

4TH World Water Forum

Household Water Treatment and Safe Storage Session

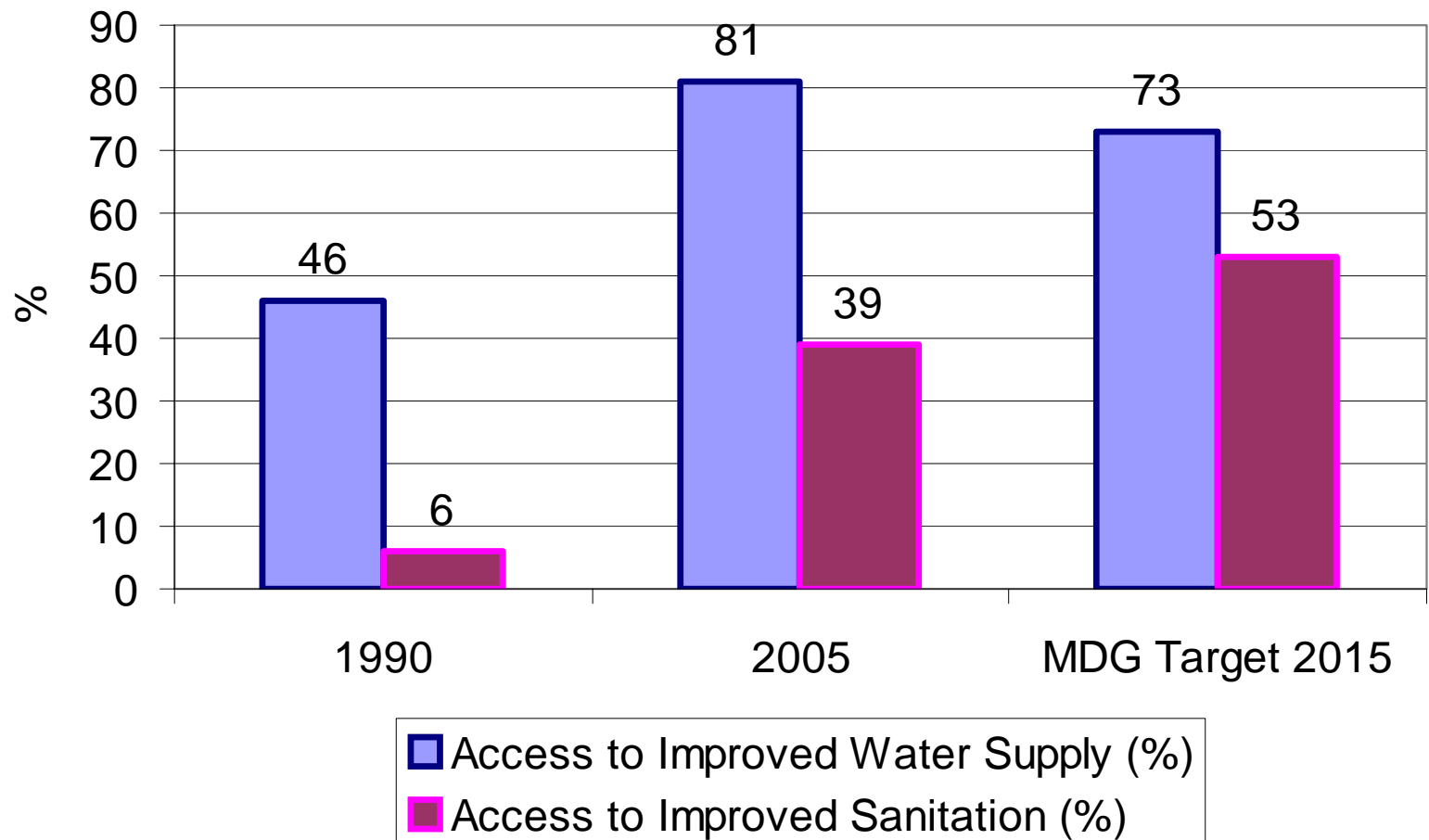
19 March 2006

IMPLEMENTATION OF HOUSEHOLD WATER TREATMENT IN NEPAL

Dr. Roshan Raj Shrestha

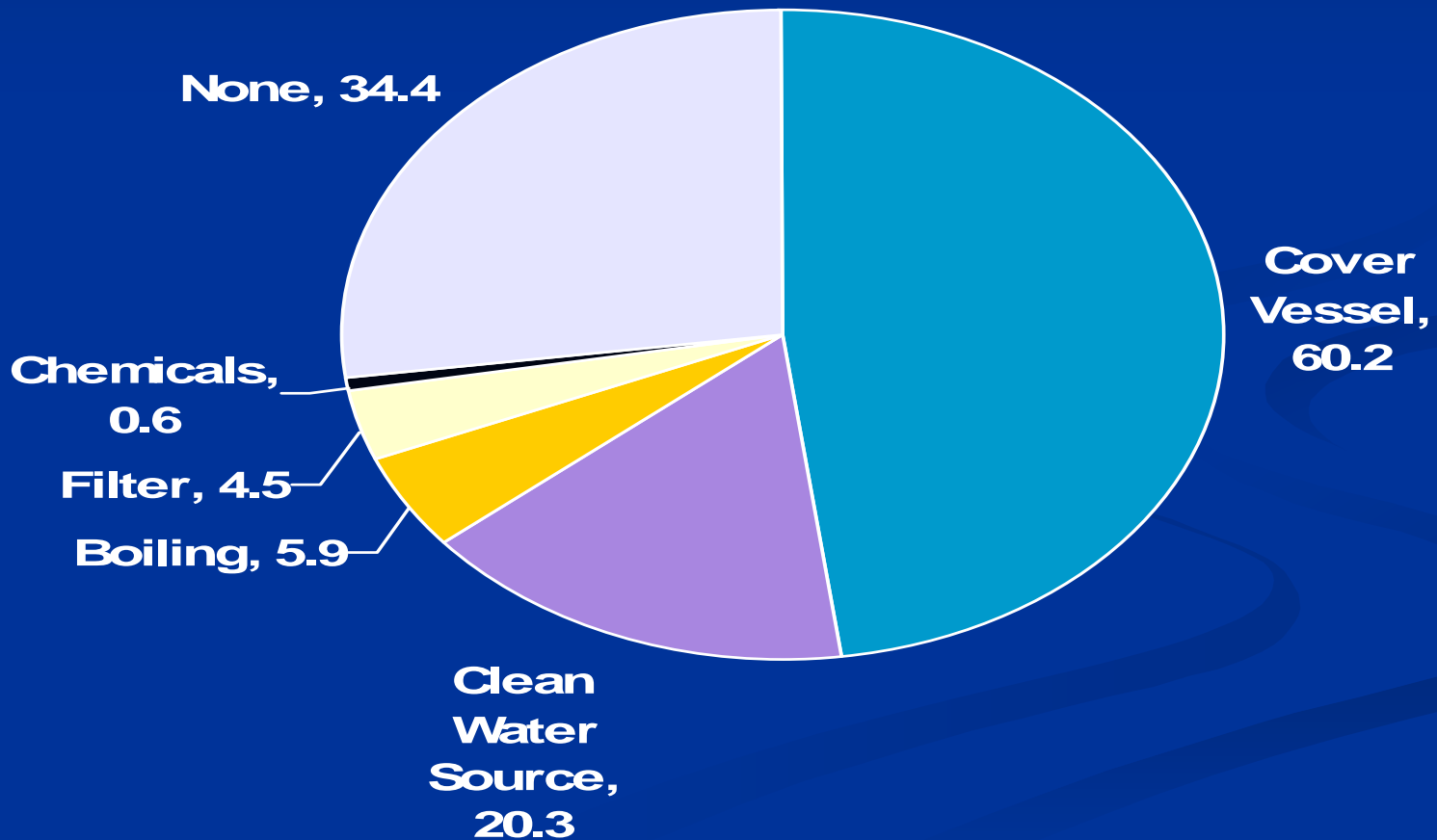


Water Supply and Sanitation Coverage in Nepal and MDG Target





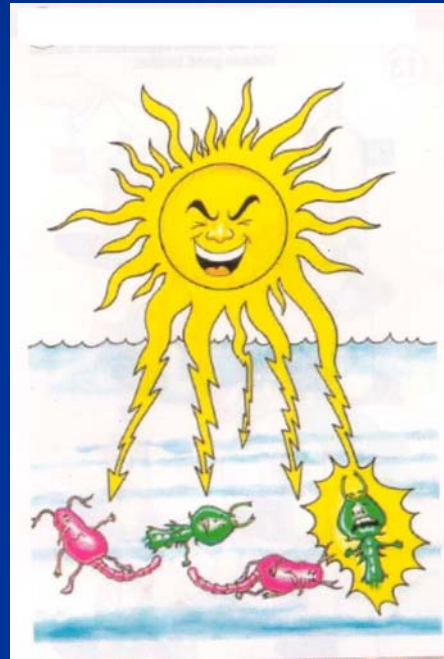
Household Water Treatment in Nepal



Implementation of different HWT Techniques



1992/93



2002



2003

PIUSH Chlorine Solution



- 0.5 % Chlorine solution
- Simple to use - Add 3 drops for 1 litre and wait 30 min.
- Rs. 17 (US\$ 0.24) per bottle (60 ml)
- Developed in 1992/93 and marketing by ENPHO since 1994
- Distributed during epidemics
- Used by Army, Nepal Red Cross, Unicef & others for emergency

Introduction of Water Guard



- ENPHO provides all information about Piyush to PSI
- MOU with PSI Nepal
 - ENPHO to assist in quality control for WaterGuard
 - PSI to assist in preparing marketing strategy and promotion
- Water Guard Introduced in 2005 with extensive marketing
- This year Piyush sales have dropped in spite of extra promotion
- PSI did not really show its partnership commitment





Water Guard's Media Campaign

वाटरगार्ड सुपथ उपाय ...

...घरको खानेपानी शुद्ध पार्ने ।



“के तपाईंलाई थाहा छ ? नेपालमा बर्सेनि हजारौ बालबालिकाहरूको भ्रूणमृत्यु भईरहेको छ, जसको एक कारण असुरक्षित खानेपानी हो । भ्रूणमृत्युको कारण बालबालिकाहरूको स्वास्थ्य, उनीहरूको शारीरिक विकास अनि भविष्यमा नै गम्भिर असर पार्न सक्छ ।

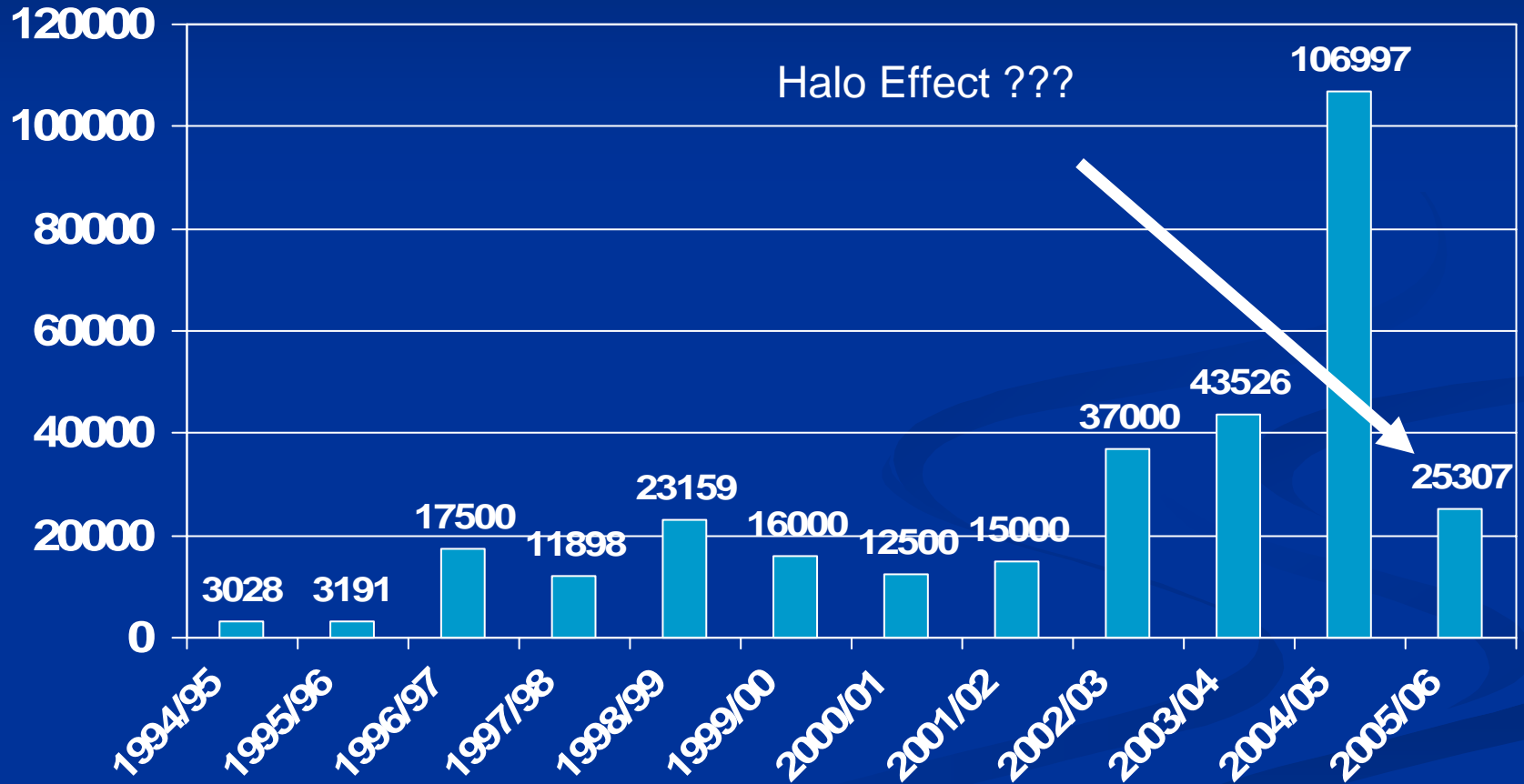
त्यसैले म त सबै वाटरगार्ड प्रयोग गर्छु । बस, अलिकति वाटरगार्डले नै घरको खानेपानीलाई शतप्रतिशत जीवाणुरहित अनि शुद्ध बनाउँछ । एउटा वाटरगार्डको मात्र ३५ रूपियाँ, जुन दुई महिनासम्म पुग्छ । अर्थात, लगभग दैनिक ५० पैसाको दिलाउँछ मनमा शान्ति ।”



घरको खानेपानी शुद्ध पार्ने मोज

In association with
Himalayan Snax & Noodles (P) Ltd.
Ugratara, Janagal VDC-1, Kavrepalanchowk, Nepal

Annual PIYUSH Sales

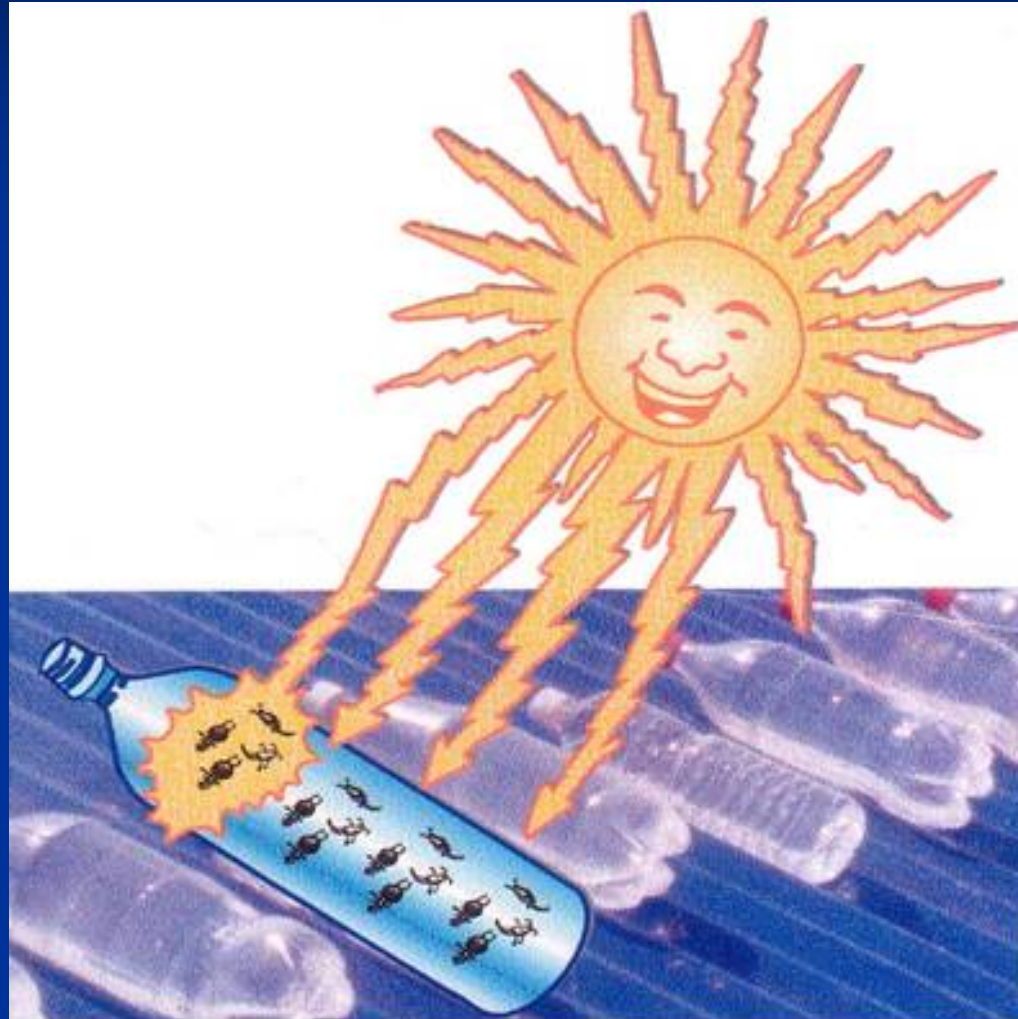


July to
Feb

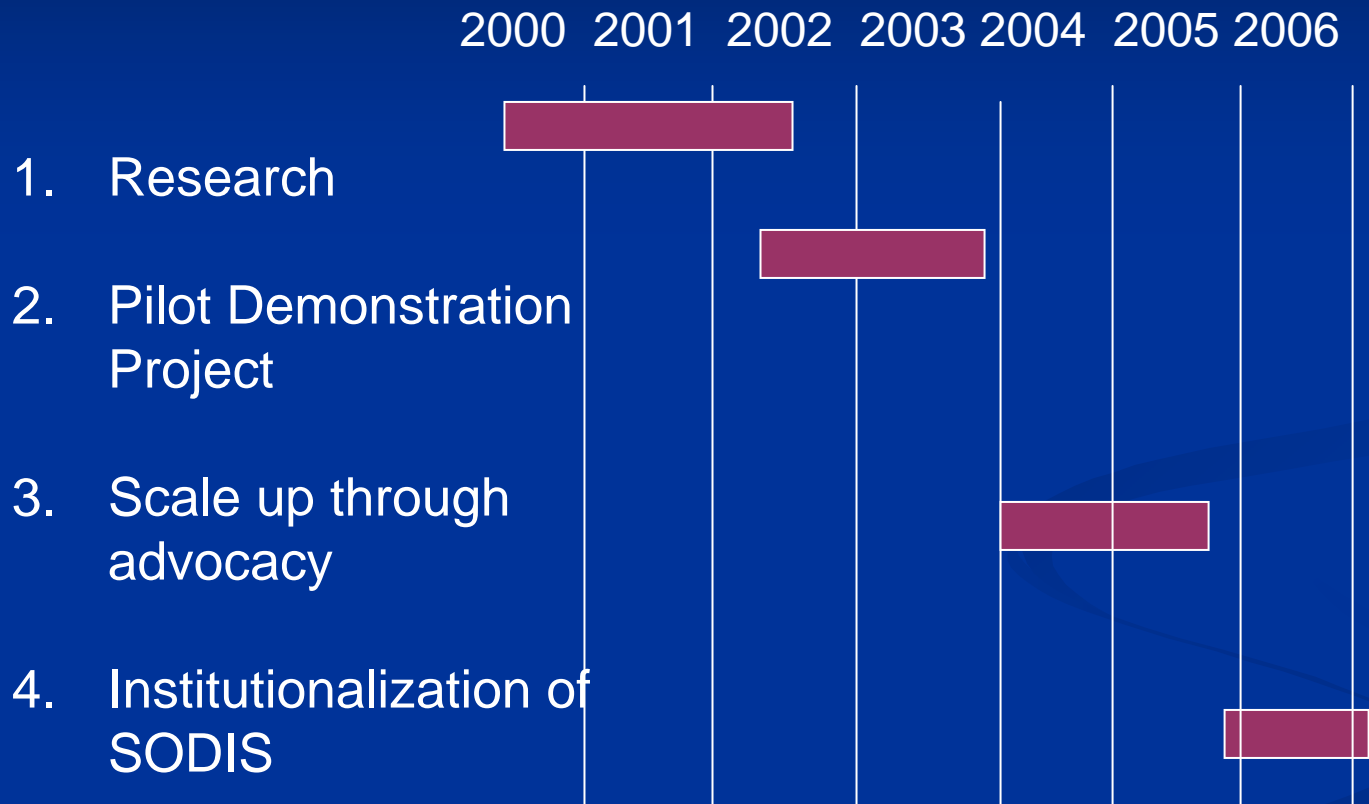
PIYUSH Promotion Strategy



- New Marketing Strategy Developed
- Product
 - Branding – Easy, Reliable, Inexpensive
 - Targeted Market Segment – households, tourists, disaster relief
- Price
 - Wholesaler – 12; Retailer – 14.5, Consumer - 17
- Place
 - Strengthen distribution mechanism
 - Previously only in drugstores
 - Also go through groceries and expand distribution beyond Kathmandu
- Promotion
 - Multiple channels – Radio, TV, Hoarding Board, Posters, stickers, etc.
 - Point of Purchase display
 - Sales Promotion



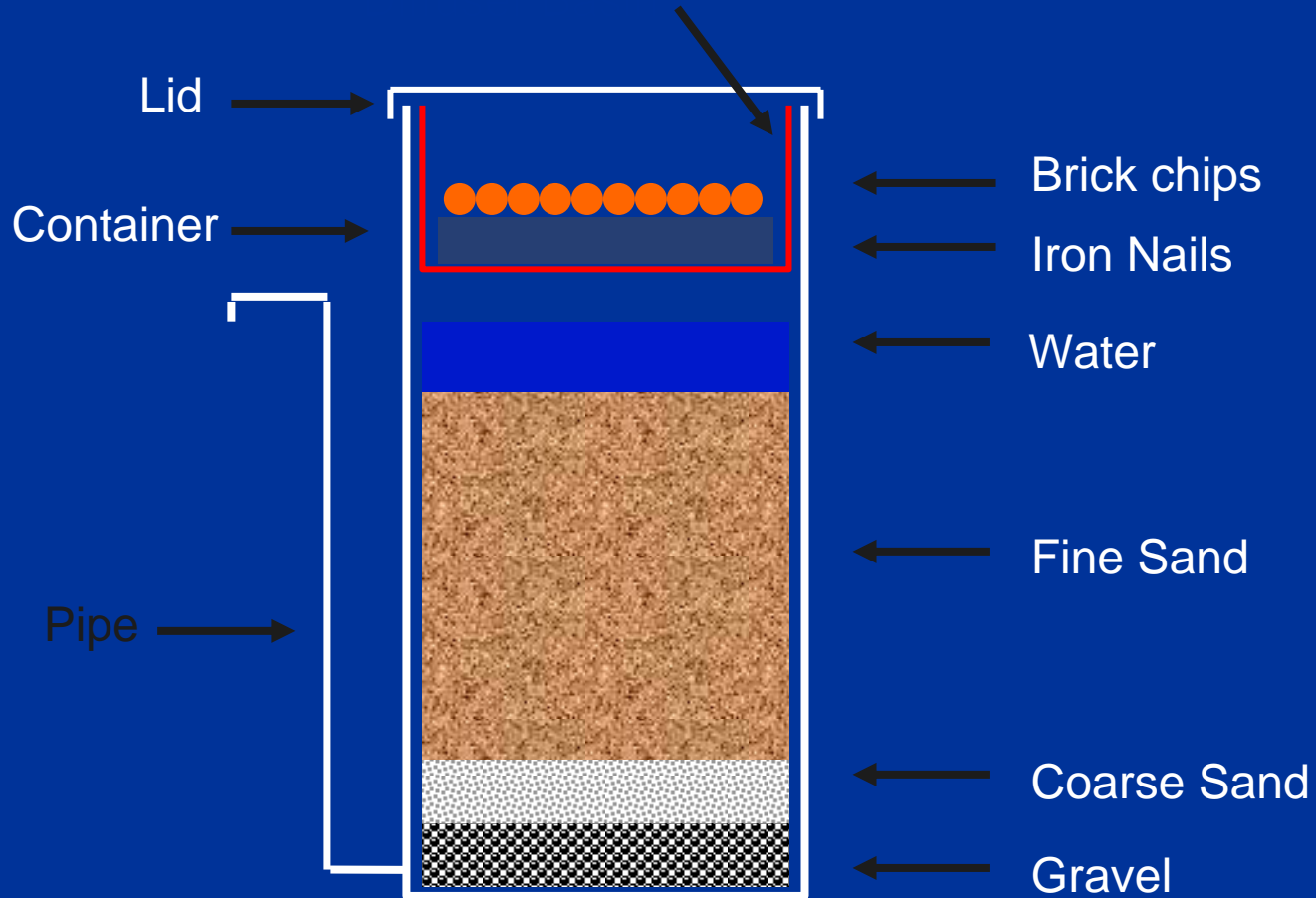
Implementation of SODIS



*Kanchan*TM Arsenic Filter



*Kanchan*TM Arsenic Filter

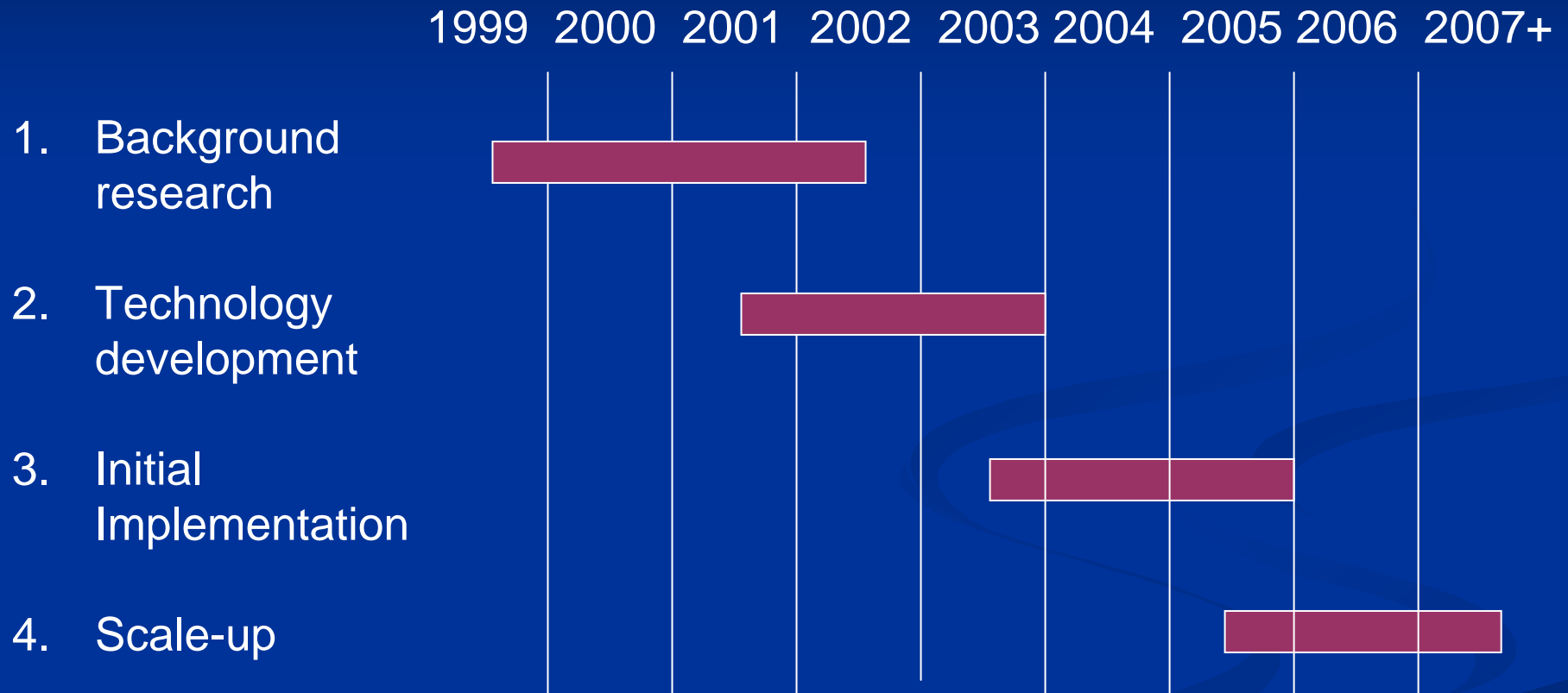


*Kanchan*TM Arsenic Filter

- Based on 5-years of collaborative research between MIT, ENPHO, and local partners
- Local cost (US\$20), innovative household-level filter considering the socio-economic conditions of rural Nepali communities
- Use of natural processes to removal arsenic, pathogen, iron, turbidity, and odour
- Highly accepted by users because of the simple O&M and the use of locally available materials and labour



Project Timeline



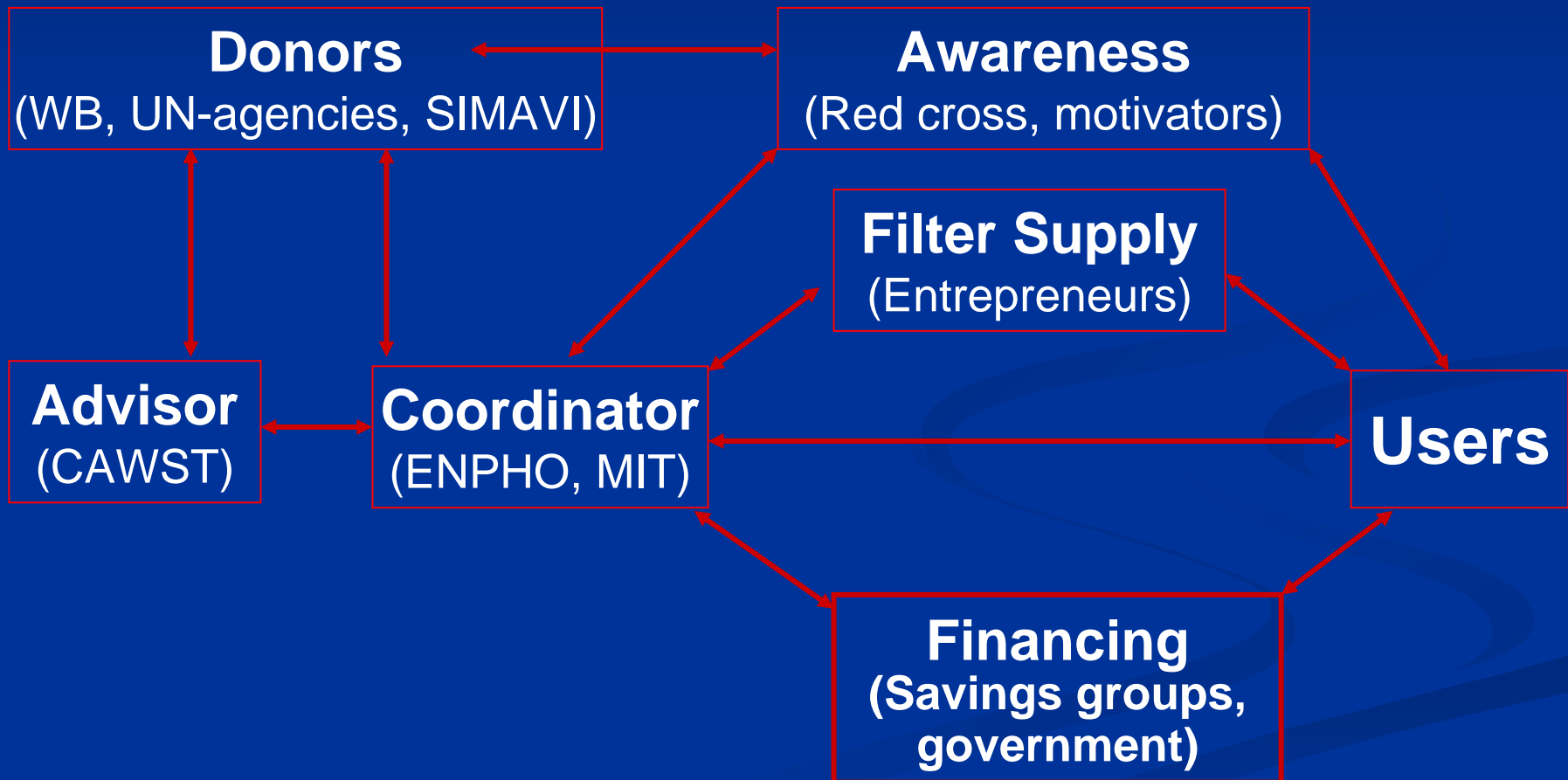
Implementation Model

International

National

Regional

Village



Recognitions and Awards

Nepal National Arsenic Steering Committee, MDG report, UNICEF, and prominent NGOs consider KAF as one of the best safe water options

KAF won prestigious awards such as:

- MIT IDEAS Design Competition 2003
- World Bank Development Marketplace Global Competition 2003
- World Bank Nepal Marketplace Competition 2005
- Wall Street Journal 2005 Technology Innovation - Environmental Category
- USEPA P3 Design Competition 2005



Recognition in MDG Report



Nepal Millennium Development Goals PROGRESS REPORT 2005



BOX 7.3: INNOVATIONS TO ENHANCE LIVELIHOODS

The Environment Public Health Organisation (ENPHO) has adopted and promoted the Solar Disinfection System (SODIS) to purify water through exposure and aeration of drinking water in sunlight for 48 hours in plastic bottles. The technology is cost-free, the only need is sunlight and clean plastic bottles. In communities where people are poor and vulnerable to water-borne disease, safe and clean water is a great need. The NGO Lumani has promoted this technology in slum and squatter communities of the Kathmandu Valley. A recent survey of Kathmandu Valley water supply conducted by CBS showed that about 1 % of the Kathmandu population, around 10,000 people, use this technology (CBS 2005). ENPHO has also developed and promoted bio-sand filters, which is a low-cost technology that has had a positive impact on mitigating arsenic in arsenic-prone areas. Piyush, produced and promoted by ENPHO, is another innovative technology affordable even by poor people to clean water and make it potable.

Scaling Up at National and Regional Level

- UNICEF/USAID is developing a programme to scale up Household Water Treatment System at National level.
- UN HABITAT has recently established a cooperation agreement with CAWST for promotion of Household water treatment in Mekong Region where Nepalese implementation model will also be utilized

Issues & Challenges

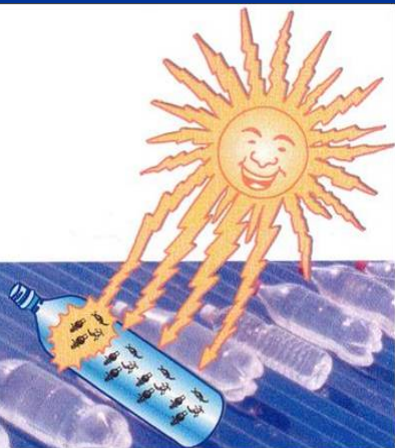
- Still not reached at rural communities and need more awareness on water quality
- Promotion of only one brand may create confusion at user's level
- Not adequately integrated with water supply and sanitation programmes
- Intellectuals like Medical professionals, Engineers and others working in WATSAN sector are not fully aware about these technologies
- Certification & Regulation
- Lack of Responsible agency for Coordination and Monitoring
- Sustainability of International Brand ??



Good For Turbid water including chemical contaminants like turbidity, iron and arsenic may require further treatment for microbiological safety



Good for supply water without chlorination and traditional water resources having less organic pollution.



Good for supply water without chlorination and traditional water sources which are not chemically contaminated

Let the people Chose !!!