



Arab Renewable Energy and Sustainability Society
الجمعية العربية للطاقة المتجددة والاستدامة



ARESS

Towards a greener future

ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA (ESCWA)

The Regional Conference on: "Renewable Energy and Sustainable Development in Rural Areas of the ESCWA Region"

26 - 28 November 2013, Rabat, Morocco.



AN ASSOCIATION FOR...

- 1) **Promoting cooperation and common standards for RE, EE and sustainable development in view of Good Governance.**

POLICIES HARMONISATION BETWEEN ARAB/EU REGIONS

- 2) **Proper Technologies and Know-How Transfer for RE, EE and sustainable development within the Arab region by strengthening collaboration with European Union and other international organisations and entities.**

KNOW-HOW HARMONISATION BETWEEN ARAB/EU REGIONS

- 3) **Market promotion for RE, EE and sustainable businesses between Arab and European countries**

SMART SUPPLY-CHAINS BETWEEN ARAB/EU REGIONS

OUR KEYWORD: COOPERATION TO HARMONISATION

COMMISSIONS to be set up

POLICY

SMART GRIDS/SMART CITIES

RE SOURCES

EE

GHG

WATER USE MANAGEMENT

SUSTAINABILITY

MULTIDISCIPLINARY
APPROACH ALWAYS
PREFERRED, INCLUDING
GLOBAL COVERAGE OF
SUSTAINABILITY ISSUES IN
RE AND EE
PROJECTS

ARESS
NOT ONLY FOR
TECHNICAL EXPERTISE
BUT TO SUPPORT THE CIVIL
SOCIETY, FINAL USERS,
EDUCATION...

ADDED VALUE TO EXISTING INITIATIVES

**NETWORK WELL DISTRIBUTED IN THE COUNTRIES
FOR REAL PROMOTION WITHIN LOCAL COMMUNITIES!**

**NO OVERLAPPING
NO DISPERSION OF FUNDS AND PERSONNEL**

ALL COLLEAGUES HAVE BEEN/ARE INVITED TO JOIN.

ARESS IS ESTABLISHING A LIST OF EXPERTS AMONG ITS MEMBERS IN ORDER TO PRO-ACTIVELY COLLABORATE WITH OTHER INTERNATIONAL INITIATIVES or PROJECTS.

FOR EXAMPLE:



GLOBAL COVERAGE: POLICY

INCENTIVES:

YES: For Promoting Employment, Creating Market Opportunities and Saving Environment.

BUT: Only If Clear Identification of Phase Out is Provided in Governmental Policies.

THUS

FIRST: Choice of the Best Mechanism or a Combination of Mechanisms (Fit, Net Metering....)

SECOND: Introduction of Regulatory Framework

*** ONLY SUSTAINABLE PROJECTS**
SHOULD BENEFIT FROM INCENTIVES

EXAMPLE OF ON GOING PROJECTS

- ☒ **SOLAR THERMAL UNIT**
- ☒ **MOBILE COGENERATION UNITS**
- ☒ **WASTE TO ENERGY: FROM-FORK-TO-FUEL PUMP**

WHERE “SMART” VILLAGE/CITY CONCEPT IS EASIER TO IMPLEMENT BECAUSE OF “VIRGIN” NETWORK

**OUR MUST:
STANDARDS AND LABELLING
NETWORK OF ENTERPRISES**

REDUCED HIGH UP FRONT COSTS IN SOLAR THERMAL INSTALLATION FOR DOMESTIC USE.

PROPOSED BY IDEASOL (PATENT OWNER)



1. VERIFICATION OF FULL RESPECT OF ARES ETHIC CODE. COMPLIANT

IN FACT THE PROJECT:

- ☒ **USES OF RE SOURCES**
- ☒ **PROMOTES EMPLOYMENT**
- ☒ **IS DESIGNED FOR DOMESTIC APPLICATIONS AS
WELL AS FOR REMOTE AREAS**
- ☒ **HAS NO NEED FOR INCENTIVES**
- ☒ **CONCEIVED TOWARDS ENVIRONMENTAL
CONSERVANCY**

2. VERIFICATION OF INNOVATION VERSUS THE STATE-OF-THE-ART. COMPLIANT



FACTS:

- ✓ **THE SYSTEM IS TOTALLY MADE IN PLASTIC, INCLUDING CONNECTORS. THIS PLASTIC WILL HAVE OTHER USES AT THE END OF THE LIFE CYCLE AS ST MODULE.**
- ✓ **MODULES ARE EASILY ASSEMBLED**
- ✓ **IT IS POSSIBLE TO WALK ON IT**
- ✓ **IT COULD BE USED TO INSULATE WALLS**
- ✓ **IT CAN BE USED IN VERTICAL ON SIDE WALLS**

3. MARKET ANALYSIS. COMPLIANT

CLASSIC MODULE with 2,20 m² absorbing area with Al absorber, pipes in CU, Mineral Wood as Insulating material, glass, 1 collector, expansion vessel, antifreeze fluid
1250 euro

Vs

INNOVATIVE SYSTEM: 16 plastic modules, with 2,48 m² absorbing area
400 euro, all included.

ABOUT PERFORMANCE:

To increase performance, the area of the plastic module must be increased
(price of 25 euro all included per module).

For 3-4 people, 200 l: 28-32 modules:
700-800 euro

1250 VS 800: DOES ARAB REGION NEEDS HIGH PERFORMANT MODULES?

4. STRATEGIC DEVELOPMENT OF NETWORK OF ENTERPRISES



ARESS WILL DEVELOP THE ENTIRE SUPPLY CHAIN FROM RAW MATERIAL TO DISTRIBUTION OF THE ST MODULE, BY ESTABLISHING A STABLE LEGALLY BINDED NETWORK OF ENTERPRISES, WITH PRIORITIES FOR THE COMPANIES ALREADY WORKING WITH IDEASOL.



IDEASOL WILL SUPPORT ARESS WITH ALL TECHNICAL DETAILS NECESSARY FOR THE CHOICE OF THE “BEST” PARTNER.

CASE STUDY N.2 AND NEXT STEP: COGENERATION

1/3

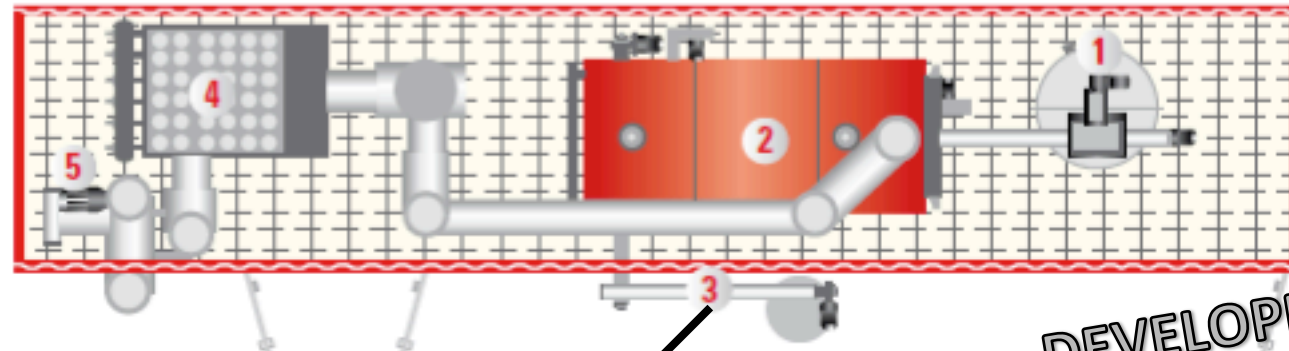
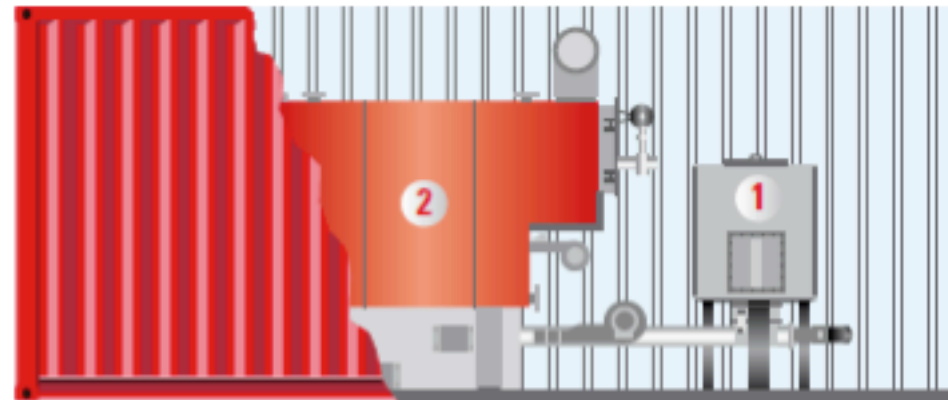
MOBILE CO-GENERATION UNITS: schools, hospitals, rural areas...

60kW-1000kW

SISTEMA CONTAINER E SKID

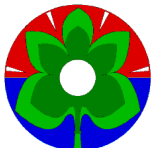
CONTAINER AND SKID SYSTEM...

1. MINI SILO
MINI SILO
2. CALDAIA
BOILER
3. ESTRAZIONE CENERI
ASH EXTRACTION SYSTEM
4. FILTRO A MANICHE
BAGS FILTER
5. ASPIRATORE FUMI
SMOKES ASPIRATOR



POTENTIAL APPL.
FOR FERTILIZERS

DEVELOPMENT OF
NETWORK OF
ENTERPRISES



CALORTECH

CASE STUDY N.2 AND NEXT STEP: COGENERATION

2/3



Training local staff on:

- A) knowledge of biomass
 - responsible use:
 - use of vegetable waste from the cultivation
 - production from bioliquids and biofuels
 - proper use of fuel available
 - obtain yields and emissions in line with European directives
 - reforestation
- B) shredding and storage of solid biomass
- C) safety of plants and operators
- D) Data management

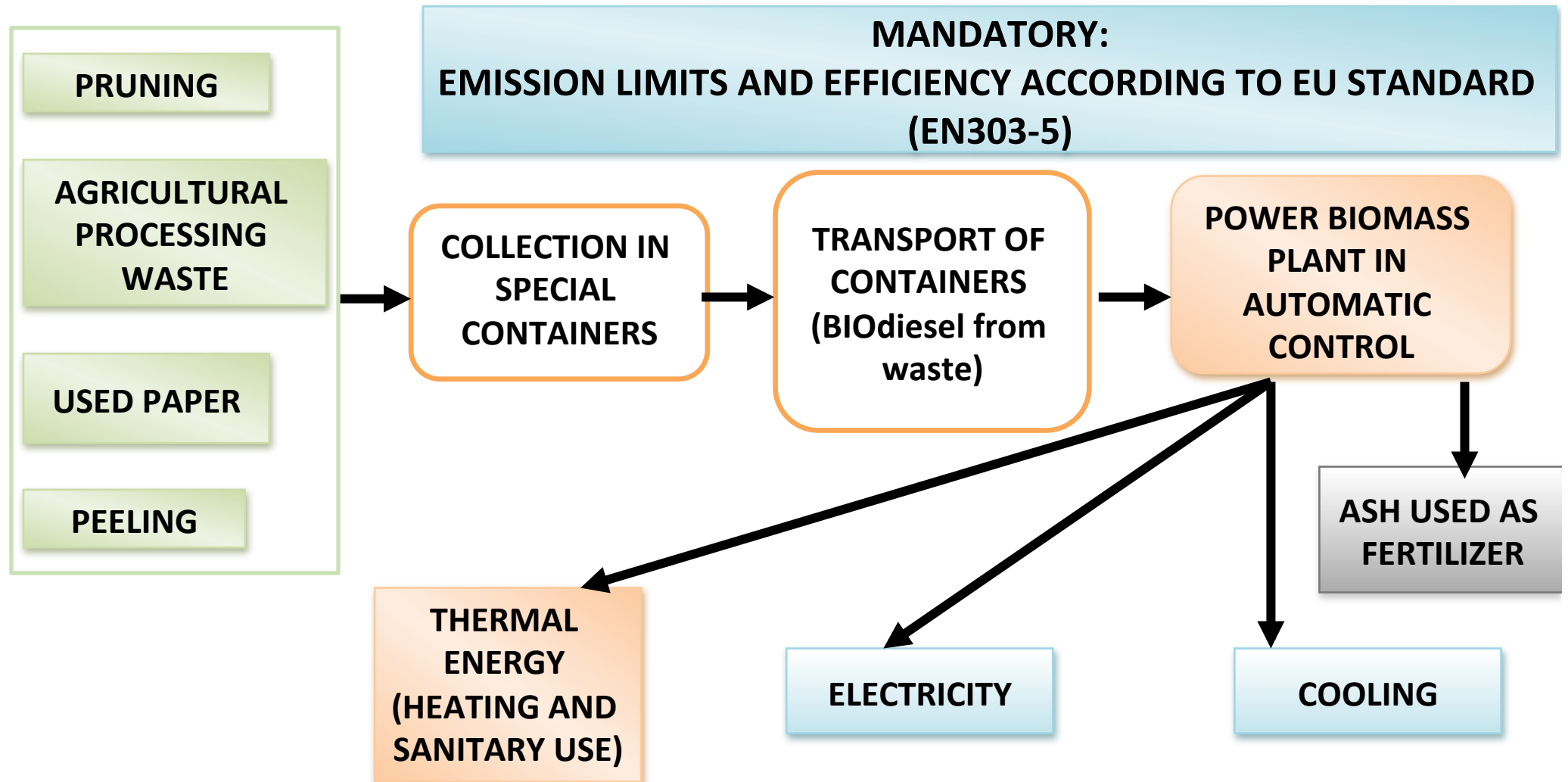
ADAPTING
UNITS

TO

NEEDS
AND
AVAILABILITY

BUILDING THE ENTIRE SUPPLY CHAIN

3/3



SUSTAINABLE SUPPLY CHAIN: FROM-FORK-TO-FUEL PUMP SUSTAINABLE DOMESTIC UCO

MUNICIPAL WASTE COMPANIES



RECOVERY PLANTS



CERTIFICATION BODIES

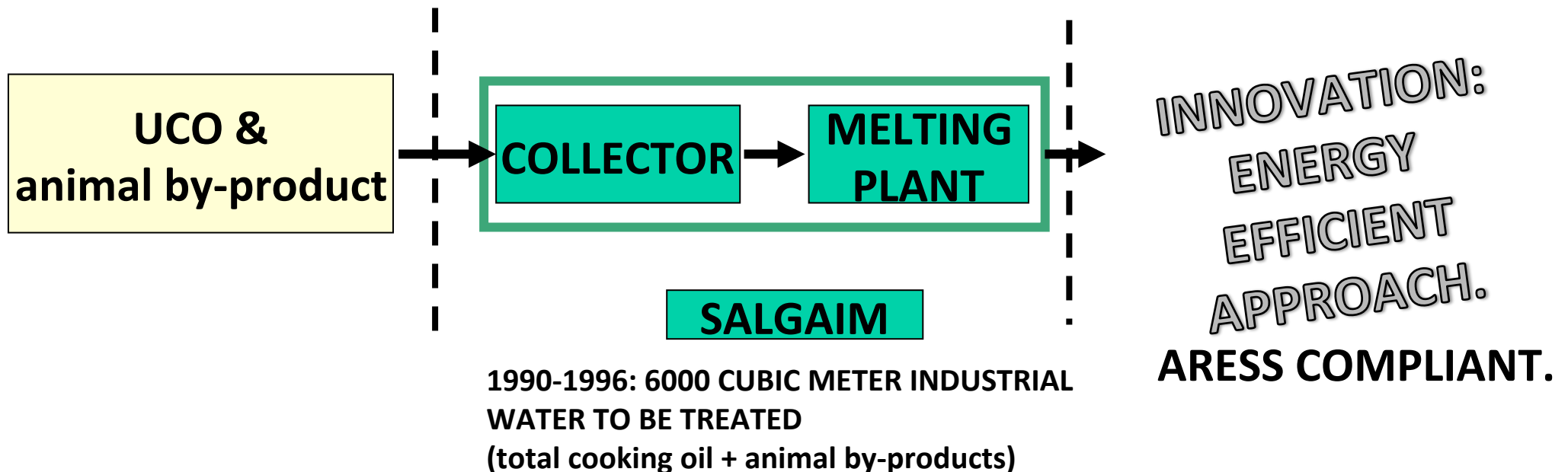


ASSOCIATION FOR SUSTAINABLE COMMUNITIES



CASE STUDY N.3 AND NEXT STEP: WASTE TO ENERGY 2/4

STATE-OF-THE-ART AN EXAMPLE FROM ONE OF OUR MEMBERS



+ Waste-to-energy plant

(SALGAIM)



MEANS: 500000 euro/year SAVED
4500000 kcal/hr RECOVERED

CASE STUDY N.3 AND NEXT STEP: WASTE TO ENERGY 3/4

WHAT TO DO?... EMPLOYMENT IN A TOTALLY DIFFERENT ACTIVITY!

ECOPOLIS SRL



**200000 kcal/hr over 4500000 kcal/hr
allowed the establishment of a
new company dedicated to fish farming:**

8 employees

Students in fish-farming

60 different tropical species



**INNOVATION:
SOCIAL SUSTAINABILITY
APPROACH
ARESS COMPLIANT.**

(SALGAIM)

CASE STUDY N.3 AND NEXT STEP: WASTE TO ENERGY 4/4

**NOW: UCO FROM COLLECTION ON STREET NOT
EVERYWHERE RECOGNISED FOR LACK IN TRACEABILITY
THE PROJECT “TR.UCO.DOC”**

**ROUND TABLE
FOR ESTABLISHING
STRICT PROCEDURES
FOR THE RECOGNITION
OF UCO IN THE ENERGY
MARKET
(WITH THE PARTICIPATION
OF CERTIFICATION BODIES)**

**ESTABLISHING THE
NETWORK OF ENTERPRISES
LEGALLY BINDED
INCLUDING SATELLITE
COMPANIES (E.G. FOR
SOFTWARE DEVELOPMENT...)
(ONLY COMPANIES DIRECTLY
INVOLVED IN THE SUPPLY CHAIN)**

NEXT STEP: TRAINING TO CIVIL SOCIETY!

GLOBAL COVERAGE: POLICY

WHAT KIND OF INCENTIVES WOULD BE ACCEPTABLE?

COMPARISON OF POLICIES IN THE MENA REGION:

FEED IN TARIFF, NET METERING VS OTHER FORM OF SUBSIDIES.

HOW TO DESIGN A SMART MIXED POLICY?

SUCH AS FIT FOR HOUSES AND NET METERING FOR INDUSTRY.

**HOW MENA COUNTRIES ARE GOING TO CHOOSE THE
VALUE OF THE FIT?**

EGYPT CASE: YEARS OF COMPETITIVE BIDDING COULD HELP THE GOVERNMENT TO SET UP A DYNAMIC FIT BASED ON THE LOWEST PRICE IN ORDER TO AVOID SPECULATION



STUDYING THE STATE-OF-THE-ART: ENERGY EFFICIENCY FOR APPLIANCES

WHY: MISSING LABELS AND STANDARDS SYSTEMS

**STATE-OF-THE-ART: USE OF INEFFICIENT APPLIANCES
50% OF TOTAL ENERGY CONSUMED IN PALESTINE
FOR ENERGY USE IN BUILDINGS**

**STUDY ON: “ENERGY EFFICIENT GOODS AND EXISTING TESTING
LABORATORIES IN PALESTINE FUNDED BY THE FRENCH DEVELOPMENT
AGENCY FOR THE PALESTINIAN AUTHORITY”.**

(COURTESY OF DR. R. HODALY)

**Aim: study the Palestinian market and establish a baseline for evaluating the
success rate of any future scenario THROUGH:**

**STUDY ON “ENERGY EFFICIENT GOODS AND EXISTING TESTING LABORATORIES IN
PALESTINE FUNDED BY THE FRENCH DEVELOPMENT AGENCY FOR THE PALESTINIAN
AUTHORITY”.**

(R. HODALI)



STUDYING THE STATE-OF-THE-ART: ENERGY EFFICIENCY FOR APPLIANCES

2/3

APPROACH:

1002 HOUSEHOLDS

65 RETAILERS AND WHOLESALERS

EXISTING TESTING LABS IN 10 INSTITUTIONS

ANALYSIS OF PREVIOUS SURVEY FOR USAGE OF EE BULBS

**DATA: 50% OF TOTAL ENERGY CONSUMED IN PALESTINE FOR ENERGY
USE IN BUILDINGS**

OBSTACLES: REAL DATA ABOUT MARKET ARE MISSING

**FINDINGS HAVE BEEN PROVIDED REGARDING ATTITUDE OF THE
CONSUMERS VS:**

-INCOME

-PURCHASING DECISION IN THE FAMILY

-USED APPLIANCES (E.G. SMALL USE OF MICROWAVES)

-AWARENESS OF THE PUBLIC

(R. HODALI)



STUDYING THE STATE-OF-THE-ART: ENERGY EFFICIENCY FOR APPLIANCES

3/3

RESULTS:

PALESTINIAN CAN SAVE UP TO 20% OF THE ALL CONSUMPTION OF ELECTRICITY BY ADOPTING ENERGY EFFICIENCY STANDARDS AND LABELS (E.G. OLD INEFFICIENT REFRIGERATORS CONSUME 5 TIMES THE NEW EFFICIENT REFRIGERATOR, 100% HOUSES HAVING A REFRIGERATOR).

**EACH FAMILY IS LOOSING 0.75 EURO, CONSIDERING THE OLD REFRIGERATOR COSTING VS THE NEW ONE:
1 EURO PER DAY VS 0.2 EURO/DAY).**

**IN WEST BANK ABOUT 500000 HOUSES:
0.4 Meuro/day ONLY from refrigerators
(18% saved by using solar water heating systems)**

(R. HODALI)

CONCLUSION

TRAINING WOULD BE THE POWERFULL TOOL TO HARMONISE THE TECHNICAL COMPETENCE TO USE LOCAL HUMAN RESOURCES IN LOCAL COMPANIES.

HARMONISING KNOW-HOW IS SEEN HAS A POSITIVE STEP TO MERGE THE MEDITERRANEAN BASIN TOWARDS A COMMON MARKET.

CIVIL SOCIETY IS FULLY INVOLVED IN ARESS ACTIVITIES THROUGH MEDIA, EVENTS, WORKSHOP: THERE IS NO PROGRESS WITHOUT SOCIETY CONSENSUS.

WE BELIEVE THAT RE, EE AND SUSTAINABILITY PROVIDE A GOOD REASON IN TERM OF ENVIRONMENT AND EMPLOYMENT:
THEY SHOULD BECOME A CHOICE AND NOT AN OBLIGATION !



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Organismo di Ricerca





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