



Disaster Management: A Vedic Perspective

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Abstract

The term management is as old as human civilization. In Bharata, the concept of management has persisted since the Vedic period. Systematic management practices are found in ancient Indian literature. This literature elaborates on the concept of disaster management. However, the term management came into vogue in the modern period with the commencement of industrialization at the end of the 19th century and at the beginning of the 20th century. The main objective of 'management' was to acquaint the newcomers with the then establishing industrial life. Nevertheless, this term was used in the Vedic period to run the biggest industry called 'nation'. Many ancient Indian texts deal with the disasters faced by a nation. Hereunder, we shall understand the idea of disaster management from the ancient Indian perspective.

In the Vedas, the words *duḥkha*, *nipata*, *pidana*, *apatti* / *vipatti* and *vyasana* were used for calamity or disaster. According to Sāṅkhya system of philosophy, disasters may be of three types: *Ādhyātmika*, *Ādhidaivika* and *Ādhibhautika*. *Ādhyātmika* calamities or disasters are caused by diseases, epidemics etc. *ādhidaivika* caused by nature, like floods, fire, earthquakes, tsunamis, storms, etc. and *ādhibhautika* disasters are caused by human errors like road accidents, plane crash etc. Vedic scholar Kauṭilya, in his *Arthaśāstra*, has summarized these three into two: *Daivam* (natural) and *Mānuṣam* (caused by human errors).

In the present paper, we shall discuss some of the disasters and their management as suggested by ancient Indians.

Daivam or Natural Disasters: *Daivam* or natural disasters in ancient India are categorized as those caused by fire (*agni*), water (*aka*), epidemics (*vyādhi*), famine (*durbhikṣa*), rats (*muṣaka*), etc.¹ For Kauṭilya, there is no control over the *daivam* or natural *vyasana*. But for *manusa* *vyasana*, man is solely to be blamed. Thus, in ancient India, disasters happen either by misfortune (natural) or by wrong policies². Kauṭilya warns the king that it is his duty to protect his subjects from these disasters³. Let us understand the ancients' views regarding managing disasters caused by various natural and human factors.

Disaster caused by Agni (fire): The disaster caused by fire may be both *adhidaivika* (natural) and *adhibhautika* (caused by human error). For example, forest conflagration is natural, but the

¹ *Kauṭilya Arthaśāstra*, Translated by Kangle, R. P, 2nd Edition, University of Mumbai, 1972. 4.3.1

² *Ibid.* 8.1.3

³ *Ibid.* 4.3.2



fire caused by short circuits in buildings, etc., is *adhibhautika*. Vedic scholars believed in the idea that prevention is better than cure, so they suggested preventive measures like firefighting implements, fire brigades, and standby provision of water to extinguish fires⁴. In summer, cooking should be done outside homes or under the supervision of ten families collectively or being protected by ten firefighting implements⁵. The roofs which are made up of grass or mats should be removed⁶. Those using fire in their profession should stay in one place⁷. House owners should live near the front doors of their own houses without gathering in one place⁸. Kauṭilya is aware of the nature of people. In society, very few people are concerned with the calamities that fall on the nation. It is a general tendency to avoid one's own responsibility as a citizen; hence punishments for not serving in such conditions are imposed in the Arthaśāstra. A punishment for the owner, not running to save the house on fire, the fine is twelve *paṇas* (it's a silver coin with $\frac{1}{4}$ part copper in it) and six *paṇas* for the tenant (Kauṭilya, 2.36.23). In case the fire is caused by negligence, the fine is fifty-four *paṇas*, and the incendiary should be put to death by fire⁹. In case of fire, if proper aid in cash or kind is not provided, then the punishment is one-quarter of a *paṇa*¹⁰. The incendiary should be put to death by fire¹¹.

2. **Disaster caused by water:** According to Kauṭilya, disasters caused by water are the worst because a fire may destroy half of one village, while a flood affects many villages (8.4.4). Several preventive measures for the management of disasters caused by water have been suggested, such as habitats should be allowed to come up away from the level of floods, people living close to water should be made ready to leave their places if the water level crosses the danger mark¹², wooden planks, bamboos and boats should be kept ready to meet any eventuality¹³. There should be a standby provision of rescue teams and rescue materials like gourds, skin bags, canoes, tree- stems and rope braids to rescue persons from flooded areas.

⁴ *Ibid.* 4.3.3; 2.36.22

⁵ *Ibid.* 4.3.3

⁶ *Ibid.* 2.36.19

⁷ *Ibid.* 2.36.20

⁸ *Ibid.* 2.36.21

⁹ *Ibid.* 2.36.24

¹⁰ *Ibid.* 2.36.17

¹¹ *Ibid.* 2.36.25

¹² *Ibid.* 4.3.6

¹³ *Ibid.* 4.3.7



Flood Warning: keeping a constant watch on the water level was an important point in management taken care of during the ancient period. There was a provision of punishment for those who did not go to the rescue even while being capable¹⁴.

3. **Disaster caused by epidemics of disease:** As preventive measures, physicians with medicines were made available at the disease-prone areas or where there was a doubt of breaking out of epidemics. The environment used to be sanitized with the help of *yajñas*¹⁵. In case of animal disease, the *Nirājanā* (cleansing) of places and *yajña* with medicinal herbs and shades and the belongings of animals was performed by directing particular deities¹⁶. In disease, Kauṭilya compared the loss caused by the death of a layman and a chief person¹⁷. For him, the loss of the chief is not bearable. This is because common people are in a very large number, but there is one chief among thousands, or not even one. Because of the high degree of spirit and intelligence, a common man always depends on him.

4. **Disaster caused by famine:** Between famine and disease, Kauṭilya opines that disease affects only one region and remedies can be found for it. In contrast, famine afflicts the whole country and leads to absence of livelihood for living beings which creates loss of the entire society¹⁸. Following measures for the management of disasters caused by the famine were used to be taken. In case of drought, the king used to make a store of seeds and foodstuff and show favour to the subjects, institute the building of forts or water works such as constructing dams etc., with the grant of food; he should share his provisions with subjects or entrust the country to another king¹⁹. Should seek shelter with allies, cause migration of people in that region where crops have grown, or settle along the sea, lakes or tanks²⁰. King started sowing grains, vegetables, roots, and fruits along the waterworks²¹.

5. **Disaster caused by rats:** Managing rats or mice may appear strange. From the ancient period, Bharata was predominantly an agricultural country. Naturally, rats or mice were considered the greatest enemies. Mice were not only enemies in ancient times but also in the modern period. Mice are a really very serious problem faced by many countries even today. They decimate food on a large scale and are responsible for diseases like plague, leptospirosis,

¹⁴ *Ibid.* 4.3.8

¹⁵ *Ibid.* 4.3.13

¹⁶ *Kauṭilya Arthaśāstra*, Translated by Kangle, R. P, 2nd Edition, University of Mumbai, 1972.
4.3.16

¹⁷ *Ibid.* 8.4.11-12

¹⁸ *Ibid.* 8.4.7

¹⁹ *Ibid.* 8.4.17

²⁰ *Ibid.* 4.3.18-19

²¹ *Ibid.* 4.3.20



etc. We can see one example of a terrifying condition created by rats. On 23 June 2010, China faced a problem of rats. The river Yangtze got flooded on that day. The water

level rose in Dangling Lake. The flood flushed out rat holes around the lake, triggering a literal rat race. Tan Lulu, one of the employees of National Geographic News from WWF, reported, "There are so many rats that you can kill three of them with one (strike). The report also mentioned the destruction caused by rats. According to that, rats have ravaged at least four million acres (1.6 million hectares) of farmland by eating roots and stems of trees²². Ancient Indians were aware of the destructive power of rats, and hence, they included them in the national calamity.

Preventive Measures: Cats and mongoose were to be let loose²³. For catching or killing cats or mongooses, there was a provision of fine, also for not restraining dogs, except in the case of foresters²⁴. Grains were strewed, smeared with the mild of snuhi-plants, or mixed with a secret mixture²⁵. Taxes were levied on rats²⁶. The same measures are suggested for locusts, insects, birds etc.

Disasters caused as a reaction to our actions: The Vedas and Vedic seers have laid emphasis on living in harmony with nature, holding nature in awe and reverence. Not only with nature, have Vedas also spoken of the need for harmony with the universe, which is the habitat not only of man but also all animals, birds, insects, plants and vegetation. The mutually supportive role of all living things is often mentioned as a crucial factor for a balanced social and harmonious existence. The ecological balance is inherent in the very process of creation. The Vedic seers stressed everywhere the need to live in harmony with the environment. The *Taittirīyopaniṣad* looks at the relationship between man and the environment in its totality and stresses complete harmony and interdependence between them in order to attain real prosperity. If we adhere to this Vedic principle, many of the disasters caused by human activities may be avoided. For example, disasters caused by avalanches, tropical cyclones, landslides, deadliest floods, deadliest heat waves, deadliest storms, tornadoes, and earthquakes are nothing more than a reaction to our actions. We blame the Earth for the death of millions. We also think of ourselves as the alpha beings on this land, governors and protectors. And yet, every now and then, our own incompetence and stupidity surface and show us we're nothing more than a danger. Here, it may not be out of context to inform that ancient Indians have never talked about or dealt with the management of disasters like global warming, depletion of ozone layers, melting glaciers, avalanches, tropical cyclones, landslides, deadliest floods, deadliest heat waves, deadliest storms, tornadoes, earthquakes, etc. This also shows that ancient Indians were more aware of the natural hazards while carrying out any activity for their benefit. They never exploited nature

²² <http://news.nationalgeographic.com/news>, 28th Oct 2010

²³ 4.3.21

²⁴ *Kauṭīliya Arthaśāstra*, Translated by Kangle, R. P, 2nd Edition, University of Mumbai, 1972. 4.3.22

²⁵ *Ibid.* 4.3.23

²⁶ *Ibid.* 4.3.24



for their benefit, rather kept nature intact and safeguarded by their noble acts, often called 'Yajña'. They desired peace, balance and harmony everywhere, whether it is in space, the outer atmosphere of earth, earth, waters, herbal plants, vegetation or trees. Echo of this attitude is traceable in the following mantra of the *Yajurveda*²⁷:

*dyau śāntirantarikṣam śāntiḥ pṛthivī śāntirāpaḥ śāntiroṣadhayaḥ śāntiḥ,
vanaspatayaḥ śāntirviśvedevāḥ śāntirbrahma śāntiḥ sarvaḥ śāntiḥ śāntireva śāntiḥ sā mā
śāntiredhi.*

This is perhaps the reason why they never face the hazards of global warming, depletion of ozone layers, melting glaciers, avalanches, tropical cyclones, landslides, deadliest floods, deadliest heat waves, deadliest storms, tornadoes, earthquakes, etc., as the modern humanity is facing.

MĒnu–am, or man-made Disasters.

In addition to the above-cited disasters caused as a reaction to human actions, there are some disasters that are directly caused by disastrous human activities. They may be cited as increasing pollution on land, water and atmosphere, chemical and nuclear plants, atomic, chemical and biological weapons, terrorism, riots, urban structure, transport accidents, nuclear power accidents, etc. Day by day, this list is increasing. Apart from war and the agitation of subjects, other human disasters did not exist during the ancient period. Obviously, disasters caused by wars and internal agitation are dealt with in ancient texts. A very systematic categorization of manmade disasters is done by Kauṭilya. In *Vyasanādhikarikam*, the topic that deals with disasters, Kauṭilya has broadly divided man-made disasters into two: 1. Internal agitation 2. External agitation²⁸. These two manmade disasters resulted in four types of threats to a nation. These four threats faced by the nation are:

1. External threat supported internally
2. Internal threat supported externally
3. External threat supported externally
4. Internal threat supported internally²⁹.

Surprisingly, presently, Bharat is suffering from the following threats - 1. External threats initiated by external sources; 2. External threats aided and abetted internally; 3. Internal threats in which foreign inimical powers try to fish in troubled water; 4. Internal inadequacies are also abetted by inimical forces within the Country. So, we can say that the threats modern India faces are nothing but the translation of the sutras 9.5.3 of Kauṭilya.

²⁷ 36.17

²⁸ *Kauṭilya Arthaśāstra*, Translated by Kangle, R. P, 2nd Edition, University of Mumbai, 1972.8.2.2-3

²⁹ *Ibid.* 9.5.3



The classification of the dangers connected with traitors and enemies is also done by Kauṭilya. They are:

Mānuṣopatti- *Mānuṣopatti* has been divided into three types- *Sudhāpatti*, *Amiśra* and *Paramiśra*.

Sudhāpatti is *āpatti* from sedition and enemies³⁰. To prevent this, the king should not use force against the citizens³¹. Why force is not to be used is explained by Kauṭilya. According to him, force cannot be used against many people, and in any case, if it is used, then it may cause another disaster³². At the same time, he strongly supports the use of force against the leaders of these people. This force is categorized as:

1. **Stratagem through kinsmen** - In this type of punishment, seducing close relatives, such as a real brother, son from a maiden or wife of the person, against him³³.
2. **Suppression by secret means** - Deploying treasonable high officers with a weak army for different expeditions such as destroying foresters and enemy towns, establishing a district officer or a frontier officer in a region separated by a wilderness, and so on and so forth. On these expeditions, secret agents who are there in the army should assassinate him and should declare that he was killed at the time of war³⁴.

This secret suppression also includes pleasure trips, arranging parties, etc. The list of measures is very big, but a few things are mentioned above.

Amisra - When treasonable and non-treasonable come together, the *Āpatti* formed is called *amisra*. Misra is a mix. Here, there is no mixing of treasonable and enemy³⁵. To control Amisra, success should be sought through the non-treasonable. Because without support, it is difficult to attain success³⁶.

Paramisra - When allies and enemies come together, it is called *Paramisrāpatti*³⁷. Here, success is to be achieved by allies. This is because establishing peace with an ally, not an enemy, is easy³⁸. The preventive measures or how to tackle these *apattis* are discussed in full

³⁰ *Ibid.* 9.6.1

³¹ *Ibid.* 9.6.2

³² *Ibid.* 9.6.3-4

³³ *Ibid.* 5.1.1- 20

³⁴ *Kauṭilya Arthaśāstra*, Translated by Kangle, R. P, 2nd Edition, University of Mumbai, 1972.

5.1.21-27

³⁵ *Ibid.* 9.6.8

³⁶ *Ibid.* 9.6.9

³⁷ *Ibid.* 9.6.11

³⁸ *Ibid.* 9.6.12



length, and for all types of threats, many measures are suggested by Kauṭilya. He firmly believes in the ideology that 'people follow their leader'. Thus, in the suggestions for monitoring internal agitation, the king's training comes first. Apart from that, appointing spies for surveillance everywhere within the country and outside the country, the appointment of village officers, etc., are suggested.

In external agitation, once again appointing spies to create a rift between enemy camps, securing friendship with loyal kings, and keeping the army and economy strong to check both the agitation, such are the suggested measures. We are not going deep into it as it all comes under the science of polity; only a few examples are mentioned above. This will be another topic of research. However, one thing is inexorable: natural and man-made disasters were discussed by ancient Indians from time to time.

Conclusion

The ancient Indian concept of disaster definitely goes with the modern 'management' ideas. If "Disaster Management" is a continuous and integrated process of planning, organizing, coordinating and implementing measures, then by ascertaining the disasters in the nation, the first management step is taken by ancient Indians as reflected in Kauṭilya's *Arthaśāstra*. Once the disasters are fixed, mitigation, i.e. reducing the risk, begins. In both disasters, preventive measures were taken by ancient Indians, as also mentioned by Kauṭilya.

Resilience is an important point in disaster management. The dictionary meaning of the word resilience is 'cheerful condition'. The Disaster Management Act, 2005 of our country and also the United Nations Strategy for Disaster Reduction (UNSDR) publication 2009 says the ability of a system, community or society exposed to hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions. Thus, by any means, resilience or re-bringing the same good condition that was there prior to the calamity should be the aim of the affected country. This is possible only when the suffering ones are supported morally and monetarily. In the case of drought, clear references for rehabilitation are available. We have seen that at a personal level, disaster is caused when the earning member suddenly dies. In such conditions, support should be given to the suffering family. In ancient India, such support was the essential duty of the state. There is also a mention of such support in the *Arthaśāstra* on both levels, personal and national. Kauṭilya has clearly stressed that if someone dies on duty, the sons and wife should get food and wages, and their minor children, old and sick persons should be supported. King should grant them money³⁹. Thus, on both personal and national levels, ancient Indians had idea of resilience.

From all the above points, we can say that ancient Indians had a good approach to management, and they successfully dealt with disaster management as well.

³⁹ *Kauṭilya Arthaśāstra*, Translated by Kangle, R. P, 2nd Edition, University of Mumbai, 1972.

5.3.28-30



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