General Information Nepal

Nepal ranks 145 of 188 rated countries in the UN Human Development Index (2015). It is still one of the poorest countries where one quarter of the 30 million people lives of less than CHF 1.25 per day. Around 50% of the Nepalese are considered working poor with an income of less than CHF 2.00 per day. Child labour (age 5 to 14) accounts for about 34%. Close to 30% of the country's GDP comes from foreign remittances. Around 1'500 to 2'000 Nepali men and women leave the country on a daily basis to work abroad for years (South Korea, Middle East, South East Asia), which represents a brain drain, causing a lack of valuable workforce within the country.

At the beginning of March, an investment summit took place resulting in a pledge by foreign countries to invest a total of USD 13.5 billion during fiscal year 2017/18. China committed to invest USD 8.3 billion or 60% of the total, reflecting their gaining influence and power in the region. India, which is the dominating country for Nepal for a long time, committed USD 317 million only. It will be interesting to see how that plays out over time for Nepal, being in the middle of two giants. The Foreign Direct Investments should go into different sectors, such as infrastructure (e.g. roads), agriculture, forestry, and tourism.

Water in Nepal

Every year around 10'000 children still die from waterborne diseases. According to Government, Nepal has reached the UN goals and states that around 85% of households have access to water. This is confirmed by the observations of Helvetas Nepal. Our unqualified observation in these two weeks is also that water availability is not the main issue. As it is true for so many topics in Nepal, there is a big gap between theory and practice. A good impression can be gained by reading some Nepalese newspapers either "The Himalayan Times" or "The Kathmandu Post". Almost on a daily basis, you are able to read something water related in these papers. In combination with the conversations with locals, the project visits, personal observations, and literature (not only water related), you can get a good feeling about the gaps to reality. In the case of water, quality of water and distribution is still a major issue. As Juerg Merz from Helvetas Nepal points out "quality is not yet a topic in Nepal", referring to any kind of topic, be it water, organic vegetables, or anything else to improve health and quality of life. Price is the determining factor. A sign to where the evolution of the country stands. It will take generations to achieve sustainable impact, as we can see in the schools working with the children on safe water.

Saturday, 25th Feb. 2017

Arrival on time with Qatar Airways. Beautiful view on the Himalaya range from the airplane, flying in over the Western mountains. From the air you could see many dry riverbeds (which will be filled in Monsoon season) and some rivers that carry water. Landslides from the hills due to road construction, tree burning for agricultural usage, were well visible, which is one of the issues the communities face every year.

The driver "Debu" drove me to the Hotel Himalaya. He seemed to know a lot about the water issues since on a regular basis, he drove an Italian NGO worker around, who was involved in a long-term project of the Government and Asian Development Bank http://www.melamchiwater.gov.np. Debu mentioned that there is a lot of construction along the roads because this year, Government will finish a new large water pipeline, which will provide the people of Kathmandu with clean water. The water comes from the big river "Melamchi". He believes that it won't be necessary any longer for the people to buy expensive water from the water tankers once the pipeline is finished. He buys 20 litre water jars at a price of USD 2 per jar. That makes about US cents 10 or CHF 0.10 per litre. Bottled water is sold around NPR 25 / litre, which equals CHF 0.23. He says that there is a need for about 100 million litres of water per day in Kathmandu.

Project: Safe Water Program

Jana Jyoti Secondary School, Janagal, District of Kavrepalanchowk (Urban)

Sunday morning, 26th Feb.2017

The ECCA employees Prachet, Shailena, and Manisha picked us up at 09.15 a.m. at the hotel. The school is located about 25 km east of the city centre.

After a warm welcome, the members of the Nature Club performed dramas. Dramas are one of the methods used to build awareness and convince people in and outside of the school about the importance of safe water. The earthquake also affected this school. One building collapsed but no fatalities were suffered, mainly because the earthquake happened on a Saturday. The earthquake also affected the water supply, since one of the sources (running water from the hills) dried up. The school is now in the construction of a 70 ft. deep well and we had the opportunity to look at the man-made hole of 25 ft.

ECCA is working with this school since June 2015, when WATASOL was introduced. The Nature Club contains of 15 members and has students of all different levels, i.e. class 6-9 (age 10-14). After the drama performance, we gathered with the Nature Club and ECCA staff in a separate room, where each student introduced him- or herself. Representatives of the school faculty were present, especially the one teacher responsible for the Nature Club and contact person for ECCA. The children showed us all the reports on Nature Club activities they are trained to write, including sales records, test results, meeting minutes, activity records, and accounting. In the year 2016, a total of 348 WATASOL bottles (60ml) were sold at an average profit of around NPR 10 (CHF 0.10; total income around CHF 35 for the Nature Club) and 140 bottles were distributed for free. Total WATASOL users inside the school are 312. A total of 1'834 beneficiaries could be reached with safe water in the year 2016.

The records mentioned above are produced based on the format provided by ECCA (standard template, based on Nature Club guidelines provided to each school). ECCA is using that information to write their report as well, which we receive twice a year.

Mahendra Secondary School, Sanga, District of Kavrepalanchowk (Urban)

Sunday afternoon, 26th Feb.2017

The second school is located closer to the city, at the border of the Kavre and Bhaktapur districts. The school is part of the Safe Water Program since May 2016. It has about 300 students and 22 faculty staff. It sold 280 bottles of WATASOL until end of 2016 and recorded sales of about NPR 3'000 (CHF 30). 190 bottles were distributed for free. Over 1'500 beneficiaries could be reached in 7.5 months. It is not clear to us why individual schools are more successful, it could be teacher's commitment, size of community, number of activities performed etc. **We recommend that ECCA is trying to understand these differences and to have an experience exchange between the schools so that they can learn more about the success factors.**

Again, two dramas were performed, one on the sickness due to unsafe water and one on social problems in the family: alcohol, not sending the daughter to school, both still common issues in Nepal. Afterwards, the 17 Nature Club members again presented themselves and their work.

The road to the school leads through a hilly area and was recently renewed by the Chinese. The road leads directly to the Chinese border in about 100 km distance. China gains more interest in Nepal, which may also become a concern to the Indian Government, who has been influencing Nepalese politics for a long time. Overall, we believe that two countries trying to increase influence over a third one could be beneficial for the improvement of people's lives. It depends very much on how the Nepalese Government and political environment is reacting to this increased attention.

St. Paul Secondary School, Thecho, District of Lalitpur (semi-urban)

Sunday, 5th March 2017

The third school we visited is in the city area. It is a member of the program since March 2013. With 350 students and 22 faculty staff, this school is slightly larger than the average size of 300 (only three of the total 32 schools have more than 1'000 students and faculty). They reach about 2'470 beneficiaries with their activities. The school sold 474 WATASOL bottles last year, which is matching the Mahendra school's numbers on a full year basis. Estimated income for these sales was about NPR 11'850 (CHF 110). St. Paul School distributed only 95 bottles for free compared to 190 of Mahendra. Based on this example, we need to understand better why a school that is in the program for much longer, does not show a comparable increase in numbers compared to a school that has been recently added. We should discuss with ECCA whether this is a pattern or an exception.

In the third school, we experienced another typical activity: "Competition". Ten other schools were invited. Three students of each school from class 9 (age 14) were fighting for the first prize. Within three hours, the students were required to produce a "Wall Magazine" where they had to explain the role of students in the schools in the development of safe water. At the end, three judges (one member of ECCA, two teachers from two different schools, which were not involved in the competition) evaluated based on a matrix which group fulfilled the task best. St. Paul School as the organizing school cashed NPR 300 (CHF 2.90) from each participating school for this event. The results were extraordinary in terms of creativity and content and beyond our expectations. The level of passion and commitment to provide safe water and to make it an important topic in the day-to-day is incredible and encouraging.

Key learnings for dropforlife:
- dropforlife can be very proud of the achievements since it started to work with ECCA in the Safe Water Program. The impact on these local eco systems is significant and the long-term impact of children growing up and knowing the importance of safe water cannot be underestimated.
- The Nature Club members are also very proud for what they are doing and are very thankful for the support by ECCA and dropforlife.
- Teacher's commitment is one of the key success factors for the success of the safe water program.
- Repeat sales remain a challenge and it is not clear why. According to the teacher, the price of water does not seem to be the issue. It is more that the understanding of the importance of repeat sales is not yet sufficiently there or as a consequence, the lack of persistent follow-ups.
- Duration – time required for behavioural change (generations) is the main challenge. Today, children grow up with WATASOL. Older generations still use the water directly from the source in spite of often knowing that the quality is not sufficient. For example, older people believe that the health condition is part of their culture and that there is no need to change.
- Side effects of program, i.e. people start to think differently about the whole environment, take more responsibility and develop a willingness to change.

Actions and Recommendations:
- **Extend reporting to include sales in NPR** (not only number of bottles). Cash sales and income should be shared between all schools so that a natural competition could become a motivating factor to generate more sales, to increase awareness and **organize experience exchanges** between schools so that individual schools can learn from the best in class.
- Analyse the reports in more detail and try to understand better what successful schools do better, conclude on key learnings and apply them to all the schools if appropriate, including patterns in sales over the period since program start.
- Visualize results of program in a map, how WATASOL is spread out in the country, schools and communities, compare number of bottles sold for each school, number and kind of activities that are performed so that the schools can learn from each other.

Questions that remain:

- How can a self-sustaining level be reached so that no outside financing is required anymore? According to Prachet, it has to be mix. We continue trying to work towards the goal of full self-sustainable models.

Project: Women Group Social Enterprises

Monday, 27th Feb. 2017

In the morning we visited the three women groups of the Women Group Social Enterprises project, located in Patan (district in Patan, close to Kathmandu).

All three women groups are physically rather close to each other. They are all connected to the same Community Learning Centre (CLC). The women groups have a 5'000 litre tank each, which is filled depending on demand by the big water tankers that deliver water to the houses (water quality sufficient for washing and cooking, but not drinking, i.e. purification with chlorine is necessary). The women groups pay NPR 100 for one litre of WATASOL to the Community Learning Centre, which should produce WATASOL on behalf of all (does not really work according to the women). There is no competition since each group serves a clearly defined area within the community. The prices achieved are NPR 12 per 20 litre jar of purified water, which is far below market price of up to NPR 50. Unpurified water is sold at NPR 5 per 20 litre jar. One of the reasons is that these women groups are serving their community, and are apparently not trying to maximize their profit. Another one is high price competition. We also learnt that their business can only be run during six months of the year, during the dry season. When the wet season arrives, the stone taps and spouts, which are spread all over the communities, give enough water free of cost. People go and get this water during these times. This set-up raises the question how they are able to build their own business in a profitable manner. Furthermore, it seems that the idea of "safe water" is not yet clearly understood nor accepted by the large community.

A long discussion took place around the entire concept of entrepreneurship. It started with the question by the women why they must repay the loan that ECCA is granting for the purchase of the necessary tanks and infrastructure. It was rather a surprise to us that this discussion had to take place. It seems true in Nepal (confirmed by various sources) that the biggest competition to build up such businesses comes from NGO's who provide stuff for free. So, the women did not understand why they must pay a loan back, when one street apart someone gets a water tank for free.
We tried to emphasize on the concept of entrepreneurship with the most important message that it is necessary to become independent. According to ECCA, this discussion repeats itself and when discussed, the women understand and agree. Afterwards, in their community centre, other voices are raised and the women change their mind again.

For the time being, there are only three women groups who have started their business. With the learnings we gained during this visit, we recommend to adapt the business model. ECCA and the women groups need to adapt and test the current business model. Only after being able to successfully run the social enterprises should the business model be rolled out to the other seven women groups agreed upon during the first phase. In particular, the business model should include production and sale of WATASOL during the wet season for purification of the water within the individual households instead of buying safe water.

In the afternoon, we had an internal meeting with ECCA to discuss the learnings of the morning and the Safe Water Program.

Key learnings:

- Top two challenges are education and awareness building for the importance of
  - safe water
    Changing old tradition and habit (e.g. water from tab is perceived as "new water" and therefore better than "stored" water in jars or tankers, independent of quality, also for religious reasons)
  - becoming independent through entrepreneurship
- Business model as originally agreed is not aligned with practical implementation (seasonal impact, WATASOL sourcing, pricing). Business plan can realistically not be achieved as defined.

- Water availability is not the biggest issue. Pricing is flexible depending on competition in very local environment. In the city, access to clean water is not an issue, so it becomes a question of easiness (how long to carry water to household) and price.
- On-site meetings with all parties are key to understand where the problems really are.
- The concept of entrepreneurship and importance of obtaining independence must be taught as thoroughly as the safe water program (discussed with ECCA how to improve).
- High flexibility of women groups in thinking to adapt services to make it more successful.
- Experience exchange with ECCA schools and women groups could be a way to better learn what is needed for successful implementation, especially regarding arguments for behaviour change.
- Importance to make business with the first three women groups successful as example for the next groups (not to start until business works).

Actions and Recommendations:
- Change of business plan as agreed with ECCA to include WATA device and own production instead of buying WATASOL from community centre at 100 NPR per litre, and incentive to sell WATASOL solution during wet season to generate additional income and provide customers with tool to make safe water. Review business plan including price setting mechanism to review viability of business model.
- Contract with women groups will be adapted to reflect changes we discussed together. New translations to be provided to dropforlife.
- Increase awareness-building activity with women groups to educate them on the importance of safe water. Consider experience exchange and learning through the Nature Clubs of the schools supported by ECCA.
- dropforlife: define means to improve communication on qualitative impact (videos, interviews, etc.) as part of new communication concept. For example, take Nepal map and visualize with different colours where dropforlife/ECCA are active with their projects (1. Pilot project / 2. Safe Water Program / 3. Women Groups Social Enterprise / 4. Nexus Centre).

Overall conclusion after two days:
- Main challenge is behaviour change (understanding importance of safe water) and understanding importance of entrepreneurship (becoming independent).
- ECCA is the right local partner and we are happy about the collaboration. We could improve the overall success of our projects by exchanging experiences and conclude on improvements closely together with ECCA.
- It should be our goal to improve measurement toward impact on entire eco system vs. simple results (e.g. no. of beneficiaries).

Visit Helvetas Nepal, Monday 6th March 2017

https://nepal.helvetas.org/en/

Meeting with Mr. Bharat Pokharel, Country Director of Helvetas Nepal, Mr. Juerg Merz, International Program Advisor (during 19 years in Nepal and transferring to Mozambique in two months), and Mr. Madan Bhatta, the responsible program manager for the Water Resource Management program.

The purpose of the visit was to learn what Helvetas is doing, what their main challenges are, and to inform them about dropforlife and their activities in Nepal. According to Bharat and also Prachet, meetings have taken place between ECCA and Helvetas. Juerg mentioned that there are still some WATA devices at Helvetas that have never been used. In spite of good intentions, there was never a follow-up to really work together, without bad intentions. Bharat expressed an interest in meeting again with ECCA. According to Prachet from ECCA, at the request of Helvetas, ECCA even conducted training on WATA devices about one year ago. The question for him is why Helvetas never reached field implementation.

Helvetas lists 43 active projects and an annual budget of CHF 12 Mio. Most of the funding comes from Helvetas Switzerland. It remains a challenge to get funding especially since the projects are long-term oriented and do basically not match the timing of the grants received. The projects have been bundled under the strategy 2016-2020 into six chapters:

1. Food Security & Nutrition
2. Integrated Water Resources Management
3. Economic Growth & Decent Employment
4. Gender Equality & Social Inclusions
5. Climate Change & Disaster Risk Management
6. Good Governance

Helvetas Nepal is mainly active in the very poor areas of the country (West, South West, South East, Central East). The water related projects are all in the West and South West, far away from dropforlife's current activities. It does not have any projects at all in the Kathmandu area or even Chitwan area, which is one of the richest in the Terai region. Some of the programs sound interesting and it even seems that Helvetas is willing to move more towards entrepreneurial thinking and creating more independence of the beneficiaries. Juerg mentioned however, that the entire culture of the donors of Helvetas do not allow for such a change! When we explained the Nexus Center approach, Juerg Merz expressed an interest to meet with Lars Willi.

Possible points of contacts / interest:

- Exchange experience and info on the Nexus-Centre approach; establish contact to explore mutual interest.
- ECCA: exchange awareness building approach in schools for Safe Water Program and what Helvetas is doing in the Climate Change Adaption program in their schools. There is also a "Blue School" project to raise awareness in WASH (Water, Sanitation, Hygiene) and create environmental friendly schools.

Actions:

- Introductory e-mail to Helvetas Nepal and ECCA (re-vive contact) and Weconnex / Nexus (new)

Fig. 1: Helvetas Nepal

Picture Gallery and Explanations
ECCA Project Visit 26th -27th Feb. 2017, 5th March 2017

Dramas

Fig. 1: Janajyoti Secondary School, Janagaal, Ugratara VDC (urban area, about 25 km east of the Kathmandu city centre), preparing for a typical Nature Club activity, a drama performance about safe water.

Dramas are one form of many activities to raise awareness about safe water. The Nature Club students (class 6-9, age 10-14, around 15 students in this school) are performing these dramas and bringing the importance of safe water to everybody's attention.

Fig. 2: Daughter is sick due to bad water quality

Fig. 3: One of the key success factors for a successful safe water program is the teacher's commitment.

How students get access to safe water

Fig. 4: 20 litre jars with safe drinking water

Fig. 5: students in line to drink water

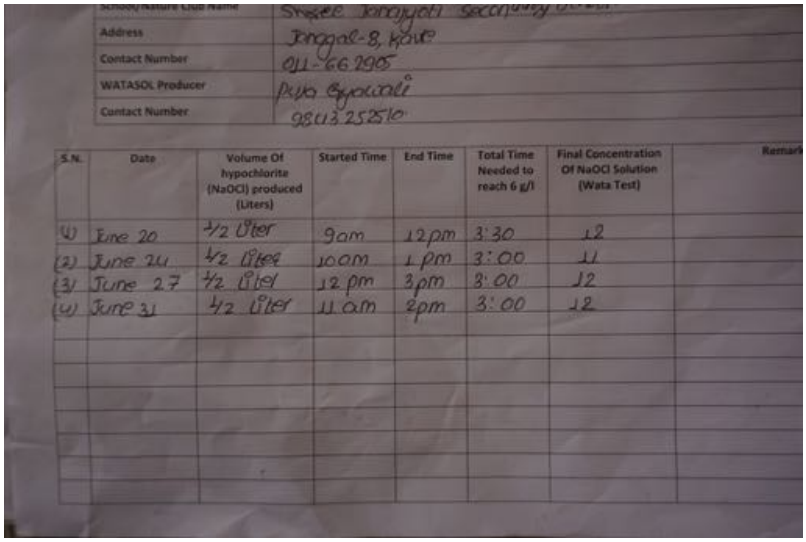
Every school makes safe water available for the schools. 20 litre jars are filled with clean water, which was previously purified by the students of the Nature Club with the chlorine solution WATASOL. The WATASOL is produced and filled into 60ml bottles. There is unstabilized and stabilized WATASOL. The unstabilized WATASOL can be used for about one week, the stabilized solution up to a year. It is much more complicated and delicate to produce stabilized WATASOL. This is why the schools produce unstabilized WATASOL whenever needed, and only ECCA produces stabilized WATASOL in their laboratory.

Nature Club members

Fig. 5 and 6: In a meeting with the Nature Club members, each one of them reports on their activities.

The Nature Club has clear rules and guidelines, established by ECCA. There are functions like President, Vice-President, Treasurer, Secretary, etc. Older students teach younger students so that the know-how and the nature of the activities are always carried on.

Students show us their detailed reporting on the numbers, the water testing and all the requirements established by ECCA.



Address	Jhagal-8, Kavre
Contact Number	011-66295
WATASOL Producer	Puja Gyawali
Contact Number	9843252516

S.N.	Date	Volume Of hypochlorite (NaOCl) produced (Liters)	Started Time	End Time	Total Time Needed to reach 6 g/l	Final Concentration Of NaOCl Solution (Wata Test)	Remark
(1)	June 20	½ Liter	9am	12pm	3:30	12	
(2)	June 24	½ Liter	10am	1pm	3:00	11	
(3)	June 27	½ Liter	12pm	3pm	3:00	12	
(4)	June 31	½ Liter	11am	2pm	3:00	12	

Fig. 7: Example of standard reporting

Fig. 8: The Nature Club members demonstrate how they produce WATASOL and how they do quality tests.

Fig. 9: Class room

Fig. 10: Toilets

Water supply

Fig. 11: Man-made water hole[1)]

Fig. 12: Water tanker[2)]

[1)]The school is digging a hole to get additional supply from groundwater. This hole is now 8 meters deep and will be around 15-20 meters once it is finished. The additional water supply compensates for the formerly running water from the hills, which has dried out since the earthquake.

[2)]A regular way for many households and communities to get water is by such water tankers. The quality of the water is poor. The water is stored in underground tanks or water tanks (e.g. 5'000 litres) above ground and roofs. The water is either used for all other purposes than drinking (e.g. washing, cooking) or it must be purified with filters or chlorine solutions before drinking.

Fig. 13: We get used to a warm welcome in the schools (Mahendra Secondary School)

Fig. 14: "WASH" and sanitation facilities are part of ECCA's Safe Water Program

Fig. 15 and 16: St. Paul Secondary School organizing the competition

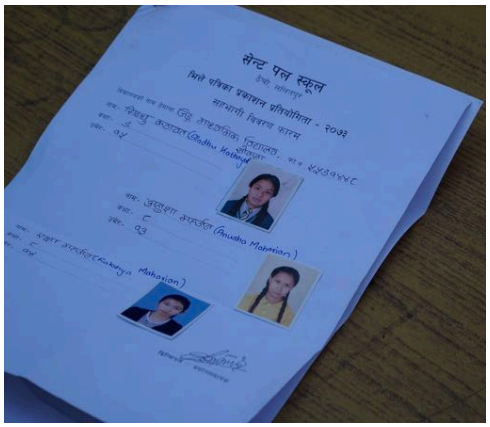


Fig. 17: Three students of each school

Fig. 18: Three hours of competition, clear rules

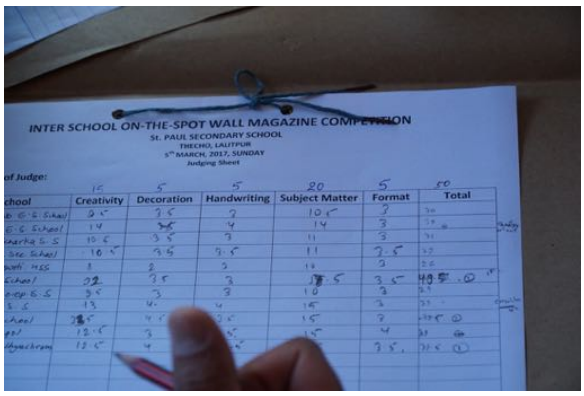


Fig. 19: Judges' assessment matrix

Fig. 20: Certificate of Participation

Fig. 21: Group photo with winning teams and participants

Picture Gallery and Explanations
ECCA Project Visit Women Group Social Enterprise 28th Feb. 2017

Fig. 1: 5'000 litre water tank in backyard, Ananda Women Group

Fig. 2: Selling water to neighbours by pipe

Fig. 3: Meeting with the three women groups

Fig: 4:Looking at sales records and reporting

Fig. 5: Tapahiti women group

Fig: 6: Patan, location of Tapahiti women group

Fig. 7: Generating sales (Yampi women group)

Fig: 8: Patan, Yampi women group

Fig. 9: group photo with the three women groups

Fig. 10: water pipe system from local spout to household

Fig: 11: Spout and stone taps, connected to pipes

Fig. 12 and 13: women getting water from spout, some give little water during dry season as well; although inconvenient (they have to carry the water home) and slow (it takes a long time to fill up the recipients).

Picture Gallery and Explanations
Examples of WATASOL posters used in the school

Fig. 1 and 2: Posters used in schools explaining how WATASOL is produced and used

Fig 3: Overview of purification process

Fig. 4: 60ml WATASOL bottles, stabilized (usable up to 6 months) or unstabilized (usable one week)

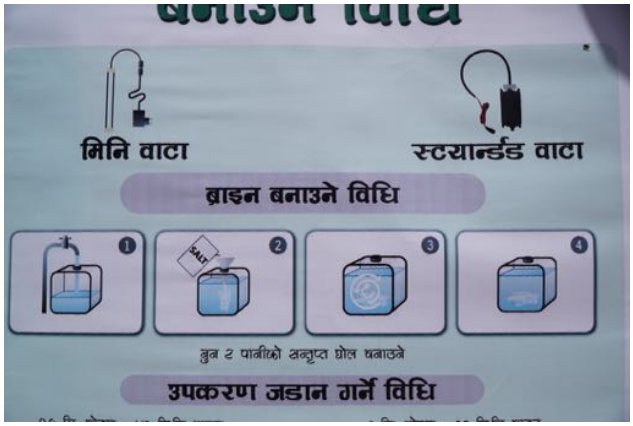


Fig. 5: Step 1, fill right quantity of water, add salt, mix it, wait, use Mini WATA or larger size device

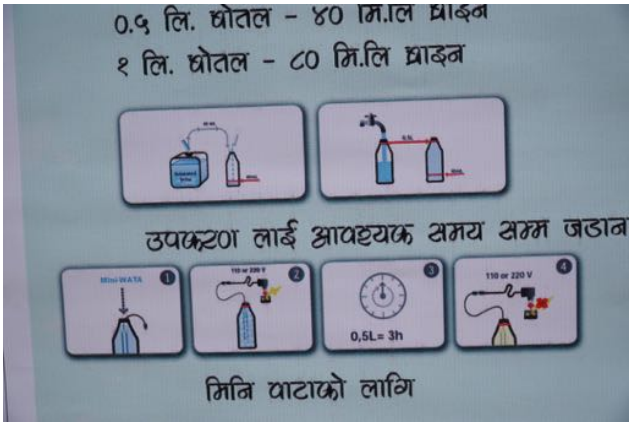


Fig. 6: Step 2, explaining the right mix and quantity and how long to wait until chlorine solution is ready, e.g. three hours for 0.5 litre

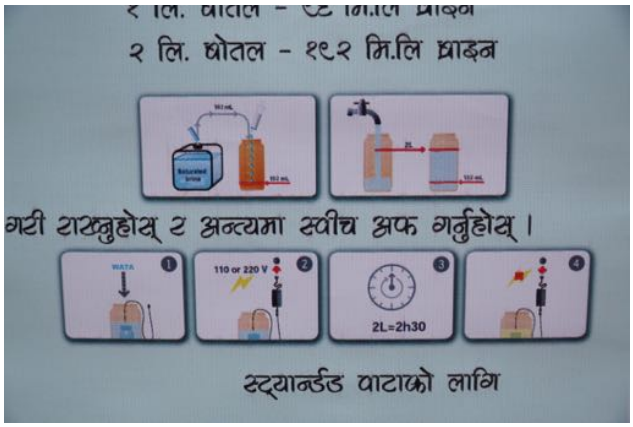
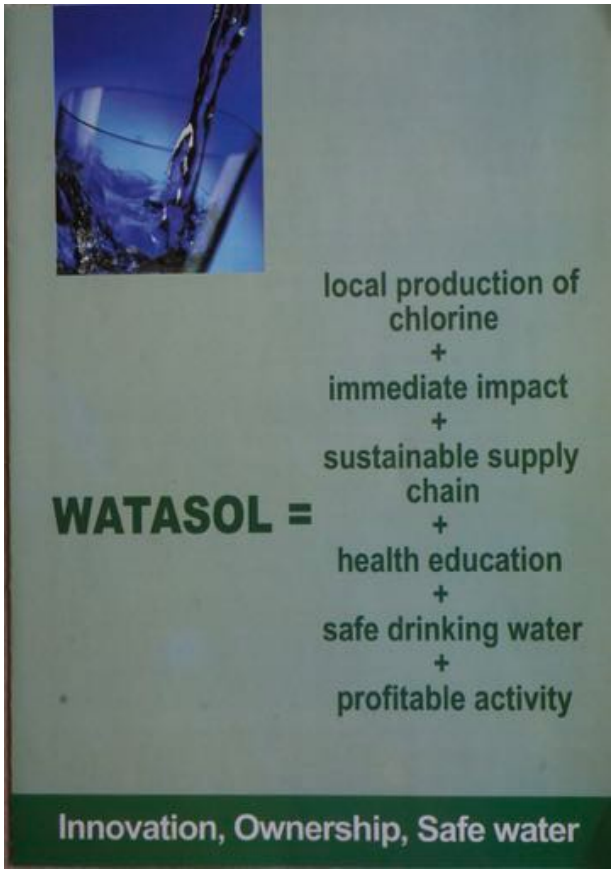


Fig. 7: same procedure with bigger WATA device (more can produced in less time)

Fig. 8: Procedure explaining quality test

https://www.youtube.com/watch?v=cWPgTmtiwaQ



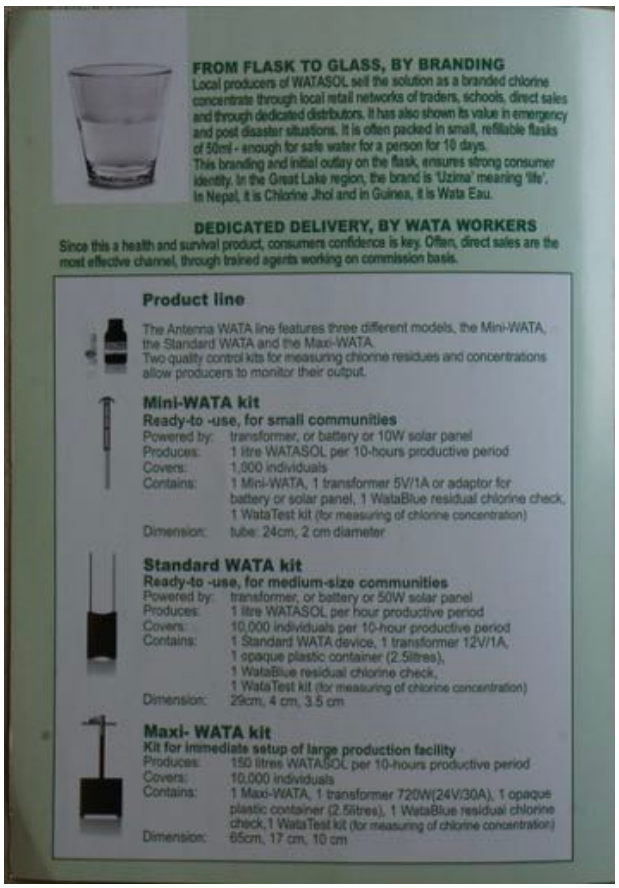


Fig. 9-12: Brochure produced by ECCA and Antenna