

## **PERILS OF INERTIA: A CASE STUDY OF WATER POLLUTION IN WATER SCARCE MARWAR**

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### **ABSTRACT**

*The current case study depicts the gruesome scenario of water pollution in a water scarce region of the Thar desert - Jodhpur, Pali and Balotra; going unresolved since decades. It is an accumulation of my learning and observation gathered on the topic since my bachelor's internship to my current area of research. The study aims to project how damaging can one's attitude of dis-concern towards the environment be. Particularly through the case study of Jodhpur, it is endeavored to bring more awareness of how grave can the human tendency of 'Inertia' and 'Defiance' be, if unchecked and un-tackled. It exemplifies that how the unaddressed environmental challenge is constantly resulting into an irreparable loss of the nature and life.*

*Keywords: Innovation, Inertia, Industrial Impact, Optimization, Water pollution, Environmental impact*

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## **INTRODUCTION**

Innovation, a word, a philosophy that is omnipresent today across sectors, domains, subjects and disciplines. Nonetheless it is an interesting paradox that while there are strata which absorb the ideology to change or talk about resistance to it rigorously, there are chunks living in an absolutely cocooned mindset.

Where on one hand the studies on innovation have been bounteous, those on resistance relatively low, the thought of studying the 'mindset of inertia' borne in the entrepreneurs appears to be not very thought for. In such a scenario, the case aims to study the impact of the absence of this kind of change and innovation adopting approach with reference to the MSME sector. Thus at the core of this paper lies the study of the vulnerability Inertia can lead to.

While an innovative approach demands incurring costs on its conception/acquisition and execution say in terms of research and development, training, pilot production, marketing and so on, it also yields a broad range of benefits that endow efficiency and effectiveness to business by means of cost optimization and waste minimization. Inertia- the reluctance can be acceptable if it purports inquisitiveness, to test the authenticity of the proposed change. However a reluctant unwilling mindset that fails to even endeavor to know the cost and benefit relationship of such an approach just for the sake of inertia can prove to be fatal, demanding a mechanism of check.

The case endeavors to witness what costs an industry suffers from if it remains reluctant to adopt/respond to change innovatively. The cost occurring on account of such Inertia shall be analyzed comprehensively, taking into consideration the direct and the indirect parameters. To elaborate, economic, social and environmental loss shall all be taken under one umbrella as cost of inertia to innovative approaches.

It further toils to work out what corrective measures could result in the generation of a more efficient and innovative industry by chalking out the gap in the existing 104 framework- if any, and suggesting a model catalyzing synergy in 'Conception and Implementation' of innovation.

The study bases itself on the MSME sector of India, of which the 'Stainless Steel Re-rolling cluster of Jodhpur' has served as the scope for the case study.

## BACKGROUND

Water, the sacred and scarce natural resource inevitable to nurture life. The importance of conserving and preserving this crucial resource needs no exaggeration. The saying that the next war will be for water, exemplifies its role and importance in our lives. In such an atmosphere, measures to prevent and check water pollution seem fundamental rather crucial. Moreover, it can be well presumed that stringent compliance of laws in this regard must be undergoing, particularly in the scarce region, to ensure optimum utilization of the depleting resource.

But astonishingly, the country's most water scarce region Marwar, the traditional land of the Tie and Dye artisan work, which has evolved into massive Dyeing and Printing industry, has a staggering attitude towards even addressing this concern.

The colorful land enfolds a harsh reality of constantly ignoring the environment degradation for last 5 decades now.

The region of Marwar has three centers of industrial clusters generating waste water - Jodhpur, Pali, and Balotra. However the present study is focused on Jodhpur, for it being the pioneer in industrialization, bestowed with research institutes/subject experts and for being under the direct administrative control. Hence this would be indicative of what the state of affairs could be at the other two weakly controlled/equipped centers.

The cradle of Jodhpur- the 2nd largest city of Rajasthan, holds various clusters of Textile-Dyeing/Printing, Steel Re-rolling, Guar-Gum Powder and Wooden-Handicraft, all of which are significantly generating trade waste water, besides the huge domestic waste water generated by the city's inhabitants. A systematic mechanism for treating the two categories of waste water to ensure proper disposal can be assumed to be well in existence.

However, the sad reality is that the city, after treating a small volume of the waste water, **discharges it along with the major untreated waste water, making the whole water polluted and getting into river Jojari**– the seasonal and peripheral river of the city, making Jojari an inundation of waste water from Jodhpur.

## CHALLENGE

It has been since mid 60's that industries have been operational in the region. Considering the pollution caused by the industries, **the city was eventually declared critically polluted by the State Government in the year 1982. In 1996, on insistence of the state government, the** Central Arid Zone Research Institute (CAZRI) conducted a detailed study on the state and damages caused to the environment of the region and gave a report of the grave condition.

Finally, in order to tackle this alarming problem of industrial water pollution, it was only in 2005 that a Common Effluent Treatment Plant (CEPT) was established, which received land and almost entire funding from state and central government. Yet the operational status of the plant all along remained under pressure due to its mismanagement, malfunctioning and the expansion of the industries beyond capacity of the plant. All this resulted in the fact that only a small part of the water was treated prior to discharge, which lost its value as it was finally mixed with the untreated water for disposal, deluding the entire treatment. This led the central government also to declare the city Critically-Polluted in 2009.

At this crucial juncture, an innovative solution was attempted, based on observation/insight that the cost of treatment was the limiting/detering factor in the minds of entrepreneurs. An alternative based on Waste Minimization and Utilization for resource generation was worked out, for the unit and the collective level. It succeeded in addressing the issue of pollution, conducive to the cost consideration and was submitted to the Industry and the Regulator. A *State direction for the implementation* of the work was also passed. *However, the industry continued to exhibit its inertia to the innovative solution to the extent of reluctance.*

*During this period 2009-2011, two major case studies were also conducted by the prestigious NGOs – First by the **Blacksmith/Pure Earth of US** (pertaining to Pali, Balotra and Jodhpur region) and thereafter by the **CSE** (Centre for Science and Environment) of Delhi on Jodhpur specifically. Both the studies depicted grave scenario of water pollution in the region. This may be equally pertinent to mention here that both the state and central governments, while declaring the city Critically-Polluted, also imposed ban on expansion of existing and establishment of new units to check the vulnerability of the environmental pollution caused by the industries. This status continues till today and so also continues the expansion and new activities.*

*The gloomy tale of perils of water pollution has led to multiple PILs (Public Interest Litigations), lodged before the High Court and the matter today rests with the NGT (National Green Tribunal).*

However the status of the pollution control measures after years of adjudication can be better understood by the differing statistics asserted by the industry to the different forums, about the fundamental parameter – the quantity-generated and the treatment-undertaken of the effluent.

Moreover the stoic silence of the regulatory authority to such contradictory submissions would not stand before the NGT, which is well equipped with the expert members and hence are liable to face dire consequences. This could indeed lead to serious socio-economic crisis in the region as the industry is a major source of employment for the masses. *The moot question that what prompts industry to such defiance of statute and its inertia to solution.*

## ENVIRONMENTAL IMPACT ASSESSMENT

Jojari has traditionally been a seasonal river with very little to no water in the dry months. However the bulk of domestic waste water has begun reaching the river during these years, after the sewer lines were laid in major localities, which was earlier absorbed by the soak-pits in the city itself.

This constant flow of domestic and trade waste, added with rain-water in the river, intensifies the problem of pollution. The voluminous **domestic waste water now acts as a carrier for the highly toxic industrial effluent to a larger area. This has resulted in contamination of soil, water bodies, ground water and finally entering into the food chain through the fodder/crops cultivated with it; thus severely affecting the flora, fauna and human health.**

What is sad is that, what should have been a happy story of resilience for the dry region on receiving better and torrential rains these years, has in fact become the cause of aggravation of the problem. *As Jojari river now carrying the city's waste water, on receiving excess water from the rains results in flooding the farm lands in vicinity trampling the cultivation and causing the public unrest.*

## IDEAS AND OBSERVATION

It may look astonishing that our observation with regard to the chronic and acute problem of the grave pollution at Jodhpur has attributed attitudinal causes in the roots that seek **impetus from the Management perspective** for redressal. These are :

- Defiance
- Inertia

### **DEFIANCE:**

Unfortunately even in today's era when there is a wave of environmental consciousness across the globe, embracing environmental protection as a part of competitive corporate strategies, a many still perceive it as a burden of compliance driven by pressures from government through legally binding statute.

The bitter truth is the mindset that we do own material personally/individually, but not the nature and the environment. And thus any environmental degradation does not bother us as it is just not our property. The harsh reality is that such a sick and non-relating attitude towards environmental conservation makes any statutory obligation merely as a cost to be avoided!

### **INERTIA:**

Just as the Law of Inertia in physical Science; maintaining status quo and unwillingness to change is inherent in human behavior too. A reluctant mindset that fails to even assess the cost benefit relationship of a proposed change, just for the sake of maintaining inertia can prove to be fatal, demanding a serious mechanism of check.

Making the status of water pollution even more vulnerable is the fact that the industry besides being defiant to its statutory obligation to treat the waste water, it is utterly resistant to imbibe any sort of change in the traditional pattern of functioning. It is more astonishing that despite availability of a resource generating and an innovative treatment mechanism, the industry at both the unit and at collective level, continues to show its reluctance to even evaluate its impact.

The question here is also of irrecoverable loss accruing in terms of the gigantic wastage of the vital national resources per annum per cluster, Can we afford continuing it ?

Only if everyone were more conscious of the fact that our limited resources need to be conserved, we could make living together, a lot more pleasant. It is truly the need of the hour to have introspection of our acts and realize what kind of environmental heritage, we are passing on to the budding lives and generations ahead of us.

Thus the gravity of the challenge posed by the human behavior of defiance and Inertia has been conspicuously intensified in this case and these are the principal factors responsible for the constant environmental degradation. Gruesome is the fact that the plight of the city's water pollution is prevalent since 5 decades despite availability of viable solutions!

The words of Henry Ford can be aptly quoted here, "Business must be run at a profit, else it will die. But when anyone tries to run a business solely for profit ... then the business must die as well, for it no longer has a reason for existence." In other words, the purpose of a business is to be a business of purpose. Unfortunately, here the purpose is that we want business/profit at the cost of the very basis of life – the environment.

If this is the state of affairs at a place like Jodhpur which is the Judicial Capital of a water scares State, known countrywide for its rich cultural heritage, then what harsh realities of irreparable environmental degradation be prevailing across the nation - unidentified and unaddressed !



### **WAY AHEAD: PROPOSED SOLUTIONS**

The city remains epitome of environmental degradation for holding official status of critically polluted for past 30 years, even when technically advanced and financially viable solutions are already existing !!

**JUST BECAUSE OF unaddressed challenge posed by DEFIANCE TO STATUTES and INERTIA TO ADOPTION OF WORKABLE SOLUTION!!**

The followings remedial measures can be useful to put a check at last and moving in the right direction to save the ever degrading environment.

- **Legal consequences of defiant attitude.**  
**The non-compliers must be made aware of the alarming legal outcomes of defiance of environmental protection laws which are indeed inescapable.** The constitution of NGT and the way it has been functioning epitomizes that there will be serious consequences of ignoring the statutory environmental compliances. This is further strengthened in the recent observation of the apex court that its “last hope” rests on the NGT for being - vested with wide powers under green laws, equipped with technical expertise, the commendable job done and thus entrusted the crucial and noble task of pollution control with the NGT. **The industrialists must hence be educated of their environmental responsibilities and made aware of the dire consequences of the defiance of environmental laws.**
- **Environmental Social Responsibility.**  
**It is crucial to educate and make aware, the industry and other stakeholders of their Environmental Social responsibility.** There is no denying fact that the Industries in order to carry out their functions utilize various natural resources and affect the environment. It thus becomes a fundamental ethical responsibility for the industries to ensure that they act for the good of the society.  
They must indeed be enlightened to play the **steward role** to ensure the optimum state of utilization along with ensuring minimum damage to the nature, and contribute to its restoration beyond regulatory requisites.
- **Waste - Minimization and Utilization** measures must be adopted at the Unit, Common Treatment Facility and State level to reduce wastages and thereby cost of treatment - the central consideration for industrialists.
- **Academic and Research Institutes** must proactively work with the industry and evolve the recommendations and solutions for the environmental challenges posed by the industries.

- **State Indulgence** in identifying and implementing 'Package Of Practice' conducive to environment to tackle the grave problem of inertia, just as being done in the agriculture sector.

And above all, it is more vigilance and awareness that can percolate Environmental Consciousness and Responsibility across the lines.

Only when  
the last tree cut down  
the last river poisoned  
only then  
will we realize  
we cannot eat

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*Let us Arise, Awake and stop not, Until the goal is achieved.*

**FOR IT WILL BE TODAY, OR TOMORROW WILL BE TOO LATE AND  
THE REST WILL BE HISTORY!**

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M/S Depollute (Conceiver of AFM Concept)