

Disaster Management in Kautilya Arthashastra

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ABSTRACT

The term management is in vogue in our modern period. This concept of management came into industrial life at the end of the 19th century and in the beginning of the 20th century. The main objective of 'management' was to acquaint the new comers to the then establishing industrial life. The term management is as old as human civilization. The stone-age man managed many things like kindling of fire from flint stone, obtaining his prey with collective efforts etc. Thus, we can say that, the systematic approach for the study of the subject 'management' came very late but the concept was there since the history of life. In Bharata (India) the concept of management persists since Vedic period. Systematic management practices are found in the Vedic literature. This literature elaborates the concept of disaster management in Kautilya Arthashastra. This text is designed to run the biggest industry called 'nation'. Kautilya's book deals with the disasters faced by a nation. Hence, we shall understand the idea of disaster management from the great guru of the science of polity, known as Kautilya.

KEY WORDS: Hazard, Disaster, Vyasana, Apatti, Vipatti, Pidana, Daivam, Manusam, Pana, Nirajana, Manusapatti, Suddhapatti, Amisra, Paramisra.

INTRODUCTION

ETYMOLOGY

The Encyclopedia of Disaster Management (2007) has quoted Oxford English dictionary, according to which the word 'disaster' is derived from the 16th century word 'desastre¹'. While the Wikipedia Encyclopedia explicitly says, "The word disaster came from Middle French; 'desastre' from Old Italian 'disastro' originally came from Greek. Here the word is the combination of two Latin words - 'Dis' and 'Astro' means bad star. While the en.wikipedia.org mentions, 'disaster is formed

on a star². Therefore, disaster can be simply referred to as the unforeseen calamities caused by planetary.

Once again the, Encyclopedia of Disaster Management (2007) quotes the Oxford English dictionary while defining disaster as, "Anything that befalls of ruinous or distressing nature; a sudden or great misfortune, mishap or misadventure; a calamity³."

The fear of disaster was there in the mind of living beings since their existence. This fear gave rise to many mysterious practices. With the passage of

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time, man realizes that the mysterious practices are not enough to avert such unforeseen calamities. For that, they must think well in advance, the solutions to avoid them. As a result, a very systematic approach was taken towards it.

HAZARDS

Hazardous situation leads to disaster. Some scholars have classified calamities into two, viz. Hazards and Disaster.

"Hazards are dangerous conditions or events with potential for injury, loss of life, and /or damage to property, agriculture or environment" (Modh, 2006)⁴. They are categorized into two -

1. Natural (hazards with meteorological, geological, biological or extraterrestrial origins).
2. Unnatural (hazards with human-caused or technological origins).

DISASTER

Prima facie, disaster is something which is personal. Say, for example, the death of an earning member of a family is considered as 'disaster' for the family. Disasters of different types occur when hazards affect population at large.

Very few scholars have classified disaster as above, but generally, both the words are considered synonymous. Thus, the Encyclopedia of Disaster Management (2007) broadly considers three types of disasters -

1. The result of natural phenomena. This includes earthquake, volcanic eruption, hurricane, tornado, avalanche or flood.
2. Anthropogenic origin - terrible accidents.
3. Hybride disasters - combination of

anthropogenic (man-made) events and natural events such as spread of diseases from a community in which the disease is endemic to a community which has no natural immunity⁵.

On this back drop now we will turn towards the idea of calamity in Kautilya Arthashastra (KA).

In case of Bharata (India), a systematic history of managing the disaster goes back to 4th century BCA. In his Arthashastra, the complete compendium on the science of polity, Kautilya, the great guru of the science of polity, also famous as Chanakya, alias Visngupta, has discussed this issue in a very systematic manner.

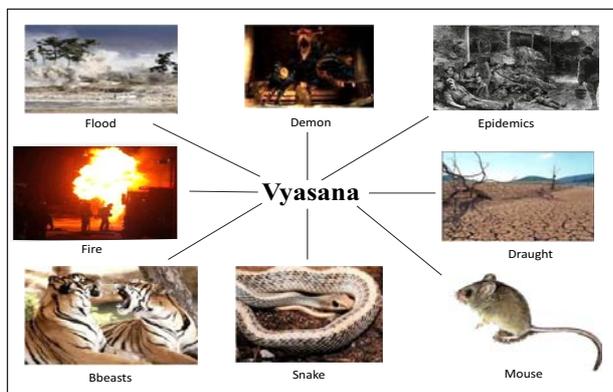
KAUTILYA'S IDEA ABOUT CALAMITY

We have seen that in modern times disasters are divided into two - natural and unnatural. Kautilya calls them vyasana. In Sanskrit, the words nipata, pidana, apatti / vipatti and vyasana are used for calamity. Yet, the word vyasana means something which is caused by ill fate. One can correlate this with hazards or natural calamities. This paper mainly deals with the natural calamities and will conclude with a cursory glance over manmade or unnatural calamities. Systematic categorization of any subject is a peculiarity of Kautilya. Following this, he has categorized the vyasana, i.e. calamities, into two -

- Daivam i.e. natural
- Manusam i.e. manmade.

Daivam is indeed a very apt word used by Kautilya long ago. Daivam means that which is divine. Even the western scholars consider it as the act of god. We have already seen the etymology of disaster. Thus, it shows that all over the world disasters were considered as the result of

astrological or supernatural forces. In the fourth book of KA, eight types of daivam or natural calamities are mentioned. They are fire (agni), flood (udaka), epidemics (vyadhi), famine



(durbhiksa), rats (musaka), beasts (vyala), snakes (sarpa) and demons (raksamsi) 4.3.1).

For Kautilya, there is no control over the daivam or natural vyasana. But for manusavyasana, though misfortune is responsible for them, he equally blames human beings. Thus, for him, the calamities fall either by misfortune or by wrong policies (8.1.3). After mentioning them, he has warned the king that it was his duty to protect his subjects from these calamities (4.3.2).

Let us understand the views of Kautilya regarding the management of hazard.

1. FIRE

The eight calamities are once again listed in the 8.4.1. Fire comes at the beginning. It is considered as hazard which is caused by meteorological, geological, biological or extraterrestrial condition. It seems that Kautilya firmly believes on the idea, 'prevention is better than cure', thus preventive methods are discussed in the chapter 'rules of the city'.

Preventive Measures

- In summer cooking should be done outside homes or under supervision of ten families collectively or being protected by ten fire fighting implements (4.3.3).
- The roofs which are made up of grass or mats should be removed (2.36.19).
- Those who make use of fire in their profession should stay at one place (2.36.20).
- House owners should live near the front doors of their own houses, without gathering at one place (2.36.21).
- Collection of water jars should be placed in thousands on roads and at crossroads, gates and in royal offices (2.36.22).

Kautilya is aware about 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 Arthashastra.

Punishments

- For the owner, not running to save the house on fire, the fine is twelve panas (it's a silver coin with ¼ part copper in it) and six panas for the tenant (2.36.23).
- In case fire is caused by negligence, the fine is fifty-four panas and the incendiary should be put to death by fire (2.36.24)
- In case of fire, if aid in the form of five jars or one big jar of water, a trough (drona), a ladder, an axe, a winnowing- basket, a hook, a hair-seizer and a skin bag (pakhal), these things are not provided then the punishment is one quarter of a pana (2.36.17).

- The incendiary should be put to death by fire (2.36.25).

2. WATER

In all the calamities Kautilya tried to establish the comparative importance of the calamities based on the loss caused by them. In both the calamities, i.e. fire and water, according to Kautilya water is the worst because fire may destroys half or one village, while flood affects many villages (8.4.4).

Preventive Measures

- In rainy season, Villagers situated near water should live away from the level of the floods (4.3.6).
- They should keep a collection of wooden planks, bamboos and boats (4.3.7).
- They should rescue a person being carried away by the flood by means of gourds, skin-bags, canoes, tree-stems and rope braids (4.3.8).

Punishment

- Those who do not go to the rescue, the fine is twelve panas, except in case of those without canoes (4.3.8).

Flood Warning

In modern period, in flood management, minor, moderate, major, local and significant river rise are considered as the types of flood. In significant river rise, it is expected that the warning is to be issued when the normal level of water will exceed the limit. The first point in the remedies in KA is, 'Villagers located near water should live away from the level of floods'. This indicates that keeping a constant watch on the water level as an

important point in management was taken care of during the period of Kautilya.

3. DISEASE

Preventive Measures

- Magicians and others should counteract with secret means
- Physicians with medicines and holy ascetics with pacificatory and expiatory rites (4.3.13).

Animal Disease

- The rite called as Nirajana* is to be performed of shades and the belongings of animals
- Particular deities are to be worshiped (4.3.16)

* Nirajana is a religious ceremony where light is waved around the deity. In modern period it is famous as Arti. It is also considered as the lustration of arms. It is performed by a king or general in the month of Asvina. But etymologically the word Nirajana is - Nira means 'water' and Ajana means 'touch'. Thus, it must have been the actual purification or cleansing of the place, person or object etc. but afterwards its religious side that is mainly waving the lamp must have become important.

In disease, Kautilya compared the loss caused by death of a lay man and a chief person. For him the loss of chief is not bearable. This is because common people are on 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 (8.4.11-12).

4. FAMINE

Between famine and disease, Kautilya opines that disease affects only one region and remedies can be found for it, while famine afflicts the whole country and leads to absence of livelihood for living beings which creates loss of the entire society (8.4.7)

Preventive Measures

- In case of drought, the king should make a store of seeds and food stuff 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 king (4.3.17).
- Should seek shelter with allies or cause migration of people in that region where crops have grown, or settle along the sea, lakes or tanks (4.3.18-19).
- King should start sowings of grains, vegetables, roots and fruits along the water works or hunt deer, beast, birds, wild animals and fish (4.3.20).

5. RATS

Managing rats or mice may appear strange. From ancient period, Bharata was predominantly an agricultural country. Naturally, rats or mice were considered as the greatest enemies. Mice were not only enemies in ancient time but also in modern period. Mice are really very serious problem faced by many countries even today. They decimate food on a large scale and are also responsible for diseases like plague, leptospirosis etc. We can see one example of terrified condition created by rat. 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 hectare) of farmland by eating roots and steams of trees (<http://news.Nationalgeographic.com/news>, 28th Oct 2010).

Kautilya was aware of the destructive power of rats and hence he has included them in the national calamity.

Preventive Measures

- Cats and mongoose should be let loose (4.3.21).
- For catching or killing them, fine is twelve panas, also for not restraining dogs, except in case of foresters (4.3.22).
- Grains should be strewed smeared with the mild of snuhi-plants or mixed with secret mixture (4.3.23).
- Tax should be instituted on rats (4.3.24).

Same measures are suggested for locusts, insects and birds etc.

6. WILD ANIMALS

Preventive Measures

- Carcasses of cattle mixed with a stupefying liquid or intestines of cattle filled with madankodrava (stupefying medicine) (4.3.28).
- Fowlers or hunters should dig pits and place cages (4.3.29).

- Armoured men, with weapons in hands should kill wild animals (4.3.30).
- Incentive is suggested for those who will kill wild animals (4.3.30).

Punishment

- For one not going forth to help, the fine shall be twelve panas. The same shall be the reward for the one slaying a wild animal (4.3.31-32).

7. SNAKES

Preventive measures

- Experts in poison cure should act with charms and medicines (4.3.35).
- Persons coming together should kill snakes (4.3.36).

8. EVIL SPIRITS

- Experts in Atharvaveda or in practices of magic should perform rites for destroying evil spirits (4.3.40).

Kautilya has fixed their hierarchy by distinguishing them from their capacity of destruction.

Between flood and fire Kautilya considers flood the worse, because fire burns half or a complete village while flood drowns away many villages. (8.4.4). When an epidemics spreads, it covers only some area but draught affects the entire country and may tax the entire life of people.

This discussion gives the clear picture that from a horrendous past, the hazardous calamities were expected and they were taken care of.

MANUSAMA OR MAN MADE CALAMITIES

Regarding man made calamities, there is a controversy amongst the scholars of disaster management. But because Kautilya has considered man made calamities as disaster they are considered over here. In modern times, along with war, many other human caused disasters are embed, viz. chemical and biological weapons, terrorism, riots, urban structure, fires, transport accidents, nuclear power accidents etc. Day by day this list is increasing. During the period of Kautilya, apart from war and the agitation of subjects, other human disasters did not exist. Obviously, Kautilya dealt only with war and internal agitation. Following his style, once again, very systematic categorization of this man made calamity is done by Kautilya. In Vyasanadhikarikam, the topic which deals with calamities, Kautilya has broadly divided human calamities into two - 1. internal agitation 2. external agitation (8.2.2-3). The result of these two calamities is four threats to a nation.

These four threats faced by the nation are:

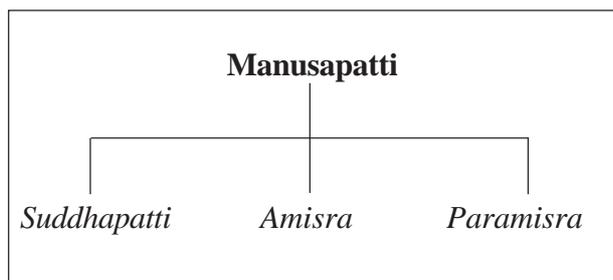
1. External threat supported internally
2. Internal threat supported externally
3. External threat supported externally
4. Internal threat supported internally (9.5.3).

Surprisingly, in the inaugural speech of the Forum for Integrated National Security (FINS). President Lt. Gen (Retd.) D. B. Shekatkar mentions the threats, which Bharata is suffering of according to him they are -

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, which are also abetted by inimical forces from within the Country⁶.

So we can say that the threats mentioned by Lt. Gen (Retd.) D. B. Shekatkar is nothing but the translation of the sutras 9.5.3 of Kautilya.



The classification of the dangers connected with traitors and enemies is done by Kautilya. They are,

Suddhapatti - Apatti from treasonable and from the enemies. These are two types of Suddhapatti (9.6.1).

Preventive measures

➤ To prevent this, king should not use force against the citizens (9.6.2) (But apart from force, what measures are to be used is not mentioned clearly). Why force is not used is explained by Kautilya. According to him force cannot be used against many people and in any case if it is used, then Kautilya hesitates about its result. Rather, he fears that it may cause another disaster (9.6.3-4). At the same time he strongly supports the use of force against the leaders of these people. This force is categories as,

1. Stratagem through kinsmen - In this type of punishment seducing close relatives, such as real brother, son from a maiden or wife of the person, against him (5.1.1-20).

2. Suppression by secret means - deploying treasonable high officer with a weak army for different expeditions such as destroying foresters, enemy's town, establishing a district officer or a frontier officer in a region separated by a wilderness, 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 war (5.1.21-27).

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

Amisra - When treasonable and non-treasonable come together the apatti which form is Amisra. Misra is mix. Here, there is no mixing of treasonable and enemy (9.6.8).

Preventive measures

➤ To control Amisra, success should be sought through the non-treasonable. Because without support it is difficult to attain success (9.6.9).

Paramisra - When allies and enemies come together then Paramisrapatti (9.6.11).

➤ Here success is to be achieved by allies. This is because it is easy to establish peace with ally and not with an enemy (9.6.12).

The preventive measures or how to tackle these apattis are discussed in full length in the book.

Rather, for all types of threats, many measures are suggested by Kautilya. He firmly believes in the ideology that 'people follow their leader'. Thus, in the list of suggestions for monitoring

internal agitation, training of the king comes first. Apart from that, appointing spies for surveillance everywhere within the country and outside the country, appointment of village officers etc. are suggested. In external agitation, once again appointing spies to create rift between enemy camps, securing friendship with loyal kings, keeping 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 science of polity; only a few examples are mentioned above. This will be another topic of research. But one thing is inexorable that natural and man-made both the disasters were discussed by Kautilya.

CONCLUSION

Arthasastra is a compendium of polity. Modern concept of management was not in practice at that time. Yet, without management, nothing is possible. Kautilya's concept of disaster definitely goes with the modern 'management' ideas.

If "Disaster Management" is a continuous and an integrated process of planning, organizing, coordinating and implementing measures than by ascertaining the calamities in the nation, the first step of management is taken by Kautilya.

Once the calamities are fixed, mitigation i.e. reducing the risk begins. In both the calamities preventive measures are mentioned by Kautilya.

Resilience is an important point in disaster management. Dictionary meaning of the word resilience means 'cheerful condition'. While the Disaster Management Act, 2005 of our country and also from 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 that same good condition which was there prior to the calamity should be the aim of affected country. This is possible only when the suffered ones are supported morally as well as monetarily. In case of draught, clear references of rehabilitation are available.

We have seen that at personal level, disaster is caused when the earning member suddenly dies. In such condition, support should be given to that suffering family. There is a mention of such support in Arthasastra on both the levels, viz. personal and national. Kautilya 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 money (5.3.28-30). Thus on both the levels, viz. personal and national Kautilya has thought of resilience.

From all the above points, we can say that Arthasastra, the very old text on polity has a good approach to management and it successfully dealt with the disaster management as well.

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DIACRITICAL MARKS

a - aa, t - ta (î), s - sh (Me), n - na (Ceæ), u, s - <e, m - ced



QUOTES

Everytime you smile at someone, it is an action of love, a gift to that person, a beautiful thing.

Mother Teresa

Good human relations not only bring great personal rewards but also are essential to the success of any enterprise

JRD Tata

Most of our troubles are due to poor implementation, Wrong priorities and unattainable targets

JRD Tata