RAWFILL
KICK OFF EVENT
Liège, 7th JUNE 2017
RAWFILL ENHANCED INVENTORY FRAMEWORK & DECISION SUPPORT TOOL
Waste is not a problem, you just have to throw them away
RAWFILL CONCEPT

WP M Project management

WP T1 Enhanced Inventories Framework

WP I 1, I 2 – LF Geophysics

WP T3 – Demonstration of RAWFILL methodology

WP C Communication

WP Long Term Effects

RAWFILL Infographics: links between WPs & Demonstration Phase

Interreg North-West Europe RAWFILL
European Regional Development Fund
HOW IT WILL WORK

Use RAWFILL Inventory framework

5 000 LFS

Eliminate all sites where obviously no interest for LFM at this time

DST LEVEL 1 Filter
- Quick scan
- Screen/Eliminate

500 LFS

Not enough Data to use DST
- Eliminate

Enough Data to use DST

DST LEVEL 2 Priorise
- Rank
- Classify

X PROJECTS

NB: DST + geophysics can be used also to rank + survey a single LF when classification limits will be fixed
NOWADAYS WE HAVE
A GOOD IDEA OF WHAT WE THROW AWAY
(even it does not end up in a landfill any more)
BUT WHAT ARE OUR 100 000 LANDFILLS MADE OF?
A Landfill Inventory is a list of landfills from a given geographical area and containing for each landfill a list of characterisation data, mostly related to physical planning and environment.

An Enhanced Landfill Inventory is a list of landfills from a given geographical area and containing for each landfill a list of characterisation data + a list of data allowing to evaluate the LFM potential of each LF.
ENHANCED INVENTORIES: INCREASE KNOWLEDGE

An Enhanced Inventory is an inventory of landfills containing suitable information about the landfills materials content allowing to perform LFM projects after prioritisation with DST.
LFs INVENTORIES vs ENHANCED LF INVENTORIES

Region A | Region B | Private 1 | Private 2 | Country C

Rawfill EIF
ENHANCED INVENTORIES: INCREASE KNOWLEDGE

RAWFILL supplies an EIF structure, i.e. a list of fields that will be helpful for evaluating LFM potential sites.

RAWFILL proposes a structure and not an inventory with data inside.

To obtain missing data related to landfill content, RAWFILL proposes a new methodology based on geophysics.

Evaluating sites and projects will be done through RAWFILL decision support tool.
ENHANCED INVENTORIES:
EXAMPLE OF FIELDS

- LANDFILL (MAIN) TYPE
- LANDFILLING PERIOD
- LANDFILL VOLUME (SURFACE + HEIGHT)
- SURROUNDINGS
- ACCESSIBILITY
- MISSING: RESOURCE DISTRIBUTION MODEL
ENHANCED INVENTORIES:
EXAMPLE OF FIELDS

- 3D model of LF volume
- X T of Fe a 85.3% as Fe and 12.3% as Fe2O3
- Y T of Al, 99%, massive pieces
- Z T of PE
- ...
ENHANCED INVENTORIES:
WHAT IS A RDM?
ENHANCED INVENTORIES:
RAWFILL TASKS

- COMPILING EXISTING LANDFILL INVENTORY STRUCTURE
ENHANCED INVENTORIES:
RAWFILL TASKS

- BENCHMARKING LFM INITIATIVES (related to RAWFILL purpose)
ENHANCED INVENTORIES:
RAWFILL TASKS

- COMPILING LANDFILL SURVEY METHODS & PRICES
ENHANCED INVENTORIES:
RAWFILL TASKS

- BUILT THE ENHANCED INVENTORY STRUCTURE
DECISION SUPPORT TOOL: Selecting relevant LFM projects

The Decision Support Tool is a multicriteria analysis system Used to evaluate LF sites and LFM projects

4 large sectors:
- Environmental impacts
- Social/societal impacts
  - Technological
  - Economical
DECISION SUPPORT TOOL: Selecting relevant LFM projects

A 2 STEPS APPROACH:
- PRELIMINARY RANKING
- (ADDITIONAL DATA COLLECTION: HISTORY + FIELD SURVEY = Resource Distribution Model)
- PROJECTS RANKING
DEcision support tool

Environment

- Main environmental indicators
  - BIOGAS
  - LEACHATES
  - GROUND/WATER POLLUTION

- What if...there is no project?
SOCIAL

- Social pressure to suppress landfill
- NIMBY (social pressure not to suppress landfill !)
- Project duration

- What if...there is no project?
ECONOMY

- Resources buried in the landfill and their distribution
  - Metals
  - Plastics
  - Organic materials
  - Gravels and stones
  - Others
- Pressure on land
- Price of capping, postmanagement, etc.
- Vicinity of valorisation plants
- Transportation
- Main project pricing elements...
TECHNICAL

- Main project specifications
  - Easy or complex?
  - Geometry
  - Leachates & biogas
  - Digging method
  - On-site sorting plant
  ...

DECISION SUPPORT TOOL

RAWFILL - RAW materials from landFILLs

Interreg
North-West Europe
RAWFILL

European Regional Development Fund
SELECT INDICATORS
GIVE A WEIGHT
TEST PHASE

- On Well known landfills
- On 2 RAWFILL pilot tests
  (Fine tuning of EIF & DST)
DECISION SUPPORT TOOL

WP T2 DST
Use EIF & fill datasheets for LF1 & LF2 with LF geophysics data from WP 11 & 12

DST Processing

LFM on LF 1:
85% profitability
LFM on LF 2:
25% profitability

Environment Social Technology Economic

Landfill 1

Landfill 11

Landfill 2

Landfill 10

Landfill 9

Landfill 8

Landfill 7

Landfill 6

Landfill 5

Landfill 4

Landfill 3
IDEAL SITUATION

+ NEEDS FOR REMEDIATION
+ GOOD PREDICTIONS
+ GOOD RESOURCES POTENTIAL
(+ GOOD CONTEXT)

= PROFITABLE
(& sustainable)
PROJECTS!
NOW EVERYTHING IS CRYSTAL CLEAR…

LET’S DO A GOOD JOB ALL TOGETHER!
Thank you!

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