



# Working Group Updates: Traceability

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## Introduction: how did we get here and ways of working

1.5 years building an engaged community, time to move toward one or more *tangible solutions, workable standards, and frameworks for guiding traceability in agrifood systems.*

Two regulations are top of mind for many:

*The EU Regulation on Deforestation - free commodities - enforceable late 2024*

*The German Supply Chain Due Diligence Act - enforceable early 2024*



# Polls

**What is your type of organization?**

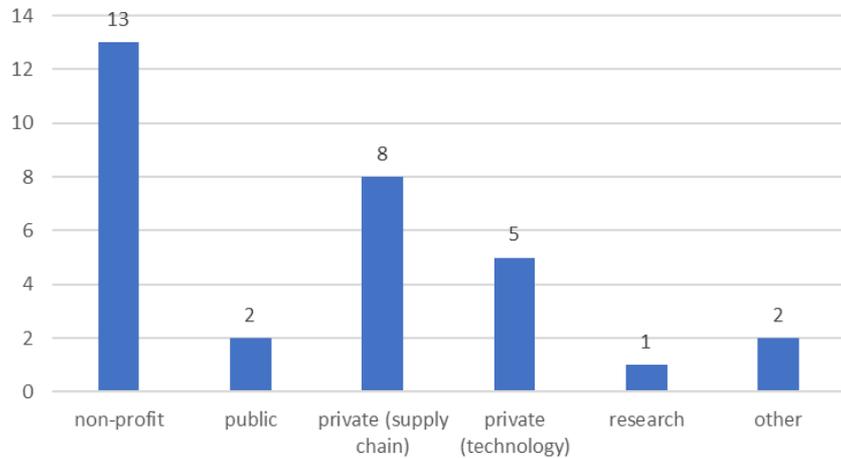
- non-profit
- public
- private

**What is your role in your organization?**

- technology
- policy/strategy
- supply chain
- research
- sustainability manager
- other

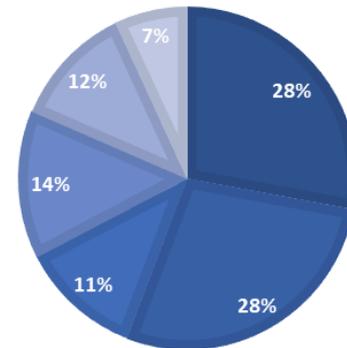


### WHAT IS YOUR TYPE OF ORGANISATION?



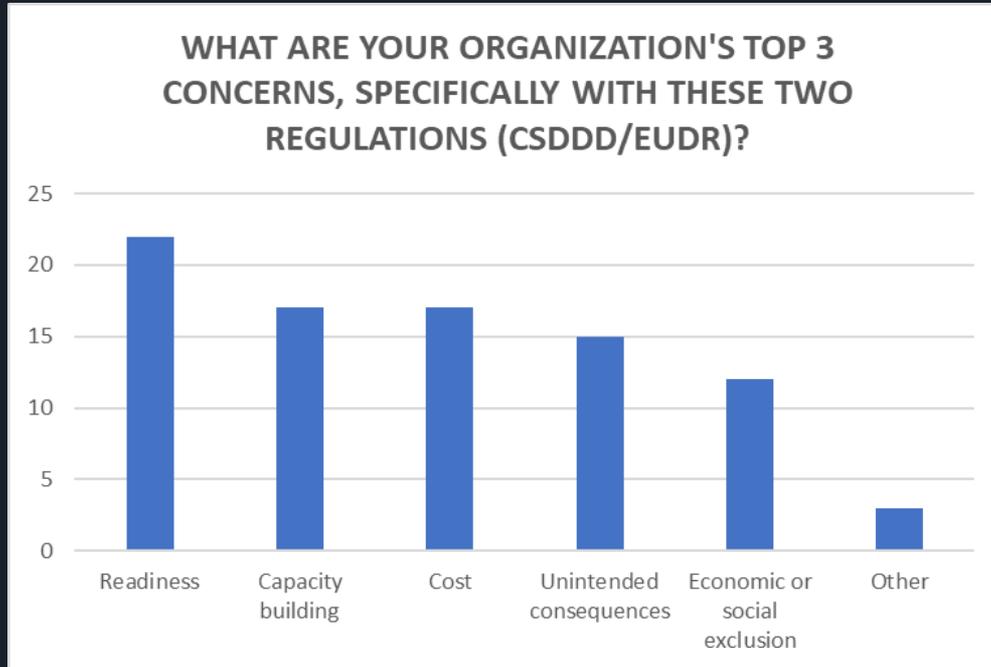
### WHAT IS YOUR ROLE IN THE ORGANISATION?

- technology
- policy/strategy
- supply chain
- research
- sustainability manager
- other



# Introduction: summary of last meeting

Multiple organizations (public, private, and non-profit) are concerned about readiness, cost, and potential unintended consequences of regulatory compliance ( particularly EUDR and CSDDD).



# Trust-building and open science point the way.

Check for updates

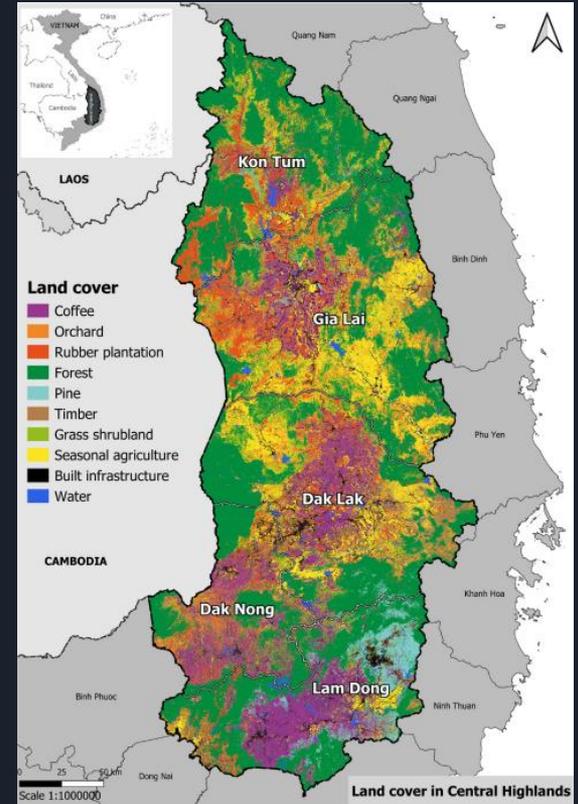
comment

## A trust framework for digital food systems

The food system is increasingly reliant on a multitude of data-driven technologies that connect global supply chains and underpin productivity, trade and security. Improved governance of data exchange — through a data trust framework — will drive sustainable business growth and secure wider public benefits.

Steve Brewer, Simon Pearson, Roger Maull, Phil Godsiff, Jeremy G. Frey, Andrea Zisman, Gerard Parr, Andrew McMillan, Sarah Cameron, Hannah Blackmore, Louise Manning and Luc Bidaut

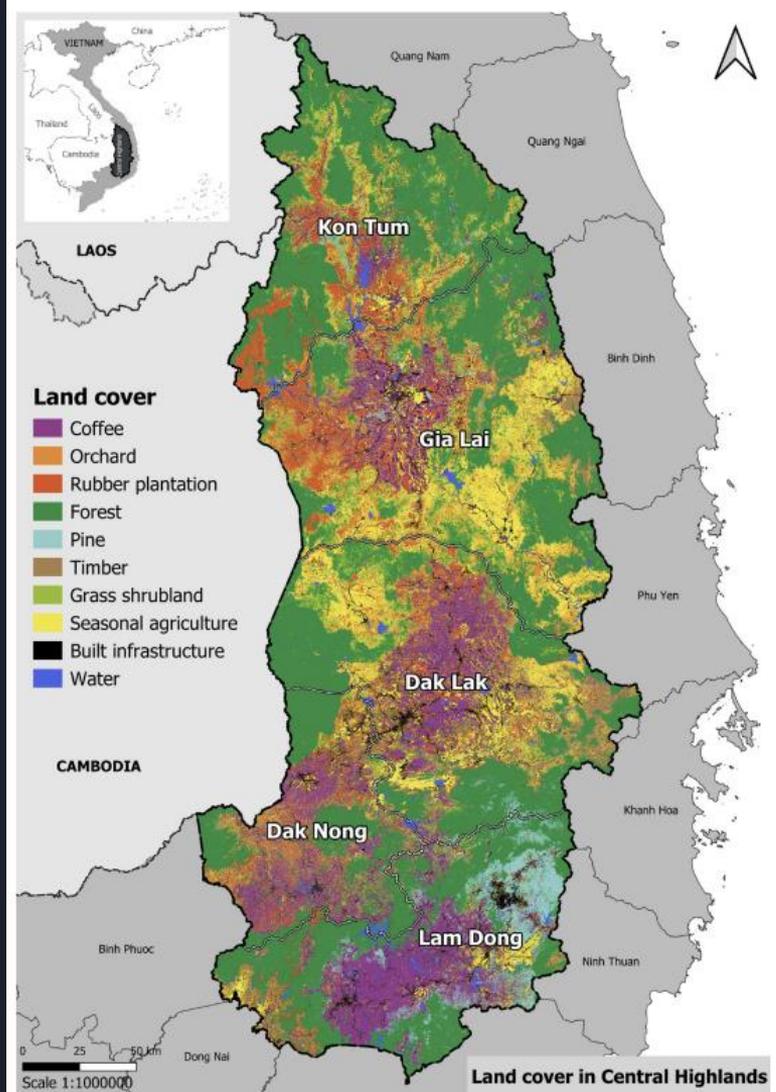
Brewer, S., Pearson, S., Maull, R. et al. A trust framework for digital food systems. *Nat Food* 2, 543–545 (2021). <https://doi.org/10.1038/s43016-021-00346-1>



Source: Reymondin, et al  
<https://cgspage.cgiar.org/handle/10568/125945>

## Open standards, meet Open Science (Vietnam country case)

- Open data, methods, models, and tools.
- Establish credible proxy measurements that can be used at scale.
- Understand the impacts (desired or not) of transparency regulation in food systems.



# Methods

## 1 Input data



The input data consist of a set of features calculated by compiling Sentinel 1 and 2 images together with a dataset of geo-located occurrences of certain land covers based on human interpretation of high-resolution imagery.

## 2 Model calibration



Based on these data, a deep learning model is calibrated, and a potential land cover map is created.

## 3 Assessment



The map is checked by interpreters and a quick assessment of the accuracy is performed. If the map passes this first quality assessment, it proceeds to validation (step 4). If not, more data collection is needed (step 1).

## 4 Validation



The map is validated based on sampling and human interpretation of high-resolution imagery.

## 5 Map publication



The map is ready to be used. It is overlaid with datasets such as historical patterns of deforestation in order to create actionable metrics. The metrics will inform key actors in the coffee industry and support them to achieve zero deforestation within their supply chain and optimize their sourcing strategy.

[nature](#) > [nature food](#) > [comment](#) > article

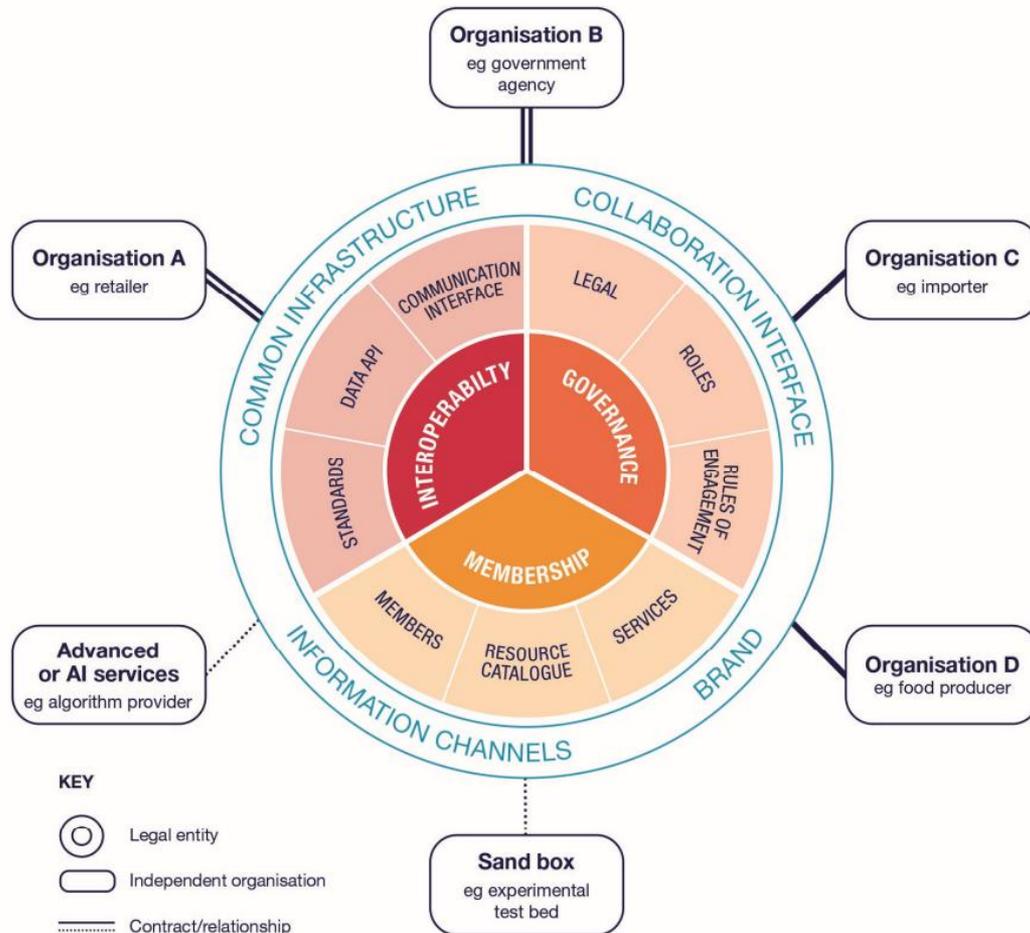
Comment | [Published: 05 August 2021](#)

## A trust framework for digital food systems

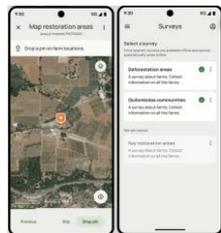
[Steve Brewer](#), [Simon Pearson](#) , [Roger Maull](#), [Phil Godsiff](#), [Jeremy G. Frey](#), [Andrea Zisman](#), [Gerard Parr](#),  
[Andrew McMillan](#), [Sarah Cameron](#), [Hannah Blackmore](#), [Louise Manning](#) & [Luc Bidaut](#)

[Nature Food](#) **2**, 543–545 (2021) | [Cite this article](#)

**724** Accesses | **9** Citations | **20** Altmetric | [Metrics](#)



# Joint FDAP AgStack proposal to SAFE



GEOID	TMF	GFC	GAEZ	PA	Alert	LCU
'c288d6c94ef	10	30	1	yes	1000	Trees
'1a41a309ae2	9	30	1	no	200	Trees
'1a4472dc407	10	10	2	no	200	Agriculture
'8e2acce7dd	1	70	4	no	100	Bare



**Field Boundaries**

**Unique Geo-IDs**

- GDSP compliant
- Anonymous
- Attribute-less

**Public geodata**

- Land cover
- Biophysical

**Public library**

- AI models
- GUI
- Validation

**Compliance support**

- Standardized data
- Verification Apps.
- APIs





Joann de Zegher, Massachusetts Institute of Technology,  
(<https://www.jfdezegher.com/>)

# Proposed country “deep dive”

**Co-Facilitators: Brian King and John Keogh**

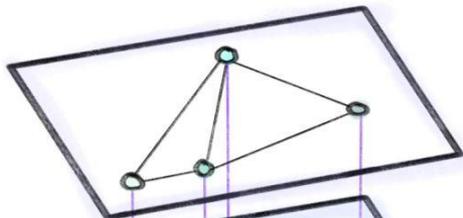
**DIASCA Working Group on Traceability**

Objective: advance interoperability across supply chain solutions to enable regulatory compliance and support development and environmental outcomes.

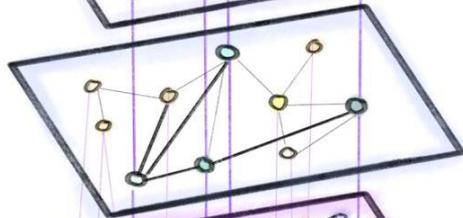
Objectives	Tasks	Timeline							Owners												
<b>Co-design with stakeholders</b>																					
○	Convene meetings of DIASCA WG on Traceability	○	○		○		○		○	○											
○	Country 'trust framework,' standards, capabilities and roadmap exercise- Honduras			○																	
○	Explore potential 'trust framework,' standards, capabilities and roadmap exercise- Vietnam				○																
○	Mobilize co-investments to support the roadmaps	○	○	○	○	○	○	○	○	○											
<b>Iterate on applied technologies and standards</b>																					
○	Country-commodity focused sprints with stakeholders-Honduras				○	○	○	○	○	○											
○	Coordinate with EUSPA effort to support EUDR compliance		○	○		○		○		○											
<b>Integrate learning and products with DIASCA working groups and stakeholders</b>																					
○	Converge data standards across WGs (deforestation, income)					○			○		○	○	○								
○	Develop reference data model				○			○			○	○									
○	Link to ISO reference architecture design exercise						○				○										
Codesign	Iterate	Integrate	<b>Objectives &amp; Tasks</b>							<b>Target Dates</b>											
			<b>Goals</b>							November	December	January	February	March	April	May	June	July	CGIAR	COSA	McGill U. / MCCHE

# It's a Small World

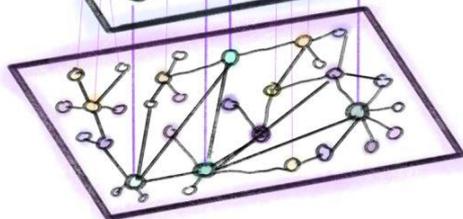
Layer One



Layer Two



Layer Three



# Thank you

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[john.keogh@mcgill.ca](mailto:john.keogh@mcgill.ca)

Source: Tony Seale <https://www.linkedin.com/in/tonyseale/>  
<https://arxiv.org/abs/1603.09320>

# CGIAR: the world's largest agricultural innovation network



AfricaRice

Africa Rice Center



International Food Policy  
Research Institute (IFPRI)



Science for resilient livelihoods in dry areas

International Center for  
Agricultural Research in the  
Dry Areas (ICARDA)



International Livestock  
Research Institute (ILRI)



International Maize and Wheat  
Improvement Center (CIMMYT)



International Institute of  
Tropical Agriculture (IITA)



International Rice Research  
Institute (IRRI)



International Water  
Management Institute (IWMI)



International Potato Center  
(CIP)



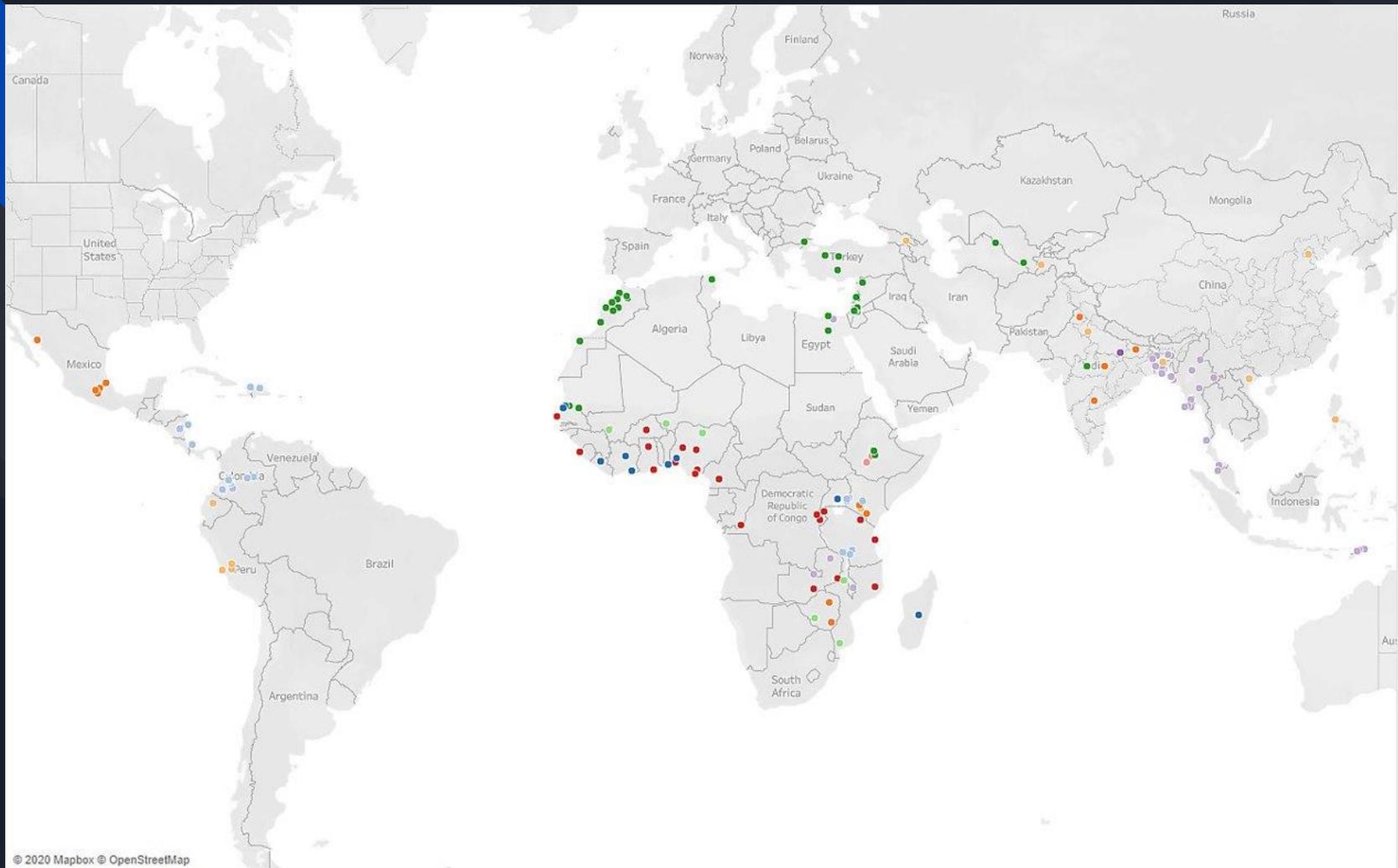
The Alliance of Bioversity  
International and the  
International Center for  
Tropical Agriculture (CIAT)



WorldFish



INTERNATIONAL CROPS RESEARCH  
INSTITUTE FOR THE SEMI-ARID TROPICS



- CGIAR Centre
- AfricaRice
  - Alliance Bioversity-CIAT
  - CIMMYT
  - CIP
  - ICARDA
  - ICRISAT
  - IITA
  - ILRI
  - IIRRI
  - WorldFish



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Im Auftrag des:



Bundesministerium für  
wirtschaftliche Zusammenarbeit  
und Entwicklung

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