

The Yantze River challenge for nature conservation in developing China: is there a chance to not repeat industrialisation mistakes?

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My travels to see the river dolphins of the world, and their demise, in recent years made me aware of the importance of major rivers and waterways. To mankind, the big rivers of the world have always been a source of drinking water and food, transport highways, sewers and waste deposits. With the small tribe of Yanomami indians which I met at the Rio Negro in the southeastern Venezuelan jungle, such attitude was no problem, since they live in a region with one of the lowest densities of human population of the world and the large affluents of the Amazon provide for all and dilute everything. Amazon river dolphins (*Inia geoffrensis*) were abundant and seemingly unaffected by human impact in that remote part of our planet. In the 'first world', however, the age of industrialisation from the early nineteenth century onwards has seen the extensive destruction of riverine ecosystems all over Europe and in USA, caused by the sheer number of humans present on the river shores and their direct and indirect effects on the rivers. The Rhine, for instance, one of the largest rivers of Europe, not only became heavily polluted by untreated wastewaters and chemical discharges, but was also made to change its course in order to avoid floodings and as a consequence of all this lost most of its fish species and other animal life. Only with the current reduction –but not complete elimination- of both untreated sewage water and dumping of chemical substances into the river, since the 1960's has the ecosystem begun to recover. Yet one important waterbound mammal, the European river otter (*Lutra lutra*), has become extinct over almost all of its original distribution range including the Rhine and has not yet recovered. We have to put things into perspective: the Rhine is 1.320 km long, the Yangtze River 6.380 km. More than 200 million people depend on the water of the Yangtze River, equivalent to about a third of the entire European population (and most of Europe does not depend on the Rhine). Despite these differences of scale, had there been any European river dolphins at the beginning of industrialisation, they would probably be either highly endangered or extinct by now over most of their original range –like the otter. On my first ship cruise on the Yangtze River, from Shanghai to Wuhan in September 1994, I spent many hours searching for river dolphins and –next to finless porpoises- I was lucky enough to once see what I judged to be a dolphin with a dorsal fin, very similar to the Amazon river dolphins which I am used to seeing almost every day at Duisburg Zoo. Many did not believe my sighting because already at that point the population of the baiji was considered extremely endangered and the species' future looked grim. When I was honoured with the invitation to join the survey of the Yangtze River for baiji 12 years later, I found the river had changed. Ship traffic had increased tremendously, to the point that it is hard to imagine dolphins living in the lower Yangtze River. The building activity and the new constructions on the river shores were incredible in number and size, reflecting the immense growth of the Chinese economy. This economic growth and its associated changes to the landscape are comparable to the European industrialisation of the last centuries. Professionally, to work with the team of international and Chinese experts in this survey for baiji in the Yangtze River was a very enriching and thrilling experience. I learned the difference between a 'search' and a 'survey', met wonderful and highly motivated colleagues and had good enriching scientific discussions with world-class scientists. I also learned that the baiji was the river dolphins which tolerated cold better than any other river dolphin species: it was freezing cold during the survey. I had to acknowledge that the baiji is probably

gone -since none were found- because even with the most optimistic estimates based on the survey results, there probably are not enough left for any natural procreation of the species. “What will be the consequences of such conclusion?”, was the question that I was asked recently. Well, I personally believe it depends on the will of the Chinese politicians to preserve their unique nature and the opinion of the general Chinese public whether they think that this is a worthwhile thing to do in times of economic growth. Therewith, the world-wide conflict of money interests against nature conservation interests has reached China as well. The emblematic baiji may well be a ‘flagship species’ to make people understand that extinction is forever and that mistakes made now can not be mended in the future. I personally have no knowledge of Chinese language nor any direct insight into the priorities of Chinese society nowadays on this matter. Yet one conversation during the survey was revealing to me: One night, a skipper told us that he was grateful for the work we “scientists were doing”, because, as he said, we were “basically doing it for his 9 year old daughter”. He had clearly understood how precious Chinese wildlife is and that it should be preserved for future generations.