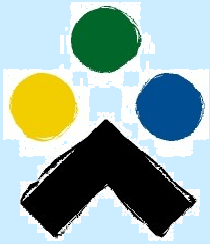


**Ministry of Environmental Protection, Physical
Planning and Construction
Croatia**

**EU Accession
Environmental legislation affecting the
financial sector**

*UNEP Finance Initiative Conference,
Zagreb Westin June 14, 2005*

Dr. Nikola Ružinski, State Secretary



EU Accession

Main challenges:

- Legislative
 - One of the widest area of the *acquis* (more than 270 pieces of legislation, 80 major directives)
- Institutional
 - Strengthen administrative structures: ministries, agencies, implementation and enforcement institutions
 - Support to development of regional and local administrations
 - Strengthen interministerial coordination
 - Strengthen environmental management in business sector
 - Transposition of all legislation by the date of accession and setting in place administrative structures

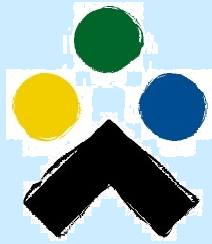


EU ACCESSION

Main Challenges:

- First priority for full implementation:
 - framework legislation: air, water, waste, Environmental Impact Assessment, Access to Information, and nature protection legislation
 - international conventions, trans-boundary pollution reduction
 - industrial and single market related legislation
 - Financial
 - High compliance costs- investments in infrastructure, structures and human resources
- All new investments should comply with *acquis*





EU ACCESSION

Investment challenges— key “Investment-Heavy Directives”

Water supply / Wastewater Treatment

- Water Framework Directive
- Urban Wastewater Treatment Directive
- Drinking Water Directive

Air Pollution Control

- Fuel Quality Directives
- Air Quality Directives

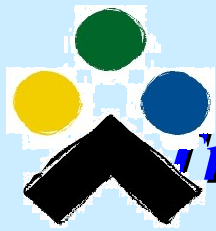
Waste Management

- Landfill Directive
- Incineration of Dangerous Waste Directive
- Incineration of Waste Directive
- Packaging and Packaging Waste Directive

Industrial Pollution Control

- Large Combustion Plants Directive
- Industrial Prevention Pollution Control /IPPC /Directive
- Volatile Organic Compound /VOC/ Solvents Directive

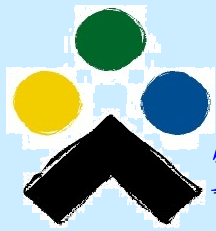




EU ACCESSION

Transposition of “Investment - Heavy Directives” into Croatian Legislation

- **Environmental Protection Act (Official Gazette No. 82/94, 128/99)**
 - New umbrella law – planned to be adopted in 2006
 - Environmental impact assessment
 - **Integrated Prevention Pollution and Control (IPPC) Directive**
 - Access to information

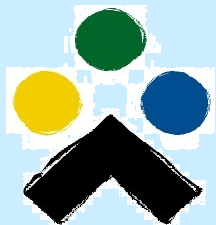


EU ACCESSION

Transposition of “Investment - Heavy Directives” into Croatian Legislation – Air quality

➤ **Air Protection Act** (Official Gazette No. 178/04)
and 6 regulations:

- Regulation on limit values and alert thresholds for SO₂, NO_x, CO, benzene, particulate matter and lead in ambient air (under preparation)
- Regulation on ozone in ambient air (under preparation)
- Regulation on liquid oil fuels quality (2006)
- Regulation on emission limit values for combustion installations, internal combustion engines and for gas turbines (2006)
- Regulation on emission limit values for processes of thermal treatment of waste (2006)
- Regulation on emission limit values for installations using solvents (2006)



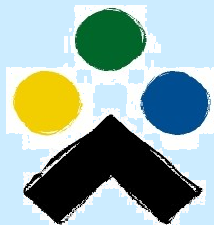
EU ACCESSION

Transposition of key “Investment-heavy Directives” into Croatian Legislation

➤ Waste Act (Official Gazette No. 178/04)

Ordinances (*under preparation*):

- Ordinance on Packaging and Packaging Waste
- Ordinance on Landfills
- Ordinance on Incineration

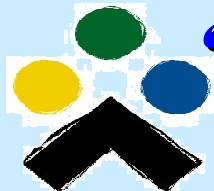


Transposition of key “Investment-heavy directives” into Croatian Legislation

- Water Act (Official Gazette No. 107/95)
 - Amendments to the Water Act (Autumn 2005)- alignment with Water Framework Directive (WFD)
 - **Ordinances:**
 - Ordinance on keeping water related documents (Autumn 2005)
 - Ordinance on limit values and indices of hazardous and other substances in wastewater (2006), and others

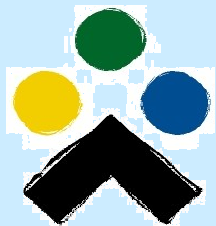
- Water Management Financing Act (Official Gazette No. 107/95, 19/96, 88/98) and implementing legislation
/Amendments planned for 2006/





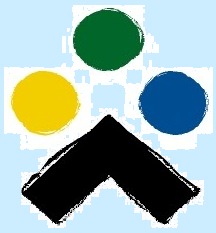
“Investment-heavy directives ”implications – heavy and other investments

SECTOR	HEAVY INVESTMENTS	OTHER INVESTMENTS
<p>Waste Management</p>	<p><u>Municipal waste</u> Waste management centers Waste thermal power plants Waste collection sites (recycling yards, green islands, etc.) Facilities for mechanical- biological treatment Lanfill reconstruction/remediation</p> <p><u>Hazardous waste</u> Incinerators Landfill and old industrial sites remediation/closure</p> <p><u>Other types of waste</u> Facilities, equipment, etc.</p>	<p>Waste collection /transport - equipment Water / groundwater/soil monitoring equipment Air quality monitoring equipment Laboratories for testing sewage sludge, etc.</p>
<p>Industrial Pollution Control</p>	<p>Processes BAT technologies Pollution control systems Emission pollutants control systems Accident prevention measure</p>	<p>Air / water / groundwater /soil monitoring equipment</p>



“Investment Heavy Directives“ implications – heavy and other investments

SECTOR	HEAVY INVESTMENT	OTHER INVESTMENT
Air quality	<p>Reduction of emission pollutants from stationary sources (combustion plants, industrial plants) and from mobile sources</p> <p>Improvement of liquid fuel oils quality- reconstruction of oil refineries, fitting to enable VOC collection during filling, VOC recovery units</p>	<p>Air quality monitoring</p> <p>Emission pollutants emission monitoring</p> <p>Testing systems (oil refineries)</p>
Water quality	<p>Wastewater treatment plants</p> <p>Wastewater collection systems</p> <p>Water supply system</p> <p>Pre-treatment of industrial discharges to sewers</p> <p style="text-align: center;">*</p>	<p>Surface and underground water monitoring</p> <p>Drinking water quality monitoring</p> <p>Effluent monitoring</p> <p>Ecological monitoring</p>



EU Accession

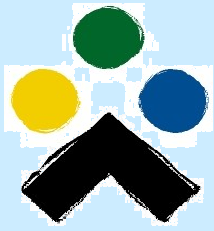
Priority investments – waste sector

- Establishment of waste management centres (on county and regional level) and remediation of landfills
 - *possible sources of financing: county and local budgets, Environmental Protection and Energy Efficiency Fund and pre-accession funds (EPEFF), Croatian development and commercial banks, International Financial Institutions /IFI/*

- Remediation of landfills (that are not in compliance with regulations)
 - *financed primarily through the Environmental Protection and Energy Efficiency Fund (started in 2004)*

- Remediation and closure of highly polluted industrial sites
 - *Activities on development of remediation programmes initiated by the MEEPC in 2004 /*



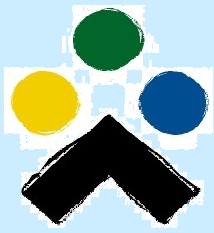


Environmental Law Approximation – *Cost estimates*

Documents dealing with cost estimates:

- National Environmental Strategy and National Environmental Action Plan (2002) – rough estimates of capital costs for reaching average EU standards/waste, water, air / 1,500 EUR – 2,200 EUR per capita
- Economic Memorandum for Croatia, World Bank July 2003 (estimates on the basis of three scenarios of reform (basic scenario, medium reform, high reform): capital costs from EUR 1,390 to EUR 2,680 per capita (50% water sector; 50% sectors of waste and air and IPPC Directive implementation (basic scenario, a 20-year period)
- Draft Waste Management Strategy, June 2005 (developed): data used primarily from the Final Report CARDS 2001 National Waste Management Strategy– Focus on Municipal Waste (capital cost estimate of the Strategy's implementation: total 3.083 mil EUR/ municipal waste 68%/, 2005-2025)

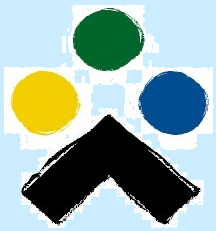




Potential investors

- **Waste management:**
 - regional and local self-government units, State, Fund for Environmental Protection and Energy Efficiency (FEPEF), public utility companies, public institutions (hospitals,..), business entities (industry, transport..)
- **Air quality:** oil refineries, combustion plants, petrol distribution stations, storage installations, State, regional and local self-government units,
- **IPPC Directive :** business entities (industry, agriculture, energy sector, ...); waste, sewage and wastewater utility companies, State
- **Water quality:**
 - watersupply, sewage and wastewater treatment utility companies, local self-government units, Croatian waters





EU Accession

Possible Sources of Finance for Infrastructure Investments

Public sources (budgetary and extra-budgetary funds)

- State Budget
- Environmental Protection and Energy Efficiency Fund
- Croatian Water Public Company
- Regional self-government units and the Town of Zagreb
- Local self-government units

Other sources:

- **Concession agreements (especially with respect to public wastewater discharge and waste disposal systems); public/private partnership**
- **EU pre-accession funds (ISPA, IPA), Cohesion and Structural funds**
- **domestic and foreign loans (Croatian Bank for Reconstruction and Development, IFI, commercial banks**
- **Own resources**
- **Leasing agreements, direct investments, equity**
- **Donations, etc.**