

PUBLIC PRIVATE PARTNERSHIP BASED SECURITY SYSTEM FOR WATER RESERVOIRS

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Abstract- Information systems are playing the important role by sharing it about the information of natural resources maintained by the human beings. The security aspects about the important resources studied where due to lack of users to provide the security systems by their involvement. We mentioned here the problems with existing system and due to which what adverse effects are arising due to lack of information system for the resource sharing? We suggested a web based model for information sharing based on the public private partnership (PPP). We also mentioned how the available human resource can be involves in the security system as part of extending the services to the nation buildings other than the present government human resources. How does this aspect helps to inculcate the concept of extending national services in the education system is stated in the paper. Paper also encompasses with working, advantages, and limitations.

Index Terms- information, PPP, resources, nation, security

I. INTRODUCTION

Education is playing the vital role in the development and sustenance of any country. Nation tries to be well accumulated with the different natural resources. Some resources are under utilization by the mankind by making use of science and technology [1, 6]. But there are certain resources which are very important in the view of future and development of mankind and especially the farming and industrial sectors. Seventy percent community is living based on agricultural business. Hence present case study selected here is a large water resource 'Koyana Dam and its security aspects about disaster administration'. Here the term disaster administration is viewed in the view of attack by the militants only. It is observed that Koyana - water resource is not having adequate safety and security measures due to certain unavoidable reasons and limitations in the usage of available human resources. Hence we felt the need of the proposed model based on Public Private Partnership [3].

II. CASE STUDY: SECURITY MODEL FOR KOYANA DAM

Objective of the paper is to enhance information sharing amongst various elements such as clients (public units – colleges) private agencies and share the data about human resources to enhance the security measure as service for providing better security to the natural resource e.g. Koyana Dam as help to nation and enhance coordination amongst the various Govt. departments.

The present study is based on Koyana Dam located in Satara district of Maharashtra - a huge water resource with large power generation plant in Western belt of India. These units are resources of water and electricity in the view of nation. Survey shows that, present mechanisms for information generation and sharing are inadequate. It is observed that, today the users are involved in providing the security as police force and other supporting man power which is a very less in the view of prevention of Natural and Artificial Disaster such as attack by external agencies. It is seen that the Govt. is unable to increase and provide the adequate and skilled man power with safety equipments. We felt that these limitations can be overcome by implementing the proposed model which follows the Private Public Partnership for information sharing and accumulation based on Distributed Computations [5]. Though public units are involved but under the control of Dam Administration.

III. PROBLEMS IN PRESENT WORKING

Why need of Web Based Computing Model for Koyana Dam Security?

We observed that, present security system available at Dam is having following limitations.

- Lack of adequate human resources
- Lack of central control agency
- Lack of coordination amongst the agency and security system
- Lack of storage of visitors database
- Inadequate emergency services
- Lack of information system and generation of requisite reports
- Preventive measure for invader attack

- As Dam area is large present human security control is fewer in the view of 24x7x365.
- Possibility of Huge damage

IV. PROPOSED DAM SECURITY MODEL

The architecture of Proposed Model is shown as below

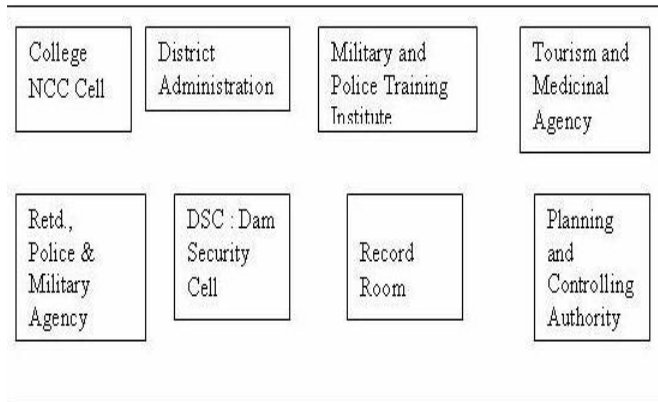


Figure 1: Dam Security Model

The present administration comprises with:

- Human Resources as Users
- Computing Equipments [10]
- Telecommunication Services
- Dam Security

The proposed model comprises with the following as support and service cells.

- College : NCC units
- District Administration
- Military and Police Training Institute
- Tourism and Medicinal Agency
- Retired. Police and Military Agency
- Dam security Cell
- Record Room
- Planning and Controlling Authority

V. TOOLS USED

The tool can be developed as web based security system [7] by using the .Net platform along with the database MS Access. The model uses Client Server Architecture. The object oriented Programming paradigms are followed during the building of the system.

There are two types of users: Client side users and Server side users.

The clients can be College NCC cells, military and police training institute, Retired Police and military agencies, district administration. The server side users are the controlling and planning authority and Dam Security.

VI. RESOURCES UTILIZED

The term resource used here is the database [4] as well as the

human man power. The users of the model are:

- College NCC users
- District Administration user
- Military and Police Training Institute users
- Tourism and Medicinal Agencies
- Retired. Police and Military Agency users
- Dam security Cell users
- Record Room users
- Planning and Controlling Authority users

Public Agencies:

The term public agencies refer to the different units such as Colleges, District Administration, Military and Police Training Institutes, Retired. Police and Military Agencies,

Private Agencies:

Here the private users are: Tourism and Medicinal Agencies, Dam security Cell, Record Room, Planning and Controlling Authority.

Proposed Model:

It is observed that providing the security to the national resources should be the prime responsibility of the nation. But it is seen that Govt. has adequate schemes for the implementation of security issues. But it is seen that as the area covered by the Dams is large dispersed all over the nation. There are number of dams whose security considerations can be studied. In present study, we have selected Western Zone of the Maharashtra for the study purpose.

FLOW DIAGRAM OF DAM SECURITY MODEL

The flow diagram for proposed Dam Security model is shown as

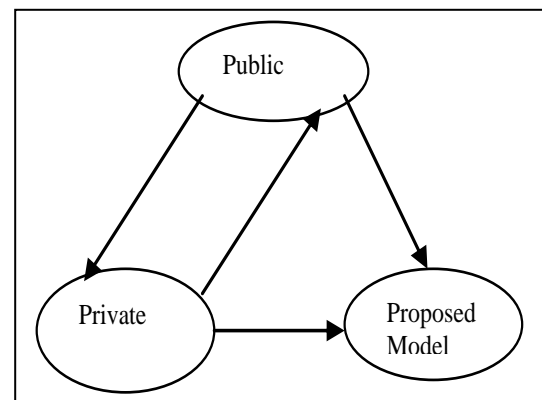


Figure 2: Flow Diagram of Security Model

The flow diagram shows the three major components.

- Public Agencies
- Private Agencies
- Proposed Model

The data and information flow [8] in the following ways :

- From Private agencies to the Proposed Model
- From Public agencies to the Proposed Model

- From Public to private agencies
- From Private to public agencies

VII. WORKING

Following should be role and responsibilities of the various components.

1) Planning and Controlling Authority users

The planning controlling authorities comprises with Dam Security cell along with other agencies who participates in the above said model. They prepare the schedule and communicate to the requisite units. The schedule is hosted and updated on the server computer by the administrator.

2) District Administration user

The District administrator's role is to support the participants/users from outside areas. They should be updated and assisted about the routes, maps of other important locations in the area around the district e.g. visiting places like temples, forts, forests, hill stations in the view of developing Tourism and study of medicinal plants and Ayurvedic Sciences.

3) Dam security Cell users

The important role and responsibility is of Dam Security Cell users. They have to prepare the actual plan which is their main job. Every location where the private users like students, Retired Military police and other experts may participate. Full time Security employee/s must undertake to support the participating outside users. They need to assist and supported for their personal security, food other arrangements and their requirements about tours and study related issues.

4) Record Room users

The record room maintains data of security [9] personnel's, users about the detailed about:

Personal data

- a. Educational data
- b. College data
- c. Residential data
- d. Referred Administration data
- e. Past History
- f. Daily visiting data of the users

The record room has to update the data and communicates to the Dam Security as well as to the District Administration.

5) College NCC users

The NCC units must be chaired by the Local Military NCC unit in association with Principal nominated by the University Grant Commission (UGC). The NCC unit

6) Military and Police Training Institute users

These users from military and police training institutes who completed their internship soon they can participants of the model. The users under the able guidance and training with authorized nomination of the Govt. Senior officer can be involved with certain security constraints. Not only the local institutions can be take part in to this as Internet is the Distributed Computing Model so the national level training institutes can submit their trainees data as global users.

7) Tourism and Medicinal Study Agencies

In the view of developing and enhancing the Tourism as industry this model can be the one of the good solution with the help of Web based security system [7]. The users who participates can bring their family members, friends who are having keen interest in the field of Tourism and stay in the nearby places and visit the Forest and Hill area besides the dam. At certain distance the Kankan the nice belt of Greenery can be visited with the help of dam security and administration. With help of these users, the travel and tourism industry may be strengthening. The final year and research students of Ayurveda – a branch of medical science can be motivated with the usage of the model. This helps to enhance both to the Dam Administration and their Studies with the help of large availability of medicinal plants I the nearby forest. The data and information of near by forest and other places can be made available by the model and provided on the request.

8) Retired Police and Military Agency users

The retired and healthy officers and soldiers from the various parts of the country may be involved based on their wish under the certification of the Govt. Medical Officer. These users can support and advise in the Dam Security issues under the guidance and support of the District and Dam Security cell. They can visit and stay with their family, friends and they can be helping to enhance and develop Tourism and Medicinal study.

VIII. ADVANTAGES

Following are will be the advantages of the proposed model.

- [i] Exchanges information securely for resource sharing.
- [ii] Model for rural development and community building.
- [iii] Helps to reduce workload on present security users.
- [iv] On site experience for the trainee students.
- [v] Enhances security in the view of 24x7x 365 ways.
- [vi] Enhances awareness about National security love and affection towards the responsibilities.
- [vii] New door for the development of Tourism industry.
- [viii] Centralized data storage for decision making [2].
- [ix] Data can be mined for the further decision making.
- [x] Present human resources can be relived from overload.
- [xi] Opportunity for Ayurveda Doctors, Medicinal Researchers to collect and study medicinal plants in the forest.
- [xii] Enhances awareness about National Resources and their problems for rural development.

IX. LIMITATIONS

Following will be the limiting factors during the implementation of the proposed model.

- High risk for the sponsoring authority to maintain the data.
- The full time existing employee must extend the assistance and support.
- District administration support must be adequate

- 24x7x365 support for participants.
- Local community help is required.
- Instant data communication between Institutes/colleges, Military and Police Officers working presently and also retired.

ACKNOWLEDGMENT

I am thankful to Dr. Om Prakash Gupta Director BVDU Y. M. Inst. of Mgmt., Karad for his cooperation towards writing the research articles. Also I am grateful to Dr. B. T. Jadhav YCIS Satara for constant support and motivation.

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