

HCFC Phase-Out Management Plan Servicing Sector

Roundtable Meeting
5th March 2014

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Pune



Introduction - GIZ Proklima

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (Ltd.) is

- an international cooperation enterprise for sustainable development with worldwide operations, established in 1975.
- operates throughout Germany and in more than 130 countries worldwide.
- registered offices: Bonn and Eschborn
- more than 16,000 staff members around the globe, some 70% of whom are employed locally as national personnel.
- business volume: about EUR 2 billion (31 December 2011)

GIZ PROKLIMA

20 years worldwide initiatives

> 240 projects

> 40 Partner countries

> 10.000 ODP tons reduced

~ 100 million tons CO₂eq. reduced



On behalf of

BMZ



Federal Ministry for Economic Cooperation and Development

On behalf of



Federal Ministry for the Environment, Nature Conservation and Nuclear Safety



Focus on natural refrigerants with low-GWP and energy-efficient applications



BMZ projects HPMPs in following countries

Bolivia
(refrigeration)

Mauritius
(refrigearction)

Afghanistan
(refrigeration)

China
(foam)

Brasilia
(refrigeration)

Seychelles
(refrigearction)

Iran
(foam)

India
(RAC)

Kenia
(refrigearction)

Lesotho
(refrigearction)

Jordan
(Methylbromid
Phase Out)

**Papua New
Guinea**
(refrigeration)

Namibia
(refrigearction)

Zimbabwe
(refrigearction
and foam)

Yemen
(Methylbromid
Phase Out)

Liberia
(refrigearction)

HPMP: HCFC Phase-Out Management Plan

Jordan and Yemen: Methyl bromid phase out



Information and Training Material

Download from www.giz.de/proklima

Movies about PROKLIMA projects

- **Environmental friendly air-conditioning in India:**
<http://www.dw.de/eco-friendly-cooling/a-16036590-1>
- **Green refrigerators in Swaziland:**
<http://www.dw.de/green-refrigerators-in-swaziland/a-5609664-1>
- **Recycling refrigerators in Brazil:**
<http://www.dw.de/recycling-refrigerators-in-brazil/a-14749211-1>
- **Green supermarkets in South Africa:**
<http://www.dw.de/cape-towns-greener-grocer/a-5978571-1>



HIDECOR (2001-2004)

Human and Institutional Development in Ecological Refrigeration

- 2001: HIDECOR project launched as an Indo-Swiss collaboration.
- Goal: Providing training on good servicing practices and hydrocarbon based retrofit to service technicians in the Refrigeration and Air-Conditioning (RAC) sector.

Geographic focus:

- Initial states: Tamilnadu, Karnataka, Andhra Pradesh, Maharashtra, Gujarat, Delhi and West Bengal
- States added later: Punjab, Haryana U.P., Rajasthan and Kerala (in anticipation of NCCoPP)





NCCoPP (2004-2010)

National CFC Consumption Phase-out Plan

- 2004: NCCoPP project launched based on the Agreement between India and the Executive Committee of the Multilateral Fund.
- Goal: Providing training on good servicing practices and to service technicians in the Refrigeration and Air-Conditioning (RAC) sector.
- Geographic focus: All over India.





Major Achievements of HIDECOR & NCCoPP

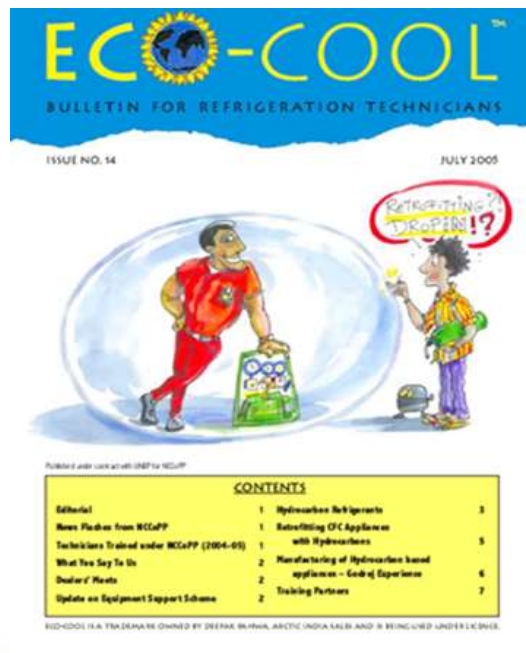
- 20,000+ technicians trained.
- Remote areas of the country accessed (60% programmes were outside the major cities).
- Knowledge about CFC Phase-out and Good Service Practices is now wide-spread amongst small firms in covered areas.
- More than 1,000 E&C units, recovery machines etc. distributed.
- Enforcement agencies and customs officers are aware of CFC phase-out.





Major Achievements of HIDECOR & NCCoPP

- EcoCool newsletter regularly distributed to 20,000+ technicians updating on new technological developments and good servicing practices.



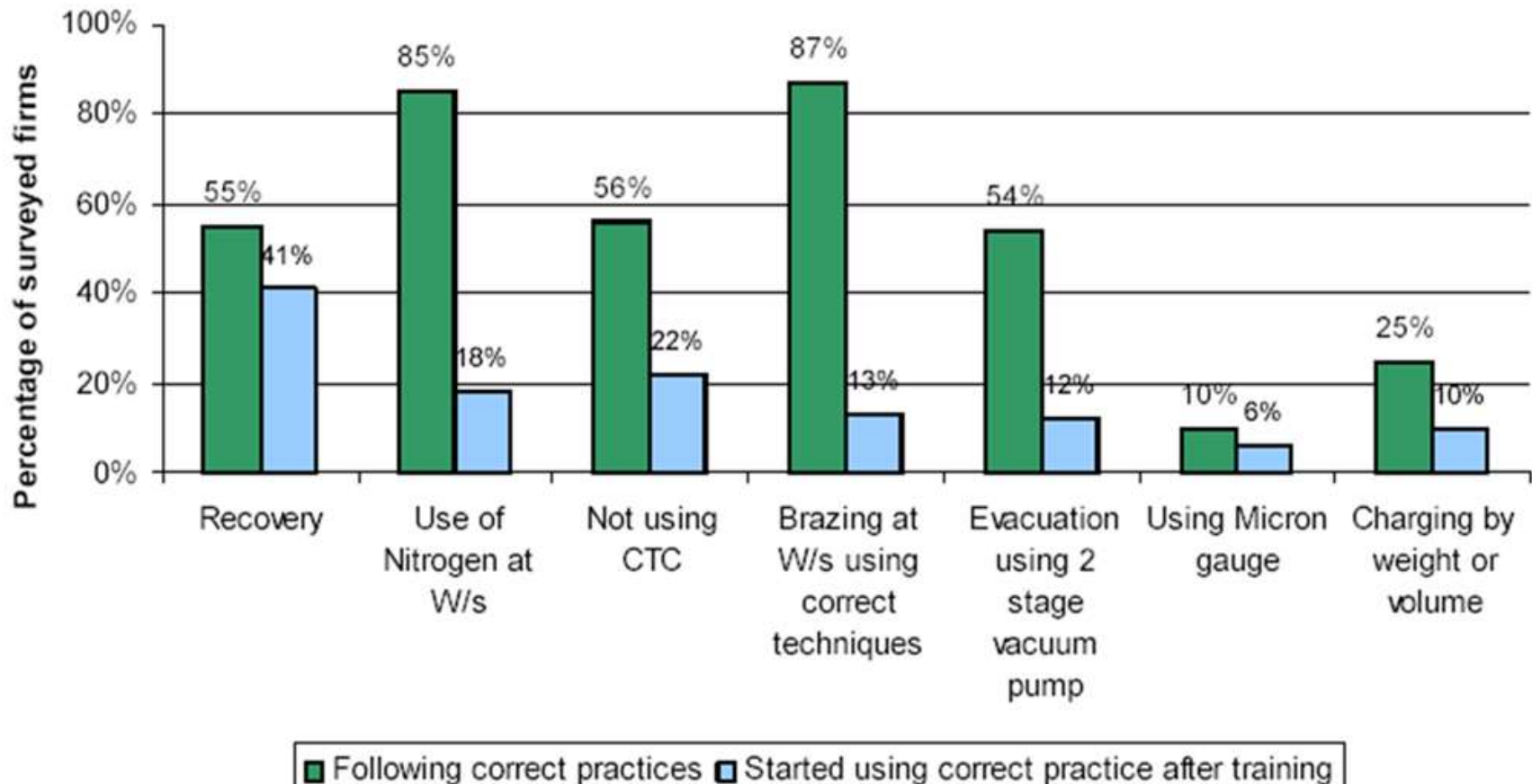


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Improvement of Service Practices

Use of correct service practices





HPMP (2012-2015) HCFC Phase-out Management Plan

- In the servicing sector during Phase I primarily the consumption of HCFC-22 will be addressed. The consumption of the other substances viz. HCFC-123, HCFC-124, HCFC-142b and HCFC-22, are consumed, however they, will be addressed during Phase II.
- Phase I from 2012 – 2015 and Phase II from 2015 to 2030.
- Consumption of HCFC-22 is expected to exceed 10,000 metric tonnes by 2013-14 in a scenario with unconstrained growth. This is due to the high growth rate in particular in the room air-conditioner sub-sector. The segment of room air-conditioners is the largest servicing sub-sector in India
- Improved servicing practices for technicians trained during Phase I would actually lead to HCFC emission reductions every year.



HPMP

Awareness raising, early adoption of better servicing practices and recovery would have an immediate phase-out impact and could significantly reduce the consumption of HCFC in the country.

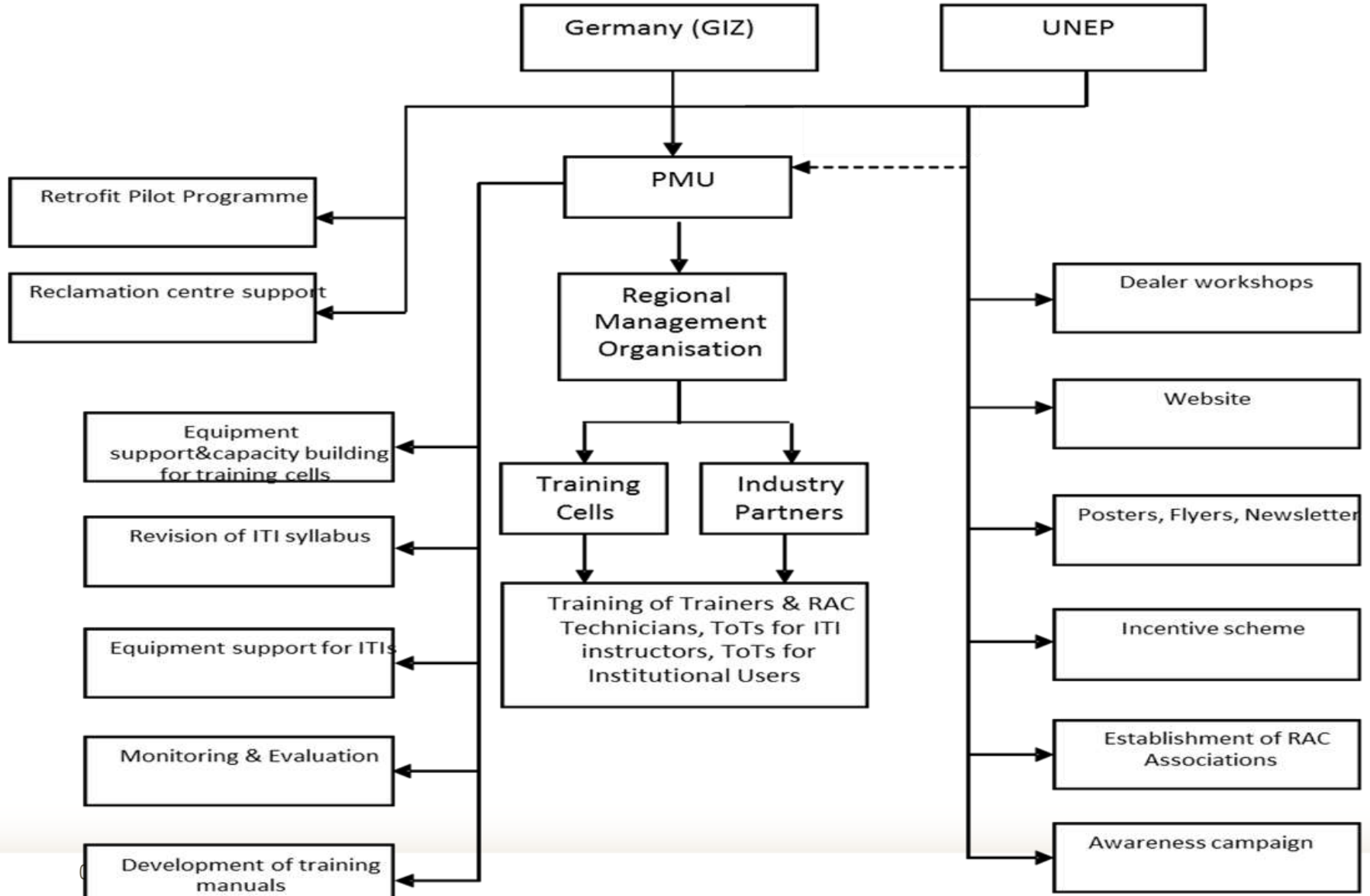
Under Phase I India has launched a) awareness campaigns prior to the freeze in 2013 and b) training of service technicians working with HCFC based systems.



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Activities under the HPMP in the Servicing Sector





HPMP - Technicians Training

- Main target group: Technicians from institutions, franchisees and the semi-organised RAC sector
- Train technicians in good servicing practices, leak prevention and introduce them to alternative refrigerants
- Train as many technicians as possible (but a minimum of 10,200 technicians to be trained through maximum 408 training programs)
- Not more than two technicians from one service enterprise to be trained
- Focus during the first training session will be on Room Air-Conditioners below 2 TR.





HPMP - Technicians Training Contd.....

- Reach out to technicians in metros and towns all over India.
- 15 training partners in the country established during the CFC Phase-Out will conduct training.
- Industry partners can train their own service technicians along with the main target group.

The training infrastructure could in future also be availed of by industry to continue training of the servicing technicians related to their sales and servicing networks once their new products with non-ODS technologies would have entered the market.





HPMP - Technicians Training Contd.....

- Modular training program;
- Training material, incl. technical handbook (English/Hindi) on good practices installation and servicing, presentation for technicians and for trainers;
- Training of Trainers Programs for trainers:
- More than 40 trainers trained;
- Hand holding for the trainers;
- Quality Control - Monitoring of training programs
- Award certificate of participation to technicians.

HPMP
MCFD Phase-Out
Management Plan,
Servicing Sector

**Good Practices in Installation and Servicing
of Room Air-conditioners**
Refrigeration and Air-conditioning (RAC) Technicians Handbook

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

INDIA
GIZ INDIA



Revision of ITI syllabus

- Adapt syllabus of the Government Industry Training Institutes (ITIs) to include modules of the training program on servicing techniques
- Relevant for achieving the targets during Phase II of the HCFC phase-out
- Basis to facilitate that future RAC technicians could adopt ODS free servicing and better servicing practices of HCFC based systems.
- Training of Trainers workshop will be organised for the ITI teaching staff.



Training of Trainer for Institutional User

- Capacity building/ ToT workshops for technical staff of institutional users (e.g. railways, army, navy, etc.) on good practices in installation and servicing
- Good inventory of HCFC based equipment
- Take up phase-out measures as a part of their institutional policy
- Better management of HCFC refrigerants (recovery and recycling)/ Institutional users are already equipped with reclamation units and have been trained in using these units for reclamation of CFCs.



Retrofitting

- Study on economic feasibility of conversion of HCFC equipment to non-HCFC alternatives)
- Close cooperation with OEMs
- For economically feasible retrofitting options, testing of trials
- It is expected that the full benefits of retrofitting older HCFC based systems will only accrue during Phase II.



Reclamation Centre Support

- Training module on proper reclamation/recycling of refrigerants
- Promotion of quality standards/ good practice, focus on on-site recycling and refilling
- Involvement of institutional users, on a pilot basis involvement of private sector with the existing reclamation centres.
- Awareness raising





Awareness Activities - UNEP

RAC & refrigerant dealer half day awareness workshops
Website
Posters for servicing enterprises
Flyers for training promotions
HCFC awareness campaign
Facilitating establishment of an RAC service enterprises association
Newsletter



Thank you for your attention!

Smita Vichare

smita.vichare@giz.de