

International Conference on Pollution Control & Sustainable Environment

April 25-26, 2016 Dubai, UAE

How the worst US sea pollution was solved?

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In 1988, I learned that about half of the 5000 bottle-nose dolphins that migrate annually from Florida to New Jersey had died over a period of three to six months from bacterial pneumonia contracted after their immune systems were weakened by a virus. This was the largest dolphin kill-off ever in the world. We discovered that primary root causes were New Jersey sewage plants and pipes that weren't being maintained. The problem was that there were 97 little towns along the New Jersey shore that operate sewerage facilities, and four county health officers have the responsibility to check beach water quality. They all had to do well. We also had to get the state to play a role of support and coach and sometimes enforcer. Instead of just being an enforcer, we came up with some state money for matching grants to check and fix pipes and an award based somewhat on the US National Quality Award that we used to help motivate the 97 shore towns. Importantly, we also had to show the cost of "not" preventing shore pollution was much greater than the cost of preventing shore pollution. In the summer of 1988, the New Jersey shore had 803 ocean beach block closing days due to pollution (most in the US) by 1991 that was reduced to 10 and by 1995 to 4. This was the largest water quality improvement ever in the US States. For the latest year (2014) of the NRDC report on beach water quality New Jersey is still a top US state. This presentation will review the "business quality approach" used to achieve this success. The full story is documented in my book, *"The Dolphins Are Back"*.

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Evaluation of potential sedimentary basins in Malaysia for carbon dioxide sequestration

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The increasing amount of greenhouse gases in the atmosphere recently has become one of the discussed topics in relation with World's concern on climate change. As Malaysia is one of the main oil-producing countries, it is vital to consider the management of disposal and storage of carbon dioxide, the result of petroleum production. This paper presents workflow and method of evaluating the potential storage sites suitability for carbon dioxide sequestration in sedimentary basins of Malaysia. The carbon dioxide storage capacity in saline formation assessment is conducted based on the method for quick assessment of carbon dioxide storage capacity in closed and semi closed saline formations modified to suit the geology setting of Malaysia. This quick method is based on the fact that an equivalent volume of native brine displaced by the cumulative injected carbon dioxide occupies additional pore volume within the storage formation and the seals. This method is designed to provide storage capacity estimation at early stages of site selection and characterization, when quick assessment of multiple sites selection and characterization data is sparse. Then the data is compiled using GIS-based evaluation tools to provide the potential storage sites for carbon dioxide sequestration in Malaysia. This study concentrated on the assessment of major sedimentary basins in Malaysia both onshore and offshore where potential geological formations which carbon dioxide could be stored exist below 800 meters and where suitable sealing formations are present.

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