

Interview Record

Q: What are the environmental groups mainly engaged on?

A: Most environmental groups in Nanjing are composed of exponents for environmental protection, including professors in college, doctors and retirees. These environmental groups launch campaigns annually to answer the call of the provincial environmental protection bureau. We hope to arouse public awareness of environmental protection. For example, I used the device to show to the children the high concentration of pollutants in the river. Therefore, they can have a direct and close encounter with water pollution, exhorting them to protect the aquatic environment in the daily life.

Q: To sum up, the function of the environmental groups is to propagate the notion of environmental protection, right?

A: Exactly! The government is the main force, after all. It is the government that can allocate funds to purify polluted rivers and lakes. The environmental groups simply represent civilians who can inform the officials of environmental contamination in the city as well as render advice.

Q: Do you have collaborations with universities and colleges?

A: Of course! We organized a campaign called "*Purification of a Bottle of Water*" last year. Many universities in Nanjing participated in it and extolled it. Besides, the provincial environmental protection bureau also organizes university environmental protection knowledge contest annually to aggrandize the notion of environmental protection.

Q: Our project is to utilize biofilm to adsorb the heavy metal in the polluted water. Could you please give some advice on it?

A: Firstly, I guess you should find a piece of area that is polluted by the heavy metal that the biofilm can adsorb. Then you should test the efficiency of heavy metal adsorption by testing the concentrations of heavy metal before and after your device respectively. You have to convince the public of the utility of your device if you want to apply it to industries. It is a long-term process and you can cooperate with other institutes in your university.

Q: Thank you for your advice! Are there laws for environmental protection?

A: The State Council in China enacted regulations in water protection in April. The regulations give out specific limitations on surface water, underground water and atmospheric water. Apart from the ministry of environmental protection, other ministries such as ministry of land and resources are also responsible for environmental conservation. Take the river as an example. Water conservation bureau is responsible for water pump and sluice administration while the underground water is administered by the ministry of land and resources. All the departments gather together to maintain the well-being of the river.

Q: So are the conditions of the aquatic environment get better due to the regulations?

A: The conditions get better compared to those of the last decade. Domestic garbage becomes less and many sewage disposal factories are established to ameliorate the

conditions. The pollution index has fallen down in the short term, but the change is too small to function in the long run. Pollution still exists and some less-developed cities such as Yan Cheng and Lian Yungang import many projects of high contamination level.

Q: New methods such as biological methods are popular these years. Are they the backbone in harnessing pollution?

A: To be honest, the new technologies can simply slow down the process of pollution instead of stopping it. Only when we reduce the sources of pollution can we totally get rid of it.

Q: Could you please share with us some cases using biological method to protect water resources?

A: There is a large artificial lake with reeds, aquatic plants and fish in Yan Cheng. The input of the lake is the polluted water from factories, which can be purified when moving through the ecological lake. The concentration of ammonia nitrogen is largely reduced while that of the solvent oxygen is aggrandized. The advantage of the method is its high efficiency in water purification. However, the expenses are extremely high because we have to construct it as well as maintain it, which severely limit the application of the method. Apart from biological methods, chemical methods are still popular in processing sewage. We always add chlorine or activated charcoal into the polluted water, which can cause the problem of secondary pollution. Therefore, biological method is more utilitarian in the long run.

Q: So chemical methods are relatively more mature, because it has been applied in industry for more than 100 years. What about the biofilm that we designed? Do you think it is worth propagating?

A: Firstly, the expenses of using biofilm is high, as I have mentioned before. Secondly, we have to consider the amount of sewage your biofilm can hold. Factories produce tons of sewage every day, so your biofilm must be stable and substantial enough to hold the large sum of water.

Q: I have heard about a factory that use microorganisms to absorb the organic toxins in sewage. Can this kind of method be largely propagated?

A: It is still a problem of expenses and efficiency. The application is not mature in our country and there is a long way to go for the universities to test the method. I think you have to figure out the exact efficiency of the method and the expenses evaluated.

Q: Thank you for your suggestions and we sincerely hope that your environmental group can grow large and successful!

A: Thank you!

The organizer:

Jian Sheng, organizer of the activity "*Journey of Love*". He is also a senior engineer in sewage detection and treatment of the Nanjing Water Conservation Group. Sheng is dedicated in environmental protection and has organized many activities in environmental protection in his spare time. He is familiar with the condition of every river in Nanjing.