

# Clean Water For Rural Areas

## Chairs

- Prof. Dr.-Ing. Martin Wagner,  
Technical University of Darmstadt (TUD)  
and Vietnamese-German University (VGU)
- Assoc Prof. Dr. Nguyen Nghia Hung,  
Southern Institute of Water Resources  
Research – MARD

## Cross-Dialogue Partners

- Prof. Nguyen Viet-Anh,  
Hanoi University of Civil Engineering,  
Institute of Environmental Science and  
Engineering (IESE)
- Mr. Alexander Goldmaier,  
Autarcon GmbH
- Dr. Le Van Chinh,  
Department of Social, Natural and Human  
Sciences, MoST



# Workshop

## Clean Water For Rural Areas



- **Challenges of the water supply in rural areas**

Prof. Nguyen Viet Anh, Vietnam Association of Water Supply and Sewerage (VWSA) and HUCE - Institute of Environmental Science and Engineering (IESE)

- **Relevant energy saving technologies for urban and rural areas**

Prof. Dr.-Ing. Martin Wagner, Technical University of Darmstadt and Vietnamese-German University (VGU)

- **(Re-)Financing of water infrastructures**

Prof. Dr. Karl-Ulrich Rudolph, University of Witten-Herdecke

- **Groundwater environment and appropriate solutions to tackle pollution and degradation issues**

Dr. Hoang Van Hoan, National Center for Water Resources Planning and Investigation (NAWAPI) – MONRE

# Workshop

## Clean Water For Rural Areas



### Challenges in Vietnam

- Overexploitation of groundwater resources
- Seawater intrusion (Mekong delta)
- contamination of water resources
- Additional treatment of rainwater and surface water for drinking water supply
- Poor sustainability of rural water supply (bottled water ) and quality (pipe water)
- Low access (30.1 %) to water supply (and basic sanitation) in rural areas

# Workshop

## Clean Water For Rural Areas

### Best Practice Examples

#### (1) Project ViWaT Operation – Mini Water Works

- Appropriate water supply designed for off-grid water users
- Treatment of groundwater, rainwater, and surface water
- Potable water and service water
- Affordable and quality assured
- Ready for transfer

#### (2) Project AquaViet – SuMeWa „Sun meets water“ System

- Removal of ammonia, production of chlorine for disinfection
- Fully automatic station, online monitoring, solar powered
- Ready for transfer



# Workshop

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### Results of the workshop regarding dissemination and implementation

- Integrating research results into national VNM strategies on rural water supply
- Education: Bottled water is the most expensive solution!
- Implementation of flexible and affordable decentralized water supply systems in remote areas (alternative: conventional on-grid systems)
- Ways of dissemination:
  - Publication of papers?
  - Involvement of private companies in the research projects
  - Involvement of stakeholders in the projects
  - Presentation of R&D at trade fairs (VietWater)
- (Re-)financing of water infrastructure:
  - How can we make R&D solutions attractive to development banks?