A Comparative Perspective of Water Pollution Control

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Abstract

Water pollution is increasingly becoming a major problem virtually in both developed and developing countries. Undoubtedly, there are numerous measures including legal interventions to control and curb water pollution so that people, in particular, ordinary people can have ample access to clean and fresh water to drink and use for other domestic activities. This paper looks at how the laws are being used to regulate and control water pollution in the United Kingdom (UK) and India through comparative research approach.

Keywords: Water Pollution Control, Regulation and Control, Accessibility

1. Introduction

The British approach to water pollution control has traditionally been founded on defining quality objectives for receiving waters in light of which varying emission standards are set individually (Harrison, 2001). Integrated pollution control addresses the cross media impact by providing a single authorization to be granted for prescribed discharges to air, land and water, account can be taken of the impact on each medium and allowance made for the interaction of one on another (Jordan, 1993). Persons must respect conditions enumerated in the emission standards (Ekins and Simon, 2003). They also have to avoid the entry of any polluting matter to the controlled waters. Failures to comply with emission standards or other water pollution laws are a criminal offence (Heyes, 1998).

England, Wales, Scotland and Northern Ireland form the United Kingdom. Legislation for water in England and Wales dates from Victorian times when Acts of parliament were passed to give local authorities, statutory boards and companies the power they needed to provide water and sewerage services expanding centres of pollution (Water UK, 2014). In England there are thousands of kilometres of watercourses, hundreds of designated bathing waters and many ponds, canals and streams. Many of these water bodies are in good condition and enjoyed and valued by communities (Water UK, 2014).

In, India, "pollution of rivers is more severe and critical near urban stretches due to huge amounts of pollution load discharged by urban activities. The rivers in India suffer from severe pollution these days... Inadequate sewerage, on-site sanitation, and wastewater treatment facilities in one hand, and lack of effective pollution control measures and their strict enforcement on the other are the major causes of rampant discharge of pollutants in the aquatic systems" (Karn and Harada, 2001). "Ganga river basin is the largest in India supporting a population of more than 250 million people. ... The constantly degrading quality of water in Ganga led the Central Pollution Control Board in 1984 to make a survey of the river, which revealed that the river is heavily polluted and contaminated." Goel (2006) indicates that "though several steps have been taken on a broader front including National River and Lakes Conservation Plans but the quality of the water resources seems to be far from satisfactory."

2. Water Pollution Control Interventions in the UK

In the UK, the Water Resources Act 2003 (WRA) came into effect in December, 1991 along with four other pieces of legislation namely, the Water Industry Act 1991, Land Drainage Act 1991, Statutory Water Act 1991, and the Water Consequential Provisions Act 1991 (Potter 2012). The purpose of these Acts was to consolidate existing water legislation which was previously spread out over twenty pieces of legislation (P Cullet 2011). The WRA governs the quality and quantity of water by outlining the functions of the Environment Agency. It sets out offences relating to water, discharge consents and possible defences to the offences. The most notable legislation to amend this Act is the Water Act 2003.

Part iii of the Water Resource Act and the Regulations made under it are concerned with the protection of controlled waters which includes relevant territorial waters, coastal, inland freshwaters (including lakes and ponds) and ground waters.

In terms of Section 85(1), WRA it is an offence to cause pollution to controlled waters. The purpose of the section is to impose criminal liability on those who cause pollution to natural water resources.

A person contravenes this section if:

- He causes or knowingly permits any poisonous, noxious or polluting matter, or any solid waste matter to enter any controlled waters.
- He causes or knowingly permits any matter other than trade effluent or sewerage effluent to enter controlled waters by being discharged from a drain or sewer in contravention of an imposed prohibition under section 86.
- He causes or knowingly permits any trade effluent or sewerage effluent to be discharged into any controlled waters or from land in England and Wales through a pipe into the sea outside seaward limits of controlled waters.
- He causes or knowingly permits any trade effluent or sewage effluent to be discharged in contravention of any prohibition imposed under section 86 from a building or from any fixed point onto or into any land, into any waters of a lake or pond, which are not inland freshwaters.
- He causes or knowingly permits any matter whatever to enter any inland freshwaters so as to tend (either directly or in combination with other matter which he or another person causes or permits to enter those waters) to impede the proper flow of the waters in a manner leading or likely to lead to a substantial aggravation of pollution due to other causes and the consequences of such pollution.

In the case of *Empress Car Co (Abertillery) Ltd v National Rivers Authority* [1988] 1 ER 481(HL), the interpretation of Section 85(1) was in issue. The appellant company maintained a diesel oil tank in a yard on its premises which drained directly into a river. The tanker was surrounded by a bund to contain the spillage and the appellant had overridden that protection by fixing an extension pipe to the outlet of the tank so as to connect it with a smaller drum standing outside the bund. The outlet from the tank was governed by a tap which had no lock. It appeared that an unknown person had opened the tap and as a result the entire contents of the tank ran into the drum, overflowed into the yard and passed down a storm drain into the river. The National Rivers Authority charged the appellant with causing polluting matter to enter controlled water from its premises contrary to section 85(1) of the Water Resource Act 1991, the court quoted with approval the reasoning of the court in the case of *Alpha cell Ltd v Woodward* 1972] 2 ER 475 (HL) of the two limbs of section 2 (1) (a) of the Rivers (Prevention of Pollution) Act 1951 which was in the same terms as section 81(1) of the 1991 Act. "The sub -section evidently contemplates two things namely 1.causing which must involve some active operation or chain of operations involving as the result the pollution of the stream, 2 knowingly permitting, which involves a failure to prevent the pollution which failure however must be accompanied by knowledge" The sub-section imposed strict liability in the sense of intention or negligence. Strict liability was imposed in the interest of protecting controlled waters from pollution.

It pertinent to point out that if the defendant did something which resulted in a situation in which the polluting matter would escape, but a necessary condition of the actual escape which happened was also the act of a third party or a natural event, the justices could consider whether that act or event should be regarded as a normal fact of life or something extra-ordinary (Abbot, 2006). It was in the general run of things, a matter of ordinary occurrence, it will not negate the casual effect of the defendants acts, even if it was not foreseeable that it would happen to that particular defendant or take that particular form (Robertson, 1996). If it can be regarded as something extra -ordinary it will be open to the justice to hold that the defendant did not cause pollution (Thode, 1977).

Whether an event was ordinary or extra-ordinary was one of the facts and degree to which the courts should apply their minds and knowledge of what happened in the area. From all indications, it is clear that the appellant has done something by maintaining a diesel oil tank on its land and it has caused the oil to enter controlled waters, so the appeal was dismissed.

In the case of *Express Ltd (trading as Express Dairies Distribution) versus The Environmental Agency* [2003] 2 ALL ER 778 (QBD), the defence of causing pollution of waters was in issue. An employee of the defendant dairy company was driving a milk tanker along a motor way in the course of the company's business. As a result of a tyre blow out, the delivery pipe was sheared causing several thousand litres of milk to escape from the tank. The driver pulled onto the hard shoulder and stopped at a point where two drains fed into a brook which constituted controlled waters. The milk from the tank entered the brook. The company was subsequently charged with causing polluting matter to enter controlled waters. There was no evidence given as to what were the intention of the driver on pulling over onto the hard

shoulder, but the justices assumed that he had done so in order to avoid danger to life or health, nevertheless the company was convicted. The company appealed to the Divisional Court, which held that the defence, provided by section 89(1) of the 1991 Act to the offence of causing polluting matter to enter controlled waters was available to a person whose act in causing that entry was done in an emergency in order to save life or health. Parliament recognised that some of those acting in an emergency should be excused. The defence succeeded and the conviction was set aside. It is significant to note that milk was considered as a water polluting substance in this case. Pollutants are not necessarily toxic substances. The appeal succeeded because the appellant committed a pollution of water in an emergency situation in order to avoid an accident and probably save life.

The Water Resources Act 1991, the Water Industry Act 1991 and Water Act 1989 contain a specific provision enabling a body corporate, directors and other officers to be prosecuted for offences committed by their companies. The Water Resources Act provides that:

"where a body corporate is guilty of an offence under this Act and that offence is provided to have been committed with the consent or connivance of or to be attributable to any neglect on the part of a director, manager, secretary or other similar officer of the body corporate or any person who was purporting to act in any such capacity, then he as well as the body corporate shall be guilty of that offence and shall be liable to be proceeded against and punished accordingly".

In *Huckerly v Elliot* [1970] 1 All ER 189 at 194, the court interpreted the meaning of the terms consent, connivance and neglect. The court held that consent exists where 'a director concurs to the commission of an offence by his company and he is well aware of what is going on and agrees to it'. Connivance means that a director 'connives at the offences committed by the company, he is equally aware of what is going on but his agreement is tacit, not actively encouraging what happens but letting it continue and saying nothing about it'. Where the offence is attributable to neglect, in the absence of authority on the point it would seem that the offence which is being committed may well be without his knowledge but it is committed in circumstances where he ought to know what is going on and he fails to carry out his duty as a director to see that the law is observed. These interpretations might be of assistance to other courts when dealing with controlling officers of a body corporate in cases of alleged water pollution.

In *National Rivers Authority v Alfred McAlpine Home East Ltd* [1994] 4 All ER 286 (QBD), the issue was whether or not a company would be held liable for pollution of water caused by its junior employees. The respondent company was engaged in building houses on a residential development. Wet cement was washed into a river during the building operations carried out by the company. In May 1992, the National Rivers Authority inspected the stream and found that the water downstream of the building site was cloudy, with a number of dead and distressed fish. The employees admitted liability. The applicant charged the respondent with causing polluting matter, wet cement to enter controlled waters, contrary to section 85(1) of the 1991 Act. Justices dismissed the charge and held that the applicant had failed to show that the company itself was liable because neither the site agent nor the site manager were of a sufficient senior standing within the company to enable them to be held categorised as persons whose acts were the acts of the company.

On appeal, the court held that a company will be criminally liable for causing pollution which resulted from the acts or omissions of its employees acting within the course and scope of their employment when the pollution occurred, regardless of whether they could be said to be exercising the controlling mind and will of the company, except if some third party acted in such a way as to interrupt the chain of causation. The appeal was allowed. This appears to be a straightforward application of the principle of vicarious liability, but it does not illustrate the need for companies to establish proper environmental management systems (Bell and McGillivray, 2006).

3. Water Pollution Control Interventions India

Water pollution is a major environmental issue in India as most lakes and surface water in India are polluted (Yeung et al. 2009). (Rodgers, 2013). The largest source of water pollution is untreated sewage; other sources of pollution include agricultural run-off and unregulated small scale industry (Rodgers, 2013). There is a large gap between generation and treatment of domestic waste water in India and as such waste are dumped in the river and caused pollution (Singh et al. 2008). The problem is not only that India lacks sufficient treatment capacity, but also that the sewage treatment plants that exist do not function as they are not maintained (Singh, 2004) (J Parkinson, K Tayler 2003). A study carried out by the World Health Organisation (WHO) in 1992 reported that out of India's three thousand one hundred and nineteen towns and cities just two hundred and nine have partial sewage treatment facilities, and only eight have full waste water treatment facilities (Chapman, 1996). Downstream, the river water polluted by the untreated water is used for drinking, bathing and washing (Chapman, 1996). The major source of surface water pollution in India is as a result of lack of toilets and sanitation facilities (Chapman, 1996).

India is the first country in the world to make constitutional provisions for the protection and improvement of the

environment (Ramakrishna, 1984). In terms of Article 48-A of chapter IV Principles of the state policy of the constitution (Singh and Kohli, 2008). The state must take reasonable measures for the protection and improvement of the environment and for safeguarding the forest and wildlife of the country. It is the fundamental duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures (Reddy and Char, 2006). The water (prevention and control of pollution Act, 1975 Chapter V) and the air quality laws have been in place since 1989 to deal with the control of hazardous waste and pollution to supplement the constitutional provisions. However, India lacks an umbrella framework to regulate freshwater in all dimensions. Common law principles and irrigation acts from the colonial period as well as more recent regulation of water quality and the judicial recognition of human right to water constitute the legislative frame work of India (Bhullar, 2013). It is difficult to identify a coherent body of comprehensive law concerning water; this is related to the fact that distinct concerns have been addressed in different enactments (Shah, 2013). This is also due to the division of powers between the centre and the states and the fact that water regulation is mostly in the hands of the state (Viswanathan, 2008).

The intervention of the central government in water regulations is limited by the constitutional scheme; the importance of national regulations in water has been recognised in certain areas (Ramakrishna, 1984). Statutory water law also includes a number of pre and post-independence enactments in various areas (Moench, 1998). These include laws on embankments, drinking water supply, irrigation, floods, water conservation, river water pollution, rehabilitation of evacuees and displaced persons, fisheries and ferries (Ramakrishna, 1985).

Some of the basic principle of water law applicable today in India is derived from irrigation acts (Saleth, 1994). For instance, the early Northern India Canal and drainage Act of 1873 sought to regulate irrigation, navigation and drainage in Northern India (Cullet and Gupta, 2009). One of the long term implications of this Act was the introduction of the right of the government to use and control the water of all rivers and streams flowing in natural channels and of all lakes for public purposes (Preamble Canal and Drainage Act, 1873 (Act VIII OF 1873). The Madhya Pradesh Irrigation Act, 1931 went much further and asserted direct state control over water by stating that "all rights in the water of any river, natural stream or natural drainage channel, natural lake or other natural collection of water shall vest in the government" (Article 26, Madhya Pradesh Irrigation Act, 1931). In general, water law is largely state based. This is due to the constitutional scheme which since the government of India Act, 1935 has in principle given power to the states to legislate in this area.

With regard to water pollution, parliament adopted an act in 1974 called the Water Act (Prevention and Control of Pollution) Act 1974. This Act seeks to prevent and control water pollution and maintain and restore the wholesomeness of water. It gives power to water boards to set standards and regulations for prevention and control of pollution.

The Central Pollution Control Board, Ministry of Environment & Forests Government of India entity has established a National Water Quality Monitoring Network comprising 1429 monitoring stations in 27 states and 6 in Union Territories on various rivers and water bodies across the country (Jain, et al. 2007). This network monitors water quality year round. The control board is created by the Act, which is India's national body for monitoring environmental pollution; it undertook a comprehensive scientific survey in order to classify river waters according to their designated best use (Mudliar, 2013). This report was the first systematic document that formed the basis of the Ganga Action Plan (GAP). The GAP detailed land use patterns, domestic and industrial pollution loads, fertiliser and pesticide use, hydrological aspects and river classification; the principle aim was to intercept and divert waste from urban settlement away from the river (Mudliar, 2013). This was the first step in river water quality management. Its mandate was limited to quick and effective, yet sustainable intervention to contain the damage.

The existing legal framework concerning water is complemented by a human rights dimension. Although the constitution does not specifically recognise a fundamental right to water, court decisions deem such right to be implied by Article 21 that provides for the right to life. The right to water can be read as being implied in the recognition of the right to clean water. In *Subhash Kumar v State of Bihar* Paragraph 7, *Subhash Kumar v State of Bihar*, AIR 1991 SC 420, the Supreme Court recognised that the right to life "includes the right of enjoyment of pollution free water and air for full enjoyment of life" (Paragraph 7, *Subhash Kumar v State of Bihar*, AIR 1991 SC 420). In the *Vardar Sarovar* case, the Supreme Court went further and directly derived the right to water from Article 21. It stated that 'water is the basic need for the survival of human beings and is part of right to life and human rights as enshrined in Article 21 of the Constitution of India (AIR 2000 SC 3751). While the recognition of a fundamental right to water by the courts is unequivocal, its implementation through policies and acts is not as advanced as one would think.

More than 400 million people live along the Ganges River which is considered a source of spiritual purification for devout Hindus; they use the river for various for ritual purposes which include bathing as the river is regarded as holy by the Hindus (AIR 2000 SC 3751) (Prime, 1994). While modern pollution is forcing people to break ties with the river, Hindu scholar Krishnakant Shukla argued that the Ganges's unique place in Hindu cosmology means the river will remain at the heart of Hindu life (AIR 2000 SC 3751). The National River Conservation Plan was an effort to improve the water quality

starting with the Ganga Action Plan whose programmes on water pollution control expanded to the Ganges River, Yamuna, and Deodar and Gomati rivers (MOEF, 2004).

4. Comparative Perspectives

Legislation in the United Kingdom (Jordan, 1993) and India (Priyadarshini and Gupta, 2003) creates offences and penalties for water pollution in different manners. Water polluters are punished by fines, imprisonment or both. Remedial orders may be made in order to prevent or minimise the effects of water pollution or to restore water to its previous conditions (Helmer et al. 1977). Policy statements regarding water pollution control can be found within the legislative framework of these countries. In most instances, corporations pollute water in their activities and measures have been taken to punish corporate bodies as well as corporate officers (Kuruc, 1985). Government statutes and constitutional documents often include paragraphs about environmental policies. The protection and conservation of natural resources is crucial especially a resource such as water which plays a vital role not only in economic development but also in social upliftment.

The United Kingdom (Water Resources Act section 161(1)) legislation imposes an obligation on the owner, occupier or controller of the land to take all reasonable measures to prevent water pollution from occurring, continuing or recurring (Braden et al. 1982). If they fail to perform their duties, the relevant authority may take all necessary steps to remedy the situation (Aagaard and Todd, 2011). It may recover all reasonably incurred costs from the responsible person.

In the two countries, statutes regulate the discharge of waste or trade effluent into a water resource (Rajaram and Das, 2008). The discharger must have a permit and comply with its restrictions, unless the activity falls under the exceptions (Kraemer and Banholzer, 1999). Non-compliance with permit conditions constitutes a criminal offence and a court may make an award of damages against the accused in favour of the person who suffered a loss as a result of the offence or to remedy the situation (Gaba, 2007). Vicarious liability is used to punish corporations for the acts or omission of their employees that pollute waters, even if they do not exercise the directing mind or will of the company unless some third party interrupts the chain of causation (Ulpian, 2007).

Environmental statutes usually provide that where a corporation has committed an offence under the legislation, then directors and other managers of the corporation are deemed to be guilty of the same offence (Simpson, 2002). Environmental law does not allow corporate officers to hide behind a legal structure of the corporation (Gill, 2008). A person may escape liability if he or she proves to the court that he or she was not in a position to influence the conduct of the corporation in relation to the transgression (Welks, 1991), or if he or she in such position used all due diligence to prevent the conduct by the corporation (Peters and Scott, 1991).

Although India has made significant changes in its environmental challenges, much work still needs to be done. According to the World Bank, the country has made one of the most rapid progresses in enhancing its environmental issues between the years 1995 and 2010. Rivers such as the Ganges, Mithi and Yamuna flow through urban areas mainly contaminated with untreated sewerage get polluted. The current treatment facilities are not only functioning under capacity due to poor maintenance but they also cannot treat the expanding volume of sewerage due to population increase. Other sources of water pollution that are of great concern are agricultural runoff and small scale factories along the rivers and lakes of India (Anju et al. 2010).

Even though India has revised its National Water Policy in 2002 to encourage community participation and decentralize water management, the country's byzantine bureaucracy ensures that it remains a "mere statement of intent". Responsibility for managing water issues is fragmented among different ministries and departments without any coordination. The government bureaucracy and state run project department has failed to solve the problem, despite having spent many years and \$140 million on this project.

United Kingdom statutes have specific provisions that allow a body corporate, directors and other officers to be prosecuted for offences committed by the company (Water Resource Act (sec 217), Water Industry Act 1991 (sec 210) and Water Act 1989 (sec 177). This materialises when a company is guilty of an offence which is proved to have been committed with the consent connivance or neglect of any directors, secretaries or managers or other similar officers of the body corporate. This provision does not only target directing officers but includes other individuals in the corporation who may commit an environmental crime by their act or omission. The responsible person as well as the corporation is guilty of the same offence and liable to be punished accordingly.

5. Conclusion

Water resources are under severe threat due to massive pollution. Everyone has a duty to halt any decline in the cleanliness of water and reverse the damage done over many decades to the water ecosystems and minimise future risks in adapting to climate change. Water is a scarce resource and if not well preserved there will be the danger of not having clean water in years to come.

Economic growth and natural environment are mutually compatible. Sustainable economic growth relies on the health of the natural environment including water bodies and the benefits it provides, often referred to as ecosystem services. The quality of water bodies determines the type of animals and plants that can live healthily in them.

6. Recommendations

Statutes governing water pollution need to criminalise a continuing offence which arises when an offence continues after a notice has been served on the person to cease the unlawful activity or if no notice was served, after a conviction of the offender. It is recommended that statutes should criminalise a continuing offence and such an offence must be punished per day of violation as this may push water polluters to stop committing the offence.

As a general rule it should be ensured that only regulations that are enforceable are actually implemented. If the existing enforcement capacity is deemed insufficient, regulation should be simplified or abandoned. Regulations and management procedures made at national level need not necessarily apply uniform conditions for the entire country, but can take account of regional variations in water pollution and socio-economic conditions. Current policy frameworks do not provide the necessary clarity with regards to delegation of powers between the different government departments at the local, provincial and national level.

The efficacy of the various policies would be greatly enhanced if the national legislation were more rational and aligned, because it would eliminate any ambiguity.

The United Kingdom doctrine of wilful blindness imputes knowledge of the offence to the responsible persons and therefore secures their convictions for environmental crimes.

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