



A Market for EcoSan?

Business Survey
by
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In Co-operation with:

- WECF 
- Province of Overijssel
- County Teleorman (Ro)
- EuroTeleorman (Ro)
- Earth Forever (Bg) 
- Several Universities (NI., D, etc)
- Aqua4all 
- KIWA
- Coram
- Dutch Ministry of Foreign Affairs (MATRA)



Survey Focus

- Not Content (Done by Universities)
- “Demand” Side of the Market = Potential Need for EcoSan
- “Supply” Side of the Market = Potential Producers for EcoSan Products
- Enabling Factors (Legislation, Education) to Match Supply and Demand
- Manufacturing Opportunities



Survey of Desk & Field Research

- Bulgaria & Romania
 - Desk research
 - Field trip February

In close cooperation and great support:

- Diana Iskerva (Bg)
- Olivia Radu (Ro)



Reasoning Behind the Survey

- Central & Eastern Europe (CEE):
 - ✓ > 25% Not Connected to Sewer System
 - ✓ Shortage of phosphates as fertilisers
 - ✓ Groundwater Pollution
 - ✓ River Pollution
 - ✓ Poor Drinking Water Sources (Wells)
 - ✓ Health and Environmental Issues
 - ✓ Poor sanitation conditions rural areas in schools, public/community houses en private houses

Is there a need?



School toilet building





More Reasons?

- **Southern Europe?**
 - Very Dry Periods
 - Climate Change
 - Environmental Problems
 - Health and sanitation Issues
- **North-western Europe?**
 - Holiday Residences without Sewers (Scandinavia, Germany)
 - “A New Way of Peeing”!
 - Medicine Residues
 - Separation at Source or End-of-Pipe
 - Experiences and R&D



If we would not have the existing systems (sewage and treatment) in The Netherlands we should design it differently





Rough Facts & Figures (Inhabitants)

- Europe 728 million
- CEE 384 (53%)
- Ro 21,7 (3%)
- Bg 7,7 (1%)
- Spain, Portugal,
France, Italy & Greece 184,1 (25%)

What about Middle Eastern countries



Facts and figures

Rural areas

Romania:

- Dwellings 3.7 million
- Schools 11.000
- Public places 13.000

Bulgaria:

- Dwellings 1.4 million
- Schools 1500
- Chitalishte 2000

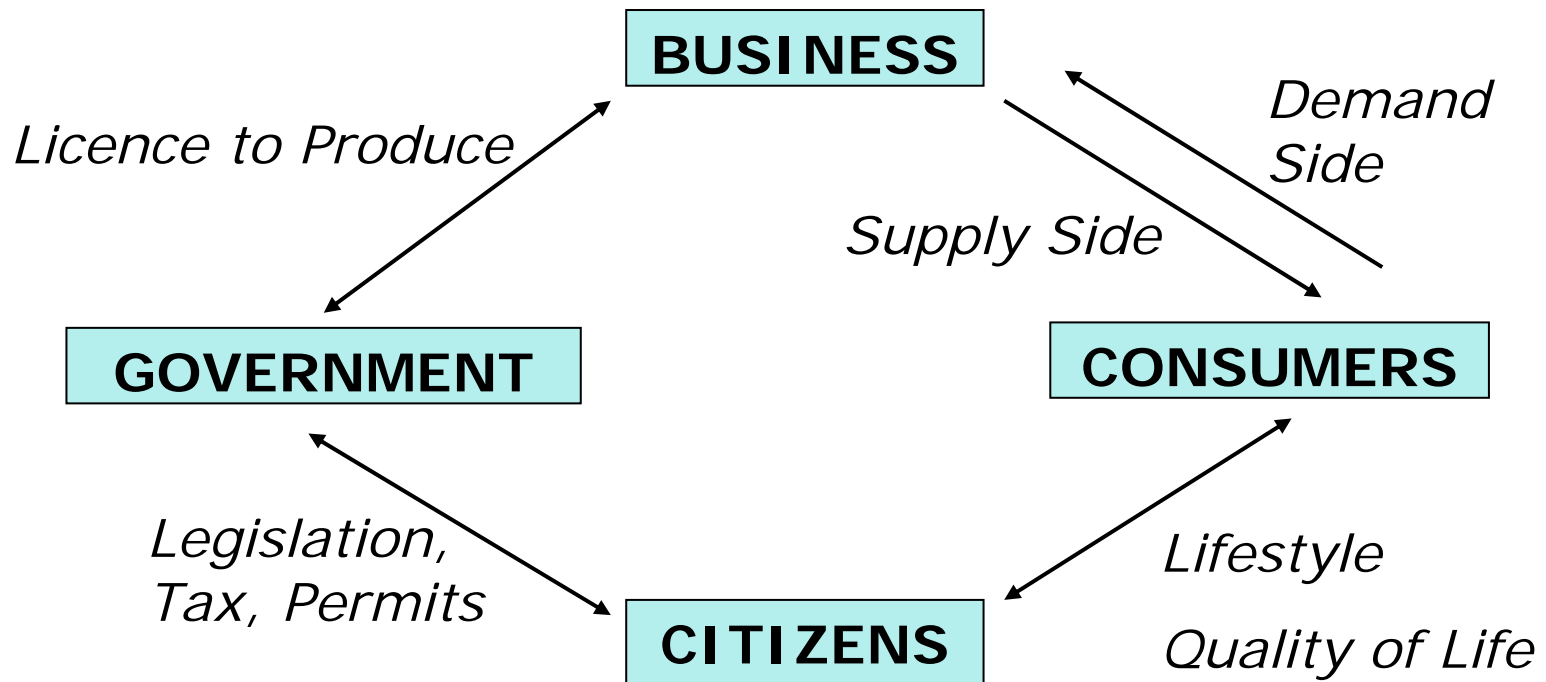


Rough Estimation of Household Market

- CEE Inhabitants 384 million
- 25% Live in Rural Areas 96 million
(Absence of Sewers)
Estimated Average of Persons per Household is 2.2
- That Means 43 million Households
- (90% of the Bulgarians has a summer house)



How Markets Work





Conclusions

1. Use the Environmental Focus (Climate Change) within the EU for Policy Decisions Based on the Future not the Past, Make It an EU Issue, Stay Away from 3rd World Solution, legislation and political will!!
2. Step into the Innovations Needed for EcoSan (Dry and With Water): Sexy Products (however awful this term may be...!)
3. Due to Absence of Sewerage a Large Potential Market of >43 Million Households, Besides Public Places like Schools and Community Buildings (these should be first movers) in CEE, what about SWEurope?
4. Make a cost analyses on Cost of Septic/Sewer > EcoSan on Macro and Micro Level
5. Take the Whole of EU as a Market (Dry and Wet)



Conclusions cont.

6. Become the World's First EcoSan Economy (Design, Production, Re-Use of Organic Sewage), Close to the Lisbon Agenda
7. Cradle-to-Cradle Solution, Health and Environmental Policy Changes
8. Production of Organic Fertilisers
9. Faeces Might be Part of Bio Fuels
10. Take into Account Comfort and Costs (Construction, Buying) for Consumers/Buyers
11. Partner up with CSR businesses in the West and CEE countries
12. Thanks to Climate Change This Is an EU Challenge



Recommendations for Next Steps (I)

- Start (EU) policy committee
- Co-Funding New Demo/Pilots at schools/public places in Counties
- Estimate Number of Toilets Used in Demos in CEE countries
- Workshops with Stakeholders:
 - Ro: 29 – 30 March 2007
 - Bg: 12 - 14 April 2007



Recommendations for Next Steps (II)

- Find Investor/Funder (Subsidy) for a Mould (25-50.000 euro)
- Invest in a Batch of approx. 5,000 Toilets and Let Them Be Sponsored (estimated costs € 50.000, = € 10/toilet)
- Partner With a CSR Business To Produce EcoSan



Part Two

- Fact finding
- Swot analysis
- Scenario planning
- Further investigations



SWOT Analysis (I)

Strengths

- *Low cost solution (no water, septic tank, tax)*
- *Use existing materials*
- *Comfort (no smell, flies)*
- *Agricultural re-use*
- *EU innovation (climate change)*

Weaknesses

- *Non west European image, 3rd world image*
- *No political support*
- *New product/existing market*
- *High start up costs (mould, batches)*
- *Education needed, use and re-use excrements*
- *Drainage systems increase initial investment*
- *2 way system for seperation urine/faeces*
- *Special construction*



SWOT Analysis (II)

Opportunities

- *EU innovation*
- *Potential large market (incl South West Europe) due to climate change*
- *Integration toilet and bathroom at the house*
- *Start with schools, show examples (= early adaptors)*
- *No sewerage system needed, saves 70%*
- *Environmental friendly*

Threats

- *No political will yet*
- *Lack of legislation (national and EU)*
- *Intermediate technology image, no favour customers, no modern image*
- *Only theoretical evidence use of excrements in agriculture, not common*



Fact-Finding Field Trip (I)

Ceramic Industry:

- Understanding EcoSan Concept
- Re-Active (Traditional, Foreign Owners, Slow Decision-Making, No Focus on Low Incomes)
- Pro-Active (One in Ro, CSR, Very Promising, Expertise, Qualified)

Plastic Industry:

- Only for Squatting Toilets
- Is There a Need To Invest in This Type of Toilets **also** for Schools?



Fact-Finding Field Trip (II)

Legislation:

- Non-Existent for EcoSan
- Some legislation in Ro on pit-latrines, septic tanks and use of excrements
- Permits for Construction and Installation of pit-Latrines

Politics:

- So many other priorities

Retail channels

Construction compagnies



Fact-Finding Field Trip (III)

Opportunities:

- Openness for Sponsored Demo Project for Schools and Community Buildings
- Co-Finance from National Budget for School Renovations (Ro)??
- Co-Finance Connecting Toilet and Bathroom to the Private Home in Bg
- Beware Of Sponsored Money (based on real demand/serious partners)



Strategy for Social Change*

- Need for a Disaster (f.i. Hot Dry Period)
 - Epidemic Break Out
 - Politicians Have To Score
 - New Legislation To Follow (Local, National, EU)
 - Joint Promotion of Public/Private Sector
 - Farmers Compete for Organic Fertilizers
- * Based on History of Europe



Scenario Planning

- Make Use of Climate Change (hot issue)
- EU Politicians Are Open To Health, Environment and Innovation (Lisbon Agenda)
- Strong Lobby of NGOs/Civil Society, Universities, Public Sector (Climate Change), Private Sector (Corporate Social Responsibility Businesses)
- Sexy Pilot Projects (first diffusion through Community houses and schools, later Private houses)



Further Investigation (I)

- Find (international) western practises
- Macro and Micro Cost Calculations on Sewer System, Septic Tanks and EcoSan as to Investments and Maintenance
- Several Places for Public (schools) Demo Project (At Least One per County)
- Promotion Tours to get Opinion Leaders
- Finding Support from International Institutions (World Bank, WHO, IMF, UN Agencies)



Further Investigation (II)

- Finding Co-Sponsors for Demo Projects in Counties Throughout CEE
 - MATRA (Dutch Ministry of Foreign Affairs)
 - EVD / Partners for Water (hardware pilots)
 - World Bank
 - Local Fund for Renovation of Schools (Ro)
 - Local Applications for Infrastructure
 - CSR Businesses

Don't Miss This Chance, Innovate, Anticipate Climate Change!!



Further Investigation (III)

- Set up system to Co-operation in Collecting and Use of Organic Fertilisers by a Farmers' Co-operative or community (mayor)
- Be aware of the Amount of Medicines and Residues in Excrements (Great Deal of Penicillin Used)
- Show Estimation of Climate Change/Dry Periods
- Emphasis on Health Issues/Diseases in Rural Areas