

One step ahead: Indicators for Clean Ports

Malte Siegert, Head of Environmental Policy NABU Hamburg

June 1st 2015



Environmental Impacts of Ports

- **Air Pollution / GHG**
- **Noise**
- **Light Emissions**
- **Land Consumption**
- **Waste**
- **Water Quality**

Influence on:

- **Community**
- **Employees**
- **Biodiversity**
- **Habitats**



Challenge: Different Models and Responsibilities

- **Private Ports**
- **Public Ports / Port Authorities**
- **Tenants**
- **Infrastructure**

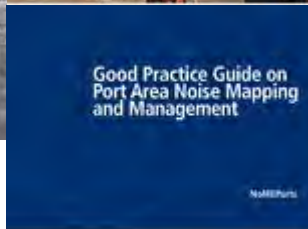
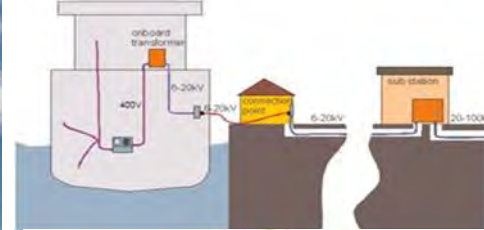
Port Management Models

Port Type	Infrastructure	Super structure	Stevedoring labour	Other functions
Service port (Major Indian Ports)	Public	Public	Public	Mainly public
Tool port (France, some African nations)	Public	Public	Private	Mainly public
Landlord port (Antwerp, Rotterdam, Singapore etc)	Public	Private	Private	Mainly private
Private port (UK, New Zealand)	Private	Private	Private	Mainly private

Beyond Legislation?

- **What are ports obliged to do? (Legislation / Compliance)**
- **What should ports do? (CSR)**
- **What could ports do? (Limits for investments, collection of data)**

Many Measures...



...much success?

- **Improvement measured?**
- **By whom?**
- **What was / is the target?**
- **Are results comparable to other ports? (level playing field)**

Measuring Environmental Performance

- 1. Inventory (base line: collection of data)**
- 2. Development / Integration / Adaption of (existing) Indicators**
- 3. Action Plan (measures, targets and intervals)**
- 4. Action / Measures**
- 5. Analysis / Relation / Adjustment (base line data)**
- 6. Adaption of Action Plan for Future Interval**
- 7. Reporting**

Indicators for Clean Ports

Indicators should be **SMART**:

- **S**pecific
- **M**easurable
- **A**ccepted
- **R**ealistic / **R**elevant
- **T**imely

▶ Indicators as individual as necessary,
as general as possible (comparability)

Indicators for Clean Ports

Platforms:

e. g. ECOPORTS, WPCI, ESPO, IAPH

Tools / Hints for Indicators:

GRI, PERS, SDM, ESI, EPI, EMS, Green Guide Annexes



Indicators for Clean Ports: Air Quality

Cat.	Unit / M.	Scale	Ind.	Ref.	Meas.
Air Quality	Nox, Sox, PM10 / 2.5 /0,1	kg emitted, %/ ppm of immission	% emissions, saved, exeedance LV, control frequency, in harbour	TEU, employees, business volume outside harbor	?
	GHG	kg	tons /kg saved	TEU, tons	?

Indicators for Clean Ports: Land Consumption

Cat.	Unit / M.	Scale	Ind.	Ref.	Meas.
Land C.	Area used	ha	In harbour	Outside harb.	?
			€ / ha	empl. / a TEU / ha € / ha	
	Rented space	€	€ / ha In harbour	Outside h.	?
					?
	Rented space	€	€ / ha In harbour	Outside h.	?

Indicators for Clean Ports: Energy

Cat.	Unit / M.	Scale	Ind.	Ref.	Meas.
Energy	Electricity	kwh	Kwh cons. / savings (terminals, buildings)	TEU, business volume	?
	Renewables	%	% subst. in harbour	outside h.	?
	Fossile Fuels (Diesel, LNG, LPG etc.)	ltr., tons	ltr., € saved	TEU, business volume	?

Indicators for Clean Ports: Biodiversity

Cat.	Unit / M.	Scale	Ind.	Ref.	Meas.
Biodiv.	Flora Fauna	Number, %	number % F+F, favorable condition	Base Line	?
	Habitats	%	% of habitat, favorable condition	of total port area	?

Indicators for Clean Ports: Waste

Cat.	Unit / M.	Scale	Ind.	Ref.	Meas.
Waste	Water discharge	m ³ / Barrel Ton	m ³ / Barrel Ton, method of treatment, % of EU-LV	TEU, employees, business volume, tons total volume	?

Indicators for Clean Ports: Waste

Cat.	Unit / M.	Scale	Ind.	Ref.	Meas.
Waste	Solid Waste	m ³ /% saved, origin, disposal method	tons, m ³ %, method of treatment,	TEU, employees, business volume	?

Message

- **Ports need inventories to rate their performance**
- **Ports need comparable indicators**
- **Green performance in ports needs to be affordable**
- **Green efforts in ports must not be a disadvantage**

NABU: Projects and Issues

Future:

- Application for Project: „Greening Ports“ (Indicators)
- Application for Project: „Emission Measurements in Ports“

Current:

- Cruise Ships
- Container Ships
- EU LIFE+ „Clean Air in Ports“



Thanks for your attention!



NABU Hamburg

Malte Siegert

Klaus-Groth-Str. 21

20535 Hamburg

Tel. +49 (0)40.69 70 89-0

Fax +49 (0)40.60 70 89-19

info@NABU-Hamburg.de

www.NABU-Hamburg.de

