Training Objectives

“Introduce, Capacitate and Enhance Knowledge ” on...

• The Integrated Environmental Management (IEM) Series sub-series and initiatives for sound environmental decision-making.

• The use and importance of the IEM Series for DWA’s business.
## Overview of Training –

<table>
<thead>
<tr>
<th>Subseries 1.1</th>
<th>Administration of the IEM Series</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subseries 1.2</strong></td>
<td>Environmental Policy</td>
</tr>
<tr>
<td><strong>Subseries 1.3</strong></td>
<td>Consolidated Environmental Implementation and Management Plan (CEIMP)</td>
</tr>
<tr>
<td><strong>Subseries 1.4</strong></td>
<td>Integrated Environmental Management Framework (IEMF)</td>
</tr>
<tr>
<td><strong>Subseries 1.5</strong></td>
<td>Environmental Decision Support System (E-DSS)</td>
</tr>
<tr>
<td><strong>Subseries 1.6</strong></td>
<td>Environmental Best Practices Guidelines and Specifications (EBPG&amp;S)</td>
</tr>
<tr>
<td><strong>Subseries 1.7</strong></td>
<td>Environmental Monitoring and Auditing Guidelines</td>
</tr>
<tr>
<td><strong>Subseries 1.8</strong></td>
<td>Environmental Reporting Framework</td>
</tr>
<tr>
<td><strong>Subseries 1.9</strong></td>
<td>Sustainable Development Management System (SDMS)</td>
</tr>
<tr>
<td><strong>Subseries 1.10</strong></td>
<td>Environmental Legal Guide Booklet</td>
</tr>
</tbody>
</table>

**Day 1 = Strategic (Managers)**
## Overview of Training –

<table>
<thead>
<tr>
<th>Subseries 1.1</th>
<th>Administration of the IEM Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subseries 1.2</td>
<td>Environmental Policy</td>
</tr>
<tr>
<td>Subseries 1.3</td>
<td>Consolidated Environmental Implementation and Management Plan (CEIMP)</td>
</tr>
<tr>
<td>Subseries 1.4</td>
<td>Integrated Environmental Management Framework (IEMF)</td>
</tr>
<tr>
<td>Subseries 1.5</td>
<td>Environmental Decision Support System (E-DSS)</td>
</tr>
<tr>
<td>Subseries 1.6</td>
<td>Environmental Best Practices Guidelines and Specifications (EBPG&amp;S)</td>
</tr>
<tr>
<td>Subseries 1.7</td>
<td>Environmental Monitoring and Auditing Guidelines</td>
</tr>
<tr>
<td>Subseries 1.8</td>
<td>Environmental Reporting Framework</td>
</tr>
<tr>
<td>Subseries 1.9</td>
<td>Sustainable Development Management System (SDMS)</td>
</tr>
<tr>
<td>Subseries 1.10</td>
<td>Environmental Legal Guide Booklet</td>
</tr>
</tbody>
</table>

---

**Day 2**

= Strategic (Managers) & Operational (implementors)**
### Overview of Training –

<table>
<thead>
<tr>
<th>Subseries</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Administration of the IEM Series</td>
</tr>
<tr>
<td>1.2</td>
<td>Environmental Policy</td>
</tr>
<tr>
<td>1.3</td>
<td>Consolidated Environmental Implementation and Management Plan (CEIMP)</td>
</tr>
<tr>
<td>1.4</td>
<td>Integrated Environmental Management Framework (IEMF)</td>
</tr>
<tr>
<td>1.5</td>
<td>Environmental Decision Support System (E-DSS)</td>
</tr>
<tr>
<td>1.6</td>
<td>Environmental Best Practices Guidelines and Specifications (EBPG&amp;S)</td>
</tr>
<tr>
<td>1.7</td>
<td>Environmental Monitoring and Auditing Guidelines</td>
</tr>
<tr>
<td>1.8</td>
<td>Environmental Reporting Framework</td>
</tr>
<tr>
<td>1.9</td>
<td>Sustainable Development Management System (SDMS)</td>
</tr>
<tr>
<td>1.10</td>
<td>Environmental Legal Guide Booklet</td>
</tr>
</tbody>
</table>

Day 3  
Operational (implementors)
Module 1: Setting the Scene
- Background
- Introduction
- Legislative Framework
- Principles of IEM
- Components of the IEM Series

Module 2: Legal Guide
- Direct vs. Indirect legislation
- User guide and database
- Keys
- Exercise

Module 3: Environmental Policy
- 3 components of the Environmental Policy
- IEM Imperatives

Module 4: CEIMP
- Purpose
- Environmental Implementation Plan
- Environmental Management Plan
Module 5: IEMF
- Purpose
- History / Background
- The Plan-Do-Check Act Cycle
- DWA’s alignment with the IEMF Process
- Exercise

Module 6: E-DSS
- Background
- DWA’s role / mandate
- E-DSS Checklists
- E-DSS Database
- Exercise
Overview of Training – Day 3

Module 7: EBPG&S
- What are the EBPG&S?
- Project life-cycle
- EBPG&S Monitoring and Auditing Checklists
- Environmental Awareness
- Exercise

Module 8: Environmental Monitoring & Auditing
- What is the difference between monitoring and auditing?
- What is monitoring - types, process and guidelines
- What is auditing - types, process and guidelines
- Exercise
What do you understand under the term “environment”?
What is the “Environment”? 

“Environment” = The biophysical, social and economic components, as well as the connections within and between these components.
How does the “environment” form part of your business?

What are your line function responsibilities in terms of the “environment”? 

water affairs
Department: Water Affairs
REPUBLIC OF SOUTH AFRICA
Exercise

Identify how DWA impacts on and manages the environment

<table>
<thead>
<tr>
<th>Water Resource Management</th>
<th>Water Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementor</td>
<td></td>
</tr>
<tr>
<td>Regulator</td>
<td></td>
</tr>
<tr>
<td>Commentary Authority</td>
<td></td>
</tr>
<tr>
<td>Examples</td>
<td>Water Resource Management</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Implementor</td>
<td>• Construction of gauging weir</td>
</tr>
<tr>
<td>Regulator</td>
<td>• Water use regulation</td>
</tr>
<tr>
<td>Commentary Authority</td>
<td>• Filling stations</td>
</tr>
<tr>
<td></td>
<td>• Industrial facilities</td>
</tr>
</tbody>
</table>
What is “Environmental Management”?

Who or what are we managing the environment for?

What components of the environment should we manage?

Who decides how the environment should be managed?

What timeframe are we working on?

Do we know how to manage the different components of the environment?

Is this a continuing issue or will environmental management go away?
What is “Environmental Management”? 

Principles

Tools
What is “Environmental Management”? 

- **People**
  - Social
  - Economic
  - Ecology
  - Viable
  - Equitable
  - Sustainable
  - Bearable

**PLANET**

- Principles
- Tools
How has “Environmental Management” evolved?
How has “Environmental Management” evolved?
How has “Environmental Management” evolved?

- EIA (& EMP)
- Water Use Authorisation
- Emissions permit

Evolution of Environmental Management

Denial
Reactive
Compliance
How has “Environmental Management” evolved?

E.g.

- Strategic Environmental Assessment
- Due Diligence Audit
- Life Cycle Assessments
How has “Environmental Management” evolved?

Evolution of Environmental Management

- Denial
- Reactive
- Compliance
- Proactive
- Integrated systems

Plan | Do | Act | Check
How has “Environmental Management” evolved?
How has “Environmental Management” evolved?

Unprepared ➔ Aware/reactive ➔ Pro-active ➔ Mainstreaming ➔ Mature/highly integrative

Steps Towards Business Excellence

EMS

- 1960: Waste / cost / non-compliance
- 2000: Pollution prevention
- Compliance - proactive
- Compliance - reactive

Environmental cost accounting
Partnerships
Product Stewardship /LCA
Integrated management systems

Global view
Outward view
Inward view
Environmental Management is an integral part of everyone's business.
What is Integrated Environmental Management?
What is Integrated Environmental Management?

Agenda 21

Philosophy

Assessment and Management of -

Activity ➔ Aspects ➔ Impact ➔ Life cycle
What is Integrated Environmental Management?

Agenda 21

Philosophy

Assessment and Management of -

Activity  ➔ Aspects ➔ Impact

Principles

Life cycle
What is Integrated Environmental Management?

“Environmental Principles”=

• Fundamental truth - foundation for a system of belief/behaviour/chain of reasoning.
• Chapter 1 of NEMA lists environmental principles –
  o Apply to actions of all organs of state that may significantly affect the environment.
  o Serve as guidelines for environmental decision-making;
  o Guide the interpretation, administration and implementation of NEMA and other environmental law.
Activity = a policy, plan, programme, or project, either being planned or implemented [e.g. operation of a sewage pumpstation]
**Activity**

An activity is a policy, plan, programme, or project, either being planned or implemented. For example, the operation of a sewage pumpstation.

---

**Aspect**

An aspect is an element of an organisation’s activities, products or services that can interact with the environment. For example, sewage discharge from a pumpstation.
**Activity**

Activity = a policy, plan, programme, or project, either being planned or implemented
[e.g. operation of a sewage pumpstation]

**Aspects**

Aspect = an element of an organisation’s activities, products or services that can interact with the environment
[e.g. sewage discharge from pumpstation]

**Impact**

Impact = Adverse of beneficial change to the environment resulting from an environmental aspect
[e.g. fish deaths as a result of the discharge]
characteristics of Environmental Management
characteristics of an Environmental Management

Leads to a change in behaviour

Fails to consider life cycles (resources & products)

Leads to increase in waste

Transfer negative effects from one environmental medium to another

Promote reuse and recycling

Promote use of efficient technology

Focus on causes, not symptoms

Focus on causes, not symptoms
characteristics of an Environmental Management

+ Leads to a change in behaviour

- Fails to consider life cycles (resources & products)

- Leads to increase in waste

+ Transfer negative effects from one environmental medium to another

+ Promote reuse and recycling

+ Focus on causes, not symptoms

+ Promote use of efficient technology

-
International Best Practices

TQM Approach
Integrating TQM and EMS in Environmental Management –
## International Best Practices

### Parallels between TQM & EMS

<table>
<thead>
<tr>
<th>TQM</th>
<th>EMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>P-D-C-A</strong> cycle (continual improvement)</td>
<td>Environmental Policy, planning, implementation and operation, checking and corrective action, and management review cycle (continual improvement)</td>
</tr>
<tr>
<td>2. Both rely on an Environmental Policy to provide direction and to convey top management’s vision with regards to environmental management</td>
<td></td>
</tr>
<tr>
<td>3. Employee involvement is essential</td>
<td></td>
</tr>
<tr>
<td>4. Senior management must be involved and committed</td>
<td></td>
</tr>
<tr>
<td>5. Capacity building, training and awareness creation is an integral part of the entire process</td>
<td></td>
</tr>
<tr>
<td>6. Both are long-term processes</td>
<td></td>
</tr>
<tr>
<td>7. Holistic thinking through customer identification</td>
<td></td>
</tr>
<tr>
<td>8. Provide a competitive edge</td>
<td></td>
</tr>
<tr>
<td>9. Promote sustainable development</td>
<td></td>
</tr>
</tbody>
</table>
Organizing good environmental practices according to EMS framework

International Best Practices

Assessing
- Identifying/evaluating risk
- Identifying/managing issues
- Identifying/understanding requirements

Planning
- Influencing/issues requirements
- Selling policy direction
- Establishing performance standards/guidance
- Obtaining permits/approvals

Implementing
- Managing compliance
- Managing risks
- Preventing/reducing unwanted impacts
- Remediating damage
- Emergency response
- Improving customer value

Reviewing
- Measuring performance
- Assuring performance
- Communicating performance

Supporting
- Training and awareness
- Documenting/record-keeping
- Managing information

Water Affairs
Department of Water Affairs
Republic of South Africa

40
International Best Practices

MARKET BASED

CO-REGULATION

COMMAND & CONTROL

CIVIL INSTRUMENTS

Combination of tools

Environmental Management & Governance Instruments
International Best Practices

MARKET BASED
- Incentives and awards
- Environmental charges
- Pricing policies
- Subsidies
- Resource charges
- Green purchasing
- Tradable licenses
- Disincentives

Pricing Strategies:
- Waste Discharge Charge System
- Water Resource Management Charge; Raw water tariffs

CO-REGULATION
- ISO 14001
- Delegation of management functions to Regions, CMA’s and Local Government
- Controlled self-regulation
- EMS
- Co-operative Agreements
- International agreements

COMMAND & CONTROL
- Environmental Law
- Inspections
- Audits
- Prosecutions
- Authorisation, license
- Penalties
- Environmental standard

Water Use regulation and authorisation

CIVIL INSTRUMENTS
- Consultative and Participative management;
- 2020 Water Vision Education Programme

Education
- Public awareness
- Access to info
- Public participation
- Green rights
- Eco-labelling

Environmental Management & Governance Instruments for DWA-related functions
What is the **environment**?

How does DWA **interact** with the environment?

What is **environmental management**?

What is **Integrated Environmental Management**?

What are **International Best Practices**?
End