



COMPETE: Work Package 5

Financing and Trade

25th November 2009, Brussels

WP leader: Michael Hofmann, Camco

WG1 leader: Dr. Teo Sanchez, Practical Action

WG2 leader: Dr. Grant Ballard-Tremeer, Eco

WG3 leader: Dr. Edward Smeets, University of Utrecht





Purpose and scope of WP5

- Development of tools and strategies for the provision of financing for sustainable bioenergy projects in Africa with a focus on:
 - Carbon credits / green certificates
 - Bilateral and multi-lateral funding instruments
 - International trade
- Scope: focus on biodiesel and bioethanol crops



WP5 - structure

- 3 Working Groups to deliver Work Package 5:
 - WG1: Carbon credits/ green certificates led by Practical Action
 - WG2: Bilateral and multilateral financing led by Eco
 - WG3: International biomass/bioenergy trade led by Utrecht University



Deliverables of WP5

- 7 deliverables in total
- Main outputs - documentation:
 - Strategy for improving financing in sustainable bioenergy projects in Africa (Dec, 2009)
 - Practical guidelines for investors in sustainable bioenergy in Africa (E+Co, Nov 2009)
- Main outputs – events:
 - Investors Conference (Dakar, Sep/Oct 2009)
 - Workshop: Financing and International Trade (Dakar, April 2008)



Financing mechanisms – issues and objectives

■ Issues:

- Huge untapped potential for bioenergy in Africa, but slow rate of mobilising this potential
- External financial flows have been small, relative to potential, e.g. no recorded venture capital in 2007
- Bioenergy funds required for various project development stages: market research, business planning, seeds and seedlings, processing equipment

■ Objectives:

- Financing solutions that promote sustainable bioenergy developments in Africa
- Development of policies to establish transparent market access



Financing mechanisms - overview

- Broad categories:
 - Debt / Equity Financing
 - Private / Public Financing
 - Grants and R&D Funds

- List of financing mechanisms (theoretical):
 - Development Finance Banks
 - Commercial Banks, Investment Banks
 - Corporate Financing (including FDI) and Venture Capitalists
 - Private equity (project developers, plantation owners, agricultural processors,...)
 - Government grants and R&D funds
 - Carbon financing



Financing - challenges / barriers / risks

- Lack of clear regulatory and legal frameworks for bioenergy in many countries (alongside land use, export, rural development)
- Lack of bioenergy expertise: Government, banks and investors
- Lack of coordination between research and markets
- Lack of dissemination of research results and training
- Generally, highly challenging to access funds, in particular: difficulties for small scale projects to gain interest from banks (transaction costs) and carbon market
- Problems to mobilise funds for feasibility studies
- Knowledge gaps regarding new (innovative) financing mechanisms, e.g. microfinance, carbon finance



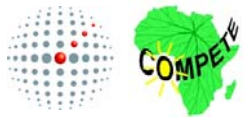
Challenges / barriers / risks – project developers

- Challenges identified by project developers:
 - Financial institutions always ask for securities / collateral
 - Financial institutions want to charge interest payments from day 1
 - Too many intermediaries, i.e. no direct access from project developers to funding institutions: projects on the ground are at the bottom of the bioenergy funding “food chain”
 - Grant conditions often too stringent



Challenges / barriers / risks – investors

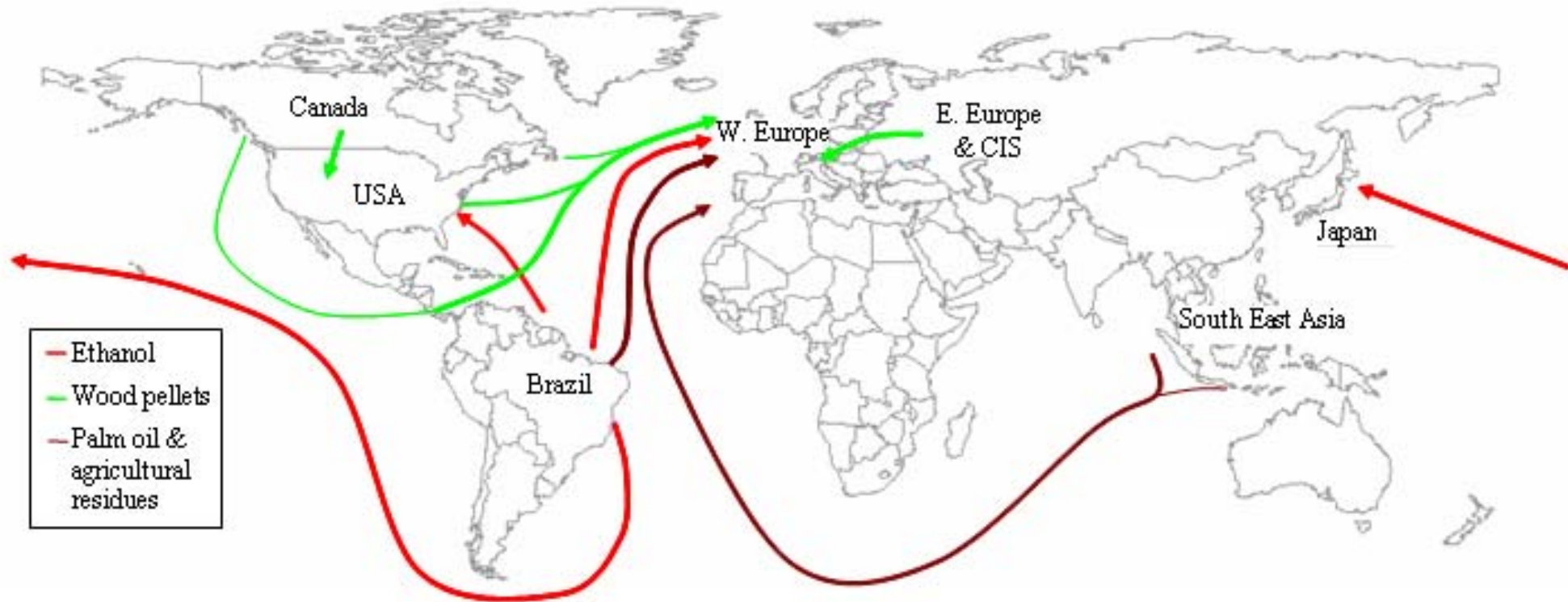
- Challenges identified by investors / financial institutions:
 - Inexperienced project developers
 - Weak business proposals
 - Inadequate local co-financing
 - Bioenergy: high risk
 - Investment pay-back times: often long



Strategies to overcome challenges

- Creation of sustainable legal / regulatory bioenergy frameworks
- Focus on demand side and market development (e.g. blending regimes, FIT)
- Improve capacity, communication and information sharing for resource mobilisation (technical clearinghouses / investment promotion centres)
- Encourage bioenergy public-private partnerships (PPP) and JVs
- Entrepreneurial and developer support services / capacity building:
 - Skilled workforce (chemists, lawyers, engineers, financing specialists)
 - Carbon finance
- New (innovative) financing mechanisms need to be particularly exploited (e.g. microfinance, carbon finance)

- Main international bioenergy trading routes:



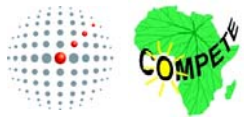
Source: IEA (2009)

- Long-term potential for Africa / Latin America: large net exporters



Trade aspects - challenges

- Economies of scale, transaction costs: small-scale projects unsuitable for trading activities
- Large-scale biofuel projects for export: challenges with respect to sustainability aspects
- National policies: protecting domestic production from cheap imported biofuels (e.g. French tax exemptions for domestic biofuel production and domestic sale)
- Import tariffs for various biofuels (e.g. EU: 0.19€ bioethanol)
- Export subsidies (e.g. US: \$1/gallon for B99 fuel)
- Various certification systems



Trade aspects - opportunities

- Overall attractiveness of Africa exporting:
 - Low cost of production
 - Large potential from abandoned agricultural land and rest land
- Opportunities for exporters:
 - Additional sources of income and increased employment
 - Agricultural diversification
- Opportunities for importers:
 - Assist in fulfilling GHG emission reduction targets
 - Diversification of fuel mix and more sustainable energy production



Carbon finance: bioenergy in Africa – key issues

- International carbon markets are including / will include allowances for international offsets
- Both compliance (e.g. CDM) carbon markets as well as voluntary carbon markets provide opportunities for African bioenergy projects
- CERs (i.e. carbon credits from CDM) cannot be claimed for bioenergy produced for export
- If projects are too small to benefit from CDM, they can be bundled
- Two existing CDM methodologies for biofuels
 - AMS-III.T. “Plant oil production and use for transport applications”
 - AM0047 “Production of biodiesel based on waste oils and/or waste fats from biogenic origin for use as fuel”
- Lacking knowledge, even awareness of carbon finance opportunities in Africa
- Carbon finance can only contribute to partial financing of projects, *typically* around 10-20% of project costs



Carbon finance

■ Global CDM activities:

Latin America
and the Carribean

Africa

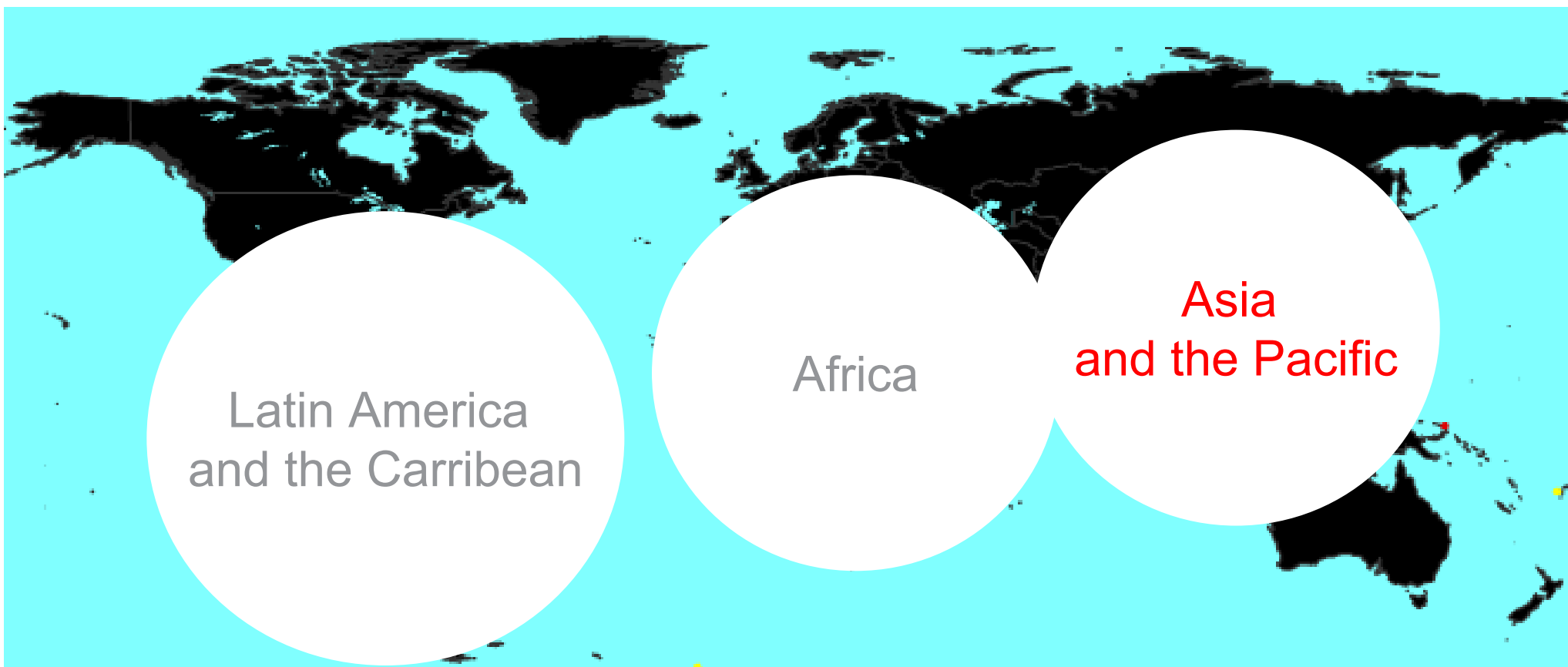
Asia
and the Pacific

Source: UNFCCC website



Carbon finance

■ Global CDM activities:

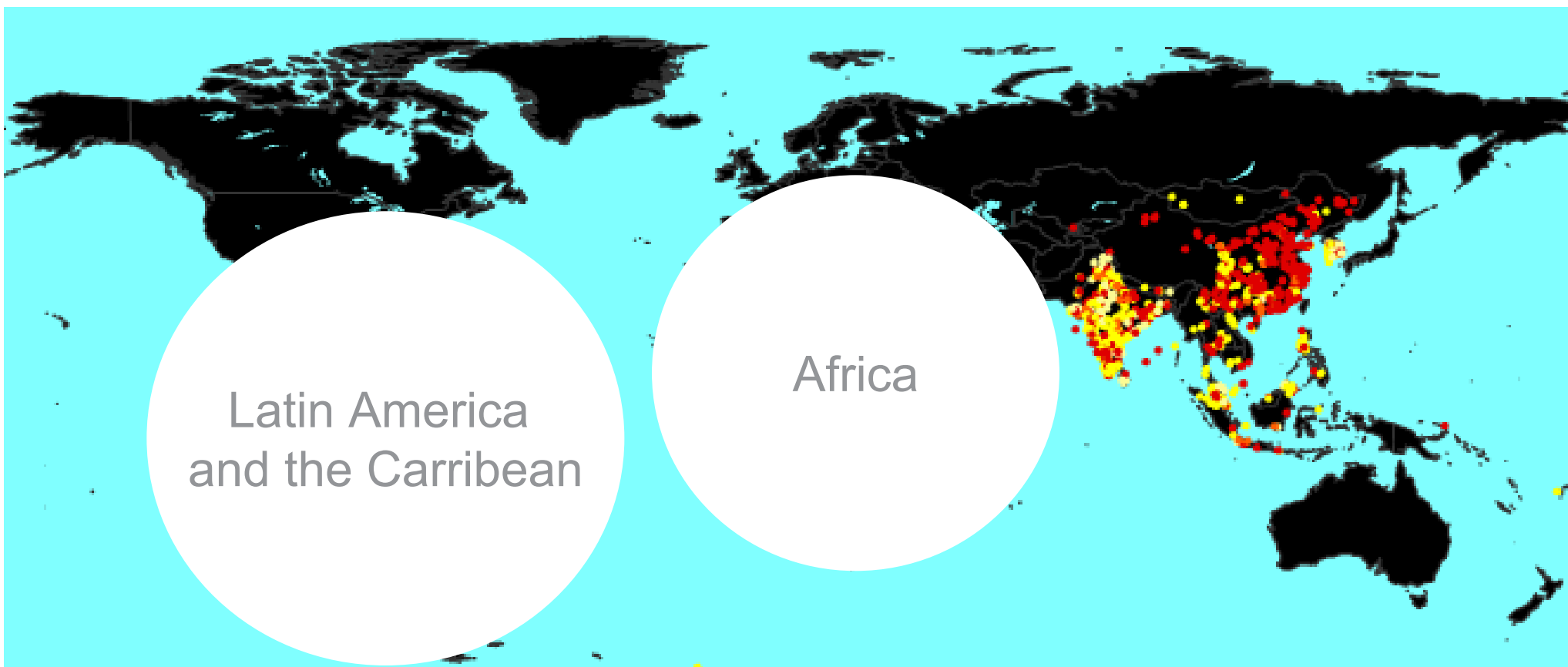


Source: UNFCCC website



Carbon finance

■ Global CDM activities:



Source: UNFCCC website



Carbon finance

■ Global CDM activities:

Latin America
and the Caribbean

Africa

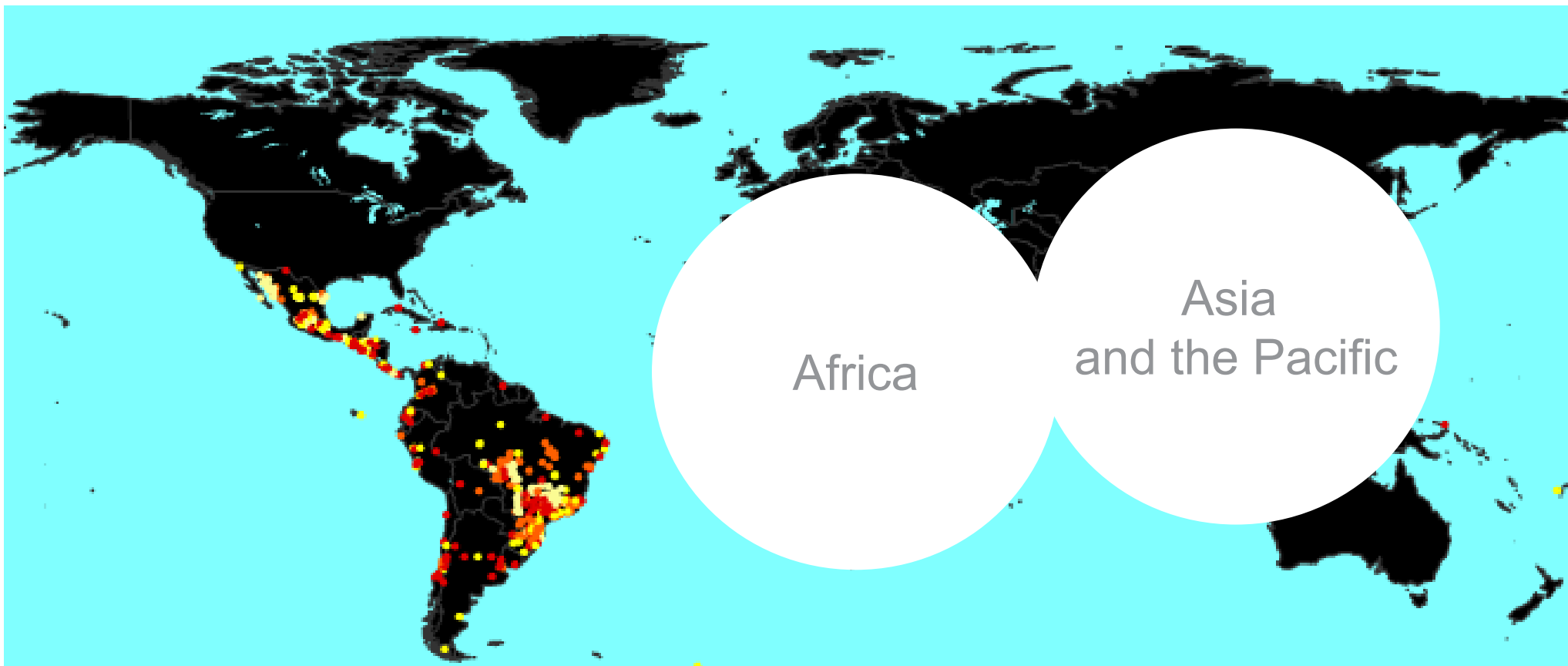
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Carbon finance

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Carbon finance

■ Global CDM activities:

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Africa

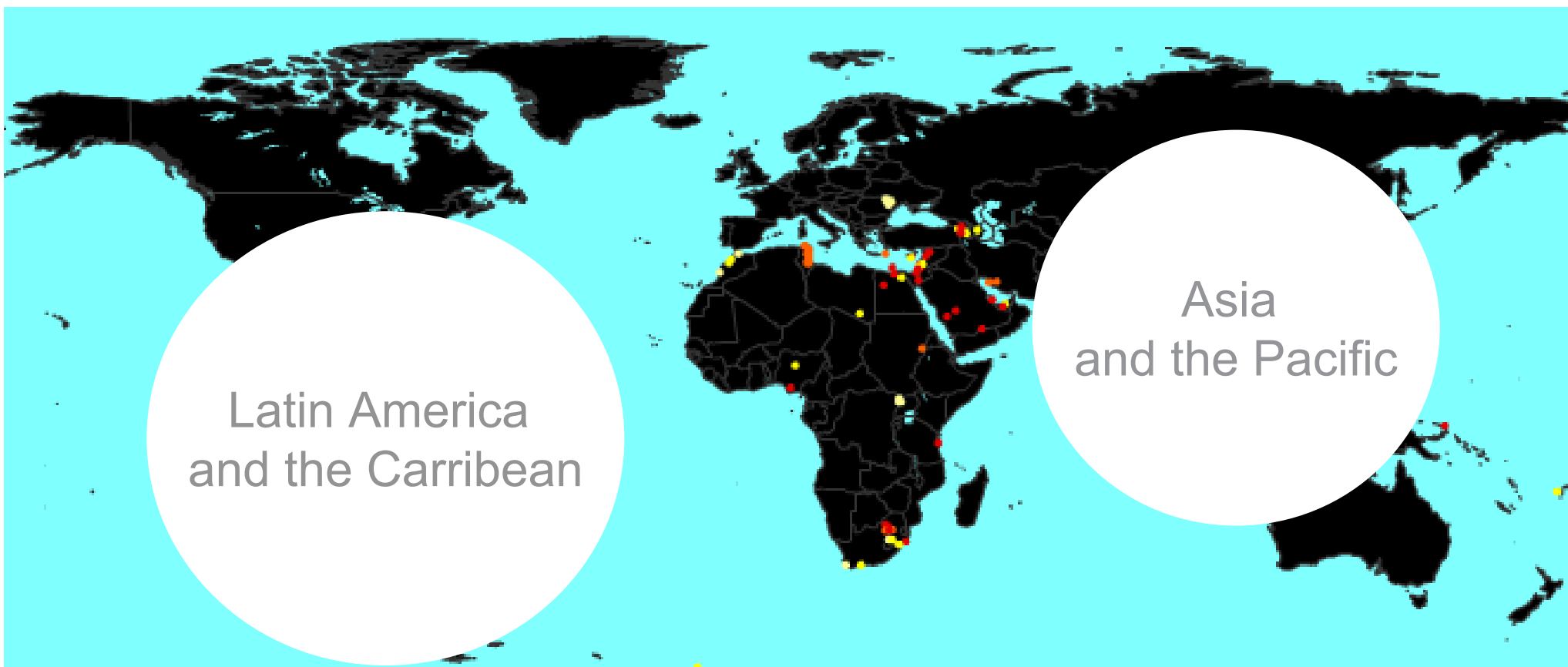
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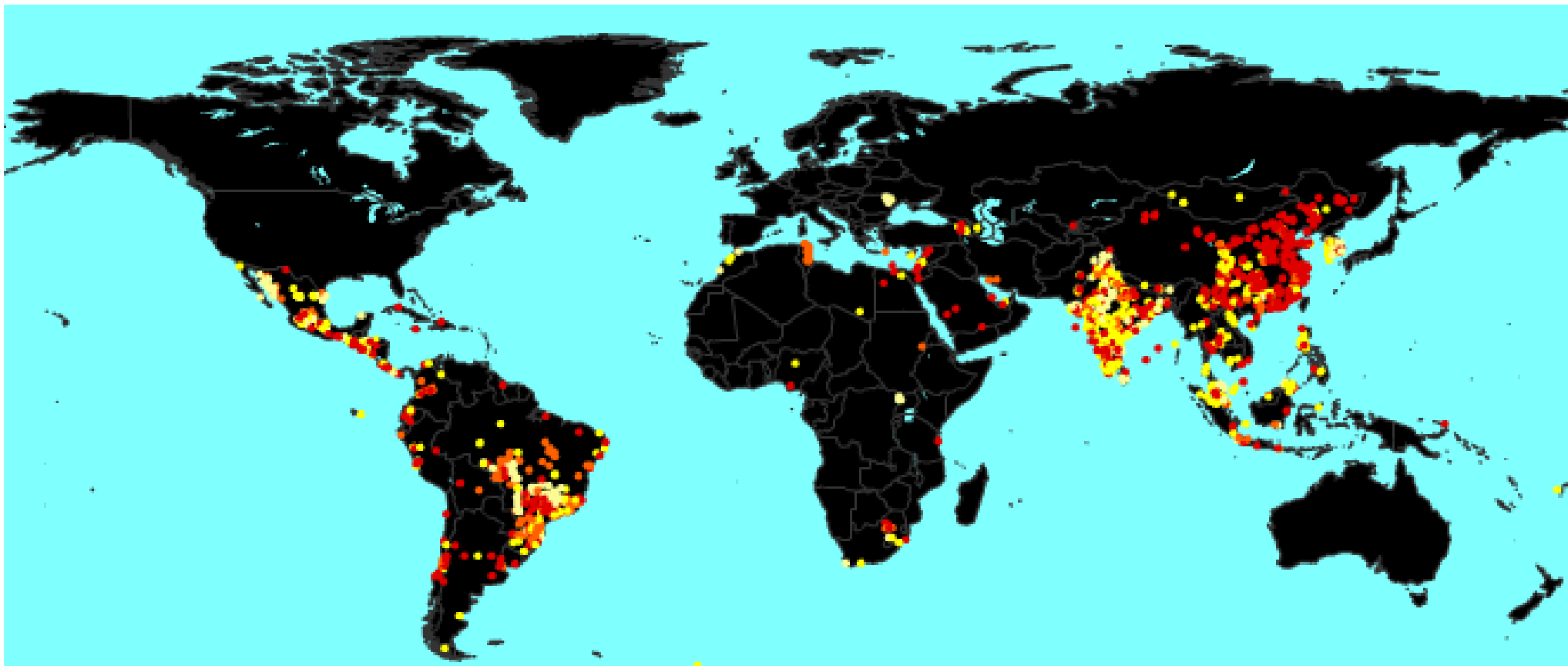
Carbon finance

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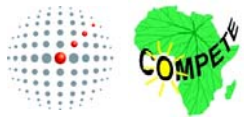


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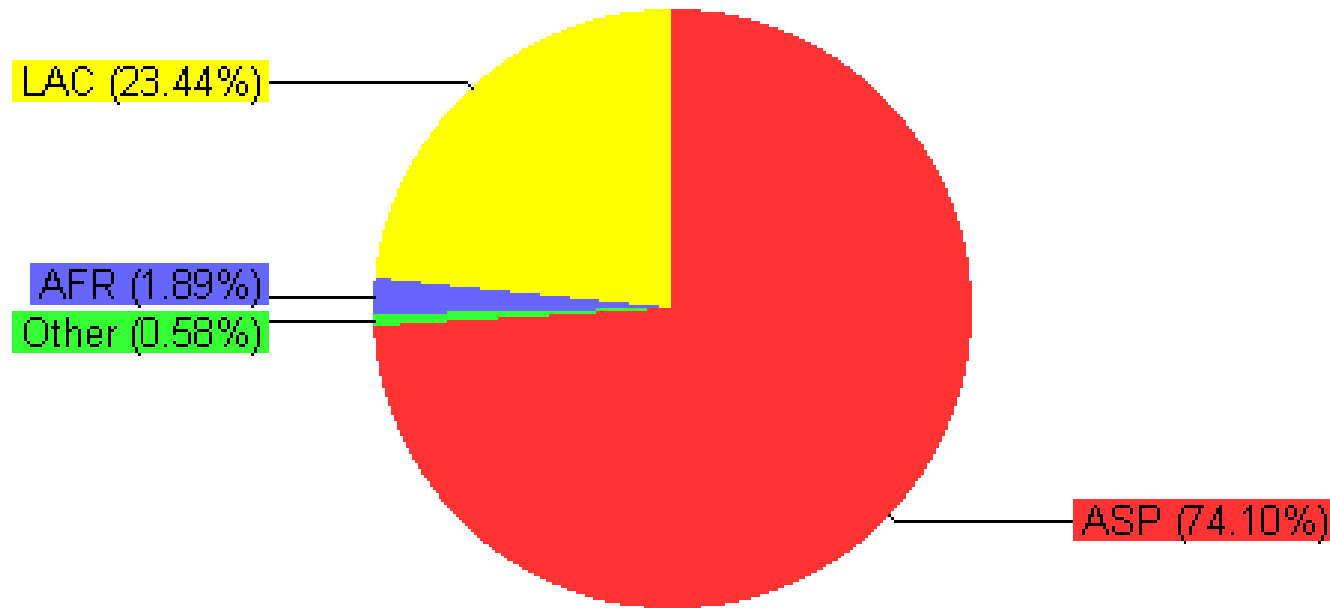
→ Less than 2% of all CDM activities are located in Africa!



Carbon finance

■ Global CDM activities:

Registered projects by region. Total 1907



Region	Number of projects
NAI-Africa	36
NAI-Asia and the Pacific	1413
NAI-Other	11
NAI-Latin America and the Caribbean	447

<http://cdm.unfccc.int> (c) 24.11.2009 16:53

→ only 36 of 1907 registered CDM projects located in Africa!



Successful bioenergy project examples - 1

Jatropha outgrower project, Zambia (Marli Investments, Kamal Desai)

- Seeds distributed to small scale farmers, farmers also participate in training and lectures
- Has grown from 12 farmers (2003) to 25,000 farmers (2009); 6000 hectares of Jatropha to mature in 2009
- Private funding/financing provided: board of directors, share holders
- No external financing received (commercial banks, development funds)
- Key constraint: Funds required to purchase processing equipment



Jatropha - biodiesel processing, Mali (Mali Biocarburant)

- Sustainable decentralised biodiesel processing, intercropping Jatropha with food, cash crops, by-products: organic fertiliser, soap
- Over 4,000 outgrowers (2009): 3 regions in Mali, 2 in Burkina Faso
- Financing: Total investment: 820,000€
60% NL Government (non-refundable grant),
40% Equity (Malian farmer union, KIT (Royal Tropical Institute), NL pensionfund, private company)
- Voluntary carbon credits (contracted to Kia Motors NL)
- Plans: Development of animal feed from Jatropha cake





Summary

- WP5 objective: Development of tools and strategies for the provision of financing for sustainable bioenergy projects in Africa
- Challenges: lack of regulatory framework, expertise, coordination and dissemination
- Opportunities: entrepreneurial support services / capacity building and improvement of capacity, communication, information sharing
- Objectives: transparent market access, long-term frameworks for investors
- Carbon finance: complex, but promising as additional income
- Trade: long-term potential in Africa (production costs, land availability), but: tariffs, subsidies, certification schemes
- Current market research on funding opportunities: project developers and investors
- Practical guidelines for investors (E+Co)



**Thank you for your attention
and for your contribution to WP5!**

