering*, 81(1), 3–34.
- Ramachandra, TV & Shruthi, B.V. 2007. Spatial mapping of renewable energy potential. *Renewable Sustainable Energy Reviews*, 11, 1460–1480.
- Roaf, S, Crichton, D & Nicol, F. 2009. *Adapting buildings and cities for climate change. A 21st century survival guide.* 2nd edition. Oxford: Architectural Press.
- Roberts, D. 2010. Prioritizing climate change adaptation and local level resilience in Durban, South Africa. *Environment and Urbanization*, 22(2), 397–413.
- Roberts, D, Boon, R, Diederichs, N, Douwes, E, Govender, N, Mcinnes, A, Mclean, C, O'Donoghue, S & Spires, M. 2012. Exploring ecosystem-based adaptation in Durban, South Africa: "learning-by-doing" at the local government coal face. *Environment and Urbanization*, 24(1), 167–195.
- Rogerson, CM. 1993. Urban Agriculture in South Arica: Scope, Issues and Potential. *Geojournal*, 30(1), 21–28.
- Roggema, R. 2012. Swarm planning: The development of a planning metholody to deal with climate adaptation. PhD thesis. Delft University of Technology, Delft.
- Roggema, R. 2017. Food Roofs of Rio de Janeiro. Cham: Springer.
- Romero-Lankao, P & Dodman, D. 2011. Cities in transition: Transforming urban centers from hotbeds of GHG emissions and vulnerability to seedbeds of sustainability and resilience. Introduction and Editorial overview. *Current Opinion in Environmental Sustainability*, 3(3), 113–120.
- Rosset, P. 2002. Lessons of the Cuban Resistance. In F. Fernando, L. Garcia, M. Bourque, N. Perez & P Rosset (eds.), *Sustainable agriculture and Resistance. Transforming food production in Cuba*. Havana: ACTAF, 189–199.
- Russo, A, Escobedo, FJ, Cirella, GT & Zerbe, S. 2017 Edible green infrastructure: An approach and review of provisioning ecosystem services and disservices in urban environments. *Agriculture, Ecosystems and Environment*, 242, 53–66.

- Russo, S, Marchese, AF, Sillmann, J & Immé, G. 2016. When will unusual heat waves become normal in a warming Africa?. *Environ. Res. Lett.*, 11, 1–10.
- Ryan, C. 2013. Eco-Acupuncture: Designing and facilitating pathways for urban transformation, for a resilient low-carbon future. *Journal of Cleaner Production*, 50, 189–199
- SA Government. 2017. Carbon tax bill (Act 15 of 2019). Government Gazette 42483, 23 May 2019.
- SA Government. 2018. Climate Change Bill. Government Gazette 41689, 8 June 2018.
- SA Government. 2019a. *Draft National Spatial Development Framework*, Pretoria: Department of Planning Monitoring & Evaluation.
- SA Government. 2019b. *Draft national climate change adaptation strategy*. Government Gazette 42446, 6 May 2019.
- SA shadecloth. 2019. 40% Shade Cloth. Accessed at: http://www.sashade.co.za/product/40-shade-cloth/ [Accessed on 24 August 2019].
- SACN. 2014. *City of Tshwane Vulnerability and Adaptation to Climate Change*. Johannesburg: South African Cities Network.
- Samangooei, M, Sassi, P & Lack, A. 2016. Soil-less systems vs. soil-based systems for cultivating edible plants on buildings in relation to the contribution towards sustainable cities. *Future of Food: Journal on Food, Agriculture and Society*, 4(2), 24–39.
- Santamouris, M. 2013. Using cool pavements as a mitigation strategy to fight urban heat island A review of the actual developments. *Renewable and Sustainable Energy Reviews*, 26, 224–240.
- Sanyé-Mengual, E, Cerón-palma, I, Oliver-solà, J, Ignacio, J, Rieradevall, J, Cerón-palma, I, Oliver-solà, J & Ignacio, J. 2015. Integrating Horticulture into Cities: A Guide for Assessing the Implementation Potential of Rooftop Greenhouses (RTGs) in Industrial and Logistics Parks. *Journal of Urban Technology*, 22(1), 1–25.
- Sanyé-Mengual, E, Martinez-blanco, J, Finkbeiner, M, Cerda, M, Camargo, M, Ometto, AR, Velacuss, LS, Niza, S, Rieradevall, J, Montero, JI, Villada, G, Pina, A, Ferreir, G & Oliver-Solá, J. 2018. Urban horticulture in retail parks: Environmental assessment of the potential implementation of rooftop greenhouses in European and South American cities. *Journal of Cleaner Production*, 172, 3081–3091.
- Sartorius, K & Sartorius, B. 2016. Service delivery inequality in South African municipal areas: A new way to account for inter-jurisdictional differences. *Urban Studies*, 53(15), 3336–3355.
- Satgar, V. 2018a. The Climate crises and systemic alternatives. In V. Satgar (ed.), *The Climate Crises South African and Global democratic exo-socialist alternatives*. Johannesburg:

- Wits University Press, 1–27.
- Satgar, V. 2018b. The anthropocene and imperial ecocide: Prospects for just transitions. In V. Satgar (ed.), *The Climate crises South African and Global democratic exo-socialist alternatives*. Johannesburg: Wits University Press, 47–69.
- Säumel, I, Kotsyuk, I, Hölscher, M, Lenkereit, C, Weber, F & Kowarik, I. 2012 How healthy is urban horticulture in high traffic areas? Trace metal concentrations in vegetable crops from plantings within inner city neighbourhoods in Berlin, Germany. *Environmental Pollution*, 165, 124–132.
- Saunders, M, Lewis, P & Thornhill, A. 2016. *Research methods for Business students*. 7th edition. Harlow: Pearson Education Limited.
- Scenario building Team. 2007. Long Term Mitigation Scenarios: Scenario Document. Pretoria: DEA.
- Schäffler, A & Swilling, M. 2013. Valueing green infrastructure in an urban environment under pressure The Johannesburg case. *Ecological Economics*, 86, 246–257.
- Schneider, A, Friedl, M & Potere, D. 2009 A new map of global urban extent from MODIS satellite data. *Environmental Research Letters*, 4, 1–11.
- Schneider, DR, Duic, N & Bogdan, Z. 2007. Mapping the potential for decentralized energy generation based on renewable energy sources in the Republic of Croatia. *Energy*, 32, 1731–1744.
- Schoonraad, M. 2000. Cultural and Institutional Obstacles to Compact Cities in South Africa. In M. Jenks & R. Burgess (eds.), *Compact Cities. Sustainable Urban Forms for Developing Countries*. New York: Spon Press, 219–230.
- Senes, G, Fumagalli, N, Ferrario, PS, Gariboldi, D & Rovelli, R. 2016. Municipal community gardens in the metropolitan area of Milano. Assessment and planning criteria. *Journal of Agricultural Engineering*, XLVII(509), 82–87.
- Seto, KC & Shepherd, JM. 2009. Global urban land-use trends and climate impacts. *Current Opinion in Environmental Sustainability*, 1(1), 89–95.
- Shafique, M & Kim, R. 2017. Retrofitting the Low Impact Development Practices into Developed Urban areas Including Barriers and Potential Solution. *Open GeoSci*, *9*, 240–254.
- Sharpe, B, Hodgson, A, Leicester, G, Lyon, A & Fazey, I. 2016. Three horizons: a pathways practice for transformation. *Ecology and Society*, 21(2).
- Shaw, A, Burch, S, Kristensen, F, Robinson, J & Dale, A. 2014. Accelerating the sustainability transition: Exploring synergies between adaptation and mitigation in British Columbian communities. *Global Environmental Change*, 25, 41–51.
- Shaw, P & Hudson, J. 2009. The Qualities of Informal Space: (Re)appropriation within the

- informal, interstitial spaces of the city. *Conference 'Occupation: Negotiations with Constructed Space'*, 2-4 July, Brighton: University of Brighton, 1–13.
- Sheppard, P. 2019. Information on WIBC greenhouses in Johannesburg, correspondence [Email]. 19 August 2019, Pretoria.
- Sherafati, S, Saradjian, MR & Amirhossein, R. 2018. Assessment of Surface Urban Heat Island in Three Cities Surrounded by Different Types of Land-Cover Using Satellite Images. *Journal of the Indian Society of Remote Sensing*, 46(7), 1013–1022.
- Sherman, MH & Dickerhoff, D. 1998. Air-tightness of U.S. dwellings.
- Shongwe, ME, Oldenborgh, GJ v, Hurk, BJJM vd & Aalst, MK v. 2011. Projected changes in mean and extreme precipitation in Africa under global warming. Part II: East Africa. *Journal of Climate*, 24, 1–15.
- Shongwe, ME., Oldenborgh, GJ v, Hurk, BJJM vd, Boer, B d, Coelho, CAS & Aalst, MK v. 2009. Projected Changes in Mean and Extreme Precipitation in Africa under Global Warming. Part I: Southern Africa. *Journal of Climate*, 22(13), 3819–3837.
- Skelhorn, CP, Levermore, G & Lindley, SJ. 2016. Impacts on cooling energy consumption due to the UHI and vegetation changes in Manchester, UK. *Energy and Buildings*, 122, 150–159.
- Slater, RJ. 2001. Urban agriculture, gender and empowerment: An alternative view. Development Southern Africa, 18(5), 635–650.
- Smith, C. & Levermore, G. 2008. Designing urban spaces and buildings to improve sustainability and quality of life in a warmer world. *Energy Policy*, 36(12), 4558–4562.
- Smith, PF. 2010. Building for a changing climate. The challenge or Construction, Planning and energy. Oxon: Earthscan.
- Specht, K & Sanyé-Mengual, E. 2017. Risks in urban rooftop agriculture: Assessing stakeholders' perceptions to ensure efficient policymaking. *Environmental Science and Policy*, 69, 13–21.
- Specht, K, Siebert, R, Hartmann, I, Freisinger, UB, Henckel, D, Walk, H & Dierich, A. 2014. Urban agriculture of the future: an overview of sustainability aspects of food production in and on buildings. *Agric Hum Values*, 31, 33–51.
- Steduto, P, Hsiao, TC, Raes, D & Fereres, E. 2009. AquaCrop—The FAO Crop Model to Simulate Yield Response to Water: I. Concepts and Underlying Principles. *Agronomy Journal*, 101(3), 429–437.
- Stern, N. 2006. *The Economics of Climate Change. The Stern Review.* Cambridge: Cambridge University Press.
- Stockle, CO, Donatelli, M & Nelson, R. 2003. CropSyst, a cropping systems simulation model. *European Journal of Agronomy*, 18, 289–307.

- Stone, B. 2012. *The city and the coming climate. Climate change in the places we live.* New York: Cambridge University Press.
- Sunrise Agrifarm. 2019. 200-micron-plastics. Accessed at: https://sunriseagrifarm.co.za/200-micron-plastic/ [Accessed on 26 August 2019].
- Syed, A. 2012. *Advanced Building Technologies for Sustainability*. New Jersey: John Wiley & Sons.
- Taleghani, M, Tenpierik, M, Dobbelsteen, A vd & Sailor, DJ. 2014. Heat mitigation strategies in winter and summer: Field measurements in temperate climates. *Building and Environment*, 81, 309-319.
- Taleghani, M, Sailor, DJ, Tenpierik, M & Dobbelsteen, A vd. 2014. Thermal assessment of heat mitigation strategies: The case of Portland State University, Oregon, USA. *Building and Environment*, 73, 138–150.
- Taleghani, M, Tenpierik, M & Dobbelsteen, A vd. 2014. Energy performance and thermal comfort of courtyard/atrium dwellings in the Netherlands in the light of climate change. *Renewable Energy*, 63, 486–497.
- Taleghani, M, Tenpierik, M, Dobbelsteen, A vd & Sailor, DJ. 2014. Heat in courtyards: A validated and calibrated parametric study of heat mitigation strategies for urban courtyards in the Netherlands. *Solar Energy*, 103, 108–124.
- Tawodzera, G. 2012. Urban household vulnerability to food security and climate change. Experiences from urban areas of Zimbabwe. In B. Frayne, C. Moser & G. Ziervogel (eds.), *Climate change, assets and food security in Southern African cities.* Oxon: Earthscan, 57–74.
- Thipe, EL, Workneh, T, Odindo, A & Laing, M. 2017. Greenhouse Technology for Agriculture Under Arid Conditions. *Sustainable Agriculture Review*, 22, 37–55.
- Thom, A & Conradie, B. 2013. Urban agriculture's enterprise potential: Exploring vegetable box schemes in Cape Town. *Agrekon*, 52(SUPPL. 1), 64–86.
- Thomaier, S, Specht, K, Henckel, D, Dierich, A, Siebert, R, Freisinger, UB & Sawicka, M. 2014. Farming in and on urban buildings: Present practice and specific novelties of Zero-Acreage Farming (ZFarming). *Renewable Agriculture and Food Systems*, 30(1), 43-54.
- Thornbush, M, Golubchikov, O & Bouzarovski, S. 2013. Sustainable cities targeted by combined mitigation adaptation efforts for future proofing. *Sustainable Cities and Society*, 9, 1–9.
- Thornton, A. 2008. Beyond the Metropolis: Small Town Case Studies of Urban and Peri-urban Agriculture in South Africa. *Urban Forum*, 19(3), 243–262.
- Thorsson, S, Lindberg, F, Eliasson, I & Holmer, B. 2007. Different methods for estimating the mean radiant temperature in an outdoor urban setting. *International Journal of*

- Climatology, (27), 1983-1993.
- Tillie, N, Dobbelsteen, A vd, Doepel, D, Joubert, M, Jager, W d & Mayenburg, D. 2009. Towards CO<sub>2</sub> neutral urban planning: Presenting the Rotterdam Energy Approach and Planning (REAP). *Journal of Green Building*, 4(3), 103–112.
- Todes, A, Dominik, T & Hindson, D. 2000 From fragmentation to compaction? The case of Durban, South Africa. In M. Jenks & R. Burgess (eds.), Compact Cities. Sustainable Urban Forms for Developing Countries. New York: Spon Press, 219–230.
- Tonnelat, S. 2008. "Out of frame": The (in)visible life of urban interstices A case study in Charenton-le-Pont, Paris, France. *Ethnography*, 9(3), 291–324.
- Tortosa, VJ, Zamora, A & Oliver, JL. 2010. A neutral network model to develop urban acupuncture. *International Conference on Knowledge-Based Intelligent Information and Engineering Systems*, Berlin: Springer, 34–35.
- Trancik, R. 1986. Finding Lost Space. New York: Van Nostrand Reinhold Company.
- Turok, I.& Watson, V. 2001. Divergent development in South African Cities: Strategic challenges facing Cape Town. *Urban Forum*, 119–138.
- uMM. 2019. Climate change Adaptation toolkit. uMgungundluvo: uMgungundluvo Municipality.
- UN. 1998. Kyoto Protocol. Geneva: UNFCCC.
- UN. 2015. Paris Agreement. Paris: UNFCCC.
- UNDP. 2018. Making the Sustainable Development Goals Happen. Singapore: UNDP & GEF.
- UNFCCC. 2018. *Kyoto protocol status of ratification. Homepage of United Nations Framework Convention on Climate change.* Accessed at: https://unfccc.int/process/the-kyoto-protocol/status-of-ratification [Accessed on 02 July 2018].
- United Nations. 1992. United Nations Framework Convention. Geneva: UN.
- United Nations. 2016. The World's Cities in 2016 Data Booklet (ST/ESA/ SER.A/392). UN.
- United Nations. 2019. *World Urbanization Prospects. The 2018 Revision*. New York: United Nations Department of Economiv and Social Affairs.
- UP. 2016. Spatial and institutional development and management framework for the Hatfield Campus Village. Pretoria: University of Pretoria Enterprises.
- Vairavamoorthy, K, Gorantiwar, SD & Pathirana, A. 2008. Managing urban water supplies in developing countries Climate change and water scarcity scenarios. *Physics and Chemistry of the Earth*, 33(5), 330–339.
- Van Averbeke, W. 2007. Urban farming in the informal settlements of Atteridgeville, Pretoria, South Africa. *Water SA*, 33(3), 337–342.
- Vilakazi, N. 2018. Personal communication. 15 May 2018, Pretoria.
- Viljoen, A. 2005 Continuous Productive Urban Landscapes. Designing for Sustainable Cities, Oxford: Architectural Press.

- Viljoen, A, Bohn, K & Howe, J. 2005 More food with less space: Why bother? In A. Viljoen (ed.), *Continuous Productive Urban Landscapes. Designing for Sustainable Cities*. Oxford: Architectural Press, 20–31.
- Visser, G & Kotze, N. 2008. The State and New-build Gentrification in Central Cape Town, South Africa. *Urban Studies*, 45(12), 2565–2593.
- Vuuren, DP v, Edmonds, J, Kainuma, M, Riahi, K, Thomson, A, Hibbard, K, Hurtt, GC, Kram, T, Krey, V, Lamarque, JF, Masui, T, Meinshausen, M, Nakicenovic, N, Smith, SJ & Rose, SK. 2011. The representative concentration pathways: An overview. *Climatic Change*, 109(1), 5–31.
- Walker, B & Salt, D. 2006, Resilience Thinking Sustaining Ecosystems and in People in a Changing World. Washington: Island Press.
- Wamsler, C, Brink, E & Rivera, C. 2013. Planning for climate change in urban areas: From theory to practice. *Journal of Cleaner Production*, 50, 68–81.
- Watts, J. 2017. *Global atmospheric CO2 levels hit records high.* Accessed at The Guardian: https://www.theguardian.com/environment/2017/oct/30/global-atmospheric-co2-levels-hit-record-high [Accessed on 24 May 2018].
- Webb, N. 1998. Urban cultivation: food crops and their importance. *Development Southern Africa*, 15(2), 201–213.
- Webb, NL. 2011. When is enough, enough? Advocacy, evidence and criticism in the field of urban agriculture in South Africa. *Development Southern Africa*, 28(2), 195–208.
- Welzer, H. 2012. Climate Wars: What People Will Be Killed For in the 21st Century, Cambridge: Polity Press.
- Wise, RM, Fazey, I, Smith, MS, Park, SE, Eakin, HC, Garderen, ERMA v & Campbell, B. 2014. Reconceptualising adaptation to climate change as part of pathways of change and response. *Global Environmental Change*, 28, 325–336.
- World Resource Institute. 2018. *Climate Watch project*. Accessed at: http://www.wri.org/our-work/project/climatewatch/country-profiles#project-tabs [Accessed on 24 June 2018].
- World Resource Institute. 2020. *Historic Greenhouse Gas Emissions*. Accessed at: https://www.climatewatchdata.org/ghg-emissions?regions=ZAF&sectors=843 [Accessed on 30 March 2020].
- Wright, F.L. 1935. Broadacre city: A new community plan. Architectural Record, 344-349.
- WUR. 2019. Dutch export of agricultural products exceeds € 90 billion in 2018. Accessed at: https://www.wur.nl/en/Research-Results/Research-Institutes/Economic-Research/show-wecr/Dutch-export-of-agricultural-products-exceeds-90-billion-in-2018.htm [Accessed on 13 February 2020].
- Yin, RK. 2006. Mixed Method Research: Are the methods genuinely integrated or merely

- parralel. Research in the Schools, 13(1), 41-47.
- Yow, DM. 2007. Urban Heat Islands: Observations, Impacts, and Adaptation. *Geography Compass*, 1(6), 1227–1251.
- Zeeuw, H d. 2011. Cities, climate change and urban agriculture. *Urban Agriculture Magazine*, (25), 39–42.
- Zeeuw, H d, Veenhuizen, R v & Dubbeling, M. 2011. The role of urban agriculture in building resilient cities in developing countries. *Journal of Agricultural Science*, 149(S1), 153–163.
- Ziervogel, G, Cowen, A & Ziniades, J. 2016. Moving from Adaptive to Transformative Capacity: Building Foundations for Inclusive, Thriving, and Regenerative Urban Settlements. *Sustainability*, 8(955), 1–20.
- Ziervogel, G, New, M, Garderen, EA v, Midgley, G, Taylor, A, Hamann, R & Stuart-hill, S. 2014. Climate change impacts and adaptation in South Africa. *WIREs Clim Change*, 5(October), 605–620.