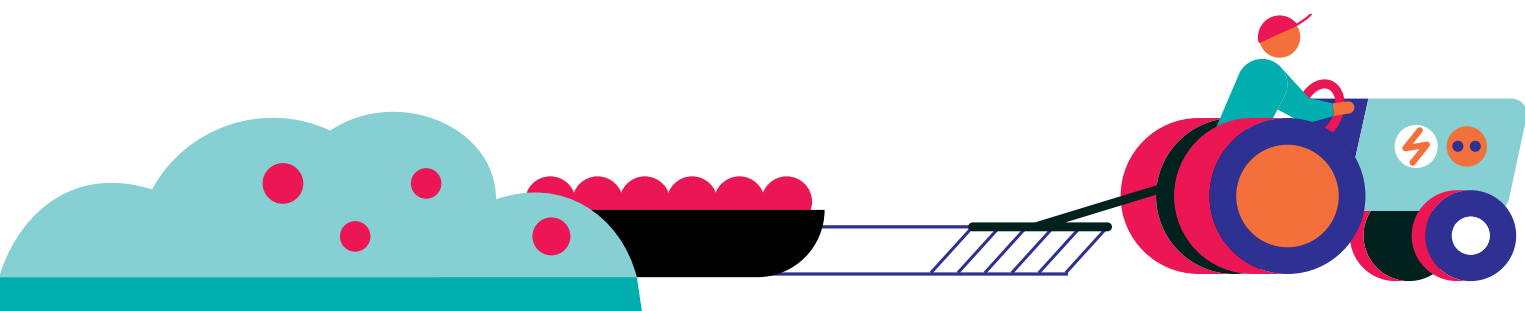




The Role of Business in Transforming Food Systems



Reference

Reference List

1. United Nations Environment Programme, *Global Environment Outlook – GEO-6: Healthy Planet, Healthy People*, Nairobi (2019) <https://doi.org/10.1017/9781108627146>
2. World Wildlife Fund, *Living Planet Report 2020 - Bending the curve of biodiversity loss* (Gland, 2020) <https://f.hubspotusercontent20.net/hubfs/4783129/LPR/PDFs/ENGLISH-FULL.pdf>
3. Intergovernmental Panel on Climate Change, *Special Report Climate Change and Land* (Geneva, 2019) <https://www.ipcc.ch/srccl/>
4. High Level Task Force of Global Food and Nutrition Security, *All Food Systems are Sustainable* (2015) <https://www.un.org/en/issues/food/taskforce/pdf/All%20food%20systems%20are%20sustainable.pdf>
5. M. Doane, *Beyond Sustainable: A Food System to Restore the Planet* (The Nature Conservancy, 2020) <https://www.nature.org/en-us/what-we-do/our-insights/perspectives/regenerative-agriculture-food-system-restore-planet/>
6. United Nations, *UN Food Systems Summit Action Tracks* <https://www.un.org/en/food-systems-summit/action-tracks>
7. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, *Global Assessment Report on Biodiversity and Ecosystem Services* (Paris, 2019) <https://ipbes.net/global-assessment>
8. World Resources Institute, *Creating a Sustainable Food Future: A Menu of Solutions to Feed Nearly 10 Billion People by 2050* (2019) https://research.wri.org/sites/default/files/2019-07/WRR_Food_Full_Report_0.pdf
9. Food and Agriculture Organization of the United Nations, *The State of Food Security and Nutrition in the World 2020* (Rome, 2020) <http://www.fao.org/documents/card/en/c/ca9692en>
10. World Economic Forum, *The Global Risks Report 2020* (Geneva, 2020) http://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf
11. Intergovernmental Panel on Climate Change, *Special Report on Global Warming of 1.5°C* (Geneva, 2018) <https://www.ipcc.ch/sr15/>
12. Food and Agriculture Organization of the United Nations, *Staple Foods: What do people eat?* <http://www.fao.org/3/u8480e/u8480e07.htm>
13. Tai, A.P.K. and Val Martin, M., *Impacts of ozone air pollution and temperature extremes on crop yields: Spatial variability, adaptation and implications for future food security* (2017) <https://www.sciencedirect.com/science/article/pii/S1352231017305836>
14. United Nations Economic Commission for Europe, *Air pollution and food production* <https://unece.org/air-pollution-and-food-production>
15. World Wide Fund for Nature, *Living Forests Report Chapter 5: Saving Forests at Risk* (Switzerland, 2015) <https://c402277.ssl.cf1.rackcdn.com/publications/793/files/original/Report.pdf?1430147305>
16. Millennium Ecosystem Assessment, *Ecosystems and Human Well-Being* (Washington, D.C., 2005) <https://www.millenniumassessment.org/documents/document.356.aspx.pdf>
17. Food and Agriculture Organization of the United Nations, *The importance of bees and other pollinators for food and agriculture* (Rome, 2018) <http://www.fao.org/3/i9527en/i9527en.pdf>
18. SDG2 Advocacy Hub, *What's the 'Bee's Knees' about Bees?* (SDG2 Advocacy Hub, 2020) <https://sdg2advocacyhub.org/news/whats-bees-knees-about-bees>
19. Food and Agriculture Organization of the United Nations, *The State of World Fisheries and Aquaculture 2020. Sustainability in action* (Rome, 2020) <https://doi.org/10.4060/ca9229en>
20. Food and Agriculture Organization of the United Nations, *The State of the World's Land and Water Resources for Food and Agriculture: Managing systems at risk* (London, 2011) <http://www.fao.org/3/i1688e/i1688e.pdf>
21. Food and Agriculture Organization of the United Nations and United Nations Environment Programme, *The United Nations Decade on Ecosystem Restoration* (2020) <https://wedocs.unep.org/bitstream/handle/20.500.11822/31813/ERDStrat.pdf?sequence=1&isAllowed=y>
22. G. Ceballos, P.R. Ehrlick, and R. Dirzo, Biological annihilation via the ongoing sixth mass extinction signalled by vertebrate population losses and declines. *National Academy of Sciences* (July 2017) <https://www.pnas.org/content/114/30/E6089>

23. Food and Agriculture Organization of the United Nations, *The State of Food and Agriculture. Women in Agriculture. Closing the gender gap for development* (Rome, 2011) <http://www.fao.org/3/i2050e/i2050e.pdf>
24. United Nations Environment Programme, *Global Gender and Environment Outlook*, Nairobi (2016) <https://www.unep.org/resources/report/global-gender-and-environment-outlook-ggeo>
25. Food and Agriculture Organization of the United Nations, *Governance of Tenure* (Rome, 2012) <http://www.fao.org/tenure/en/>
26. High Level Panel of Experts on Food Security and Nutrition, *Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition* (Rome, 2019) <http://www.fao.org/3/ca5602en/ca5602en.pdf>
27. Food and Agriculture Organization of the United Nations, *The future of food and agriculture - Trends and challenges* (Rome, 2017) <http://www.fao.org/3/i6583e/i6583e.pdf>
28. High Level Panel of Experts on Food Security and Nutrition, *Nutrition and Food Systems* (2017) http://www.fao.org/fileadmin/user_upload/hlpe/hlpe_documents/HLPE_Reports/HLPE-Report-12_EN.pdf
29. The Food and Land Use Coalition, *Growing Better: Ten Critical Transitions to Transform Food and Land Use* (2019) <https://www.foodandlandusecoalition.org/wp-content/uploads/2019/09/FOLU-GrowingBetter-GlobalReport.pdf>
30. Food and Agriculture Organization of the United Nations, *Global Food Losses and Food Waste* (Düsseldorf, 2011) <http://www.fao.org/3/mb060e/mb060e.pdf>
31. Food and Agriculture Organization of the United Nations, *The State of Food and Agriculture 2019. Moving forward on food loss and waste reduction* (Rome, 2019) <http://www.fao.org/3/ca6030en/ca6030en.pdf>
32. United Nations Environment Programme, *Food Waste Index Report 2021* (Nairobi, 2021) <https://www.unep.org/resources/report/unep-food-waste-index-report-2021>
33. W. Willet and others, *Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems*. Vol. 393, No. 10170 (2019) [https://doi.org/10.1016/S0140-6736\(18\)31788-4](https://doi.org/10.1016/S0140-6736(18)31788-4)
34. K. Flanagan, B. Lipinski and L. Goodwin, *SDG Target 12.3 on Food Loss and Waste: 2019 Progress Report* (2019) <https://champions123.org/publication/sdg-target-123-food-loss-and-waste-2019-progress-report>
35. Lipinski, B. and others, *Reducing Food Loss and Waste*. Working Paper, Installment 2 of Creating a Sustainable Food Future. World Resources Institute (Washington, DC, 2013) https://files.wri.org/d8/s3fs-public/reducing_food_loss_and_waste.pdf
36. T. Lang and M. Heasman, *Food Wars: The Global Battle for Mouths, Minds and Markets* (London, 2015) <https://doi.org/10.4324/9781849776011>
37. P.L. Pingali, Green Revolution: Impacts, limits, and the path ahead. *National Academy of Sciences* (July, 2012) <https://doi.org/10.1073/pnas.0912953109>
38. L. Horrigan, R.S. Lawrence and P. Walker, How Sustainable Agriculture Can Address the Environmental and Human Health Harms of Industrial Agriculture. *Environmental Health Perspectives* (May, 2002) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1240832/pdf/ehp0110-000445.pdf>
39. J. Duncan, M. Carolan and J.S.C. Wiskerke, *Routledge Handbook of Sustainable and Regenerative Food Systems* (2020) <https://doi.org/10.4324/9780429466823>
40. Rodale Institute, *Regenerative Organic Agriculture* (2021) <https://rodaleinstitute.org/why-organic/organic-basics/regenerative-organic-agriculture/>
41. S. Lunn-Rockliffe and others, *Farmer Led Regenerative Agriculture for Africa*. London, Institute for Global Prosperity (2020) https://www.ucl.ac.uk/bartlett/igp/sites/bartlett/files/igp_ra_for_africa_report_2020.pdf
42. C. E. LaCanne and J. G. Lundgren, Regenerative agriculture: merging farming and natural resource conservation profitably. *PeerJ* (February, 2018) <https://doi.org/10.7717/peerj.4428>
43. C. White, Why Regenerative Agriculture? *The American Journal of Economics and Sociology* (July 2020) <https://doi.org/10.1111/ajes.12334>
44. L. Schreefel and others, *Regenerative agriculture – the soil is the base*. Global Food Security, Vol. 26 (2020) <https://doi.org/10.1016/j.gfs.2020.100404>
45. G. Brown, *Dirt to Soil: One Family's Journey into Regenerative Agriculture* (Vermont, 2018) ISBN: 9781603587631
46. C. N. Merfield, *An analysis and overview of regenerative agriculture. Report number 2-2019* (New Zealand, 2019) <http://www.bhu.org.nz/future-farming-centre/ffc/information/misc/an-analysis-and-overview-of-regenerative-agriculture-2019-ffc-merfield.pdf>

47. United Nations Environment Programme, *Adapt to Survive: Business transformation in a time of uncertainty* (Nairobi, 2021) <https://wedocs.unep.org/bitstream/handle/20.500.11822/32630/G4B.pdf?sequence=1&isAllowed=y>
48. M. Henchion and others, *Future Protein Supply and Demand: Strategies and Factors Influencing a Sustainable Equilibrium* (Foods, 2017) <https://dx.doi.org/10.3390%2Ffoods6070053>
49. Research and Markets, *Plant-based Protein Market by Source (Soy, Wheat, and Pea), Type (Isolates, Concentrates, and Textured), Form, Application (Food (Dairy Alternative, Meat Alternatives, and Performance Nutrition) and Feed), and Region – Global Forecast to 2026* (February, 2021) <https://www.researchandmarkets.com/reports/5264248/plant-based-protein-market-by-source-soy-wheat>
50. Food and Agriculture Organization of the United Nations, *World agriculture: towards 2030/2050* (Rome, 2006) http://www.fao.org/fileadmin/user_upload/esag/docs/Interim_report_AT2050web.pdf
51. ProVeg International, *What is cellular agriculture?* (August, 2020) <https://proveg.com/blog/what-is-cellular-agriculture/>
52. A.T. Kearney, *How Will Cultured Meat and Meat Alternatives Disrupt the Agricultural and Food Industry?* (2019) <https://www. Kearney.com/documents/20152/2795757/How+Will+Cultured+Meat+and+Meat+Alternatives+Disrupt+the+Agricultural+and+Food+Industry.pdf/06ec385b-63a1-71d2-c081-51c07ab88ad1>
53. Tyson Foods, *Tyson Foods Invests in Cultured Meat with Stake in Memphis Meats* (January, 2018) <https://www.tysonfoods.com/news/news-releases/2018/1/tyson-foods-invests-cultured-meat-stake-memphis-meats>
54. Cargill, *Protein innovation: Cargill invests in cultured protein* (January, 2020) <https://www.cargill.com/story/protein-innovation-cargill-invests-in-cultured-meats>
55. Bell Food Group, *The Bell Food Group participates in Mosa Meat* <https://www.bellfoodgroup.com/en/stories/the-bell-food-group-participates-in-mosa-meat/>
56. C. Lamb, *FDA Approves Perfect Day's Animal-Free Whey Protein as Safe to Eat* (The Spoon, April, 2020) <https://thespoon.tech/fda-approves-perfect-days-animal-free-whey-protein-as-safe-to-eat/>
57. Australian Government, *National Food Waste Strategy* (November, 2017) <https://www.environment.gov.au/system/files/resources/4683826b-5d9f-4e65-9344-a900060915b1/files/national-food-waste-strategy.pdf>
58. Farming First, *Actions in Africa Preventing Food Loss and Waste* (2019) <https://farmingfirst.org/2019/04/18874/>
59. WRAP, *Courtauld Commitment 2025 Milestone Progress Report* (January, 2020) <https://wrap.org.uk/resources/report/courtauld-commitment-2025-milestone-progress-report>
60. Project Drawdown, *Table of Solutions* (2017) <https://drawdown.org/solutions/table-of-solutions>
61. H. Locke and others, *A Nature-Positive World: The Global Goal for Nature* (2021) <https://f.hubspotusercontent20.net/hubfs/4783129/Nature%20Positive%20The%20Global%20Goal%20for%20Nature%20paper.pdf>
62. E. Hodson and others, *Boost Nature Positive Production – A paper on Action Track 3* (2021) https://sc-fss2021.org/wp-content/uploads/2021/04/3-ACTION_TRACK_Scientific_Group_Final_Revision_2ndApril2021.pdf
63. United Nations, *Action Track 3 – Boost Nature-Positive Food Production at Scale*. Action Track Discussion Starter (2021) https://www.un.org/sites/un2.un.org/files/at_3_discussion_starter.pdf
64. S. Karas, *Making Room in Regenerative Agriculture for the Arts*. California State University (Center for Regenerative Agriculture and Resilient Systems, 2019) <https://www.csuchico.edu/regenerativeagriculture/blog/art-reg-ag.shtml>
65. Project Drawdown, *Regenerative Annual Cropping* (2019) <https://drawdown.org/solutions/regenerative-annual-cropping>
66. G. Tamburini and others, *Agricultural diversification promotes multiple ecosystems services without compromising yield* (2020) <https://advances.sciencemag.org/content/6/45/eaba1715.abstract>
67. DFCD, *The Dutch Fund for Climate Change and Development open for business* (The Dutch Fund for Climate and Development, December 2019) <https://thedfcd.com/2019/12/09/the-dutch-fund-for-climate-and-development-open-for-business/>
68. Landscape Enterprise Networks, *How LENs Works* (2018) <https://landscapeenterprisenetworks.com/how-lens-works/>

69. LANDac, The Quantifying Tenure Risk (QTR) Initiative: Assessing the Costs of Tenure Risks to Agribusiness. *Land Governance for Equitable and Sustainable Development* (July 2020) <https://www.landgovernance.org/the-quantifying-tenure-risk-qtr-initiative-assessing-the-costs-of-tenure-risks-to-agribusinesses/#:~:text=Tenure%20risk%20%E2%80%93%20or%20the%20risk,bankruptcy%20at%20a%20corporate%20level.>
70. Food and Agricultural Organization of the United Nations, *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security* (Rome, 2012) <http://www.fao.org/3/i2801e/i2801e.pdf>
71. Food and Nutrition Service of the U.S. Department of Agriculture, *Farm to School Grant Program* (January 2021) <https://www.fns.usda.gov/cfs/farm-school-grant-program>
72. Food and Nutrition Service of the U.S. Department of Agriculture, *USDA Gives Out \$12.1 Million in Largest-Ever Farm to School Grant Awards* (June 2020) <https://www.fns.usda.gov/news-item/fns-000720#:~:text=Washington%2C%20DC%2C%20June%2029%2C,most%20projects%20funded%20to%20date.>
73. Food and Agricultural Organization of the United Nations, *School Food and Nutrition* (Rome, 2021) <http://www.fao.org/school-food/en/>
74. The Good Food Institute, *Marketing and Promoting Plant-Based Proteins* (2021) https://gfi.org/wp-content/uploads/2021/02/Marketing_and_promoting_plant-based_proteins_Retail_Toolkit.pdf
75. Meatless Monday, *The Global Movement* (2021) <https://www.mondaycampaigns.org/meatless-monday/the-global-movement>
76. Aldi Australia, *Reducing food waste from farm to store* (Aldi Unpacked, 2018) <https://www.aldiunpacked.com.au/reducing-food-waste-from-farm-to-store/>
77. Imperfect Foods, *What makes the food imperfect?* (2021) <https://www.imperfectfoods.com/what-makes-the-food-imperfect>
78. S. Farrell, *Nothing wonky about Lidl's Too Good to Waste Campaign* (The Grocer, August 2018) <https://www.thegrocer.co.uk/food-waste/nothing-wonky-about-lidls-too-good-to-waste-campaign/570383.article>
79. FoodDrink Europe, *Nestlé helps dairy farmers worldwide to avoid milk losses* (January 2017) <https://www.fooddrinkeurope.eu/industry-action/nestle-helps-dairy-farmers-worldwide-to-avoid-milk-losses/>
80. FastCasual, *6 Ways to Reduce Food Waste in Your Supply Chain* (February 2019) <https://www.fastcasual.com/blogs/6-ways-to-reduce-food-waste-in-your-supply-chain/>
81. Dixa, *Too Good to Go Case Study* (Dixa, 2020) https://global-uploads.webflow.com/5873645dcda6383b06dc220a/5d398e6a202ce7b28e61269d_Dixa%20%26%20Too%20Good%20To%20Go%20Case%20Study-Download.pdf
82. T. Rayner, *Too Good to Go: Fight Food Waste from Restaurant by...Eating it Yourself!* (August 2018) <https://en.reset.org/blog/too-good-go-fight-food-waste-restaurants-eating-it-yourself-08012018>
83. A. Chrisafis, *French law forbids food waste by supermarkets* (The Guardian, February 2016) <https://www.theguardian.com/world/2016/feb/04/french-law-forbids-food-waste-by-supermarkets>
84. WRAP 2020, *Food Futures: from business as usual to business unusual* <https://wrap.org.uk/sites/default/files/2020-08/Food-Futures.pdf>
85. Food Marketing Institute, *U.S. Grocery Shopper Trends 2015* (2015) <https://www.fmi.org/forms/store/ProductFormPublic/u-s-grocery-shopper-trends-2015-full-report>
86. J. Bloom, *American Wasteland: How America Throws Away Nearly Half of Its Food (and What We Can Do About It)* (2011) ISBN: 0738215287Z. Kálmán, *"Hidden" Costs of Our Food Systems* (IPS News, 2020) <http://www.ipsnews.net/2020/09/hidden-costs-food-systems/>
87. WRAP, *Food Waste Reduction Roadmap* <https://wrap.org.uk/taking-action/food-drink/initiatives/food-waste-reduction-roadmap>
88. C. Baseel, *Japanese restaurant chain starts new policy: Letting you take your leftovers home with you* (Japan Today, October 2020) <https://japantoday.com/category/features/food/japanese-restaurant-chain-starts-new-policy-letting-you-take-your-leftovers-home-with-you>
89. F. Cloake, *Don't be shy about asking for a doggy bag: you deserve a round of applause*. The Guardian (May 2019) <https://www.theguardian.com/food/shortcuts/2019/may/13/dont-be-shy-asking-for-doggy-bag-deserve-round-of-applause>
90. The Connexion France, *Restaurants 'must offer doggy bags'* (November 2018) <https://www.connexionfrance.com/French-news/Restaurants-must-offer-doggy-bags>

91. Federal Ministry for Food and Agriculture, *We throw away every eighth item of food we buy. You can make a real difference* (2018) https://www.oneplanetnetwork.org/sites/default/files/too_good_for_the_bin.pdf
92. L. Lemos, *How governments around the world are encouraging food waste initiatives* <https://blog.winnowsolutions.com/how-governments-around-the-world-are-encouraging-food-waste-initiatives>
93. Xinhua, *China's "Clear Your Plate" Campaign Gaining Steam Online* (Xinhua, August 2020) http://www.xinhuanet.com/english/2020-08/14/c_139290555.htm

List of figures

Figure 1: Schematic of the global food system

Source: Nourish Life, Food Systems Tools, <https://www.nourishlife.org/teach/food-system-tools/>

Figure 2: Transforming from degenerative to regenerative systems

Source: Fullerton, J., *Regenerative Capitalism*. Capital Institute (2015)
<http://capitalinstitute.org/wp-content/uploads/2015/04/2015-Regenerative-Capitalism-4-20-15-final.pdf>

Figure 3: Perception of global risks

Source: World Economic Forum, *The Global Risks Report 2020* (Geneva, 2020)
http://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf

Figure 4: Practical application of the waste hierarchy for food

Source: European Commission Joint Research Centre (JRC), *Brief on Food Waste in the European Union* (2020)
https://ec.europa.eu/jrc/sites/default/files/kcb-food_waste_brief_print_hq.pdf