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Citation

This submission from the Project Implementation Unit, Uttarakhand Disaster Recovery Project, Dehradun, Uttarakhand, is awarded the Winner from India and the Runner-Up from the region for SAPIA 2018. The case story presents an innovative and unique MIS system for monitoring, contributing in effective contract management by providing an integrated framework joining stakeholders and helping them work as a team towards fulfillment of project objectives. The system is already being replicated in other projects and by other departments. The system is sustainable as there is no dependency on any external agency for its development and operation. The mobile app connected with the MIS is also very simple to operate and can be easily used by any project team member.

Summary

The Uttarakhand Disaster Recovery Project developed an innovative system for monitoring, contributing in effective contract management by providing an integrated framework joining stakeholders and helping them work as a team towards fulfillment of project objectives. The project monitoring is being done through unique MIS, which integrates all team members on one platform through the website www.ukdisasterrecovery.in, a mobile app called 'UDRI Collect' and through Social Networking App – 'Telegram' with the following main features:

- Monthly emails on progress;
- Online work programs;
- Updating real time photographs of sites in web portal and in 'Telegram' app through mobile app UDRI Collect;
- Project monitoring through a feature called 'blog on pics'
- SMS alert system for managing bank guarantees;
- SMS information system for bidders for upcoming opportunities;
- Quality Monitoring System recording the details of tests done and rectification measures;
- A feature called 'Quality Perception Ranking';
- Online Grievances Management System; and
- Social and environmental compliance dashboard.

Recently, the project has initiated installation of CCTV cameras connected online, at the construction sites. The unique monitoring and controlling system has resulted in substantial progress by completing 118 works related to reconstruction of 1341 km village roads and bridges and it is hoped that the project will be completed within the stipulated time.

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Innovations and Best Practices in Procurement Processes of Disaster Recovery Projects

(This article is a summarized version of the submission entitled "Innovations and Best Practices in Procurement Processes of Uttarakhand Disaster Recovery Project" made by Mr. Rajesh Kumar, Procurement Expert, Project Implementation Unit, Uttarakhand Disaster Recovery Project, Dehradun, Uttarakhand, India.)

In India, the Uttarakhand Disaster Recovery Project developed an innovative system for monitoring, contributing in effective contract management by providing an integrated framework

The unique monitoring and controlling system has resulted in substantial progress by completing 118 works related to reconstruction of 1341 km village roads and bridges

This innovative approach of contract monitoring has resulted in faster implementation of the projects with high quality of the works

Challenge(s) Addressed

Due to its geographical features, rough terrain, extreme weather conditions and vulnerability to natural disasters like earthquakes, flash floods, cloud burst, landslides etc., this hilly state poses numerous inherent challenges for implementation of such projects in remote areas. Some of the challenges addressed are as follows:

- Extreme weather conditions and landslides;

- Heavy inflow of tourists during peak seasons also affects the progress of construction of roads and bridges;

- Monitoring and controlling construction contracts is a real challenge due to inaccessible sites, long travel distances in hilly areas and frequent landslides during rainy season;

- Most of the contractors participating in the bidding process are small contractors having no awareness regarding quality, project management, social and environmental issues;

- Difficulty in locating quarries and identification of dumping zones due to forests; and

- Unwillingness of good quality key experts to work in remote areas creating scarcity of quality manpower for working at project sites.

Impacts

It has been observed that the above-mentioned challenges resulted in delay in projects and variations in the contracts. The project team is consistently engaged in evolving with innovative methodologies for project monitoring and controlling so that the impact of above challenges may be mitigated. This innovative approach of contract monitoring has resulted in faster implementation of the projects with high quality of the works.

Level of Innovation/Good Practice

This kind of monitoring and controlling system is being adopted for the first time in Uttarakhand. The MIS developed in-house is being used as a tool for monitoring, controlling and contract management of works where all stakeholders are connected and well informed through the website www.ukdisasterrecovery.in and the Apps 'UDRI Collect' and "Telegram". Some of the unique features of the system are: (a) Bringing all stakeholders on same platform; (b) Auto-generated monthly emails informing contractors and concerning team regarding progress of works; (c) Regularly updating work programs of every contract in the system; (d) Updating real time photographs of contract sites in the web portal through mobile App "UDRI Collect". This entails feeding basic details of work and the photographs automatically get uploaded in website as well as in groups created in Telegram App along with GPS coordinates, time and date. So far, 22,361 photographs of work sites have been uploaded. The App allows the user to record pictures offline, which automatically get uploaded when it is connected online; (e) Project monitoring through a feature called 'blog on pics' in which team members may comment on the photograph and tag the person concerned, which will automatically be notified through e-mails. Corrective measures may be informed to the person initiating the blog. So far, comments on 312 photographs have been marked by users; (f) SMS alert system for managing Bank Guarantees by automatically notifying the officers and contractors concerned regarding the expiry date. Bank Guarantees of nearly 140 contracts are successfully managed; (g) SMS alert system for bidders informing them about upcoming opportunities; (h) Quality Monitoring System for works in which data of tests carried out are entered
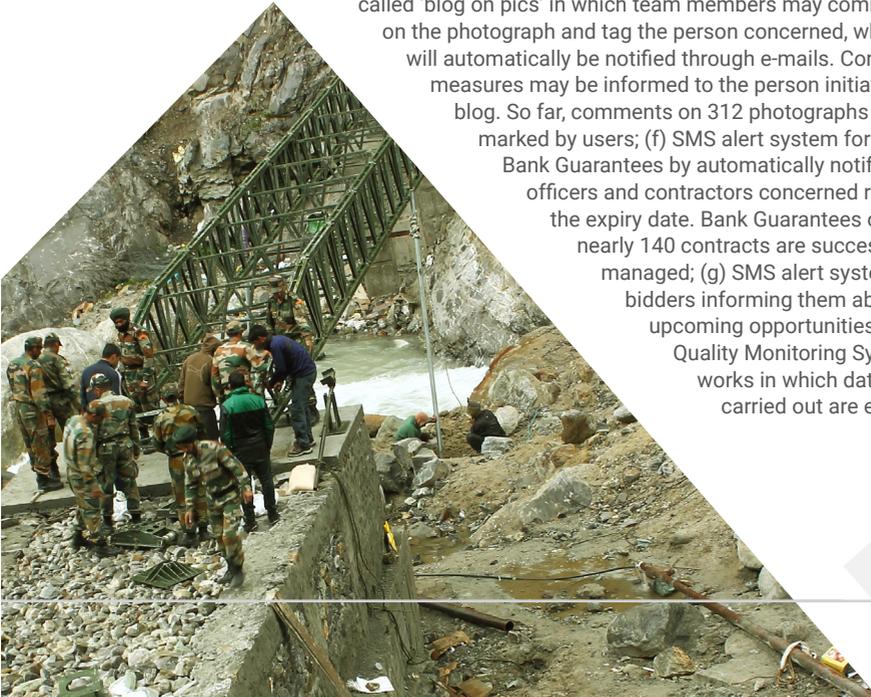
and corrective measures, if any, are also recorded. Till date, 77,503 field test data have been recorded; (i)The system also entails a feature called 'Quality Perception Ranking', which allows visiting officers to rank the items of work executed. A total of 219 works have been ranked so far; (j) Online Grievances Management system allows stakeholders to register and monitor the grievances. So far, 776 grievances have been registered out of which 757 are solved; (k) Social and environmental compliance dashboard provides status of compliance in the form of pie chart.

The project has recently initiated online monitoring system through CCTV cameras at remote sites. As on date, cameras have been fixed at sites in districts Rudraprayag and Chamoli.

Replicability and Sustainability

The system has been appreciated by other departments engaged in similar nature of projects. The system can easily be adopted by them. The system has been replicated in another project, i.e. "Uttarakhand Emergency Assistance Project" as well. The system is simple and user friendly. The simplicity and practicality of the system makes it easily replicable which does not entail complicated terminology and operating procedure and therefore it is very sustainable. The best part of the system is that it has been developed by officers and experts of the project itself involving negligible cost in developing and operating the system. There is no dependency on any external agency for development and operation of the system. The mobile App connected with MIS is also very simple to operate and can be easily used by any team member of the project.
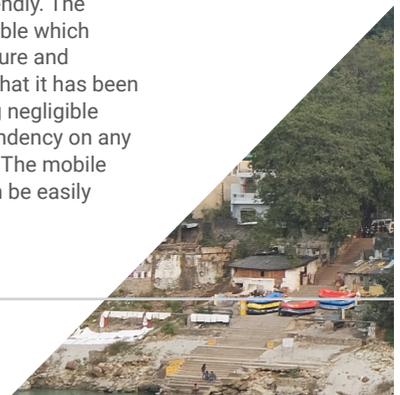
Lessons Learned

The following are the lessons learned:

- Contract management of works under disaster recovery projects requires effective monitoring and controlling;

- Readily available technologies, such as social networking sites and connecting the same to simple MIS tools enabled with user friendly Apps may go a long way in addressing the unique procurement and contract management challenges faced in hilly remote areas struck with disaster;

- Awareness about the importance of social and environmental compliance adopting good contract management practices is important;

- Delivery of works in remote areas requires integrated contract management approach where all the stakeholders can contribute to the success of the project as one team;

- Creating a system by the use of technology for monitoring and controlling of the project works located in remote areas is extremely helpful in providing an integrated platform for the stakeholders; and

- Availability and retention of good quality key experts is crucial for the project sites in remote hilly areas.