

## Cooperation Agreement

### Präambel:

The Institutions **SCMS Group** and **LimCo International GmbH (Limco)** had several meetings in the frame of Indian-German cooperation activities. During the discussions about various technological aspects of water and wastewater it was found out that there could be best synergies in working together. The goal of this cooperation between the both parties is to develop and to apply together best economic and effective solutions in the named fields in research and practical applications, under involvement of staff and students from both sides and from further partners.

- This cooperation agreement is established between the following two institutions:
- **SCMS – School of Engineering and Technology SSET**  
SCMS Campus  
Prathap Nagar, Muttom  
Cochin 683 106, Kerala, India  
represented by Prof. Pramod P. Thevanoor  
Vice Chairman.
- **LimCo International GmbH**  
Blarerstr. 56, 78462 Konstanz, Germany  
represented by the Managing Director Dr. Almut Gerhardt
- **SCMS** group as a private educational institution offers undergraduate and post graduate programs in management, business and technology and has R&D activities on various fields. SCMS Water Institute is an activity of SCMS Group of Educational Institutions at SSET with the following objectives:
  - developing water and wastewater technologies including reuse of water and recycling of valuable components
  - finetuning of given technologies for local conditions
  - framing water policies
  - performing environmental impact assessments and water audits
  - offering water related capacity building on all levels

**LimCo International GmbH** is specialized in the research, development, consulting, education and engineering in the water sector. We especially develop innovative technologies for continuous monitoring of water quality for drinking, surface, re-use and wastewater as well as



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seawater and aqua/maricultures, such as the Multispecies Freshwater Biomonitor, the LimCo Biosensor System and the new biofilm sensor. We are partner in several national and international applied research projects in aquatic and soil ecotoxicology, we have lecturing contracts with the HTWG Konstanz and we exchange and co-supervise students at different career levels. We also perform consultancies in stream and land fill assessments.

- These both institutions are interested in a close cooperation to develop and apply new technologies and to adapt approved technologies to the specific tropical conditions. The focus is water and wastewater treatment, re-use of water from rain water, aquacultures, etc.

For specific project applications separate Letters of Intend (LoI) will be agreed on.

Following projects could be of interest among others:

- Adapt the Multispecies Freshwater Biomonitor (MFB) to Indian conditions to monitor WWTP effluents, rivers, reservoirs for drinking water, etc.
- Adapt the biofilm sensor to monitor water quality in drinking water tanks and swimming pools  
A goal of the cooperation is to apply the research results on a technical level in practical application in larger scale, e.g. in a pilot WWTP plant of SSET.
- The role of the two partners is as follows:

SCMS:

- identification of fields for research and application
- basic investigation for the preparation of research projects (elaborating of funding sources and proposal writing)
- providing of qualified project support by staff or students of SSET
- performing local research work by applying this technology in India.

LimCo:

- Technology transfer such as demonstration, workshops, lectures
- Technology loan for pilot plants and applications
- Co-supervision of research work and joint publications
- Student exchange and support (both ways)



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- Results, which are worked out in common research projects will be published or used together.
- All technical information resp. technology as well as information about projects, which are exchanged in the frame of this cooperation, will be handled confidentially. All rights will stay with the institution which has delivered this information resp. technology.
- The cooperation can be terminated from each side to the end of a year by written notice three months in advance.
- The following had been agreed by both partners based on the points mentioned above:

1. SCMS Group shall help LimCo as a Knowledge Partner.
2. Student to come in Spring for 1 month to learn the equipment (covered by project of Prof. Fritsch (BWS), Limco is looking for a room as soon as this is approved).
3. Student works in India on application of the biomonitor in India with a native species (3 months): financed by the locally by SSET.
4. Writing joint research papers for scientific journals.
5. Application for further funding for research in this field in Indian conditions.
6. Joint research, workshops and demonstration of equipment & technology in India.

Cochin,

27/01/2015



(signature/ stamp)

Konstanz,

13.01.2015



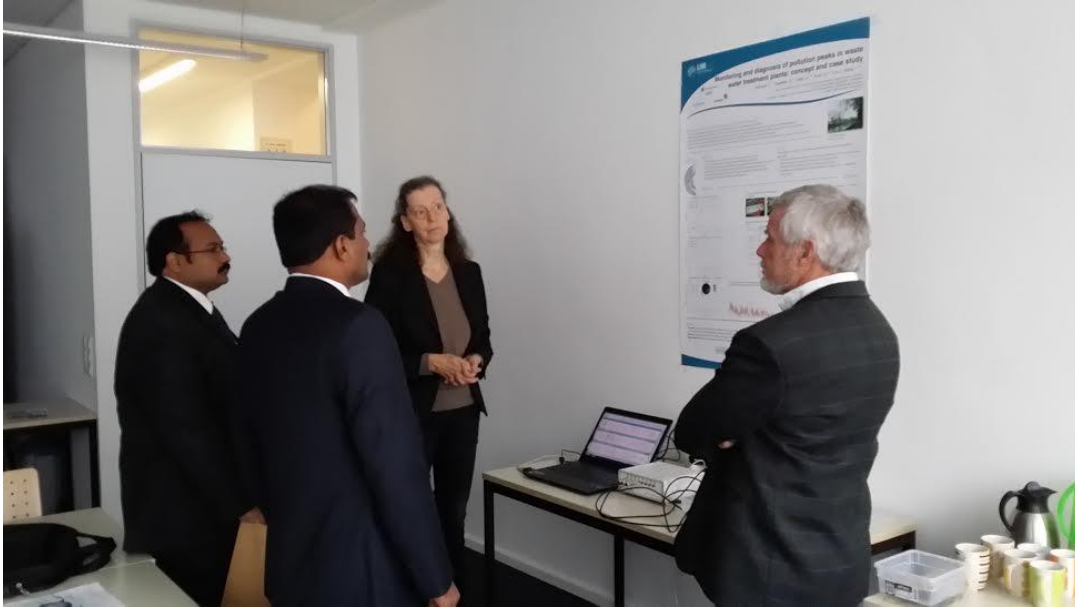
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## LimCo International GmbH, Germany

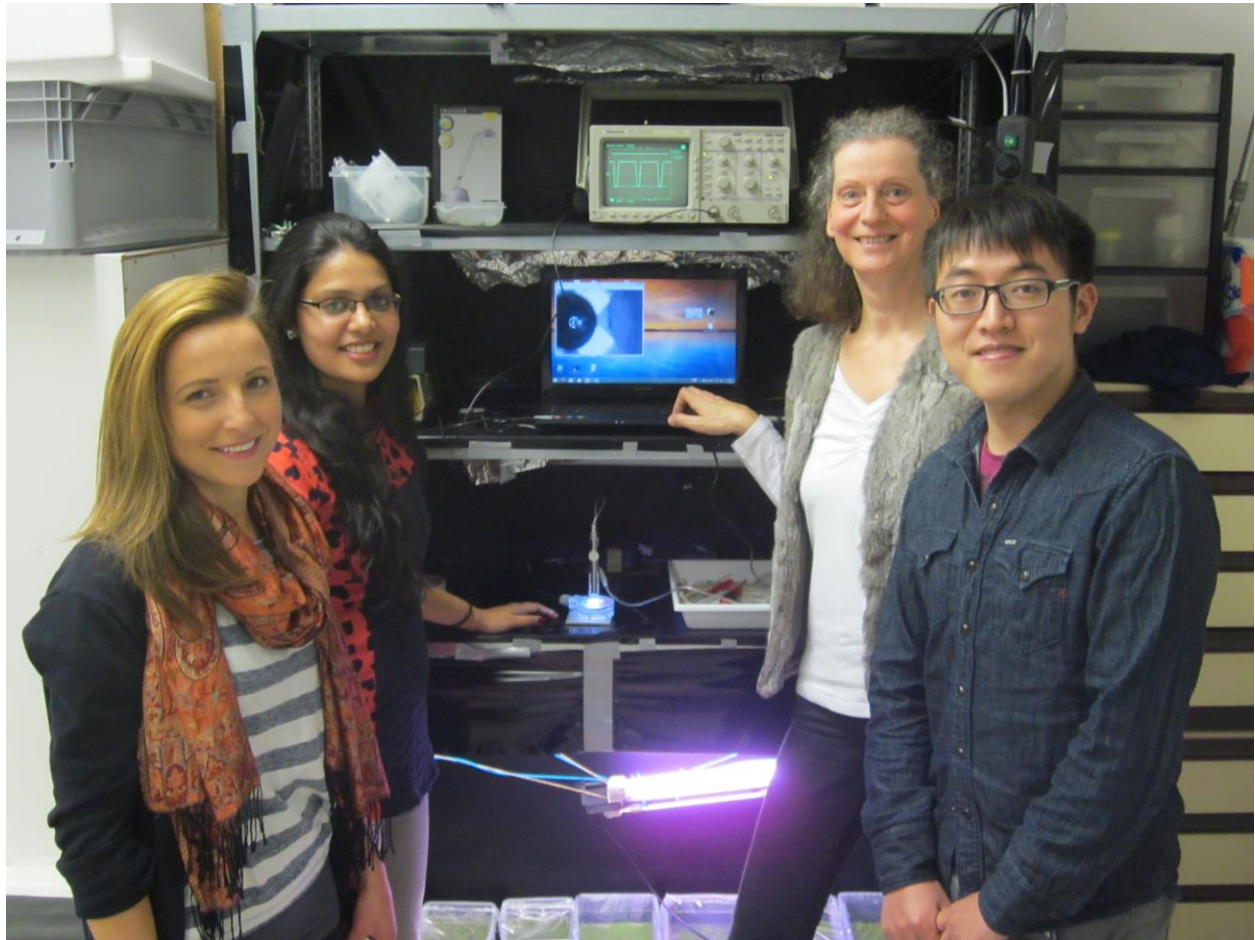
LimCo GmbH, an expert in biomonitoring, has given their Automated Multi species Biomonitoring Device costing Rs 8 lakhs to SCMS Water Institute for optimizing and fine tuning the instrument to Indian conditions.



Merin Mathew (2013 admission) student from the first batch of M. tech Environmental Engineering) was selected to undergo advanced training at International GmbH, Konstanz, Germany for a period of five weeks in May 2015. Limco International GmbH is an internationally reputed German company, a consultant in Limcology (science of fresh water). Merin Mathew got training in their worldwide unique IP-protected LimCo BioSensor system (LBS) based on the established Multispecies Freshwater Biomonitor (MFB). After the training, the biosensing equipment was brought to SCMS Water Institute for conducting studies in India and Merin Methew is continuing the project at SCMS Water Institute.



• Linda Joy (2014 admission) of M. tech Environmental Engineering undergone a one month industrial training at Limco International GmbH, Germany from 22<sup>nd</sup> October to 22<sup>nd</sup> November 2015.



Approved by

HOD