Partnership for Action on Computing Equipment (PACE) under the Basel Convention

PACE Outcomes

COP 13 Meeting Side Event
29 April 2017, Geneva, Switzerland

Marco Buletti
Co-chair PACE Working Group
Federal Office for the Environment
Switzerland

Guidance Document on Environmentally Sound Management of Used and End-of-Life Computing Equipment

Guidance Document

It contains Executive Summaries and Recommendations taken from the following PACE documents:

➢ Report on Environmentally Sound Management Criteria Recommendations

➢ Guideline on Environmentally Sound Testing, Refurbishment and Repair of Used Computing Equipment

➢ Guideline on Environmentally Sound Material Recovery and Recycling of End-of-Life Computing Equipment

➢ Glossary of Terms- terms that are used in all PACE documents

Guideline on environmentally sound testing, refurbishment and repair of used computing equipment

Guideline on environmentally sound testing, refurbishment and repair of used computing equipment

➢ It covers measures that refurbishment and repair facilities and facility managers may put in place to better ensure the environmentally sound management.

➢ One of the most important elements in the guideline is guidance on the testing to be applied for used equipment prior to reuse to ensure full functionality. Functionality tests have been recommended and have been identified in the guideline.

➢ It contains 18 recommendations under 3 sub-heading: facility measures to support ESM, refurbishment/repair process, and marketing and redeployment of refurbished or repaired computing equipment.

Guideline on environmentally sound material recovery and recycling of end-of-life computing equipment

UNEP

PARTNERSHIP FOR ACTION ON COMPUTING EQUIPMENT

PROJECT 2.1

GUIDELINE ON ENVIRONMENTALLY SOUND MATERIAL RECOVERY
AND RECYCLING OF END-OF-LIFE COMPUTING EQUIPMENT

Approved by the PACE Working Group – 17 February 2011

Revised – 10 May 2013

Guideline on environmentally sound material recovery and recycling of end-of-life computing equipment

➢ It provides guidance on recycling facility practices, supported by series of flow charts.

➢ It identifies how materials should be safely stored.

➢ It discusses material recovery processes.

➢ It identifies legal requirements for material recovery and recycling facilities.

➢ It identifies commercial considerations when establishing material recovery operations.

➢ It contains 24 recommendations under 5 sub-headings: Goals and Objectives, Development of Recycling Infrastructure, Facility-level Guidelines, Design for Recycling, and Future Collaborative Steps.

John Joseph Myslicki
*September 15, 1947 - †August 18, 2012

Thank you!

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Strategies, Actions and Incentives to Promote Environmentally Sound Management

Ross Bartley

Co-chair PACE Project Group 5.1

Bureau of International Recycling

The world federation of the recycling industries

Routes to Environmentally Sound Management
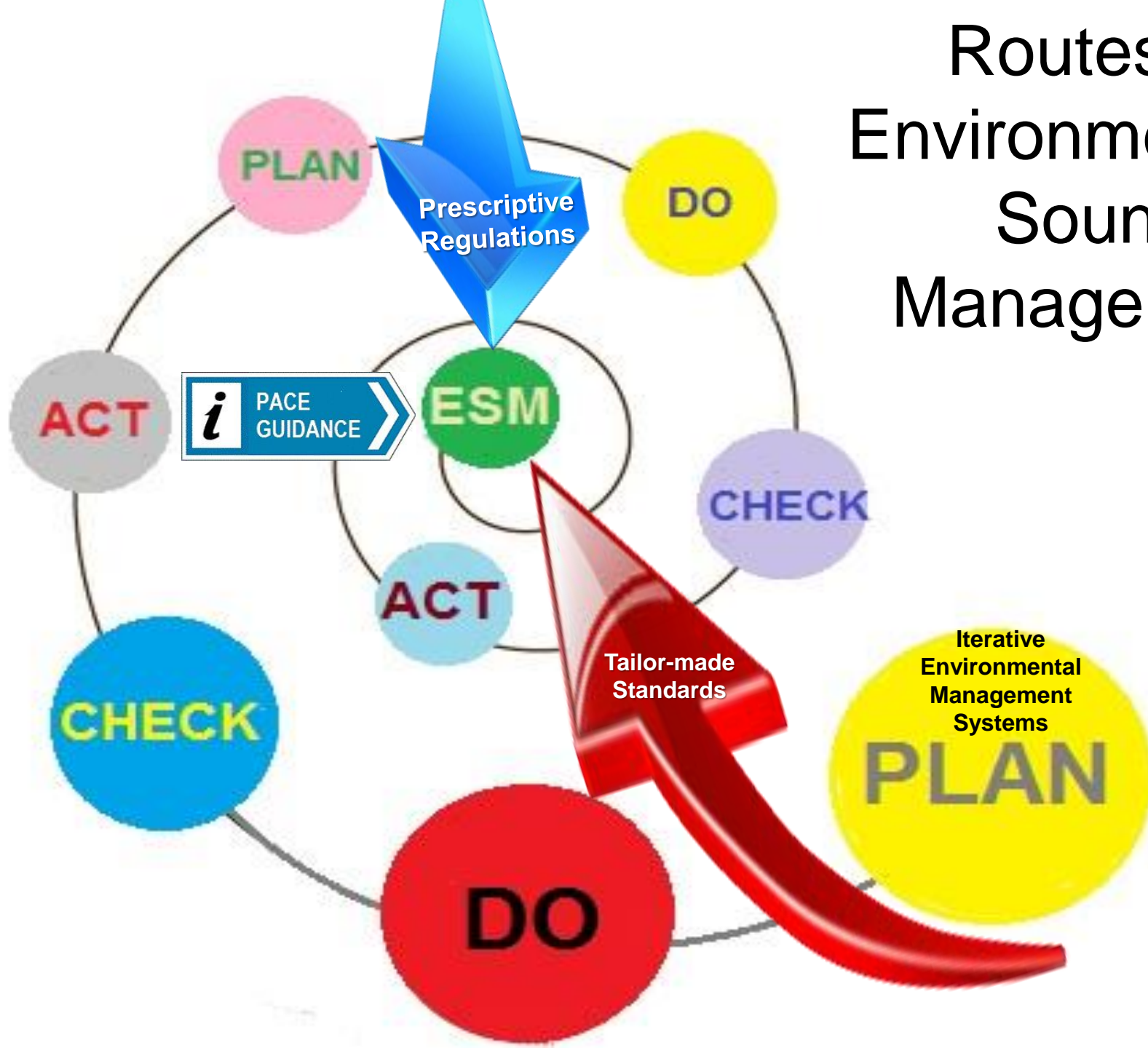
Report includes:

- The basic requirements of a national and regional strategy for environmentally sound management of computer equipment waste;

- Guidance to developing countries and countries with economies in transition in their policy formulation and implementation;

- Barriers preventing developing countries and countries with economies in transition from implementing collection and take-back schemes as well as other strategic activities;

- Barriers preventing producers from starting up voluntary schemes in certain countries;

- Options to overcome these barriers.

Identify and make publicly accessible information on existing certification scheme:

- ➢ Canadian Stewardship programs
- ➢ WEEELABEX
- ➢ R2
- ➢ e-Stewards
- ➢ AS NZ 5377

Thank you!
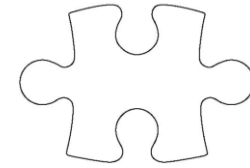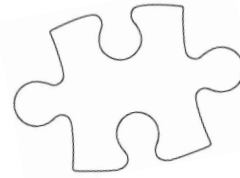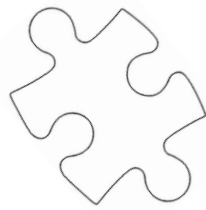
Manual on Steps to Establish and Implement Environmentally Sound Management for Used and Waste Computing Equipment

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PACE
Partnership for Action on
Computing Equipment

BASEL CONVENTION

Isabelle Baudin
Co-chair PACE Project Group 1.1
Federal Office for the Environment
Switzerland

Five steps to ESM

- 5 steps to ESM for governments
- 5 steps to ESM for the private sector

Example 5 steps to ESM for Governments

1 Assess the current realities at national level

1

Assess the current realities at national level

The objective of step 1 is to assess the current realities related to used and waste computing equipment to get a national overview of the situation in your country, including baseline estimates of e-waste flows and practices, in order to have all the important elements from a government's perspective to build an action plan / strategy.

National and/or state or provincial legislative and regulative review

National legislative context:

- Does national and/or state or provincial legislation exist for solid and hazardous waste management in your country?
- Does it cover used and waste computing equipment?
- Are there any other pre-existing national laws and regulations that may be applicable to the various aspects of the ESM of used and waste computing equipment?
- Are there any related laws at the state or provincial level?
- Are national and sub national laws being enforced?
- Does any international or national technical directive on ESM of used and waste computing equipment exist?
- Does the country use any international standard or indicators to assess their used and waste computing equipment management techniques?
- Does the country implement any international standards to assist with the recovery of rare, strategic and precious metals from used and waste computing equipment?

Domestic laws pertaining to exports, imports, and transits of used and waste computing equipment:

- Are there national laws that cover the import, transit, and export of used and waste computing equipment?
- Do the regulations vary for different types of shipments; e.g., repaired computers vs. unprocessed computers?
- Are these laws being enforced?

Multilateral environmental agreements (MEAs):

- Is the country party to the Basel, Rotterdam and/or Stockholm Conventions? Does the country follow the SAICM?
- If so, has your country transposed your legally-binding obligations under these agreements into your domestic laws ("enabling legislation")?
- Is (Are) the enabling legislation(s) for these MEAs the same as the one(s) previously identified for dealing with used and waste computing equipment management?

National and/or state or provincial legislative and regulative review

- If not, do any specific conditions applicable to the ESM of used and waste computing equipment exist within the enabling legislation?

Regional environmental agreements (REAs) regarding transboundary movements (export, import, transit) of used and waste computing equipment:

- Is the country a party to any regional waste and chemicals related MEA (e.g. Bamako Convention, Waigani Convention, Izmir Protocol, Central American Protocol)?
- Is (Are) the enabling legislation(s) for these REAs the same as the one(s) previously identified for dealing with used and waste computing equipment management?
- If not, do any specific conditions applicable to the ESM of used and waste computing equipment exist within the enabling legislation?

Trade agreements:

- Is the country a signatory to any bilateral or other applicable trade agreement(s)?
- If yes, has your country transposed your legally-binding obligations under these agreements into your domestic laws ("enabling legislation")?
- If yes, do any conditions apply to the transboundary movements of wastes, especially used and waste computing equipment?

Stakeholder identification

Identify all relevant stakeholders:

For example all government agencies which play (or should play) a role in managing used and waste computing equipment, persons from government, collection centres, repair and refurbishing facilities, brokers, recycling/recovery facilities, solid waste and hazardous waste landfills (with and without liners and leachate controls), waste-to- energy incinerators, transporters, storage/transfer facilities, the informal sector, producers/manufacturers, distributors, importers, exporters, retailers, business association(s), research centres and universities, formal and informal disposal sites, waste generators (such as households and businesses), relevant international organizations, standards developing organizations, non-governmental organizations and any others who are dealing with used and waste computing equipment.

> Stakeholders are people or companies that are from far or near concerned with the project, activity or program

Estimating volumes of used and waste computing equipment

- Try to estimate domestic flows, by quantity and type per year, of used and waste computing equipment[1]:
- Estimate the volume of used and waste computing equipment that is available for reuse, recycling and recovery in your country annually.
- Estimate the volume that is currently being collected and reused.
- Estimate the volume that is currently being collected and recycled and recovered.

[1] See References UNU-IAS and Step e-waste world map: http://www.step-initiative.org/step-e-waste-world-map.html

Five Steps to ESM for governments

1

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The objective of step 1 is to assess the current realities related to used and waste computing equipment to get a national overview of the situation in your country, including baseline estimates of e-waste flows and practices, in order to have all the in[...]
an action plan / s[...]

National and/or stat[...]
or provincial legisla[...]
and regulative revie[...]

National legislation, stakeholder identification, estimation of the volume of waste computing equipment, technicability, collection, public awareness, financing aspects …

– Are these laws being enforced?

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– If so, has your country transposed your legally-binding obligations under these agreements into your domestic laws ("enabling legislation")?

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9

Five Steps to ESM for governments

National and/or state or provincial legislative and regulative review

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[...]ts of wastes,[...]

[...] role in mana-[...]ent, collection[...]ry facilities,[...]nd leachate[...]sfer facilities, the[...]xporters, retai-[...]mal and informal[...]es), relevant[...]n-governmen-[...]ste computing[...]

[...]ncerned with[...]

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Example 5 steps to ESM for Governments

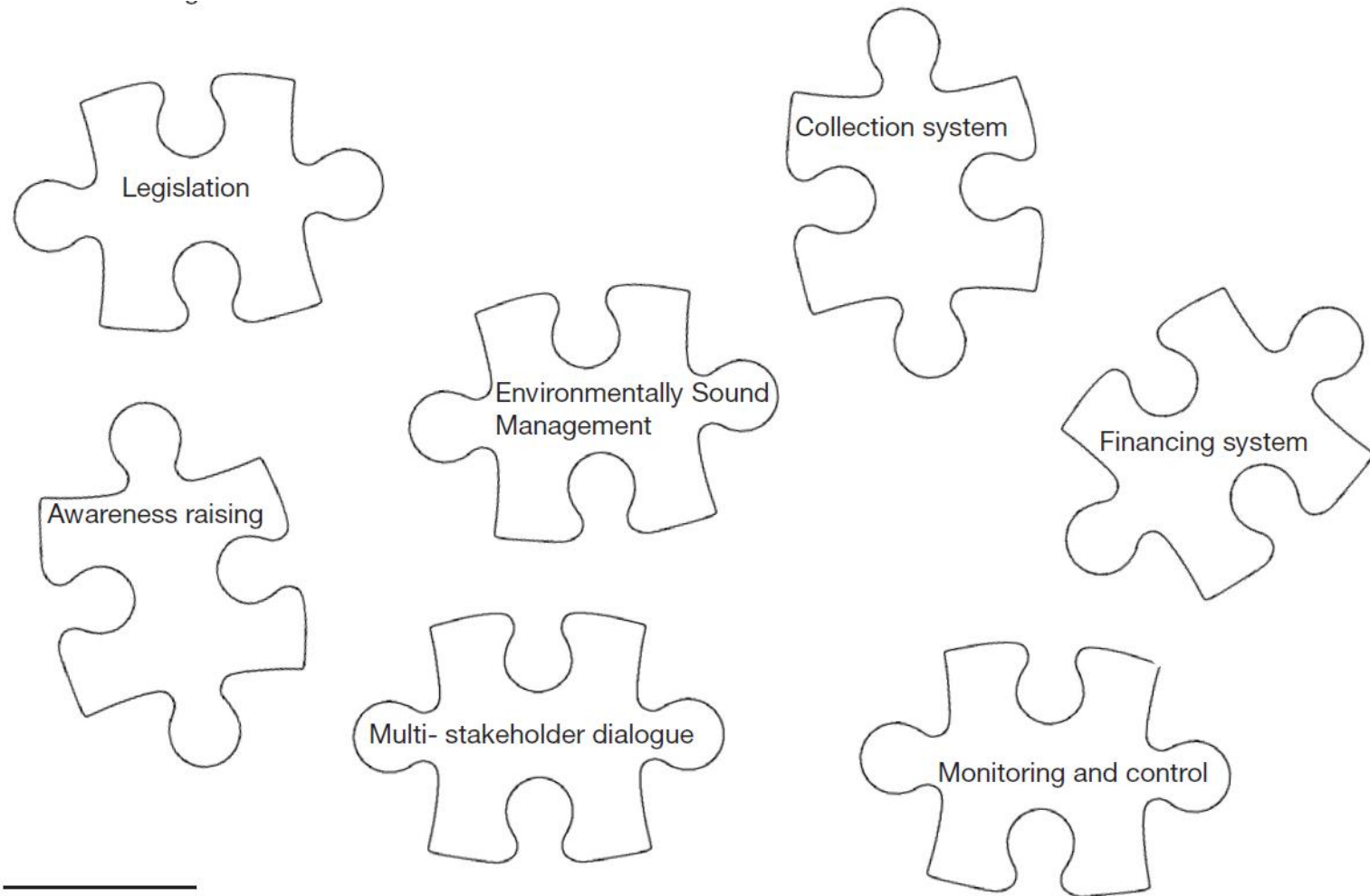**1** Assess the current realities at national level

2 Collect existing information

3 Identify gaps and needs

To be successful: ESM needs the compilation of several puzzle parts

Example 5 steps to ESM for Governments

1 — Assess the current realities at national level

2 — Collect existing information

3 — Identify gaps and needs

4 — Define relevant needs and priorities

5 — Implement activities

Go for ESM of Computing Equipment!
Thank you!

Marco Buletti, Switzerland

Oladele Osibanjo, BCRC-Nigeria