

Prof. Christopher David West
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Biography

Chris West is a Senior Research Fellow at the York Centre of the Stockholm Environment Institute, and leads SEI York' Sustainable Consumption and Production group. He has a multidisciplinary background encompassing environmental science, ecology, mathematics and economics, is co-leader of SEI's *Rethinking Development Theme*, sits on the Academic Panel of Theme 2 (Sustainable Supply Chains) of the *N8 AgriFood Programme*, and on the Steering Group of SEI's *Producer to Consumer Sustainability Initiative*. At SEI, Chris has led and contributed to a number of projects developing an understanding of the links between international supply chain and environmental impact and risk, which includes the development of SEI's hybrid multi-regional input output model (IOTA) and material flow platform (Trase). He engages actively (including via workshops and other face-to-face activities) with policy, business and third-sector practitioners in the development of this work, including on projects with Defra, the Joint Nature Conservation Committee, and Scottish Natural Heritage to develop links between UK consumption and biodiversity impact. Recently, Chris led research linked to the Green Economy Coalition's *Measure What Matters* project which specifically aimed to seek alignment between corporate- and national-scale indicator development and monitoring processes. Chris is Co-Investigator on the major York-based *IKnowFood* project, leading work on the quantitative and qualitative analysis of UK food supply chains and links to UK food security and resilience. Chris has written and contributed to a number of policy-focused reports and academic publications linked to supply chain impact assessment, consumption-based accounting, and footprinting techniques.

Employment

Research Associate

Post doctoral research assistant
Stockholm Environment Institute at York
University of York
Grimston House, Heslington, York
30 Sept 2011 → 30 Sept 2016

Research Fellow

Senior researcher
Stockholm Environment Institute at York
University of York
Grimston House, Heslington, York
1 Oct 2016 → 30 Sept 2019

Senior Research Fellow

Senior researcher
Stockholm Environment Institute at York
University of York
Grimston House, Heslington, York
1 Oct 2019 → 30 Sept 2023

Professor

Stockholm Environment Institute at York
University of York
Grimston House, Heslington, York
1 Oct 2023 → 29 Oct 2024

Professor

Professor
Stockholm Environment Institute at York
University of York
Grimston House, Heslington, York

1 Oct 2023 → present

Research output

The global deforestation footprint of agriculture and forestry

West, C., Rabeschini, G., Singh, C., Kastner, T., Bastos Lima, M., Dermawan, A., Croft, S. & Persson, U. M., 29 Apr 2025, In: *Nature Reviews Earth and Environment*. 6, 5, p. 325-341 17 p., 5851.

Choosing fit-for-purpose biodiversity impact indicators for agriculture in the Brazilian Cerrado ecoregion

Rabeschini, G., Persson, U. M., West, C. & Kastner, T., 20 Feb 2025, In: *Nature Communications*. 16, 1, 11 p., 1799.

Global Metrics for Terrestrial Biodiversity

Burgess, N. D., Ali, N., Bedford, J., Bhola, N., Brooks, S., Cierna, A., Correa, R., Harris, M., Hargreaves, A., Hughes, J., McDermott-Long, O., Miles, L., Ravilious, C., Rodrigues, A. R., van Soesbergen, A., Sihvonen, H., Seager, A., Swindell, L., Vukelic, M. & Durán, A. P. & 7 others, Green, J. M. H., West, C., Weatherdon, L. V., Hawkins, F., Brooks, T. M., Kingston, N. & Butchart, S. H. M., 18 Oct 2024, In: *Annual Review of Environment and Resources*. 49, 1, p. 673-709 37 p.

Assessing the value of biodiversity-specific footprinting metrics linked to South American soy trade

Molotoks, A., Green, J. M. H., Ribeiro, V., Wang, Y. & West, C. D., Oct 2024, In: *People and Nature*. 6, 5, p. 1742-1757 16 p.

11: Engaging suppliers to support sustainable development via procurement in UK higher education

West, C., Miles, S. L. & Brannigan, J., 17 Sept 2024, *How to Enable Engagement Between Universities and Business: A Guide for Building Relationships*. Edward Elgar Publishing Ltd., p. 104-114 11 p.

The European Union and United Kingdom's deforestation-free supply chains regulations: implications for Brazil

Cesar de Oliveira, S. E. M., Nakagawa, L., Lopes, G. R., Visentin, J. C., Couto, M., Silva, D. E., d'Albertas, F., Pavani, B. F., Loyola, R. & West, C., Mar 2024, In: *Ecological Economics*. 217, 12 p., 108053.

Stakeholder perspectives on cross-border climate risks in the Brazil-Europe soy supply chain

Stokeld, E. C. M., Croft, S., Reis, T., Stringer, L. C. & West, C. D., 20 Nov 2023, In: *Journal of Cleaner Production*. 428, 11 p., 139292.

High-resolution maps show that rubber causes substantial deforestation

Wang, Y., Hollingsworth, P. J., Zhai, D., West, C. D., Green, J. M. H., Chen, H., Hurni, K., Warren-Thomas, E. M., Xu, J. & Ahrends, A., 18 Oct 2023, (E-pub ahead of print) In: *Nature*. 23 p.

Demand-Side Actors in Agricultural Supply Chain Sustainability: An Assessment of Motivations for Action, Implementation Challenges, and Research Frontiers

Mueller, C., West, C. D., Bastos Lima, M. & Doherty, B., 7 Sept 2023, In: *World*. 4, 3, p. 569-588 20 p.

Climate change mitigation in Zimbabwe and links to sustainable development

Sithole, D., Tagwireyi, C., Marowa, T., Muwidzi, F., Mapanda, F., Svinurai, W., Gotore, T., Ngarize, S., Muchawona, A., Chigoverah, S., Takavingofa, G., Ndizano, K., Mashungu, L., Zhakata, W., Dhlakama, T., Malley, C. S., Slater, J., Palmer, E., Molotoks, A. & West, C. & 1 others, Veysey, J., Sept 2023, In: *Environmental Development*. 47, 30 p., 100891.

A spatially explicit approach to assessing commodity-driven fertilizer use and its impact on biodiversity

Eliasson, K., West, C. D., Croft, S. & Green, J. M. H., 1 Jan 2023, In: *Journal of Cleaner Production*. 382, 135195, 12 p., 135195.

Impacts of climate change on global food trade networks

Hedlund, J., Carlsen, H., Croft, S., West, C. D., Bodin, O., Stokeld, E. C. M., Jagermeyr, J. & Muller, C., 9 Dec 2022, In: *Environmental Research Letters*. 17, 14 p., 124040.

Disentangling the numbers behind agriculture-driven tropical deforestation

Pendrill, F., Gardner, T. A., Meyfroidt, P., Persson, U. M., Adams, J., Azevedo, T., Bastos Lima, M., Baumann, M., Curtis, P., De Sy, V., Garrett, R., Godar, J., Goldman, E., Hansen, M., Helmayr, R., Herold, M., Kuemmerle, T., Lathuilliere, M., Ribeiro, V. & Tyukavina, A. & 2 others, Weisse, M. & West, C. D., 9 Sept 2022, In: *Science*. 377, 6611, 13 p., 1168.

Lessons from COVID-19 for managing transboundary climate risks and building resilience

Ringsmuth, A., Otto, I., van den Hurk, B., Lahn, G., Reyer, C., Carter, T., Magnuszewski, P., Monasterolo, I., Aerts, J., Benzie, M., Campiglio, E., Fronzek, S., Gaupp, F., Jarzabek, L., Klein, R., Knaepen, H., Mechler, R., Mysiak, J., Sillmann, J. & Stuparu, D. & 1 others, West, C. D., 1 Feb 2022, In: *Climate Risk Management*. 35, 14 p., 100395.

Europe's cross-border trade, human security and financial connections: A climate risk perspective

West, C. D., Stokeld, E. C. M., Campiglio, E., Croft, S., Detges, A., Duranovic, A., von Jagow, A., Jarzabek, L., Knaepen, H., Magnuszewski, P., Monasterolo, I. & Reyer, C., 23 Nov 2021, In: *Climate Risk Management*. 34, 20 p., 100382.

Trading deforestation - Why the legality of forest-risk commodities is insufficient

Reis, T., de Faria, V. G., Russo Lopes, G., Sparovek, G., West, C. D., Rajão, R. G., Ferreira, M. N., Elvira, M. & Valle, R., 23 Nov 2021, In: *Environmental Research Letters*. 16, 8 p., 124025.

Technical documentation for an experimental statistic estimating the global environmental impacts of UK consumption

Croft, S., West, C. D., Harris, M., Green, J. M. H., Molotoks, A., Harris, V. & Way, L., 28 Oct 2021, JNCC.

A Commodity Supply Mix for More Regionalized Life Cycle Assessments

Lathuilliere, M., Patouillard, L., Margni, M., Ayre, B., Lofgren, P., Ribeiro, V., West, C. D., Gardner, T. A. & Suavet, C., 7 Sept 2021, In: *Environmental Science and Technology*. 55, 17, p. 12054–12065 12 p.

A conceptual framework for cross-border impacts of climate change

Carter, T., Benzie, M., Campiglio, E., Carlsen, H., Fronzek, S., Hilden, M., Reyer, C. & West, C. D., 1 Jul 2021, In: *Global Environmental Change*. 69, 14 p., 102307.

Towards indicators of the global environmental impacts of UK consumption: Embedded Deforestation

Croft, S., West, C. D., Harris, M., Otley, A. L. & Way, L., 1 May 2021, JNCC.

A framework for analysing cross-border climate change impacts, responses and their propagation

Carter, T., Benzie, M., Campiglio, E., Carlsen, H., Fronzek, S., Hilden, M., Reyer, C. & West, C. D., 2021.

What can COVID-19 teach us about preparing for climate risks in Europe?

van den Hurk, B., Otto, I., Reyer, C., Aerts, J., Benzie, M., Campiglio, E., Carter, T., Fronzek, S., Guapp, F., Jarzabek, L., Klein, R., Knaepen, H., Lahn, G., Mechler, R., Monasterolo, I., Mysiak, J., Shephard, T., Sillmann, J., Stuparu, D. & West, C. D., Nov 2020, 17 p. CASCADES.

Climate change, crops and commodity traders: subnational trade analysis highlights differentiated risk exposure

Stokeld, E. C. M., Croft, S., Green, J. M. H. & West, C. D., 15 Sept 2020, In: *Climatic change*. 162, p. 175–192 18 p.

Understanding the Stickiness of Commodity Supply Chains Is Key to Improving Their Sustainability

Reis, T., Meyfroidt, P., zu Ermgassen, E., West, C. D., Gardner, T. A., Bager, S., Croft, S., Lathuilliere, M. & Godar, J., 24 Jul 2020, In: *One Earth*. 3, 1, p. 1-17 17 p.

A practical approach to measuring the biodiversity impacts of land conversion

Duran, A. P., Green, J. M. H., West, C. D., Visconti, P., Burgess, N., Virah-Sawmy, M. & Balmford, A., 26 Jun 2020, (E-pub ahead of print) In: *Methods in ecology and evolution*.

Citizen participation in food systems policy making: A case study of a citizens' assembly

Doherty, B., Sidhu, Y., Heron, T., West, C. D., Seaton, A., Gulec, J., Prado, P. & Flores Martínez, P., 7 May 2020, In: *Emerald Open Research*. 2, 22, p. 1-11 11 p.

Using supply chain data to monitor zero deforestation commitments: an assessment of progress in the Brazilian soy sector
zu Ermgassen, E., Ayre, B., Godar, J., Bastos Lima, M., Bauch, S., Garrett, R., Green, J. M. H., Lathuilliere, M., Lofgren, P., Macfarquhar, C., Meyfroidt, P., Suavet, C., West, C. D. & Gardner, T. A., 18 Feb 2020, In: Environmental Research Letters. 15, 3, 12 p., 035003.

Linking global drivers of agricultural trade to on-the-ground impacts on biodiversity

Green, J. M. H., Croft, S., Durán, A. P., Balmford, A., Burgess, N., Fick, S., Gardner, T., Godar, J., Suavet, C., Virah-Sawmy, M., Young, L. & West, C. D., 12 Nov 2019, In: Proceedings of the National Academy of Sciences of the United States of America. 116, 46, p. 23202-23208 7 p.

Transparency and sustainability in global commodity supply chains

Gardner, T. A., Benzie, M., Börner, J., Dawkins, E., Fick, S., Garrett, C. R., Godar, J., Grimard, A., Lake, S., Larsen, R. K., Mardas, N., McDermott, C. L., Meyfroidt, P., Osbeck, M., Persson, C. M., Sembres, T., Suavet, C., Strassburg, B. B. N., Trevisan, A. & West, C. & 1 others, Wolvekamp, P., Sept 2019, In: World Development . 121, p. 163-177 15 p., 121.

Sustainability gridlock in a global agricultural commodity chain: Reframing the soy-meat food system

Virah-Sawmy, M., P. Durán, A., Green, J. M. H., M. Guerrero, A., Biggs, D. & West, C. D., 1 Apr 2019, In: Sustainable Production and Consumption. 18, p. 210-223 14 p.

Improving consumption based accounting for global capture fisheries

West, C. D., Hobbs, E., Croft, S., Green, J. M. H., Schmidt, S. & Wood, R., 1 Mar 2019, In: Journal of Cleaner Production. 212, p. 1396-1408 13 p.

Economic and agronomic impact assessment of wheat straw based alkyl polyglucoside produced using green chemical approaches

Lokesh, K., West, C., Kuylenstierna, J. C., Fan, J., Budarin, V., Priecel, P., Lopez-Sanchez, J. A. & Clark, J. H., 1 Feb 2019, In: Journal of Cleaner Production. 209, p. 283-296 14 p.

Capturing the heterogeneity of sub-national production in global trade flows

Croft, S., West, C. D. & Green, J. M. H., 1 Dec 2018, In: Journal of Cleaner Production. 203, p. 1106-1118

Global Value Chains and the Governance of 'Embedded' Food Commodities: The Case of Soy

Heron, T., Prado, P. & West, C., 1 Oct 2018, In: Global Policy. 9, p. 29-37 9 p.

Integrating data to connect consumers to their impacts

Croft, S., Green, J. M. H. & West, C. D., 2018, *WWF Living Planet Report 2018: Aiming Higher*. WWF, p. 34-36 3 p.

Trase Yearbook 2018: Sustainability in forest-risk supply chains: Spotlight on Brazilian soy

Trase, 2018, Stockholm Environment Institute. 68 p.

Environmental impact assessment of wheat straw based alkyl polyglucosides produced using novel chemical approaches

Lokesh, K., West, C. D., Kuylenstierna, J. C. I., Fan, J., Budarin, V. L., Priecel, P., Lopez-Sanchez, J. A. & Clark, J. H., 18 Aug 2017, In: Green Chemistry. 19, p. 4380-4395

Linking consumption to production: the case of soy

West, C. D. & Croft, S., 2016, *Living Planet Report 2016: Risk and resilience in a new era*. WWF

Evaluating the Use of a Carbon Footprint Calculator: Communicating Impacts of Consumption at Household Level and Exploring Mitigation Options

West, S. E., Owen, A., Axelsson, K. & West, C. D., 16 Nov 2015, In: Journal of Industrial Ecology. 20, 3, p. 396-409 14 p.

Hydrologically driven ecosystem processes determine the distribution and persistence of ecosystem-specialist predators under climate change

Carroll, M. J., Heinemeyer, A., Pearce-Higgins, J. W., Dennis, P., West, C. D., Holden, J., Wallage, Z. E. & Thomas, C. D., 31 Jul 2015, In: Nature Communications. 6, p. 1-10 10 p., 7851.

Identifying and exploring key commodity chains at risk from climate impacts
West, C. D., Croft, S., Dawkins, E., Warren, R. & Price, J., 2015, N/A.

Assessing physical trade flows of materials of biological origin to and from Scotland
Croft, S., Dawkins, E. & West, C. D., 2014, JNCC.

Measuring the impacts on global biodiversity of goods and services imported into the UK: Methodology report
Croft, S., West, C. D., Dawkins, E., Brugere, C., Sheate, W. & Raffaelli, D. G., Feb 2013, Defra. 21 p.

Improving the policy application of footprint indicators to support Europe's transition to a one planet economy: The development of the EUREAPA tool

Roelich, K., Owen, A., Thompson, D., Dawkins, E. & West, C., 1 Jan 2013, In: Science of the Total Environment. 481, p. 662-667

Measuring the impacts on global biodiversity of goods and services imported into the UK
West, C. D., Dawkins, E., Croft, S., Raffaelli, D. G., Brugere, C. & Sheate, W., 2013, Defra. 54 p.

Modelling migration and aggregation: Applications in fisheries, environmental change, and evolution
West, C. D., 16 Mar 2011

OPEN:EU Scenario Quantification Report: Scenarios for a One Planet Economy
Roelich, K. E., Owen, A., West, C. D. & Moore, D., 2011, EU.

Preventing overexploitation of migratory fish stocks: the efficacy of marine protected areas in a stochastic environment

West, C. D., Dytham, C., Righton, D. & Pitchford, J. W., Oct 2009, In: ICES Journal of Marine Science. 66, 9, p. 1919-1930 12 p.

Awards

GREENGROCER: Maturing food footprint tools, solutions, and uptake to accelerate a rapid EU food transition

West, C. D. (Principal investigator), Croft, S. (Co-investigator), Green, J. M. H. (Co-investigator) & Molotoks, A. V. (Co-investigator)

EUROPEAN COMMISSION: £477,850.22

1/09/25 → 31/08/29

Projects

AVOID II

West, C. D. (Principal investigator) & Croft, S. (Co-investigator)

12/03/15 → 31/03/16

CASCADES - Climate chAge and SytemIC risks: ADaptive and resilient Europe

West, C. D. (Principal investigator), Croft, S. (Co-investigator) & Heron, T. (Co-investigator)

EUROPEAN COMMISSION

1/09/19 → 31/12/23

Crowdsourcing resistant yeast strains

West, C. D. (Principal investigator) & Pateman, R. M. (Co-investigator)

BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)

6/01/20 → 31/10/20

Drivers and Threats of Biodiversity Loss

West, C. D. (Principal investigator)

1/11/15 → 30/06/18

GCRF TRADE Hub

West, C. D. (Principal investigator), Croft, S. (Co-investigator), Green, J. M. H. (Co-investigator) & Molotoks, A. V. (Researcher)

ECONOMIC AND SOCIAL RESEARCH COUNCIL (ESRC)

13/02/19 → 30/09/24

GFS FSR - UK Soy Demand

West, C. D. (Principal investigator)

BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)

1/10/20 → 31/03/21

GREENGROCER: Maturing food footprint tools, solutions, and uptake to accelerate a rapid EU food transition

West, C. D. (Principal investigator), Croft, S. (Co-investigator), Green, J. M. H. (Co-investigator) & Molotoks, A. V. (Co-investigator)

EUROPEAN COMMISSION

1/09/25 → 31/08/29

I KnowFood

Doherty, B. (Principal investigator), Ensor, J. (Co-investigator), Heron, T. (Co-investigator), Howley, P. (Co-investigator),

Petrie, H. (Co-investigator), Pickett, K. (Co-investigator) & West, C. D. (Co-investigator)

BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)

16/10/16 → 31/07/21

Measure What Matters

West, C. D. (Principal investigator), Croft, S. (Co-investigator) & Dawkins, E. (Co-investigator)

1/06/13 → 31/05/16

Measuring the impacts on global biodiversity of goods and services imported into the UK

Raffaelli, D. G. (Principal investigator), Chadwick, M. T. (Co-investigator), Dawkins, E. (Co-investigator) & West, C. D. (Co-investigator)

30/09/11 → 31/03/13

NET positive sustainable construction

West, C. D. (Principal investigator)

30/04/13 → 30/06/14

P2CS Initiative

West, C. D. (Principal investigator) & Croft, S. (Co-investigator)

1/01/15 → 31/12/16

PRINCE

West, C. D. (Principal investigator)

1/05/14 → 31/05/17

SUSTAIN EU-ASEAN

West, C. D. (Principal investigator) & Dawkins, E. (Co-investigator)

EUROPEAN COMMISSION

1/06/13 → 31/10/16