

Prof. Christopher David West  
Stockholm Environment Institute at York  
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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  
United Kingdom  
30 Sept 2011 → 30 Sept 2016

### Research Fellow

Senior researcher  
Stockholm Environment Institute at York  
University of York  
United Kingdom  
1 Oct 2016 → 30 Sept 2019

### Senior Research Fellow

Senior researcher  
Stockholm Environment Institute at York  
University of York  
United Kingdom  
1 Oct 2019 → 30 Sept 2023

### Professor

Stockholm Environment Institute at York  
University of York  
United Kingdom  
1 Oct 2023 → present

## Research output

### 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., Ndidzano, 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.

### **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., 9 Feb 2023, (E-pub ahead of print) In: *People and Nature*. 16 p.

### **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 Martinez, 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., Durán, A., Green, J. M. H., 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. Cl., Fan, J., Budarin, V., Priece, 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., Priece, 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**

### **GFS FSR - UK Soy Demand**

West, C. D.

BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL): £5,000.00

1/10/20 → 31/03/21

## **Projects**

### **AVOID II**

West, C. D. & Croft, S.

12/03/15 → 31/03/16

### **CASCADES - Climate chAnge and SytemiC risks: ADaptive and resilient Europe**

West, C. D., Croft, S. & Heron, T.

EUROPEAN COMMISSION

1/09/19 → 31/12/23

### **Crowdsourcing resistant yeast strains**

West, C. D. & Pateman, R. M.

BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)

6/01/20 → 31/10/20

### **Drivers and Threats of Biodiversity Loss**

West, C. D.

1/11/15 → 30/06/18

### **GCRF TRADE Hub**

West, C. D., Croft, S., Green, J. M. H. & Molotoks, A. V.

ECONOMIC AND SOCIAL RESEARCH COUNCIL (ESRC)

13/02/19 → 31/03/24

### **GFS FSR - UK Soy Demand**

West, C. D.

BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)

1/10/20 → 31/03/21

### **I KnowFood**

Doherty, B., Ensor, J., Heron, T., Howley, P., Petrie, H., Pickett, K. & West, C. D.

BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)

16/10/16 → 31/07/21

### **Measure What Matters**

West, C. D., Croft, S. & Dawkins, E.

1/06/13 → 31/05/16

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

Raffaelli, D. G., Chadwick, M. T., Dawkins, E. & West, C. D.

30/09/11 → 31/03/13

### **NET positive sustainable construction**

West, C. D.

30/04/13 → 30/06/14

**P2CS Initiative**

West, C. D. & Croft, S.  
1/01/15 → 31/12/16

**PRINCE**

West, C. D.  
1/05/14 → 31/05/17

**SUSTAIN EU-ASEAN**

West, C. D. & Dawkins, E.  
EUROPEAN COMMISSION  
1/06/13 → 31/10/16