

# South Pole Group Proposal

## Spring Health & South Pole Group Project

London, 18 March 2016

**Prepared for:**

Bose Koorliyil Varghese  
Head of Green Initiatives at Infosys Limited  
Bengaluru · Karnataka · India  
+91 80 2852 0261 · Bose.Varghese@infosys.com  
Infosys.com

**Prepared by:**

Junio Valerio Palomba, Senior Key Account Manager  
South Pole Carbon Asset Management Ltd. (South Pole Group)  
80 Haymarket · SW1Y 4TE · London · United Kingdom  
+44 75 805 804 65 · j.palomba@thesouthpolegroup.com  
thesouthpolegroup.com

**Disclaimer:**

This proposal is solely for the use of Infosys. No part of it may be circulated, quoted, or reproduced for distribution to third parties without prior written approval from South Pole Carbon Asset Management Ltd. The offer will remain valid until 31/03/2016

## Table of contents

|          |                                                   |           |
|----------|---------------------------------------------------|-----------|
| <b>1</b> | <b>Project description</b>                        | <b>4</b>  |
| 1.1      | Overview                                          | 4         |
| 1.2      | Technology & implementation strategy              | 4         |
| <b>2</b> | <b>Proposed project expansion</b>                 | <b>6</b>  |
| <b>3</b> | <b>Emission Reduction Component</b>               | <b>7</b>  |
| <b>4</b> | <b>Expected environmental and social benefits</b> | <b>9</b>  |
| <b>5</b> | <b>Risks</b>                                      | <b>11</b> |
| <b>6</b> | <b>Finance</b>                                    | <b>12</b> |
| <b>7</b> | <b>Your Team</b>                                  | <b>13</b> |



## List of tables

|                                                |    |
|------------------------------------------------|----|
| Table 1: Overview of proposed project.....     | 6  |
| Table 2: Overview of carbon component.....     | 7  |
| Table 3: Project and carbon-related risks..... | 11 |
| Table 4: Project costs .....                   | 12 |

## List of figures

|                                                                                                                                                                    |    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Figure 1: Treatment tank installed by Spring Health at a village kiosk .....                                                                                       | 5  |
| Figure 2: Summary of Spring Health's business model .....                                                                                                          | 5  |
| Figure 3: The development of a strong, safe, reliable, health-giving brand identity in rural villages is a central focus of Spring Health's business strategy..... | 5  |
| Figure 4: Type of non-renewable biomass fired traditional cooking stove used in many households for boiling water .....                                            | 8  |
| Figure 5: Water purification project co-benefits.....                                                                                                              | 10 |

## 1 Project description

### 1.1 Overview

Access to safe drinking water remains a challenge for many rural households in India. Around 37.7 million Indians are affected by waterborne diseases annually, 1.5 million children are estimated to die of diarrhoea alone and 73 million working days are lost due to waterborne disease each year. The resulting economic burden is estimated at USD 600 million a year.

Spring Health sanitises water at the point of distribution through a simple chlorination technique, selling safe drinking water to rural households at affordable rates. Electro chlorinators (devices using the basic combination of water, salt and electric current) produce the chlorine used to purify drinking water inexpensively. A decentralised distribution system based on existing village kiosks is used to tap into previously unreachable rural Indian consumer markets.

The villages Spring Health is serving are very poor. Their water sources are simple hand pumps and tubes, and sometimes wells, which tend to be open. Many people collect water from natural sources, like rivers and ponds. The water that is consumed is almost always untreated. People are usually unaware of the need to treat the water and Spring Health dedicates a large amount of resources into raising awareness. They do this via innovative awareness/marketing campaigns which include gathering village people and presenting the benefits of Spring Health's water. As an example of the activities in these gatherings, people are invited to bring some water from home, which is then sealed and kept in an isolated container for a couple days; after this period, it can clearly be seen that all sorts of things begin to grow very quickly.

By end of 2015, Spring Health had 234 operational kiosks serving 260 villages in Odisha and employed 75 staff. In order to generate additional revenue and keep water tariffs for end users to a minimum, Spring Health is currently working on the registration of a carbon project that already includes existing kiosks. The carbon project will be registered as a micro-scale project under the Gold Standard and is expected to issue its first GS VERs before end of 2016.

### 1.2 Technology & implementation strategy

Spring Health uses WATA electro chlorinators to easily produce chlorine solution from water and salt (these are small devices that can be operated on a table).<sup>1</sup> One electro chlorinator serves at least 50 of the surrounding villages, each with approximately 200 - 500 households. With a dollar's worth of electricity a day and a few cents worth of salt, each electro chlorinator will produce at least 20 litres of chlorine solution per day, sufficient to sterilise 80,000 litres of water.

The company contracts small multipurpose family shops in a cluster of 50 villages, pays local artisans to build one 3000 litre cement tank in each shop's backyard with a smaller plastic tank in the shop's front and provides credit financing to shop owners to install electric pumps to fill the tank with water to be purified, sourced from their own shallow wells or ponds. Company business associates use motorcycles to carry chlorine solution to each kiosk, clean the tank, purify the water and also test it for residual chlorine.

For a small fee, customers fill their own 10-litre jerrycans with purified water and carry it to their homes - each 10 litre jerrycan is INR 5 (when delivered at home) and INR 4 (when collected at the kiosk). Currently more than 70% of customers opt for home delivery and are willing to pay a small extra fee for the convenience. Each kiosk hires up to two delivery men who deliver cans of water either by bicycle, cycle trolley or motorised rickshaw.

Spring Health applies a rigorous quality control system for chlorine production as well as for water treatment at the village kiosks. Further information can be made available on request.

---

<sup>1</sup>For more information on WATA devices, please see: <http://www.antenna.ch/en/research/safe-water/wata-devices>



Figure 1: Treatment tank installed by Spring Health at a village kiosk

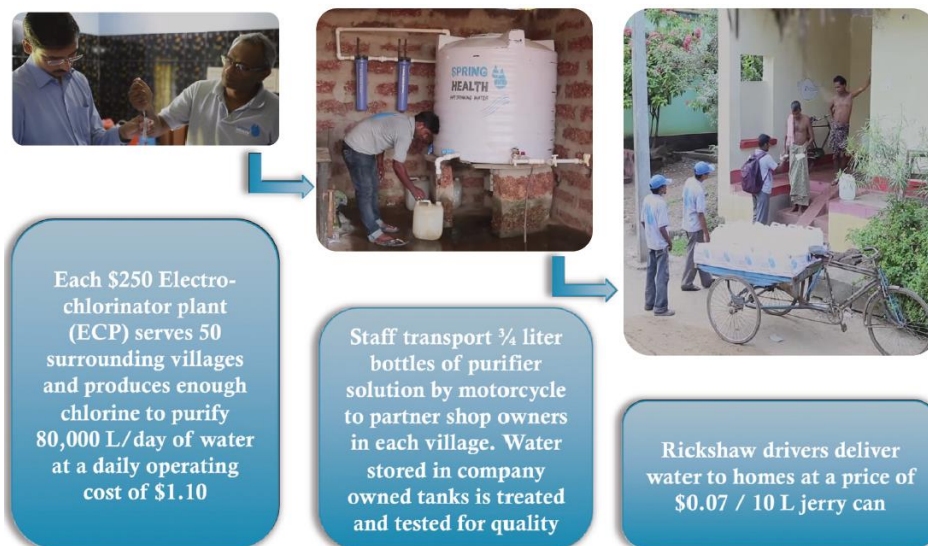


Figure 2: Summary of Spring Health's business model

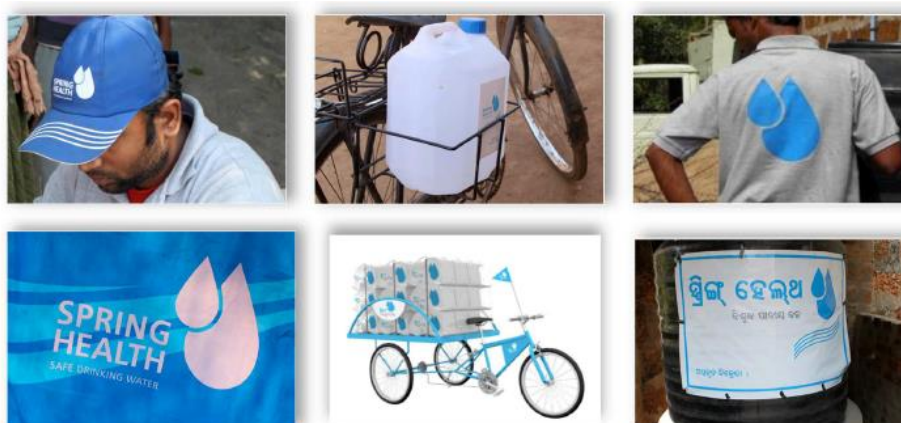


Figure 3: The development of a strong, safe, reliable, health-giving brand identity in rural villages is a central focus of Spring Health's business strategy

## 2 Proposed project expansion

With the financial support of Infosys, Spring Health intends to further expand its operations in Odisha. Spring Health has already identified 125 villages where kiosk installations could start immediately, including in the Ganjam, Narsinghpur, Dhenkanal, Jajpur, Bhadrak and Cuttack districts. Within 24 months an additional 300 water kiosks will start operations – providing safe drinking water to approximately 50,000 people. It is expected that the project expansion will lead to 150 averted disability-adjusted life years (DALYs) and three averted deaths per year by reducing the prevalence of diarrhoeal diseases. In addition, more than 100 jobs will be created – not including delivery men hired directly by the kiosk owners.

**Table 1: Overview of proposed project**

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Region</b>              | South Asia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Country</b>             | India                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Project Implementer</b> | Spring Health<br>A private company registered with the "Register of Companies", and has all necessary licenses in terms of VAT, etc. It is headquartered in Khordha Town in Khordha District, Odisha State.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Project Description</b> | <p>Spring Health will start operating an additional 300 water kiosks. The funding from Infosys is used to pay with the set-up of these kiosks, including hardware components (water tanks and jerrycans) as well as software components (marketing and awareness creation). If desirable, the Infosys logo and potentially additional information will be placed at each of the 300 new water kiosks.</p> <p>Operation and maintenance of the new water kiosks will mainly be financed through end user payments. All kiosks are expected to be financially self-sufficient after six months of full operation. It is proposed that Infosys covers the full operation costs of the first six months. In addition, when GS VERs are successfully issued (and hence the project is performing well), Spring Health will receive additional funding from Infosys (USD 2 per GS VER) which will be used to support kiosks with maintenance works.</p> <p>Spring Health wishes to further expand its operations beyond the initial 300 water kiosks. Based on experience gained through this first project, a further collaboration can be discussed.</p> |
| <b>Expected Schedule</b>   | Construction of 300 water kiosks within two years after project start date. The first kiosk will start operating in less than one month after the first payment has been made to Spring Health.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### 3 Emission Reduction Component

With the financial support of Infosys, the project will be registered as a micro-scale voluntary activity (VPA) under a Gold Standard (GS) programme of activities (with South Pole Group as the coordinating and managing entity). Two VPAs will be required to cover the proposed 300 kiosks. It is expected that the project will generate 105,000 GS VERs over the seven year crediting period.

Carbon credits can be generated because some rural households currently boil their drinking water prior to consumption. As boiling is replaced by chlorination (a green technology), carbon emissions are reduced. In addition, the applied methodology allows the assumption of suppressed demand in cases where the households currently do not have access to safe drinking water.

**Table 2: Overview of carbon component**

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Carbon Standard</b>                | Gold Standard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Carbon Project Developer</b>       | South Pole Carbon Asset Management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Field of activities</b>            | Demand-side household energy efficiency<br><br>In the proposed project, boiling at the household level is replaced with an efficient and green technology at the community level for water treatment. Typically, in the absence of the project, non-renewable biomass (and/or fossil fuels like kerosene and LPG) is used in the intervention area for overall cooking purposes as well as boiling of water for purifying. This leads to GHG emissions. Furthermore, in many (mostly poor) households, these fuels (predominantly fuelwood-based) are used in traditional cookstoves which are highly inefficient in transferring the heat to the cooking vessel. |
| <b>Project type</b>                   | 2 VPAs under micro-scale programme of activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Current status</b>                 | PoA under GS internal validation<br>(India will be included as additional host country)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Methodology</b>                    | Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 2.0 (GS Methodology)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Time frame</b>                     | Both VPAs are expected to be included in the PoA within 24 months after project start date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Total volume of carbon credits</b> | 105,000 GS VERs by 2026<br>(first issuance of GS VERs in 2018 or 2019)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Crediting period</b>               | 7 years (option of additional two crediting periods of 7 years)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |



**Figure 4: Type of non-renewable biomass fired traditional cooking stove used in many households for boiling water**

## 4 Expected environmental and social benefits

A Gold Standard registration requires intensive consultation with all stakeholders – including the local government. The project received very positive feedback from local government officials in the intervention area. In addition, chlorine is approved by the government of India for water purification applications and even most municipal water supply treatment plants are using chlorine. Since Spring Health is neither setting up any industrial manufacturing facility nor selling packaged drinking water, it does not require any additional license or regulatory approval from the government.

Environmental and social benefits:

- Improved access to safe drinking water will reduce child and adult morbidity and mortality, and can improve attendance at school and increase productivity, thus potentially providing improved employment/business opportunities.
- The intervention alleviates the burden on women as they have to spend less time collecting firewood for boiling water. This will provide more opportunities for productive work.
- Reduction of greenhouse gas emissions.
- Reduction of the use of non-renewable biomass therefore protecting natural forest ecosystems and wildlife habitats.
- The protection of standing forests will ensure the maintenance of watersheds that regulate water table levels and prevent flash flooding.
- Collecting firewood or purchasing fossil fuels to boil drinking water constitutes a significant expense for the very poorest households and communities. The intervention provides access to safe drinking water at reasonable costs to communities.
- Indoor air pollution due to open and uncontrolled combustion for boiling water is a health concern. This will be avoided when people obtain access to chlorinated water.
- Spring Health generates employment opportunities and additional income generating activities for local kiosks.

Spring Health and South Pole Group will monitor co-benefits during the entire project period. It is currently estimated that 7,500 GS VERs correspond to 2.5 million 10 L containers, which is slightly more conservative than in the initial PIN.

Currently quantification is based on following assumptions:

- 1,000 L drinking water per person per year (2.74 L/person/day)
- 5 people per family
- 460 L/day sold per kiosk
- Averted DALYs and deaths as per PSI's impact calculator (<http://impactcalculator.psi.org/calculator/105>)

We look forward to discussing with Infosys opportunities to increase the ROI on your ER project in terms of marketing and branding – e.g. videos; logos on the water kiosks.

# South Pole Group

## Water Purification co-benefit

**300**  
water kiosks

**50,000 m<sup>3</sup>**  
safe water per year



**Figure 5: Water purification project co-benefits**

We are interested in exploring with Infosys cutting hedge solutions to measure and quantify more accurately the number of beneficiaries of your project, e.g. remote RMV technologies.

## 5 Risks

Table 3: Project and carbon-related risks

| Risks                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Project-related risks</b> | <ul style="list-style-type: none"> <li>- Delays in implementation. Rather unlikely as Spring Health has successfully demonstrated over the last years that 25 villages can be launched in a month.</li> <li>- Lower water consumption than expected. Rather unlikely as Spring Health' experience has shown that the water consumption has gone up per family and kiosk when the village penetration has increased.</li> <li>- Cost increases in project implementation. Rather unlikely as contracts with Spring Health' suppliers will be made over the full project period.</li> <li>- It is likely that some of the kiosks will have to be closed after few years of operation. This is mainly due to the lack of interest by entrepreneurs, water sources that go dry or issues with the raw water quality. However, it is expected that this will affect less than 10% of all 300 kiosks.</li> </ul> |
| <b>Carbon-related risks</b>  | <ul style="list-style-type: none"> <li>- The quantification of suppressed demand in version 2.0 of the GS methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption" is slightly different to version 1.0 (which was presented in the PIN).</li> <li>- The project presented in the PIN is the first project of its kind in India and not yet registered under the Gold Standard. The VER estimations are based on field surveys however not yet approved by Gold Standard. There is a slight risk that the VERs per kiosk will need to be adjusted.</li> </ul>                                                                                                                                                                                                                                                                                                         |

## 6 Finance

The budget below summarises the costs for the installation of 300 water kiosks, operation costs over the first six months for all kiosks, carbon incentive for Spring Health, monitoring costs and all carbon-related costs over the seven year crediting period for two VPAs. The costs also include the monitoring of co-benefits. A detailed schedule of the payments will need to be agreed with Infosys when a collaboration agreement is prepared. In addition, the collaboration agreement shall include an agreement about the terms for Infosys to purchase GS VERs in the second and third monitoring period.

**Table 4: Project costs**

| Project costs                                             |                                          |                    |
|-----------------------------------------------------------|------------------------------------------|--------------------|
| <b>Spring Health</b>                                      | Kiosk installation                       | USD 390,000        |
|                                                           | Kiosk operation                          | USD 165,000        |
|                                                           | Carbon incentive                         | USD 210,000        |
|                                                           | Monitoring                               | USD 30,000         |
|                                                           | <b>Total</b>                             | <b>USD 795,000</b> |
| <b>South Pole Group<br/>(internal and external costs)</b> | PoA adjustments                          | USD 4,700          |
|                                                           | Grouped LSC meeting / baseline           | USD 11,400         |
|                                                           | VPA inclusion (per VPA)                  | USD 27,500         |
|                                                           | VER issuance (per VPA and year)          | USD 10,275         |
|                                                           | Project management<br>(per VPA and year) | USD 5,200          |
|                                                           | <b>Total</b>                             | <b>USD 287,750</b> |
|                                                           | <i>of which external costs</i>           | <i>USD 56,750</i>  |
| <b>Total Cost</b>                                         | <b>USD 1,082,750</b>                     |                    |
| <b>Price per GS VER</b>                                   | <b>USD 10.31</b>                         |                    |

## 7 Your Team

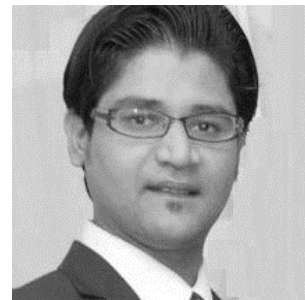
### Lars Osterwalder – Head of Project Development

Lars holds an MSc in Environmental Engineering from the Swiss Federal Institute of Technology in Zurich. Over the last 8 years, he was involved in water and carbon projects with a special focus on East Africa. Lars' professional focus over the last 3 years has been on the registration of 'carbon for water' projects under the CDM and Gold Standard and the assessment and design of community-based projects with water filters and fuel-efficient cook stoves. In his function as senior consultant based in Addis Ababa (Ethiopia), he represents South Pole Group in Africa and is responsible for the communication on the ground with implementers of a range of projects, including capacity development. Lars has plenty of hands-on experience in working on water quality and household energy related projects in almost all East African countries. Development of baseline and monitoring procedures, coordination of data collection in the field and managing stakeholder consultation processes are part of his work experience. Lars is well integrated in the international water, sanitation and hygiene (WaSH) community and participated at events such as the World Water Week in Stockholm, WEDC conference, Rural Water Supply Network forum, International Water Association conference, and the Water and Health conference.



### Krishan Kartick – Project Development Liaison

Kartick has for the past 8+ years focused on Climate Change and Energy Advisory Services, including GHG abatement project development (under both compliance based and voluntary mechanisms) as well as GHG accounting/carbon footprint estimation and GHG inventory analysis. His experience covers various industrial sectors, such as power (and renewable energy), oil & gas, iron & steel, cement, automobiles, chemicals, FMCG, buildings, waste, etc. He has assisted The World Bank Group as well as the Tata Group to assess their GHG inventory and move towards a low carbon corporate strategy, as well as executed national GHG inventory and climate change policy related assignments. He has also worked with a number of governments, multilateral organisations and international financial institutions, including UNESCAP, UNFCCC, UN Foundation, GIZ, KfW, and governments of Germany, India, Sweden, Switzerland, etc. At South Pole, his responsibilities entail project portfolio management, as well as execution of select consulting assignments for some of the company's esteemed clientele.



### **Junio Valerio Palomba – Key Account Manager - Infosys**

Junio has profound experience in business development and carbon consultancy services, having worked for 7 years across 3 different countries with over 100 customers. He has successfully lead and participated in several tenders for both VER and CDM projects for over 5,000,000 carbon credits and supervised the evaluation of over 50 potential projects eligible under the Kyoto Protocol to ensure their compliance with national and international standards. He has been a member of the ICROA Executive Board and supported the adoption and implementation of the first standardized protocol for benefits measurement with the Imperial College of London. Junio applies his in-depth knowledge in sustainability solutions to ensure the long-term success of South Pole Group's key accounts, with a dedicated focus on the ICT Sector.



### **Christopher Perceval – Director – Sustainable Services**

Chris has fifteen years of experience supporting and accelerating implementation of sustainable business practices across markets and a range of industry sectors. He has helped to launch the UN Global Compact, conceptualise, launch and manage the World Resources Institute Corporate Consultative Group, and lead a team that developed and launched the Action 2020 Initiative with a number of corporate members of the World Business Council on Sustainable Development. He is a recognised thought leader, and has helped to shape several industries focused initiatives - including the BSR Future of Fuels initiative, WRI Aqueduct, Global Forest Watch and GHG Protocol. He has been interviewed on CNN Business, featured in articles with Fast Company, written for the UNFCCC adaptation blog, and lectured at several universities in Europe and Latin America including INSEAD, Oxford University and Universidad Catolica. At an intergovernmental level, Chris helped to strengthen the role of the Ramsar Convention in bringing together 168 governments and over thirty other partner organisations to increase the restoration of aquatic ecosystems in order to reduce water risks. He worked closely with the Global Environment Facility and Green Climate Fund on their mobilisation of financial resources to support implementation of the convention and facilitated several NORAD investments in natural infrastructure for water services across Africa and Asia.



### **Thomas Schroeder – Head of Marketing**

Thomas has extensive experience across the full spectrum of marketing and communications, and oversees all of South Pole Group's activities in these domains. Prior to joining South Pole Group, he started m-way and sharoo.com, both subsidiaries of Migros, Switzerland's biggest retailer. m-way is Switzerland's leading electric mobility retailer; sharoo.com is the country's biggest peer-to-peer car sharing platform. Thomas has also worked, among others, as Project Manager at Migros' Headquarters in Zurich, contributing to strategic realignments of Migros portfolio companies, as well as Mergers & Acquisitions. He holds a PhD in Business Administration from the University of St.Gallen, Switzerland.

