

GEF International Waters Needs & Resources Matrix

A. TRAINING

Needs	Resources	Contacts
Awareness Course (10)		
Stakeholder Involvement (9)		
Water Quality Analysis (7)		
Project Development (5)	Training course on project development and management	Chua Thia Eng
Hydrological Data Analysis Tools (4)		
GIS Applications for L&W Management (4)	www.esri.com	samuelsw@saic.com dann@sklarew.com
ICM (3)	Annual training course at icm demo. Sites, training manual and good practices	. PEMSEA
Integrated Land & Water Management (3)		
Fisheries Management (2)		
Policy Development (for Decision Makers) (2)		
Transboundary Waters Management (2)		
Risk Assessment (2)	WHO IMOIE Pilot Project on Rapid Environmental and Health Risk Assessment Risk Asst. training, manual WHO IMOIE Pilot Project on Rapid Environmental and Health Risk Assessment	R Aertgeerts Via F Crispi 10 I 00187 Roma Italia E rae@who.it PEMSEA Andrea De Angelis Ministry for the Environment Italy siar@pelagus.it
Wetland Management (2)		
International & Regional Conventions (2)	Secretariat, UNECE Convention on Protection and Sustainable Use of Transboundary Water and International Lakes *Water Convention(Rainer Enderlein E rainer.enderlein@unece.org
Marine Ecosystem Modeling (2)		

Harmonization of Environmental Standards		
Large Marine Ecosystems		
Pollution Control		
Information Management		
Project Management		
Oil Spill Response	Alaska Dept of Envir. Quality OPRC training course	Contact dann@iwlearn.org for info IMO or PEMSEA
Trainer Training		
Sustainable Livelihoods		
Law of the Sea		
Sustainable Tourism		
Transboundary Waters Governance		
Responsible Port & Shipping Management		
Reservoir Management		
Natural Resources Damage Assessment	Training manual and training course	PEMSEA
Sustainable Agriculture		
Engineered wetland operations		
Integrated Lake Watershed Management		
Municipal Water & Wastewater Management		
Total Quality Management		
Risk Assessment	Training course and manual	PEMSEA
Individual Processing		
How to introduce polluter pays principle		
How to initiate and implement GEF projects		
Training of trainers for all areas		
Solid waste management		
Evaluation of Incremental Costs		
Communications technology		
Natural Resources valuation	Training course and manual	PEMSEA
Voluntary codes for industry		
Communications planning		

B. EDUCATION

Needs	Resources	Contacts
Incorporation of IWRM and Environmental Management into high school, under-graduate and graduate curricula (13)		
Environmental Engineering (3)		
GIS and other data for Environmental Management (3)		
Environmental Assessment (2)		
Water Resources and Hydrological Engineering		
Institutional Management		
English Language		
International Waters Law	<u>Manuals and tools for implementing international convention</u>	<u>PEMSEA</u>
Social and Economic Monitoring		
Planning of Water and Natural Resources at Basin level		
High School student participation in Water Quality Monitoring		
Engineered Wetlands Technology		
Information Management		
Municipal Water and Waste Water Management		
Water Quality Analysis		
Integrated Ecosystem Management		
Distance Learning	<u>UNDP-GEF IW:LEARN project</u>	<u>dann@iwlearn.org</u>
Environmental Economics/Resource Valuation		
Responsible Port and Shipping Management		
International Environmental		

Policy		
Freshwater Biology and Limnology	<u>Dept.Biology, George Mason University</u>	<u>rcjones@gmu.edu</u>
Consumer environmental awareness		
Conflict Resolution		
Why and how to participate in environmental decisions		
Biotechnology		
Marine Biology/Ecology		

C. INSTITUTIONAL FRAMEWORKS

Needs	Resources	Contacts
Model for River Basin/Lake Basin Management (7) (Data, Information, Administration, Finance)		
Networking at all levels (6)		
Model for involving local governments (5)		
Institutionalization of Legal commitments (4)		
Capacity building institutions for river basin mgmt (4)	Potomac River Commission	chaywood@potomac-commission.org
Information access and exchange (3)		
Models for Regional Sea and LME Management(3)		
Institutions for water quality monitoring and management (regional and national) (2)		
International Environmental Educational Network		
Institutional structures for protected area management		
Promoting use of national experts		
Framework for exchanging lessons learned		
Model for Waste Water management		
Demand driven water management		
Models for Information Technology and data exchange (fisheries, etc.)	Dann Sklarew, IW:LEARN	dann@iwlearn.org
Ballast Water Management		
Interlinkages between institutions involved in IWRM (government levels & sectors)		
Models for sustainability (human, finance, etc.)		
Institutions for conflict resolution	P.Tallarico	ptallarico@marasconewton.com
Models for public		

participation		
Transition from technical data to political commitments		

D. POLICY AND STRATEGIC FRAMEWORKS

Needs	Resources	Contacts
Policies/Legislation to meet international legal obligations (10)		
Policies for facilitating stakeholder participation (5)		
Strategic action plans/programmes (5)	Examples of plan preparation	PEMSEA
Harmonization of national/regional policies (5)		
Sustainable land & water use policies for local communities(4)		
IWRM policies : Regional, National, Local (4)		
Policies for transboundary biosphere reserves		
Policies for sustainable tourism – industry, fisheries, energy transport, etc.		
EIA Policies		
Policies which integrate waters management from watersheds to coasts/LMEs	www.chesapeakebay.net www.epa.gov/ow	matuszesli@epa.gov klima.karen@epa.gov
Policies to promote ecological sanitation		
Operationalizing legislation through rules and regulations for stakeholders		
Policy models for good agricultural practices		
Enforcing environmental policies/legislation		
Integrating cross-cutting issues into environmental policy (gender, poverty, etc.)		
Monitoring & evaluation of environ. policies & legislation		
Inter-sectoral involvement in policy development		
Developed country policy models		
Policies for conflict resolution		

Human Resource development policy		
Partnership – industry, government and community		

E. SUSTAINABLE FUNDING MECHANISMS

Needs	Resources	Contacts
Environmental Funds (10)		
Revenue generation through economic instruments (fees/taxes/licenses) (8)		
Donor Commitment (7)		
Community involvement in waste management (5)	WHO ECEH Solid Waste Management Programme	Philip Rushbrook WHO ECEH Via F Crispi 10 I 00187 Roma Italia Fax 39 06 4877599
Sale of products and services (3)		
Economic valuation of natural resources to stimulate investment (2)		
Private sector role (2)		
Compliance with financial obligations to Regional Agreements		
Stakeholder participation in investments		
Full cost pricing of water		
Public /Private Partnerships	Batangas experience	PEMSEA
Sale of recycled waste and waste water		
Investment packages for SAPs		
Twinning arrangements		
Examples of watershed project/programme sustainability		
Investment corporation		
Country Ownership		
Building green accounting into IWRM		
NGO Involvement		
Research involvement - twinning		
National Banks		

F. RESEARCH RESULTS AND TOOLS

Needs	Resources	Contacts
Examples/Methodologies for Transboundary Diagnostic Analyses (4)		
Economic instruments in pollution control and ecosystem protection (3)		
Low cost sustainable agricultural practices adaptable to local needs		
3-dimensional oceanographic modeling		
User-friendly tools for implementing Integrated Water Resources Management (IWRM) concepts (2)		
Understanding interactions between surface and ground waters (2)		
Water Hyacinth control strategies		
Creating more government support for research programmes to increase knowledge base		
Integration of national research programmes with broader regional ones		
Need for common international standards for reservoir and dam safety		
Environmental Information Systems for basin-wide resource assessment and monitoring		
Mathematical models for sediment generation, transport and sedimentation		
Measures to prevent and control sediment erosion		
Cleaner industrial production techniques in lake and coastal watersheds		

Studies on environmental impacts of agricultural practices on water resources		
Research experiences related to land-based impacts on coastal area management, including effects on globally significant biodiversity		
Experience with shifting conservation approaches from land-based ecosystems to the land-river-coastal-ocean continuum		
Relationships between fisheries management and transboundary movements of stocks, biomass fluctuations, environmental variability and ecosystem functioning		
Research on environmental impacts of tourism and adaptive measures		
Research on environmental impacts of different fishing methods		
Strategies for improving implementation of international conventions		
Management plans and best practices for monitoring and mitigating ecosystem impacts of marine industries (oil/gas exploration, seabed mining, fishing methods)		
Approaches to setting water quality objectives and classification of water bodies		
Best practices in ICM	ICM Good practices in ten languages	PEMSEA
Modeling techniques for wetlands water quality		
Experiences in selecting constructed/rehabilitated wetland plant and fish species		
Experiences in marketing wetland by-products		

Water resources modeling		
Equitable management of water resources		
Methodologies for measuring and understanding dispersal and impact of radioactive contaminants		
Data management systems adapted for broad public use and dissemination		
Methods to define nutrient input limitations to maintain oligotrophic state of lakes		
Methods for evaluating non-point source pollution loads to lake basins		
Methods for lake fish stock inventories		
Pesticide studies of watersheds		
Systems for rapid assessment of water suitability for recreational use		
Software for calculating nutrient balances at farm level		
Case studies of impacts of introduced species on marine ecosystems		
Database of priority “source” ports for invasive marine organisms/catalogue of commonly occurring ballast water species		
Examples of modern MIS and communication technologies		
Tools for prioritization		
Communicating research results		

G. PROJECT DEVELOPMENT, MANAGEMENT, M&E

Needs	Resources	Contacts
Methods for project monitoring and evaluation, indicators (9)		
Strategies for increasing project development efficiency (7)		
Formalized mechanism(s) for exchange of experiences with other IW projects, including 'virtual' (6)		
Strategies for improving project consultation and participation techniques (5)		
Clear definitions and monitoring approaches for project process, stress reduction and environmental status indicators (2)		
Strategies for post-implementation project evaluation (2)		
Strategies to promote better transboundary integration and coordination of biodiversity protection and nature restoration projects		
Tendering documents and procedures		
Methods/requirements for GEF project development		
Simplification/Clarification/ reconciliation of different donor agency procedures		
Strategies for development of follow-on/replication projects		
Promotion and marketing		
How to keep project shadow accounts – involvement of UNOPS		
Roster of consultants		
Audit and risk management		