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“ENVIRONMENTAL LAW AT THE CROSSROADS”

ENVIRONMENTAL LAW, GOVERNANCE & MANAGEMENT

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Environmental Management Systems (EMS) for CITIES

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SUSTAINABLE CITIES / ECO-CITIES

- Meaning of ‘sustainable city - A city that meets the needs of the present without sacrificing the needs of future generations – Brundtland Commission
- Cities have large environmental footprints
- On-going population expansion – increased pressures on existing resources
- Tensions between economic development and environmental stewardship
- Pollution management - continued growth while improving quality of life?
- What are the solutions? Role of the law?

ADVANTAGES OF CITIES

Concentration of industries and population bring advantages and savings :-

- Lower costs per household/enterprise for provision of environmental infrastructure and services
- Lower costs and greater efficiency in enforcement of laws
- Cities with good public transportation systems reduce need for private motor vehicles
- Better and more affordable educational facilities
- Recreational facilities can be easily accessible

CHALLENGES FOR CITIES

Providing citizens with safe and reliable supply of food, water and essential services –

Need for:-

- good roads & efficient public transportation systems,
- modern sanitation,
- effective waste management (MSW, hazardous wastes etc)
- decent and affordable housing
- good communication facilities (reduces need to travel)
- good quality of life – parks & recreational facilities, playgrounds, malls
- protection of natural and cultural heritage
- sustainable use of natural resources

SOLUTIONS DIFFER – depends on resources & needs of each city

I. The Developing World –

- The urban poor - lack of infrastructure, poor transportation systems, squatter colonies, inadequate housing, public health problems, continued migrations to city
- Pollution – air, water, noise, toxic substances, waste
- Loss of natural areas
- Loss of heritage – old buildings, burial grounds etc.
- Lack of institutional capacity
- Lack of financial capacity
- Wrong policies, lack of political will
- Corruption and cronyism

Bangalore, India – No EMS?

- Inadequate /confused allocation of jurisdictions between govt institutions, fragmented actions
- Inefficient legal system leading to long delays and high costs
- Poor environmental infrastructure
- Laws woefully inadequate – low fines and penalties, overworked courts, ignorance of the law, lack of qualified lawyers
- Interference of politicians in bureaucratic decision-making - corruption and cronyism leading to failure to enforce laws

Bangalore (contd)

A judge commented :

“The order of decisions is all wrong. Politicians decide on projects and then the scientists simply concur. It should be the other way round, but no one has the guts to make an independent decision.”

Bangalore : Pollution Levels at All-time High”

<http://www.rediff.com/news/2008/feb/07level.htm>

Solutions differ – depends on resources & needs of each city

II. The Developed World – the Green Economy

- Sustainable production & livelihood
 - **green/renewable energy** (solar, wind, geothermal, marine including wave, biogas, and fuel cell)
 - **green buildings** (green construction, retrofits, LEED)
 - **clean transportation** (alternative fuels, public transit systems, hybrid and electric vehicles, car sharing, car pooling)
 - **waste management** (recycling, MSW salvage, brownfield land remediation, cleanup of contaminated sites, sustainable packaging)
 - **water management** (water reclamation, grey water and rainwater systems, water purification, storm water management)
 - **land management** (habitat conservation and restoration, organic farming, urban forestry and parks, reforestation and afforestation, soil stabilization)

Environmental Management Systems (EMS) & ISO 14001

- International Standards Organisation - Switzerland
- ISO 14000 series established in 1996 – targeted at corporations and organisations, particularly the business and industry sectors, to manage their impacts on the local and global environments.
- Cities need EMS - Lack of policy prioritisation and long-term planning, need an overarching framework that links actions and actors in a coherent and systematic way.
- **ISO 14001 - Plan, Do, Check, Act**
- 2003 UNEP-IETC International Environmental Technology Centre “Environmental Management Systems and ISO 14001 for Cities” (2003)
 - Used Tokyo as illustration for EMS for cities
 - Toolkit produced

<http://www.denvergov.org/es/EnvironmentalManagementSystem/tabid/427949/Default.aspx>

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Denver's Environmental Management System
Continuous environmental improvement

Project Updates | FAQ's | EMS Documents | Staff / Teams | More Information | Success Stories | Become Involved

Are you a city employee looking for EMS documents?
Click here for the internal EMS website: [*http://dehweb/FMS](http://dehweb/FMS)
*Please note that this website is for City employees only.
Or check out the EMS documents section of this website.

**THE CITY OF DENVER IS
ISO 14001 CERTIFIED
CONFIRMING OUR COMMITMENT TO
OUTSTANDING
ENVIRONMENTAL PERFORMANCE**

<http://www.denvergov.org/es/EnvironmentalManagementSystem/tabid/427949/Default.aspx>

“Denver is a Gold-level Partner in the State Environmental Leadership Program. All City Departments are certified to the ISO 14001 standard, making Denver the first city in the country with an EMS covering all operations. “

- **Based on ISO 14001 - Plan, Do, Check, Act**
- **Planning** : identifying environmental aspects and impacts and establishing goals [Plan];
- **Implementing** : objectives and targets, training, operational controls [Do];
- **Checking** : monitoring, measuring, corrective / preventive action [Check];
- **Reviewing** : progress reviews and updating the EMS [Act].

Other Cities with EMS

- Dallas, Seattle, Charlottesville,
- Toronto, Edmonton
- Japan –
See UNEP-IETC International Environmental Technology Centre “Environmental Management Systems and ISO 14001 for Cities” (2003)
 - Used Tokyo as illustration for EMS for cities
 - Toolkit produced
- **Every city, town, municipality, village – needs an EMS!**

A. An EMS for Cities - Planning and Implementation

I. INGREDIENTS FOR A SOUND EMS

- Institutional and administrative structures
- Comprehensive land use planning laws and policies
- Environmental laws – ineffective without sound EMS
- Housing – providing decent and affordable housing with modern sanitation and water
- Physical infrastructure for essential services - clean water, energy, transport and communications
- Physical infrastructure for pollution control – collection of garbage, recycling, treatment of sewage, management of hazardous substances, air pollution management etc
- **Good laws, political stability and respect for human rights and the Rule of Law**

B. IMPLEMENTATION OF EMS

- Who takes the lead?

II. Building Institutional Capacity –

- Q - Which institutional structure is best?
 - Ministry for Environment?
 - Ministry for Environment & Natural Resources?
 - MOSTE – Ministry of Science, Technology & Environment (Vietnam),
Now from 1992 - MONRE
 - Other agencies - Ministry of Transport; National Development; Land Authority, National Parks, Ministry of Finance, Trade and Industry etc.
- **Collaboration among institutions**
 - Overlapping jurisdictions?
 - Financial considerations – bringing in investments in environmental infrastructure
 - Education and training of personnel – building capacity down the line
 - Technical assistance and economic aid – ensure coordination

II. IMPLEMENTATION OF EMS (contd)

C. Sound Land Use Planning

- Effective land use policy, planning and zoning laws – industrial sites (industrial ecology), transportation, residential and commercial areas, schools, recreational facilities and amenities, conservation of natural and built heritage, water harvesting;
- Strategic land use planning - anticipating future growth, projection of land needs for infrastructure (sewage, transportation, waste dumps, incinerators etc), new residential/commercial/industrial sites etc), water catchments
- Restoration and rejuvenation projects, conservation of built heritage

C. Land use planning (contd)

- New factories – ensure properly sited and pollution control measures adopted
- Relocation of existing industries, residents, informal settlements – again, EMS needed, provision of alternative residence/public housing - ensure air and equitable compensation & system for resettlement
- New workplaces, schools; commercial and recreational areas
- Conservation of the natural environment – nature reserves and parks
- Public participation – Agenda 21, EIA laws

II. Implementation of EMS –

D. Environmental Laws

- Identifying the laws that apply, strengths and weaknesses, administration, implementation and enforcement
- Constitutional provisions? Principles developed at Rio – polluter pays, precautionary principle , EIA laws, BAT etc.
- hard laws and soft laws, Codes of practice/administrative codes
- Economic incentives/disincentives – environmental taxation
- Environmental audits and monitoring
- Public access to information, public participation and access to courts
- Are penalties realistic? Reversing onus of proof?
- Empowering enforcement officers – investigations, arrest
- Jail sentences for corporate officers – due diligence?
- New approaches – name and shame?

IMPLEMENTATION OF EMS -

E. BUILDING THE ENVIRONMENTAL INFRASTRUCTURE

- Q – how to find the money?
- Central government often gives this low priority
- Confusion between social, environmental and commercial aims
- Political interference
- Poor management structures and imprecise objectives
- Lack of transparency in award of contracts
- Non-existent or weak and inexperienced regulators
- Resistance to cost-recovery tariffs (for water)
- Solutions – PPP, BOO, BOT contracts; loans from World Bank, ADB and other agencies

Singapore's Proposal - A Biodiversity Index for Cities

- CBD's Executive Secretary Dr. Djoghlaif called for cities to share and pool knowledge, develop new approaches, methods and tools
- May 2008, S'pore's Minister for National Development proposed that Parties collaborate in developing a CBD-led "city biodiversity index"
- February 2009, Singapore hosted with the Secretariat of CBD the first expert workshop on the development of the City Biodiversity Index

F. Implementation of EMS – Biodiversity in the City

- Singapore's Cities' Biodiversity Index – endorsed in Nagoya at 10th COP, CBD
- Assists cities in benchmarking their conservation efforts for biodiversity and Helps evaluate progress in reducing the rate of biodiversity loss in urban ecosystems
- Three components for the Index:
 1. Native biodiversity in the city
 2. Ecosystem services provided by native biodiversity in the city
 3. Governance and management of native biodiversity in the city

CONCLUSION

- Every country, city, province, municipality, village – needs an EMS
- An effective EMS is an excellent step towards sustainability and sustainable development
- It is part of good governance and management
- Laws are only a part of the EMS – the best laws will not work with a sound EMS
- Good governance requires good government – right policies, laws, well educated civil servants, political will, clean government
- Challenges – governance system and politics.

Singapore – From Third World to First - 1965 to 2000

