

Developing remote sensing methods to retrieve the biomethanpotential of agricultural areas with special focus of the upcoming EnMAP mission

Objectives:

- Development of methods for:
 - Classification of specific land cover classes with one-class classifiers
 - Estimation of biomass with regression/ensemble algorithms
 - Data fusion EnMAP+SAR (e.g. TerraSAR-X)

Duration:

- 01. August 2010 – 30. June 2013
- Funding: DLR/BMWi: FKZ 50EE 1011



Fig.1: TerraSAR-X (2011, links) and HyMAP (2010, rechts).

Gefördert durch:



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für Wirtschaft
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Products / Parameters:

- Land cover
- Biomass [t/ha] (necessary for the determination of the regionalized biomethanpotential [m³ /ha])

Added Value (quantitative /qualitative):

- Efficient algorithms for classification of specific land cover classes
- Biomass estimation
- Data fusion algorithms (EnMAP+SAR)

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Involved User Organisation:

- CRP Gabriel Lippmann (research center, Luxembourg)
- ASTA (agricultural administration, Luxembourg)
- CONVIS (agricultural consortium, Luxembourg)

Additional:

- Project Area: North-west of Luxembourg City, between Kehlen and Nagem (2011), respectively Kehlen and Useldange (2010)
- Image data: HyMAP, APEX, TerraSAR-X, Radarsat-2
- Currently Cross-Validation is applied, if the dataset is enlarged a independent set will be used for validation

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