Field visit to Kafr El Sheikh with ISSIP local team

9 July 2012

Team members: Philippe Reymond and Mohamed Hassan Tawfik, led by Eng. Maher Fares (leader ISSIP local office – 01201728801)

Contact: Philippe Reymond, ESRISS project coordinator, 0106 483 43 14 - philippe.reymond@eawag.ch

www.sandec.ch/esriss

Objectives

This field trip had as objective to visit the two preselected villages for decentralised component in Kafr El Sheikh Governorate and make a preliminary assessment of the situation.

Programme

We visited two ezbas: i. Ezba El Sayed A'ateya; ii. Ezba Abd El Hameed As Syufi (Figure 1). Both are close to the city of Kafr El Sheikh – and close to each other - in Cluster KSH-1.

Tools

We used the maps provided by ISSIP PM/TA head office and an interview guide elaborated for the first contact visit in villages (cf. Appendix 2).

Content of this report

This report features the main observations and recommendations and provides the notes taken in the respective villages.

Location of the villages

Figure 1: Satellite image featuring the location of the two ezbas, close to Kafr El Sheikh City (Nov.2011)

MAIN OBSERVATIONS AND RECOMMENDATIONS

This visit was the second related to ISSIP Project in the preselected ezbas. The observations and recommendations below are aimed to provide a basis for further work in ISSIP decentralised component. They highlight the necessity to have a preliminary assessment of each ezba on the field in order to have realistic design parameters and optimise planning.

Our observations lead to three important planning remarks:

1. As mentioned above, both villages are very close to Kafr El Sheikh City, and to Kafr El Sheikh treatment plant. They are literally lying above the force main transporting the wastewater from the town of Misir (Figure 2). It is strongly recommended to investigate the possibility to connect those villages to the force main, instead of building an independent system.

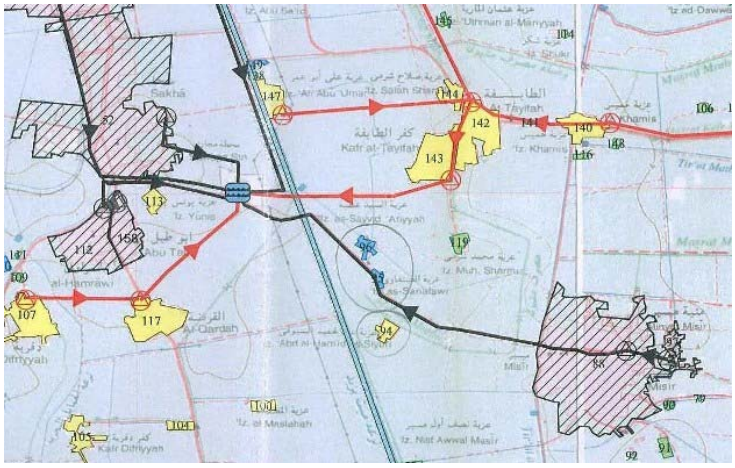

Figure 2: Map featuring the existing force main (in black) between Misir and KES City.

2. El Sayed A'ateya almost touches another ezba, Ezba As Sanafawi (Figure 3), and they will most probably connect in the years to come. It makes no sense to serve the first without serving the second at the same time. In the first draft provided by the PM/TA, the foreseen location of the WWTP is even between the two villages.

Figure 3: Satellite image featuring Sayed A'ateya and Sanafawi, very close to each other (Nov.2011)

3. A "groundwater lowering pipe system" is planned by the Government (Governorate?) in Ezba As Sanafawi. It is recommended to take this opportunity to coordinate with this agency and install a proper sewer system, connected to the treatment units of El Sayed A'ateya.

FIRST CONTACT IN VILLAGES

Ezba El Sayed A'ateya

(Coordinates: 31°4'36.18"N - 30°58'37.18"E)

Preliminary comment: *Eng. Maher Faher did a preliminary data collection for 4 villages, one of which was El Sayed A'ateyah village (number of inhabitants, coverage of water network, sanitation status and name of person responsible for the village). He visited the ezba with Ahmed Badr (01006245214), responsible for the village in Matboul Village Council. We also started by a meeting with Ahmed Badr in Matboul. Then, a member of the Village Council accompanied us to the ezba.*

The omda responsible for the ezba is in Al Taifa village (name: Al Sayed Basyouni Ghazi). We did not find any Sheikh Baladi. A villager (teacher?) guided us through the village (name: Mohamed Abdu El kashawy - 01013537226)

Number of inhabitants:

- according to ISSIP PM/TA: 622 inhabitant
- according to the 2010 statistics given by the Village Council: 715 inhabitants and 183 households.
- projection of Maher Fares for 2012: 774 inhabitants.

=> population number **to be checked** by other methods

Number of houses:

- to be checked; the villages is quite dense and grows in the vertical way, with buildings reaching 5 storeys.

Main occupation of people:

- Farmers and civil servants; many people work in nearby KES.
- 2-3 cattle per house, sometimes no cattle at all (according to villager)

Drinking water supply:

- Water supply is good, all the people have water connection, no interruption, taste is good, the pressure is good and no need for domestic pumps, since they are near the water station.

Sanitation practices:

- Bayaras made in bricks with unsealed bottoms; salt is used to increase infiltration
- Obvious damage for the buildings due to waste water from trenches.
- Trucks are discharging in a drain called Saba'a which is located close to Sakha WWTP.
- No mention of use of WW in the fields.
- Liquid manure is mixed with solid manure for two reasons; make it better fertiliser and to reduce the WW level inside the trenches (reduce emptying frequency); solids are collected.
- Emptying trucks take 15 EGP per trip (fixed price).
- Manure produced in chicken farms sold to fish farms and/or as fertiliser (to be confirmed).

Small-scale industries:

- Two chicken farms in the village, a small one and a big one (reaching between 15,000 and 20,000 chicken)
- No milk factory

Miscellaneous:

- The canal is covered in the village. At the exits of the pipes, the canal is covered with duck weed, showing that a significant amount of wastewater currently ends up in the canal.
- Matboul drain starts a few hundred meters from the village, on the other side of the main road (cf. Appendix 1).
- The ezba is surrounded by rice fields, which definitely contribute to the high groundwater table.
- No CDA; there is charity association (provide support for poor people, such as food).
- Health centre and agriculture association are located in Kafr el Taifa.

Ezba Abd El Hameed As Syufi

(Coordinates: 31°3'59.90"N - 30°58'45.51"E)

Preliminary comment: *Eng. Maher visited this village for the first time a few days before us. We met first the Sheikh Baladi (Mr. Mohammed) for a preliminary discussion. We used our interview guide to know about the current situation in the village. A contact person for this village is Mr. /Mohamed Sayed Ahmed el Shahawy, head of the engineering department in the Local Unit in Misir (01022341385).*

Number of inhabitants:

- according to PM/TA: 1180; according to sheikh, about 2000 inhabitants (to be checked)

Number of houses:

- according to sheikh, about 150 households (to be checked)

Main occupation of people:

- mainly farmers
- 1 to 2 cattle per house, sometimes there is no cattle

Drinking water supply:

- Water supply is good, all the people have water connection, no interruption, taste is good, the pressure is good and no need for domestic pumps, since they are near the water station.

Sanitation practices:

- about 25 % of inhabitants are using bayaras and 75 % are connected to a “groundwater lowering pipe network” which discharges in Matboul drain (cf. Appendix 1), running next to the village.
- Bayaras are made of brick and mortar for walls and concrete for the bottom (?).
- Septage discharged by trucks in Matboul drain.
- Wastewater or sludge not used on the fields.
- 10 EGP per trip, more expensive during winter, up to 20 EGP (why ?)
- They are not using liquid manure, just dump it.

Small-scale industries:

- no such activities

Miscellaneous:

- no CDA, only charity association
- Agriculture association and health center are located in Misir district.
- Village developing in the vertical way; mainly two storeys so far, but already goes up to 5 storeys.
- Village surrounded by rice fields

APPENDIX 1: Situation map with Matboul Drain indicated in blue (the drain starts close to Sanafawi)

APPENDIX 2:

Interview Guide to Village Authorities and Representatives

دليل المقابلة مع المسؤلين فى القرية

- First Contact Visit –
أول زيارة

Team members: Philippe Reymond, Anastasia Papangelou, Lukas Ulrich and Mohamed Hassan Tawfik

Contact: Philippe Reymond, ESRISS project coordinator, 0106 483 43 14 - philippe.reymond@eawag.ch

Rationale of the study الهدف من وراء هذة الدراسة

ESRISS project is an **applied research project** led by the **Swiss Research Institute for Water and Wastewater** aiming to support the Egyptian Holding Company for Water and Wastewater (HCWW) in the development of sustainable and cost-effective rural sanitation. Until now there is no clear strategy for sanitation in isolated ezbas, and most initiatives in rural areas failed because of lack of understanding of the particularities of the Egyptian village.

هذا المشروع هو بحث تطبيقى يقوم بة مركز ابحاث سويسرى للمياة و الصرف الصحى هدفة دعم الشركة القابضة المصرية للمياة و الصرف الصحى لتطوير الصرف الصحى المستدام فى القرى,حتى ألان لا يوجد استراتيجية واضحة للصرف الصحى فى العزب المعزولة ,ومعظم المبادرات فى المناطق الريفية فشلت بسبب قلة فهم الاوضاع الخاصة للقرى المصرية.

The goal of our research is to develop improved wastewater management systems for ezbas. A good system should اهداف هذة الدراسة:

collect and treat the wastewater properly تجميع و معالجة مياة الصرف الصحى بصورة صحيحة

- improve the cleanliness and hygiene inside and around villages and reduce the pollution of drains, canals and groundwater resource

  تحسين النظافة داخل وحول القرى والحد من تلوث الترع و المصارف وموارد المياة الجوفية

- improve public health تحسين الصحة العامة
- reduce the amount of money that households have to pay currently to empty bayaras

  تخفيض التكاليف التى تتحملها كل أسرة من اجل تفريغ البيارات

- This study should provide Egyptian decision-makers with a good basis for the design and implementation of sustainable and cost-effective sanitation systems for isolated rural areas.

  هذة الدراسة من المتوقع ان تقدم اسس جيدة لصانعى القرار فى مصر من اجل تصميم و تنفيذ شبكات صرف صحى مستدامة تكون فعالة فى المناطق الريفية

Methodology المنهجية (المنهج المتبع)

Our study encompasses three components: هذة الدراسة تشمل ثلاثة مكونات

1. Assessment of past and on-going small-scale sanitation initiatives in rural areas in Egypt
   تقييم المبادرات السابقة و الحالية للصرف الصحى على نطاق صغير فى المناطق الريفية فى مصر
2. Assessment of the situation of ezbas in the Nile delta, including needs of the communities, sanitation practices and characteristics of raw wastewater
   تقييم الوضع فى العزب الواقعة فى دلتا النيل, بما فى ذلك أحتياجات المجتمع , و الممارسات الصحية و خصائص مياة الصرف الصحى الخام
3. Development of scenarios, including technical proposal and management schemes.
   وضع السيناريوهات بما فى ذلك اقتراح التكنولوجيا ومخططات الادارة

In order to understand the existing situation and to be able to develop our approaches we will start by studying two representative ezbas, one with and another without sewers. To collect information, we will use the following tools:

من أجل استيعاب و فهم الوضع الحالى ولنكون قادرين على تطوير منهجنا ,سوف نبدأ بدراسة عزبتان ,واحدة منهم بها مجارى والاخرى لا يوجد بها ,من اجل جمع المعلومات المناسبة سوف نستخدم الادوات التالية :

- Transect walks and observation المسح الشامل و الملاحظة
- Interviews with key-stakeholders (omda, bayara emptiers, farmers, person responsible for the sewer network, village council, NGOs (e.g. CDA), women associations, mosque caretaker, health centres) مقابلات مع الشخصيات المؤثرة و المسؤلة عن كل ما لة علاقة بالدراسة بداية من العمدة و المسؤلين عن القرية
- Household surveys دراسات منزلية (مقابلات مع اهالى القرية)
- Wastewater sampling and analyses اخذ عينات و تحليل مياة الصرف الصحى

Preliminary questions for omdas اسئلة للعمدة

1. How many inhabitants, how many households? ما عدد الاسر الموجودة ؟عدد السكان
2. What are the main professional occupations of the inhabitants? ما هى الوظائف الاساسية لمعظم السكان
3. Are there small industrial activities (e.g. milk factories)? هل يوجد انشطة صناعية صغيرة (البان؟)
4. Are there any community members who play a special role in this village? (Examples: leading an association, organizing special activities, religious leaders, etc.)
   هل هناك أىً من الافراد الذين يلعبون دورا خاصا فى القرية؟ (على سبيل المثال:تأسيس جمعيات,تنظيم أنشطة أجتماعية)
5. Are there NGOs in the village? A Water User Association?
   هل هناك منظمات غير حكومية فى القرية؟ او جمعية لمستخدمى المياة؟
6. Is there a health centre? هل يوجد مركز صحى

Questions during transect walk اسئلة اثناء المسح الشامل

Goal of transect walk: get a first impression and understanding of الحصول على الانطباع الاول و فهم: اهدافة:

- *the current infrastructure and practices,* البنية التحتية و الممارسات الحالية
- *hot spots and problems related to wastewater management,* البقع الساخنة و المشاكل المتعلقة بادارة المياة العامة
- *requirements for sampling and measurements.* المتطلبات لآخذ العينات و القياسات

7. How many animals does one household have on average? Do they live in the house, a separate building or outside?
كم عدد الحيوانات التى تملكها الاسرة الواحدة (المتوسط) ؟ هل تعيش هذة الحيوانات فى نفس المنزل أم فى مبنى منفصل؟

8. Are there significant differences in the inhabitants' income and social status?
هل هناك فرق واضح فى الدخل و المستوى المعيشى بين أهالى القرية؟

If yes: what are the different categories?
أذا كان الجزاب بـ "نعم" , ما هى الفئات المختلفة؟

9. Are all households connected to the drinking water supply network? Is this supply good (pressure, quantity, quality)?
هل كل ألاسر موصلة لشبكة مياة الشرب ؟ هل هى جيدة من حيث (ضغط المياة,الكمية ,نوعية المياة)

10. Can you describe the sanitation situation of the village? How has it evolved over the past 40-50 years? Are there any problems?
هل يمكن شرح و ضع الصرف الصحى فى القرية؟كيف تطور خلال ال الخمسين سنة الماضية؟وهل هناك مشاكل؟

11. *If there is a sewer:* اذا كان هناك مجارى
    a. How many households are connected? If not, why?
    كم عدد ألاسر الموصلة أليها ؟ اذا كان لا ف لماذا؟
    b. When was this system built? متى تم الأنشاء
    c. Who was involved in the planning, design and construction?
    من كان المسؤل عن التصميم و التخطيط و البناء ؟
        Company, consultant, contractor? *Name*: شركة؟ مستشار؟ مقاول؟
        Village leaders? رؤساء القرية
        CDA? جمعية تنمية محلية
        Omda? العمدة
    d. What material is it made of? ما الخامات المستخدمة فى ألانشاء
    e. Where are the main lines located? اين تقع الخطوط الرئيسية
    f. Where is the wastewater discharged? اين يتم التخلص من مياة الصرف
    g. Who is responsible for the maintenance? من المسؤل عن الحفاظ علية (الصيانة)

If there is no sewer: اذا كان لا يوجد مجارى

a. Are there households that have a different system than bayaras? Which one?
هل هناك أسر تستخدم أنظمة غير البيارة؟ ما هى هذة ألانظمة؟

b. Is there someone in the village who builds bayaras?
هل هناك من يبنى البيارات فى القرية

c. How bayaras are constructed (lining, bottom, filled with gravel, etc.)?
كيف يتم أنشاء البيارات؟(ألارضية,القاع,..)

d. Where is the sludge from the bayaras disposed of?
اين يتم التخلص من مياة المجارى من البيارة

e. Do farmers use wastewater from the bayaras in their fields?
هل يستخدم الفلاحون مياة الصرف من البيارات فى الحقول؟

f. Do farmers use manure and animal urine in their fields?
هل يتم استخدام روث الحيوانات فى الحقول؟

g. What is the price of desludging? ما هى تكلفة أزالة مياة المجارى

h. What happens if someone cannot afford emptying?
ماذا يحدث لو أحد ألافراد لا يستطيع تحمل التكلفة ؟

12. What would you do to improve the existing system and practices? ماذا يمكن ان تفعل لتحسين الوضع الحالى

Ask for contact number رقم تليفون العمدة أو أى شخص أخر يمكن الاتصال بة فى القرية