

# Gold is Blue!

The challenge of bringing clean water and sanitation to the rural areas of Burkina Faso





# GOLD IS BLUE

The challenge of bringing clean drinking water, sanitation and hygiene to rural areas of Burkina Faso

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*"The shortest answer is doing" (English proverb)*

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# Introduction

When the public water services warn us of a water cut, we quickly fill tubs and water bottles, hoping that it won't last too long. When the toilets are plugged or the septic tank overflows in the middle of the summer, woe to us if we don't find someone to unplug it fast!

Because the water and sanitation system has to function correctly if we want time to do something else. It's true for us as for them.

You don't choose to be born in the Sahel. You are born there, that's it! These people live in a world with no drinking water and no sanitation infrastructure. *"We live with less than 1.50$ a day. With so little, we hardly survive. If we had the means to dig wells or build latrines, we would have done it a long time ago. We're not blind! We see how our children get sick by drinking the contaminated swamp water. But we have no choice. However we are more than willing to give our time to help the well diggers."* (A woman from the Eastern province of Tapoa – Burkina Faso)

We write this book so that our (future) donors understand that it's mainly the unavailability of drinking water and lack of access to sanitation that prevents long-term public health. When a village has clean water, access to latrines and has good hygiene practices, the villagers are now liberated for spectacular economic growth. It is true here as it is over there.

You will discover that the NGO Morija has done a lot for the last 35 years with relatively little means. At the end of this book, you will discover what YOU can do even if you have little means. For a little money that comes from here can do miracles over there and save a generation of children whose lives have no future.

Of course, it wasn't your fault to be born here either. So enjoy it! But if you don't reach out to someone who is thirsty when you have some means to act, who will reach out to you when someday you'll be thirsty too? The experts say that between now and 2025, 50% of the countries in the world will lack drinking water.

## Have you calculated your water footprint?[1]

We could say that the lack of water in the Sahel is really not our problem. But the experts have calculated the 'water footprint' of every product that we buy in Europe and the figures are astounding. For example, in Switzerland, 80% of the products we buy come from other countries that have less water resources than the Helvetic Confederation.

To produce one kilo of beef, we need 15,400 liters (4,068 gallons) of water. Of course not all is blue water (drinkable water). The website *Agrisalon* says they need 200 liters (53 gallons) of 'blue' water and the rest is 'green' water (recycled rain water). But still…it's just for one kilo! [2]

[1] http://www.waterfootprint.org/?page=files/home

| To produce | Liters | Gallons |
|---|---|---|
| One kilo of beef | 15,400 | 4,068 |
| A car | 400,000 | 105,669 |
| A kilo of chicken | 3,000 | 792 |
| A cotton jean | 11,000 | 2,906 |
| A beer bottle 33cl (11 fl. oz.) | 11 | 2.90 |
| A cup of coffee | 140 | 37 |

*The question is: We may be 'green' but are we 'blue'?*

When we consume a product we also consume the water needed to manufacture it. Here is what a citizen really consumes (often water provided by another country) when buying products. It's per inhabitant and per day.

| Country | Liters per day | Gallons |
|---|---|---|
| United States | 6,800 | 1,796 |
| France | 5,100 | 1,347 |
| Switzerland | 4,800 | 1,268 |



**Figure 1 - Give back what has been taken?**

But before we give ideas for what we can do, listen to what the villagers, who received their well this year, have to say.

[2] http://blogs.ec.europa.eu/echo-action/safe-water-sanitation-for-cholera-hot-spots/

Then we will talk about the technical challenges involved that demand the perseverance of a top level athlete to find the blue gold.[3]



**Figure 2 - Smiling women: at last they have drinking water!**

[3] http://www.iwmi.cgiar.org/issues/groundwater/overview/summary-groundwater/

# I. The Challenge: find blue gold in the dry Sahel region

The villagers from a town called Katela, in the Eastern part of Burkina Faso, recently discovered several big gold nuggets while digging their well.

They had just reached the water table level, Saturday March 30th, a bit before 10 a.m. when Ignace Kampaoré was surprised to see a stone that had a yellowish color, lying in the mud. Gold! And there was not just one nugget! With his bare hands, he feverishly dug away to discover several others. The women were overjoyed and came running, whooping away with victory cries.
Not only their well will provide clean drinking water for everybody, but they unexpectedly hit the jackpot! Already the villagers got themselves organized and dug the mud away from the gold vein.
They will be able to sell the gold at a good price and be able to offer their children and themselves what they've lacked for so long. Soon they will have sufficient food, tools, and medicine for the pharmacy. On top of it all they will be able to finance the schooling of the boys and girls of Katela and maybe even buy cattle…

Burkina Faso produced 40 tons of gold in 2012. The French economic magazine 'Les Echos' reports on their website that this poor country of West Africa attained a growth of its GDP of almost 8% in 2012. This was mainly due to excellent harvests that year and also the boom in the gold industry. Burkina Faso also has an important reserve of manganese in the south east.

**This article was published the first of April 2013… a real April fool's joke** so that the readers would discover what the NGO Morija does and how their well digging program functions!

Of course the village people from Katela ***really did find gold in the bottom of their well…blue gold***.

***And your gift is worth gold*** to the populations in the rural areas who do not yet have access to clean drinking water, vital to be able to live in these harsh regions.

The story might have us smile. But what does really change our life? Finding yellow gold or blue gold? You can have all the yellow gold or black gold you want, but if you do not have blue gold, it will cost you your fortune to get it! We cannot live without water[4].

With our WASH Burkina program, the NGO Morija helps villages who have shown a desire to obtain a well for their village. But Morija doesn't just dig it for them. Once their application has been accepted, the inhabitants dig down to the water table level, provide labor, bring gravel and stones to the site, and feed the well diggers during the 3 to 6 weeks stay. Without the participation of the villagers, the well cannot be built.

[4] http://www.worldwatercouncil.org/library/archives/water-crisis/

# II. Do you hear the 'call of the Sahel'?

A Bushman came to visit the city with a friend of his who was a native of Johannesburg (South Africa). In the center of town, all around them was the sound of bus traffic and honking cars. Suddenly the Bushman saw his friend turn around suddenly. "Did you hear that?" And he bent over to pick up a coin that had fallen on the sidewalk. The Bushman had not heard anything but he said to his friend, "Do you hear the cricket?" And he bent over a small hedge to pick up the cricket to show his friend.

That shows that we only pay attention to familiar sounds corresponding to the preoccupations of our mind. The song of the cricket and the sound of a piece of money falling on the sidewalk are both drowned in background noise. But the sound is nevertheless perceived by the ears that pay attention to those specific sounds.

## A. *Do you hear what they are saying to us?*

- A woman from Kankandi in the province of Tapoa, Burkina Faso: "Having to go and get water every day was torturing me, but the village well has delivered me!"
- A young girl who now will be allowed to go to school because the school latrines have been built with a separate side for the girls. "I no longer am afraid of being seen by a passerby."
- A 50-year-old man who now benefits from a family latrine: "I no longer have to go to the bush to relieve myself. Every day I was afraid of being bitten by a snake."

## B. *The villagers give their testimony!*

**Bamini**: A village without water for the last 100 years!

Situated in the Eastern Region of Burkina Faso, the village of **Bamini** is often cut off from the rest of the country by the rainy season when neither the foot traffic nor any 4-wheel drive trucks are able to travel on the muddy clay tracks and trails. The population lives essentially from their production of millet, corn crops, and sorghum. The surplus is sold on the marketplace.

Of course the community cannot live without water. They use it for drinking water, washing utensils in the home and watering plants.

In 2011, this village of 1,200 inhabitants, founded in 1912, still had no access to drinkable water. The women supplied their needs in a local swamp or had to walk several miles to a neighboring village. And as for sanitation facilities, they just didn't exist. The majority of the population defecates in the bush somewhere.

In 2012, to celebrate the centennial, the village of **Bamini** finally benefited from a well construction financed by the NGO Morija, and the community life was totally transformed.

## C. *Why the inhabitants of Tiapambagou consider having a well is a gift from heaven?*

We cannot stress enough how much the construction of a well and the provision of a sufficient supply of drinking water radically changes the life of the villagers. The improvement is immediately visible to all, if only in terms of public health.

But there are many other positive effects. For example, the women and the young girls no longer have to walk long distances to find the water so essential for survival.

The following testimony explains this clearly.

“In the past our village had no well and no pump. We got our water from the mud puddles when it rained or we walked to the next village. The people often suffered from stomach aches, diarrhea or vomiting. Our economic activity suffered because of it. See that mother selling her cakes on the marketplace. When her child becomes sick, she has to abandon her money-making activity to take care of the child. And the whole family suffers.

Fortunately the well that Morija is building will soon be finished. Thanks to the well, we soon will have clean water. That will allow us also to start a small production of poultry. The women will no longer have to get up so early to avoid the heat of the day on the trails. Also, many families left the village because of the lack of water. They will probably come back. This well will be a source of rejoicing for all the reunited families!”



**Figure 3 - Women walking the trails in 40°C (104° F) weather**

D. ***Tankoano Boukaro, Person in charge from the village of Payenga***

“I live in a village that does not have a well. In the dry season we walk 6 kilometers to find water. We leave the village at 4 o’clock in the morning, and walk back several hours later. In the rainy season we drink the water directly from the river. Because of the work in the fields, we do not have the time to do these extra kilometers.

However the river water causes many health problems. The villagers regularly suffer from typhoid fever, malaria and diarrhea. Those that are most sick are transported to a health clinic 25 kilometers from here.

Once Morija has finished the well, the inhabitants will live much better. Everybody will have **enough to drink.** We will be able to raise small livestock because we won't have to spend as much on medication and health.

In the name of my village we want to express our profound gratitude to the donors who allow Morija to build a well so precious in these regions."



**Figure 4 - Typical village in the East of Burkina Faso**

### E. *The village of Kankandi*

"The population of Kankandi has suffered the last 30 years of sicknesses related to the drinking of contaminated water. Today this village of 500 inhabitants has its own well, thanks to the Morija WASH program.

After many years of requests and useless negotiations with the local and regional authorities to obtain a well, today the water flows from the modern well equipped with a pump. All this was possible with the mobilization of the population and the dynamic well digging team from Morija.

To prevent sickness and diarrhea, 15 family latrines were built for 284 persons in all.

Hygiene awareness sessions are regularly held by our facilitators to teach the population good practices in terms of hygiene to prevent sickness. Using pictures and drawings, the facilitator helps

the participants discover their bad habits to transform them into good so that their life conditions improve." Isaaka Nikiema, WASH program director, Burkina Faso

### F. *Youmali Tankoano's testimony*



**Figure 5 - Youmali, inhabitant living in Kankandi**

"My name is Youmali Tankoano, a woman from Kankandi. My name means 'a happy heart' but I was not at all happy because of the daily suffering caused by the lack of water.

But today my name has become significant once again because I am now very happy, thanks to this pump that gives us clean drinking water. It is right there in the village and so easy to pump.

Before, we were forced to drink the yellowish water coming from the traditional well. To be able to acquire this dirty water we had to get up at 4 or 5 o'clock in the morning and hope to get 2 pails full. The whole village suffered from stomach aches and diarrhea, especially the children. Those that had the means to pay were constantly at the health clinic of Tatiangou, 6 kilometers (3.73 miles) away.

Now with the clean water supplied by the pump and also the latrines now available, the number of sick people in Kankandi will be considerably reduced. We are approaching the winter season and I'm sure that we will have a better harvest this year because there will be much less sick people.

Thanks to the WASH program from Morija, for the pump and latrines that protect us from so many sicknesses that weaken us and prevent us from working in the fields."

### G. *Lompo Oumpounini's testimony*



**Figure 6 - Lompo, inhabitant of Kankandi**

"My name is Lompo Oumpounini, inhabitant of Kankandi. We came to Kankandi with my parents when I was quite young, around 15 years of age. Today, I'm 45 years old and we have never had clean water in this village.

We have suffered much because of the lack of water these last 30 years. We dug out traditional wells but they kept caving in because we had no means to reinforce the walls with cement. We didn't know what to do and we tried to weave branches around the hole to prevent it from collapsing. But these branches polluted the water even more.

My parents came with 3 other families but the lack of water forced them to leave. My parents decided to face the difficulties and the sickness linked to contaminated water.

Today, thanks to Morija, we are delighted with this pump and latrines. **Even just last year we couldn't have imagined it, but today it is reality!**

I would have loved that my parents see this day and share in the rejoicing, but unfortunately they are no longer alive.

Now we will really be able to work on the development of the village because the stomach aches and other sicknesses related to the dirty water of our traditional well have disappeared.

Thank you Morija for having delivered us from our suffering."



Figure 7 - From dream to reality

**Report from Lompo Miyembda, hygienist in the village of Mamangou**

"A well has been dug, and 15 latrines are now functional and a program of hygiene awareness has been taught.

The village of Mamangou in Burkina Faso has already seen the positive effects. The hygiene awareness has quickly impacted behavior and practices and each inhabitant is now very attentive to how they do things.

And as Tankoano, a mother from the village reports: "The economic impact of the WASH program will be significant. Now we will be able to do market gardening. And with much less sickness, each one will be able to work normally. (That is, without diarrhea!)"

**When a village has access to blue gold…**

In conclusion, when a village has access to blue gold, there is…

- More time for money-making activities
- Fewer absentees at school
- More money available because less money spent for medication

In the following part of the book we will suggest practical strategies to connect with Morija's WASH program. But before that we would like you to discover **our best practices** that make our work so efficient. ***These points are important for you to know so that you will be confident that your money is well invested in the WASH Burkina Program.***

# III. A team committed to long-term development

*"We will not conquer either HIV, nor tuberculosis, malaria or any other infectious diseases that plague developing countries, before having won the battle for clean drinking water, sanitation and basic health care."* Kofi Annan, former Secretary General of the United Nations.

Bringing water and sanitation to an urban area where there is a certain infrastructure is not the same thing as bringing water to the rural areas.

The rural areas of the Eastern part of Burkina Faso are very difficult to access during the rainy season and the infrastructures are basically non-existent. But setting up a basic infrastructure like wells and latrines, is probably the easy part. The real challenge is changing unsafe behavior and practices.




**Figure 8 - What if this is the only water you have available to drink?**

Here is one of the UN Millennium Development Goals[5]: **Reduce by half the number of people on the earth not having access to clean drinking water and basic sanitation before 2015**.[6]

[5] http://www.un.org/millenniumgoals/

[6] http://en.morija.org/fr/morija/menus/projects/water/WASH-Burkina

**The NGO Morija is specialized in bringing water to rural areas** of Burkina Faso, Togo, Cameroon, and Chad.

There are 3 unique aspects to Morija's way of doing things:

- The Burkina nationals who are paid and trained by Morija as well diggers and builders
- The devoted hygiene facilitators and promoters who teach the basic hygiene rules
- The villagers themselves who are committed to improve their situation.

Through this participative approach, more than 750 villages have received their well in the last 25 years.

For the period 2012 to 2015, Morija and the donors are committed to the implementation of the WASH Burkina program (Water, Sanitation and Hygiene).

In 2014, once again, 45 wells will be built in the provinces of Gourma, Gnagna and Kouritenga in Burkina Faso. As for the family latrines, 675 will be built to protect the water sources. And more than 20,000 villagers will change their behavior patterns in terms of hygiene. A school project for hygiene awareness will be undertaken also. For each village, an association of Water Users will be formed and trained to sustainably manage the installation.

Just before going on to the chapter concerning our 'best practices', know that all our action is under the auspices of the national Reform of the Water Sector in Burkina Faso and Morija works closely with the local authorities, the traditional leaders as well as with the Regional Hydraulic authorities.

*A very important NGO, specialized in bringing water to the villages, came to consult with our Director of the WASH program, Issaka Nikiema, to find out how we go about having the project 'adopted' by the villagers so that they will take charge of the installation when the facilitators and well diggers leave. Just to show that our action is considered as being very efficient over there.* This is what we will discuss in the next chapter.



**Figure 9 - Issaka Nikiema (left) accompanies visitors on a construction site**

# IV. Morija's 7 "Best Practices"

Here are the 7 guiding principles developed by the African partners of the WASH Burkina program to ensure efficiency and sustainability of our action.[7]

1) ***Cost reduction*****:** We have our own team, all of them are Africans. There are 40 persons in the team, including 18 well diggers and builders who work by twos. We do not send expatriates with a truck equipped with drills and so on. It would cost too much and the regions where Morija works are much too difficult for a big truck to access. Our well diggers cannot work during the rainy season because the villages cannot be reached. It is impossible to travel on the muddy trails. It takes 3 to 6 weeks to build a well. It depends on the depth and how rocky the ground is.



**Figure 10 - A well with a watering trough for animals**

[7] http://www.twnside.org.sg/title2/resurgence/2013/271-272/eco1.htm



**Figure 11 - This is what hard (and hot) work is all about**

**2)** ***The villagers are implicated:*** They must dig down to the water table or the rock even before our well diggers come to continue the work. They must also gather a predefined volume of sand, gravel and stones. This effort validates their application. In 2012 we had 213 villages that applied for the 45 wells we can dig each year. These conditions seem to be one of the best ways for the population to take possession of their installation. If you have put in 'sweat-equity' you'll probably take better care of the installation afterwards. And the village participation is valorized at about 20% of the total cost which is quite significant.



Figure 12 - The whole village helps the well diggers

3) ***Creation and support for Water Users Association (WUA)***: This structure is created to comply with the requirements of the Reform of the Water Sector and has the mission to implement a sustainable Water Users Association.

4) ***Each day 10 workers are supplied by the village*** to help the well diggers (carry the cement bags, fill the curved brick forms, bring the gravel and sand to the site with wheelbarrows).

5) ***Two masons are trained in each village.*** They are trained and receive a wheelbarrow, pail, shovel and trowel. Their first contract is to build the 15 family latrines for the poorest families designated by the WUA. There is also a public latrine to be constructed at the school.

After this pilot project, the other villagers can order their latrine from these masons, which allow them to create a money-making activity with pricing compatible with the local situation.

6) ***Hygiene awareness by community facilitators:*** Simple practices like washing hands regularly, brushing teeth, using mosquito nets with an insect repellent while sleeping to ward off malaria, are not often practiced by these people who don't see the connection between their hygiene and their health. For it to be efficient, the promotion of hygiene cannot just be a short campaign. It needs to be ongoing. Our hygiene facilitators stay in the area for at least 2 to 3 years. The chosen approach is to educate the villagers by the villagers. In each village, a team (man/woman) is chosen and trained to promote hygiene and make the population aware of the usefulness of these simple practices.

7) ***Two pump repairmen and maintenance workers*** are trained by each Water Users Association.

***Is it possible that a village that has a well with clean drinking water goes back to the contaminated swamp water or traditional well?***

Unfortunately it is quite possible. Our diagnostic study of 2011 showed that before our arrival, 30% of the wells no longer functioned. No one was assigned for maintenance and repairs. So the population went back to their old ways exposed as they were to the contaminated water (bacteria from fecal matter).[8]

[8] http://www.who.int/ceh/risks/cehwater/en/



Figure 13 - Fulani women getting water in a mud puddle



Figure 14 - A traditional well

The reasons are the following when the population returns to the swamp water or the traditional wells.

- The NGO came to build a well but the pump that was installed has **no spare parts available** in the country at a reasonable price.
- **No one was trained to do the maintenance** and able to replace working parts that wear out quickly in a hot and dusty environment.
- **The population has not taken ownership of the installation** because it was 'built for them'. No one in particular has the responsibility when maintenance is needed.

There are solutions:

### *a. Behavioral solutions:*

It takes time, working with the hygiene facilitators, for the population to understand the relationship between the different sicknesses that handicap them and the contaminated water they drink. They generally understand right away how they can save money if they no longer have to spend it on medication for their sick children.

The real challenge is to have them understand that clean water costs something and that they need to pay a little bit in order to buy the working parts of the pump that will need to be replaced.



**Figure 15 - Hygiene awareness session in a village**

### *b. Technical solutions:*

Morija uses a pump that has proved its resistance to the climate and the spare parts are available in the country for a reasonable price.

### *c. Governance and training solutions:*

The Water Users Association is trained to manage the installation. Two local repairmen designated by the association, are trained in a workshop to ensure maintenance and several spare parts are made available in advance for emergency situations. (Repairmen that would have to come from the capital would take far too long to travel to these inaccessible areas and would cost a fortune in 'retainer's fees' while waiting for the next intervention.)

An agent from another NGO explained during a roundtable that the main challenge is that of governance. After a long day on the overheated trails he aspired to a shower he would get in a village where he knew there was a pump. When he got there, the villagers told him that there was no possibility of getting a shower because the pump was no longer functional. "Did you not inform the government? - Of course, but in spite of the different emissaries that were sent, we've been waiting for 6 months."



**Figure 16 - A bush workshop for pump maintenance workers**

The local solution allows **optimal reactivity** for such a sensitive subject as a daily supplying of water.

The associations decide themselves how much the users should be charged for clean water to finance the spare parts and the salaries of the repairmen and maintenance workers.

## V. Who will benefit from the WASH Burkina program in the provinces of Gourma, Gnagna and Kouritenga in 2013-2015?

First of all here is a short history.

In 2011, the Well Project started its work in the province of Tapoa. After meeting with local administrative and traditional authorities, the team received 213 applications for a well installation from the different communities in the province. The province of Tapoa is one of the regions least equipped in improved drinking water sources. Never in any other region that Morija worked in for the last 24 years was the situation as urgent as it was in the Tapoa. Issaka Nikiema, Well Project director testifies to this fact:



**Figure 17 - Issaka Nikiema, director of the Well Project**

"Usually when we receive the application we try to accept between 40 and 50 villages, since we know for one reason or another several villages will not be able to dig to the water table level or bring in the gravel or small stones. We usually are able to meet our quota of 30 wells a year according to our action plan.

But the situation in the Tapoa was particularly difficult. The majority of the villages had no mechanical pump or a dug well. Having safe drinking water was such an issue that each village did everything they could to have their application accepted. Each time we tried to turn down a village's request because of the large number of applicants, we heard them say things like, "we do not have clean water and you are our only hope. Why do you turn down our request?"

And on top of this in this region, access to sanitation was virtually nonexistent. And the sanitary situation was dramatic (cholera, typhoid fever). After having studied the needs, the urgent requests of the communities and after consultation with local authorities and an in-depth diagnostic study, Morija decided to set up a large-scale project: The Well project became the WASH Burkina program.

The WASH Burkina program built up their construction team and now aims for 45 wells a year instead of the 25-30 wells per year built by the Well project. Moreover the project evolved towards a total package, integrating construction of latrines for the sanitation part of the program as well as a full hygiene awareness program, complying with the requirements of the Reform of the Water Sector."

### *Description of the target groups*

The program 2013-2015 targets the poorest rural and peri-urban populations in the provinces of Gourma, Gnagna and Kouritenga, regardless of gender, political views, ethnic group or religion.

The choice of the construction site and the beneficiaries is decided by the municipality or a village development committee that directs Morija team workers to the most neglected areas.

After receiving and validating the applications, a priority list is established as well as a substitute list in case the population of a selected village cannot fill their obligations in matter of local participation in the project (such as digging down to the water table or rock level, and bringing on site sufficient gravel and stones).



**Figure 18 - Making bricks for the well**

Though the WASH Burkina program works for the whole population, the **accent is put on the needs of the women and the children**, for several reasons. The women are in charge of **water transport** and

water conservation and protection in their home. They take care of the **family health** situations and suffer from the economic impact of so many hours a day lost on the trails to get the water. The young girls cannot get **consistent schooling** because of water chores and their dignity and intimacy depend on their access to family and school latrines.

***The children are also essential actors for behavioral transformation in the family in the matter of hygiene.***

# VI. How do water and sanitation impact the other Millennium Development Goals?

There is no longer any doubt possible. Building a well in a village is not just a matter of bringing in clean drinking water. The implementation of Morija's Burkina WASH program also has a direct or indirect impact on the other Millennium Development Goals.

### 1. Eradicate extreme poverty and hunger

In a strongly agricultural based society, clean water allows a better productivity for the crops and market gardens and workers are more available because of fewer diseases (like typhoid fever and diarrhea).



Figure 19 - Watering the cabbage patch

### 2. Achieve universal primary education

Less sickness means fewer absences at school. The percentage of the children who go to school and obtain better grades will determine a better future for all.

The young girls are generally required to do water chores. If the well is close by, they will have the time to go to school. And many parents did not allow the girls to go to school because the school was not equipped with a latrine. It was a matter of their dignity and intimacy.

### 3. Promote gender equality and empower women

The women gain increased roles in decision-making and a better sharing of tasks between the sexes. They especially have an important role to play in the Water Users Associations.

### 4. Reduce child mortality

A better nutrition prevents sickness and allows for a better physical and intellectual development of the children. Child malnutrition has been reduced.



Figure 20 - The future of a malnourished child is in danger

### 5. Improve maternal health

A good hygiene, thanks to clean water, allows normal pregnancies and a better post-partum recovery.

### 6. Combat HIV/AIDS, malaria and other diseases

All the statistics of the health centers in the Eastern region of Burkina Faso show that 80 % of the sicknesses are caused by contaminated water. Prevention is better than healing!

With clean water, there are also fewer attacks on the immune system of HIV victims.

Fewer contaminated water sources and less standing water around water points reduces the breeding grounds for mosquitoes and rolls back malaria.

With a better hygiene there is less contagion from diarrhea and public health is reinforced.

### 7. Ensure environmental sustainability

The environment is cleaner and less contaminated by fecal matter and waste water. The population learns how to sustainably stock the excrements and their quality of life is improved.

**Did you know?**

According to the statistics of the World Health Organization (WHO), building wells and giving access to safe drinking water, lowers the incidence of contaminated water-related diseases by **25%.**



**Figure 21 - Can I offer you a drink?**

By setting up latrines and improving sanitation, the incidence of diseases related to the contamination of water resources is lowered by **32%.**

But by making the local population aware of basic hygiene practices such as washing hands before preparing the baby's food or after having gone to the latrine, it is possible to lower by **45%** the number of cases of sickness.[9]

[9] http://www.pseau.org/outils/ouvrages/pseau_solidarity_financing.pdf



Figure 22 - The villagers from Kankandi around their well

# VII. Promoting hygiene and sanitation in the schools

By winning over the children of the schools to better hygiene and sanitation practices, we can change the destiny of a generation.

### *Step 1 – Organization*

The school directors met with the school educational inspectors and the hygiene facilitators. They worked out together the objectives as well as the activities to be carried out to raise hygiene awareness in the primary schools.

### *Step 2 – Hygiene awareness in 45 primary school classes*

The facilitators went from school to school to explain why hygiene and sanitary practices are necessary. The themes were: body hygiene, washing hands, keeping the food clean, and the relationship between health and hygiene. A handbook was especially developed for the teachers of each school by WSA (Water and Sanitation for Africa).

### *Step 3 – Installation of 45 hand-washing facilities*

Each device has a water storage tank and several taps. The students are able to wash their hands after using the latrines. The facilities are situated close to the school canteens so that the students can wash their hands before and after eating.




**Figure 23 - Several girls learn to wash their hands**

### *Step 4 – Broadcast targeted messages promoting hygiene and sanitary practices through community radios*

Local radio stations are easily accessible and the population considers the messages as being a **continuity of the oral tradition**. Many languages are available and radio is the best media to reach rural populations. The message penetrates easily to the most isolated areas in the East. The community radio stations broadcast hygiene promotion messages and communicate information on the project. Different types of programs like talk shows, telephone calls, and reporting on the project are used to get the message through to the population.[10]

In the **conclusion**, we will explain how to use the tools of modern fundraising; like creating your own fundraising page on Internet or how companies can promote a Corporate Responsibility program to motivate their staff.

But just before that we have a last chapter for those who want to understand the **technical aspects** of our program.

[10] http://www.unicef.org/publications/files/Progress_for_Children_-_No._4.pdf

# VIII. What are the technical decisions best adapted to the situation in rural Africa?

## A. *Access to safe water*

According to the norms established by the PN-AEPA (National Program for Water Supply and Sanitation) all water points of villages of less than 3,500 inhabitants must be modernized (closed well with mechanical pump). These modern wells have a large diameter and reach the water table level. They are made of reinforced concrete pipes throughout the length of the well, with casings, catchments, floor slabs, an 80 cm (31.49 in.) high concrete coping with a 180 cm (70.87 in.) width inside diameter. Every well is equipped with a hand pump.

***Applied standards:***

| |
|---|
| Quality of water: WHO Guidelines |
| Production: The well must supply 20 liters (5.28 gallons) per inhabitant per day |
| Distance from home: Less than 1,000 meters (0.62 mile) from a group of houses |
| Accessibility: One well for 300 inhabitants |

Robust and available in the country, the mechanical pump India Mark 2 is much used in rural areas. This pump has proven its quality in many other water access projects and is recommended by the Regional Direction of Agriculture, Hydraulics and Fishing Resources (DRAHRH). The pump is widely used in Burkina Faso and there are many spare parts distribution stores available. If there is a breakdown of the pump, the repairman can easily find the part that is needed. So the sustainability of the installation is not jeopardized. The maintenance is carried out locally by the villagers trained for this intervention, and interventions on the bottom part of the pump can be quickly realized without having to move the pump or the piping.

***Technical characteristics:***

| |
|---|
| Diameter of the cylinder: 65.5 mm (2.58 in.) |
| Average water table level: 15 to 25 meters (16.4 to 27.34 yards) |
| Optimum well depth: 21 to 30 meters (23 to 32.80 yards) |
| Flow: minimum 15 liters (3.9 gallons) per minute or 1 $m^3$ (264 gallons) per hour |
| Column of the pump: 65mm (2.56 in.) galvanized steel |



**Figure 24 - Well equipped with an India Mark 2 pump. It works!**

### B. *Sanitation*

By sanitation we mean the management of the excrement. Concerning sanitation in rural areas, the PN-AEPA considers that autonomous family or public latrines are the most adapted.

The choice for the family latrine was for the single pit model. The double pit model had many advantages in terms of recycling the excrement. When one side was filled they would go to the other side while the first pit was composting. But the price was too high for the families who wanted it without financing.

It is difficult for families to go from 'nothing' to full-fledged managing of excrement.

With the single pit model, the families will be able to use their private latrines for about four years and then will have to move it and build another. They will be able to salvage some parts like the door, roof, and slab etc.



**Figure 25 - A family latrine for 20 persons**

***Constitutive elements:***

- The pit for excrement and sludge digestion
- A concrete slab with a hole for defecation and an opening for ventilation
- A vent pipe to evacuate the smell of anaerobic decomposition of sludge and also trap the flies
- The superstructure with door and roof to ensure intimacy and protection of the user

***Advantages:***

- Easy use
- Possibility to use local materials for the superstructure, the ventilation pipe, the roof and the door
- It is possible to manage the smells with this system
- The relative darkness in the latrine limits fly proliferation
- Low cost and the villagers can take charge of the construction themselves

### C. *Involvement of the beneficiaries in the project – WUA (Water Users Association)*

The participation of the beneficiaries is essential to reach the goals of the WASH program. According to PN-AEPA, the beneficiaries of the well installation need to be in charge of maintaining the structure through their Water Users Association (WUA).

Setting up a WUA is a crucial issue of the WASH program. Their effective creation and proper functioning will ensure:

- That the WASH program is integrated into the national Reform of the Water Sector and delegation of the water service to the local communities via the commune.
- And the involvement of the village community to manage a safe drinking water installation ensures the long-term sustainability of a hydraulic infrastructure.
- The WASH program helps each community to organize their Water Users Association, thanks to the competence and experience of the facilitators in this area.
- The WASH program will train the executive team in the implementation of the following objectives:
    - Ensure the continuity of the public water service.
    - Ensure regular maintenance of the installation and the mechanical pumps.
    - Decide the price of water in conjunction with local authorities.
    - Do awareness sessions for the beneficiaries on the advantages of consuming safe drinking water, the necessity of regular payments and the protection of the installation.

### D. *Construction of the well*

The beneficiaries get involved in the following ways:

- They dig down to the water table level or the rock before Morija's well diggers will come.
- They gather local materials used in the construction: sand, gravel and small stones.
- They provide the workforce during the construction: 10 persons per day.
- They are asked for a financial participation of a symbolic sum of money (20,000 CFA) ($ 42).
- They will accommodate and feed the workers during the construction of the well.

### E. *Construction of a family latrine*

The beneficiaries are involved in the following ways:

- They supply the construction site with sand, gravel and possibly, water.
- They watch over the security of the mason's tools, which may be stocked in a closed house.
- At least 2 unskilled laborers are provided for each working day.
- They manufacture bricks out of 'banco' (adobe) for the superstructure according to the recommendations of the mason.



**Figure 26 - Songola, 19 years old: "I am no longer afraid of being watched by a passerby"**

### F. *Hygiene awareness*

Two hygiene promoters, (a man and a woman) are chosen in each village. They are members of the WUA. The hygiene promoter has a good understanding of the community practices in matter of hygiene and a will to participate in their transformation. Their awareness work is persuasive because they know the practices and the questions of the population. Motivated and proactive, they are seen as examples in the community. Each promoter receives training from the facilitator and is equipped with a hygiene awareness kit which allows them to be an efficient relay to the community.



**Figure 27 - The facilitator conducts a hygiene awareness session for the population**

## Conclusion

“You have no idea of the impact you’ll have in a village of the Sahel if you become a blue gold seeker with us!”

We are just getting started! When you have 213 candidate villages for the 45 wells that our teams are able to build, how can you say “no” to certain villages and “yes” to others?

Unicef says that in the world there are 5,000 children under 5, that die every day from drinking unsafe water. Their parents are forced to have them drink swamp water which is contaminated with all sorts of pollution. The mother prepares baby food with this water without being able to wash her hands. And she doesn’t drink enough herself to produce enough breast milk to feed her baby sufficiently.

5,000 a day! That’s 10 big airplanes, filled with 500 children each, smiling with expectation before their life’s journey and **who crash before the end of the day!**



**Figure 28 - 10 airplanes, full of children, 'crash' every day**



Figure 29 - You can't put a price on the smile of a child

“**What do you want me to do?”**

This is an important question!  We don’t always know how to react to such inequality and injustice.

Our Partnership Coordinator, Andre Amsing answers this crucial question:



Figure 30 - André Amsing

We can do a lot even if we have limited human or financial resources:

As a simple citizen you could organize a 'home party' to share about the situation in the Sahel with a PowerPoint presentation or film (that we can provide). This could be organized with your home schooling group, church or youth group, school parents or sports club. Why not decide to sponsor a village with a full WASH package? A modern well with mechanical pump, 15 family latrines, a school or public latrine, and a hygiene awareness program will altogether cost around 10,000$. You will get reports and photos to be used in your newsletter and you will be able to follow the events on our website www.morija.org

If you are part of an association of active professionals like a Rotary, Kiwanis, and Lions Club (and of course there are many others out there), you could choose to adopt a village WASH program.

If you work in a company the president, vice-president, or marketing and communications director may be interested by a Corporate Responsibility Initiative.

Here are some of the advantages that Pentair Europe based in Lausanne, an international company specialized in water purification and filtration, found in working with an NGO like Morija who builds wells in Africa.

- **A humanitarian or social value is added** to the already amazing product or service offered by the company. Pentair Europe has 4 full colored pages about their partnership with Morija in the front of their main catalogue.
- **Several fundraising events were organized** by the personnel: sponsored bike race in Belgium or the 20 kilometers running race in Lausanne.

**See the video of the** Pentair 2013 Bike Ride here

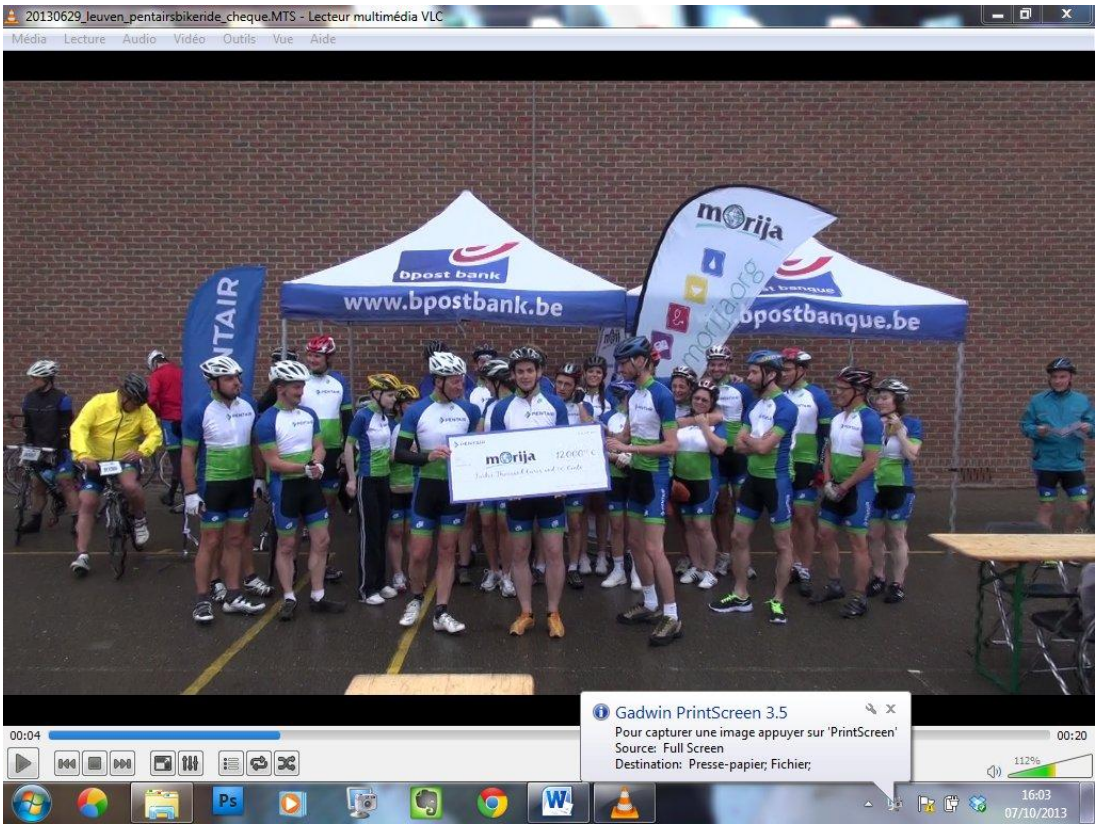



**Figure 31 - The Pentair/ Morija check ceremony during the Bike Ride**




**Figure 32 - The second check given during a ceremony with Pentair at the end of 2013**

The Pentair team also organized a lottery, a Christmas party, and a barbecue to raise money.

They decided to grant, as a donation to villages without water, **a small percentage of their year-end salary** as well as the amount of the Christmas gift offered to the employees by Pentair.

These different initiatives were completed by **'matching funds' coming from the company Foundation** who encouraged these efforts by doubling the amounts gathered and they were able to finance 5 villages in 2013.

- These initiatives were considered as **'team building'** activities and the Pentair team found a real **motivation** to be involved in such a noble cause outside their ordinary working day.
- The marketing directors were pleasantly surprised that **clients and suppliers** also got involved in their fundraising initiative.
- The use of an independent fundraising collection agency like www.alvarum.com where each participant or business group could set up their own on-line giving page was very important for the trustworthiness of the event (see Pentair page). People knew the money was going directly to the NGO and not through the Accounting department of the company.
- The Pentair Europe group received the Win-Right Award for their action from Pentair International based in Minnesota. The Lausanne headquarters also received a painting, in gratitude for such significant help, from Morija, done by a local artist in Burkina Faso, Abou.




Figure 33 - Africa's present to Pentair

Many public utility **water services** in Europe (France, Switzerland, Germany, Great Britain and others) have decided to give one cent/penny per cubic meter of water sold in their community, to WASH projects in underdeveloped nations. This comes out to one dollar/pound/euro per inhabitant per year on their water bill. Perhaps you have the possibility to influence these political decisions and join the UN Millennium Goal movement to bring safe water to these underdeveloped areas.

In France, the **Oudin-Santini** Law allows public entities who are charged with providing water services and sanitation in a commune to put aside 1% of their revenues to support NGOs fighting to bring clean water to underdeveloped countries. The regional Water Agency can get involved in completing the financing up to 50% of the amount required. The amount engaged by a local water service can be multiplied by up to 5 times by other organizations like foundations, regional government, and other smaller towns. So if you have the possibility to influence local decisions in this matter you can see what a great impact you can have to liberate funding available. The only condition is that a local entity who is responsible for water and/or sanitation 'represents' the project before regional entities.

In Switzerland, the platform Solidarit'eau Suisse[11] unites the Communes and their industrial services with Swiss NGOs who operate and bring water to underdeveloped areas and who are looking for long term financing. Instead of giving grants every year, the Commune decides to tie their giving to the water bills based on the criteria of one centime per cubic meter of water sold every year; (one Swiss franc per inhabitant per year). Nothing has long term stability like water bills, and the NGO spends much less time looking for funding. No doubt that saving time also saves money that is better spent elsewhere. The participating Commune gets a label as a 'Commune Solidarit'eau Suisse'.

All the projects have been validated by an independent expertise (Aguasan) and are trustworthy.

Even small communities can be involved and do not have to send technicians on-site since the NGOs have their teams and can be operator on their behalf.[12]




**Figure 34 - The town of Coldrerio obtained their label Solidarit'eau**

**Just for information**: We are reaching the goal N° 7c to reduce by half, the populations that do not have safe drinking water before the year 2015 in almost every area of the world, EXCEPT in sub-Saharan Africa. If we triple our effort from now on we can hope to get there by 2042! But that is just **half** the population. Don't forget the **other half**!

This book was dedicated to bringing clean water to the rural areas of Burkina Faso.

However Morija works in five different domains and your 'core' business may be more adapted to another of our projects:

**Education** – We work with '63 bush' schools in Chad. Only ten have a real school building. In each school we set up adult literacy classes, agricultural projects, and a cereal bank to combat speculation of food commodities. Evidently we want clean well water and school latrines in each establishment which is not yet the case.

[11] http://www.water-1percent.org/en/switzerland
[12] http://www.see-swe.org/en

We also support a school in Burkina Faso, (Paalga) with one thousand students that go from the primary school level to technical high school.

**Rural development** – We have natural soil restoration and composting projects to combat hunger; tree and plant nurseries and irrigation and market gardening projects.

**Health** – Morija has 6 health centers where many undernourished children are taken care of. In Kaya, Burkina Faso we have an orthopedic hospital and rehabilitation center. (See www.morija.org)

**Water and sanitation** – The impact of safe clean water on all our other domains of activity is explained in Chapter 6.

**Nutrition** – We receive many tons of milk products from the Helvetic Confederation to restore under nourished mothers and children. And we have sponsors who provide a good meal at the lunch hour so that the parents want their children at school (one less mouth to feed) and so the students can concentrate on their studying, (instead of their growling stomach). Any mothers coming to our health centers also benefit from the teaching and question and answer sessions about what foods and local vegetables are necessary for the children.

1) **Other Corporate partnership projects** include:

**a)** Studying what products in your catalogue could be useful to support one of Morija's projects.

**b)** How about encouraging an ecological or humanitarian voyage to see for yourself?

**c)** Promote one or several products from your product line to benefit a humanitarian project. ***When the client buys a selected product, a percentage of the price is sent to a NGO***.

**d)** The employees decide to **work for free** one hour per 3 months (or 1 minute per hour or whatever is decided). This amount that the company does not pay to the employees, plus the social security charges, plus eventually a matching funds program coming from the company can provide substantial amounts to NGO projects. And the company can write it off for tax purposes. And the NGO spends less money on fundraising.

Many **investors** want to invest their money in companies that have a Corporate Responsibility program.

Many talented **candidates for key positions** in your company will consider the Code of Conduct, Vision statement and Corporate Responsibility programs as being key deciding factors for committing themselves to your company.

2) If you are a **teacher or student or group leader** would you like to promote a project that will allow you mark your year? A **fundraising project** is a great idea! (For more information click here)[13]

If you go to www.alvarum.com under Morija you will find several campaigns. Matthew Kalousek ran all by himself the 'Heroes Race' in Lille (France) 2012. In 2013 he mobilized a team of 10 runners who were asked to get sponsors for at least 200€ each to be able to run. They finally collected 5,156€ ($ 7,157) to finance a well in the village of Baalga.

[13] http://en.morija.org/fr/morija/menus/projects/run?iset=1003&refpage=52876

3) If you are **involved in grant writing or working with a foundation** and one of Morija's projects is in line with your objectives, would you like to have your work or your giving count in one of the least developed countries in the world?

4) **If you have significant financial means** and would like to visit our work to get a first-hand view of things please contact me at andre.amsing@morija.org

Don't hesitate to commit yourself to finding out more! A small effort here can have a tremendous impact over there. And just imagine their smiles when they see the precious 'blue gold' come out of their own village well.

Economic development, health and even education depend on whether they have access to safe drinking water.

So let's unite our efforts, so that they may live!

André Amsing

Partnership Coordinator

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***"The smallest action is worth more that the biggest intention!"***



**Figure 35 - So that they may live!**

# IX. Sources


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