

IEA Bioenergy Task 37

Swiss Country Report

Istanbul - April 2011



Traitement et valorisation de
déchets et
d'effluents organiques

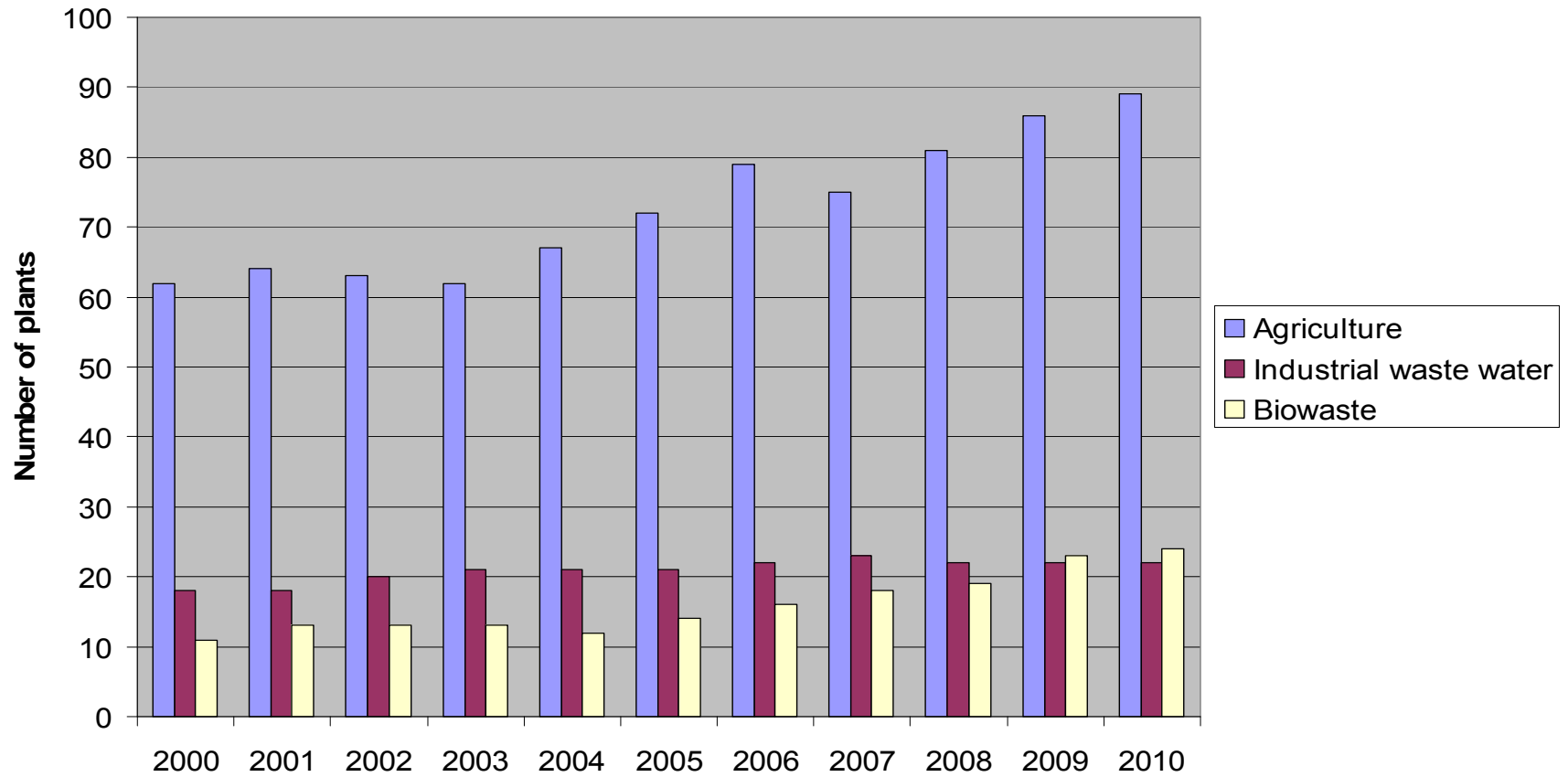
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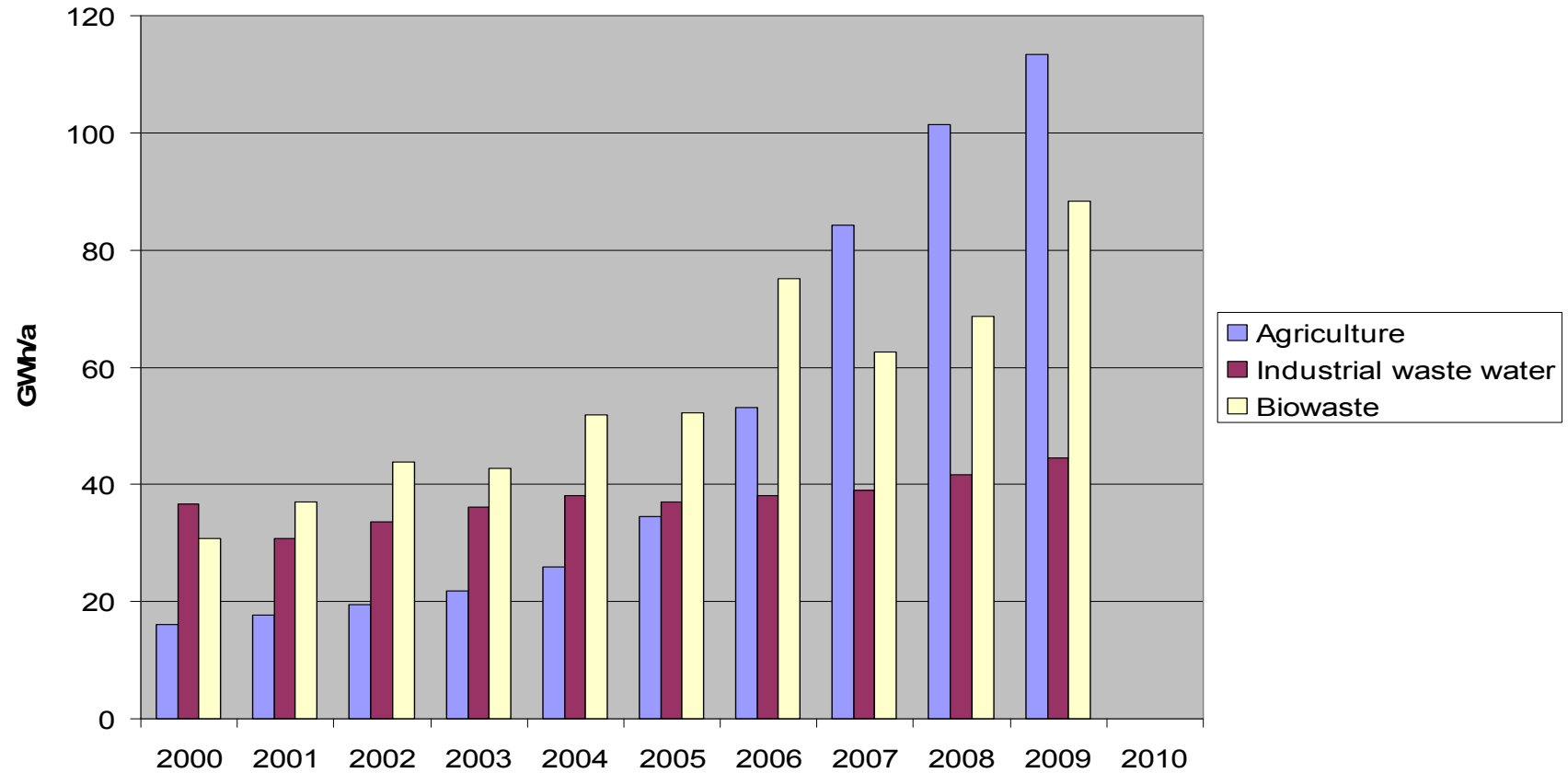
Biogas Plant Inventory

Development of installations



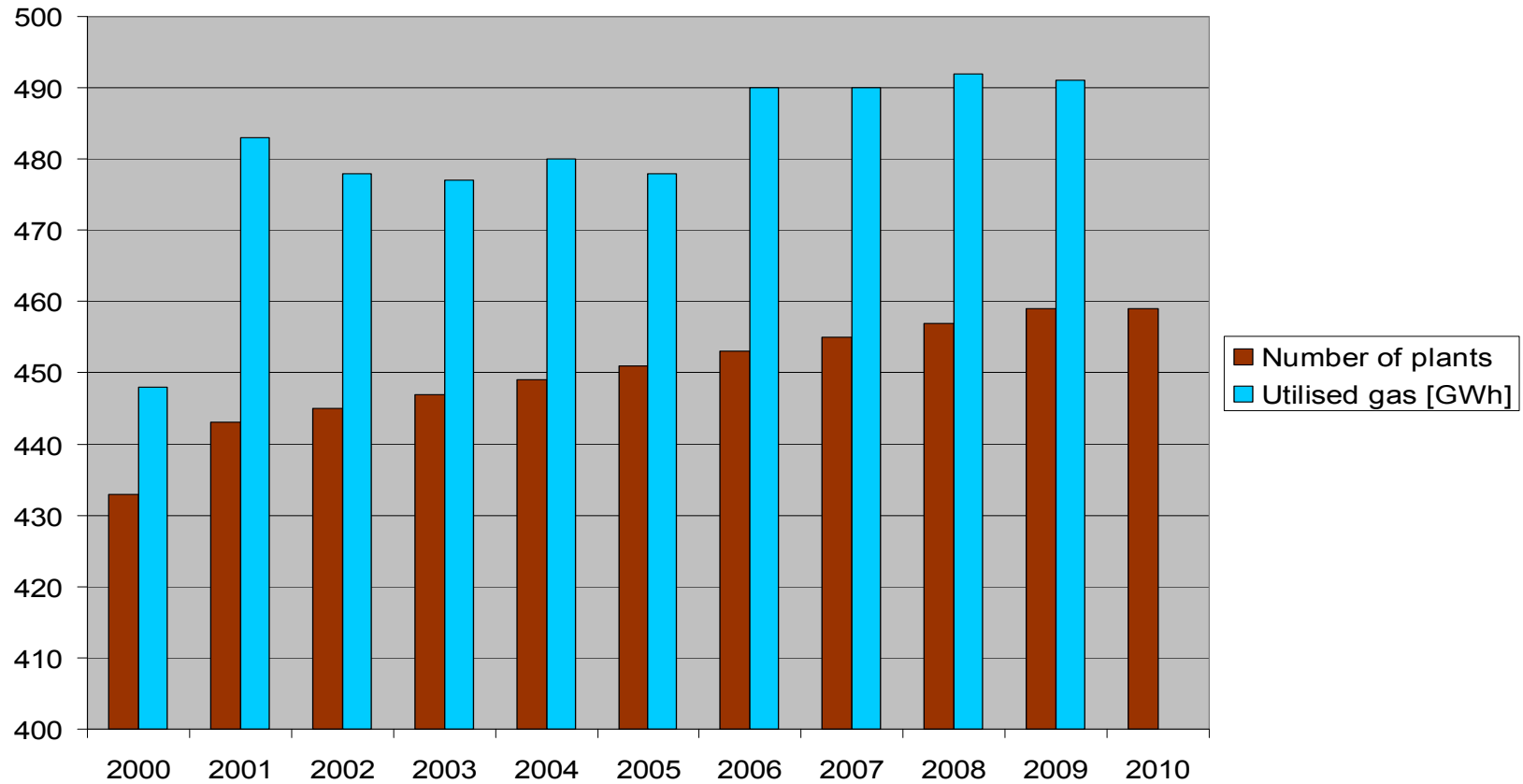
Biogas Plant Inventory

Gross gas production

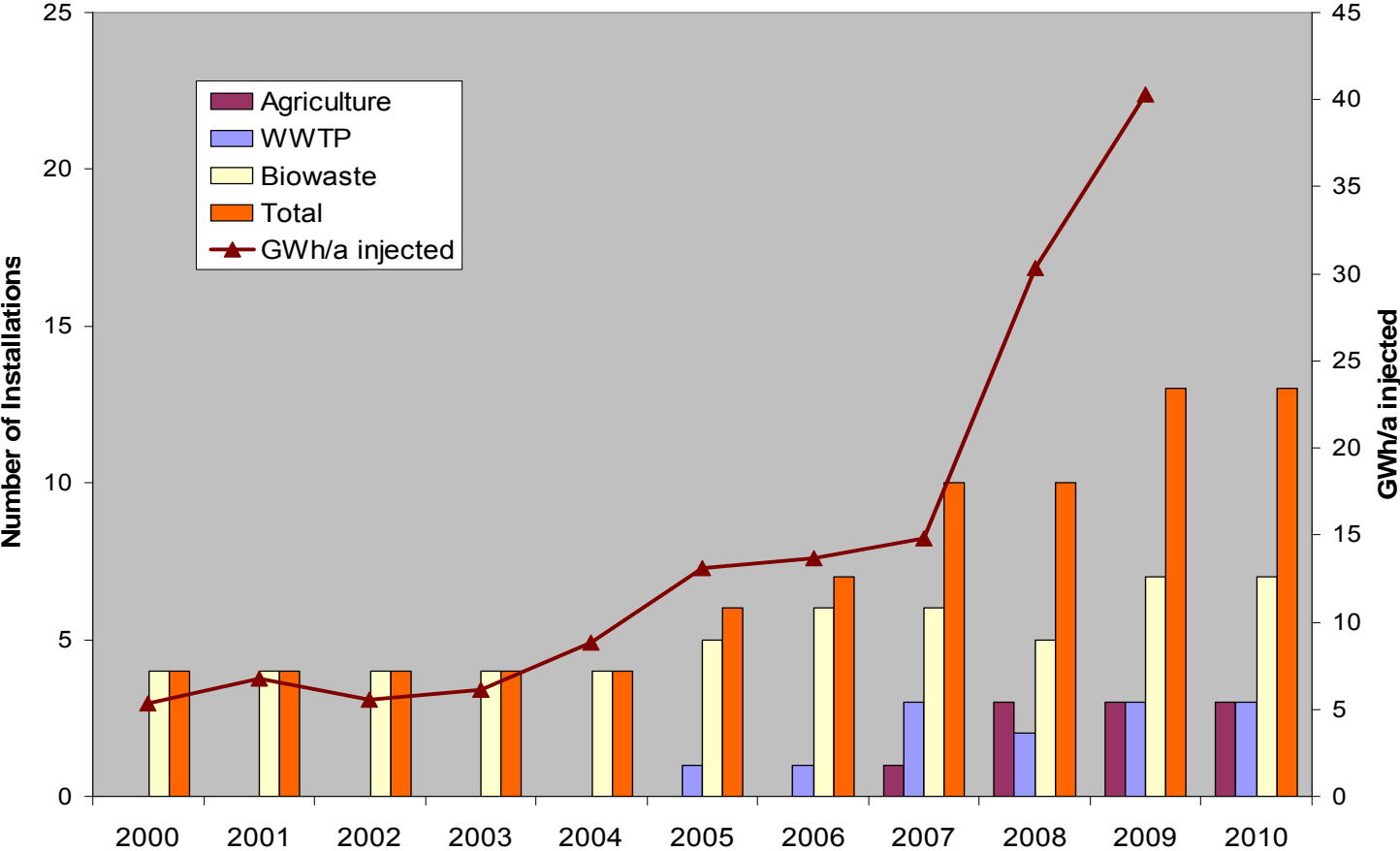


Biogas Plant Inventory

WWTP

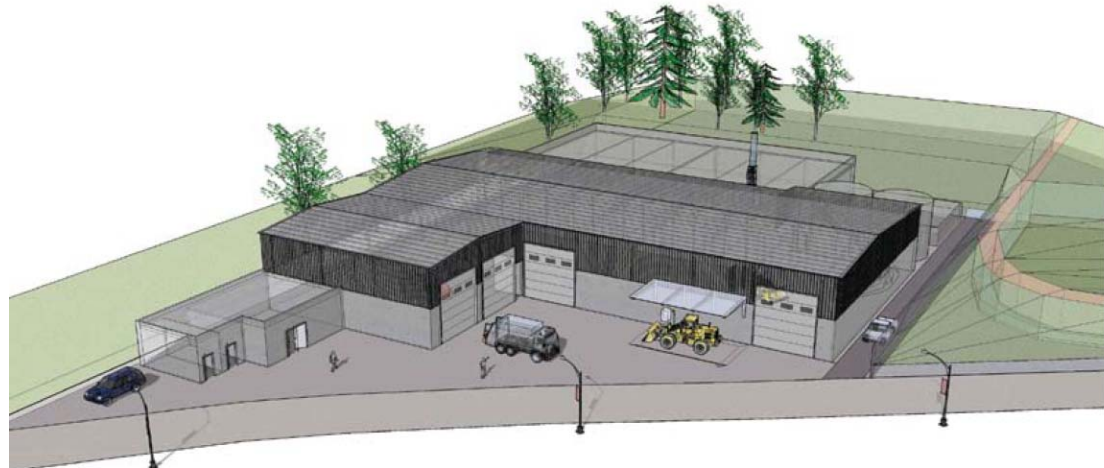


Biogas upgrading plants



New biogas plants

- **Spiez**
Dry batch fermenter
- **Bätterkinden**
Agricultural plant
- **Oberkirch**
Agricultural plant
- **Cadenazzo**
Agricultural plant



© Oberland Energie Biomassezentrum

Biogas plants under construction

- **E-Bio / Bellechasse:** Agricultural plant (17,000 tpy)
- **Schweizer/ Gollion:** Agricultural plant
- **Eisenmann / Liesberg:** Biowaste (10,000 tpy)
- **Kompogas:** Wauwil (16,000 tpy), Villeneuve (20,000 tpy), Chavornay (20,000 tpy)
- **SwissEcosystems:** WWTP Frutigen, agricultural plant Zwillikon
- **Divers agricultural installations:** Cadenazzo, Diesbach, Bure, Fleurier, Düdingen

Economic support data



Increase of the cap on feed in tariffs:

- New cap up to 0.009 (instead of 0.006) CHF/kWh on electricity consumption
- Some projects in the waiting list can be accepted

Voluntary support programme for biogas injection by the Swiss Gas Association (VSG):

- Within 6 years the injection of biogas shall be increased 6 times
- Local gas providers supply a fund with ~2 million CHF per year

Legislation and Guidelines

Feed in tariff for electricity: subsidies new on net electricity production

Animal feeding: No more animal feeding with organic waste (Summer 2011)

Revision of the Act on Waste Treatment: Discussion on codigestion in WWTP and on digestion temperature in agricultural plants (substrate hygienisation)

Guidelines:

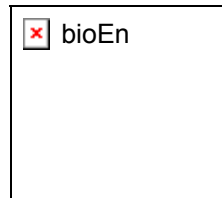
- Quality management for compost and digestate
- Guide on odour and noise reduction in agricultural plants



Associations

Fusion and new name:

Biogas Forum + Biomasse Energie = Biomasse Suisse



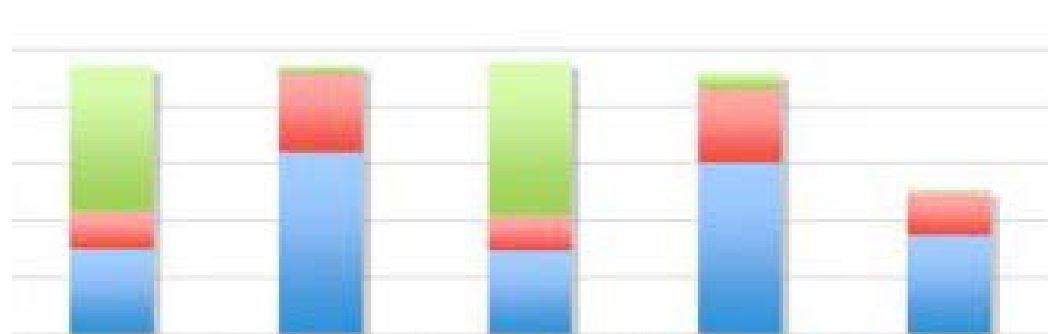
Main focus 2011:

- Quality of installation planification, construction and operation
- Professional trainings
- Information, communication and project monitoring

Research projects

2 projects using Life Cycle Analysis

- **Optimal plant size:**
Centralised vs. decentralised agricultural biogas production
- **Optimal biogas valorisation:**
Heat production - cogeneration - grid injection



Research projects

Gas potential measurements

- **Standardised tests in batch digesters:**
 - Reasons for unreliable test results
 - Differences to full-scale digestion
 - Collaboration with IWA



MBR reactor

- **Digestion of manure and co-substrates:**
Efficiency improvement for economic and space savings

