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DON'T MIX!

Interview with Uno Winblad about his professional history, ecological sanitation and his current work in China

by Andreas Schönborn, Editor of the EcoEng Newsletter



Uno Winblad (born 1932 in Gothenburg, Sweden) is an architect and town planner with a post graduate degree in tropical architecture. He is well known to everybody interested in alternative sanitation systems through his books "Sanitation without Water" and "Ecological Sanitation". Uno is presently based in Stockholm where he is working as a self-employed consultant.

Paper "Towards an Ecological Approach to Sanitation":

<http://www.wkab.se/toyama.html>

"Ecological Sanitation": download at

<http://www.gwpforum.org/gwpef/wfmain.nsf/Publications> in English, Chinese, French, Spanish and Vietnamese

Nanning Conference: see <http://www.wkab.se>

A. Schoenborn: **How long have you actually been working in the field of ecological sanitation?**

Uno Winblad: About 30 years. The whole thing began during my first assignment in Ethiopia in the early 60s. My job in Addis Ababa was in the field of housing and urban planning. I soon found that the real problem was neither the buildings themselves, nor their design and building materials. The real problem was the urban infrastructure. At that time there were technical solutions available for water supply, electricity and roads, but no feasible solutions for sanitation.

That's why I began experimenting with various non-conventional solutions. At that time everything wasn't quite clear to me so I wouldn't call those early experiments ecological sanitation, but from there it developed and by 1970 it was clear in which direction we had to move.

AS: Was it back then when you built the first composting toilet?

Uno Winblad: Addis Ababa was an interesting place to come to at that time. Ethiopia had been independent for ages. Addis Ababa had grown spontaneously. It had an unusual character in that there were no separate areas for the rich and the poor. The rich man in his modern villa would live next to the poor man in his mud hut. As the town had grown spontaneously it would be virtually impossible to install gravity fall sewers afterwards. When you are planning a modern town the main pipe network is what you sketch up first, to determine which areas could be provided with sewers and which could not.

In Addis Ababa centralized sewerage was not even an alternative to consider. At that time they had absolutely awful pit latrines in Addis Ababa (they still have). During heavy rains they were overflowing . As much the town of is built on steep slopes, the pit latrines from higher up were flooding the floors of houses below. My conclusion was that you couldn't have anything that was underground. The question was: What could you have above ground?

This is how it began. I was looking for solutions and there were none. We needed research and development. In the early 70s I managed to get funds from the Canadian IDRC (International Development Research Centre) for a 3 year research and development project in Africa.

Tanzania seemed to be a suitable country for the project. So that's where the project was set up and it resulted 1978 in the book "Sanitation without Water. I thought then that the book answered at least some of the questions we had posed a couple of years earlier, and that now, when the book was published, I could leave sanitation and return to architecture. That's what I thought... but it didn't work out like that.

Shortly after the book was published the World Bank and UNDP started its water and sanitation decade and suddenly there was a great interest and a lot of money going into the sanitation sector [...]. Everyone was looking for people with experience and I was one of those who had recent hands-on experience of "low cost sanitation". I was therefore offered jobs and came to be regarded as a sanitation expert. It has proved difficult to get rid of that label.

AS: You still have it, I suppose...

Uno Winblad: Yes, in spite of working over a much wider field. During most of the 80s I hardly did any work in the field of sanitation. During the decade, international aid in the water and sanitation sector was very much monopolized by the World Bank's Technical Advisory Group (TAG). The Bank and TAG had found The Solution and didn't want anything else. The Solution for Africa was the V.I.P.

AS: What is that?

Uno Winblad: The Ventilated Improved Pit Latrine, developed by Peter Morgan in Zimbabwe. For Asia it was the twin-pit pour-flush toilet. And if someone tried to come up with alternatives, for example dry, non-polluting systems built entirely above ground, that was heretical. TAG turned sanitation into a religion with two gods: the V.I.P. and the poor flush. Those who advocated something else were left out in the cold.

AS: How did this development come about?

Uno Winblad: Well, a small group in Washington controlled the money and also influenced all bilateral donors. The field of sanitation is rather special: there is hardly any scientific thinking and little real research, except on big treatment plants [...], and no open discussion. In other fields, if someone comes up with a new theory, a new paradigm, it's published, discussed and tested.

AS: That's the nature of science.

Uno Winblad: Yes, but the field of sanitation does not have this tradition. For example when the 2nd edition of my book "Sanitation without Water" was to be published, one of the leading members of TAG, who had been asked to peer review the manuscript, suggested that the book should not be published. The publisher did not follow his advice.

I left the field of sanitation and [...] had no intention of returning. But in 1990 I felt that things had changed. In the early 70s, ecology was not discussed very much. There was the beginning of an ecological movement, but ecological issues were of little interest to the media. Now more and more people understand the close relation between sanitation and ecology.

Many people began experimenting with alternative sanitation and I noticed that they were repeating mistakes that my colleagues and I had made 25 years earlier. Maybe I should devote the last few years of my professional life to sanitation? From 1992 onwards I have done that.

AS: It seems like you have been very successful, haven't you?

Uno Winblad: There is a greater appreciation of environmental issues now. Another reason why ecological sanitation did not take off in the 70s was that much of the work was done in Africa. Many African cultures are highly faecophobic. Like the Hindu cultures. In Africa and India you have to spend a lot of time overcoming taboos to be able to do anything related to human excreta. It can be done, but takes time and effort. Another reason was that in the late 70s and early 80s Tanzania went through an economic recession. There was no money to spend on sanitation.

Latin American cultures are not quite as faecophilic as Chinese or Japanese cultures. But it was much easier to work with sanitation in Latin America than in Africa. And when I shifted from there to East Asia things really started moving. Because there are few taboos related to human faeces in that part of the world we could make real progress. I was lucky to find good local teams in China and Vietnam. From [...] small pilot projects we have been doing with seed money from Sida (Swedish International Development Cooperation Agency), the projects have, especially in China, taken off and multiplied. They are now moving ahead without foreign aid.

AS: Because you met an interest that was already there...

Uno Winblad: First of all there was a need. There has been a terrific economic development in China over the past 10 to 15 years. The Chinese are building modern cities and many villagers are building new, modern houses. But sanitation is left behind. In China a household can spend money on a luxury house, with mirrors in the ceiling and marble on the floor, [...] but the toilet is still an open stinking pit in the backyard. Water is often in short supply and there are no sewers.

And then, in China they are now used to moving very fast. I mean they are not "fiddling around" with little projects for 5 or 10 households. If something is worth doing, it's worth doing on a large scale. [...] Also, in China [mobilization] does not seem to be a problem. It's very easy to get mass mobilization. People are used to that.

AS: Does the access there go via the official way, the administration?

Uno Winblad: It has to. Sanitation is not a politically sensitive issue (unlike certain forms of meditation and physical exercise) but when it comes to what the authorities interpret as political activity no dissent is allowed. On sanitation issues there is an open discussion. We were lucky to find the right people in Guangxi province. People who understood what ecological sanitation was about. We started with a pilot project for about 70 households in a remote, compact village with poor water supply.

The toilets (double-vault dehydration toilets with urine diversion) are placed inside the houses and often upstairs. There are no odours. People like them and so do influential officials like the provincial governor and the party secretary. They want to implement similar projects all over the province. As Guangxi province is lagging behind the national sanitation targets, the local officials are under pressure from Beijing to do something. And we came up with what seemed to be a solution to their problems - a solution popular with the users. This year Guangxi province is completing over 30,000 units. There are hardly any subsidies involved - the households pay the full costs.

AS: That's really amazing if you think how we have to struggle here in Europe, to just get tiny little pilot projects financed. It can take years and years...

Uno Winblad: Actually, what is holding us back in China now is the capacity of the factories producing squatting pans with urine diversion. The pans have been developed within our project and are produced by private factories. There are now 4 such factories in China. The first one outside of Beijing makes a porcelain squatting pan. Another one in Guangxi makes a different model in fiberglass. Two factories in the north also make fiberglass units.

AS: And now you have architects who start building this system on their own?

Uno Winblad: Not architects...

AS: Who builds them?

Uno Winblad: In Guangxi, where we have most of the projects, it's the Provincial Public Health Bureau in cooperation with local authorities. They have already designated a number of villages and small towns as "ecological communities". When a village is declared an ecological village all kinds of environmental improvements are made by the villagers: roads paved, drainage improved, toilets built and piggsties relocated outside the village.

AS: Let's have a look into the future. How do you think your projects in China will develop?

Uno Winblad: They are now well established in China. Sida initially funded pilot projects in 3 provinces: Guangxi, Shanxi and Jilin . [...] Central government decided a few months ago to continue with pilot projects in another seven. This means that altogether 10 provinces in China have ecological sanitation projects. Ecological sanitation is now established in so many places in China and so many people are involved that I am confident that it will continue.

AS: How do they deal with the material that is collected in the toilets?

Uno Winblad: [...] East Asia has a long tradition of using human excreta as fertilizer. On my travels in China, I have often seen fields fertilized with the contents of latrine buckets. They just take the fresh excreta to the fields. When farmers can handle that stuff they have no problems handling what they take out from ecological sanitation toilets because that is dry, odour free, and largely free from pathogenic organisms.

AS: Do you use ecological sanitation in your own house?

Uno Winblad: Yes I do. [...] I built one [dry toilet] in 1980 and it worked alright. I used it for several years until I sold the house. Then I bought a new house [...], and there I installed a solar heated dry toilet. It is important for those of us working with ecological sanitation to have our own experience.

AS: Can you tell me some more about the conference in China you are organizing for next year?

Uno Winblad: [...] We have for quite a long time been planning an international conference on ecological sanitation. The reason is that so many conferences on "water and sanitation" deal mainly with water. If they take up sanitation, they deal with "shit diluted in water" - sewage in other words. This time we want to concentrate on dry systems. That's why we felt we need our own conference. It will also be a good opportunity to present what we have achieved so far. We are going to present case studies and data from microbiological studies. And we are going to try to formulate recommendations on storage time, secondary treatment and recycling. We shall discuss urban applications and of course visit some project sites.

The conference will be held in Nanning, the provincial capital of Guangxi. There we have large projects within easy reach. Participants can see for themselves what has been achieved in village after village: 100% coverage, most toilets installed indoors, often upstairs, the enthusiasm of the people After a site visit nobody can come and say that it doesn't work. That's why it's important to have a conference in Nanning [...] When the conference is over, ecological sanitation will be well established in China. We have political support - not only in the provinces where we work but at a very high level - the First v. Premier of China, Mr Li Lanqing, is the honorary chairman of our Organizing Committee.

AS: Are you aiming to establish this kind of sanitation in bigger cities, too?

Uno Winblad: [...] In China there are over 40,000 small or medium sized towns - none of them has a sewage system. The total population of these towns is more than 200 million. The population of these towns is our main target.

AS: And in the bigger cities, sewers are more appropriate?

Uno Winblad: In the big cities sewerage systems are already established and are being extended. I wouldn't say that they are appropriate. Mixing human excreta and water is never appropriate. But we have to start somewhere. The small to medium sized towns is where we should concentrate our efforts. At some time in the future ecological sanitation, both the thinking behind and the technology, will develop so that we can build ecological cities - regardless of size.

AS: Would you consider yourself an ecological engineer, too?

Uno Winblad: I have an engineering background. I started as a building engineer and then went into architecture. But ecological sanitation is so much more than engineering. Ecological engineering is a part, an important part, of ecological development.

AS: Do you think ecological sanitation encompasses more than ecological engineering?

Uno Winblad: What I have always stressed is that we must regard sanitation as a system. We cannot just consider what we have in the bathroom, the pipe network and the treatment plant. We must consider the total ecological context. This means that ecological sanitation is much more than engineering. It includes the production of food. It is about closing the loop. This is actually the main difference [to] conventional sanitation, which regards sanitation as an engineering exercise. Conventional sanitation is the toilet, the treatment plant and the pipe network connecting them. But when we look at sanitation as an ecological system, we realize that sanitation is a part of the biosphere. We must therefore take into consideration everything that is affected.

AS: In my view, good engineering should encompass the effects downstream.

Uno Winblad: It should, but the concept of engineering is usually taken in a more narrow sense. That's why I don't use this term myself.

AS: The terms you use are very important for the ideas people develop in their minds.

Uno Winblad: [...] Language is important. For example: "wastewater". The wastewater is in the title of this conference [the GTZ Ecosan Symposium in Bonn, October 2000, where the interview was made]. I pointed out to the organizers at an early stage that this is confusing. Ecological sanitation has nothing to do with wastewater. The human body does not produce sewage. Sewage is the product of a particular technology. And that is not the subject of this conference.

AS: Maybe it helps to understand the issue...

Uno Winblad: I don't think so. On the contrary it prevents understanding. If the problem is sewage, then the "solution" of transporting it in pipes may seem rational. But if you realize that the problem is not sewage ... The problem is what comes out from the human body - faeces and urine. These substances come out from separate openings and in different directions. They are not mixed. [...] I think a ground role in ecological thinking is to catch a pollutant as close to the source as possible. The source is our body. - At a conference in Toyama in Japan some years ago I coined the slogan: Don't mix! - Don't mix urine and faeces. Don't mix human excreta and water. Don't mix domestic black water and grey water with rainwater runoff and industrial wastewater.

AS: Thank you very much for this interview.

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