

Evaluation Report on Fabrication and Popularization of low cost and efficient fuel less wheel turbine pump-cum power takeoff machine (Mangal Turbine) Project

Introduction:

1. The captioned project was sanctioned by CAPART to Shri Mangal Singh on 22-5-2001 in the capacity of an individual innovator of rural technology. The estimated cost of the project was Rs 16.86 lakh of which Rs 15.00 lakh were sanctioned and only Rs. 12.00 lakh were released in two equal installments. The project could not be completed by Shri Mangal Singh who was placed under FAS (further assistance stopped) category in 2004. Shri Mangal Singh filed a civil writ petition in the Hon'ble High Court against the Union of India and Others in 2008. He also complained to the Secretary, Ministry of Rural Development (MORD) Government of India seeking relief. The MORD called for the files relating to the project and sent the same to the undersigned for undertaking a fresh evaluation of the project. The letter No. 11060/12/2010-PC dated 14-12-2011 enter alia stated that "There are allegations and counter allegations of irregularities (in the project) both by CAPART and Shri Mangal Singh". I was advised to "associate a technical person, preferably one who has visited the project earlier, to assist in evaluating the project." Luckily, I was able to locate the person in Shri S.M. Singh, Asstt. Engineer, Jal Nigam, Government of Uttarakhand. Shri S.M. Singh is not only an engineer working in the water sector but more than that he is from Jhansi district and is familiar with Mangal Turbine. He was kind enough to have taken leave to join me in the evaluation of this project.

2. Both of us visited Lalitpur and project area from 16th to 19th February, 2011. When we reached the site Kanji Ghat on Sajnam River we found that the project was inoperative. Although there were six water wheels installed at the site but unfortunately, the huge check dam and the turbines installed in a row were submerged in the backwaters due to construction of another check dam and installation of a turbine just about ½ km downstream of the same river. On enquiry, we were informed that the downstream project was implemented by one Shri Lal Singh with the support from CIMMYT India and IIT Delhi. We were also told that Shri Lal Singh has been the supervisor in Mangal Turbine workshop and he was the right hand of Shri Mangal Singh till 2002. He was assigned the job of coordinating with CIMMYT India in carrying out the R& D work on Mangal Turbine. CIMMYT India in collaboration with IIT Delhi was working on Mangal Turbine under IFAD|NGO extended cooperation Programme. It was reported that Shri Mangal Singh had some difference of opinion with CIMMYT India on the approach of R & D work. He wanted the R&D work done in his workshop and the rivers in Bundelkhand instead of taking his Turbine to Hariyana for testing its efficiency in a drain there.

3. Shri Lal Singh reportedly parted the company of Shri Mangal Singh in 2003 at the instance of CIMMYT India to install his own Turbine at Dhanu Ghat, just half a km downstream of Kanji Ghat where Shri Mangal Singh had installed six Turbines under CAPART project in 2002. This was done despite the objection raised by Shri Mangal Singh about its feasibility and adverse impact on the Turbines installed by him in the upstream and also that there was no permission from the concerned authority for installation of Turbine at that site which

was mandatory under the law. Shri Lal Singh allegedly with the support and patronage from local administration and CIMMYT India went ahead with the project in spite of the complaint lodged by Shri Mangal Singh. The net result was that it has rendered the whole investment in CAPART project at Kanji Ghat in fructuous. Shri Mangal Singh considers it a conspiracy hatched by the forces opposed to him. He has included this development also as a case of sabotage in the writ petition filed in the Hon`ble High Court. He also blamed CAPART monitors who he said had visited there around that time for playing a part in the alleged conspiracy.

4. After visiting the sites and perusal of the files, it was clear to us that this was a complicated case and a conventional evaluation focusing on technical and socio- economic aspects of the project was not going to help serve the purpose. We noticed that CAPART had got the project evaluated by 4 teams and one individual evaluator already. Repeating the same exercise would have been a futile effort. Instead, the need was to find out what had happened, how it happened and why it happened? So we adopted the approach of process evaluation to ascertain the factors behind this unpleasant episode. We also visited some other sites of CAPART`s earlier projects which were also half done, damaged and deserted. It was clear that Shri Mangal Singh was up against some powerful vested interests that were audacious enough to destroy the assets created with public money for public benefit.

Background:

5. Shri Mangal Singh of village Bhailoni Lodh, Block Bar, district Lalitpur UP invented a fuel less water lifting device in 1987. This device is known as ‘Mangal Turbine’. There are several variants of the Turbine but the standard device contains a water wheel of 2 meter diameter with 12 blades radially fixed to the rim. The shaft is coupled with a suitable gear box for stepping up of rotation to 1500-1800 rpm. The output shaft of the gear box is coupled on one end with a centrifugal pump for lifting water and the other end is mounted with a suitable pulley to operate any other machine like crusher, grinder etc. By using the energy of flowing water in a stream, Mangal Turbine enables lifting of water for irrigation/ drinking purposes and also produces mechanical power that can be used for various other purposes. The device can also operate an alternator to generate electricity for lighting nearby areas. It is patented as “Mangal Water Wheel Turbine Machine” (Patent No. 177190 dated 13-11-1997) as per Government of India gazette Notification dated 30th November, 1998.

6. The Council for Advancement of Peoples Action and Rural Technology, (CAPART) is an organization of the Ministry of Rural Development Government of India. CAPART naturally got interested in promoting Mangal Turbine as a low cost, environment friendly and energy saving device for use in irrigation, drinking water and other income generating activities in rural areas. CAPART sponsored the development and installation of a prototype model of water wheel turbine pump as early as in 1988, with a grant-in-aid of Rs. 48500/- This project was duly completed and evaluated by Dr. T.P Ojha, Director, Central Institute of Agriculture Engineering, Bhopal. The report commended the efforts of Shri Mangal Singh for developing a device to lift stream water by means of water wheel turbine and recommended that the action was needed to popularize the machine by installing few more water wheels in different areas as demonstration units (pp35-36/c). The Turbine was inspected and appreciated also by alternate Hydro Energy Center IIT Roorkee, The Energy Research Institute (TERI)

New Delhi, Rural Technology Development Centre IIT New Delhi and Dr. Punjab Singh, Director IARI Delhi. Senior bureaucrats like Shri Kalika Prasad the then Commissioner Jhansi, Mrs. Sarla Gopalan Advisor Planning Commission New Delhi and Dr. R.S Tolia Director SIRD and MC CAPART, Central Zone Lucknow also made recommendations for its popularization.

7. Following this, CAPART sanctioned few more projects to complement the experiment and assess the possibilities of its replication in other areas also. The euphoria generated by the success of Mangal Turbine led many other institutions like CIMMYT India, NEDA, Development Alternatives, and DRDAs etc to join the bandwagon of Mangal Turbine. However, the party did not last long. Soon, the round of deception, desertion and deprecation started all aimed at subverting the rising popularity of Mangal Singh and fixing him to the size.

8. On his part Shri Mangal Singh is also not an ordinary man. He is not only a farmer inventor, as he likes to be portrayed, but more than that the man is also a hard core activist and crusader against corruption. His activism against corruption in public institutions increased with his rising popularity which militated against the interests of those who had joined him thinking of profiting under the glory of Mangal Turbine. This applied equally to the lower and middle ranking officers of CAPART who also did not like the crude and 'dry' manners of Shri Mangal Singh.

9. Things started worsening from the year 1994-95 when VIPs from UP, MP and Delhi started visiting and showering all praise on Mangal Singh. This led to sanction of some projects to Shri Mangal Singh by DRDAS of adjoining districts of UP and MP. CAPART with few small projects was already in the fray. The tragedy was that Shri Mangal Singh could not complete most of these projects due to hurdles created in the release of fund by the sponsors. The problem was that though there was progress on the ground, he could not show that on papers. His account keeping was poor and so was the case with the preparation of progress reports. This weakness of Shri Mangal Singh was exploited by his detractors to the hilt.

10. So much so, Shri Mangal Singh, who had been acclaimed as an inventor and innovator of rural technology was placed under FAS (further assistance stopped) category by CAPART in 1996 on a trivial issue of not submitting proper utilization report of the paltry sum of Rs. 6400/- released to him for a project in 1990. The DM Jhansi got his bank accounts seized in 1997 for allegedly not submitting the feasibility report of Mangal turbine along with the units supplied to Jhansi. Subsequently, the district administration Lalitpur also attached and auctioned his agricultural land allegedly for not completing the projects sanctioned by the DRDA. Incidentally, one of the projects sanctioned by DRDA Lalitpur was for installing two Turbines at Pura Pachwani village where CAPART had sanctioned a project in 1996 for construction of check dam. It was only after seeing the sanction letter of CAPART that the DM Lalitpur in his capacity as Chairman DRDA sanctioned and released Rs. 4.00 lakh for installation of two Turbines immediately after the check dam was ready. But unfortunately CAPART did not release the sanctioned fund because of which the check dam could not be constructed and as a result the Turbines sanctioned by D M Lalitpur could not be installed. Shri Mangal Singh had to pay a heavy price for no fault of his. Sabotage by his opponents

increased to the extent that several Turbines and pipe lines laid by Shri Mangal Singh were damaged and destroyed to undo whatever had been done by him on the ground. Shri Mangal Singh was shaken but somehow maintained his poise. He also launched a relentless solo campaign against the alleged corrupt officials and their collaborators. Finally, Shri Mangal Singh managed to get himself delisted from the FAS category in CAPART in 1998 and in spite of stiff opposition from within CAPART; he was able to secure the sanction of the captioned project to him as an Individual Innovator in 2001.

11. This is the background in which the above project was sanctioned by CAPART to Shri Mangal Singh in May 2001. The project proposal was first mooted in 1998 after delisting from FAS. The delay in the sanction was due to stiff opposition from within CAPART for sanctioning this project to Shri Mangal Singh (pp 9-11/n). The objections raised by the staff were over ruled by the DG CAPART on the recommendations of Prof. B. N. Gupta, Director, Netaji Subhash Chandra Bose Institute of Technology (NSIT), Delhi and the then Chairman, Rural Technology Standing Committee of CAPRT. Prof. B.N. Gupta accompanied by Prof R.S. Parma of NSIT had visited the sites for conducting pre-sanction appraisal of the project. Accordingly, the project titled “Fabrication and Popularization of low cost and efficient fuel less water wheel turbine pump cum power take off machine (Mangal turbine pump)” was sanctioned by CAPART vide FNO ARTS| UPR |17|10|1999 on May 22, 2001.

The project

12. The main objective of the project as stated in the proposal was to provide clean alternative (non conventional) source of energy in remote rural areas for increasing agricultural productivity, rural employment and income and to provide an efficient and low cost source of irrigation to the farmers. According to Shri Mangal Singh, the project proposal was prepared by an Assistant. Director in the CAPART office under the direction of the DDG as Shri Mangal Singh expressed inability to formulate the project which also shows his weakness in paper work. He said some of the provisions in the project like training and Technical Assistant were not of his liking but he did not object because that could have further delayed the sanction of the project which was already delayed by more than three years.

Proposed Activities:

13. Shri Mangal Singh intended to set up/upgrade his fabrication unit. Initially, five units of Mangal Turbine were to be fabricated out of which three were to be installed at the same site for experiment, innovation and R&D work; to conduct training of NGOs, farmers, scientists and engineers and to demonstrate that the same head and water quantity at the same site can generate more energy to increase the discharge of water and lead to increased coverage of irrigation command area. Remaining two units were to be kept in ready stock for supply to interested parties so as to make the project sustainable.

Duration: one year.

Fabrication and installation 6 months

Training and demonstration 6 months

Budget of the Project:

- | | |
|---|--------------|
| i. Cost of 5 units of Mangal Turbines @ Rs.2.10 lakh each | Rs.10.5 lakh |
| ii. 130qmr. civil work for 3 units @1000/-per qmr | Rs. 1.3 lakh |
| iii. PVC pipe 900 mtrs. @ Rs. 200/- per mtr- | Rs.1.8 lakh |

iv. Training to farmers and others	Rs.0.2 lakh
v. Brochure, operating manual, TA DA & misc. expenses	Rs. 1.5lakh
vi. Honoraria for the innovator	Rs.1.2lakh
vii. One skilled assistant @ Rs..3000pm	Rs.0.36lakh
Total	Rs.16.86lakh

Opinion of the Experts:

14. The project proposal was referred to Dr.D. Raghunandan, Director Centre for Technology Development (CTD) New Delhi on 9-3-2000 seeking his comments on the feasibility and viability of Mangal Turbine in the light of the information presented in the proposal. In his reply dated 10-3-2000, Dr. Raghunandan observed that prima facie the proposal was technically feasible and viable deserving of CAPART support. He also suggested for sending a suitable expert for pre sanction appraisal of the project.(pp 78-80/c) Accordingly, the proposal was sent to Dr.Gyanendra Singh, Director Central Institute of Agricultural Engineering (CIAE) Bhopal for conducting a pre sanction appraisal on 13-5-2000 (p 3/n). In response Dr. Gyanendra Singh sent his comments and suggestions stating that: "I understand that the CAPART sanctioned a project in 1989 for developing a water lift pump. The Inventor has already demonstrated the utility of water wheel turbine in lifting water for irrigation and other purposes. As claimed by the inventor, two units of his water pumps have been installed in village Dasrara in District Lalitpur. He has also been able to install similar pumps in other regions....In my opinion, the earlier two units which were installed by him in the village Dasrara could be utilized for training, demonstration or further improvements..... In my opinion enough work has been done on this water lifting device. Further work is required to promote the use of this water lifting device with the cooperation of the state govt. or local agencies involved in promotion of irrigation....the Inventor requires infrastructure for fabrication of pumps and work shop equipments....The Inventor also requires recurring expenditure for purchase of raw material.... In the present form the proposal is inadequate for the kind of activities indicated in the project. If necessary, he may be guided in the preparation of the project."(P. 234/C)

15. This advice was not acted upon. There was no progress on the file either for nearly eight months. It required a VIP reference and query from the Ministry of Rural Development to activate the file again. In fact the project had been submitted before the National Standing Committee for Rural Technology (NSCRT) of CAPART for consideration in its meeting held nearly one year back on 13th March, 2000.The Committee had decided that the Chairman of the NSCRT Dr. B.N. Gupta would interact with Shri Mangal Singh to find out the feasibility and suitability of implementing the project. Shri Mangal Singh was instructed to be in touch with the Chairman and fix up a mutually convenient date for a presentation of the project proposal (letter of even no. dated 29-3-2000 p.194/c and p 6/n dated 1-1-2001).The Chairman NSCRT Dr. B.N.Gupta finally visited the site along with one Prof. R.S.Permar of Netaji Subhash Institute of Technology Delhi on 25-1-2001 for a formal pre - sanction appraisal of the project. Their report was received in CAPART on 13-3-2001 (pp 184-185/c) In the pre – sanction appraisal report, Prof Gupta stated that:

(1) The three turbine units installed in the river flowing close to village Bhailoni Lodh were

an asset to the villagers as these units were being very effectively used for irrigating the barren land of the village.

(2) The centrifugal pump coupled to the Turbine was capable of pumping water at a rate of approximately 65 liters/sec and the flow could be regulated as per the need.

(3) Presently 200 acres of land were being covered with the installation resulting in bumper crop all around. This area could be further extended by increasing the number of water wheel units and it was possible to go up to 10 units of such Turbines at one installation.

(4) The unit could as well be used for power generation at the rate of about 15 KW per turbine. Thus if 10 units were installed it would be possible to generate up to 150 KW of electricity.

(5) These units could be employed for irrigation and other purposes during the day time and could be used for lighting the village at night.

(6) The power so generated could as well be used to eliminate the use of diesel sets being used at present for irrigation purposes thus saving fossil fuel and eliminating pollution.....”

In the light of above observations it was recommended that:

- a. Shri Mangal Singh should be given all encouragement to extend the scope of his present venture by building check dams at appropriate places and installing the requisite number of water wheel pump sets to irrigate as much land as possible within the scope of proposed extension.
- b. Funds may be granted for building check dams, fabrication of water wheels, purchasing appropriate machinery required for the needs of the village community as also for electric poles, wires and PVC pipelines for carrying water.
- c. For the present scope of work an amount of Rs. 15, 00,000/- will be adequate to create the required infrastructure.
- d. The funds may be released in two installments and the progress of the work be monitored at regular intervals.
- e. A time schedule may be drawn for completion of work so that the lives of the villagers be made more comfortable and useful thereby improving the living standard of the community.

16. It will be seen that the pre sanction appraisal report by none less than the Chairman National Standing Committee on Rural Technology was silent on the proposal of 3 units for installation and 2 units for sale and instead emphasized installation of more units at the same site to cover more area under irrigation at cheaper rate and generating more electricity for other services and lighting. This is precisely the idea with which Shri Mangal Singh was emphasizing R&D and innovation in this project and the reason why he installed 6 Turbines at the same site in spite of the fact that only 5 units had been sanctioned in the project. When he was questioned by CAPART about this alleged irregularity, Shri Mangal Singh said that one extra Turbine was his own contribution as he was experimenting an innovation.. Another thing the monitors did was that they arbitrarily reduced the budget of the project from an estimated cost of Rs. 16.86 lakh to Rs. 15.00 lakh which only was sanctioned.

Sanction and After:

17. The project was finally approved by NSCRT at its meeting held on 12-4-2001 for CAPART assistance of Rs.15.00 lakh. It took four months to complete the formalities to

release the first installment of Rs.6.00 lakh on 30-7-2009 an act which could have been easily done in not more than 15 days (p 19/n). This was in spite of the fact that Shri Mangal Singh in his letter dated 28-3-2001 addressed to Dr. Jagpal Singh Dy. Director (RTD) had especially requested for an early action so as to enable him to complete the civil work by November 2001 and take water to the fields for the next Rabi crops (p 201/c).The fund was released by account payee cheque as per the new policy of CAPART. It took more than a month (13th September) for it to be credited in the account of the project holder (p.277/c). However Shri Mangal Singh had been already working at the site of his own from much earlier (1999) in anticipation of the sanction of the project. As a result, he was able to show the progress within few months of the receipt of the fund.

18. Shri Mangal Singh wrote a letter to DDG CPART on 1/10/2001 (p 280/c) informing that the money was credited in his account on 13/9/2001. Some work had been done in anticipation which was seen by Prof B.N. Gupta & Prof R.S. Parmar also during their visit for pre sanction appraisal. And that he was trying his best to provide irrigation water to farmers in the ensuing Rabi season. He was confident that if there was no disruption in the progress of the work, he would be able to lift 300 liter. Water per second without using any fuel and electricity..

19. On 24-10-2001 he wrote another letter to the DDG CAPART informing that out of Rs. 600,000/-received by him, a check dam of 70 meter span had been constructed by him and taking advantage of the adequate gradient at the site, 30 meter long channel walls have also been constructed to fix 6 numbers of Mangal Turbines. This civil work had cost him Rs. 3.75 lakh. In the project only Rs. 1.3 lakh were provided because the proposal was 4 years old. Cost had increased considerably in last 4 years. (P 282c). He also informed that 3 Sr.Officers of Agricultural Engineering Department of M.P had visited the site on 23.10.2001 to see the project work sanctioned by CAPART. He further added that the civil work done by him for Rs. 3.75 lakh could be compared with the civil work done by any engineering department at a cost of Rs.12-15 lakh and that his work would still be better not inferior. He also requested the DDG to release the cost of five units of Turbines early so that the work could be completed within next 40-45 days to provide irrigation facility to the farmers in the ensuing Rabi season. A copy of this letter was also endorsed to the Chairman NSCRT suggesting that he was working according to the understanding reached with him at the time of pre sanction appraisal. The point is that Shri Mangal Singh had informed CAPART at the very outset that: (i) he was installing 6 Turbines and not 3 as mentioned in the sanction letter, and (ii) that the civil work had cost Rs. 3.75 lakh and not Rs. 1.30 lakh as was sanctioned.

20. In his third letter dated 8-11-2001 addressed to the DDG, he sent a sort of progress report stating that out of Rs 6.00 lakh released by CAPART, (i) Rs.3.10,569/- had been spent on civil work for which photocopy of 7 pages MB was attached;

(ii) A 79 meter long check dam had been constructed of which two drawings were enclosed,

(iii) One Mangal turbine costing Rs. 2.10 lakh had been installed. And

(iv) 300 meter long PVC pipeline had also been laid.

This way by Diwali, he added, water from one Turbine would be released to the farmers' fields. In this letter he also requested DDG to make a visit of the project site to personally

see the progress stating that during last 16-17 years period, several dignitaries and senior officers of other departments had visited his projects, but no Sr. officer from CAPRT had so far visited his projects implemented with CAPART assistance (pp 292-93/c).

21. Following this, CAPART initiated two moves; first, it wrote a letter (ARTS/4PR/17/10/1999 dated 27.11.2001 p 294/c) to Dr. A.K. Bhatiya of CSIR requesting him to share information about his observations in NSCRT meeting on 6.9.2001 about Mangal Singh having received fund for similar project from some other funding agencies which could not be corroborated.. CAPART also wrote another letter dated 5-3-2002 to Dr. R.R.Abhajaukar, Scientist, Department of Science and Technology (DST) seeking to know whether Shri Mangal Singh had applied for and received any financial support from the DST under their Technopreneur Promotion Programme which was denied by the DST also. (p351/c). This shows that after receiving Shri Mangal Singh's progress report in the form of letters immediately within two months of receiving 1st installment of the fund, CAPART authorities, instead of appreciating his record performance, suspected him using funds from more than one sources for the same project which was totally uncalled for and based on distrust. Secondly, CAPART wrote to Shri Mangal Singh (p 295/c) seeking progress report along with unaudited statement of account for the period up to November, 2001 meaning that what he was writing about the progress of work in his letters was not acceptable to CAPART. This was also not in conformity with the Terms and Conditions which said "Shri Singh will furnish half yearly progress reports to the Council" (p 269/c). As stated above the first installment was received by Shri Singh on 13th September only.

22. Shri Mangal Singh responded to DDG immediately (26/11/2001, p 295/c) presenting the progress report in the letter itself as below.

- i. Civil work for 6 unit Mangal Turbines had been completed with 10 steel gates fixed to check the flow of silt in the turbine and for regulating the flow of river water during rainy season.
- ii. A 928 mtr. Long 200mm dia, PVC pipe line had been laid 4 feet deep in the farmers' fields with 3 outlets at suitable intervals.
- iii. Two units of Turbines had been installed, and that
- iv. On 25/2/2001, Secretary Agriculture, Govt. of M.P. would be visiting to see the project indirectly suggesting that if possible DDG may also visit the project for which he had made a formal request in the previous letter..

A hand written self certified utilization certificate was also enclosed with the letter stating that Rs. 600,000/- released by CAPART as first installment of grant had been utilized for which it was received and some more work had also been done at the site in anticipation of the release of 2nd installment.

First Mid-Term Monitoring:

23. On receipt of this letter report of Shri Mangal Singh, CAPART on 18th Dec 2001 appointed Dr. B.S. Chauhan, Reader Agricultural Economics, Ajitmal, Auriya to conduct the mid-term evaluation of the project.(pp 21-22/n) .Dr. Chauhan submitted his report dated 20/2/2002 (pp 305-312/c) reporting the progress of project work as below:

- Fuel less waterwheel turbine pump (Mangal Turbine) had been installed at Kanjighat on river Sajnam.

- About 80 mtrs long check dam was constructed while using stone boulders, cement, sand and machinery work.
- Cement plastering on both sides of check dam from right to left bank of river has been done.
- Channel walls for installation of 6 units of water wheels were constructed.
- Steel iron gates were fitted in 10 gates of check dam.
- About 928 mtrs long and 200 mm dia PVC pipe line was fitted 4 feet deep underground with four outlets at proper distances..
- Installation of one unit of Mangal Turbine along with one water wheel of 24 blades, centrifugal pump, gear box, delivery pipe etc. had been completed irrigating 40 ha. of crop land .
- The water wheel unit was lifting water from river to fields located at an elevation ranging from 20 to 30 ft. No fuel of any kind, diesel |petrol| kerosene oil| electricity was required for its operation.
- All the Vouchers except the Voucher of PVC pipes were maintained properly. Neither the accounts book nor audited statement of account was available for my perusal. The work done through the use of first installment was measured by shri Veer Singh JE Minor Irrigation.
- The breakup of Rs. 6.00 lakh of the first installment was not given in the release order. Therefore head wise utilization of funds could not be assessed. However, based on the vouchers shown a the sum of Rs. 5, 80,557/- was utilized for the purpose for which it was received.
- During the visit village people and block officials expressed positive opinion about Mr. Mangal Singh saying that he was sincere, innovative and hard working. They also said that some village people were envious of him and wanted to harm him. They had broken some parts of the pipe line so that he did not succeed in his mission. He also reported that some VIPs consulted by him, expressed good opinion about Mangal Singh (p 306/c).
- Large acreage of land can be irrigated by this device.
- The machine can also be used for multifarious other ways such as flour grinder, cane crusher, chaff cutter, oil expeller, thresher etc.
- Quality and quantity of materials used seemed satisfactory.
- The next installment of grant may be released.
- Sign boards should be fixed at different places.
- Stock book should be maintained indicating details of material purchased| fabricated.
- Entry of vouchers should be made on the stock book and measurement book with proper entries.

24. After receiving the highly positive report of the monitor, CAPART instead of releasing the second installment as recommended by its monitor wrote to Mr. Mangal Singh vide letter no ARTS/UPR/17/90/1999 dated 19/3/2002(p352/c) high lighting the negative feedback that cash book was not produced to the monitor, in place of 3 units sanctioned 6 units have been constructed, UC not presented as required, only one turbine was installed against two reported in the letter etc. There was no mention about the release

of 2nd installment as recommended by the monitor. It appears that given the distrust the CAPART was not willing to oblige Shri Mangal Singh so easily in any case. This type of response shows that the attitude of CAPART officials was not helpful as they did not appreciate the positive points. The monitor had given lot of information which called for positive action on the part of CAPART. Where Shri Mangal Singh was focused on the work, CAPART officials it appears were interested more in finding the loop holes than in the progress of the work.

25. Shri Mangal Singh replied on 23-3-2002 admitting that he was unable to maintain the records, cash book etc. It takes time and that he was an individual innovator. He considered working in the field more important than preparing reports and accounts. The main thing for CAPART was to ascertain whether the money was being used on the project work or not. He argued that when fund was sanctioned for five units why civil work could not be done for five units particularly when the site could accommodate even six and more turbines. He also informed that the Chairman NSCRT had told him at the time of pre sanction appraisal that he could do as much as he deemed fit and that more fund would be sanctioned if Shri Mangal Singh tried new innovations in the project. He added arguing that operating more water wheels at the same site using same water cyclically from one check dam would be cost effective proposition and that he was trying to demonstration precisely that (pp255-257/c).

26. The saner approach would have been to appreciate and encourage Shri Mangal Singh to continue his experiment particularly when it was clear from the monitoring report that he was not misusing the fund and the excess expenditure under civil work was the actual expenditure in the construction of the check dam which had started much before the sanction of the project. In fact the cost of civil work in the sanctioned project was grossly under estimated. Shri Mangal Singh had not claimed his honorarium and the savings were ploughed back in the project which he considered more important. Shri Mangal Singh did not lie in stating that the PVC pipe he used was purchased much earlier for DRDA project and did not claim its cost which he could have easily done by forging a receipt from the market. All these important plus points were ignored. Instead CAPART responded stating that the plea given by Shri Mangal Singh was not acceptable because the fund provided was public money for which maintenance of proper accounts was mandatory. It concluded by warning that in case Shri Mangal Singh did not comply, he would be liable to action including stoppage of assistance etc (p359/c).

Second Mid-Term Monitoring:

27. Instead of releasing the second installment as recommended by the monitor, what it knows to do best—send another team of monitors, this time two persons. One was a Jr. Accounts Officer of CAPART and another was an empanelled monitor. The purpose ostensibly was to check the veracity of the expenditure reported by Shri Mangal Singh. Mean while Shri Mangal Singh wrote four letters in quick succession this time addressed to DG CAPART. In the first letter dated 24-5-2002, he wanted to know whether CAPART sincerely wanted to complete the project or not. If the CAPART was really interested in the project then why the balanced fund was not being released (p367/c). In the second letter dated 30-5-2002, he reminded DG CAPART about his promised visit to the project site. He wanted DG

to see for himself whether the work worth Rs 6.00 lakhs released by CAPART was done or not (p 368/c) In his third letter dated 3-6-2002, he enclosed the copy of an article by Shri Mohan Dharia published in a magazine which said that investment of the order of Rs.1 to 1.2 lakh was now required to irrigate 1 hectare of land. He then wanted to know how many hectares of land CAPART wanted him to irrigate for Rs. 6.00 lakh (p379/c). In his fourth letter dated 15-6-2002, Shri Mangal Singh while thanking DG for appreciating his work during a meeting, wondered how one Dy Director in CAPART could over rule the recommendations of so many top technocrats and bureaucrats. One can understand the frustration of Shri Mangal Singh speaking when he found the project getting delayed on flimsy grounds and his dream being shattered on trivial issues.

28. In the mean time, the team of monitors appointed for second monitoring had visited the village and submitted their report on 19-6-2002, the time by which the project was planned to be completed. They more or less, reported the same progress which had been earlier reported by the first monitor. The first monitor had reported that all vouchers excepting for PVC pipes were properly maintained by Shri Mangal Singh based on which he had estimated the expenditure of Rs. 5, 80,557/-till December 2001. The second team of the monitors comprising an accounts officer of CAPART reported that the expenditure incurred till June 2002 was Rs.622089/- which was just Rs.41532/- more than what was reported six months back. That showed that the expenditure reported earlier was correct and Shri Mangal Singh was somehow managing to keep the work going even when funds were not released. This also meant that the project was unnecessarily delayed by CAPART. The second team of monitors also reported that one unit of turbine installed by Shri Mangal Singh was irrigating 20 to 25 hectares of land area which was barren earlier (p373/c). The report also said that they had prepared the receipt and payment account for the period from 23-5-2001 to 27-12-2001 which was based on the vouchers produced by Shri Mangal Singh. (p 376/c). This further proves the point that Shri Mangal Singh was maintaining the vouchers of expenditure. But he was not able to write the cash book and maintain proper record of the expenditure as an accountant would have done. It also showed that for want of fund he could not do anything beyond 27-12-2001 otherwise there was no point in limiting the Receipt and Payment account only up to 27 December 2001 when the same was prepared by the monitors in June 2002.

29. On seeing the report of the second team of monitors, the DDG wrote in the file: "The main point that emerges was that while work has been done at the site including civil work, Shri Mangal Singh produced incomplete records, bills and vouchers....It would appear that Shri Mangal Singh had revised the project and used resources from elsewhere. The point for consideration was that if the PVC pipe which is part of a dispute with Lalitpur DRDA is asked to be returned by the DRDA, the project would be rendered in fructuous"(p 42/n). This was not the whole truth. Shri Mangal Singh had not produced incomplete record, bills and vouchers. The only thing he sincerely did not produce were the vouchers of PVC pipes which he was having but those were old vouchers. He could have managed new vouchers for the PVC pipes and nobody would have suspected as the pipes were actually laid underground. But as an honest man he did not do that because he is himself an activist against corruption and he means what he says. It is another thing that he is suffering because of his honesty.

30. DG took a lenient view of the anomalies enumerated in the monitoring report and

approved the release of second installment of Rs.6.00 lakh In his note on the file the DG wrote:”Even though the work has not been done as per the original sanction, Shri Mangal Singh has taken necessary steps to put his project on the ground. In the circumstances, the project still needs to be supported.” He further said that it was not necessary for CAPART to concern itself about the source from which the PVC pipes had been obtained and whether it had been paid for. As long as the pipes were being utilized, its cost could be taken in to account provided supporting documents were made available.(p43/n). This was the right way of looking at the whole project. Had this consolatory message been conveyed to Shri Mangal Singh by taking him in to confidence and a way found out to solve his problem of accounts keeping, the project could have been salvaged from drowning in to the black hole of repeated monitoring and evaluations to no avail.

31. But unfortunately this approach was not adopted by the office. In its letter dated 16-8-2002, CAPART informed Shri Mangal Singh accusingly that he was not maintaining a separate bank account of the project fund; that no name plates and sign boards were placed at the project site indicating the source of fund; that PVC pipes used were purchased for DRDA project much earlier, that no training was imparted to farmers; that the supervisor was paid less than the amount sanctioned and that the savings were diverted to other heads without taking due permission from CAPART etc. etc. However, since the DG had approved the release of second installment on the file, the letter concluded mercifully that “in the mean time, we are releasing Rs. 6.00 lakh to you under this project for continuation of the project” (pp 401-402/c). Shri Mangal Singh pleaded through his letter dated 23-8-2002 arguing that he was an individual innovator and not a NGO having an office and workers. He also said that until the project was completed, training of farmers etc. was meaningless. Moreover, the cost estimates approved by CAPART in 2001 were 3-4 years old so the cost of civil work would be more than what was provided in the budget as the quality cannot be compromised. Paying less to my supervisor and not drawing my own honorarium was not a crime because the savings earned this way was adjusted against the increased cost of the civil work he concluded (p 407/c).

The Stalemate:

32. But CAPART un necessarily stuck to its position and responded with a letter dated 20-11-2002 seeking quarterly progress report and audited statement of account of the amount released (p 417/c). Shri Mangal Singh wrote to DG CAPART on 6-1-2003 reporting that out of Rs. 12.00 lakh released by CAPART, Rs 10.00 lakh have been spent on the fabrication of 5 Turbines alone as per the original proposal. In addition Rs. 3.80 lakh were spent on civil work which had been seen by CAPART monitors twice. This way the total expenditure incurred was Rs 13.80 lakh against the release of Rs.12.00 lakh. He requested the DG to release the remaining amount of the approved budget (Rs.3.00 lakh) to complete installation and other items of the work (p 418/c). But CAPART simply reminded him on 14-1-2003 about their earlier letter seeking a formal progress report on the prescribed format and audited statement of account as a condition for any further release (p 422/c). This stand was also not in conformity with the T&C which said that within three months of the completion of the project Shri Mangal Singh would submit to the Council six copies of the consolidated report of the work done. And that within six months of the completion of the project Shri Singh

should furnish to the Council an utilization certificate and an audited statement of accounts pertaining to the grant and also refund the unutilized balance if any (p 269/c).

33. Shri Mangal Singh wrote to the DDG on 27-1-2003 stating that he had requested CAPART many a times not to treat him as a NGO because he was alone and the project was sanctioned to him as an individual innovator. He argued that insisting on submitting report and accounts on prescribed formats amounted to harassing him. He also said that he had already exceeded the expenditure on the project and further work could not be undertaken unless the balance of the sanctioned amount was released. He requested the DDG to find a way out of this stalemate so that the project could be completed. He also complained that the second team of monitors who visited him in June last year had taken possession of the original MB of the civil work and despite several requests, the MB had not been returned to him. And that he was also not able to follow the instructions for writing cash book etc. which was very cumbersome. So he requested for finding a way out of this embarrassment (pp 423-424/c).When there was no response from CAPART, Shri Mangal Singh , on 1-3-2003 sent a statement of account to the DDG showing the amount released , amount spent and the estimated cost of the remaining work to be done as per sanction letter. The total cost got escalated by Rs. 4.30 lakh because of the delay. He also endorsed a copy of this letter to the Chairman NSCRT for his information and necessary action. The CAPART did not agree to the request and instead decided to send a fresh team of monitors for undertaking a comprehensive evaluation! of the project (pp 51-55/n and p 441/c).No action was considered necessary on his complaint regarding his original MB having been taken by the Jr. Accounts Officer of CAPART at the time of monitoring in June, 2002.

Comprehensive Evaluation:

34. The note on the file (p54/n dated 8-10-2003) proposed that “a team of three monitors comprising one from CAPART HQ, one engineer and one accounts person may be deputed to take stock of work done in all CAPART assisted projects and suggest suitable measures to utilize the potential talent of Mangal Singh”. It was agreed to by the DDG. But two persons including one from within CAPART, chosen for the task perhaps aware of the hidden agenda behind the whole exercise, declined to join the team.. It was with great difficulty that CAPART could find two persons only to do the job. Of the two, one Shri Shravan Kumar RO, Rural Technology Division in CAPART was allegedly biased against Shri Mangal Singh. The moment Shri Mangal Singh came to know about the inclusion of Shri Shravan Kumar in the team, he sought a letter to DG CAPART dated 29-1-2004 requesting for the replacement of Shri Shravan Kumar from the team of monitors complaining that .Shri Shravan Kumar nursed an old prejudice against him and that he was working in the same Division (RTD) where his file was being processed. He added that sending Shri Shravan Kumar for the evaluation would be against the principle of natural justice (p 497/c).

35. This letter was received in CAPART office on 30-1-2003 and was marked to DDG but not presented to him or to the DG. Instead the letter reached straight to Dy. Director (RTD) and got filed without being put up before the DDG or DG to whom it was addressed. So there was no change in the composition of the team and Shri Shravan Kumar was very much there. This gives credence to the allegations of conspiracy against Shri Mangal Singh in CAPART. First, CAPART declined to release the balance fund sanctioned for the project in spite of the

recorded evidence that he had exceeded the expenditure and that the work was held up for want of fund. Secondly, it insisted on the submission of the audited accounts which as per T&C were to be submitted six months after the completion of the project. Thirdly it deviated from the main course by deciding to undertake comprehensive evaluation of all projects sanctioned to Shri Mangal Singh during eighties and early nineties which was absolutely unnecessary at this stage when they should have been concerned with and focused on how to expedite the completion of the ongoing project which was getting delayed. Fourth, and most importantly by manipulating to send Shri Shravan Kumar RO (RTD) in CAPART for the comprehensive evaluation in spite of the written objection raised by Shri Mangal Singh about his inclusion in the team.

36. The team submitted their report on 19/2/01 on the expected lines and confirmed what was apprehended by Shri Mangal Singh. A thoroughly negative report full of lies and half truths was submitted to CAPART. It was less of an evaluation and more of a rapid enquiry against Shri Mangal Singh. Under the heading "Major findings of mid-term appraisal" the opening sentence reads thus: "the mid-term appraisal conducted by monitor(s) of CAPART had brought out following shortcomings and weaknesses in the execution of various projects sanctioned to Mr. Mangal Singh." Clearly the mission was to highlight shortcomings and weaknesses. The list started with the allegation that Shri Mangal Singh did not carry out any work out of the grant of Rs. 6400/- released on 10th April, 1990 and ended with the charge that he incurred excess expenditure of Rs. 2.89 lakh under civil work head in his last (current) project under evaluation"(p 501/c). Similarly under the sub head "Finding of Current Comprehensive Evaluation", the opening sentence reads thus "The comprehensive appraisal by us has revealed following shortcomings and weaknesses in the execution of project by Shri Mangal Singh"(p 502/c).The shortcomings and weaknesses were sub-classified under (A) Financial, (B) Physical and (C) Technical categories (PP 502-03/c). Under the financial head, the report said that Shri Mangal Singh had reportedly received fund from various sources. But Shri Mangal Singh refused to show the receipts. As such/the monitors were not able to ascertain how much fund was released by various other sources (p 502/c).

37. It was ridiculous to accuse a person without any proof. And if the monitors meant what they were saying they should have better gone to the sources and found out from them instead of running a smear campaign against the project holder who is supposed to be a partner in development. Is it the way a partner should be treated? What prevented the monitors to collect information from other sources which allegedly funded the same project? If the DRDA Lalitpur had initiated proceedings against Shri Mangal Singh, the monitors should have checked with the DRDA and collected records of the case including the report of Shri Arun Arya, IAS exonerating Shri Mangal Singh and questioning the motive of DRDA authorities (pp 891-900/c). Similarly, under the heading Physical Progress the report said "except for two turbine pumps at Bhailoni Lodh at no other places the projects were operational"(p 503/c). Two teams of CAPART monitors had reported as early as in December 2001 and June 2002 that one turbine was operational and it irrigated about 20-25 hectare of land. This was when only first installment was released by CAPART. From out of second installment, shri Mangal Singh had informed CAPART that the second installment would be used in the fabrication of three turbines of Rs 2.00 lakh each (p 415/c dated 2-11-2002) The installation

of these units required fund which was withheld by CAPART. The basic fact of the matter was totally forgotten in the haste of painting Shri Mangal Singh black. Under the technical sub-head the report reads thus:” Shri Mangal Singh had reportedly invented the pump. He has not got the technical viability/ suitability verified from any Government agency ... So far he has not got its patent regularized from the Government agencies. The cost effectiveness for replicating the technology across the country had also not been examined. In these circumstances the CAPART assistance for fabrication of five units of Turbine pumps that too to an individual is not justified” (p 503/c)

Further Assistance Stopped:

38. Thus, the team comprising one Research Officer CAPART and a hired monitor delivered the final verdict questioning the wisdom of CAPART for sanctioning the project! The report concluded “No further grant may be released to Shri Mangal Singh and his VO may be put under FAS category immediately and proceedings for recovery of the funds provided to Shri Mangal Singh and his VO be initiated.” This was the most irresponsible statement clearly motivated by the ill will against Shri Mangal Singh. The monitors are supposed to submit the report based on facts and not pronounce judgments that too on imaginary grounds. The brief note put up by the DD (RTD) on 10/3/04 for a decision on the monitor’s report inter alia concluded: “The project may be considered for termination at this stage. Show cause notice may be issued to Shri Mangal Singh to submit detailed physical report of work done under the project within 30 days. Otherwise, legal proceedings will be initiated against him” (p.62/n). This proposal was approved by the DDG and the show cause notice was duly issued on 24/3/2004 (p 528/c) Shri Mangal Singh through his 3 letters dated 31.3.04,(p 537/c), 3.4.04 (p 531/c) and dated 6/4/04 (P 529/c) pleaded for reconsideration narrating the whole story of his 18 years bitter experience with CAPART and requested DG|DDG to themselves visit the project site but all in vain. After one month notice period was over, the last rites were performed. The note on the file triumphantly declared: “The VO has been placed in the FAS category successfully” (p 65/n). The harassment of Shri Mangal Singh did not end there. After accomplishing the mission of placing him under FAS, the matter was referred to the Chief Vigilance Officer for initiating further enquiry of the alleged irregularities committed by Shri Mangal Singh and the modus operandi was again the same: deploy a team of monitors to undertake another comprehensive evaluation this time to further corroborate what the previous team had said.

39. It appears that CAPART authorities have invented an easy escape route by shifting responsibility on empanelled monitors/evaluators for all their omissions and commissions in administering grant-in aid to voluntary organizations. In this case also the whole act was played with the help of monitors who were picked up from the list of empanelled monitors according to the need and choice of the officers. These monitors are paid for each job on daily wage basis. They are also “briefed” about their mission before they take up the assignment. It is therefore not difficult to “manage” a desired outcome of an enquiry and settle a dispute in their own favor. This is what happened in Shri Mangal Singh’s case also. Whenever CAPART came under some pressure, it took shelter in the reports of monitors/evaluators (pp 764-765/c). There is need for rethinking about the procedure adopted by CAPART for managing grant – in – aid to NGOs because the prevailing practice has not helped brush

up the image of CAPART. Instead, the popular perception continues to be uncharitable. In these times of anti corruption campaigns, the authorities in CAPART need to take a serious view about its image. It is not difficult to devise ways to cleans the system even in the given structure. Instead of relying on foot loose monitors only, members of executive committee or standing committees who have a stake in CAPART could be involved whenever there is some problem. In the instant case, the pre sanction appraisal was done by the Chairman Standing Committee of rural technology but when the case became sticky, batteries of hired monitors were sent repeatedly instead of placing the matter before the Standing Committee or Executive Committee for a solution of the problem so that the resources invested were not wasted. And for that matter why not the senior officers of CAPART visit to verify for themselves and take on- the- spot decisions? CAPART has the tendency to complicate the matter rather than adopting problem solving approach to the issue.

40. The last lot of the monitors report was also full of anomalies and contradictions. Regarding the project under reference it said, it was reported that five units of waterwheel Turbines were to be setup out of which civil work for installation of 3 units had already been done. These would be used for R & D training and demonstration purposes. In the next line the same report said that the civil work of only one unit had been completed and remaining was yet to be constructed. (p 72/n). Further it said out of 6 units installed, 3 units were smaller and 3 units were of large size and that there was scope for installation of one more unit and in the next line it said, Shri Mangal Singh installed two units at the same place without getting any demand (p 72/n). This type of reporting shows that the monitors were doctored but since the task had to be done hurriedly they could not fully follow the instructions. The rest of the report repeated the same “short comings” which were reported by the previous monitors. The mission was to confirm what they had said. After all, their predecessor’s report had resulted in placing Shri Mangal Singh under FAS. The monitors were so much obsessed with finding the evil in Shri Mangal Singh that they did not realize that what they were writing was self contradicting.

Civil Suit and After:

41. Shri Mangal Singh tried to revive the project for which he made several pleas to CAPART but to no avail (PP 529/c ,531/c ,537/c,538/c, pp 564-67/c). There were references from the Ministry and several other concerned quarters but all attempts were successfully resisted by the office with the help of a standard dossier of lies and half truths about Shri Mangal Singh’s work (p 547/c,549/c, p568/c,579/c,580/c,588/c,753/c,764/c). The main weapon was the inability of Shri Mangal Singh to submit the reports and accounts in the “prescribed” format. It may be pertinent to state here that there was no mention of the prescribed format in the sanction letter or in the T&C attached. It only called for sending half yearly progress report which Shri Mangal Singh has been duly sending rather on monthly basis. He was regularly informing CAPART about the progress and also expenditure head wise vouched for by monitors but since it was not as per the so called standard format, the project was allowed to be wasted after spending Rs. 12.00 lakh of public money. The question also arises that why CAPART did not ask its battery of monitors some of whom were accountants and technical experts to prepare the report and the accounts. After all they are paid handsomely by CAPART. What is the purpose of sending paid monitors if they

cannot prepare the report of the project? What is their role and stake in CAPART other than sensationalizing and being used as tools by unscrupulous elements in CAPART office? And why CAPART takes action on monitors report only selectively as in this project. These are some of issues which need to be addressed to improve the functioning of CAPART.

42. Shri Mangal Singh finally filed a civil writ petition No 13146/08 in the Hon`ble High Court of Allahabad for redressal of his grievances. Even after filing civil writ, Shri Mangal Singh made attempts to settle the dispute with CAPART and met DG to find a way out. DG sincerely tried to resolve the issue but these attempts were also thwarted by the RT Division by reciting the same old stories of alleged omissions and commissions by Shri Mangal Singh and the matter being sub-judiced (pp 101-127/n). DG constantly questioned the utility of contesting the case against Shri Mangal Singh in the hon`ble court when in the petition filed by Shri Mangal Singh versus Union of India and others no specific relief was sought from CAPART. In a meeting held on 12-1-2010, DG proposed for delisting of Shri Mangal Singh from the FAS category and release of the balance grant of Rs. 3.00 lakh withheld by CAPART. It was decided that:

- (1) Legal opinion may be obtained from the legal retainer whether the counter affidavit can be withdrawn and out of court settlement could be done;
- (2) Shri Mangal Singh could be requested to furnish requisite documents to avoid audit objections in future and to process the matter for delisting from FAS, and
- (3) After delisting from FAS, the matter would be processed for the release of balance amount (p 120/n).

43. It was argued by the DDG CAPART that since a counter affidavit had been already filed in the Hon`ble High Court by CAPART, withdrawal of such an affidavit would require clear directions from the Hon`ble Court. Further, the feasibility of such withdrawal by a single respondent would also require legal scrutiny (PP 121-22n) DG further questioned the propriety of placing Shri Mangal Singh under FAS in the first place and wanted to know whether the alleged irregularities had been corroborated on the basis of records. He also wanted to know what harm would have accrued to CAPART if the case was not contested when no relief was sought from CAPART. RT division replayed the same old cassette cataloging the short comings stated by monitors Shri OP Pandey and Shri Shravan Kumar in their report and seeking legal opinion on the question of not contesting (PP 124-126 /n dated 8-2-2010). The DDG in his brief comments said that the VO was placed under FAS category for non compliance of the requirements of terms and conditions on the basis of which funds were sanctioned to Shri Mangal Singh. He also informed that corroborations were made by a comprehensive evaluation conducted by CAPART from 27-2-2005 to 3-3-2005. He also reiterated that legal opinion may be necessary to ascertain the implications of not contesting (p 127 /n). It may be stated here that the project was sanctioned after ascertaining the feasibility and utility of the project in a pre sanction appraisal of the project by the Chairman NSCRT himself. So his views could have been taken before taking the drastic decision. Secondly the T&C did not stipulate submitting audited accounts before the release of full project cost and completion of the project. So the ground for FAS was subjective rather than objective.

Delisting from FAS:

44. DG was obviously not convinced with the above explanation. He took a bold decision and reversed the 30-4-2004 decision of DDG placing Shri Mangal Singh under FAS stating that the decision stood modified. In his note dated 23/2/2010 DG wrote. "From the comparative statement of sanction, execution and the report of the inspection team, (Page nos. 1032/c-1037/c); it is apparent that enough assets have been created against Rs. 12 lakhs released by CAPART. Therefore, no case of defalcation of money is prime facie established. It appears that the innovator has not been well versed with accounting procedures and has not done enough due diligence with regard to maintaining of accounts because of which CAPART summarily put the organization under FAS. In this context, it is imperative to take note of the observations of Shri Arun Arya IAS, Director Project Management Unit, Swajal Pariyojana, Lucknow, a senior functionary of state government of Uttar Pradesh. In his fact finding report at Page nos. 891/c-900/c he has recommended the withdrawal of the orders of seizure of Shri. Mangal Singh's accounts and also recommended for wide publicity of his invention on appropriate hydro sites. Shri Arun Arya IAS also mentioned that Shri Mangal Singh is a village farmer who invented Machine (Mangal Turbine) with his working knowledge. However, since he doesn't have adequate educational qualification he is not able to prepare technical feasible reports etc at his own. The recommendation made by Shri. Arun Arya IAS is reproduced herewith for learning appropriate lessons in future while handling this type of innovative projects from the inventors belonging to villages:

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45. The DG further added "In the light of aforesaid report, this also emerged as a case which highlights that the grass root innovators belonging to villages are not well versed with reporting and accounting procedures. Moreover, minor deviations from the original project bound to occur and the same may be accommodated in such innovative projects. This may also be necessitated because of changed conditions at site and other unforeseen factors normal in an innovative project. Appropriate lesson need to learnt. In future wherever innovators are supported by CAPART, it should provide the innovators the professional support for maintaining accounts as part of the project cost. It has been laid down in the MOA

of CAPART as an objective of CAPART to work with NGOs hand in hand. The innovator should have been supported with regard to maintenance of accounts etc. If need be a team comprising of account officials or Chartered Accountant may be sent to help Mr. Mangal Singh to finalize the accounts and submit the report as per requirement of CAPART. Since there is no malafide deviation of funds made out as per the records there is no need to put the organization under FAS as approved by DDG on page 65/n. the order accordingly stands modified.”The DG also questioned the validity of the accusations made by some monitors and officers against Shri Mangal Singh having allegedly received funds from various sources which he said should be further probed and explanation called from the concerned officers (p 130/n).

46. Accordingly, the order of delisting Shri Mangal Singh from FAS was issued on 3/3/2010. (p 1040 /c). This letter was also endorsed to Shri Mangal Singh. But strangely Shri Mangal Singh was unaware of it when we met him during the field visit. Either the copy of the letter was not posted to him or the letter got misplaced in transit. A decision was also taken not to pursue the case in the Hon’ble High Court. For this purpose, the Member Convener, Central Zone Lucknow was instructed to approach the legal retainer in Allahabad to file an affidavit to this effect in the next hearing (p1053/c dated 15.4.2010). But what happened there after is not clear. There is no record in the files whether such an affidavit was indeed filed in the court. However, Shri Mangal Singh was not aware of this development also. This means that whatever was being discussed and decided in CAPART about the fate of the project was not shared with the project holder. For the release of balance fund to Shri Mangal Singh, DG had directed the office that a team of accounts officials or chartered accountant could be deputed to help Shri Mangal Singh to finalize the accounts and submit the report as per requirements of CAPART. Bu this line of action was also not pursued and instead the office again sent a letter and e-mail to Shri Mangal Singh as usual seeking audited statement of account and progress report on the format (p1046/c) to which Shri Mangal Singh responded saying that he was unable to prepare the accounts as he was alone and most of the records had already been taken by the Monitors who visited so many times (pp 1047 and 1049/c). But CAPART did not consider the option suggested by DG for sending Accountants etc to help prepare the accounts and report (130/n). So effectively, there is no change in the status of the project. Neither the withdrawal of FAS order had been communicated to Shri Mangal Singh nor CAPART seems to have informed the Hon’ble Court about not pursuing the case and the balance amount of project cost withheld by CAPART was also not released to Shri Mangal Singh.

Concluding observations:

47. It will be clear from the above account that Shri Mangal Singh was harassed and harmed in the process of implementation of the project. This has happened not only in connection with the project under reference which was the last sanctioned by CAPART. It has happened in respect of all projects sanctioned by CAPART to Shri Mangal Singh earlier too (list enclosed as annexure I). He was put in double jeopardy. First, his project which was estimated to cost Rs. 16. 86 lakh in 1998 (formulated by CAPART officials in CAPPART office) was arbitrarily pruned to Rs. 15.00 lakh without reducing the physical size and that too after nearly four years. As is common practice, delay in sanction and release results in

upward revision of the cost to match with the increased cost of inputs and labor but here was a case where the cost was reduced without justification. Secondly, after sanction of the project, second installment of fund was not released timely even when there was clear evidence of the utilization of the first installment as reported by two sets of monitors. In fact the second team of monitors reported that utilization was more than the amount released (p 373/c). As for the allegation that the project was not implemented as per the plan, it is not clear what the plan was. As per the sanction letter, 5 units of Mangal Turbine were to be fabricated. The monitor's reports said 6 Mangal Turbines were installed at the site. We also witnessed 6 units installed in a row. Civil work was to be done for 3 units only but civil work for all the 6 units was done. PVC pipe 900 mterre long was to be laid which was also done. What was not done was training, preparation of operating manual and payment of honoraria which according to Shri Mangal Singh was to be done in the end with the last installment of grant (pp 407-408/c). But the project was terminated mid way. So what was done was more than what was planned to be done which should have been appreciated rather than deprecated.

48. In view of the above, there is no case against Shri Mangal Singh who need to be compensated for the loses suffered due to adversary role played by CAPART in all the projects sanctioned to him simply because he did not “please “ them ! Or because he was from humble background and rural area or because he was an anti corruption activist. It goes to the credit of Shri Mangal Singh that in spite of so much of horror and harassment, he remains stead fast to his commitment and is able to smile whenever he sees or hears something positive happening around him. He remains deeply committed to societal causes and would not mind putting everything (remaining) at stake to fight corruption and other evils in the society. He loves fighting for a cause and that is what is sustaining him. He needs to be suitably honored and awarded not only for his invention but also for his conviction and commitment.

49. As for his invention, it is undoubtedly unparalleled in its simplicity and utility. Its cost benefit cannot be restricted to the extent of area irrigated and increase in production and income on account of that. Its benefits are multiple and multidimensional. Some of the benefits transcend the tools of social cost benefit analysis. Mangal Turbine is the answer to the challenging problems of drought, pollution, energy scarcity, global warming, climate change and price rise besides helping the farmers, rural artisans and the society at large by its multifarious utility. All the qualities of Mangal Turbine are well documented and described elsewhere. The Government of India is implementing a Bundelkhand package. Bundelkhand is a drought prone area and its main problem is lack of irrigation. Unfortunately our policy makers and planners prefer big and extravagant projects which allow pilferage and splurge. Mangal Turbine offers the low cost, environment friendly and sustainable solution to the irrigation problem of Bundelkhand.

50. The IIT Delhi report on “Problems and Potentials of Bundelkhand with Special Reference to Water Resources” the report which resulted in the preparation of Bundelkhand package, has this to say about Mangal Turbine. “Mangal Turbine would prove a boon for fulfilling the energy need of irrigation, agro-processing etc in the rural sector wherever low water head exists in the rivers/ nallahs. ...Preliminary study of this system conducted by IIT personnel

has indicated that its efficiency can be further improved by using some modern scientific technical inputs. Considering 500 suitable hydrosites in one district of Bundelkhand for installing Mangal turbine it is estimated that by using this system, about 25 MW energy can be easily generated. On an average, two Turbines on one site have the potential to irrigate 200 hectares of land. Thus total command area of 500 hydrosites would be 1 lakh hectares (in one district) ... This, turbine is a fine example of common people's interventiveness, and should be encouraged by all means for peoples benefit. It is unfortunate that in the pervasive atmosphere of "foreignomania", this device has not got the recognition it deserves."

51. In view of the above, Mangal Turbine should be embraced by not only CAPART but all other agencies of the Government be it Ministry of Rural Development, Ministry of Agriculture, Ministry of Panchayati Raj, Ministry of Water Resources Development, NBARD, Horticulture Board, Rajiv Gandhi. Drinking Water Mission, Department of Alternate Energy Sources, Department of Land Resources, DRDA's, PRIs etc: CAPART need to shed all reservations about Mangal Turbine and being pioneer in its promotion, should adopt it as a scheme to be promoted through NGOs. The Ministry of RD should also adopt it as a scheme to be implemented under Livelihood Mission. Agriculture Ministry should be in the fore front of its propagation under its NFSM, NHM, NWDPR and RKVY. Similarly, Department of Land Resources can adopt it under IWMP and Ministry of Water Resources Development under AIBP and Minor Irrigation etc.

Action Points:

1. There are some half a dozen sites where Mangal Turbines were once operating which were visited by many dignitaries and experts. But these assets have been damaged allegedly by some vested interests with the help of antisocial elements who did not like the innovation and particularly the low cost construction of check dams as the comparison was exposing their misdeeds. All these sites need to be restored with functioning Mangal Turbines, It will be of great help to the farmers of the area who, are spending huge sums in operating large number diesel engines for irrigation.
2. CAPART should compensate for the damage of its project sites and also the monetary loss suffered by Shri Mangal Singh. This should be the part of out of court settlement of the dispute. One possible way to do this could be to reimburse the net present value (NPV) of the investment made in these projects by Shri Mangal Singh minus the NPV of the amount already released by CAPART. Estimates for two projects (i) the last one at Kanji Ghat for which Rs. 12.00 lakh were released in 2001 and (ii) another Pura Toria/ Pachauni project for which Rs 2.50 lakh were released in the year 2000 are enclosed at annexure II & III. The NPV of these projects has been assessed by the valuer at Rs. 3569066/and Rs. 1194591/- respectively. The total net present value of these two projects works out to Rs 4763657/- and Rs. 14, 50, 000/- have already been released by CAPART for these projects at different times. A suitable compounding rate can give the NPV of the fund released. The balance can be released to Shri Mangal Singh with the condition that both these projects would be restored to their planned capacity which can be supervised by a team of neutral monitors.
3. Submergence problem of the assets of KanjiGhat project where six Turbines are installed can be solved by relocating the single turbine installed by Shri Lal Singh

just below the CAPART project site. For this purpose CAPART should request the district administration, Lalitpur to remove or relocate that unit causing submergence of CAPART assets which has the potential of irrigating about 100 ha of land against barely 20 ha by the other located downstream.

4. The Secretary RD, Government of India speak to the Secretary/ Principal Secretary Rural Development and also to the APC Uttar Pradesh Government to withdraw the false cases against Shri Mangal Singh, defreeze bank account and restore his land through an out of the court settlement process. For this the inquiry report of Shri Arun Arya IAS exonerating Shri Mangal Singh of inaction and misappropriation charges could be the basis for such an action by the State Government.
5. Shri Mangal Singh needs to be suitably rewarded for his invention and contributions for the betterment of society.

Encls. As above

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